

Contents

1	Dose rate Coefficients and Slope Factors (S.I. units)	2
1.1	Dose rate coefficients for external exposure	3
1.2	Dose rate coefficients for ingestion	55
1.3	Dose rate coefficients for inhalation	98
1.4	Morbidity risk coefficients for external exposure	195
1.5	Morbidity risk coefficients for ingestion	237
1.6	Morbidity risk coefficients for inhalation	280
2	Dose Coefficients and Slope Factors (Traditional units)	430
2.1	Dose rate coefficients for external exposure	431
2.2	Dose rate coefficients for ingestion	473
2.3	Dose rate coefficients for inhalation	516
2.4	Morbidity risk coefficients for external exposure	613
2.5	Morbidity risk coefficients for ingestion	655
2.6	Morbidity risk coefficients for inhalation	698

1 Dose rate Coefficients and Slope Factors (S.I. units)

In Appendix B, dose rate coefficients and slope factors are presented in the units used in Federal Guidance Reports 11, 12, and 13. Brief descriptions of specific contents are located before each table. All nuclides found in ICRP 107 are listed as well as for radionuclide decay chains. Values for these chains are indicated by having the suffix +D or +E after the nuclide symbol.

1.1 Dose rate coefficients for external exposure

Explanation of Entries:

Table 1.1 contains the dose rate coefficients used for external exposure. This includes submersion in air, immersion in water, and ground exposure to various thicknesses of soil contamination. The relevant densities used are water (1000 kg m^{-3}), air (1.2 kg m^{-3}), and soil ($1.6 \times 10^3 \text{ kg m}^{-3}$).

*Note that skin is not included in the effective dose summation.

Air submersion is shown in column two and is given in Sv per Bq s m^{-3} . To derive coefficients for an air density other than 1.2 kg m^{-3} , multiply coefficients by $(1.2/\rho)$, where ρ is the air density in kg m^{-3} .

Water immersion is shown in column three and is given in Sv per Bq s m^{-3} . To derive coefficients for a water density other than $1 \times 10^3 \text{ kg m}^{-3}$, multiply coefficients by $(1 \times 10^3/\rho)$, where ρ is the water density in kg m^{-3} .

External exposure to soil contamination of the ground plane is shown in column four and is given in Sv per Bq s m^{-2} . Note that ground plane dose rate coefficients are expressed as per area unlike the other ground contamination values which are expressed as per volume. The ground plane dose rate coefficients are valid for any soil density.

External exposure dose coefficient for soil contamination of thicknesses one, five, and fifteen centimeters are shown in columns five, six and seven respectively and are given in Sv per Bq s m^{-3} . Radionuclide dose coefficients for soil contaminated to a finite depth cannot be scaled to account for a different soil density.

External exposure to soil contaminated to an infinite depth is shown in column eight and is given in Sv per Bq s m^{-3} . To derive coefficients for a soil density other than $1.6 \times 10^3 \text{ kg m}^{-3}$, multiply coefficients by $(1.6 \times 10^3/\rho)$, where ρ is the soil density in kg m^{-3} .

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion (Sv per Bq s m^{-3})	Immersion (Sv per Bq s m^{-3})	Ground Plane (Sv per Bq s m^{-2})	1cm	5cm	15cm	Infinite
				(Sv per Bq s m^{-3})			
Ac-223	7.28E-16	1.60E-18	1.62E-17	1.00E-19	2.74E-19	3.94E-19	4.16E-19
Ac-223+D	8.91E-16	1.95E-18	1.97E-17	1.22E-19	3.37E-19	4.89E-19	5.18E-19
Ac-223+E	8.91E-16	1.95E-18	1.97E-17	1.22E-19	3.37E-19	4.89E-19	5.18E-19
Ac-224	9.33E-15	2.06E-17	2.05E-16	1.28E-18	3.44E-18	4.72E-18	4.84E-18
Ac-225	5.66E-16	1.26E-18	1.32E-17	7.81E-20	2.04E-19	2.75E-19	2.83E-19
Ac-225+D	1.83E-15	4.03E-18	4.03E-17	2.51E-19	6.86E-19	9.67E-19	1.00E-18
Ac-225+E	1.83E-15	4.03E-18	4.03E-17	2.51E-19	6.86E-19	9.67E-19	1.00E-18
Ac-226	5.68E-15	1.23E-17	1.37E-16	7.64E-19	2.11E-18	2.99E-18	3.10E-18
Ac-227	3.65E-18	8.25E-21	2.37E-19	5.04E-22	1.09E-21	1.38E-21	1.40E-21
Ac-228	4.01E-14	8.67E-17	8.39E-16	5.15E-18	1.48E-17	2.33E-17	2.70E-17
Ac-230	2.66E-14	5.70E-17	5.91E-16	3.28E-18	9.33E-18	1.51E-17	1.81E-17
Ac-231	1.84E-14	3.98E-17	4.48E-16	2.51E-18	6.97E-18	1.02E-17	1.07E-17
Ac-232	5.65E-14	1.22E-16	1.14E-15	6.79E-18	1.96E-17	3.19E-17	3.90E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Ac-233	2.29E-14	4.92E-17	5.74E-16	3.13E-18	8.78E-18	1.35E-17	1.49E-17
Ag-100m	1.33E-13	2.87E-16	2.81E-15	1.72E-17	4.90E-17	7.76E-17	8.98E-17
Ag-101	7.19E-14	1.56E-16	1.57E-15	9.52E-18	2.71E-17	4.21E-17	4.76E-17
Ag-102	1.60E-13	3.47E-16	3.24E-15	2.03E-17	5.83E-17	9.29E-17	1.09E-16
Ag-102m	9.72E-14	2.10E-16	1.81E-15	1.15E-17	3.34E-17	5.46E-17	6.69E-17
Ag-103	3.79E-14	8.23E-17	8.05E-16	4.98E-18	1.42E-17	2.19E-17	2.48E-17
Ag-104	1.24E-13	2.70E-16	2.54E-15	1.61E-17	4.63E-17	7.33E-17	8.46E-17
Ag-104m	8.45E-14	1.83E-16	1.74E-15	1.08E-17	3.08E-17	4.89E-17	5.70E-17
Ag-105	2.21E-14	4.81E-17	4.78E-16	3.00E-18	8.51E-18	1.29E-17	1.42E-17
Ag-105m	4.42E-17	9.63E-20	9.60E-19	5.98E-21	1.70E-20	2.59E-20	2.82E-20
Ag-106	3.13E-14	6.77E-17	7.28E-16	4.27E-18	1.21E-17	1.86E-17	2.05E-17
Ag-106m	1.29E-13	2.79E-16	2.63E-15	1.67E-17	4.80E-17	7.58E-17	8.72E-17
Ag-108	1.27E-15	2.32E-18	8.98E-17	1.63E-19	3.87E-19	5.73E-19	6.31E-19
Ag-108m	7.23E-14	1.57E-16	1.54E-15	9.74E-18	2.78E-17	4.31E-17	4.81E-17
Ag-108m+D	7.24E-14	1.57E-16	1.55E-15	9.75E-18	2.78E-17	4.31E-17	4.82E-17
Ag-108m+E	7.24E-14	1.57E-16	1.55E-15	9.75E-18	2.78E-17	4.31E-17	4.82E-17
Ag-109m	1.58E-16	3.56E-19	7.41E-18	2.21E-20	4.58E-20	5.46E-20	5.45E-20
Ag-110	2.46E-15	4.38E-18	1.63E-16	3.75E-19	7.97E-19	1.15E-18	1.27E-18
Ag-110m	1.28E-13	2.77E-16	2.59E-15	1.65E-17	4.75E-17	7.53E-17	8.71E-17
Ag-110m+D	1.28E-13	2.77E-16	2.59E-15	1.65E-17	4.75E-17	7.53E-17	8.71E-17
Ag-110m+E	1.28E-13	2.77E-16	2.59E-15	1.65E-17	4.75E-17	7.53E-17	8.71E-17
Ag-111	1.39E-15	2.80E-18	5.29E-17	1.72E-19	4.73E-19	7.04E-19	7.51E-19
Ag-111m	1.68E-16	3.71E-19	5.79E-18	2.31E-20	5.93E-20	8.66E-20	9.32E-20
Ag-112	3.39E-14	7.24E-17	7.72E-16	4.32E-18	1.21E-17	1.93E-17	2.28E-17
Ag-113	3.83E-15	7.75E-18	1.59E-16	5.16E-19	1.35E-18	2.02E-18	2.21E-18
Ag-113m	9.55E-15	2.07E-17	2.23E-16	1.30E-18	3.67E-18	5.56E-18	6.04E-18
Ag-114	1.46E-14	2.97E-17	4.31E-16	2.00E-18	5.15E-18	8.00E-18	9.33E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Ag-115	2.40E-14	5.12E-17	5.54E-16	2.98E-18	8.38E-18	1.34E-17	1.60E-17
Ag-116	1.07E-13	2.29E-16	2.07E-15	1.27E-17	3.65E-17	5.96E-17	7.31E-17
Ag-117	6.50E-14	1.40E-16	1.28E-15	7.65E-18	2.20E-17	3.59E-17	4.44E-17
Ag-99	1.08E-13	2.33E-16	2.28E-15	1.39E-17	3.98E-17	6.27E-17	7.23E-17
Al-26	1.28E-13	2.78E-16	2.47E-15	1.56E-17	4.53E-17	7.35E-17	8.84E-17
Al-28	8.88E-14	1.91E-16	1.71E-15	1.04E-17	3.01E-17	4.98E-17	6.19E-17
Al-29	6.71E-14	1.44E-16	1.37E-15	8.18E-18	2.36E-17	3.83E-17	4.63E-17
Am-237	1.55E-14	3.41E-17	3.38E-16	2.12E-18	5.89E-18	8.60E-18	9.17E-18
Am-238	4.09E-14	8.88E-17	8.34E-16	5.28E-18	1.51E-17	2.36E-17	2.72E-17
Am-239	9.37E-15	2.07E-17	2.09E-16	1.29E-18	3.43E-18	4.67E-18	4.78E-18
Am-240	4.69E-14	1.02E-16	9.60E-16	6.07E-18	1.73E-17	2.73E-17	3.14E-17
Am-241	6.72E-16	1.54E-18	2.18E-17	9.80E-20	1.85E-19	1.99E-19	1.99E-19
Am-242	6.11E-16	1.27E-18	1.61E-17	7.47E-20	1.88E-19	2.40E-19	2.41E-19
Am-242m	1.98E-17	4.53E-20	2.07E-18	2.75E-21	4.72E-21	5.64E-21	5.68E-21
Am-242m+D	7.50E-16	1.57E-18	2.06E-17	9.28E-20	2.37E-19	3.16E-19	3.29E-19
Am-242m+E	7.50E-16	1.57E-18	2.06E-17	9.28E-20	2.37E-19	3.16E-19	3.29E-19
Am-243	1.92E-15	4.34E-18	4.96E-17	2.72E-19	5.98E-19	6.88E-19	6.88E-19
Am-243+D	9.27E-15	2.05E-17	2.12E-16	1.27E-18	3.31E-18	4.45E-18	4.57E-18
Am-243+E	9.27E-15	2.05E-17	2.12E-16	1.27E-18	3.31E-18	4.45E-18	4.57E-18
Am-244	3.58E-14	7.77E-17	7.55E-16	4.72E-18	1.35E-17	2.11E-17	2.40E-17
Am-244m	1.04E-15	1.89E-18	7.01E-17	1.21E-19	2.94E-19	4.45E-19	5.08E-19
Am-245	1.45E-15	3.03E-18	4.10E-17	1.83E-19	4.93E-19	6.89E-19	7.11E-19
Am-246	3.27E-14	7.09E-17	7.28E-16	4.36E-18	1.23E-17	1.90E-17	2.11E-17
Am-246m	4.57E-14	9.86E-17	9.59E-16	5.83E-18	1.68E-17	2.67E-17	3.10E-17
Am-247	5.85E-15	1.25E-17	1.69E-16	7.84E-19	2.11E-18	2.98E-18	3.10E-18
Ar-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-39	1.15E-16	1.28E-19	2.52E-18	1.58E-21	3.38E-21	4.25E-21	4.31E-21

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Ar-41	6.15E-14	1.33E-16	1.22E-15	7.56E-18	2.19E-17	3.55E-17	4.25E-17
Ar-42	1.26E-16	1.41E-19	4.08E-18	1.98E-21	4.07E-21	5.10E-21	5.18E-21
Ar-42+D	1.50E-14	3.12E-17	4.04E-16	1.88E-18	5.10E-18	8.22E-18	9.95E-18
Ar-42+E	1.50E-14	3.12E-17	4.04E-16	1.88E-18	5.10E-18	8.22E-18	9.95E-18
Ar-43	7.55E-14	1.62E-16	1.52E-15	9.16E-18	2.63E-17	4.27E-17	5.19E-17
Ar-44	9.46E-14	2.04E-16	1.78E-15	1.12E-17	3.26E-17	5.33E-17	6.53E-17
As-68	1.76E-13	3.80E-16	3.61E-15	2.24E-17	6.40E-17	1.02E-16	1.20E-16
As-69	5.25E-14	1.13E-16	1.22E-15	7.10E-18	2.00E-17	3.08E-17	3.43E-17
As-70	2.00E-13	4.32E-16	4.04E-15	2.53E-17	7.28E-17	1.16E-16	1.36E-16
As-71	2.55E-14	5.56E-17	5.44E-16	3.44E-18	9.75E-18	1.48E-17	1.62E-17
As-72	8.21E-14	1.77E-16	1.80E-15	1.09E-17	3.09E-17	4.84E-17	5.48E-17
As-73	1.54E-16	3.55E-19	5.14E-18	2.30E-20	4.01E-20	4.18E-20	4.18E-20
As-74	3.40E-14	7.38E-17	7.46E-16	4.60E-18	1.31E-17	2.03E-17	2.26E-17
As-76	2.00E-14	4.25E-17	5.13E-16	2.67E-18	7.41E-18	1.16E-17	1.31E-17
As-77	4.86E-16	9.34E-19	1.33E-17	5.21E-20	1.46E-19	2.15E-19	2.30E-19
As-78	6.27E-14	1.35E-16	1.33E-15	7.94E-18	2.26E-17	3.62E-17	4.26E-17
As-79	2.25E-15	4.20E-18	1.38E-16	3.14E-19	7.34E-19	1.08E-18	1.19E-18
At-204	1.04E-13	2.26E-16	2.25E-15	1.41E-17	4.00E-17	6.17E-17	6.87E-17
At-205	5.22E-14	1.13E-16	1.09E-15	6.79E-18	1.93E-17	3.01E-17	3.46E-17
At-206	1.12E-13	2.44E-16	2.36E-15	1.49E-17	4.24E-17	6.60E-17	7.46E-17
At-207	9.34E-14	2.03E-16	1.85E-15	1.18E-17	3.39E-17	5.38E-17	6.30E-17
At-208	1.40E-13	3.03E-16	2.83E-15	1.80E-17	5.16E-17	8.13E-17	9.38E-17
At-209	1.03E-13	2.24E-16	2.15E-15	1.36E-17	3.87E-17	6.03E-17	6.84E-17
At-210	1.40E-13	3.03E-16	2.70E-15	1.73E-17	4.99E-17	8.02E-17	9.54E-17
At-211	1.27E-15	2.86E-18	3.06E-17	1.78E-19	4.18E-19	5.08E-19	5.14E-19
At-211+D	1.49E-15	3.33E-18	3.51E-17	2.07E-19	5.00E-19	6.37E-19	6.61E-19
At-211+E	1.49E-15	3.33E-18	3.51E-17	2.07E-19	5.00E-19	6.37E-19	6.61E-19

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
At-215	7.53E-18	1.64E-20	1.63E-19	1.03E-21	2.93E-21	4.42E-21	4.79E-21
At-216	9.52E-17	2.12E-19	2.19E-18	1.32E-20	3.32E-20	4.34E-20	4.45E-20
At-217	1.06E-17	2.31E-20	2.27E-19	1.44E-21	4.02E-21	5.94E-21	6.35E-21
At-218	9.80E-19	1.25E-21	1.25E-19	1.69E-22	2.37E-22	2.86E-22	2.98E-22
At-219	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-220	2.09E-14	4.46E-17	5.48E-16	2.89E-18	7.94E-18	1.18E-17	1.27E-17
Au-186	6.87E-14	1.49E-16	1.50E-15	9.12E-18	2.57E-17	3.97E-17	4.48E-17
Au-187	4.96E-14	1.08E-16	9.75E-16	6.17E-18	1.76E-17	2.81E-17	3.33E-17
Au-190	1.16E-13	2.51E-16	2.11E-15	1.36E-17	3.94E-17	6.41E-17	7.88E-17
Au-191	2.55E-14	5.58E-17	5.54E-16	3.47E-18	9.64E-18	1.44E-17	1.58E-17
Au-192	9.29E-14	2.02E-16	1.73E-15	1.11E-17	3.22E-17	5.21E-17	6.32E-17
Au-193	6.41E-15	1.42E-17	1.49E-16	8.90E-19	2.26E-18	3.07E-18	3.20E-18
Au-193m	8.37E-15	1.83E-17	1.80E-16	1.15E-18	3.21E-18	4.67E-18	4.89E-18
Au-194	4.81E-14	1.05E-16	9.45E-16	6.03E-18	1.72E-17	2.73E-17	3.20E-17
Au-195	2.70E-15	6.10E-18	6.93E-17	3.83E-19	8.34E-19	9.60E-19	9.60E-19
Au-195m	8.52E-15	1.87E-17	1.84E-16	1.17E-18	3.26E-18	4.75E-18	4.99E-18
Au-196	2.02E-14	4.42E-17	4.43E-16	2.79E-18	7.76E-18	1.15E-17	1.23E-17
Au-196m	9.70E-15	2.14E-17	2.16E-16	1.33E-18	3.49E-18	4.75E-18	4.87E-18
Au-198	1.80E-14	3.90E-17	4.05E-16	2.45E-18	6.97E-18	1.06E-17	1.15E-17
Au-198m	2.21E-14	4.87E-17	4.82E-16	3.03E-18	8.22E-18	1.15E-17	1.19E-17
Au-199	3.97E-15	8.74E-18	8.61E-17	5.41E-19	1.46E-18	2.01E-18	2.05E-18
Au-200	1.33E-14	2.84E-17	3.37E-16	1.71E-18	4.79E-18	7.57E-18	8.79E-18
Au-200m	8.84E-14	1.92E-16	1.88E-15	1.19E-17	3.40E-17	5.21E-17	5.73E-17
Au-201	1.79E-15	3.62E-18	7.31E-17	2.26E-19	6.10E-19	9.22E-19	1.01E-18
Au-202	8.90E-15	1.85E-17	2.81E-16	1.19E-18	3.18E-18	4.94E-18	5.67E-18
Ba-124	2.51E-14	5.46E-17	5.53E-16	3.34E-18	9.45E-18	1.46E-17	1.64E-17
Ba-126	2.56E-14	5.57E-17	5.40E-16	3.36E-18	9.56E-18	1.49E-17	1.68E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Ba-127	3.28E-14	7.08E-17	7.54E-16	4.39E-18	1.24E-17	1.91E-17	2.14E-17
Ba-128	2.12E-15	4.67E-18	5.86E-17	2.96E-19	7.67E-19	1.11E-18	1.17E-18
Ba-129	1.44E-14	3.13E-17	3.23E-16	1.91E-18	5.39E-18	8.31E-18	9.33E-18
Ba-129m	7.20E-14	1.56E-16	1.47E-15	9.30E-18	2.66E-17	4.19E-17	4.82E-17
Ba-131	2.00E-14	4.36E-17	4.45E-16	2.73E-18	7.64E-18	1.15E-17	1.25E-17
Ba-131m	2.65E-15	5.93E-18	6.73E-17	3.70E-19	9.07E-19	1.16E-18	1.16E-18
Ba-133	1.62E-14	3.56E-17	3.73E-16	2.24E-18	6.18E-18	9.14E-18	9.75E-18
Ba-133m	2.49E-15	5.36E-18	6.08E-17	3.31E-19	8.85E-19	1.29E-18	1.36E-18
Ba-135m	2.16E-15	4.65E-18	5.38E-17	2.87E-19	7.58E-19	1.10E-18	1.16E-18
Ba-137m	2.69E-14	5.83E-17	5.77E-16	3.60E-18	1.03E-17	1.61E-17	1.81E-17
Ba-139	2.67E-15	5.17E-18	1.49E-16	3.75E-19	8.76E-19	1.21E-18	1.26E-18
Ba-140	8.06E-15	1.74E-17	1.91E-16	1.09E-18	3.06E-18	4.68E-18	5.13E-18
Ba-141	4.32E-14	9.32E-17	9.67E-16	5.62E-18	1.59E-17	2.48E-17	2.82E-17
Ba-142	4.84E-14	1.05E-16	1.01E-15	6.22E-18	1.78E-17	2.81E-17	3.24E-17
Be-10	1.39E-16	1.55E-19	3.44E-18	1.98E-21	4.25E-21	5.35E-21	5.43E-21
Be-7	2.21E-15	4.81E-18	4.76E-17	3.03E-19	8.63E-19	1.32E-18	1.45E-18
Bi-197	7.85E-14	1.70E-16	1.60E-15	1.01E-17	2.87E-17	4.55E-17	5.29E-17
Bi-200	1.10E-13	2.39E-16	2.31E-15	1.46E-17	4.14E-17	6.42E-17	7.23E-17
Bi-201	8.11E-14	1.76E-16	1.58E-15	1.01E-17	2.90E-17	4.65E-17	5.51E-17
Bi-202	1.26E-13	2.74E-16	2.58E-15	1.64E-17	4.69E-17	7.37E-17	8.45E-17
Bi-203	1.13E-13	2.44E-16	2.17E-15	1.39E-17	4.01E-17	6.45E-17	7.72E-17
Bi-204	1.35E-13	2.92E-16	2.71E-15	1.73E-17	4.95E-17	7.83E-17	9.08E-17
Bi-205	7.99E-14	1.73E-16	1.53E-15	9.83E-18	2.83E-17	4.56E-17	5.46E-17
Bi-206	1.51E-13	3.28E-16	3.05E-15	1.94E-17	5.57E-17	8.79E-17	1.02E-16
Bi-207	7.03E-14	1.53E-16	1.45E-15	9.12E-18	2.60E-17	4.10E-17	4.72E-17
Bi-208	1.35E-13	2.93E-16	2.21E-15	1.46E-17	4.29E-17	7.26E-17	9.45E-17
Bi-210	2.58E-16	2.98E-19	3.51E-17	1.68E-20	2.43E-20	2.87E-20	2.93E-20

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Bi-210m	1.14E-14	2.49E-17	2.44E-16	1.56E-18	4.40E-18	6.53E-18	6.95E-18
Bi-210m+D	1.18E-14	2.54E-17	3.05E-16	1.60E-18	4.46E-18	6.60E-18	7.02E-18
Bi-210m+E	1.18E-14	2.54E-17	3.05E-16	1.60E-18	4.46E-18	6.60E-18	7.02E-18
Bi-211	2.07E-15	4.51E-18	4.45E-17	2.84E-19	8.02E-19	1.20E-18	1.29E-18
Bi-212	5.17E-15	1.08E-17	1.54E-16	6.69E-19	1.84E-18	2.89E-18	3.35E-18
Bi-212+D	5.17E-15	1.08E-17	1.54E-16	6.69E-19	1.84E-18	2.89E-18	3.35E-18
Bi-212+E	5.17E-15	1.08E-17	1.54E-16	6.69E-19	1.84E-18	2.89E-18	3.35E-18
Bi-212n	3.89E-16	4.61E-19	6.03E-17	3.94E-20	5.43E-20	6.37E-20	6.52E-20
Bi-213	5.94E-15	1.26E-17	1.64E-16	7.95E-19	2.22E-18	3.37E-18	3.68E-18
Bi-213+D	5.94E-15	1.26E-17	1.64E-16	7.95E-19	2.22E-18	3.37E-18	3.68E-18
Bi-213+E	5.94E-15	1.26E-17	1.64E-16	7.95E-19	2.22E-18	3.37E-18	3.68E-18
Bi-214	7.11E-14	1.54E-16	1.42E-15	8.72E-18	2.52E-17	4.08E-17	4.89E-17
Bi-214+D	7.11E-14	1.54E-16	1.42E-15	8.72E-18	2.52E-17	4.08E-17	4.89E-17
Bi-214+E	7.11E-14	1.54E-16	1.42E-15	8.72E-18	2.52E-17	4.08E-17	4.89E-17
Bi-215	1.18E-14	2.52E-17	3.07E-16	1.56E-18	4.34E-18	6.60E-18	7.33E-18
Bi-215+D	1.18E-14	2.52E-17	3.07E-16	1.56E-18	4.34E-18	6.60E-18	7.34E-18
Bi-215+E	1.18E-14	2.52E-17	3.07E-16	1.56E-18	4.34E-18	6.60E-18	7.34E-18
Bi-216	3.41E-14	7.31E-17	8.46E-16	4.71E-18	1.31E-17	2.00E-17	2.21E-17
Bk-245	9.29E-15	2.05E-17	2.06E-16	1.27E-18	3.43E-18	4.71E-18	4.84E-18
Bk-246	3.82E-14	8.30E-17	7.93E-16	5.00E-18	1.42E-17	2.22E-17	2.54E-17
Bk-247	5.99E-15	1.32E-17	1.32E-16	8.23E-19	2.21E-18	3.06E-18	3.17E-18
Bk-248m	2.28E-15	4.91E-18	5.75E-17	3.02E-19	8.20E-19	1.18E-18	1.26E-18
Bk-249	4.37E-19	5.42E-22	5.67E-21	1.52E-23	2.73E-23	3.30E-23	3.40E-23
Bk-250	4.18E-14	9.03E-17	8.52E-16	5.34E-18	1.54E-17	2.45E-17	2.85E-17
Bk-251	3.56E-15	7.70E-18	9.39E-17	4.71E-19	1.23E-18	1.64E-18	1.66E-18
Br-72	1.41E-13	3.03E-16	2.99E-15	1.83E-17	5.19E-17	8.19E-17	9.48E-17
Br-73	6.52E-14	1.41E-16	1.51E-15	8.87E-18	2.49E-17	3.83E-17	4.25E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Br-74	2.30E-13	4.98E-16	4.10E-15	2.62E-17	7.62E-17	1.26E-16	1.58E-16
Br-74m	2.00E-13	4.33E-16	3.85E-15	2.43E-17	7.01E-17	1.13E-16	1.36E-16
Br-75	5.36E-14	1.16E-16	1.20E-15	7.29E-18	2.07E-17	3.17E-17	3.47E-17
Br-76	1.34E-13	2.91E-16	2.58E-15	1.63E-17	4.72E-17	7.63E-17	9.18E-17
Br-76m	9.66E-16	2.19E-18	3.23E-17	1.41E-19	2.79E-19	3.49E-19	3.71E-19
Br-77	1.40E-14	3.05E-17	2.99E-16	1.90E-18	5.42E-18	8.26E-18	9.04E-18
Br-77m	5.96E-16	1.32E-18	1.37E-17	8.15E-20	2.08E-19	2.66E-19	2.67E-19
Br-78	4.69E-14	1.01E-16	1.11E-15	6.43E-18	1.81E-17	2.78E-17	3.07E-17
Br-80	3.98E-15	8.09E-18	1.60E-16	5.40E-19	1.42E-18	2.17E-18	2.40E-18
Br-80m	2.38E-16	5.56E-19	1.38E-17	3.70E-20	4.77E-20	4.79E-20	4.79E-20
Br-82	1.22E-13	2.64E-16	2.48E-15	1.58E-17	4.54E-17	7.19E-17	8.27E-17
Br-82m	1.59E-16	3.19E-19	6.67E-18	2.22E-20	5.52E-20	8.42E-20	9.58E-20
Br-83	5.10E-16	8.98E-19	2.88E-17	5.06E-20	1.33E-19	2.00E-19	2.20E-19
Br-84	8.88E-14	1.92E-16	1.65E-15	1.02E-17	2.95E-17	4.88E-17	6.13E-17
Br-84m	1.31E-13	2.83E-16	2.66E-15	1.65E-17	4.75E-17	7.59E-17	8.93E-17
Br-85	3.98E-15	7.81E-18	1.83E-16	5.44E-19	1.34E-18	2.06E-18	2.37E-18
C-10	7.90E-14	1.71E-16	1.76E-15	1.07E-17	3.03E-17	4.70E-17	5.24E-17
C-11	4.56E-14	9.90E-17	1.00E-15	6.21E-18	1.77E-17	2.72E-17	3.00E-17
C-14	2.60E-18	2.89E-21	1.28E-20	3.47E-23	5.54E-23	5.92E-23	5.92E-23
Ca-41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ca-45	1.52E-17	1.66E-20	3.78E-20	1.33E-22	2.51E-22	2.86E-22	2.86E-22
Ca-47	5.02E-14	1.08E-16	9.90E-16	6.21E-18	1.80E-17	2.90E-17	3.46E-17
Ca-49	1.67E-13	3.61E-16	2.67E-15	1.72E-17	5.08E-17	8.71E-17	1.16E-16
Cd-101	1.17E-13	2.53E-16	2.39E-15	1.47E-17	4.23E-17	6.74E-17	7.93E-17
Cd-102	3.73E-14	8.10E-17	7.91E-16	4.96E-18	1.41E-17	2.20E-17	2.47E-17
Cd-103	1.00E-13	2.17E-16	1.91E-15	1.21E-17	3.51E-17	5.70E-17	6.89E-17
Cd-104	1.01E-14	2.21E-17	2.29E-16	1.37E-18	3.77E-18	5.69E-18	6.32E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Cd-105	6.13E-14	1.33E-16	1.20E-15	7.57E-18	2.19E-17	3.53E-17	4.20E-17
Cd-107	4.90E-16	1.09E-18	2.28E-17	6.79E-20	1.54E-19	2.12E-19	2.27E-19
Cd-109	2.27E-16	5.20E-19	1.65E-17	3.25E-20	5.64E-20	6.52E-20	6.51E-20
Cd-111m	1.20E-14	2.64E-17	2.60E-16	1.64E-18	4.63E-18	6.73E-18	7.02E-18
Cd-113	2.49E-17	2.72E-20	5.74E-20	2.20E-22	4.38E-22	5.14E-22	5.16E-22
Cd-113m	9.28E-17	1.06E-19	1.78E-18	1.56E-21	3.56E-21	4.68E-21	4.81E-21
Cd-115	8.73E-15	1.88E-17	2.07E-16	1.18E-18	3.33E-18	5.12E-18	5.64E-18
Cd-115m	1.99E-15	3.87E-18	1.02E-16	2.47E-19	6.35E-19	9.84E-19	1.14E-18
Cd-117	5.11E-14	1.10E-16	1.03E-15	6.39E-18	1.84E-17	2.94E-17	3.47E-17
Cd-117m	9.88E-14	2.14E-16	1.84E-15	1.19E-17	3.45E-17	5.63E-17	6.85E-17
Cd-118	7.25E-17	8.02E-20	5.80E-19	8.12E-22	1.77E-21	2.20E-21	2.23E-21
Cd-119	7.96E-14	1.72E-16	1.56E-15	9.59E-18	2.77E-17	4.51E-17	5.46E-17
Cd-119m	1.11E-13	2.41E-16	2.15E-15	1.34E-17	3.90E-17	6.35E-17	7.70E-17
Ce-130	2.14E-14	4.66E-17	4.65E-16	2.84E-18	7.95E-18	1.21E-17	1.35E-17
Ce-131	7.43E-14	1.61E-16	1.58E-15	9.71E-18	2.77E-17	4.33E-17	4.94E-17
Ce-132	1.09E-14	2.40E-17	2.49E-16	1.50E-18	4.11E-18	5.92E-18	6.18E-18
Ce-133	2.28E-14	4.96E-17	5.49E-16	3.13E-18	8.60E-18	1.29E-17	1.42E-17
Ce-133m	7.95E-14	1.73E-16	1.61E-15	1.01E-17	2.90E-17	4.60E-17	5.35E-17
Ce-134	4.20E-16	9.72E-19	2.30E-17	6.46E-20	9.27E-20	1.04E-19	1.05E-19
Ce-135	3.61E-14	7.85E-17	7.75E-16	4.85E-18	1.37E-17	2.11E-17	2.34E-17
Ce-137	8.48E-16	1.90E-18	3.25E-17	1.23E-19	2.58E-19	3.60E-19	3.88E-19
Ce-137m	1.94E-15	4.18E-18	4.97E-17	2.57E-19	6.58E-19	9.53E-19	1.01E-18
Ce-139	5.98E-15	1.32E-17	1.43E-16	8.26E-19	2.19E-18	3.03E-18	3.10E-18
Ce-141	3.13E-15	6.87E-18	6.97E-17	4.23E-19	1.13E-18	1.54E-18	1.56E-18
Ce-143	1.19E-14	2.58E-17	2.99E-16	1.61E-18	4.45E-18	6.69E-18	7.29E-18
Ce-144	7.35E-16	1.61E-18	1.73E-17	9.95E-20	2.53E-19	3.35E-19	3.38E-19
Ce-144+D	3.25E-15	6.07E-18	1.78E-16	4.65E-19	1.02E-18	1.47E-18	1.66E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Ce-144+E	3.25E-15	6.07E-18	1.78E-16	4.65E-19	1.02E-18	1.47E-18	1.66E-18
Ce-145	3.64E-14	7.87E-17	8.40E-16	4.82E-18	1.36E-17	2.11E-17	2.39E-17
Cf-244	4.32E-18	1.01E-20	7.62E-19	6.04E-22	6.09E-22	6.09E-22	6.09E-22
Cf-246	4.90E-18	1.12E-20	5.65E-19	6.61E-22	1.08E-21	1.40E-21	1.54E-21
Cf-247	3.58E-15	7.95E-18	8.45E-17	4.93E-19	1.29E-18	1.71E-18	1.73E-18
Cf-248	2.00E-17	4.40E-20	9.49E-19	2.49E-21	6.18E-21	9.60E-21	1.15E-20
Cf-249	1.43E-14	3.11E-17	3.08E-16	1.96E-18	5.57E-18	8.39E-18	9.03E-18
Cf-250	4.82E-16	1.04E-18	9.75E-18	5.79E-20	1.66E-19	2.69E-19	3.27E-19
Cf-251	4.84E-15	1.07E-17	1.07E-16	6.59E-19	1.77E-18	2.42E-18	2.47E-18
Cf-252	2.23E-14	4.81E-17	4.32E-16	2.67E-18	7.69E-18	1.25E-17	1.52E-17
Cf-253	3.15E-17	5.64E-20	2.12E-18	2.73E-21	3.31E-21	3.36E-21	3.36E-21
Cf-254	8.24E-13	1.78E-15	1.60E-14	9.89E-17	2.84E-16	4.61E-16	5.61E-16
Cf-255	1.16E-16	1.30E-19	5.78E-18	2.36E-21	4.42E-21	5.45E-21	5.54E-21
Cl-34	4.77E-14	1.02E-16	1.17E-15	6.66E-18	1.84E-17	2.81E-17	3.10E-17
Cl-34m	1.03E-13	2.24E-16	1.91E-15	1.21E-17	3.53E-17	5.76E-17	7.08E-17
Cl-36	1.66E-16	1.94E-19	1.11E-17	4.79E-21	9.54E-21	1.25E-20	1.30E-20
Cl-38	7.36E-14	1.58E-16	1.40E-15	8.52E-18	2.45E-17	4.07E-17	5.12E-17
Cl-39	6.97E-14	1.50E-16	1.42E-15	8.60E-18	2.48E-17	4.00E-17	4.77E-17
Cl-40	2.09E-13	4.53E-16	3.60E-15	2.30E-17	6.71E-17	1.13E-16	1.45E-16
Cm-238	3.05E-15	6.80E-18	6.98E-17	4.21E-19	1.08E-18	1.39E-18	1.40E-18
Cm-239	1.05E-14	2.32E-17	2.30E-16	1.44E-18	3.89E-18	5.35E-18	5.46E-18
Cm-240	4.54E-18	1.06E-20	7.49E-19	6.21E-22	7.69E-22	8.37E-22	8.43E-22
Cm-241	2.12E-14	4.63E-17	4.64E-16	2.90E-18	8.12E-18	1.21E-17	1.31E-17
Cm-242	3.90E-18	9.09E-21	6.68E-19	5.32E-22	6.29E-22	6.79E-22	6.89E-22
Cm-243	5.33E-15	1.17E-17	1.18E-16	7.29E-19	1.98E-18	2.78E-18	2.87E-18
Cm-244	4.00E-18	9.22E-21	5.85E-19	5.33E-22	7.72E-22	9.71E-22	1.07E-21
Cm-245	4.00E-15	8.90E-18	9.11E-17	5.52E-19	1.43E-18	1.87E-18	1.89E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Cm-246	1.79E-16	3.87E-19	3.87E-18	2.15E-20	6.13E-20	9.92E-20	1.21E-19
Cm-247	1.38E-14	3.01E-17	2.98E-16	1.90E-18	5.41E-18	8.18E-18	8.84E-18
Cm-247+D	1.48E-14	3.22E-17	3.21E-16	2.03E-18	5.71E-18	8.56E-18	9.22E-18
Cm-247+E	1.48E-14	3.22E-17	3.21E-16	2.03E-18	5.71E-18	8.56E-18	9.22E-18
Cm-248	6.41E-14	1.39E-16	1.25E-15	7.69E-18	2.21E-17	3.59E-17	4.37E-17
Cm-249	1.02E-15	2.04E-18	3.30E-17	1.21E-19	3.38E-19	5.19E-19	5.76E-19
Cm-250	6.52E-13	1.41E-15	1.27E-14	7.83E-17	2.25E-16	3.65E-16	4.44E-16
Cm-250+D	6.65E-13	1.44E-15	1.30E-14	7.99E-17	2.30E-16	3.72E-16	4.52E-16
Cm-250+E	6.65E-13	1.44E-15	1.30E-14	7.99E-17	2.30E-16	3.72E-16	4.52E-16
Cm-251	5.20E-15	1.10E-17	1.47E-16	6.87E-19	1.92E-18	2.92E-18	3.22E-18
Co-54m	1.85E-13	3.99E-16	3.85E-15	2.38E-17	6.80E-17	1.08E-16	1.25E-16
Co-55	9.18E-14	1.99E-16	1.92E-15	1.20E-17	3.44E-17	5.41E-17	6.18E-17
Co-56	1.76E-13	3.82E-16	3.27E-15	2.11E-17	6.12E-17	9.99E-17	1.22E-16
Co-57	4.98E-15	1.11E-17	1.09E-16	6.86E-19	1.82E-18	2.41E-18	2.44E-18
Co-58	4.44E-14	9.63E-17	9.22E-16	5.86E-18	1.68E-17	2.64E-17	3.00E-17
Co-58m	6.09E-20	1.43E-22	6.68E-21	9.36E-24	9.58E-24	9.56E-24	9.56E-24
Co-60	1.19E-13	2.58E-16	2.30E-15	1.47E-17	4.27E-17	6.91E-17	8.24E-17
Co-60m	1.94E-16	4.23E-19	4.24E-18	2.47E-20	6.59E-20	1.01E-19	1.20E-19
Co-61	4.06E-15	8.67E-18	1.36E-16	5.36E-19	1.29E-18	1.76E-18	1.92E-18
Co-62	7.92E-14	1.70E-16	1.61E-15	9.64E-18	2.76E-17	4.49E-17	5.45E-17
Co-62m	1.30E-13	2.81E-16	2.57E-15	1.59E-17	4.59E-17	7.46E-17	8.98E-17
Cr-48	1.88E-14	4.12E-17	4.05E-16	2.58E-18	7.20E-18	1.05E-17	1.10E-17
Cr-49	4.68E-14	1.02E-16	1.07E-15	6.39E-18	1.80E-17	2.73E-17	2.99E-17
Cr-51	1.40E-15	3.05E-18	2.99E-17	1.92E-19	5.47E-19	8.20E-19	8.74E-19
Cr-55	1.00E-15	1.30E-18	1.29E-16	1.69E-19	2.41E-19	2.95E-19	3.10E-19
Cr-56	3.47E-15	7.36E-18	1.48E-16	4.73E-19	1.04E-18	1.24E-18	1.24E-18
Cs-121	5.41E-14	1.16E-16	1.28E-15	7.44E-18	2.07E-17	3.17E-17	3.50E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Cs-121m	5.38E-14	1.16E-16	1.25E-15	7.37E-18	2.06E-17	3.15E-17	3.47E-17
Cs-123	4.89E-14	1.06E-16	1.13E-15	6.65E-18	1.87E-17	2.87E-17	3.19E-17
Cs-124	5.43E-14	1.16E-16	1.28E-15	7.45E-18	2.07E-17	3.18E-17	3.54E-17
Cs-125	3.37E-14	7.31E-17	7.54E-16	4.52E-18	1.28E-17	1.98E-17	2.22E-17
Cs-126	5.29E-14	1.14E-16	1.23E-15	7.22E-18	2.03E-17	3.12E-17	3.46E-17
Cs-127	1.84E-14	4.01E-17	4.08E-16	2.51E-18	7.07E-18	1.08E-17	1.18E-17
Cs-128	4.04E-14	8.71E-17	9.47E-16	5.51E-18	1.55E-17	2.38E-17	2.64E-17
Cs-129	1.12E-14	2.46E-17	2.60E-16	1.55E-18	4.32E-18	6.51E-18	7.05E-18
Cs-130	2.23E-14	4.83E-17	5.25E-16	3.04E-18	8.56E-18	1.32E-17	1.46E-17
Cs-130m	2.01E-15	4.53E-18	6.26E-17	2.86E-19	6.25E-19	7.73E-19	7.85E-19
Cs-131	2.40E-16	5.63E-19	1.80E-17	3.79E-20	4.22E-20	4.22E-20	4.22E-20
Cs-132	3.15E-14	6.85E-17	6.77E-16	4.23E-18	1.20E-17	1.88E-17	2.11E-17
Cs-134	7.07E-14	1.53E-16	1.48E-15	9.39E-18	2.69E-17	4.21E-17	4.76E-17
Cs-134m	8.00E-16	1.77E-18	2.25E-17	1.10E-19	2.65E-19	3.47E-19	3.50E-19
Cs-135	2.17E-17	2.37E-20	5.06E-20	1.87E-22	3.62E-22	4.18E-22	4.19E-22
Cs-135m	7.31E-14	1.59E-16	1.52E-15	9.61E-18	2.76E-17	4.34E-17	4.97E-17
Cs-136	9.81E-14	2.13E-16	1.99E-15	1.27E-17	3.65E-17	5.76E-17	6.63E-17
Cs-137	9.40E-17	1.05E-19	3.13E-18	2.15E-21	3.75E-21	4.57E-21	4.65E-21
Cs-137+D	2.55E-14	5.51E-17	5.48E-16	3.40E-18	9.73E-18	1.52E-17	1.71E-17
Cs-137+E	2.55E-14	5.51E-17	5.48E-16	3.40E-18	9.73E-18	1.52E-17	1.71E-17
Cs-138	1.15E-13	2.48E-16	2.26E-15	1.39E-17	4.02E-17	6.53E-17	7.92E-17
Cs-138m	1.92E-14	4.14E-17	4.07E-16	2.43E-18	6.90E-18	1.09E-17	1.28E-17
Cs-139	1.66E-14	3.45E-17	4.33E-16	2.07E-18	5.58E-18	8.99E-18	1.10E-17
Cs-140	8.89E-14	1.91E-16	1.74E-15	1.06E-17	3.03E-17	4.95E-17	6.10E-17
Cu-57	5.65E-14	1.19E-16	1.36E-15	7.89E-18	2.15E-17	3.29E-17	3.67E-17
Cu-59	6.68E-14	1.44E-16	1.52E-15	8.99E-18	2.53E-17	3.93E-17	4.42E-17
Cu-60	1.88E-13	4.06E-16	3.65E-15	2.30E-17	6.64E-17	1.07E-16	1.29E-16

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Cu-61	3.70E-14	8.02E-17	8.15E-16	5.00E-18	1.42E-17	2.20E-17	2.43E-17
Cu-62	4.60E-14	9.90E-17	1.11E-15	6.33E-18	1.77E-17	2.72E-17	3.00E-17
Cu-64	8.29E-15	1.80E-17	1.78E-16	1.12E-18	3.19E-18	4.92E-18	5.44E-18
Cu-66	5.50E-15	1.11E-17	2.15E-16	7.40E-19	1.90E-18	2.94E-18	3.41E-18
Cu-67	4.91E-15	1.08E-17	1.05E-16	6.66E-19	1.82E-18	2.54E-18	2.61E-18
Cu-69	2.53E-14	5.41E-17	5.97E-16	3.27E-18	9.24E-18	1.46E-17	1.70E-17
Dy-148	3.15E-14	6.85E-17	6.81E-16	4.25E-18	1.20E-17	1.86E-17	2.08E-17
Dy-149	7.52E-14	1.63E-16	1.49E-15	9.42E-18	2.69E-17	4.31E-17	5.10E-17
Dy-150	1.18E-14	2.57E-17	2.63E-16	1.63E-18	4.53E-18	6.80E-18	7.35E-18
Dy-151	6.28E-14	1.36E-16	1.27E-15	8.04E-18	2.30E-17	3.64E-17	4.23E-17
Dy-152	1.18E-14	2.59E-17	2.64E-16	1.62E-18	4.46E-18	6.49E-18	6.81E-18
Dy-153	3.82E-14	8.34E-17	8.05E-16	4.97E-18	1.39E-17	2.15E-17	2.46E-17
Dy-154	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-155	2.96E-14	6.45E-17	6.18E-16	3.86E-18	1.09E-17	1.68E-17	1.91E-17
Dy-157	1.44E-14	3.15E-17	3.24E-16	1.99E-18	5.50E-18	8.14E-18	8.68E-18
Dy-159	1.00E-15	2.32E-18	3.91E-17	1.53E-19	2.37E-19	2.42E-19	2.42E-19
Dy-165	1.39E-15	2.73E-18	6.94E-17	1.72E-19	4.28E-19	6.21E-19	6.78E-19
Dy-165m	7.08E-16	1.55E-18	1.71E-17	9.67E-20	2.50E-19	3.57E-19	3.83E-19
Dy-166	1.31E-15	2.91E-18	3.76E-17	1.84E-19	3.75E-19	4.48E-19	4.57E-19
Dy-167	2.40E-14	5.17E-17	5.81E-16	3.24E-18	9.10E-18	1.38E-17	1.52E-17
Dy-168	1.73E-14	3.74E-17	4.01E-16	2.34E-18	6.55E-18	9.86E-18	1.07E-17
Er-154	2.24E-15	5.00E-18	6.72E-17	3.20E-19	7.24E-19	9.93E-19	1.07E-18
Er-156	1.72E-15	3.89E-18	5.67E-17	2.52E-19	4.98E-19	6.12E-19	6.31E-19
Er-159	4.36E-14	9.47E-17	8.98E-16	5.64E-18	1.60E-17	2.52E-17	2.90E-17
Er-161	4.46E-14	9.70E-17	9.25E-16	5.81E-18	1.65E-17	2.59E-17	2.98E-17
Er-163	9.82E-16	2.26E-18	3.47E-17	1.48E-19	2.47E-19	2.63E-19	2.67E-19
Er-165	9.01E-16	2.08E-18	3.25E-17	1.36E-19	2.21E-19	2.27E-19	2.27E-19

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Er-167m	4.03E-15	8.83E-18	8.81E-17	5.49E-19	1.50E-18	2.15E-18	2.22E-18
Er-169	2.95E-17	3.24E-20	6.98E-20	2.79E-22	5.69E-22	6.76E-22	6.79E-22
Er-171	1.61E-14	3.50E-17	3.77E-16	2.19E-18	6.08E-18	8.92E-18	9.47E-18
Er-172	2.24E-14	4.88E-17	4.90E-16	3.05E-18	8.54E-18	1.30E-17	1.43E-17
Er-173	3.73E-14	8.08E-17	8.47E-16	4.94E-18	1.38E-17	2.10E-17	2.35E-17
Es-249	1.77E-14	3.86E-17	3.80E-16	2.39E-18	6.68E-18	9.98E-18	1.09E-17
Es-250	5.25E-14	1.14E-16	1.12E-15	6.99E-18	1.97E-17	3.01E-17	3.35E-17
Es-250m	2.49E-14	5.42E-17	5.08E-16	3.20E-18	9.10E-18	1.42E-17	1.64E-17
Es-251	3.58E-15	7.96E-18	8.31E-17	4.93E-19	1.29E-18	1.70E-18	1.71E-18
Es-253	1.50E-17	3.30E-20	5.00E-19	2.06E-21	5.42E-21	7.93E-21	8.50E-21
Es-254	1.47E-16	3.33E-19	8.85E-18	2.08E-20	4.30E-20	5.57E-20	5.79E-20
Es-254+D	4.19E-14	9.06E-17	8.61E-16	5.36E-18	1.54E-17	2.46E-17	2.86E-17
Es-254+E	4.19E-14	9.06E-17	8.61E-16	5.36E-18	1.54E-17	2.46E-17	2.86E-17
Es-254m	2.13E-14	4.61E-17	4.59E-16	2.84E-18	8.11E-18	1.27E-17	1.42E-17
Es-255	4.95E-17	8.96E-20	6.83E-19	4.13E-21	1.18E-20	1.89E-20	2.30E-20
Es-256	4.33E-16	5.29E-19	6.66E-17	4.83E-20	6.58E-20	7.69E-20	7.88E-20
Eu-142	5.78E-14	1.23E-16	1.36E-15	7.91E-18	2.18E-17	3.37E-17	3.79E-17
Eu-142m	1.58E-13	3.42E-16	3.40E-15	2.10E-17	5.97E-17	9.35E-17	1.06E-16
Eu-143	5.26E-14	1.13E-16	1.18E-15	6.97E-18	1.96E-17	3.06E-17	3.49E-17
Eu-144	5.18E-14	1.11E-16	1.21E-15	7.04E-18	1.95E-17	3.02E-17	3.40E-17
Eu-145	5.95E-14	1.29E-16	1.18E-15	7.45E-18	2.14E-17	3.43E-17	4.06E-17
Eu-146	1.11E-13	2.40E-16	2.24E-15	1.42E-17	4.08E-17	6.47E-17	7.51E-17
Eu-147	2.03E-14	4.42E-17	4.38E-16	2.68E-18	7.46E-18	1.15E-17	1.29E-17
Eu-148	1.01E-13	2.19E-16	2.10E-15	1.33E-17	3.80E-17	5.95E-17	6.76E-17
Eu-149	2.03E-15	4.53E-18	5.85E-17	2.89E-19	6.88E-19	9.67E-19	1.03E-18
Eu-150	6.92E-14	1.51E-16	1.47E-15	9.27E-18	2.64E-17	4.08E-17	4.55E-17
Eu-150m	2.33E-15	4.88E-18	7.01E-17	2.96E-19	8.19E-19	1.25E-18	1.39E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Eu-152	5.38E-14	1.17E-16	1.09E-15	6.88E-18	1.97E-17	3.11E-17	3.61E-17
Eu-152m	1.37E-14	2.94E-17	3.36E-16	1.79E-18	5.00E-18	7.84E-18	9.01E-18
Eu-152n	2.63E-15	5.92E-18	6.50E-17	3.70E-19	8.66E-19	1.05E-18	1.05E-18
Eu-154	5.78E-14	1.25E-16	1.17E-15	7.39E-18	2.12E-17	3.36E-17	3.90E-17
Eu-154m	2.15E-15	4.87E-18	5.98E-17	3.07E-19	6.67E-19	7.89E-19	7.89E-19
Eu-155	2.17E-15	4.87E-18	5.39E-17	3.05E-19	7.14E-19	8.74E-19	8.74E-19
Eu-156	5.94E-14	1.28E-16	1.16E-15	7.22E-18	2.09E-17	3.39E-17	4.09E-17
Eu-157	1.23E-14	2.67E-17	3.05E-16	1.68E-18	4.58E-18	6.85E-18	7.47E-18
Eu-158	6.14E-14	1.32E-16	1.30E-15	7.75E-18	2.22E-17	3.54E-17	4.17E-17
Eu-159	1.32E-14	2.83E-17	3.80E-16	1.77E-18	4.64E-18	6.98E-18	7.87E-18
F-17	4.60E-14	9.95E-17	1.07E-15	6.28E-18	1.78E-17	2.73E-17	3.01E-17
F-18	4.41E-14	9.58E-17	9.49E-16	6.01E-18	1.71E-17	2.64E-17	2.91E-17
Fe-52	3.28E-14	7.13E-17	7.10E-16	4.46E-18	1.26E-17	1.91E-17	2.08E-17
Fe-53	5.35E-14	1.15E-16	1.25E-15	7.31E-18	2.06E-17	3.16E-17	3.49E-17
Fe-53m	1.44E-13	3.12E-16	2.81E-15	1.80E-17	5.21E-17	8.39E-17	9.93E-17
Fe-55	6.69E-24	1.49E-26	1.45E-25	9.22E-28	2.45E-27	3.26E-27	3.29E-27
Fe-59	5.62E-14	1.22E-16	1.10E-15	7.02E-18	2.03E-17	3.27E-17	3.87E-17
Fe-60	6.93E-18	7.59E-21	2.29E-20	6.97E-23	1.19E-22	1.30E-22	1.30E-22
Fe-60+D	1.19E-13	2.58E-16	2.30E-15	1.47E-17	4.27E-17	6.90E-17	8.23E-17
Fe-60+E	1.19E-13	2.58E-16	2.30E-15	1.47E-17	4.27E-17	6.90E-17	8.23E-17
Fe-61	6.68E-14	1.44E-16	1.40E-15	8.35E-18	2.39E-17	3.84E-17	4.55E-17
Fe-62	2.32E-14	4.98E-17	5.85E-16	3.17E-18	8.90E-18	1.36E-17	1.50E-17
Fm-251	6.35E-15	1.40E-17	1.40E-16	8.61E-19	2.34E-18	3.35E-18	3.57E-18
Fm-252	1.71E-17	3.78E-20	8.98E-19	2.17E-21	5.08E-21	7.69E-21	9.09E-21
Fm-253	2.32E-15	5.15E-18	5.61E-17	3.19E-19	8.38E-19	1.12E-18	1.14E-18
Fm-254	3.47E-16	7.50E-19	7.25E-18	4.16E-20	1.19E-19	1.92E-19	2.34E-19
Fm-255	9.47E-17	2.16E-19	7.16E-18	1.34E-20	2.44E-20	2.86E-20	2.88E-20

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Fm-256	6.07E-13	1.31E-15	1.17E-14	7.27E-17	2.10E-16	3.40E-16	4.13E-16
Fm-257	6.02E-15	1.32E-17	1.32E-16	7.99E-19	2.18E-18	3.11E-18	3.33E-18
Fr-212	5.26E-14	1.14E-16	1.05E-15	6.68E-18	1.91E-17	3.02E-17	3.51E-17
Fr-219	1.57E-16	3.41E-19	3.37E-18	2.15E-20	6.07E-20	9.11E-20	9.83E-20
Fr-220	3.52E-16	7.85E-19	8.45E-18	4.89E-20	1.21E-19	1.55E-19	1.57E-19
Fr-220+D	4.47E-16	9.96E-19	1.06E-17	6.21E-20	1.54E-19	1.98E-19	2.01E-19
Fr-220+E	4.47E-16	9.96E-19	1.06E-17	6.21E-20	1.54E-19	1.98E-19	2.01E-19
Fr-221	1.25E-15	2.75E-18	2.69E-17	1.71E-19	4.78E-19	6.86E-19	7.13E-19
Fr-221+D	1.26E-15	2.77E-18	2.71E-17	1.72E-19	4.82E-19	6.92E-19	7.19E-19
Fr-221+E	1.26E-15	2.77E-18	2.71E-17	1.72E-19	4.82E-19	6.92E-19	7.19E-19
Fr-222	8.17E-15	1.74E-17	2.36E-16	1.09E-18	2.97E-18	4.33E-18	4.64E-18
Fr-223	2.15E-15	4.55E-18	7.73E-17	2.82E-19	6.67E-19	8.94E-19	9.41E-19
Fr-224	2.62E-14	5.63E-17	6.00E-16	3.34E-18	9.42E-18	1.48E-17	1.72E-17
Fr-227	2.00E-14	4.32E-17	5.03E-16	2.70E-18	7.40E-18	1.11E-17	1.22E-17
Ga-64	1.64E-13	3.55E-16	3.18E-15	1.99E-17	5.72E-17	9.26E-17	1.12E-16
Ga-65	5.23E-14	1.13E-16	1.20E-15	7.10E-18	2.00E-17	3.06E-17	3.38E-17
Ga-66	1.24E-13	2.69E-16	2.26E-15	1.43E-17	4.15E-17	6.83E-17	8.52E-17
Ga-67	6.57E-15	1.45E-17	1.43E-16	9.03E-19	2.47E-18	3.52E-18	3.68E-18
Ga-68	4.29E-14	9.27E-17	9.97E-16	5.84E-18	1.65E-17	2.55E-17	2.81E-17
Ga-70	8.27E-16	1.32E-18	8.45E-17	1.01E-19	2.03E-19	2.90E-19	3.24E-19
Ga-72	1.31E-13	2.83E-16	2.48E-15	1.58E-17	4.57E-17	7.45E-17	9.05E-17
Ga-73	1.56E-14	3.37E-17	3.71E-16	2.10E-18	5.94E-18	8.92E-18	9.61E-18
Ga-74	1.55E-13	3.35E-16	2.90E-15	1.83E-17	5.30E-17	8.70E-17	1.07E-16
Gd-142	4.78E-14	1.03E-16	1.06E-15	6.33E-18	1.79E-17	2.79E-17	3.16E-17
Gd-143m	9.77E-14	2.11E-16	2.10E-15	1.28E-17	3.63E-17	5.68E-17	6.47E-17
Gd-144	4.25E-14	9.19E-17	8.98E-16	5.40E-18	1.53E-17	2.43E-17	2.84E-17
Gd-145	1.18E-13	2.55E-16	2.19E-15	1.39E-17	4.04E-17	6.63E-17	8.17E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Gd-145m	3.08E-14	6.67E-17	6.67E-16	4.11E-18	1.17E-17	1.83E-17	2.06E-17
Gd-146	8.74E-15	1.95E-17	2.24E-16	1.23E-18	2.97E-18	3.87E-18	3.91E-18
Gd-147	6.29E-14	1.37E-16	1.31E-15	8.29E-18	2.36E-17	3.66E-17	4.14E-17
Gd-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-149	2.24E-14	4.89E-17	4.94E-16	3.04E-18	8.43E-18	1.26E-17	1.38E-17
Gd-150	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-151	2.15E-15	4.81E-18	6.17E-17	3.06E-19	7.09E-19	9.51E-19	9.82E-19
Gd-152	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-153	3.11E-15	7.05E-18	9.21E-17	4.48E-19	9.50E-19	1.14E-18	1.14E-18
Gd-159	2.35E-15	4.95E-18	6.97E-17	3.08E-19	8.24E-19	1.21E-18	1.30E-18
Gd-162	1.86E-14	4.02E-17	4.18E-16	2.53E-18	7.19E-18	1.09E-17	1.19E-17
Ge-66	2.97E-14	6.46E-17	6.41E-16	4.02E-18	1.14E-17	1.73E-17	1.90E-17
Ge-67	6.54E-14	1.41E-16	1.47E-15	8.74E-18	2.47E-17	3.80E-17	4.26E-17
Ge-68	8.87E-20	2.05E-22	3.61E-20	6.05E-24	6.05E-24	6.05E-24	6.05E-24
Ge-68+D	4.29E-14	9.27E-17	9.97E-16	5.84E-18	1.65E-17	2.55E-17	2.81E-17
Ge-68+E	4.29E-14	9.27E-17	9.97E-16	5.84E-18	1.65E-17	2.55E-17	2.81E-17
Ge-69	4.38E-14	9.49E-17	8.99E-16	5.67E-18	1.63E-17	2.58E-17	2.97E-17
Ge-71	9.00E-20	2.08E-22	3.66E-20	6.14E-24	6.14E-24	6.14E-24	6.14E-24
Ge-75	1.83E-15	3.71E-18	7.30E-17	2.31E-19	6.29E-19	9.22E-19	9.72E-19
Ge-77	4.95E-14	1.07E-16	1.08E-15	6.51E-18	1.85E-17	2.87E-17	3.22E-17
Ge-78	1.23E-14	2.68E-17	2.66E-16	1.67E-18	4.77E-18	7.08E-18	7.47E-18
H-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-167	2.73E-14	5.91E-17	6.39E-16	3.76E-18	1.05E-17	1.58E-17	1.72E-17
Hf-169	2.78E-14	6.05E-17	6.22E-16	3.81E-18	1.06E-17	1.62E-17	1.77E-17
Hf-170	1.83E-14	4.01E-17	4.09E-16	2.51E-18	6.81E-18	1.01E-17	1.10E-17
Hf-172	3.09E-15	7.02E-18	8.91E-17	4.47E-19	9.20E-19	1.07E-18	1.07E-18
Hf-172+D	3.09E-15	7.02E-18	8.91E-17	4.47E-19	9.20E-19	1.07E-18	1.07E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Hf-172+E	3.09E-15	7.02E-18	8.91E-17	4.47E-19	9.20E-19	1.07E-18	1.07E-18
Hf-173	1.62E-14	3.57E-17	3.63E-16	2.23E-18	5.93E-18	8.39E-18	8.84E-18
Hf-174	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-175	1.47E-14	3.22E-17	3.29E-16	2.03E-18	5.56E-18	8.18E-18	8.73E-18
Hf-177m	9.84E-14	2.15E-16	2.13E-15	1.35E-17	3.77E-17	5.56E-17	5.91E-17
Hf-178m	9.78E-14	2.13E-16	2.11E-15	1.34E-17	3.77E-17	5.68E-17	6.15E-17
Hf-179m	3.92E-14	8.59E-17	8.60E-16	5.40E-18	1.50E-17	2.21E-17	2.37E-17
Hf-180m	4.27E-14	9.33E-17	9.29E-16	5.86E-18	1.64E-17	2.45E-17	2.63E-17
Hf-181	2.32E-14	5.05E-17	5.02E-16	3.17E-18	8.90E-18	1.34E-17	1.45E-17
Hf-182	1.04E-14	2.27E-17	2.23E-16	1.42E-18	4.00E-18	5.87E-18	6.17E-18
Hf-182+D	7.02E-14	1.53E-16	1.41E-15	8.97E-18	2.55E-17	4.01E-17	4.63E-17
Hf-182+E	7.02E-14	1.53E-16	1.41E-15	8.97E-18	2.55E-17	4.01E-17	4.63E-17
Hf-182m	3.99E-14	8.69E-17	8.59E-16	5.38E-18	1.51E-17	2.28E-17	2.51E-17
Hf-183	3.50E-14	7.58E-17	7.73E-16	4.63E-18	1.31E-17	2.03E-17	2.29E-17
Hf-184	9.88E-15	2.15E-17	2.36E-16	1.34E-18	3.66E-18	5.24E-18	5.50E-18
Hg-190	7.74E-15	1.72E-17	1.77E-16	1.07E-18	2.73E-18	3.58E-18	3.65E-18
Hg-191m	6.73E-14	1.46E-16	1.38E-15	8.77E-18	2.49E-17	3.87E-17	4.40E-17
Hg-192	1.10E-14	2.44E-17	2.47E-16	1.52E-18	4.07E-18	5.71E-18	5.96E-18
Hg-193	3.81E-14	8.29E-17	7.65E-16	4.85E-18	1.37E-17	2.16E-17	2.51E-17
Hg-193+D	3.84E-14	8.35E-17	7.71E-16	4.89E-18	1.38E-17	2.18E-17	2.53E-17
Hg-193+E	3.84E-14	8.35E-17	7.71E-16	4.89E-18	1.38E-17	2.18E-17	2.53E-17
Hg-193m	4.67E-14	1.01E-16	9.48E-16	6.02E-18	1.71E-17	2.69E-17	3.10E-17
Hg-194	4.49E-19	1.04E-21	1.62E-19	4.11E-23	4.11E-23	4.11E-23	4.11E-23
Hg-194+D	4.81E-14	1.05E-16	9.45E-16	6.03E-18	1.72E-17	2.73E-17	3.20E-17
Hg-194+E	4.81E-14	1.05E-16	9.45E-16	6.03E-18	1.72E-17	2.73E-17	3.20E-17
Hg-195	8.23E-15	1.81E-17	1.81E-16	1.10E-18	2.95E-18	4.34E-18	4.85E-18
Hg-195m	8.37E-15	1.83E-17	1.83E-16	1.14E-18	3.13E-18	4.58E-18	4.93E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Hg-197	2.39E-15	5.41E-18	6.09E-17	3.39E-19	7.41E-19	8.50E-19	8.51E-19
Hg-197m	3.75E-15	8.28E-18	8.38E-17	5.12E-19	1.32E-18	1.75E-18	1.79E-18
Hg-199m	7.53E-15	1.65E-17	1.64E-16	1.02E-18	2.70E-18	3.74E-18	3.88E-18
Hg-203	1.04E-14	2.27E-17	2.22E-16	1.42E-18	4.01E-18	5.91E-18	6.24E-18
Hg-205	6.19E-16	9.63E-19	6.56E-17	7.07E-20	1.40E-19	1.87E-19	1.94E-19
Hg-206	5.56E-15	1.19E-17	1.49E-16	7.42E-19	2.07E-18	3.07E-18	3.28E-18
Hg-207	1.28E-13	2.77E-16	2.49E-15	1.56E-17	4.50E-17	7.29E-17	8.78E-17
Ho-150	8.73E-14	1.88E-16	1.97E-15	1.18E-17	3.33E-17	5.16E-17	5.79E-17
Ho-153	4.61E-14	9.99E-17	1.03E-15	6.20E-18	1.75E-17	2.69E-17	2.99E-17
Ho-153m	4.72E-14	1.02E-16	1.07E-15	6.42E-18	1.80E-17	2.74E-17	3.02E-17
Ho-154	8.63E-14	1.87E-16	1.88E-15	1.15E-17	3.25E-17	5.05E-17	5.70E-17
Ho-154m	1.09E-13	2.37E-16	2.37E-15	1.47E-17	4.19E-17	6.45E-17	7.16E-17
Ho-155	2.71E-14	5.89E-17	5.89E-16	3.57E-18	9.98E-18	1.54E-17	1.73E-17
Ho-156	9.78E-14	2.12E-16	2.00E-15	1.25E-17	3.55E-17	5.61E-17	6.51E-17
Ho-157	2.46E-14	5.38E-17	5.45E-16	3.31E-18	9.12E-18	1.38E-17	1.52E-17
Ho-159	1.52E-14	3.36E-17	3.52E-16	2.09E-18	5.51E-18	7.91E-18	8.47E-18
Ho-160	7.64E-14	1.66E-16	1.59E-15	1.00E-17	2.86E-17	4.48E-17	5.12E-17
Ho-161	1.33E-15	3.06E-18	4.84E-17	1.98E-19	3.52E-19	3.90E-19	3.92E-19
Ho-162	6.54E-15	1.43E-17	1.51E-16	8.61E-19	2.27E-18	3.44E-18	3.95E-18
Ho-162m	2.48E-14	5.40E-17	5.15E-16	3.20E-18	8.96E-18	1.40E-17	1.61E-17
Ho-163	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-164	8.04E-16	1.76E-18	3.36E-17	1.12E-19	1.92E-19	2.04E-19	2.04E-19
Ho-164m	1.06E-15	2.44E-18	3.86E-17	1.60E-19	2.60E-19	2.68E-19	2.68E-19
Ho-166	1.75E-15	3.34E-18	1.06E-16	2.24E-19	5.07E-19	7.37E-19	8.51E-19
Ho-166m	7.29E-14	1.59E-16	1.53E-15	9.72E-18	2.77E-17	4.28E-17	4.80E-17
Ho-167	1.60E-14	3.48E-17	3.52E-16	2.18E-18	6.16E-18	9.20E-18	9.84E-18
Ho-168	4.06E-14	8.74E-17	9.17E-16	5.32E-18	1.51E-17	2.37E-17	2.71E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Ho-168m	1.50E-16	3.46E-19	5.42E-18	2.27E-20	3.69E-20	3.79E-20	3.79E-20
Ho-170	7.83E-14	1.69E-16	1.68E-15	1.02E-17	2.90E-17	4.54E-17	5.20E-17
I-118	9.38E-14	2.02E-16	2.08E-15	1.26E-17	3.54E-17	5.52E-17	6.24E-17
I-118m	1.71E-13	3.71E-16	3.67E-15	2.28E-17	6.49E-17	1.02E-16	1.15E-16
I-119	4.06E-14	8.79E-17	9.21E-16	5.51E-18	1.56E-17	2.38E-17	2.61E-17
I-120	1.28E-13	2.76E-16	2.52E-15	1.57E-17	4.52E-17	7.27E-17	8.70E-17
I-120m	1.63E-13	3.53E-16	3.39E-15	2.11E-17	6.06E-17	9.56E-17	1.10E-16
I-121	1.69E-14	3.70E-17	3.75E-16	2.30E-18	6.48E-18	9.71E-18	1.05E-17
I-122	4.39E-14	9.45E-17	1.04E-15	6.00E-18	1.68E-17	2.59E-17	2.87E-17
I-123	6.55E-15	1.45E-17	1.54E-16	9.00E-19	2.43E-18	3.40E-18	3.51E-18
I-124	5.11E-14	1.11E-16	1.05E-15	6.57E-18	1.88E-17	2.99E-17	3.46E-17
I-125	3.78E-16	8.88E-19	3.19E-17	5.94E-20	6.43E-20	6.42E-20	6.42E-20
I-126	1.92E-14	4.17E-17	4.23E-16	2.59E-18	7.36E-18	1.14E-17	1.26E-17
I-128	3.55E-15	7.16E-18	1.54E-16	4.90E-19	1.26E-18	1.89E-18	2.07E-18
I-129	2.86E-16	6.68E-19	1.99E-17	4.47E-20	5.19E-20	5.19E-20	5.19E-20
I-130	9.68E-14	2.10E-16	2.05E-15	1.29E-17	3.70E-17	5.77E-17	6.49E-17
I-130m	4.88E-15	1.05E-17	1.20E-16	6.57E-19	1.84E-18	2.84E-18	3.19E-18
I-131	1.70E-14	3.69E-17	3.65E-16	2.31E-18	6.58E-18	9.97E-18	1.08E-17
I-132	1.04E-13	2.26E-16	2.18E-15	1.36E-17	3.91E-17	6.16E-17	7.05E-17
I-132m	1.50E-14	3.26E-17	3.27E-16	2.01E-18	5.71E-18	8.86E-18	9.93E-18
I-133	2.78E-14	6.02E-17	6.22E-16	3.72E-18	1.06E-17	1.65E-17	1.84E-17
I-134	1.21E-13	2.61E-16	2.49E-15	1.55E-17	4.46E-17	7.08E-17	8.21E-17
I-134m	1.19E-14	2.60E-17	2.69E-16	1.62E-18	4.53E-18	6.74E-18	7.21E-18
I-135	7.57E-14	1.64E-16	1.47E-15	9.28E-18	2.69E-17	4.36E-17	5.23E-17
In-103	1.30E-13	2.82E-16	2.67E-15	1.65E-17	4.71E-17	7.49E-17	8.78E-17
In-105	8.97E-14	1.94E-16	1.90E-15	1.16E-17	3.31E-17	5.19E-17	5.98E-17
In-106	1.63E-13	3.53E-16	3.47E-15	2.16E-17	6.15E-17	9.65E-17	1.10E-16

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
In-106m	1.35E-13	2.92E-16	2.73E-15	1.69E-17	4.83E-17	7.74E-17	9.16E-17
In-107	7.18E-14	1.56E-16	1.43E-15	8.96E-18	2.58E-17	4.12E-17	4.85E-17
In-108	1.81E-13	3.93E-16	3.66E-15	2.33E-17	6.69E-17	1.06E-16	1.23E-16
In-108m	1.35E-13	2.92E-16	2.52E-15	1.59E-17	4.62E-17	7.54E-17	9.24E-17
In-109	2.86E-14	6.23E-17	5.94E-16	3.74E-18	1.07E-17	1.65E-17	1.87E-17
In-109m	2.74E-14	5.95E-17	5.86E-16	3.68E-18	1.05E-17	1.64E-17	1.84E-17
In-110	1.41E-13	3.06E-16	2.92E-15	1.85E-17	5.31E-17	8.38E-17	9.59E-17
In-110m	7.26E-14	1.57E-16	1.55E-15	9.49E-18	2.71E-17	4.26E-17	4.87E-17
In-111	1.69E-14	3.70E-17	3.69E-16	2.31E-18	6.46E-18	9.32E-18	9.69E-18
In-111m	2.10E-14	4.55E-17	4.56E-16	2.85E-18	8.12E-18	1.25E-17	1.39E-17
In-112	1.19E-14	2.56E-17	2.74E-16	1.61E-18	4.55E-18	7.02E-18	7.76E-18
In-112m	9.86E-16	2.15E-18	2.80E-17	1.32E-19	3.40E-19	4.67E-19	4.76E-19
In-113m	1.13E-14	2.46E-17	2.46E-16	1.55E-18	4.40E-18	6.67E-18	7.21E-18
In-114	7.27E-16	9.87E-19	9.64E-17	1.00E-19	1.57E-19	2.01E-19	2.17E-19
In-114m	3.26E-15	7.07E-18	7.28E-17	4.35E-19	1.22E-18	1.83E-18	1.99E-18
In-114m+D	3.96E-15	8.02E-18	1.66E-16	5.32E-19	1.37E-18	2.02E-18	2.20E-18
In-114m+E	3.96E-15	8.02E-18	1.66E-16	5.32E-19	1.37E-18	2.02E-18	2.20E-18
In-115	6.60E-17	7.29E-20	3.74E-19	7.08E-22	1.54E-21	1.91E-21	1.93E-21
In-115m	6.94E-15	1.50E-17	1.52E-16	9.41E-19	2.67E-18	4.01E-18	4.28E-18
In-116m	1.18E-13	2.55E-16	2.27E-15	1.45E-17	4.20E-17	6.79E-17	8.13E-17
In-117	3.08E-14	6.69E-17	6.65E-16	4.17E-18	1.18E-17	1.79E-17	1.96E-17
In-117m	4.08E-15	8.63E-18	1.25E-16	5.50E-19	1.50E-18	2.18E-18	2.30E-18
In-118	5.72E-15	1.08E-17	2.52E-16	8.58E-19	1.93E-18	2.91E-18	3.36E-18
In-118m	1.31E-13	2.83E-16	2.65E-15	1.65E-17	4.76E-17	7.62E-17	8.97E-17
In-119	3.54E-14	7.63E-17	7.99E-16	4.67E-18	1.33E-17	2.09E-17	2.37E-17
In-119m	3.89E-15	7.63E-18	1.77E-16	5.31E-19	1.31E-18	2.00E-18	2.30E-18
In-121	4.36E-14	9.37E-17	9.89E-16	5.69E-18	1.61E-17	2.55E-17	2.93E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
In-121m	3.92E-15	7.29E-18	2.12E-16	5.92E-19	1.23E-18	1.77E-18	2.03E-18
Ir-180	7.24E-14	1.56E-16	1.62E-15	9.81E-18	2.75E-17	4.22E-17	4.70E-17
Ir-182	6.42E-14	1.39E-16	1.42E-15	8.60E-18	2.42E-17	3.71E-17	4.15E-17
Ir-183	5.48E-14	1.19E-16	1.09E-15	6.88E-18	1.96E-17	3.09E-17	3.64E-17
Ir-184	9.01E-14	1.96E-16	1.84E-15	1.16E-17	3.30E-17	5.18E-17	5.97E-17
Ir-185	3.95E-14	8.59E-17	7.67E-16	4.86E-18	1.38E-17	2.19E-17	2.62E-17
Ir-186	7.63E-14	1.66E-16	1.53E-15	9.75E-18	2.78E-17	4.35E-17	5.03E-17
Ir-186m	5.81E-14	1.26E-16	1.15E-15	7.32E-18	2.09E-17	3.32E-17	3.90E-17
Ir-187	1.40E-14	3.07E-17	3.06E-16	1.88E-18	5.14E-18	7.73E-18	8.65E-18
Ir-188	1.01E-13	2.19E-16	1.86E-15	1.20E-17	3.47E-17	5.66E-17	6.94E-17
Ir-189	2.67E-15	5.99E-18	6.74E-17	3.77E-19	8.67E-19	1.09E-18	1.11E-18
Ir-190	6.51E-14	1.42E-16	1.40E-15	8.83E-18	2.50E-17	3.81E-17	4.19E-17
Ir-190m	1.14E-19	2.65E-22	4.43E-20	9.03E-24	9.03E-24	9.03E-24	9.03E-24
Ir-190n	1.82E-15	4.12E-18	4.87E-17	2.60E-19	5.52E-19	6.37E-19	6.41E-19
Ir-191m	2.66E-15	5.96E-18	6.40E-17	3.72E-19	8.86E-19	1.10E-18	1.11E-18
Ir-192	3.61E-14	7.86E-17	7.75E-16	4.93E-18	1.40E-17	2.12E-17	2.29E-17
Ir-192m	2.68E-18	5.92E-21	2.13E-19	3.48E-22	8.41E-22	1.17E-21	1.24E-21
Ir-192n	6.65E-17	9.60E-20	8.49E-19	3.02E-21	6.75E-21	8.14E-21	8.21E-21
Ir-193m	1.04E-17	2.32E-20	3.18E-19	1.43E-21	2.96E-21	3.29E-21	3.29E-21
Ir-194	4.77E-15	9.74E-18	1.81E-16	6.43E-19	1.69E-18	2.56E-18	2.83E-18
Ir-194m	1.04E-13	2.26E-16	2.22E-15	1.41E-17	4.03E-17	6.18E-17	6.81E-17
Ir-195	2.20E-15	4.72E-18	7.38E-17	2.91E-19	6.54E-19	7.85E-19	7.90E-19
Ir-195m	1.63E-14	3.56E-17	3.60E-16	2.22E-18	6.20E-18	9.27E-18	1.00E-17
Ir-196	1.16E-14	2.42E-17	3.48E-16	1.58E-18	4.26E-18	6.52E-18	7.30E-18
Ir-196m	1.10E-13	2.39E-16	2.36E-15	1.49E-17	4.25E-17	6.52E-17	7.19E-17
K-38	1.56E-13	3.36E-16	2.97E-15	1.86E-17	5.38E-17	8.77E-17	1.07E-16
K-40	7.94E-15	1.68E-17	2.04E-16	9.52E-19	2.71E-18	4.40E-18	5.34E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
K-42	1.49E-14	3.11E-17	4.00E-16	1.88E-18	5.10E-18	8.21E-18	9.94E-18
K-43	4.33E-14	9.39E-17	9.35E-16	5.85E-18	1.67E-17	2.57E-17	2.83E-17
K-44	1.19E-13	2.57E-16	2.23E-15	1.39E-17	4.02E-17	6.63E-17	8.25E-17
K-45	9.05E-14	1.95E-16	1.74E-15	1.07E-17	3.09E-17	5.05E-17	6.21E-17
K-46	1.47E-13	3.17E-16	2.66E-15	1.66E-17	4.81E-17	8.01E-17	1.02E-16
Kr-74	4.70E-14	1.02E-16	1.07E-15	6.41E-18	1.80E-17	2.74E-17	2.99E-17
Kr-75	5.85E-14	1.26E-16	1.37E-15	7.99E-18	2.23E-17	3.39E-17	3.75E-17
Kr-76	1.83E-14	4.00E-17	3.96E-16	2.51E-18	7.10E-18	1.07E-17	1.15E-17
Kr-76+D	1.83E-14	4.00E-17	3.96E-16	2.51E-18	7.10E-18	1.07E-17	1.15E-17
Kr-76+E	1.83E-14	4.00E-17	3.96E-16	2.51E-18	7.10E-18	1.07E-17	1.15E-17
Kr-77	4.63E-14	1.00E-16	1.06E-15	6.32E-18	1.78E-17	2.68E-17	2.93E-17
Kr-79	1.11E-14	2.42E-17	2.37E-16	1.50E-18	4.29E-18	6.56E-18	7.21E-18
Kr-81	3.82E-17	8.39E-20	1.57E-18	5.13E-21	1.43E-20	2.10E-20	2.22E-20
Kr-81m	5.57E-15	1.22E-17	1.18E-16	7.58E-19	2.12E-18	3.03E-18	3.13E-18
Kr-83m	1.10E-18	2.57E-21	3.26E-19	1.20E-22	1.25E-22	1.25E-22	1.25E-22
Kr-85	2.41E-16	3.75E-19	1.05E-17	1.67E-20	4.44E-20	6.67E-20	7.29E-20
Kr-85m	6.85E-15	1.49E-17	1.56E-16	9.24E-19	2.55E-18	3.60E-18	3.71E-18
Kr-87	3.97E-14	8.51E-17	8.38E-16	4.79E-18	1.36E-17	2.20E-17	2.68E-17
Kr-88	9.71E-14	2.10E-16	1.72E-15	1.11E-17	3.25E-17	5.39E-17	6.76E-17
Kr-89	9.56E-14	2.06E-16	1.84E-15	1.13E-17	3.26E-17	5.33E-17	6.54E-17
La-128	1.30E-13	2.82E-16	2.79E-15	1.72E-17	4.89E-17	7.64E-17	8.68E-17
La-129	4.11E-14	8.90E-17	9.41E-16	5.58E-18	1.57E-17	2.41E-17	2.65E-17
La-130	1.03E-13	2.23E-16	2.20E-15	1.35E-17	3.85E-17	6.03E-17	6.88E-17
La-131	2.88E-14	6.26E-17	6.44E-16	3.90E-18	1.10E-17	1.67E-17	1.84E-17
La-132	9.34E-14	2.02E-16	1.89E-15	1.18E-17	3.39E-17	5.39E-17	6.31E-17
La-132m	2.95E-14	6.42E-17	6.36E-16	3.96E-18	1.12E-17	1.71E-17	1.91E-17
La-133	6.39E-15	1.39E-17	1.51E-16	8.67E-19	2.40E-18	3.67E-18	4.06E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
La-134	3.26E-14	7.02E-17	7.73E-16	4.44E-18	1.25E-17	1.92E-17	2.13E-17
La-135	7.73E-16	1.73E-18	3.05E-17	1.12E-19	2.35E-19	3.30E-19	3.59E-19
La-136	1.79E-14	3.86E-17	4.22E-16	2.43E-18	6.84E-18	1.05E-17	1.16E-17
La-137	3.07E-16	7.20E-19	2.01E-17	4.84E-20	5.72E-20	5.73E-20	5.73E-20
La-138	5.82E-14	1.26E-16	1.12E-15	7.18E-18	2.08E-17	3.36E-17	4.03E-17
La-140	1.11E-13	2.39E-16	2.15E-15	1.35E-17	3.92E-17	6.35E-17	7.63E-17
La-141	2.14E-15	3.86E-18	1.40E-16	2.95E-19	6.46E-19	9.71E-19	1.14E-18
La-142	1.19E-13	2.56E-16	2.16E-15	1.36E-17	3.96E-17	6.56E-17	8.22E-17
La-143	1.39E-14	2.91E-17	3.76E-16	1.76E-18	4.77E-18	7.64E-18	9.19E-18
Lu-165	5.02E-14	1.09E-16	1.06E-15	6.49E-18	1.83E-17	2.84E-17	3.27E-17
Lu-167	7.94E-14	1.72E-16	1.53E-15	9.73E-18	2.80E-17	4.50E-17	5.39E-17
Lu-169	6.07E-14	1.32E-16	1.20E-15	7.62E-18	2.17E-17	3.46E-17	4.08E-17
Lu-169m	2.52E-20	5.83E-23	9.37E-21	1.95E-24	1.99E-24	1.99E-24	1.99E-24
Lu-170	1.25E-13	2.71E-16	2.26E-15	1.46E-17	4.23E-17	6.96E-17	8.64E-17
Lu-171	2.79E-14	6.09E-17	6.07E-16	3.74E-18	1.04E-17	1.60E-17	1.80E-17
Lu-171m	9.86E-18	2.24E-20	2.89E-19	1.42E-21	2.82E-21	3.09E-21	3.09E-21
Lu-172	8.96E-14	1.94E-16	1.82E-15	1.15E-17	3.28E-17	5.19E-17	6.02E-17
Lu-172m	3.90E-20	9.04E-23	4.55E-21	5.36E-24	7.40E-24	7.43E-24	7.43E-24
Lu-173	6.47E-15	1.44E-17	1.64E-16	9.14E-19	2.19E-18	2.95E-18	3.08E-18
Lu-174	4.46E-15	9.84E-18	1.03E-16	5.87E-19	1.48E-18	2.18E-18	2.52E-18
Lu-174m	1.78E-15	4.04E-18	5.20E-17	2.57E-19	5.17E-19	6.17E-19	6.46E-19
Lu-176	2.07E-14	4.52E-17	4.47E-16	2.82E-18	7.91E-18	1.16E-17	1.22E-17
Lu-176m	7.71E-16	1.41E-18	5.62E-17	9.01E-20	1.80E-19	2.11E-19	2.12E-19
Lu-177	1.50E-15	3.25E-18	3.21E-17	1.99E-19	5.39E-19	7.54E-19	7.77E-19
Lu-177m	4.23E-14	9.29E-17	9.27E-16	5.82E-18	1.61E-17	2.34E-17	2.47E-17
Lu-178	6.44E-15	1.34E-17	2.00E-16	8.06E-19	2.18E-18	3.45E-18	4.09E-18
Lu-178m	4.53E-14	9.89E-17	1.01E-15	6.21E-18	1.73E-17	2.56E-17	2.74E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Lu-179	1.63E-15	3.23E-18	7.96E-17	2.06E-19	5.36E-19	7.68E-19	8.04E-19
Lu-180	7.09E-14	1.53E-16	1.46E-15	8.98E-18	2.57E-17	4.09E-17	4.78E-17
Lu-181	2.58E-14	5.57E-17	6.29E-16	3.48E-18	9.69E-18	1.48E-17	1.64E-17
Mg-27	4.16E-14	8.98E-17	9.25E-16	5.41E-18	1.54E-17	2.44E-17	2.81E-17
Mg-28	6.38E-14	1.38E-16	1.26E-15	8.01E-18	2.31E-17	3.70E-17	4.37E-17
Mn-50m	2.18E-13	4.71E-16	4.47E-15	2.79E-17	7.99E-17	1.27E-16	1.48E-16
Mn-51	4.52E-14	9.76E-17	1.07E-15	6.18E-18	1.75E-17	2.68E-17	2.95E-17
Mn-52	1.62E-13	3.51E-16	3.21E-15	2.05E-17	5.92E-17	9.47E-17	1.11E-16
Mn-52m	1.13E-13	2.45E-16	2.36E-15	1.45E-17	4.15E-17	6.60E-17	7.70E-17
Mn-53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn-54	3.83E-14	8.30E-17	7.89E-16	5.02E-18	1.44E-17	2.27E-17	2.60E-17
Mn-56	8.17E-14	1.76E-16	1.62E-15	1.00E-17	2.88E-17	4.67E-17	5.63E-17
Mn-57	5.30E-15	1.07E-17	2.17E-16	7.35E-19	1.84E-18	2.75E-18	3.07E-18
Mn-58m	1.15E-13	2.47E-16	2.36E-15	1.44E-17	4.12E-17	6.61E-17	7.84E-17
Mo-101	6.97E-14	1.51E-16	1.40E-15	8.70E-18	2.51E-17	4.02E-17	4.75E-17
Mo-102	1.02E-15	2.01E-18	4.41E-17	1.20E-19	3.21E-19	4.55E-19	4.70E-19
Mo-89	5.70E-14	1.22E-16	1.34E-15	7.78E-18	2.17E-17	3.35E-17	3.74E-17
Mo-90	3.66E-14	7.98E-17	7.83E-16	4.90E-18	1.39E-17	2.10E-17	2.32E-17
Mo-91	4.50E-14	9.66E-17	1.08E-15	6.20E-18	1.73E-17	2.65E-17	2.93E-17
Mo-91m	6.45E-14	1.40E-16	1.36E-15	8.35E-18	2.39E-17	3.78E-17	4.37E-17
Mo-93	1.70E-17	3.99E-20	3.83E-18	2.20E-21	2.19E-21	2.19E-21	2.19E-21
Mo-93m	1.09E-13	2.36E-16	2.13E-15	1.37E-17	3.95E-17	6.33E-17	7.48E-17
Mo-99	6.92E-15	1.48E-17	1.77E-16	9.06E-19	2.56E-18	3.95E-18	4.43E-18
N-13	4.57E-14	9.91E-17	1.03E-15	6.23E-18	1.77E-17	2.72E-17	3.00E-17
N-16	2.59E-13	5.63E-16	3.44E-15	2.28E-17	6.73E-17	1.19E-16	1.73E-16
Na-22	1.02E-13	2.20E-16	2.05E-15	1.31E-17	3.76E-17	5.97E-17	6.90E-17
Na-24	2.08E-13	4.51E-16	3.59E-15	2.31E-17	6.79E-17	1.14E-16	1.46E-16

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Nb-87	5.54E-14	1.19E-16	1.32E-15	7.67E-18	2.13E-17	3.22E-17	3.51E-17
Nb-88	1.94E-13	4.20E-16	4.11E-15	2.55E-17	7.28E-17	1.14E-16	1.31E-16
Nb-88m	1.91E-13	4.13E-16	3.99E-15	2.48E-17	7.09E-17	1.12E-16	1.29E-16
Nb-89	6.51E-14	1.40E-16	1.37E-15	8.22E-18	2.34E-17	3.73E-17	4.38E-17
Nb-89m	5.88E-14	1.27E-16	1.34E-15	8.02E-18	2.27E-17	3.50E-17	3.86E-17
Nb-90	2.05E-13	4.44E-16	3.78E-15	2.42E-17	7.04E-17	1.15E-16	1.41E-16
Nb-91	8.45E-17	1.86E-19	4.74E-18	1.14E-20	2.94E-20	4.44E-20	4.88E-20
Nb-91m	1.20E-15	2.59E-18	2.62E-17	1.49E-19	4.26E-19	6.83E-19	8.09E-19
Nb-92	6.83E-14	1.48E-16	1.42E-15	9.00E-18	2.58E-17	4.06E-17	4.62E-17
Nb-92m	4.44E-14	9.63E-17	9.03E-16	5.73E-18	1.65E-17	2.62E-17	3.03E-17
Nb-93m	3.04E-18	7.13E-21	6.83E-19	3.92E-22	3.91E-22	3.91E-22	3.91E-22
Nb-94	7.13E-14	1.55E-16	1.48E-15	9.38E-18	2.69E-17	4.24E-17	4.83E-17
Nb-94m	2.15E-16	4.67E-19	6.97E-18	2.80E-20	7.73E-20	1.21E-19	1.39E-19
Nb-95	3.49E-14	7.56E-17	7.26E-16	4.61E-18	1.32E-17	2.08E-17	2.36E-17
Nb-95m	2.83E-15	6.10E-18	6.25E-17	3.75E-19	1.06E-18	1.55E-18	1.62E-18
Nb-96	1.13E-13	2.45E-16	2.33E-15	1.48E-17	4.24E-17	6.69E-17	7.67E-17
Nb-97	3.04E-14	6.56E-17	6.82E-16	4.05E-18	1.16E-17	1.80E-17	2.03E-17
Nb-98m	1.32E-13	2.86E-16	2.71E-15	1.68E-17	4.84E-17	7.72E-17	9.01E-17
Nb-99	8.32E-15	1.72E-17	3.08E-16	1.22E-18	2.90E-18	3.82E-18	3.88E-18
Nb-99m	3.86E-14	8.26E-17	8.03E-16	4.57E-18	1.29E-17	2.12E-17	2.63E-17
Nd-134	2.32E-14	5.06E-17	5.25E-16	3.16E-18	8.80E-18	1.32E-17	1.43E-17
Nd-135	5.63E-14	1.22E-16	1.30E-15	7.67E-18	2.15E-17	3.28E-17	3.62E-17
Nd-136	1.10E-14	2.41E-17	2.59E-16	1.50E-18	4.03E-18	6.01E-18	6.61E-18
Nd-137	5.33E-14	1.16E-16	1.13E-15	6.94E-18	1.97E-17	3.09E-17	3.54E-17
Nd-138	1.08E-15	2.44E-18	3.80E-17	1.57E-19	3.37E-19	4.55E-19	4.78E-19
Nd-139	1.95E-14	4.22E-17	4.43E-16	2.62E-18	7.36E-18	1.14E-17	1.28E-17
Nd-139m	7.19E-14	1.56E-16	1.48E-15	9.31E-18	2.66E-17	4.19E-17	4.82E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Nd-140	4.44E-16	1.04E-18	2.39E-17	6.93E-20	8.95E-20	8.98E-20	8.98E-20
Nd-141	2.64E-15	5.79E-18	6.94E-17	3.56E-19	9.13E-19	1.38E-18	1.56E-18
Nd-141m	3.16E-14	6.85E-17	6.68E-16	4.19E-18	1.20E-17	1.88E-17	2.14E-17
Nd-144	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-147	5.74E-15	1.25E-17	1.40E-16	7.77E-19	2.08E-18	3.05E-18	3.31E-18
Nd-149	1.63E-14	3.53E-17	3.94E-16	2.20E-18	6.13E-18	9.10E-18	9.78E-18
Nd-151	3.93E-14	8.49E-17	8.56E-16	5.08E-18	1.44E-17	2.25E-17	2.57E-17
Nd-152	7.29E-15	1.57E-17	1.75E-16	9.81E-19	2.77E-18	4.11E-18	4.36E-18
Ne-19	4.63E-14	9.98E-17	1.09E-15	6.33E-18	1.79E-17	2.74E-17	3.02E-17
Ne-24	2.48E-14	5.33E-17	6.15E-16	3.38E-18	9.50E-18	1.46E-17	1.61E-17
Ni-56	7.82E-14	1.70E-16	1.61E-15	1.03E-17	2.94E-17	4.58E-17	5.19E-17
Ni-57	9.19E-14	1.99E-16	1.78E-15	1.14E-17	3.29E-17	5.30E-17	6.31E-17
Ni-59	6.92E-19	1.50E-21	1.48E-20	9.44E-23	2.69E-22	4.14E-22	4.57E-22
Ni-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-65	2.72E-14	5.83E-17	5.77E-16	3.34E-18	9.58E-18	1.55E-17	1.86E-17
Ni-66	1.36E-17	1.48E-20	3.45E-20	1.20E-22	2.24E-22	2.54E-22	2.55E-22
Np-232	5.35E-14	1.16E-16	1.12E-15	7.07E-18	2.01E-17	3.11E-17	3.50E-17
Np-233	3.38E-15	7.52E-18	7.72E-17	4.67E-19	1.19E-18	1.55E-18	1.57E-18
Np-234	5.23E-14	1.13E-16	9.99E-16	6.39E-18	1.84E-17	2.97E-17	3.57E-17
Np-235	2.84E-17	6.43E-20	2.16E-18	3.88E-21	8.21E-21	1.01E-20	1.01E-20
Np-235+D	2.84E-17	6.43E-20	2.16E-18	3.88E-21	8.21E-21	1.01E-20	1.01E-20
Np-235+E	2.84E-17	6.43E-20	2.16E-18	3.88E-21	8.21E-21	1.01E-20	1.01E-20
Np-236	5.57E-15	1.23E-17	1.28E-16	7.64E-19	2.00E-18	2.65E-18	2.68E-18
Np-236m	1.90E-15	4.18E-18	4.32E-17	2.58E-19	6.63E-19	8.78E-19	9.04E-19
Np-237	8.60E-16	1.93E-18	2.44E-17	1.20E-19	2.86E-19	3.58E-19	3.59E-19
Np-237+D	1.01E-14	2.22E-17	2.26E-16	1.39E-18	3.82E-18	5.52E-18	5.81E-18
Np-237+E	1.01E-14	2.22E-17	2.26E-16	1.39E-18	3.82E-18	5.52E-18	5.81E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Np-238	2.72E-14	5.88E-17	5.63E-16	3.48E-18	1.00E-17	1.59E-17	1.85E-17
Np-239	7.35E-15	1.62E-17	1.62E-16	1.00E-18	2.71E-18	3.76E-18	3.88E-18
Np-240	4.73E-14	1.03E-16	1.00E-15	6.22E-18	1.77E-17	2.76E-17	3.13E-17
Np-240m	1.49E-14	3.20E-17	3.75E-16	1.97E-18	5.55E-18	8.66E-18	9.82E-18
Np-241	1.79E-15	3.67E-18	7.28E-17	2.28E-19	5.76E-19	7.74E-19	7.96E-19
Np-242	1.33E-14	2.82E-17	3.44E-16	1.68E-18	4.67E-18	7.48E-18	8.90E-18
Np-242m	4.16E-14	8.99E-17	9.19E-16	5.45E-18	1.55E-17	2.43E-17	2.76E-17
O-14	1.63E-13	3.52E-16	3.03E-15	1.91E-17	5.56E-17	9.11E-17	1.12E-16
O-15	4.60E-14	9.95E-17	1.07E-15	6.28E-18	1.78E-17	2.73E-17	3.01E-17
O-19	4.60E-14	9.83E-17	1.03E-15	5.87E-18	1.64E-17	2.59E-17	3.04E-17
Os-180	4.67E-15	1.03E-17	1.12E-16	6.47E-19	1.63E-18	2.30E-18	2.48E-18
Os-181	6.31E-14	1.37E-16	1.27E-15	8.06E-18	2.29E-17	3.60E-17	4.17E-17
Os-182	1.82E-14	3.98E-17	4.02E-16	2.50E-18	6.88E-18	1.02E-17	1.10E-17
Os-183	2.66E-14	5.83E-17	5.83E-16	3.62E-18	9.93E-18	1.47E-17	1.61E-17
Os-183m	4.63E-14	1.00E-16	9.31E-16	5.89E-18	1.68E-17	2.67E-17	3.12E-17
Os-185	3.06E-14	6.65E-17	6.54E-16	4.10E-18	1.16E-17	1.79E-17	2.01E-17
Os-186	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Os-189m	1.03E-19	2.38E-22	4.03E-20	7.80E-24	7.82E-24	7.82E-24	7.82E-24
Os-190m	7.04E-14	1.53E-16	1.51E-15	9.58E-18	2.72E-17	4.16E-17	4.56E-17
Os-191	2.95E-15	6.62E-18	7.11E-17	4.14E-19	9.84E-19	1.22E-18	1.23E-18
Os-191m	1.82E-16	4.15E-19	5.04E-18	2.63E-20	5.33E-20	5.87E-20	5.87E-20
Os-193	3.03E-15	6.41E-18	9.02E-17	3.99E-19	1.07E-18	1.56E-18	1.68E-18
Os-194	5.09E-17	1.18E-19	2.21E-18	7.79E-21	1.16E-20	1.18E-20	1.18E-20
Os-194+D	4.82E-15	9.86E-18	1.83E-16	6.51E-19	1.70E-18	2.57E-18	2.84E-18
Os-194+E	4.82E-15	9.86E-18	1.83E-16	6.51E-19	1.70E-18	2.57E-18	2.84E-18
Os-196	3.64E-15	7.73E-18	1.05E-16	4.82E-19	1.31E-18	1.91E-18	2.05E-18
P-30	4.69E-14	1.01E-16	1.13E-15	6.47E-18	1.81E-17	2.77E-17	3.05E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
P-32	5.36E-16	6.45E-19	8.52E-17	6.64E-20	9.05E-20	1.06E-19	1.09E-19
P-33	1.44E-17	1.57E-20	3.64E-20	1.27E-22	2.36E-22	2.68E-22	2.69E-22
Pa-227	7.18E-16	1.61E-18	1.80E-17	1.01E-19	2.38E-19	2.92E-19	2.92E-19
Pa-228	6.21E-14	1.35E-16	1.26E-15	8.01E-18	2.29E-17	3.59E-17	4.13E-17
Pa-229	2.33E-15	5.22E-18	5.46E-17	3.24E-19	8.02E-19	1.00E-18	1.00E-18
Pa-230	2.99E-14	6.50E-17	6.22E-16	3.93E-18	1.11E-17	1.73E-17	1.97E-17
Pa-231	1.45E-15	3.18E-18	3.47E-17	2.00E-19	5.53E-19	8.13E-19	8.61E-19
Pa-232	4.26E-14	9.25E-17	8.80E-16	5.58E-18	1.60E-17	2.51E-17	2.87E-17
Pa-233	9.27E-15	2.03E-17	2.02E-16	1.27E-18	3.53E-18	5.16E-18	5.45E-18
Pa-234	6.67E-14	1.45E-16	1.38E-15	8.67E-18	2.48E-17	3.88E-17	4.43E-17
Pa-234m	1.42E-15	2.45E-18	1.12E-16	1.94E-19	4.10E-19	5.96E-19	6.73E-19
Pa-235	3.35E-16	3.93E-19	5.05E-17	2.98E-20	4.15E-20	4.87E-20	4.98E-20
Pa-236	4.36E-14	9.38E-17	9.20E-16	5.43E-18	1.56E-17	2.50E-17	2.96E-17
Pa-237	2.82E-14	6.07E-17	6.40E-16	3.71E-18	1.06E-17	1.66E-17	1.88E-17
Pb-194	4.94E-14	1.07E-16	9.95E-16	6.31E-18	1.79E-17	2.81E-17	3.26E-17
Pb-195m	7.40E-14	1.61E-16	1.57E-15	9.88E-18	2.80E-17	4.33E-17	4.84E-17
Pb-196	2.10E-14	4.60E-17	4.58E-16	2.87E-18	7.91E-18	1.17E-17	1.27E-17
Pb-197	7.14E-14	1.55E-16	1.40E-15	8.95E-18	2.57E-17	4.08E-17	4.81E-17
Pb-197m	5.22E-14	1.14E-16	1.10E-15	6.95E-18	1.97E-17	3.02E-17	3.37E-17
Pb-198	1.86E-14	4.07E-17	4.05E-16	2.54E-18	6.99E-18	1.03E-17	1.10E-17
Pb-199	4.79E-14	1.04E-16	9.54E-16	6.06E-18	1.73E-17	2.73E-17	3.19E-17
Pb-200	8.16E-15	1.81E-17	1.85E-16	1.13E-18	2.92E-18	3.95E-18	4.08E-18
Pb-201	3.34E-14	7.28E-17	7.05E-16	4.46E-18	1.25E-17	1.91E-17	2.13E-17
Pb-201m	1.63E-14	3.54E-17	3.79E-16	2.19E-18	6.18E-18	9.52E-18	1.06E-17
Pb-202	4.85E-19	1.12E-21	1.88E-19	3.81E-23	3.81E-23	3.81E-23	3.81E-23
Pb-202+D	1.97E-14	4.32E-17	4.33E-16	2.72E-18	7.55E-18	1.13E-17	1.23E-17
Pb-202+E	1.97E-14	4.32E-17	4.33E-16	2.72E-18	7.55E-18	1.13E-17	1.23E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Pb-202m	9.06E-14	1.97E-16	1.89E-15	1.20E-17	3.43E-17	5.36E-17	6.08E-17
Pb-203	1.31E-14	2.88E-17	2.87E-16	1.80E-18	4.92E-18	7.07E-18	7.45E-18
Pb-204m	9.45E-14	2.05E-16	1.96E-15	1.24E-17	3.55E-17	5.58E-17	6.37E-17
Pb-205	4.92E-19	1.14E-21	1.90E-19	3.86E-23	3.86E-23	3.86E-23	3.86E-23
Pb-209	1.00E-16	1.12E-19	3.19E-18	1.58E-21	3.19E-21	3.97E-21	4.03E-21
Pb-210	4.71E-17	1.09E-19	2.17E-18	7.12E-21	1.10E-20	1.12E-20	1.12E-20
Pb-211	3.22E-15	6.68E-18	1.08E-16	4.15E-19	1.14E-18	1.76E-18	1.97E-18
Pb-212	6.11E-15	1.34E-17	1.32E-16	8.32E-19	2.28E-18	3.24E-18	3.38E-18
Pb-214	1.11E-14	2.41E-17	2.43E-16	1.50E-18	4.23E-18	6.29E-18	6.73E-18
Pd-100	3.64E-15	8.19E-18	9.98E-17	5.11E-19	1.17E-18	1.41E-18	1.41E-18
Pd-101	1.48E-14	3.22E-17	3.21E-16	1.97E-18	5.61E-18	8.69E-18	9.73E-18
Pd-103	5.29E-17	1.24E-19	7.66E-18	7.60E-21	8.84E-21	9.78E-21	1.00E-20
Pd-107	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-109	4.20E-16	6.88E-19	3.72E-17	3.86E-20	7.58E-20	9.42E-20	9.64E-20
Pd-109m	4.59E-15	1.01E-17	1.00E-16	6.24E-19	1.74E-18	2.48E-18	2.56E-18
Pd-111	2.89E-15	5.62E-18	1.46E-16	3.86E-19	9.54E-19	1.45E-18	1.66E-18
Pd-112	2.68E-17	4.33E-20	2.22E-18	1.67E-21	1.78E-21	1.82E-21	1.82E-21
Pd-114	1.49E-15	2.89E-18	8.36E-17	1.89E-19	4.76E-19	6.72E-19	7.00E-19
Pd-96	6.51E-14	1.41E-16	1.38E-15	8.59E-18	2.45E-17	3.82E-17	4.32E-17
Pd-97	1.12E-13	2.43E-16	2.26E-15	1.41E-17	4.06E-17	6.46E-17	7.60E-17
Pd-98	1.76E-14	3.85E-17	3.82E-16	2.36E-18	6.60E-18	9.96E-18	1.11E-17
Pd-99	5.88E-14	1.28E-16	1.24E-15	7.62E-18	2.17E-17	3.39E-17	3.88E-17
Pm-136	1.25E-13	2.69E-16	2.77E-15	1.69E-17	4.77E-17	7.38E-17	8.24E-17
Pm-137m	8.01E-14	1.74E-16	1.79E-15	1.08E-17	3.04E-17	4.66E-17	5.18E-17
Pm-139	4.29E-14	9.24E-17	9.99E-16	5.83E-18	1.63E-17	2.52E-17	2.81E-17
Pm-140	4.93E-14	1.05E-16	1.18E-15	6.82E-18	1.89E-17	2.90E-17	3.22E-17
Pm-140m	1.39E-13	3.01E-16	2.97E-15	1.84E-17	5.24E-17	8.20E-17	9.32E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Pm-141	3.35E-14	7.24E-17	7.60E-16	4.46E-18	1.26E-17	1.96E-17	2.21E-17
Pm-142	3.95E-14	8.48E-17	9.46E-16	5.42E-18	1.51E-17	2.32E-17	2.58E-17
Pm-143	1.35E-14	2.93E-17	2.97E-16	1.80E-18	5.04E-18	7.86E-18	8.90E-18
Pm-144	6.95E-14	1.51E-16	1.49E-15	9.36E-18	2.67E-17	4.14E-17	4.64E-17
Pm-145	5.50E-16	1.28E-18	2.64E-17	8.47E-20	1.20E-19	1.22E-19	1.22E-19
Pm-146	3.33E-14	7.23E-17	7.17E-16	4.48E-18	1.27E-17	1.97E-17	2.20E-17
Pm-147	8.66E-18	9.64E-21	2.81E-20	1.01E-22	1.97E-22	2.30E-22	2.31E-22
Pm-148	2.76E-14	5.93E-17	6.11E-16	3.48E-18	9.93E-18	1.59E-17	1.87E-17
Pm-148m	8.99E-14	1.95E-16	1.90E-15	1.20E-17	3.44E-17	5.35E-17	6.01E-17
Pm-149	7.60E-16	1.41E-18	4.14E-17	8.46E-20	2.23E-19	3.29E-19	3.53E-19
Pm-150	6.97E-14	1.50E-16	1.44E-15	8.78E-18	2.52E-17	4.02E-17	4.72E-17
Pm-151	1.44E-14	3.12E-17	3.25E-16	1.94E-18	5.44E-18	8.16E-18	8.85E-18
Pm-152	1.45E-14	3.04E-17	4.04E-16	1.91E-18	5.13E-18	8.00E-18	9.30E-18
Pm-152m	7.07E-14	1.53E-16	1.50E-15	9.04E-18	2.58E-17	4.05E-17	4.68E-17
Pm-153	3.40E-15	7.02E-18	1.48E-16	4.63E-19	1.12E-18	1.51E-18	1.56E-18
Pm-154	8.73E-14	1.88E-16	1.70E-15	1.04E-17	3.02E-17	4.93E-17	6.02E-17
Pm-154m	8.50E-14	1.84E-16	1.75E-15	1.06E-17	3.04E-17	4.85E-17	5.73E-17
Po-203	7.55E-14	1.64E-16	1.52E-15	9.61E-18	2.75E-17	4.35E-17	5.07E-17
Po-204	5.16E-14	1.12E-16	1.08E-15	6.80E-18	1.91E-17	2.94E-17	3.32E-17
Po-205	7.31E-14	1.59E-16	1.47E-15	9.33E-18	2.67E-17	4.22E-17	4.92E-17
Po-206	5.33E-14	1.16E-16	1.11E-15	7.04E-18	2.00E-17	3.09E-17	3.49E-17
Po-207	5.86E-14	1.27E-16	1.20E-15	7.59E-18	2.16E-17	3.40E-17	3.92E-17
Po-208	9.36E-19	2.04E-21	2.00E-20	1.26E-22	3.55E-22	5.41E-22	6.00E-22
Po-209	2.76E-16	6.01E-19	5.77E-18	3.65E-20	1.03E-19	1.58E-19	1.78E-19
Po-210	4.45E-19	9.65E-22	9.22E-21	5.86E-23	1.68E-22	2.64E-22	3.02E-22
Po-211	3.73E-16	8.08E-19	7.76E-18	4.92E-20	1.41E-19	2.21E-19	2.52E-19
Po-212	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Po-212m	3.99E-15	8.65E-18	6.76E-17	4.43E-19	1.30E-18	2.18E-18	2.79E-18
Po-213	1.71E-18	3.71E-21	3.57E-20	2.26E-22	6.47E-22	1.02E-21	1.16E-21
Po-214	3.80E-18	8.23E-21	7.87E-20	5.00E-22	1.43E-21	2.26E-21	2.57E-21
Po-215	7.80E-18	1.70E-20	1.68E-19	1.07E-21	3.05E-21	4.64E-21	5.06E-21
Po-216	7.00E-19	1.52E-21	1.45E-20	9.21E-23	2.64E-22	4.16E-22	4.75E-22
Po-218	2.62E-21	2.86E-24	6.65E-24	2.32E-26	4.34E-26	4.94E-26	4.94E-26
Pr-134	1.44E-13	3.12E-16	3.08E-15	1.91E-17	5.43E-17	8.47E-17	9.57E-17
Pr-134m	1.08E-13	2.34E-16	2.29E-15	1.40E-17	3.99E-17	6.29E-17	7.27E-17
Pr-135	3.89E-14	8.42E-17	8.87E-16	5.24E-18	1.47E-17	2.26E-17	2.52E-17
Pr-136	9.95E-14	2.15E-16	2.08E-15	1.28E-17	3.67E-17	5.80E-17	6.69E-17
Pr-137	1.62E-14	3.50E-17	3.71E-16	2.17E-18	6.09E-18	9.42E-18	1.06E-17
Pr-138	3.73E-14	8.02E-17	9.00E-16	5.14E-18	1.43E-17	2.20E-17	2.43E-17
Pr-138m	1.13E-13	2.45E-16	2.35E-15	1.48E-17	4.23E-17	6.65E-17	7.60E-17
Pr-139	5.10E-15	1.11E-17	1.24E-16	6.87E-19	1.87E-18	2.87E-18	3.21E-18
Pr-140	2.44E-14	5.27E-17	5.86E-16	3.34E-18	9.37E-18	1.44E-17	1.59E-17
Pr-142	3.49E-15	6.94E-18	1.47E-16	4.37E-19	1.12E-18	1.78E-18	2.15E-18
Pr-142m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-143	1.95E-16	2.22E-19	2.08E-17	8.24E-21	1.28E-20	1.54E-20	1.57E-20
Pr-144	2.51E-15	4.45E-18	1.61E-16	3.65E-19	7.66E-19	1.13E-18	1.32E-18
Pr-144m	2.52E-16	5.76E-19	1.09E-17	3.70E-20	6.34E-20	8.04E-20	8.84E-20
Pr-145	1.37E-15	2.46E-18	9.87E-17	1.76E-19	4.05E-19	6.02E-19	6.79E-19
Pr-146	4.92E-14	1.06E-16	1.06E-15	6.17E-18	1.75E-17	2.81E-17	3.33E-17
Pr-147	2.18E-14	4.69E-17	5.50E-16	2.88E-18	7.91E-18	1.22E-17	1.38E-17
Pr-148	4.83E-14	1.03E-16	1.07E-15	6.16E-18	1.73E-17	2.75E-17	3.22E-17
Pr-148m	4.37E-14	9.36E-17	1.05E-15	5.95E-18	1.66E-17	2.54E-17	2.82E-17
Pt-184	3.02E-14	6.63E-17	6.68E-16	4.13E-18	1.12E-17	1.64E-17	1.77E-17
Pt-186	2.99E-14	6.51E-17	6.43E-16	4.02E-18	1.13E-17	1.72E-17	1.92E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Pt-187	2.66E-14	5.81E-17	5.77E-16	3.56E-18	9.81E-18	1.48E-17	1.64E-17
Pt-188	8.04E-15	1.78E-17	1.84E-16	1.11E-18	2.90E-18	4.02E-18	4.20E-18
Pt-189	2.06E-14	4.51E-17	4.49E-16	2.77E-18	7.57E-18	1.13E-17	1.26E-17
Pt-190	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt-191	1.18E-14	2.60E-17	2.70E-16	1.63E-18	4.30E-18	6.14E-18	6.59E-18
Pt-193	2.83E-19	6.57E-22	1.07E-19	2.34E-23	2.34E-23	2.34E-23	2.34E-23
Pt-193m	3.68E-16	8.04E-19	9.06E-18	4.89E-20	1.04E-19	1.17E-19	1.17E-19
Pt-195m	2.45E-15	5.52E-18	6.20E-17	3.44E-19	7.62E-19	8.90E-19	8.91E-19
Pt-197	9.91E-16	2.10E-18	2.42E-17	1.26E-19	3.07E-19	3.90E-19	3.97E-19
Pt-197m	3.26E-15	7.05E-18	7.27E-17	4.34E-19	1.12E-18	1.55E-18	1.63E-18
Pt-199	9.23E-15	1.97E-17	2.46E-16	1.24E-18	3.46E-18	5.27E-18	5.80E-18
Pt-200	2.33E-15	5.09E-18	5.40E-17	3.14E-19	7.92E-19	1.05E-18	1.08E-18
Pt-202	5.03E-16	6.05E-19	7.79E-17	6.21E-20	8.48E-20	9.96E-20	1.02E-19
Pt-202+D	9.40E-15	1.91E-17	3.59E-16	1.25E-18	3.26E-18	5.04E-18	5.77E-18
Pt-202+E	9.40E-15	1.91E-17	3.59E-16	1.25E-18	3.26E-18	5.04E-18	5.77E-18
Pu-232	2.31E-15	5.16E-18	5.31E-17	3.20E-19	8.10E-19	1.03E-18	1.03E-18
Pu-234	2.50E-15	5.58E-18	5.77E-17	3.46E-19	8.76E-19	1.12E-18	1.12E-18
Pu-235	3.46E-15	7.70E-18	7.98E-17	4.77E-19	1.22E-18	1.60E-18	1.63E-18
Pu-236	4.33E-18	1.00E-20	6.69E-19	5.85E-22	8.15E-22	9.10E-22	9.21E-22
Pu-237	1.79E-15	4.00E-18	4.27E-17	2.48E-19	6.21E-19	7.88E-19	7.89E-19
Pu-238	3.36E-18	7.81E-21	5.99E-19	4.48E-22	5.54E-22	5.94E-22	5.95E-22
Pu-239	3.77E-18	8.51E-21	3.06E-19	5.17E-22	1.08E-21	1.43E-21	1.48E-21
Pu-239+D	3.77E-18	8.51E-21	3.06E-19	5.17E-22	1.08E-21	1.43E-21	1.48E-21
Pu-239+E	3.77E-18	8.51E-21	3.06E-19	5.17E-22	1.08E-21	1.43E-21	1.48E-21
Pu-240	3.29E-18	7.66E-21	5.68E-19	4.41E-22	5.56E-22	6.00E-22	6.05E-22
Pu-241	6.15E-20	1.37E-22	1.43E-21	8.49E-24	2.16E-23	2.79E-23	2.80E-23
Pu-242	6.43E-18	1.43E-20	5.56E-19	8.07E-22	1.72E-21	2.56E-21	3.02E-21

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Pu-243	9.65E-16	2.08E-18	2.27E-17	1.26E-19	3.02E-19	3.77E-19	3.83E-19
Pu-244	9.70E-16	2.09E-18	1.92E-17	1.16E-19	3.34E-19	5.42E-19	6.59E-19
Pu-244+D	1.61E-14	3.46E-17	4.00E-16	2.12E-18	5.96E-18	9.30E-18	1.06E-17
Pu-244+E	1.61E-14	3.46E-17	4.00E-16	2.12E-18	5.96E-18	9.30E-18	1.06E-17
Pu-245	1.81E-14	3.92E-17	3.91E-16	2.40E-18	6.81E-18	1.04E-17	1.16E-17
Pu-246	5.43E-15	1.20E-17	1.25E-16	7.48E-19	1.98E-18	2.73E-18	2.80E-18
Ra-219	7.37E-15	1.61E-17	1.59E-16	1.01E-18	2.83E-18	4.19E-18	4.47E-18
Ra-219+D	7.37E-15	1.61E-17	1.59E-16	1.01E-18	2.83E-18	4.19E-18	4.47E-18
Ra-219+E	7.37E-15	1.61E-17	1.59E-16	1.01E-18	2.83E-18	4.19E-18	4.47E-18
Ra-220	2.07E-16	4.51E-19	4.46E-18	2.84E-20	8.08E-20	1.24E-19	1.35E-19
Ra-221	1.47E-15	3.24E-18	3.27E-17	2.01E-19	5.30E-19	7.13E-19	7.26E-19
Ra-221+D	1.47E-15	3.24E-18	3.27E-17	2.01E-19	5.31E-19	7.14E-19	7.27E-19
Ra-221+E	1.47E-15	3.24E-18	3.27E-17	2.01E-19	5.31E-19	7.14E-19	7.27E-19
Ra-222	4.04E-16	8.81E-19	8.65E-18	5.54E-20	1.58E-19	2.36E-19	2.52E-19
Ra-223	5.74E-15	1.27E-17	1.27E-16	7.90E-19	2.12E-18	2.97E-18	3.10E-18
Ra-223+D	8.31E-15	1.83E-17	1.82E-16	1.14E-18	3.12E-18	4.46E-18	4.70E-18
Ra-223+E	8.31E-15	1.83E-17	1.82E-16	1.14E-18	3.12E-18	4.46E-18	4.70E-18
Ra-224	4.51E-16	9.87E-19	9.60E-18	6.15E-20	1.74E-19	2.54E-19	2.65E-19
Ra-224+D	4.80E-16	1.05E-18	1.02E-17	6.54E-20	1.85E-19	2.71E-19	2.84E-19
Ra-224+E	4.80E-16	1.05E-18	1.02E-17	6.54E-20	1.85E-19	2.71E-19	2.84E-19
Ra-225	2.47E-16	5.43E-19	1.10E-17	3.46E-20	4.75E-20	4.77E-20	4.77E-20
Ra-226	3.11E-16	6.84E-19	6.68E-18	4.24E-20	1.17E-19	1.66E-19	1.70E-19
Ra-226+D	8.26E-14	1.79E-16	1.67E-15	1.03E-17	2.96E-17	4.73E-17	5.58E-17
Ra-226+E	8.26E-14	1.79E-16	1.67E-15	1.03E-17	2.96E-17	4.73E-17	5.58E-17
Ra-227	6.37E-15	1.37E-17	1.69E-16	8.53E-19	2.37E-18	3.53E-18	3.80E-18
Ra-228	2.89E-18	6.78E-21	7.34E-19	3.53E-22	3.52E-22	3.52E-22	3.52E-22
Ra-228+D	4.01E-14	8.67E-17	8.40E-16	5.15E-18	1.48E-17	2.33E-17	2.70E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Ra-228+E	4.01E-14	8.67E-17	8.40E-16	5.15E-18	1.48E-17	2.33E-17	2.70E-17
Ra-230	3.33E-15	7.23E-18	7.54E-17	4.48E-19	1.21E-18	1.74E-18	1.84E-18
Rb-77	7.09E-14	1.53E-16	1.62E-15	9.59E-18	2.68E-17	4.13E-17	4.61E-17
Rb-78	2.04E-13	4.41E-16	3.67E-15	2.34E-17	6.78E-17	1.12E-16	1.39E-16
Rb-78m	1.52E-13	3.28E-16	3.11E-15	1.93E-17	5.52E-17	8.78E-17	1.03E-16
Rb-79	6.52E-14	1.41E-16	1.46E-15	8.82E-18	2.50E-17	3.83E-17	4.24E-17
Rb-80	5.54E-14	1.19E-16	1.33E-15	7.68E-18	2.13E-17	3.27E-17	3.61E-17
Rb-81	2.25E-14	4.89E-17	4.90E-16	3.05E-18	8.71E-18	1.34E-17	1.48E-17
Rb-81m	1.07E-15	2.33E-18	2.43E-17	1.42E-19	3.92E-19	5.92E-19	6.63E-19
Rb-82	5.09E-14	1.09E-16	1.21E-15	6.98E-18	1.96E-17	3.01E-17	3.33E-17
Rb-82m	1.34E-13	2.91E-16	2.74E-15	1.75E-17	5.02E-17	7.93E-17	9.12E-17
Rb-83	2.16E-14	4.69E-17	4.64E-16	2.94E-18	8.39E-18	1.29E-17	1.43E-17
Rb-84	4.13E-14	8.95E-17	8.70E-16	5.44E-18	1.56E-17	2.45E-17	2.78E-17
Rb-84m	1.68E-14	3.66E-17	3.58E-16	2.29E-18	6.51E-18	9.72E-18	1.04E-17
Rb-86	4.88E-15	1.01E-17	1.65E-16	6.20E-19	1.69E-18	2.66E-18	3.11E-18
Rb-86m	2.44E-14	5.30E-17	5.23E-16	3.32E-18	9.47E-18	1.46E-17	1.62E-17
Rb-87	3.57E-17	3.90E-20	7.89E-20	3.07E-22	6.14E-22	7.20E-22	7.22E-22
Rb-88	3.37E-14	7.12E-17	7.48E-16	4.12E-18	1.14E-17	1.86E-17	2.29E-17
Rb-89	1.09E-13	2.36E-16	2.12E-15	1.32E-17	3.80E-17	6.20E-17	7.55E-17
Rb-90	1.08E-13	2.33E-16	1.84E-15	1.15E-17	3.32E-17	5.61E-17	7.38E-17
Rb-90m	1.63E-13	3.51E-16	2.95E-15	1.86E-17	5.40E-17	8.94E-17	1.12E-16
Re-178	8.17E-14	1.77E-16	1.58E-15	9.87E-18	2.83E-17	4.54E-17	5.48E-17
Re-179	4.90E-14	1.07E-16	9.99E-16	6.33E-18	1.80E-17	2.80E-17	3.20E-17
Re-180	5.44E-14	1.18E-16	1.13E-15	7.10E-18	2.01E-17	3.15E-17	3.62E-17
Re-181	3.52E-14	7.66E-17	7.50E-16	4.70E-18	1.31E-17	2.00E-17	2.23E-17
Re-182	8.10E-14	1.76E-16	1.65E-15	1.04E-17	2.93E-17	4.56E-17	5.24E-17
Re-182m	5.59E-14	1.22E-16	1.12E-15	7.05E-18	2.00E-17	3.16E-17	3.72E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Re-183	5.53E-15	1.24E-17	1.37E-16	7.78E-19	1.86E-18	2.40E-18	2.45E-18
Re-184	3.99E-14	8.68E-17	8.35E-16	5.25E-18	1.48E-17	2.31E-17	2.63E-17
Re-184m	1.64E-14	3.58E-17	3.52E-16	2.19E-18	6.02E-18	9.02E-18	1.00E-17
Re-186	9.95E-16	1.99E-18	4.34E-17	1.20E-19	2.91E-19	3.78E-19	3.84E-19
Re-186m	4.26E-16	9.72E-19	1.31E-17	6.22E-20	1.19E-19	1.30E-19	1.30E-19
Re-186m+D	1.42E-15	2.96E-18	5.65E-17	1.82E-19	4.10E-19	5.08E-19	5.14E-19
Re-186m+E	1.42E-15	2.96E-18	5.65E-17	1.82E-19	4.10E-19	5.08E-19	5.14E-19
Re-187	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-188	3.29E-15	6.60E-18	1.48E-16	4.43E-19	1.11E-18	1.62E-18	1.76E-18
Re-188m	2.26E-15	5.12E-18	5.94E-17	3.23E-19	6.95E-19	8.04E-19	8.05E-19
Re-189	2.55E-15	5.40E-18	7.14E-17	3.32E-19	9.12E-19	1.32E-18	1.39E-18
Re-190	6.04E-14	1.31E-16	1.34E-15	8.10E-18	2.30E-17	3.54E-17	3.93E-17
Re-190m	4.13E-14	8.96E-17	9.13E-16	5.56E-18	1.57E-17	2.40E-17	2.65E-17
Rh-100	1.32E-13	2.85E-16	2.46E-15	1.59E-17	4.61E-17	7.50E-17	9.09E-17
Rh-100m	2.03E-15	4.43E-18	5.15E-17	2.64E-19	7.14E-19	1.10E-18	1.26E-18
Rh-101	1.17E-14	2.58E-17	2.57E-16	1.60E-18	4.43E-18	6.27E-18	6.48E-18
Rh-101m	1.21E-14	2.64E-17	2.65E-16	1.66E-18	4.72E-18	7.07E-18	7.54E-18
Rh-102	2.24E-14	4.86E-17	4.94E-16	3.02E-18	8.62E-18	1.33E-17	1.48E-17
Rh-102m	9.74E-14	2.11E-16	2.03E-15	1.29E-17	3.69E-17	5.79E-17	6.56E-17
Rh-103m	5.61E-18	1.32E-20	8.26E-19	8.15E-22	8.46E-22	8.46E-22	8.46E-22
Rh-104	1.40E-15	2.26E-18	1.28E-16	2.11E-19	4.03E-19	5.57E-19	6.04E-19
Rh-104m	9.14E-16	2.09E-18	3.43E-17	1.34E-19	2.47E-19	2.74E-19	2.77E-19
Rh-105	3.47E-15	7.49E-18	7.38E-17	4.67E-19	1.33E-18	1.99E-18	2.12E-18
Rh-106	1.07E-14	2.20E-17	3.46E-16	1.50E-18	3.93E-18	6.00E-18	6.70E-18
Rh-106m	1.32E-13	2.86E-16	2.69E-15	1.71E-17	4.90E-17	7.75E-17	8.93E-17
Rh-107	1.41E-14	3.05E-17	3.38E-16	1.91E-18	5.42E-18	8.13E-18	8.70E-18
Rh-108	1.61E-14	3.34E-17	4.79E-16	2.30E-18	6.06E-18	9.15E-18	1.01E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Rh-109	1.38E-14	2.95E-17	3.91E-16	1.91E-18	5.25E-18	7.78E-18	8.29E-18
Rh-94	1.81E-13	3.89E-16	3.70E-15	2.30E-17	6.54E-17	1.04E-16	1.23E-16
Rh-95	1.21E-13	2.62E-16	2.45E-15	1.52E-17	4.37E-17	6.99E-17	8.23E-17
Rh-95m	4.29E-14	9.31E-17	8.24E-16	5.23E-18	1.51E-17	2.42E-17	2.90E-17
Rh-96	1.81E-13	3.93E-16	3.77E-15	2.36E-17	6.76E-17	1.07E-16	1.23E-16
Rh-96m	6.03E-14	1.30E-16	1.24E-15	7.65E-18	2.19E-17	3.50E-17	4.10E-17
Rh-97	6.60E-14	1.43E-16	1.42E-15	8.69E-18	2.48E-17	3.88E-17	4.40E-17
Rh-97m	1.06E-13	2.31E-16	1.97E-15	1.26E-17	3.67E-17	5.99E-17	7.31E-17
Rh-98	8.34E-14	1.80E-16	1.85E-15	1.11E-17	3.16E-17	4.92E-17	5.55E-17
Rh-99	2.42E-14	5.28E-17	5.23E-16	3.27E-18	9.26E-18	1.41E-17	1.56E-17
Rh-99m	2.89E-14	6.28E-17	6.08E-16	3.84E-18	1.10E-17	1.70E-17	1.90E-17
Rn-207	4.41E-14	9.59E-17	9.47E-16	5.91E-18	1.67E-17	2.58E-17	2.87E-17
Rn-209	5.47E-14	1.19E-16	1.11E-15	7.05E-18	2.01E-17	3.15E-17	3.62E-17
Rn-210	2.71E-15	5.89E-18	5.71E-17	3.61E-19	1.02E-18	1.57E-18	1.76E-18
Rn-211	8.62E-14	1.87E-16	1.74E-15	1.11E-17	3.18E-17	5.03E-17	5.82E-17
Rn-212	1.53E-17	3.32E-20	3.23E-19	2.05E-21	5.86E-21	9.15E-21	1.03E-20
Rn-215	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-216	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-217	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-218	3.40E-17	7.39E-20	7.24E-19	4.59E-21	1.31E-20	2.04E-20	2.28E-20
Rn-219	2.56E-15	5.60E-18	5.50E-17	3.52E-19	9.97E-19	1.49E-18	1.59E-18
Rn-219+D	2.57E-15	5.62E-18	5.52E-17	3.53E-19	1.00E-18	1.49E-18	1.60E-18
Rn-219+E	2.57E-15	5.62E-18	5.52E-17	3.53E-19	1.00E-18	1.49E-18	1.60E-18
Rn-220	2.81E-17	6.10E-20	6.01E-19	3.82E-21	1.09E-20	1.68E-20	1.86E-20
Rn-222	1.73E-17	3.76E-20	3.72E-19	2.36E-21	6.73E-21	1.04E-20	1.14E-20
Rn-222+D	1.73E-17	3.76E-20	3.72E-19	2.36E-21	6.73E-21	1.04E-20	1.14E-20
Rn-222+E	1.73E-17	3.76E-20	3.72E-19	2.36E-21	6.73E-21	1.04E-20	1.14E-20

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Ru-223	1.56E-14	3.35E-17	3.80E-16	2.06E-18	5.78E-18	8.88E-18	9.96E-18
Ru-103	2.21E-14	4.80E-17	4.74E-16	3.01E-18	8.59E-18	1.32E-17	1.45E-17
Ru-105	3.39E-14	7.34E-17	7.48E-16	4.52E-18	1.29E-17	2.00E-17	2.24E-17
Ru-106	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-106+D	1.07E-14	2.20E-17	3.46E-16	1.50E-18	3.93E-18	6.00E-18	6.70E-18
Ru-106+E	1.07E-14	2.20E-17	3.46E-16	1.50E-18	3.93E-18	6.00E-18	6.70E-18
Ru-107	1.69E-14	3.57E-17	4.42E-16	2.22E-18	6.13E-18	9.56E-18	1.10E-17
Ru-108	2.92E-15	6.10E-18	1.05E-16	3.82E-19	1.01E-18	1.39E-18	1.42E-18
Ru-92	9.44E-14	2.05E-16	2.00E-15	1.23E-17	3.50E-17	5.41E-17	6.13E-17
Ru-94	2.28E-14	4.96E-17	4.85E-16	3.06E-18	8.75E-18	1.35E-17	1.50E-17
Ru-95	5.68E-14	1.23E-16	1.16E-15	7.35E-18	2.11E-17	3.33E-17	3.82E-17
Ru-97	9.96E-15	2.18E-17	2.17E-16	1.36E-18	3.84E-18	5.61E-18	5.88E-18
S-35	3.07E-18	3.40E-21	1.33E-20	3.73E-23	6.07E-23	6.53E-23	6.53E-23
S-37	1.54E-13	3.34E-16	2.48E-15	1.59E-17	4.71E-17	8.07E-17	1.07E-16
S-38	8.47E-14	1.83E-16	1.52E-15	9.67E-18	2.83E-17	4.72E-17	5.94E-17
Sb-111	6.76E-14	1.46E-16	1.55E-15	9.19E-18	2.58E-17	3.96E-17	4.39E-17
Sb-113	5.71E-14	1.24E-16	1.29E-15	7.74E-18	2.19E-17	3.38E-17	3.75E-17
Sb-114	1.27E-13	2.74E-16	2.61E-15	1.62E-17	4.63E-17	7.37E-17	8.62E-17
Sb-115	3.94E-14	8.55E-17	8.72E-16	5.35E-18	1.52E-17	2.34E-17	2.59E-17
Sb-116	1.08E-13	2.33E-16	2.15E-15	1.34E-17	3.87E-17	6.23E-17	7.38E-17
Sb-116m	1.43E-13	3.11E-16	2.89E-15	1.83E-17	5.26E-17	8.36E-17	9.72E-17
Sb-117	7.23E-15	1.59E-17	1.66E-16	9.88E-19	2.70E-18	3.82E-18	3.98E-18
Sb-118	3.65E-14	7.86E-17	8.67E-16	4.99E-18	1.40E-17	2.16E-17	2.39E-17
Sb-118m	1.21E-13	2.61E-16	2.41E-15	1.53E-17	4.40E-17	7.01E-17	8.19E-17
Sb-119	1.51E-16	3.55E-19	1.56E-17	2.33E-20	2.41E-20	2.40E-20	2.40E-20
Sb-120	2.00E-14	4.32E-17	4.67E-16	2.72E-18	7.68E-18	1.18E-17	1.31E-17
Sb-120m	1.13E-13	2.46E-16	2.28E-15	1.45E-17	4.14E-17	6.56E-17	7.64E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Sb-122	2.04E-14	4.39E-17	4.88E-16	2.74E-18	7.77E-18	1.20E-17	1.34E-17
Sb-122m	1.77E-15	4.04E-18	5.88E-17	2.57E-19	4.99E-19	5.50E-19	5.50E-19
Sb-124	8.80E-14	1.90E-16	1.73E-15	1.09E-17	3.16E-17	5.09E-17	6.05E-17
Sb-124m	1.98E-14	4.30E-17	4.30E-16	2.67E-18	7.63E-18	1.18E-17	1.32E-17
Sb-124n	5.63E-21	1.32E-23	5.69E-22	8.74E-25	9.01E-25	8.99E-25	8.99E-25
Sb-125	1.90E-14	4.12E-17	4.14E-16	2.58E-18	7.31E-18	1.12E-17	1.24E-17
Sb-126	1.25E-13	2.71E-16	2.65E-15	1.67E-17	4.77E-17	7.44E-17	8.36E-17
Sb-126m	7.02E-14	1.52E-16	1.55E-15	9.44E-18	2.69E-17	4.17E-17	4.67E-17
Sb-127	3.14E-14	6.80E-17	6.80E-16	4.20E-18	1.20E-17	1.86E-17	2.08E-17
Sb-128	1.41E-13	3.05E-16	2.98E-15	1.87E-17	5.35E-17	8.36E-17	9.44E-17
Sb-128m	8.73E-14	1.89E-16	1.92E-15	1.16E-17	3.31E-17	5.16E-17	5.81E-17
Sb-129	6.83E-14	1.48E-16	1.39E-15	8.71E-18	2.51E-17	3.99E-17	4.66E-17
Sb-130	1.51E-13	3.26E-16	3.15E-15	1.97E-17	5.63E-17	8.84E-17	1.01E-16
Sb-130m	1.26E-13	2.72E-16	2.66E-15	1.63E-17	4.67E-17	7.37E-17	8.49E-17
Sb-131	9.85E-14	2.13E-16	1.96E-15	1.23E-17	3.54E-17	5.69E-17	6.75E-17
Sb-133	1.33E-13	2.87E-16	2.54E-15	1.60E-17	4.64E-17	7.56E-17	9.18E-17
Sc-42m	1.98E-13	4.28E-16	4.03E-15	2.51E-17	7.22E-17	1.15E-16	1.35E-16
Sc-43	4.41E-14	9.55E-17	9.82E-16	6.00E-18	1.71E-17	2.62E-17	2.89E-17
Sc-44	9.87E-14	2.14E-16	2.08E-15	1.28E-17	3.68E-17	5.81E-17	6.66E-17
Sc-44m	1.22E-14	2.66E-17	2.56E-16	1.65E-18	4.70E-18	7.03E-18	7.55E-18
Sc-46	9.37E-14	2.03E-16	1.88E-15	1.20E-17	3.45E-17	5.50E-17	6.42E-17
Sc-47	4.70E-15	1.03E-17	1.00E-16	6.35E-19	1.75E-18	2.43E-18	2.48E-18
Sc-48	1.58E-13	3.42E-16	3.11E-15	1.99E-17	5.74E-17	9.21E-17	1.09E-16
Sc-49	7.13E-16	9.20E-19	1.01E-16	1.00E-19	1.46E-19	1.81E-19	1.93E-19
Sc-50	1.54E-13	3.32E-16	3.10E-15	1.91E-17	5.50E-17	8.87E-17	1.06E-16
Se-70	3.14E-14	6.83E-17	6.96E-16	4.28E-18	1.21E-17	1.84E-17	2.02E-17
Se-71	7.40E-14	1.60E-16	1.66E-15	9.90E-18	2.79E-17	4.33E-17	4.87E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Se-72	6.10E-16	1.41E-18	2.43E-17	9.30E-20	1.43E-19	1.45E-19	1.45E-19
Se-73	4.81E-14	1.05E-16	1.08E-15	6.57E-18	1.85E-17	2.82E-17	3.08E-17
Se-73m	1.18E-14	2.55E-17	2.67E-16	1.60E-18	4.53E-18	6.95E-18	7.67E-18
Se-75	1.66E-14	3.64E-17	3.56E-16	2.27E-18	6.37E-18	9.24E-18	9.68E-18
Se-77m	3.70E-15	8.13E-18	7.88E-17	5.03E-19	1.39E-18	1.93E-18	1.97E-18
Se-79	3.05E-18	3.38E-21	1.45E-20	3.99E-23	6.39E-23	6.83E-23	6.82E-23
Se-79m	3.60E-16	8.01E-19	8.56E-18	4.95E-20	1.23E-19	1.53E-19	1.53E-19
Se-81	8.16E-16	1.33E-18	8.02E-17	9.94E-20	2.08E-19	2.93E-19	3.16E-19
Se-81m	5.54E-16	1.23E-18	1.27E-17	7.59E-20	1.93E-19	2.46E-19	2.47E-19
Se-83	1.24E-13	2.68E-16	2.45E-15	1.55E-17	4.48E-17	7.14E-17	8.39E-17
Se-83m	4.78E-14	1.02E-16	1.04E-15	6.01E-18	1.71E-17	2.74E-17	3.24E-17
Se-84	1.90E-14	4.09E-17	4.63E-16	2.59E-18	7.32E-18	1.11E-17	1.20E-17
Si-31	4.83E-16	6.14E-19	7.13E-17	5.16E-20	7.88E-20	9.90E-20	1.06E-19
Si-32	1.05E-17	1.14E-20	2.87E-20	9.50E-23	1.72E-22	1.92E-22	1.92E-22
Si-32+D	5.47E-16	6.56E-19	8.52E-17	6.65E-20	9.07E-20	1.06E-19	1.09E-19
Si-32+E	5.47E-16	6.56E-19	8.52E-17	6.65E-20	9.07E-20	1.06E-19	1.09E-19
Sm-139	6.64E-14	1.44E-16	1.48E-15	8.91E-18	2.52E-17	3.89E-17	4.35E-17
Sm-140	2.53E-14	5.49E-17	5.47E-16	3.31E-18	9.34E-18	1.45E-17	1.66E-17
Sm-141	6.47E-14	1.40E-16	1.40E-15	8.50E-18	2.42E-17	3.78E-17	4.30E-17
Sm-141m	8.92E-14	1.93E-16	1.86E-15	1.16E-17	3.31E-17	5.19E-17	5.95E-17
Sm-142	4.17E-15	9.11E-18	1.06E-16	5.74E-19	1.52E-18	2.28E-18	2.52E-18
Sm-143	2.36E-14	5.11E-17	5.61E-16	3.22E-18	9.01E-18	1.39E-17	1.54E-17
Sm-143m	3.11E-14	6.75E-17	6.60E-16	4.12E-18	1.18E-17	1.85E-17	2.10E-17
Sm-145	1.23E-15	2.86E-18	5.46E-17	1.89E-19	2.78E-19	2.85E-19	2.85E-19
Sm-146	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Sm-151	2.65E-20	6.20E-23	3.81E-21	3.85E-24	3.88E-24	3.88E-24	3.88E-24
Sm-153	2.12E-15	4.65E-18	6.25E-17	2.88E-19	6.34E-19	7.76E-19	7.80E-19
Sm-155	4.43E-15	9.44E-18	1.55E-16	5.99E-19	1.48E-18	1.92E-18	1.96E-18
Sm-156	4.73E-15	1.04E-17	1.07E-16	6.41E-19	1.72E-18	2.40E-18	2.47E-18
Sm-157	1.91E-14	4.09E-17	4.83E-16	2.53E-18	7.00E-18	1.06E-17	1.17E-17
Sn-106	5.40E-14	1.17E-16	1.14E-15	7.17E-18	2.04E-17	3.17E-17	3.56E-17
Sn-108	2.96E-14	6.45E-17	6.40E-16	4.01E-18	1.14E-17	1.72E-17	1.88E-17
Sn-109	1.05E-13	2.28E-16	1.99E-15	1.28E-17	3.71E-17	6.02E-17	7.27E-17
Sn-110	1.21E-14	2.65E-17	2.68E-16	1.66E-18	4.71E-18	6.98E-18	7.38E-18
Sn-111	2.21E-14	4.79E-17	4.78E-16	2.88E-18	8.23E-18	1.29E-17	1.48E-17
Sn-113	3.45E-16	7.73E-19	1.70E-17	4.90E-20	1.09E-19	1.53E-19	1.59E-19
Sn-113m	1.02E-16	2.38E-19	9.32E-18	1.56E-20	1.85E-20	1.92E-20	1.92E-20
Sn-117m	6.13E-15	1.35E-17	1.40E-16	8.36E-19	2.26E-18	3.14E-18	3.21E-18
Sn-119m	9.23E-17	2.17E-19	9.81E-18	1.42E-20	1.47E-20	1.47E-20	1.47E-20
Sn-121	3.98E-17	4.36E-20	9.05E-20	3.74E-22	7.80E-22	9.38E-22	9.44E-22
Sn-121m	5.31E-17	1.12E-19	3.65E-18	6.87E-21	7.71E-21	7.74E-21	7.74E-21
Sn-121m+D	8.40E-17	1.46E-19	3.72E-18	7.16E-21	8.32E-21	8.47E-21	8.47E-21
Sn-121m+E	8.40E-17	1.46E-19	3.72E-18	7.16E-21	8.32E-21	8.47E-21	8.47E-21
Sn-123	7.01E-16	1.15E-18	6.55E-17	7.87E-20	1.70E-19	2.50E-19	2.84E-19
Sn-123m	6.21E-15	1.34E-17	1.75E-16	8.32E-19	2.25E-18	3.12E-18	3.19E-18
Sn-125	1.64E-14	3.49E-17	4.01E-16	2.09E-18	5.87E-18	9.35E-18	1.10E-17
Sn-125m	1.60E-14	3.42E-17	4.23E-16	2.18E-18	6.09E-18	9.14E-18	9.85E-18
Sn-126	1.82E-15	4.09E-18	4.82E-17	2.54E-19	5.82E-19	6.98E-19	6.97E-19
Sn-126+D	8.95E-14	1.94E-16	1.97E-15	1.20E-17	3.42E-17	5.28E-17	5.91E-17
Sn-126+E	8.95E-14	1.94E-16	1.97E-15	1.20E-17	3.42E-17	5.28E-17	5.91E-17
Sn-127	9.02E-14	1.95E-16	1.80E-15	1.13E-17	3.25E-17	5.21E-17	6.16E-17
Sn-127m	2.67E-14	5.72E-17	6.65E-16	3.59E-18	1.00E-17	1.55E-17	1.75E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Sn-128	2.52E-14	5.49E-17	5.67E-16	3.43E-18	9.61E-18	1.46E-17	1.61E-17
Sn-129	4.76E-14	1.02E-16	1.08E-15	6.25E-18	1.76E-17	2.78E-17	3.20E-17
Sn-130	4.16E-14	9.04E-17	9.19E-16	5.55E-18	1.57E-17	2.41E-17	2.68E-17
Sn-130m	4.20E-14	8.99E-17	9.64E-16	5.44E-18	1.52E-17	2.40E-17	2.78E-17
Sr-79	5.39E-14	1.16E-16	1.30E-15	7.48E-18	2.07E-17	3.15E-17	3.45E-17
Sr-80	1.92E-14	4.17E-17	4.13E-16	2.61E-18	7.43E-18	1.14E-17	1.26E-17
Sr-81	6.26E-14	1.35E-16	1.43E-15	8.50E-18	2.40E-17	3.67E-17	4.05E-17
Sr-82	4.73E-18	1.10E-20	1.52E-18	5.02E-22	5.02E-22	5.02E-22	5.02E-22
Sr-82+D	5.09E-14	1.09E-16	1.21E-15	6.98E-18	1.96E-17	3.01E-17	3.33E-17
Sr-82+E	5.09E-14	1.09E-16	1.21E-15	6.98E-18	1.96E-17	3.01E-17	3.33E-17
Sr-83	3.70E-14	8.02E-17	7.80E-16	4.88E-18	1.40E-17	2.19E-17	2.48E-17
Sr-85	2.19E-14	4.77E-17	4.72E-16	2.99E-18	8.53E-18	1.31E-17	1.45E-17
Sr-85m	9.42E-15	2.07E-17	2.00E-16	1.29E-18	3.64E-18	5.29E-18	5.51E-18
Sr-87m	1.41E-14	3.07E-17	3.03E-16	1.93E-18	5.51E-18	8.34E-18	9.01E-18
Sr-89	4.39E-16	5.26E-19	6.88E-17	4.84E-20	6.71E-20	7.92E-20	8.15E-20
Sr-90	9.83E-17	1.09E-19	1.64E-18	1.26E-21	2.72E-21	3.42E-21	3.46E-21
Sr-90+D	8.89E-16	1.09E-18	1.12E-16	1.27E-19	1.77E-19	2.10E-19	2.18E-19
Sr-90+E	8.89E-16	1.09E-18	1.12E-16	1.27E-19	1.77E-19	2.10E-19	2.18E-19
Sr-91	3.32E-14	7.14E-17	7.35E-16	4.30E-18	1.23E-17	1.94E-17	2.24E-17
Sr-92	6.41E-14	1.39E-16	1.22E-15	7.83E-18	2.27E-17	3.69E-17	4.44E-17
Sr-93	1.07E-13	2.31E-16	2.17E-15	1.34E-17	3.87E-17	6.18E-17	7.28E-17
Sr-94	6.92E-14	1.49E-16	1.40E-15	8.43E-18	2.44E-17	3.97E-17	4.79E-17
Ta-170	4.88E-14	1.05E-16	1.14E-15	6.69E-18	1.85E-17	2.83E-17	3.15E-17
Ta-172	7.82E-14	1.69E-16	1.62E-15	1.01E-17	2.86E-17	4.50E-17	5.21E-17
Ta-173	2.56E-14	5.58E-17	5.42E-16	3.31E-18	9.17E-18	1.42E-17	1.63E-17
Ta-174	4.46E-14	9.68E-17	9.37E-16	5.73E-18	1.62E-17	2.52E-17	2.90E-17
Ta-175	5.09E-14	1.11E-16	1.01E-15	6.39E-18	1.81E-17	2.86E-17	3.36E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Ta-176	1.07E-13	2.32E-16	2.00E-15	1.28E-17	3.71E-17	6.03E-17	7.34E-17
Ta-177	2.17E-15	4.90E-18	5.89E-17	3.10E-19	6.66E-19	8.16E-19	8.48E-19
Ta-178	4.72E-15	1.04E-17	1.09E-16	6.25E-19	1.58E-18	2.29E-18	2.62E-18
Ta-178m	4.91E-14	1.08E-16	1.08E-15	6.76E-18	1.87E-17	2.76E-17	2.94E-17
Ta-179	6.96E-16	1.59E-18	2.12E-17	1.02E-19	1.90E-19	2.02E-19	2.02E-19
Ta-180	1.42E-15	3.22E-18	4.18E-17	2.05E-19	3.97E-19	4.35E-19	4.35E-19
Ta-182	5.98E-14	1.30E-16	1.19E-15	7.55E-18	2.15E-17	3.42E-17	4.01E-17
Ta-182m	1.05E-14	2.31E-17	2.37E-16	1.44E-18	3.78E-18	5.17E-18	5.31E-18
Ta-183	1.20E-14	2.63E-17	2.70E-16	1.64E-18	4.37E-18	6.16E-18	6.43E-18
Ta-184	7.07E-14	1.54E-16	1.51E-15	9.41E-18	2.68E-17	4.12E-17	4.60E-17
Ta-185	6.70E-15	1.43E-17	2.15E-16	9.12E-19	2.35E-18	3.27E-18	3.41E-18
Ta-186	6.43E-14	1.39E-16	1.45E-15	8.65E-18	2.44E-17	3.73E-17	4.14E-17
Tb-146	1.74E-13	3.77E-16	3.42E-15	2.15E-17	6.18E-17	9.98E-17	1.20E-16
Tb-147	1.02E-13	2.20E-16	2.05E-15	1.29E-17	3.69E-17	5.88E-17	6.89E-17
Tb-147m	9.11E-14	1.97E-16	1.77E-15	1.11E-17	3.22E-17	5.21E-17	6.27E-17
Tb-148	1.11E-13	2.40E-16	2.26E-15	1.40E-17	4.02E-17	6.41E-17	7.53E-17
Tb-148m	1.42E-13	3.09E-16	3.00E-15	1.89E-17	5.39E-17	8.42E-17	9.52E-17
Tb-149	6.28E-14	1.36E-16	1.26E-15	7.95E-18	2.28E-17	3.61E-17	4.21E-17
Tb-149m	6.20E-14	1.34E-16	1.33E-15	8.23E-18	2.34E-17	3.66E-17	4.14E-17
Tb-150	1.17E-13	2.54E-16	2.21E-15	1.41E-17	4.07E-17	6.61E-17	8.03E-17
Tb-150m	1.12E-13	2.44E-16	2.41E-15	1.52E-17	4.32E-17	6.69E-17	7.45E-17
Tb-151	4.34E-14	9.47E-17	9.31E-16	5.81E-18	1.64E-17	2.50E-17	2.78E-17
Tb-151m	3.20E-15	6.99E-18	7.30E-17	4.35E-19	1.18E-18	1.78E-18	1.97E-18
Tb-152	6.98E-14	1.51E-16	1.39E-15	8.72E-18	2.50E-17	3.99E-17	4.70E-17
Tb-152m	3.28E-14	7.16E-17	7.14E-16	4.45E-18	1.25E-17	1.88E-17	2.06E-17
Tb-153	1.35E-14	2.97E-17	3.05E-16	1.83E-18	4.97E-18	7.36E-18	8.04E-18
Tb-154	1.11E-13	2.40E-16	2.02E-15	1.30E-17	3.77E-17	6.18E-17	7.62E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Tb-155	6.30E-15	1.40E-17	1.59E-16	8.85E-19	2.17E-18	2.89E-18	2.97E-18
Tb-156	8.87E-14	1.93E-16	1.79E-15	1.13E-17	3.24E-17	5.12E-17	5.95E-17
Tb-156m	9.24E-16	2.13E-18	3.27E-17	1.39E-19	2.29E-19	2.35E-19	2.35E-19
Tb-156n	9.97E-17	2.25E-19	3.21E-18	1.44E-20	2.69E-20	3.00E-20	3.00E-20
Tb-157	9.83E-17	2.28E-19	4.04E-18	1.51E-20	2.25E-20	2.28E-20	2.28E-20
Tb-158	3.61E-14	7.84E-17	7.53E-16	4.69E-18	1.33E-17	2.09E-17	2.40E-17
Tb-160	5.20E-14	1.13E-16	1.06E-15	6.68E-18	1.92E-17	3.03E-17	3.50E-17
Tb-161	9.14E-16	2.01E-18	3.03E-17	1.26E-19	2.29E-19	2.52E-19	2.53E-19
Tb-162	5.04E-14	1.09E-16	1.09E-15	6.64E-18	1.89E-17	2.94E-17	3.31E-17
Tb-163	3.51E-14	7.62E-17	7.74E-16	4.78E-18	1.36E-17	2.07E-17	2.25E-17
Tb-164	1.14E-13	2.47E-16	2.35E-15	1.45E-17	4.17E-17	6.60E-17	7.66E-17
Tb-165	4.04E-14	8.67E-17	8.64E-16	5.02E-18	1.44E-17	2.31E-17	2.75E-17
Tc-101	1.52E-14	3.28E-17	3.66E-16	2.06E-18	5.83E-18	8.73E-18	9.35E-18
Tc-102	5.85E-15	1.10E-17	2.59E-16	9.01E-19	2.02E-18	2.99E-18	3.38E-18
Tc-102m	1.18E-13	2.56E-16	2.34E-15	1.46E-17	4.21E-17	6.79E-17	8.11E-17
Tc-104	1.10E-13	2.37E-16	2.17E-15	1.33E-17	3.82E-17	6.18E-17	7.47E-17
Tc-105	3.77E-14	8.10E-17	8.68E-16	4.90E-18	1.37E-17	2.13E-17	2.44E-17
Tc-91	1.20E-13	2.60E-16	2.41E-15	1.48E-17	4.25E-17	6.84E-17	8.19E-17
Tc-91m	6.60E-14	1.42E-16	1.53E-15	9.01E-18	2.52E-17	3.89E-17	4.33E-17
Tc-92	1.79E-13	3.88E-16	3.71E-15	2.30E-17	6.58E-17	1.04E-16	1.21E-16
Tc-93	7.46E-14	1.62E-16	1.42E-15	9.12E-18	2.65E-17	4.30E-17	5.18E-17
Tc-93m	4.66E-14	1.01E-16	8.31E-16	5.39E-18	1.57E-17	2.58E-17	3.20E-17
Tc-94	1.21E-13	2.63E-16	2.51E-15	1.59E-17	4.57E-17	7.21E-17	8.23E-17
Tc-94m	9.11E-14	1.97E-16	1.91E-15	1.17E-17	3.36E-17	5.32E-17	6.15E-17
Tc-95	3.59E-14	7.78E-17	7.48E-16	4.73E-18	1.36E-17	2.13E-17	2.43E-17
Tc-95m	3.06E-14	6.64E-17	6.43E-16	4.07E-18	1.16E-17	1.80E-17	2.01E-17
Tc-96	1.14E-13	2.48E-16	2.36E-15	1.50E-17	4.30E-17	6.78E-17	7.77E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Soil Contamination				
	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Tc-96m	1.94E-15	4.21E-18	4.16E-17	2.50E-19	7.15E-19	1.14E-18	1.32E-18
Tc-97	2.21E-17	5.20E-20	4.56E-18	2.97E-21	2.95E-21	2.95E-21	2.95E-21
Tc-97m	3.68E-17	8.10E-20	4.37E-18	4.65E-21	7.10E-21	8.13E-21	8.13E-21
Tc-98	6.41E-14	1.39E-16	1.34E-15	8.54E-18	2.45E-17	3.83E-17	4.32E-17
Tc-99	2.88E-17	3.14E-20	6.55E-20	2.53E-22	5.03E-22	5.89E-22	5.91E-22
Tc-99m	5.27E-15	1.17E-17	1.14E-16	7.23E-19	1.95E-18	2.66E-18	2.70E-18
Te-113	1.05E-13	2.27E-16	2.22E-15	1.35E-17	3.85E-17	6.10E-17	7.10E-17
Te-114	5.92E-14	1.28E-16	1.18E-15	7.42E-18	2.13E-17	3.41E-17	4.02E-17
Te-115	1.05E-13	2.26E-16	2.18E-15	1.35E-17	3.85E-17	6.11E-17	7.08E-17
Te-115m	1.22E-13	2.65E-16	2.48E-15	1.55E-17	4.45E-17	7.11E-17	8.35E-17
Te-116	3.66E-15	8.08E-18	9.70E-17	5.02E-19	1.30E-18	1.86E-18	2.01E-18
Te-117	7.25E-14	1.57E-16	1.45E-15	9.09E-18	2.62E-17	4.20E-17	4.95E-17
Te-118	1.51E-16	3.56E-19	1.42E-17	2.37E-20	2.48E-20	2.48E-20	2.48E-20
Te-118+D	3.67E-14	7.90E-17	8.81E-16	5.01E-18	1.40E-17	2.16E-17	2.39E-17
Te-118+E	3.67E-14	7.90E-17	8.81E-16	5.01E-18	1.40E-17	2.16E-17	2.39E-17
Te-119	3.43E-14	7.44E-17	7.21E-16	4.53E-18	1.29E-17	2.03E-17	2.31E-17
Te-119m	6.97E-14	1.51E-16	1.38E-15	8.77E-18	2.52E-17	4.01E-17	4.71E-17
Te-121	2.51E-14	5.45E-17	5.47E-16	3.41E-18	9.68E-18	1.50E-17	1.66E-17
Te-121m	9.02E-15	1.98E-17	1.98E-16	1.22E-18	3.42E-18	5.02E-18	5.32E-18
Te-123	2.63E-19	6.19E-22	2.47E-20	4.11E-23	4.31E-23	4.30E-23	4.30E-23
Te-123m	5.81E-15	1.28E-17	1.32E-16	7.97E-19	2.16E-18	3.00E-18	3.06E-18
Te-125m	3.36E-16	7.78E-19	2.68E-17	5.14E-20	5.83E-20	5.95E-20	5.95E-20
Te-127	3.35E-16	6.02E-19	1.05E-17	3.18E-20	8.81E-20	1.32E-19	1.43E-19
Te-127m	1.12E-16	2.55E-19	8.54E-18	1.66E-20	2.04E-20	2.17E-20	2.20E-20
Te-129	2.99E-15	6.13E-18	1.16E-16	3.91E-19	1.05E-18	1.60E-18	1.76E-18
Te-129m	1.57E-15	3.26E-18	5.83E-17	2.07E-19	5.47E-19	8.40E-19	9.45E-19
Te-131	1.92E-14	4.14E-17	4.72E-16	2.56E-18	7.13E-18	1.08E-17	1.20E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Te-131m	6.69E-14	1.45E-16	1.36E-15	8.65E-18	2.48E-17	3.92E-17	4.51E-17
Te-132	9.35E-15	2.05E-17	2.13E-16	1.28E-18	3.54E-18	5.11E-18	5.32E-18
Te-133	5.67E-14	1.23E-16	1.18E-15	7.16E-18	2.06E-17	3.26E-17	3.81E-17
Te-133m	8.64E-14	1.87E-16	1.76E-15	1.11E-17	3.18E-17	5.04E-17	5.85E-17
Te-134	3.87E-14	8.42E-17	8.25E-16	5.20E-18	1.48E-17	2.26E-17	2.50E-17
Th-223	2.78E-15	6.18E-18	6.36E-17	3.84E-19	9.72E-19	1.25E-18	1.27E-18
Th-224	9.75E-16	2.14E-18	2.10E-17	1.33E-19	3.69E-19	5.26E-19	5.46E-19
Th-226	3.21E-16	7.08E-19	7.21E-18	4.39E-20	1.17E-19	1.58E-19	1.61E-19
Th-227	5.22E-15	1.15E-17	1.15E-16	7.17E-19	1.99E-18	2.88E-18	3.02E-18
Th-228	8.25E-17	1.84E-19	2.16E-18	1.14E-20	2.90E-20	3.81E-20	3.88E-20
Th-229	3.32E-15	7.40E-18	7.75E-17	4.59E-19	1.17E-18	1.52E-18	1.54E-18
Th-229+D	3.57E-15	7.94E-18	8.85E-17	4.94E-19	1.22E-18	1.57E-18	1.59E-18
Th-229+E	3.57E-15	7.94E-18	8.85E-17	4.94E-19	1.22E-18	1.57E-18	1.59E-18
Th-230	1.52E-17	3.42E-20	6.41E-19	2.11E-21	4.75E-21	5.84E-21	5.92E-21
Th-231	4.63E-16	1.02E-18	1.52E-17	6.27E-20	1.43E-19	1.74E-19	1.74E-19
Th-232	7.90E-18	1.80E-20	4.53E-19	1.10E-21	2.22E-21	2.55E-21	2.56E-21
Th-232+D	4.01E-14	8.67E-17	8.40E-16	5.15E-18	1.48E-17	2.33E-17	2.70E-17
Th-232+E	4.01E-14	8.67E-17	8.40E-16	5.15E-18	1.48E-17	2.33E-17	2.70E-17
Th-233	1.79E-15	3.63E-18	6.99E-17	2.25E-19	6.00E-19	8.93E-19	9.78E-19
Th-234	3.22E-16	7.22E-19	8.19E-18	4.49E-20	1.03E-19	1.24E-19	1.24E-19
Th-234+D	1.74E-15	3.17E-18	1.20E-16	2.39E-19	5.13E-19	7.20E-19	7.97E-19
Th-234+E	1.74E-15	3.17E-18	1.20E-16	2.39E-19	5.13E-19	7.20E-19	7.97E-19
Th-235	2.93E-15	5.86E-18	1.30E-16	3.89E-19	1.01E-18	1.53E-18	1.70E-18
Th-236	1.68E-15	3.44E-18	5.96E-17	2.11E-19	5.68E-19	8.33E-19	8.99E-19
Ti-44	4.88E-15	1.10E-17	1.23E-16	6.92E-19	1.52E-18	1.74E-18	1.74E-18
Ti-44+D	1.04E-13	2.25E-16	2.20E-15	1.35E-17	3.83E-17	5.98E-17	6.83E-17
Ti-44+E	1.04E-13	2.25E-16	2.20E-15	1.35E-17	3.83E-17	5.98E-17	6.83E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Ti-45	3.90E-14	8.45E-17	8.66E-16	5.30E-18	1.51E-17	2.32E-17	2.56E-17
Ti-51	1.71E-14	3.66E-17	4.54E-16	2.33E-18	6.51E-18	9.81E-18	1.06E-17
Ti-52	5.75E-15	1.22E-17	2.05E-16	7.88E-19	1.99E-18	2.62E-18	2.65E-18
Tl-190	5.94E-14	1.28E-16	1.36E-15	8.14E-18	2.27E-17	3.49E-17	3.87E-17
Tl-190m	1.11E-13	2.41E-16	2.40E-15	1.49E-17	4.24E-17	6.56E-17	7.34E-17
Tl-194	4.10E-14	8.87E-17	9.25E-16	5.60E-18	1.57E-17	2.40E-17	2.65E-17
Tl-194m	1.13E-13	2.46E-16	2.41E-15	1.52E-17	4.31E-17	6.66E-17	7.45E-17
Tl-195	5.74E-14	1.25E-16	1.11E-15	7.06E-18	2.03E-17	3.25E-17	3.88E-17
Tl-196	8.80E-14	1.91E-16	1.72E-15	1.10E-17	3.15E-17	5.03E-17	5.96E-17
Tl-197	2.02E-14	4.40E-17	4.22E-16	2.64E-18	7.34E-18	1.12E-17	1.27E-17
Tl-198	9.50E-14	2.06E-16	1.82E-15	1.17E-17	3.37E-17	5.41E-17	6.46E-17
Tl-198m	5.36E-14	1.17E-16	1.15E-15	7.27E-18	2.06E-17	3.14E-17	3.46E-17
Tl-199	1.03E-14	2.27E-17	2.29E-16	1.42E-18	3.80E-18	5.46E-18	5.87E-18
Tl-200	5.98E-14	1.30E-16	1.22E-15	7.73E-18	2.20E-17	3.46E-17	3.97E-17
Tl-201	3.26E-15	7.32E-18	7.93E-17	4.57E-19	1.07E-18	1.30E-18	1.31E-18
Tl-202	1.99E-14	4.36E-17	4.37E-16	2.75E-18	7.63E-18	1.14E-17	1.24E-17
Tl-204	1.75E-16	2.44E-19	1.09E-17	9.49E-21	1.91E-20	2.23E-20	2.24E-20
Tl-206	3.97E-16	4.75E-19	6.12E-17	4.06E-20	5.66E-20	6.67E-20	6.84E-20
Tl-206m	1.09E-13	2.37E-16	2.29E-15	1.45E-17	4.14E-17	6.41E-17	7.17E-17
Tl-207	4.61E-16	6.50E-19	5.61E-17	4.66E-20	8.56E-20	1.17E-19	1.28E-19
Tl-208	1.68E-13	3.64E-16	2.96E-15	1.90E-17	5.55E-17	9.23E-17	1.16E-16
Tl-209	1.02E-13	2.20E-16	2.02E-15	1.26E-17	3.62E-17	5.79E-17	6.89E-17
Tl-210	1.32E-13	2.85E-16	2.64E-15	1.64E-17	4.71E-17	7.57E-17	8.98E-17
Tm-161	5.89E-14	1.28E-16	1.19E-15	7.35E-18	2.07E-17	3.27E-17	3.87E-17
Tm-162	9.14E-14	1.98E-16	1.78E-15	1.12E-17	3.20E-17	5.16E-17	6.21E-17
Tm-163	6.03E-14	1.31E-16	1.20E-15	7.58E-18	2.15E-17	3.41E-17	4.03E-17
Tm-164	3.57E-14	7.70E-17	7.84E-16	4.66E-18	1.31E-17	2.05E-17	2.35E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Tm-165	2.40E-14	5.23E-17	5.23E-16	3.23E-18	8.92E-18	1.35E-17	1.49E-17
Tm-166	9.30E-14	2.02E-16	1.79E-15	1.14E-17	3.29E-17	5.30E-17	6.34E-17
Tm-167	5.49E-15	1.21E-17	1.33E-16	7.61E-19	1.92E-18	2.66E-18	2.76E-18
Tm-168	5.51E-14	1.20E-16	1.17E-15	7.35E-18	2.07E-17	3.20E-17	3.59E-17
Tm-170	3.25E-16	5.14E-19	2.49E-17	2.70E-20	5.22E-20	6.06E-20	6.08E-20
Tm-171	1.70E-17	3.89E-20	5.31E-19	2.50E-21	4.55E-21	4.82E-21	4.82E-21
Tm-172	2.29E-14	4.92E-17	4.84E-16	2.80E-18	8.02E-18	1.30E-17	1.56E-17
Tm-173	1.72E-14	3.74E-17	3.86E-16	2.35E-18	6.66E-18	1.01E-17	1.09E-17
Tm-174	8.05E-14	1.75E-16	1.70E-15	1.06E-17	3.02E-17	4.67E-17	5.24E-17
Tm-175	4.96E-14	1.07E-16	1.07E-15	6.52E-18	1.86E-17	2.91E-17	3.31E-17
Tm-176	9.39E-14	2.03E-16	1.87E-15	1.15E-17	3.31E-17	5.30E-17	6.32E-17
U-227	4.85E-15	1.07E-17	1.06E-16	6.63E-19	1.81E-18	2.55E-18	2.64E-18
U-228	1.59E-16	3.53E-19	3.91E-18	2.19E-20	5.71E-20	7.68E-20	7.84E-20
U-230	4.56E-17	1.02E-19	1.52E-18	6.29E-21	1.56E-20	2.07E-20	2.12E-20
U-231	2.66E-15	5.96E-18	6.67E-17	3.70E-19	9.12E-19	1.14E-18	1.15E-18
U-232	1.08E-17	2.43E-20	7.30E-19	1.48E-21	3.09E-21	3.82E-21	3.87E-21
U-233	1.06E-17	2.35E-20	4.76E-19	1.45E-21	3.51E-21	4.76E-21	4.92E-21
U-234	6.14E-18	1.40E-20	5.80E-19	8.39E-22	1.56E-21	1.84E-21	1.85E-21
U-235	6.87E-15	1.51E-17	1.49E-16	9.41E-19	2.60E-18	3.65E-18	3.75E-18
U-235+D	7.33E-15	1.61E-17	1.64E-16	1.00E-18	2.74E-18	3.82E-18	3.92E-18
U-235+E	7.33E-15	1.61E-17	1.64E-16	1.00E-18	2.74E-18	3.82E-18	3.92E-18
U-235m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-236	3.78E-18	8.69E-21	4.82E-19	5.10E-22	8.26E-22	9.39E-22	9.41E-22
U-237	5.28E-15	1.17E-17	1.23E-16	7.28E-19	1.87E-18	2.51E-18	2.56E-18
U-238	3.20E-18	7.32E-21	3.91E-19	4.26E-22	7.15E-22	8.66E-22	9.17E-22
U-238+D	1.85E-15	3.41E-18	1.23E-16	2.53E-19	5.53E-19	7.83E-19	8.69E-19
U-238+E	1.85E-15	3.41E-18	1.23E-16	2.53E-19	5.53E-19	7.83E-19	8.69E-19

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
U-239	2.10E-15	4.41E-18	8.15E-17	2.73E-19	6.27E-19	7.95E-19	8.33E-19
U-240	2.07E-16	4.30E-19	5.59E-18	2.50E-20	6.13E-20	7.92E-20	8.00E-20
U-242	1.96E-15	4.03E-18	7.21E-17	2.51E-19	6.56E-19	9.56E-19	1.04E-18
V-47	4.50E-14	9.72E-17	1.05E-15	6.13E-18	1.74E-17	2.67E-17	2.94E-17
V-48	1.36E-13	2.95E-16	2.71E-15	1.73E-17	4.99E-17	7.97E-17	9.33E-17
V-49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
V-50	6.87E-14	1.49E-16	1.28E-15	8.28E-18	2.41E-17	3.94E-17	4.79E-17
V-52	7.05E-14	1.52E-16	1.43E-15	8.58E-18	2.47E-17	4.03E-17	4.88E-17
V-53	4.93E-14	1.06E-16	1.09E-15	6.32E-18	1.80E-17	2.87E-17	3.35E-17
W-177	3.99E-14	8.70E-17	8.50E-16	5.30E-18	1.47E-17	2.23E-17	2.49E-17
W-178	4.33E-16	9.89E-19	1.28E-17	6.33E-20	1.20E-19	1.29E-19	1.29E-19
W-178+D	5.15E-15	1.14E-17	1.22E-16	6.88E-19	1.70E-18	2.42E-18	2.75E-18
W-178+E	5.15E-15	1.14E-17	1.22E-16	6.88E-19	1.70E-18	2.42E-18	2.75E-18
W-179	1.45E-15	3.32E-18	4.54E-17	2.13E-19	3.97E-19	4.25E-19	4.25E-19
W-179m	1.99E-15	4.39E-18	4.88E-17	2.73E-19	6.40E-19	8.22E-19	8.43E-19
W-181	1.15E-15	2.63E-18	3.40E-17	1.69E-19	3.20E-19	3.43E-19	3.43E-19
W-185	4.96E-17	5.67E-20	1.67E-19	7.27E-22	1.60E-21	1.96E-21	1.98E-21
W-185m	9.33E-16	2.05E-18	2.15E-17	1.27E-19	3.15E-19	4.10E-19	4.17E-19
W-187	2.00E-14	4.33E-17	4.41E-16	2.68E-18	7.56E-18	1.16E-17	1.29E-17
W-188	1.10E-16	2.08E-19	1.81E-18	1.13E-20	3.12E-20	4.53E-20	4.76E-20
W-190	5.75E-15	1.26E-17	1.54E-16	7.83E-19	1.90E-18	2.46E-18	2.49E-18
Xe-120	1.65E-14	3.60E-17	3.71E-16	2.22E-18	6.19E-18	9.47E-18	1.05E-17
Xe-121	6.95E-14	1.50E-16	1.40E-15	8.61E-18	2.47E-17	3.95E-17	4.68E-17
Xe-122	2.19E-15	4.81E-18	6.01E-17	3.05E-19	8.01E-19	1.17E-18	1.25E-18
Xe-123	2.85E-14	6.20E-17	6.09E-16	3.72E-18	1.05E-17	1.63E-17	1.85E-17
Xe-125	1.08E-14	2.37E-17	2.47E-16	1.47E-18	4.07E-18	5.96E-18	6.35E-18
Xe-127	1.13E-14	2.48E-17	2.56E-16	1.55E-18	4.28E-18	6.20E-18	6.48E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Xe-127m	6.57E-15	1.45E-17	1.51E-16	9.02E-19	2.39E-18	3.25E-18	3.31E-18
Xe-129m	9.18E-16	2.01E-18	4.17E-17	1.27E-19	2.33E-19	2.98E-19	3.06E-19
Xe-131m	3.57E-16	7.64E-19	1.63E-17	4.69E-20	8.29E-20	1.03E-19	1.05E-19
Xe-133	1.37E-15	3.06E-18	4.06E-17	1.91E-19	4.08E-19	4.77E-19	4.76E-19
Xe-133m	1.29E-15	2.75E-18	3.53E-17	1.68E-19	4.27E-19	6.09E-19	6.35E-19
Xe-135	1.10E-14	2.39E-17	2.50E-16	1.49E-18	4.22E-18	6.23E-18	6.57E-18
Xe-135m	1.89E-14	4.09E-17	4.15E-16	2.56E-18	7.30E-18	1.13E-17	1.24E-17
Xe-137	1.04E-14	2.12E-17	3.48E-16	1.49E-18	3.78E-18	5.73E-18	6.42E-18
Xe-138	5.47E-14	1.18E-16	1.07E-15	6.55E-18	1.89E-17	3.08E-17	3.74E-17
Y-81	5.35E-14	1.15E-16	1.29E-15	7.44E-18	2.05E-17	3.10E-17	3.40E-17
Y-83	6.16E-14	1.33E-16	1.41E-15	8.28E-18	2.33E-17	3.62E-17	4.07E-17
Y-83m	3.77E-14	8.15E-17	8.80E-16	5.19E-18	1.46E-17	2.22E-17	2.43E-17
Y-84m	1.84E-13	3.98E-16	3.86E-15	2.40E-17	6.87E-17	1.08E-16	1.25E-16
Y-85	4.85E-14	1.05E-16	1.09E-15	6.58E-18	1.87E-17	2.88E-17	3.19E-17
Y-85m	6.18E-14	1.34E-16	1.29E-15	7.90E-18	2.27E-17	3.59E-17	4.16E-17
Y-86	1.68E-13	3.64E-16	3.31E-15	2.11E-17	6.10E-17	9.77E-17	1.15E-16
Y-86m	9.60E-15	2.10E-17	2.03E-16	1.30E-18	3.68E-18	5.37E-18	5.65E-18
Y-87	1.94E-14	4.23E-17	4.20E-16	2.66E-18	7.57E-18	1.16E-17	1.28E-17
Y-87m	1.35E-14	2.94E-17	2.91E-16	1.85E-18	5.28E-18	7.99E-18	8.62E-18
Y-88	1.30E-13	2.82E-16	2.41E-15	1.56E-17	4.54E-17	7.43E-17	9.06E-17
Y-89m	4.16E-14	9.02E-17	8.49E-16	5.40E-18	1.55E-17	2.46E-17	2.84E-17
Y-90	7.91E-16	9.86E-19	1.10E-16	1.26E-19	1.74E-19	2.07E-19	2.15E-19
Y-90m	2.80E-14	6.10E-17	6.02E-16	3.82E-18	1.09E-17	1.63E-17	1.76E-17
Y-91	6.01E-16	8.61E-19	7.43E-17	7.02E-20	1.24E-19	1.69E-19	1.87E-19
Y-91m	2.36E-14	5.13E-17	5.08E-16	3.21E-18	9.15E-18	1.42E-17	1.57E-17
Y-92	1.32E-14	2.74E-17	3.83E-16	1.77E-18	4.71E-18	7.38E-18	8.57E-18
Y-93	5.63E-15	1.13E-17	2.17E-16	7.53E-19	1.90E-18	2.93E-18	3.43E-18

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane (Sv per Bq s m ⁻²)	Soil Contamination			
	Submersion	Immersion		1cm	5cm	15cm	Infinite
	(Sv per Bq s m ⁻³)	(Sv per Bq s m ⁻³)		(Sv per Bq s m ⁻³)			
Y-94	3.82E-14	8.12E-17	8.90E-16	4.96E-18	1.38E-17	2.19E-17	2.56E-17
Y-95	5.71E-14	1.23E-16	1.09E-15	6.51E-18	1.87E-17	3.11E-17	3.94E-17
Yb-162	1.00E-14	2.21E-17	2.30E-16	1.38E-18	3.64E-18	5.17E-18	5.49E-18
Yb-163	3.29E-14	7.13E-17	7.04E-16	4.28E-18	1.20E-17	1.89E-17	2.17E-17
Yb-164	1.61E-15	3.64E-18	4.77E-17	2.34E-19	4.80E-19	5.99E-19	6.31E-19
Yb-165	1.37E-14	3.01E-17	3.13E-16	1.83E-18	4.83E-18	7.21E-18	8.15E-18
Yb-166	2.37E-15	5.42E-18	7.49E-17	3.50E-19	6.40E-19	6.88E-19	6.88E-19
Yb-167	9.55E-15	2.14E-17	2.38E-16	1.34E-18	3.20E-18	4.16E-18	4.30E-18
Yb-169	1.19E-14	2.65E-17	2.95E-16	1.67E-18	4.06E-18	5.39E-18	5.54E-18
Yb-175	1.73E-15	3.73E-18	3.69E-17	2.32E-19	6.47E-19	9.60E-19	1.03E-18
Yb-177	9.11E-15	1.95E-17	2.23E-16	1.16E-18	3.24E-18	5.01E-18	5.76E-18
Yb-178	1.76E-15	3.74E-18	3.91E-17	2.31E-19	6.54E-19	9.86E-19	1.06E-18
Yb-179	4.40E-14	9.52E-17	1.01E-15	5.94E-18	1.69E-17	2.60E-17	2.89E-17
Zn-60	6.91E-14	1.49E-16	1.59E-15	9.42E-18	2.66E-17	4.09E-17	4.52E-17
Zn-61	7.23E-14	1.55E-16	1.61E-15	9.55E-18	2.69E-17	4.21E-17	4.81E-17
Zn-62	1.94E-14	4.21E-17	4.19E-16	2.64E-18	7.48E-18	1.15E-17	1.27E-17
Zn-63	4.99E-14	1.08E-16	1.16E-15	6.77E-18	1.91E-17	2.95E-17	3.28E-17
Zn-65	2.72E-14	5.88E-17	5.37E-16	3.43E-18	9.91E-18	1.59E-17	1.87E-17
Zn-69	2.00E-16	2.28E-19	2.09E-17	8.14E-21	1.29E-20	1.55E-20	1.58E-20
Zn-69m	1.84E-14	4.01E-17	3.98E-16	2.53E-18	7.20E-18	1.10E-17	1.20E-17
Zn-71	1.52E-14	3.22E-17	4.19E-16	2.05E-18	5.64E-18	8.72E-18	9.80E-18
Zn-71m	7.04E-14	1.53E-16	1.54E-15	9.48E-18	2.70E-17	4.17E-17	4.63E-17
Zn-72	6.18E-15	1.37E-17	1.33E-16	8.46E-19	2.29E-18	3.14E-18	3.20E-18
Zr-85	6.74E-14	1.45E-16	1.54E-15	9.13E-18	2.57E-17	3.98E-17	4.43E-17
Zr-86	1.20E-14	2.63E-17	2.63E-16	1.64E-18	4.64E-18	6.85E-18	7.24E-18
Zr-87	4.22E-14	9.10E-17	9.81E-16	5.71E-18	1.62E-17	2.49E-17	2.77E-17
Zr-88	1.69E-14	3.68E-17	3.66E-16	2.32E-18	6.61E-18	1.00E-17	1.08E-17

Continued on next page

Table 1.1: Dose coefficients for external exposure to radionuclides

Nuclide	Air	Water	Ground Plane	Soil Contamination			
	Submersion (Sv per Bq s m ⁻³)	Immersion (Sv per Bq s m ⁻³)		1cm	5cm	15cm	Infinite
			(Sv per Bq s m ⁻²)	(Sv per Bq s m ⁻³)			
Zr-89	5.29E-14	1.15E-16	1.10E-15	6.91E-18	1.98E-17	3.13E-17	3.58E-17
Zr-89m	2.88E-14	6.24E-17	6.04E-16	3.82E-18	1.09E-17	1.71E-17	1.93E-17
Zr-93	6.45E-22	6.75E-25	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-95	3.33E-14	7.23E-17	6.96E-16	4.42E-18	1.27E-17	1.99E-17	2.25E-17
Zr-97	4.07E-14	8.79E-17	9.18E-16	5.36E-18	1.53E-17	2.40E-17	2.73E-17

1.2 Dose rate coefficients for ingestion

Explanation of Entries:

Table 1.2 contains the dose coefficients for internal exposure due to ingestion of a radionuclide.

Form: Separate dose rate coefficients are given for ^3H as tritiated water and organically bound tritium, and for inorganic and organic forms of radioisotopes of sulfur, mercury, and polonium.

f1: This is the fractional uptake from the small intestine to blood (f1) for common chemical forms of the radionuclide.

Per Capita: This is the effective dose equivalent for the entire population taking in fractional distributions of all age groups.

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ac-223		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-224		5.00E-03	5.23E-08	1.45E-08	7.54E-09	5.37E-09	3.92E-09	1.56E-09	2.78E-09	
Ac-225		5.00E-03	5.51E-07	2.43E-07	1.20E-07	8.17E-08	4.82E-08	3.86E-08	5.23E-08	
Ac-225+D		–	5.51E-07	2.43E-07	1.20E-07	8.17E-08	4.82E-08	3.86E-08	5.23E-08	
Ac-225+E		–	5.51E-07	2.43E-07	1.20E-07	8.17E-08	4.82E-08	3.86E-08	5.23E-08	
Ac-226		5.00E-03	1.37E-07	7.76E-08	3.86E-08	2.29E-08	1.30E-08	1.04E-08	1.45E-08	
Ac-227		5.00E-03	7.27E-06	6.68E-07	5.00E-07	3.74E-07	3.22E-07	3.22E-07	3.92E-07	
Ac-228		5.00E-03	5.02E-09	2.50E-09	1.29E-09	7.81E-10	4.72E-10	3.78E-10	5.14E-10	
Ac-230		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-231		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-232		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-233		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-100m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-101		1.00E-01	3.64E-10	2.06E-10	1.03E-10	6.01E-11	4.11E-11	3.23E-11	4.27E-11	
Ag-102		1.00E-01	4.34E-10	2.49E-10	1.26E-10	7.49E-11	5.20E-11	4.11E-11	5.36E-11	
Ag-102m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-103		1.00E-01	3.74E-10	2.28E-10	1.18E-10	7.20E-11	4.79E-11	3.81E-11	4.96E-11	
Ag-104		1.00E-01	4.40E-10	2.98E-10	1.70E-10	1.11E-10	7.61E-11	6.14E-11	7.63E-11	
Ag-104m		1.00E-01	7.26E-10	4.18E-10	2.10E-10	1.24E-10	8.40E-11	6.64E-11	8.74E-11	
Ag-105		1.00E-01	3.90E-09	2.44E-09	1.38E-09	9.05E-10	5.83E-10	4.62E-10	5.91E-10	
Ag-105m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-106		1.00E-01	3.66E-10	2.06E-10	1.02E-10	5.92E-11	4.03E-11	3.17E-11	4.21E-11	
Ag-106m		1.00E-01	9.74E-09	6.94E-09	4.09E-09	2.77E-09	1.85E-09	1.47E-09	1.83E-09	
Ag-108		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ag-108m		1.00E-01	2.06E-08	1.11E-08	6.51E-09	4.29E-09	2.85E-09	2.35E-09	2.95E-09	
Ag-108m+D		–	2.06E-08	1.11E-08	6.51E-09	4.29E-09	2.85E-09	2.35E-09	2.94E-09	
Ag-108m+E		–	2.06E-08	1.11E-08	6.51E-09	4.29E-09	2.85E-09	2.35E-09	2.94E-09	
Ag-109m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-110		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-110m		1.00E-01	2.44E-08	1.39E-08	7.99E-09	5.27E-09	3.47E-09	2.82E-09	3.55E-09	
Ag-110m+D		–	2.44E-08	1.39E-08	7.99E-09	5.27E-09	3.47E-09	2.82E-09	3.56E-09	
Ag-110m+E		–	2.44E-08	1.39E-08	7.99E-09	5.27E-09	3.47E-09	2.82E-09	3.56E-09	
Ag-111		1.00E-01	1.43E-08	9.26E-09	4.62E-09	2.75E-09	1.56E-09	1.25E-09	1.73E-09	
Ag-111m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-112		1.00E-01	4.85E-09	3.00E-09	1.49E-09	8.76E-10	5.31E-10	4.22E-10	5.73E-10	
Ag-113		1.00E-01	4.56E-09	2.89E-09	1.43E-09	8.42E-10	4.93E-10	3.93E-10	5.40E-10	
Ag-113m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-114		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-115		1.00E-01	7.48E-10	4.23E-10	2.07E-10	1.19E-10	7.87E-11	6.17E-11	8.30E-11	
Ag-116		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-117		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-99		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Al-26		2.00E-02	3.39E-08	2.12E-08	1.13E-08	7.09E-09	4.34E-09	3.49E-09	4.59E-09	
Al-28		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Al-29		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Am-237		5.00E-03	1.77E-10	1.08E-10	5.67E-11	3.46E-11	2.31E-11	1.83E-11	2.38E-11	
Am-238		5.00E-03	2.52E-10	1.64E-10	9.15E-11	5.95E-11	4.00E-11	3.22E-11	4.05E-11	
Am-239		5.00E-03	2.64E-09	1.71E-09	8.68E-10	5.23E-10	3.08E-10	2.45E-10	3.32E-10	
Am-240		5.00E-03	4.84E-09	3.34E-09	1.83E-09	1.18E-09	7.44E-10	5.93E-10	7.63E-10	
Am-241		5.00E-03	3.72E-06	3.75E-07	2.74E-07	2.22E-07	2.04E-07	2.04E-07	2.38E-07	
Am-242		5.00E-03	5.00E-09	2.18E-09	1.09E-09	6.47E-10	3.73E-10	2.99E-10	4.22E-10	
Am-242m		5.00E-03	3.09E-06	3.00E-07	2.34E-07	1.99E-07	1.89E-07	1.90E-07	2.16E-07	
Am-242m+D		–	3.10E-06	3.02E-07	2.35E-07	2.00E-07	1.89E-07	1.90E-07	2.17E-07	
Am-242m+E		–	3.10E-06	3.02E-07	2.35E-07	2.00E-07	1.89E-07	1.90E-07	2.17E-07	
Am-243		5.00E-03	3.66E-06	3.70E-07	2.72E-07	2.21E-07	2.03E-07	2.03E-07	2.36E-07	
Am-243+D		–	3.67E-06	3.76E-07	2.75E-07	2.23E-07	2.04E-07	2.04E-07	2.38E-07	
Am-243+E		–	3.67E-06	3.76E-07	2.75E-07	2.23E-07	2.04E-07	2.04E-07	2.38E-07	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Am-244		5.00E-03	4.84E-09	3.05E-09	1.57E-09	9.55E-10	5.72E-10	4.58E-10	6.14E-10	
Am-244m		5.00E-03	3.79E-10	2.05E-10	9.92E-11	5.63E-11	3.80E-11	2.98E-11	4.01E-11	
Am-245		5.00E-03	6.78E-10	4.49E-10	2.20E-10	1.28E-10	7.87E-11	6.23E-11	8.45E-11	
Am-246		5.00E-03	7.48E-10	4.23E-10	2.09E-10	1.21E-10	8.12E-11	6.38E-11	8.51E-11	
Am-246m		5.00E-03	3.92E-10	2.22E-10	1.11E-10	6.47E-11	4.41E-11	3.47E-11	4.58E-11	
Am-247		5.00E-03	3.78E-10	2.09E-10	1.01E-10	5.75E-11	3.89E-11	3.04E-11	4.09E-11	
Ar-37		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-39		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-41		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-42		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-42+D		–	5.12E-09	3.04E-09	1.49E-09	8.73E-10	5.47E-10	4.37E-10	5.90E-10	
Ar-42+E		–	5.12E-09	3.04E-09	1.49E-09	8.73E-10	5.47E-10	4.37E-10	5.90E-10	
Ar-43		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-44		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
As-68		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
As-69		1.00E+00	6.30E-10	3.60E-10	1.77E-10	1.02E-10	6.96E-11	5.46E-11	7.26E-11	
As-70		1.00E+00	1.19E-09	8.06E-10	4.18E-10	2.54E-10	1.72E-10	1.37E-10	1.76E-10	
As-71		1.00E+00	2.76E-09	2.78E-09	1.48E-09	9.25E-10	5.68E-10	4.56E-10	5.86E-10	
As-72		1.00E+00	1.09E-08	1.25E-08	6.39E-09	3.88E-09	2.31E-09	1.85E-09	2.42E-09	
As-73		1.00E+00	2.56E-09	1.87E-09	9.35E-10	5.59E-10	3.22E-10	2.59E-10	3.51E-10	
As-74		1.00E+00	1.04E-08	8.16E-09	4.26E-09	2.63E-09	1.59E-09	1.28E-09	1.68E-09	
As-76		1.00E+00	9.92E-09	1.14E-08	5.71E-09	3.41E-09	1.98E-09	1.59E-09	2.11E-09	
As-77		1.00E+00	2.64E-09	2.89E-09	1.44E-09	8.56E-10	4.93E-10	3.95E-10	5.27E-10	
As-78		1.00E+00	1.87E-09	1.32E-09	6.56E-10	3.85E-10	2.49E-10	1.97E-10	2.61E-10	
As-79		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-204		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-205		1.00E+00	6.31E-10	3.80E-10	1.91E-10	1.14E-10	7.41E-11	5.96E-11	7.85E-11	
At-206		1.00E+00	6.59E-10	4.06E-10	2.08E-10	1.26E-10	8.29E-11	6.69E-11	8.70E-11	
At-207		1.00E+00	2.38E-09	1.49E-09	7.52E-10	4.54E-10	2.80E-10	2.27E-10	3.02E-10	
At-208		1.00E+00	8.17E-10	5.21E-10	2.75E-10	1.71E-10	1.14E-10	9.28E-11	1.18E-10	
At-209		1.00E+00	3.91E-09	2.48E-09	1.25E-09	7.61E-10	4.65E-10	3.80E-10	5.04E-10	
At-210		1.00E+00	9.01E-09	5.89E-09	2.96E-09	1.79E-09	1.08E-09	8.78E-10	1.17E-09	
At-211		1.00E+00	1.25E-07	7.84E-08	3.84E-08	2.29E-08	1.34E-08	1.09E-08	1.48E-08	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
At-211+D		–	1.25E-07	7.84E-08	3.84E-08	2.29E-08	1.34E-08	1.09E-08	1.48E-08	
At-211+E		–	1.25E-07	7.84E-08	3.84E-08	2.29E-08	1.34E-08	1.09E-08	1.48E-08	
At-215		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-216		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-217		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-218		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-219		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-220		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-186		2.00E-01	4.88E-10	2.83E-10	1.42E-10	8.40E-11	5.69E-11	4.49E-11	5.91E-11	
Au-187		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-190		2.00E-01	3.68E-10	2.31E-10	1.24E-10	7.75E-11	5.32E-11	4.27E-11	5.41E-11	
Au-191		2.00E-01	6.20E-10	4.28E-10	2.30E-10	1.44E-10	9.14E-11	7.31E-11	9.47E-11	
Au-192		2.00E-01	1.24E-09	8.99E-10	5.04E-10	3.32E-10	2.16E-10	1.74E-10	2.19E-10	
Au-193		2.00E-01	1.17E-09	8.35E-10	4.36E-10	2.69E-10	1.62E-10	1.29E-10	1.71E-10	
Au-193m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-194		2.00E-01	2.79E-09	2.13E-09	1.20E-09	7.93E-10	5.11E-10	4.09E-10	5.16E-10	
Au-195		2.00E-01	2.53E-09	1.80E-09	9.25E-10	5.63E-10	3.30E-10	2.65E-10	3.55E-10	
Au-195m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-196		2.00E-01	2.62E-09	1.96E-09	1.09E-09	7.06E-10	4.47E-10	3.55E-10	4.54E-10	
Au-196m		2.00E-01	4.03E-09	2.75E-09	1.39E-09	8.32E-10	4.88E-10	3.90E-10	5.28E-10	
Au-198		2.00E-01	1.02E-08	7.21E-09	3.67E-09	2.21E-09	1.29E-09	1.03E-09	1.39E-09	
Au-198m		2.00E-01	1.15E-08	8.18E-09	4.20E-09	2.56E-09	1.50E-09	1.21E-09	1.61E-09	
Au-199		2.00E-01	4.54E-09	3.20E-09	1.61E-09	9.69E-10	5.59E-10	4.49E-10	6.08E-10	
Au-200		2.00E-01	8.21E-10	4.63E-10	2.26E-10	1.30E-10	8.59E-11	6.74E-11	9.08E-11	
Au-200m		2.00E-01	8.56E-09	6.21E-09	3.30E-09	2.07E-09	1.27E-09	1.01E-09	1.32E-09	
Au-201		2.00E-01	3.05E-10	1.68E-10	8.13E-11	4.61E-11	3.11E-11	2.43E-11	3.27E-11	
Au-202		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ba-124		6.00E-01	8.34E-10	4.61E-10	2.25E-10	1.29E-10	8.82E-11	6.91E-11	9.23E-11	
Ba-126		6.00E-01	2.60E-09	1.66E-09	8.38E-10	4.91E-10	3.12E-10	2.54E-10	3.36E-10	
Ba-127		6.00E-01	2.80E-10	1.60E-10	7.93E-11	4.60E-11	3.14E-11	2.48E-11	3.28E-11	
Ba-128		6.00E-01	2.09E-08	1.80E-08	9.22E-09	5.39E-09	3.03E-09	2.74E-09	3.56E-09	
Ba-129		6.00E-01	4.06E-10	2.92E-10	1.53E-10	9.23E-11	5.79E-11	4.87E-11	6.26E-11	
Ba-129m		6.00E-01	4.23E-10	3.42E-10	1.96E-10	1.28E-10	8.50E-11	7.20E-11	8.81E-11	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ba-131		6.00E-01	4.24E-09	2.67E-09	1.46E-09	9.61E-10	6.36E-10	4.63E-10	6.08E-10	
Ba-131m		6.00E-01	5.86E-11	3.28E-11	1.62E-11	9.41E-12	6.42E-12	4.99E-12	6.65E-12	
Ba-133		6.00E-01	2.16E-08	6.31E-09	3.92E-09	4.70E-09	7.23E-09	1.54E-09	2.44E-09	
Ba-133m		6.00E-01	4.26E-09	3.72E-09	1.89E-09	1.09E-09	6.05E-10	5.52E-10	7.19E-10	
Ba-135m		6.00E-01	3.31E-09	2.93E-09	1.48E-09	8.54E-10	4.74E-10	4.35E-10	5.66E-10	
Ba-137m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ba-139		6.00E-01	1.42E-09	8.54E-10	4.17E-10	2.38E-10	1.51E-10	1.22E-10	1.64E-10	
Ba-140		6.00E-01	3.20E-08	1.81E-08	9.26E-09	5.87E-09	3.74E-09	2.62E-09	3.63E-09	
Ba-141		6.00E-01	8.10E-10	5.01E-10	2.47E-10	1.42E-10	9.11E-11	7.40E-11	9.85E-11	
Ba-142		6.00E-01	3.49E-10	2.14E-10	1.08E-10	6.40E-11	4.22E-11	3.40E-11	4.46E-11	
Be-10		2.00E-02	1.42E-08	8.05E-09	4.07E-09	2.41E-09	1.39E-09	1.14E-09	1.56E-09	
Be-7		2.00E-02	1.78E-10	1.30E-10	7.81E-11	5.34E-11	3.58E-11	2.80E-11	3.48E-11	
Bi-197		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-200		1.00E-01	4.83E-10	3.08E-10	1.66E-10	1.04E-10	7.02E-11	5.61E-11	7.16E-11	
Bi-201		1.00E-01	9.59E-10	6.43E-10	3.51E-10	2.24E-10	1.46E-10	1.17E-10	1.49E-10	
Bi-202		1.00E-01	7.57E-10	5.11E-10	2.87E-10	1.87E-10	1.25E-10	1.01E-10	1.26E-10	
Bi-203		1.00E-01	3.56E-09	2.57E-09	1.45E-09	9.57E-10	6.18E-10	4.96E-10	6.26E-10	
Bi-204		1.00E-01	3.94E-09	2.88E-09	1.65E-09	1.10E-09	7.19E-10	5.76E-10	7.22E-10	
Bi-205		1.00E-01	6.19E-09	4.56E-09	2.62E-09	1.75E-09	1.15E-09	9.16E-10	1.15E-09	
Bi-206		1.00E-01	1.41E-08	1.02E-08	5.77E-09	3.80E-09	2.45E-09	1.95E-09	2.47E-09	
Bi-207		1.00E-01	1.02E-08	7.22E-09	3.97E-09	2.56E-09	1.61E-09	1.28E-09	1.65E-09	
Bi-208		1.00E-01	7.25E-09	5.47E-09	3.20E-09	2.18E-09	1.45E-09	1.16E-09	1.44E-09	
Bi-210		1.00E-01	1.50E-08	9.72E-09	4.84E-09	2.87E-09	1.63E-09	1.31E-09	1.80E-09	
Bi-210m		1.00E-01	2.12E-07	9.12E-08	4.72E-08	2.96E-08	1.86E-08	1.50E-08	2.01E-08	
Bi-210m+D		–	2.12E-07	9.12E-08	4.72E-08	2.96E-08	1.86E-08	1.50E-08	2.01E-08	
Bi-210m+E		–	2.12E-07	9.12E-08	4.72E-08	2.96E-08	1.86E-08	1.50E-08	2.01E-08	
Bi-211		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-212		1.00E-01	3.23E-09	1.80E-09	8.81E-10	5.09E-10	3.32E-10	2.61E-10	3.52E-10	
Bi-212+D		–	3.23E-09	1.80E-09	8.81E-10	5.09E-10	3.32E-10	2.61E-10	3.52E-10	
Bi-212+E		–	3.23E-09	1.80E-09	8.81E-10	5.09E-10	3.32E-10	2.61E-10	3.52E-10	
Bi-212n		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-213		1.00E-01	2.51E-09	1.39E-09	6.75E-10	3.86E-10	2.52E-10	1.98E-10	2.68E-10	
Bi-213+D		–	2.51E-09	1.39E-09	6.75E-10	3.86E-10	2.52E-10	1.98E-10	2.69E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Bi-213+E		–	2.51E-09	1.39E-09	6.75E-10	3.86E-10	2.52E-10	1.98E-10	2.69E-10	
Bi-214		1.00E-01	1.37E-09	7.52E-10	3.67E-10	2.10E-10	1.42E-10	1.12E-10	1.49E-10	
Bi-214+D		–	1.37E-09	7.52E-10	3.67E-10	2.10E-10	1.42E-10	1.12E-10	1.50E-10	
Bi-214+E		–	1.37E-09	7.52E-10	3.67E-10	2.10E-10	1.42E-10	1.12E-10	1.50E-10	
Bi-215		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-215+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-215+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-216		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bk-245		5.00E-03	6.14E-09	3.99E-09	2.04E-09	1.24E-09	7.24E-10	5.79E-10	7.83E-10	
Bk-246		5.00E-03	3.65E-09	2.54E-09	1.40E-09	8.99E-10	5.69E-10	4.52E-10	5.82E-10	
Bk-247		5.00E-03	8.88E-06	8.54E-07	6.29E-07	4.62E-07	3.80E-07	3.50E-07	4.43E-07	
Bk-248m		5.00E-03	7.35E-09	3.05E-09	1.56E-09	9.31E-10	5.30E-10	4.28E-10	6.05E-10	
Bk-249		5.00E-03	2.20E-08	2.89E-09	1.94E-09	1.37E-09	1.09E-09	9.93E-10	1.25E-09	
Bk-250		5.00E-03	1.51E-09	8.67E-10	4.50E-10	2.75E-10	1.72E-10	1.38E-10	1.83E-10	
Bk-251		5.00E-03	4.65E-10	2.63E-10	1.28E-10	7.34E-11	4.82E-11	3.78E-11	5.11E-11	
Br-72		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-73		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-74		1.00E+00	8.73E-10	5.00E-10	2.51E-10	1.49E-10	1.03E-10	8.18E-11	1.07E-10	
Br-74m		1.00E+00	1.46E-09	8.34E-10	4.18E-10	2.47E-10	1.70E-10	1.35E-10	1.76E-10	
Br-75		1.00E+00	8.52E-10	4.90E-10	2.45E-10	1.45E-10	9.85E-11	7.85E-11	1.03E-10	
Br-76		1.00E+00	4.12E-09	2.63E-09	1.39E-09	8.61E-10	5.62E-10	4.63E-10	5.92E-10	
Br-76m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-77		1.00E+00	6.37E-10	4.50E-10	2.60E-10	1.71E-10	1.16E-10	9.78E-11	1.20E-10	
Br-77m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-78		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-80		1.00E+00	3.91E-10	2.14E-10	1.03E-10	5.85E-11	3.98E-11	3.11E-11	4.18E-11	
Br-80m		1.00E+00	1.39E-09	8.01E-10	3.91E-10	2.26E-10	1.45E-10	1.15E-10	1.55E-10	
Br-82		1.00E+00	3.75E-09	2.60E-09	1.49E-09	9.63E-10	6.50E-10	5.49E-10	6.75E-10	
Br-82m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-83		1.00E+00	5.51E-10	3.08E-10	1.49E-10	8.53E-11	5.64E-11	4.43E-11	5.98E-11	
Br-84		1.00E+00	1.05E-09	5.83E-10	2.86E-10	1.65E-10	1.12E-10	8.84E-11	1.18E-10	
Br-84m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-85		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
C-10		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C-11		1.00E+00	2.61E-10	1.48E-10	7.36E-11	4.32E-11	2.99E-11	2.36E-11	3.10E-11	3.10E-11
C-14		1.00E+00	1.43E-09	1.61E-09	9.95E-10	8.00E-10	5.76E-10	5.81E-10	6.33E-10	6.33E-10
Ca-41		6.00E-01	1.45E-09	6.11E-10	4.64E-10	5.56E-10	5.84E-10	2.27E-10	2.96E-10	2.96E-10
Ca-45		6.00E-01	1.12E-08	4.89E-09	2.57E-09	1.82E-09	1.31E-09	7.09E-10	1.04E-09	1.04E-09
Ca-47		6.00E-01	1.29E-08	9.49E-09	4.95E-09	3.05E-09	1.86E-09	1.60E-09	2.05E-09	2.05E-09
Ca-49		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-101		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-102		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-103		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-104		1.00E-01	1.04E-09	6.47E-10	3.32E-10	2.01E-10	1.27E-10	1.01E-10	1.34E-10	1.34E-10
Cd-105		1.00E-01	4.07E-10	2.47E-10	1.29E-10	7.90E-11	5.31E-11	4.23E-11	5.47E-11	5.47E-11
Cd-107		1.00E-01	7.15E-10	4.61E-10	2.30E-10	1.36E-10	7.90E-11	6.25E-11	8.59E-11	8.59E-11
Cd-109		1.00E-01	2.05E-08	9.46E-09	5.51E-09	3.54E-09	2.37E-09	2.00E-09	2.52E-09	2.52E-09
Cd-111m		1.00E-01	1.44E-10	8.52E-11	4.34E-11	2.59E-11	1.74E-11	1.38E-11	1.81E-11	1.81E-11
Cd-113		1.00E-01	1.00E-07	4.73E-08	3.65E-08	2.97E-08	2.61E-08	2.45E-08	2.63E-08	2.63E-08
Cd-113m		1.00E-01	1.22E-07	5.66E-08	3.96E-08	2.95E-08	2.47E-08	2.34E-08	2.57E-08	2.57E-08
Cd-115		1.00E-01	1.49E-08	1.00E-08	5.04E-09	3.02E-09	1.74E-09	1.39E-09	1.90E-09	1.90E-09
Cd-115m		1.00E-01	4.05E-08	1.94E-08	9.67E-09	6.88E-09	4.09E-09	3.29E-09	4.35E-09	4.35E-09
Cd-117		1.00E-01	2.93E-09	1.88E-09	9.56E-10	5.76E-10	3.48E-10	2.78E-10	3.73E-10	3.73E-10
Cd-117m		1.00E-01	2.56E-09	1.71E-09	9.06E-10	5.67E-10	3.54E-10	2.84E-10	3.71E-10	3.71E-10
Cd-118		1.00E-01	2.30E-09	1.29E-09	6.27E-10	3.57E-10	2.35E-10	1.84E-10	2.50E-10	2.50E-10
Cd-119		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-119m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce-130		5.00E-03	7.78E-10	4.47E-10	2.25E-10	1.33E-10	9.03E-11	7.13E-11	9.37E-11	9.37E-11
Ce-131		5.00E-03	3.00E-10	1.72E-10	8.65E-11	5.11E-11	3.50E-11	2.76E-11	3.62E-11	3.62E-11
Ce-132		5.00E-03	3.21E-09	2.14E-09	1.12E-09	6.94E-10	4.15E-10	3.32E-10	4.42E-10	4.42E-10
Ce-133		5.00E-03	9.56E-10	6.41E-10	3.25E-10	1.94E-10	1.12E-10	8.83E-11	1.21E-10	1.21E-10
Ce-133m		5.00E-03	1.65E-09	1.14E-09	6.35E-10	4.12E-10	2.63E-10	2.11E-10	2.69E-10	2.69E-10
Ce-134		5.00E-03	2.91E-08	1.89E-08	9.58E-09	5.76E-09	3.32E-09	2.66E-09	3.63E-09	3.63E-09
Ce-135		5.00E-03	1.95E-09	1.39E-09	7.88E-10	5.17E-10	3.33E-10	2.64E-10	3.35E-10	3.35E-10
Ce-137		5.00E-03	2.70E-10	1.77E-10	9.22E-11	5.62E-11	3.36E-11	2.65E-11	3.57E-11	3.57E-11
Ce-137m		5.00E-03	6.23E-09	4.02E-09	2.02E-09	1.21E-09	6.92E-10	5.54E-10	7.59E-10	7.59E-10

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ce-139		5.00E-03	2.62E-09	1.65E-09	8.78E-10	5.49E-10	3.32E-10	2.64E-10	3.50E-10	
Ce-141		5.00E-03	8.15E-09	5.17E-09	2.60E-09	1.55E-09	8.88E-10	7.14E-10	9.78E-10	
Ce-143		5.00E-03	1.26E-08	8.13E-09	4.09E-09	2.45E-09	1.41E-09	1.13E-09	1.54E-09	
Ce-144		5.00E-03	6.62E-08	3.88E-08	1.94E-08	1.15E-08	6.50E-09	5.23E-09	7.25E-09	
Ce-144+D		–	6.68E-08	3.91E-08	1.96E-08	1.16E-08	6.56E-09	5.28E-09	7.32E-09	
Ce-144+E		–	6.68E-08	3.91E-08	1.96E-08	1.16E-08	6.56E-09	5.28E-09	7.32E-09	
Ce-145		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cf-244		5.00E-03	9.78E-10	4.84E-10	2.35E-10	1.34E-10	8.97E-11	7.03E-11	9.55E-11	
Cf-246		5.00E-03	5.01E-08	2.45E-08	1.23E-08	7.28E-09	4.09E-09	3.29E-09	4.63E-09	
Cf-247		5.00E-03	2.33E-10	1.45E-10	7.36E-11	4.42E-11	2.73E-11	2.16E-11	2.90E-11	
Cf-248		5.00E-03	1.51E-06	1.60E-07	9.83E-08	5.99E-08	3.30E-08	2.83E-08	4.68E-08	
Cf-249		5.00E-03	9.00E-06	8.65E-07	6.35E-07	4.64E-07	3.81E-07	3.51E-07	4.46E-07	
Cf-250		5.00E-03	5.66E-06	5.43E-07	3.64E-07	2.32E-07	1.71E-07	1.61E-07	2.22E-07	
Cf-251		5.00E-03	9.12E-06	8.79E-07	6.46E-07	4.74E-07	3.89E-07	3.58E-07	4.55E-07	
Cf-252		5.00E-03	4.96E-06	5.16E-07	3.25E-07	1.86E-07	1.04E-07	9.05E-08	1.51E-07	
Cf-253		5.00E-03	1.01E-07	1.14E-08	6.27E-09	3.87E-09	1.87E-09	1.48E-09	2.76E-09	
Cf-254		5.00E-03	1.15E-05	2.66E-06	1.44E-06	8.98E-07	5.04E-07	4.02E-07	6.02E-07	
Cf-255		5.00E-03	7.55E-10	2.76E-10	1.37E-10	8.01E-11	4.83E-11	3.82E-11	5.46E-11	
Cl-34		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cl-34m		1.00E+00	1.19E-09	6.70E-10	3.31E-10	1.92E-10	1.32E-10	1.04E-10	1.37E-10	
Cl-36		1.00E+00	9.71E-09	6.30E-09	3.15E-09	1.91E-09	1.15E-09	9.28E-10	1.24E-09	
Cl-38		1.00E+00	1.41E-09	7.83E-10	3.82E-10	2.19E-10	1.49E-10	1.17E-10	1.56E-10	
Cl-39		1.00E+00	9.77E-10	5.50E-10	2.72E-10	1.58E-10	1.08E-10	8.51E-11	1.13E-10	
Cl-40		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cm-238		5.00E-03	5.61E-10	3.61E-10	1.95E-10	1.24E-10	7.89E-11	6.32E-11	8.17E-11	
Cm-239		5.00E-03	8.24E-10	5.42E-10	2.80E-10	1.72E-10	1.02E-10	8.18E-11	1.09E-10	
Cm-240		5.00E-03	2.19E-07	4.83E-08	2.47E-08	1.50E-08	9.23E-09	7.65E-09	1.12E-08	
Cm-241		5.00E-03	1.08E-08	5.91E-09	3.09E-09	1.91E-09	1.15E-09	9.25E-10	1.24E-09	
Cm-242		5.00E-03	5.85E-07	7.60E-08	3.93E-08	2.36E-08	1.46E-08	1.17E-08	1.92E-08	
Cm-243		5.00E-03	3.23E-06	3.27E-07	2.21E-07	1.67E-07	1.48E-07	1.50E-07	1.80E-07	
Cm-244		5.00E-03	2.93E-06	2.93E-07	1.93E-07	1.40E-07	1.21E-07	1.23E-07	1.51E-07	
Cm-245		5.00E-03	3.74E-06	3.78E-07	2.79E-07	2.28E-07	2.09E-07	2.08E-07	2.42E-07	
Cm-246		5.00E-03	3.75E-06	3.76E-07	2.77E-07	2.26E-07	2.08E-07	2.07E-07	2.41E-07	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Cm-247		5.00E-03	3.44E-06	3.50E-07	2.57E-07	2.09E-07	1.92E-07	1.91E-07	2.22E-07	
Cm-247+D		–	3.44E-06	3.51E-07	2.57E-07	2.09E-07	1.92E-07	1.91E-07	2.23E-07	
Cm-247+E		–	3.44E-06	3.51E-07	2.57E-07	2.09E-07	1.92E-07	1.91E-07	2.23E-07	
Cm-248		5.00E-03	1.39E-05	1.44E-06	1.05E-06	8.54E-07	7.81E-07	7.75E-07	9.03E-07	
Cm-249		5.00E-03	3.88E-10	2.19E-10	1.07E-10	6.11E-11	3.97E-11	3.12E-11	4.23E-11	
Cm-250		5.00E-03	9.46E-05	1.00E-05	7.26E-06	5.87E-06	5.35E-06	5.30E-06	6.18E-06	
Cm-250+D		–	9.46E-05	1.00E-05	7.26E-06	5.87E-06	5.35E-06	5.30E-06	6.18E-06	
Cm-250+E		–	9.46E-05	1.00E-05	7.26E-06	5.87E-06	5.35E-06	5.30E-06	6.18E-06	
Cm-251		5.00E-03	3.55E-10	1.98E-10	9.64E-11	5.51E-11	3.67E-11	2.87E-11	3.87E-11	
Co-54m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Co-55		6.00E-01	6.09E-09	5.52E-09	2.92E-09	1.82E-09	1.11E-09	1.03E-09	1.27E-09	
Co-56		6.00E-01	2.55E-08	1.53E-08	8.84E-09	5.82E-09	3.87E-09	2.53E-09	3.44E-09	
Co-57		6.00E-01	2.86E-09	1.58E-09	8.93E-10	5.79E-10	3.74E-10	2.11E-10	3.13E-10	
Co-58		6.00E-01	7.34E-09	4.45E-09	2.58E-09	1.69E-09	1.13E-09	7.48E-10	1.01E-09	
Co-58m		6.00E-01	1.95E-10	1.54E-10	7.79E-11	4.68E-11	2.78E-11	2.39E-11	3.10E-11	
Co-60		6.00E-01	5.43E-08	2.68E-08	1.69E-08	1.12E-08	7.94E-09	3.42E-09	5.49E-09	
Co-60m		6.00E-01	2.12E-11	1.16E-11	5.61E-12	3.18E-12	2.17E-12	1.68E-12	2.27E-12	
Co-61		6.00E-01	8.28E-10	5.13E-10	2.52E-10	1.46E-10	9.29E-11	7.51E-11	1.00E-10	
Co-62		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Co-62m		6.00E-01	5.53E-10	3.12E-10	1.55E-10	9.08E-11	6.26E-11	4.92E-11	6.48E-11	
Cr-48		2.00E-01	1.35E-09	9.72E-10	5.63E-10	3.75E-10	2.47E-10	1.97E-10	2.47E-10	
Cr-49		2.00E-01	6.83E-10	3.93E-10	1.97E-10	1.16E-10	7.79E-11	6.15E-11	8.13E-11	
Cr-51		2.00E-01	3.44E-10	2.29E-10	1.23E-10	7.81E-11	4.83E-11	3.86E-11	5.03E-11	
Cr-55		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cr-56		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-121		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-121m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-123		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-124		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-125		1.00E+00	3.87E-10	2.19E-10	1.09E-10	6.38E-11	4.38E-11	3.46E-11	4.56E-11	
Cs-126		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-127		1.00E+00	1.88E-10	1.24E-10	6.83E-11	4.37E-11	3.00E-11	2.49E-11	3.09E-11	
Cs-128		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Cs-129		1.00E+00	4.36E-10	2.98E-10	1.67E-10	1.08E-10	7.20E-11	6.06E-11	7.50E-11	
Cs-130		1.00E+00	3.14E-10	1.75E-10	8.62E-11	4.98E-11	3.41E-11	2.68E-11	3.56E-11	
Cs-130m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-131		1.00E+00	4.56E-10	2.90E-10	1.58E-10	1.02E-10	6.99E-11	5.81E-11	7.22E-11	
Cs-132		1.00E+00	2.74E-09	1.88E-09	1.16E-09	7.89E-10	5.84E-10	5.14E-10	6.00E-10	
Cs-134		1.00E+00	2.58E-08	1.57E-08	1.32E-08	1.41E-08	1.90E-08	1.93E-08	1.87E-08	
Cs-134m		1.00E+00	2.12E-10	1.20E-10	5.94E-11	3.52E-11	2.48E-11	2.02E-11	2.61E-11	
Cs-135		1.00E+00	5.40E-09	3.08E-09	2.23E-09	2.21E-09	2.70E-09	2.65E-09	2.64E-09	
Cs-135m		1.00E+00	1.34E-10	8.75E-11	5.01E-11	3.28E-11	2.38E-11	1.94E-11	2.37E-11	
Cs-136		1.00E+00	1.45E-08	9.58E-09	6.09E-09	4.35E-09	3.44E-09	3.03E-09	3.45E-09	
Cs-137		1.00E+00	2.11E-08	1.24E-08	9.71E-09	1.02E-08	1.34E-08	1.36E-08	1.33E-08	
Cs-137+D		–	2.11E-08	1.24E-08	9.71E-09	1.02E-08	1.34E-08	1.36E-08	1.33E-08	
Cs-137+E		–	2.11E-08	1.24E-08	9.71E-09	1.02E-08	1.34E-08	1.36E-08	1.33E-08	
Cs-138		1.00E+00	1.11E-09	6.24E-10	3.09E-10	1.79E-10	1.23E-10	9.66E-11	1.28E-10	
Cs-138m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-139		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-140		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-57		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-59		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-60		1.00E+00	7.14E-10	4.32E-10	2.20E-10	1.32E-10	9.09E-11	7.19E-11	9.33E-11	
Cu-61		1.00E+00	7.06E-10	7.36E-10	3.78E-10	2.29E-10	1.45E-10	1.16E-10	1.49E-10	
Cu-62		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-64		1.00E+00	5.27E-10	8.38E-10	4.26E-10	2.56E-10	1.53E-10	1.23E-10	1.59E-10	
Cu-66		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-67		1.00E+00	2.03E-09	2.32E-09	1.17E-09	7.01E-10	4.11E-10	3.30E-10	4.35E-10	
Cu-69		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-148		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-149		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-150		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-151		5.00E-03	1.72E-10	1.08E-10	5.81E-11	3.65E-11	2.48E-11	1.97E-11	2.52E-11	
Dy-152		5.00E-03	9.65E-10	6.55E-10	3.51E-10	2.21E-10	1.36E-10	1.09E-10	1.42E-10	
Dy-153		5.00E-03	1.51E-09	1.02E-09	5.58E-10	3.56E-10	2.24E-10	1.79E-10	2.32E-10	
Dy-154		5.00E-03	1.64E-06	1.61E-07	1.06E-07	7.19E-08	5.86E-08	5.57E-08	7.27E-08	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Dy-155		5.00E-03	1.09E-09	7.65E-10	4.31E-10	2.82E-10	1.81E-10	1.45E-10	1.84E-10	
Dy-157		5.00E-03	4.42E-10	3.14E-10	1.80E-10	1.19E-10	7.72E-11	6.15E-11	7.76E-11	
Dy-159		5.00E-03	1.05E-09	6.71E-10	3.58E-10	2.22E-10	1.33E-10	1.06E-10	1.41E-10	
Dy-165		5.00E-03	1.31E-09	7.88E-10	3.87E-10	2.26E-10	1.37E-10	1.09E-10	1.49E-10	
Dy-165m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-166		5.00E-03	1.90E-08	1.23E-08	6.14E-09	3.65E-09	2.07E-09	1.66E-09	2.29E-09	
Dy-167		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-168		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-154		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-156		5.00E-03	3.56E-10	2.14E-10	1.09E-10	6.59E-11	4.34E-11	3.44E-11	4.52E-11	
Er-159		5.00E-03	1.94E-10	1.23E-10	6.67E-11	4.21E-11	2.89E-11	2.31E-11	2.92E-11	
Er-161		5.00E-03	6.83E-10	4.64E-10	2.56E-10	1.65E-10	1.06E-10	8.49E-11	1.08E-10	
Er-163		5.00E-03	2.39E-11	1.51E-11	8.06E-12	5.00E-12	3.33E-12	2.63E-12	3.39E-12	
Er-165		5.00E-03	1.76E-10	1.19E-10	6.37E-11	4.00E-11	2.45E-11	1.96E-11	2.57E-11	
Er-167m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-169		5.00E-03	4.35E-09	2.78E-09	1.39E-09	8.21E-10	4.65E-10	3.74E-10	5.16E-10	
Er-171		5.00E-03	3.94E-09	2.51E-09	1.27E-09	7.59E-10	4.47E-10	3.57E-10	4.85E-10	
Er-172		5.00E-03	1.07E-08	7.05E-09	3.63E-09	2.21E-09	1.30E-09	1.04E-09	1.40E-09	
Er-173		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Es-249		5.00E-03	1.89E-10	1.19E-10	6.40E-11	4.02E-11	2.66E-11	2.13E-11	2.73E-11	
Es-250		5.00E-03	4.88E-09	2.97E-09	1.55E-09	9.57E-10	5.82E-10	4.66E-10	6.20E-10	
Es-250m		5.00E-03	3.27E-10	1.56E-10	8.77E-11	5.67E-11	3.78E-11	3.07E-11	3.93E-11	
Es-251		5.00E-03	1.98E-09	1.25E-09	6.39E-10	3.86E-10	2.26E-10	1.80E-10	2.45E-10	
Es-253		5.00E-03	1.70E-07	4.55E-08	2.34E-08	1.40E-08	7.56E-09	6.06E-09	9.21E-09	
Es-254		5.00E-03	1.42E-06	1.63E-07	9.79E-08	5.96E-08	3.30E-08	2.81E-08	4.59E-08	
Es-254+D		–	1.42E-06	1.64E-07	9.84E-08	5.99E-08	3.32E-08	2.82E-08	4.61E-08	
Es-254+E		–	1.42E-06	1.64E-07	9.84E-08	5.99E-08	3.32E-08	2.82E-08	4.61E-08	
Es-254m		5.00E-03	5.82E-08	3.14E-08	1.58E-08	9.43E-09	5.36E-09	4.32E-09	5.99E-09	
Es-255		5.00E-03	2.64E-07	4.53E-08	2.40E-08	1.46E-08	7.46E-09	5.96E-09	9.91E-09	
Es-256		5.00E-03	2.84E-08	1.81E-08	9.53E-09	5.93E-09	3.69E-09	2.95E-09	3.87E-09	
Eu-142		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-142m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-143		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Eu-144		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-145		5.00E-03	4.59E-09	3.32E-09	1.91E-09	1.28E-09	8.37E-10	6.66E-10	8.36E-10	
Eu-146		5.00E-03	8.22E-09	5.99E-09	3.46E-09	2.32E-09	1.52E-09	1.21E-09	1.51E-09	
Eu-147		5.00E-03	3.72E-09	2.54E-09	1.39E-09	8.92E-10	5.58E-10	4.44E-10	5.74E-10	
Eu-148		5.00E-03	8.76E-09	6.27E-09	3.68E-09	2.48E-09	1.65E-09	1.30E-09	1.62E-09	
Eu-149		5.00E-03	1.65E-09	1.06E-09	5.53E-10	3.40E-10	2.02E-10	1.61E-10	2.15E-10	
Eu-150		5.00E-03	1.28E-08	5.47E-09	3.27E-09	2.24E-09	1.53E-09	1.25E-09	1.57E-09	
Eu-150m		5.00E-03	4.44E-09	2.83E-09	1.41E-09	8.34E-10	4.78E-10	3.83E-10	5.27E-10	
Eu-152		5.00E-03	1.54E-08	7.23E-09	3.99E-09	2.57E-09	1.64E-09	1.34E-09	1.74E-09	
Eu-152m		5.00E-03	5.65E-09	3.60E-09	1.80E-09	1.07E-09	6.24E-10	4.99E-10	6.82E-10	
Eu-152n		5.00E-03	1.44E-10	8.60E-11	4.82E-11	2.57E-11	1.65E-11	1.30E-11	1.76E-11	
Eu-154		5.00E-03	2.40E-08	1.17E-08	6.26E-09	3.92E-09	2.42E-09	1.97E-09	2.61E-09	
Eu-154m		5.00E-03	9.13E-11	5.23E-11	2.60E-11	1.52E-11	1.02E-11	7.97E-12	1.06E-11	
Eu-155		5.00E-03	4.38E-09	2.24E-09	1.15E-09	6.96E-10	4.09E-10	3.32E-10	4.52E-10	
Eu-156		5.00E-03	2.35E-08	1.54E-08	7.91E-09	4.83E-09	2.85E-09	2.29E-09	3.07E-09	
Eu-157		5.00E-03	6.82E-09	4.39E-09	2.21E-09	1.32E-09	7.67E-10	6.14E-10	8.37E-10	
Eu-158		5.00E-03	1.04E-09	5.97E-10	2.97E-10	1.74E-10	1.16E-10	9.13E-11	1.21E-10	
Eu-159		5.00E-03	5.95E-10	3.36E-10	1.64E-10	9.43E-11	6.21E-11	4.88E-11	6.57E-11	
F-17		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F-18		1.00E+00	4.99E-10	2.91E-10	1.48E-10	8.83E-11	6.05E-11	4.78E-11	6.24E-11	
Fe-52		6.00E-01	1.30E-08	9.13E-09	4.63E-09	2.80E-09	1.67E-09	1.38E-09	1.83E-09	
Fe-53		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-53m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-55		6.00E-01	7.46E-09	2.35E-09	1.74E-09	1.12E-09	7.71E-10	3.31E-10	5.51E-10	
Fe-59		6.00E-01	3.93E-08	1.29E-08	7.50E-09	4.73E-09	3.07E-09	1.79E-09	2.74E-09	
Fe-60		6.00E-01	8.14E-07	2.86E-07	2.85E-07	2.57E-07	2.43E-07	1.16E-07	1.48E-07	
Fe-60+D		–	8.68E-07	3.13E-07	3.02E-07	2.68E-07	2.51E-07	1.19E-07	1.53E-07	
Fe-60+E		–	8.68E-07	3.13E-07	3.02E-07	2.68E-07	2.51E-07	1.19E-07	1.53E-07	
Fe-61		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-62		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fm-251		5.00E-03	7.74E-10	4.91E-10	2.53E-10	1.54E-10	9.18E-11	7.31E-11	9.83E-11	
Fm-252		5.00E-03	4.16E-08	2.12E-08	1.06E-08	6.30E-09	3.56E-09	2.86E-09	4.01E-09	
Fm-253		5.00E-03	2.81E-08	8.74E-09	4.46E-09	2.67E-09	1.47E-09	1.18E-09	1.74E-09	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Fm-254		5.00E-03	5.80E-09	3.32E-09	1.64E-09	9.59E-10	5.76E-10	4.58E-10	6.29E-10	
Fm-255		5.00E-03	3.32E-08	1.91E-08	9.49E-09	5.62E-09	3.18E-09	2.55E-09	3.55E-09	
Fm-256		5.00E-03	1.85E-07	1.16E-07	6.10E-08	3.77E-08	2.39E-08	1.91E-08	2.50E-08	
Fm-257		5.00E-03	1.01E-06	1.21E-07	6.82E-08	4.18E-08	2.03E-08	1.63E-08	2.94E-08	
Fr-212		1.00E+00	5.38E-09	3.78E-09	2.06E-09	1.24E-09	8.15E-10	7.05E-10	8.82E-10	
Fr-219		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-222		1.00E+00	6.12E-09	3.82E-09	1.99E-09	1.24E-09	8.43E-10	7.12E-10	8.94E-10	
Fr-223		1.00E+00	2.61E-08	1.70E-08	8.38E-09	5.00E-09	2.93E-09	2.38E-09	3.23E-09	
Fr-224		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-227		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ga-64		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ga-65		1.00E-02	4.26E-10	2.38E-10	1.18E-10	6.80E-11	4.67E-11	3.67E-11	4.86E-11	
Ga-66		1.00E-02	1.22E-08	7.95E-09	4.08E-09	2.48E-09	1.48E-09	1.18E-09	1.59E-09	
Ga-67		1.00E-02	1.86E-09	1.24E-09	6.55E-10	4.07E-10	2.45E-10	1.96E-10	2.60E-10	
Ga-68		1.00E-02	1.15E-09	6.71E-10	3.35E-10	1.97E-10	1.29E-10	1.02E-10	1.36E-10	
Ga-70		1.00E-02	3.96E-10	2.17E-10	1.05E-10	5.93E-11	4.01E-11	3.13E-11	4.22E-11	
Ga-72		1.00E-02	1.04E-08	6.97E-09	3.67E-09	2.29E-09	1.39E-09	1.12E-09	1.47E-09	
Ga-73		1.00E-02	2.98E-09	1.87E-09	9.37E-10	5.57E-10	3.31E-10	2.64E-10	3.59E-10	
Ga-74		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-142		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-143m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-144		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-145		5.00E-03	3.27E-10	1.95E-10	1.02E-10	6.23E-11	4.31E-11	3.43E-11	4.40E-11	
Gd-145m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-146		5.00E-03	9.25E-09	5.94E-09	3.16E-09	1.97E-09	1.20E-09	9.54E-10	1.26E-09	
Gd-147		5.00E-03	4.76E-09	3.38E-09	1.91E-09	1.25E-09	8.08E-10	6.42E-10	8.15E-10	
Gd-148		5.00E-03	1.64E-06	1.62E-07	1.06E-07	7.20E-08	5.79E-08	5.47E-08	7.19E-08	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Gd-149		5.00E-03	4.77E-09	3.25E-09	1.76E-09	1.12E-09	6.90E-10	5.48E-10	7.15E-10	
Gd-150		5.00E-03	1.49E-06	1.47E-07	9.76E-08	6.76E-08	5.52E-08	5.23E-08	6.78E-08	
Gd-151		5.00E-03	2.45E-09	1.54E-09	7.94E-10	4.84E-10	2.84E-10	2.27E-10	3.07E-10	
Gd-152		5.00E-03	1.17E-06	1.16E-07	7.66E-08	5.31E-08	4.33E-08	4.10E-08	5.32E-08	
Gd-153		5.00E-03	2.98E-09	1.82E-09	9.55E-10	5.87E-10	3.49E-10	2.79E-10	3.74E-10	
Gd-159		5.00E-03	5.84E-09	3.73E-09	1.86E-09	1.10E-09	6.30E-10	5.05E-10	6.95E-10	
Gd-162		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ge-66		1.00E+00	8.16E-10	5.23E-10	2.91E-10	1.87E-10	1.27E-10	1.02E-10	1.28E-10	
Ge-67		1.00E+00	7.02E-10	3.90E-10	1.92E-10	1.10E-10	7.58E-11	5.95E-11	7.91E-11	
Ge-68		1.00E+00	1.23E-08	8.04E-09	4.23E-09	2.63E-09	1.61E-09	1.28E-09	1.69E-09	
Ge-68+D		–	1.34E-08	8.71E-09	4.56E-09	2.83E-09	1.74E-09	1.38E-09	1.83E-09	
Ge-68+E		–	1.34E-08	8.71E-09	4.56E-09	2.83E-09	1.74E-09	1.38E-09	1.83E-09	
Ge-69		1.00E+00	1.56E-09	1.05E-09	5.95E-10	3.85E-10	2.57E-10	2.08E-10	2.61E-10	
Ge-71		1.00E+00	1.24E-10	7.88E-11	4.03E-11	2.45E-11	1.49E-11	1.18E-11	1.58E-11	
Ge-75		1.00E+00	5.56E-10	3.10E-10	1.51E-10	8.74E-11	5.93E-11	4.63E-11	6.19E-11	
Ge-77		1.00E+00	2.98E-09	1.85E-09	9.90E-10	6.20E-10	4.12E-10	3.27E-10	4.21E-10	
Ge-78		1.00E+00	1.13E-09	6.66E-10	3.44E-10	2.10E-10	1.44E-10	1.14E-10	1.47E-10	
H-3	Tritiated	1.00E+00	7.53E-11	5.51E-11	3.38E-11	2.45E-11	1.91E-11	1.91E-11	2.10E-11	
H-3	Organically Bound	1.00E+00	1.19E-10	1.18E-10	7.26E-11	5.69E-11	4.17E-11	4.19E-11	4.58E-11	
Hf-167		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hf-169		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hf-170		2.00E-02	3.25E-09	2.28E-09	1.26E-09	8.17E-10	5.18E-10	4.14E-10	5.30E-10	
Hf-172		2.00E-02	1.99E-08	6.31E-09	3.40E-09	2.09E-09	1.29E-09	1.06E-09	1.46E-09	
Hf-172+D		–	2.00E-08	6.32E-09	3.40E-09	2.10E-09	1.29E-09	1.06E-09	1.46E-09	
Hf-172+E		–	2.00E-08	6.32E-09	3.40E-09	2.10E-09	1.29E-09	1.06E-09	1.46E-09	
Hf-173		2.00E-02	1.88E-09	1.30E-09	7.06E-10	4.50E-10	2.80E-10	2.24E-10	2.90E-10	
Hf-174		2.00E-02	6.08E-06	5.67E-07	4.11E-07	3.10E-07	2.70E-07	2.55E-07	3.15E-07	
Hf-175		2.00E-02	3.74E-09	2.37E-09	1.29E-09	8.21E-10	5.07E-10	4.04E-10	5.28E-10	
Hf-177m		2.00E-02	8.00E-10	4.84E-10	2.53E-10	1.54E-10	1.05E-10	8.33E-11	1.08E-10	
Hf-178m		2.00E-02	5.61E-08	1.58E-08	9.43E-09	6.47E-09	4.61E-09	3.97E-09	4.97E-09	
Hf-179m		2.00E-02	1.22E-08	7.94E-09	4.22E-09	2.64E-09	1.60E-09	1.27E-09	1.68E-09	
Hf-180m		2.00E-02	1.47E-09	9.90E-10	5.35E-10	3.38E-10	2.13E-10	1.71E-10	2.21E-10	
Hf-181		2.00E-02	1.19E-08	7.43E-09	3.85E-09	2.36E-09	1.40E-09	1.11E-09	1.50E-09	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Hf-182		2.00E-02	5.24E-08	7.12E-09	4.90E-09	3.71E-09	3.07E-09	2.83E-09	3.43E-09	
Hf-182+D		–	6.65E-08	1.64E-08	9.84E-09	6.81E-09	4.96E-09	4.35E-09	5.43E-09	
Hf-182+E		–	6.65E-08	1.64E-08	9.84E-09	6.81E-09	4.96E-09	4.35E-09	5.43E-09	
Hf-182m		2.00E-02	4.55E-10	2.74E-10	1.42E-10	8.59E-11	5.73E-11	4.56E-11	5.94E-11	
Hf-183		2.00E-02	8.15E-10	4.86E-10	2.45E-10	1.45E-10	9.36E-11	7.42E-11	9.87E-11	
Hf-184		2.00E-02	5.50E-09	3.58E-09	1.83E-09	1.11E-09	6.56E-10	5.24E-10	7.06E-10	
Hg-190	Inorganic	4.00E-02	1.90E-10	1.20E-10	6.42E-11	4.03E-11	2.73E-11	2.18E-11	2.78E-11	
Hg-190	Methyl	1.00E+00	1.49E-10	8.97E-11	4.71E-11	2.88E-11	2.02E-11	1.62E-11	2.06E-11	
Hg-190	Organic	8.00E-01	1.69E-10	1.16E-10	6.18E-11	3.87E-11	2.63E-11	2.11E-11	2.67E-11	
Hg-191m	Inorganic	4.00E-02	4.59E-10	2.98E-10	1.61E-10	1.02E-10	6.72E-11	5.38E-11	6.88E-11	
Hg-191m	Methyl	1.00E+00	2.93E-10	1.80E-10	9.58E-11	5.95E-11	4.15E-11	3.35E-11	4.24E-11	
Hg-191m	Organic	8.00E-01	3.50E-10	2.69E-10	1.45E-10	9.16E-11	6.11E-11	4.90E-11	6.20E-11	
Hg-192	Inorganic	4.00E-02	1.79E-09	1.25E-09	6.89E-10	4.48E-10	2.83E-10	2.27E-10	2.91E-10	
Hg-192	Methyl	1.00E+00	5.16E-10	3.42E-10	1.98E-10	1.26E-10	8.55E-11	7.10E-11	8.81E-11	
Hg-192	Organic	8.00E-01	8.15E-10	9.42E-10	5.19E-10	3.36E-10	2.14E-10	1.72E-10	2.16E-10	
Hg-193	Inorganic	4.00E-02	9.19E-10	6.21E-10	3.35E-10	2.13E-10	1.34E-10	1.08E-10	1.39E-10	
Hg-193	Methyl	1.00E+00	3.42E-10	2.17E-10	1.17E-10	7.29E-11	4.96E-11	4.05E-11	5.12E-11	
Hg-193	Organic	8.00E-01	4.93E-10	4.95E-10	2.67E-10	1.70E-10	1.08E-10	8.68E-11	1.10E-10	
Hg-193+D		–	9.19E-10	6.21E-10	3.35E-10	2.13E-10	1.34E-10	1.08E-10	1.39E-10	
Hg-193+E		–	9.19E-10	6.21E-10	3.35E-10	2.13E-10	1.34E-10	1.08E-10	1.39E-10	
Hg-193m	Inorganic	4.00E-02	3.71E-09	2.55E-09	1.37E-09	8.72E-10	5.41E-10	4.33E-10	5.62E-10	
Hg-193m	Methyl	1.00E+00	1.13E-09	7.40E-10	4.02E-10	2.55E-10	1.71E-10	1.41E-10	1.77E-10	
Hg-193m	Organic	8.00E-01	1.65E-09	1.88E-09	1.02E-09	6.45E-10	4.04E-10	3.25E-10	4.11E-10	
Hg-194	Inorganic	4.00E-02	7.25E-09	3.67E-09	2.60E-09	1.95E-09	1.55E-09	1.39E-09	1.56E-09	
Hg-194	Methyl	1.00E+00	1.32E-07	1.15E-07	8.40E-08	6.56E-08	5.54E-08	5.13E-08	5.53E-08	
Hg-194	Organic	8.00E-01	1.07E-07	4.76E-08	3.45E-08	2.69E-08	2.26E-08	2.09E-08	2.30E-08	
Hg-194+D		–	1.00E-08	5.80E-09	3.80E-09	2.74E-09	2.06E-09	1.80E-09	2.08E-09	
Hg-194+E		–	1.00E-08	5.80E-09	3.80E-09	2.74E-09	2.06E-09	1.80E-09	2.08E-09	
Hg-195	Inorganic	4.00E-02	1.01E-09	6.70E-10	3.48E-10	2.14E-10	1.29E-10	1.03E-10	1.37E-10	
Hg-195	Methyl	1.00E+00	3.12E-10	2.14E-10	1.11E-10	6.81E-11	4.47E-11	3.62E-11	4.65E-11	
Hg-195	Organic	8.00E-01	4.79E-10	5.10E-10	2.65E-10	1.63E-10	9.89E-11	7.92E-11	1.03E-10	
Hg-195m	Inorganic	4.00E-02	5.77E-09	3.81E-09	1.95E-09	1.18E-09	6.90E-10	5.53E-10	7.47E-10	
Hg-195m	Methyl	1.00E+00	2.05E-09	1.32E-09	6.82E-10	4.22E-10	2.69E-10	2.19E-10	2.84E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Hg-195m	Organic	8.00E-01	2.58E-09	2.79E-09	1.42E-09	8.63E-10	5.09E-10	4.09E-10	5.37E-10	
Hg-197	Inorganic	4.00E-02	2.66E-09	1.75E-09	8.90E-10	5.37E-10	3.11E-10	2.50E-10	3.39E-10	
Hg-197	Methyl	1.00E+00	1.05E-09	6.76E-10	3.43E-10	2.11E-10	1.33E-10	1.07E-10	1.41E-10	
Hg-197	Organic	8.00E-01	1.39E-09	1.30E-09	6.58E-10	3.97E-10	2.32E-10	1.87E-10	2.48E-10	
Hg-197m	Inorganic	4.00E-02	5.34E-09	3.48E-09	1.75E-09	1.04E-09	6.00E-10	4.82E-10	6.58E-10	
Hg-197m	Methyl	1.00E+00	1.58E-09	9.81E-10	4.91E-10	2.97E-10	1.87E-10	1.50E-10	1.99E-10	
Hg-197m	Organic	8.00E-01	2.23E-09	2.51E-09	1.26E-09	7.49E-10	4.34E-10	3.48E-10	4.62E-10	
Hg-199m	Inorganic	4.00E-02	3.69E-10	2.08E-10	1.02E-10	5.86E-11	3.91E-11	3.07E-11	4.11E-11	
Hg-199m	Methyl	1.00E+00	3.41E-10	1.89E-10	9.21E-11	5.27E-11	3.58E-11	2.80E-11	3.76E-11	
Hg-199m	Organic	8.00E-01	3.56E-10	2.05E-10	1.01E-10	5.78E-11	3.87E-11	3.03E-11	4.06E-11	
Hg-203	Inorganic	4.00E-02	5.53E-09	3.58E-09	1.85E-09	1.14E-09	6.73E-10	5.39E-10	7.23E-10	
Hg-203	Methyl	1.00E+00	1.52E-08	1.07E-08	5.70E-09	3.60E-09	2.32E-09	1.91E-09	2.43E-09	
Hg-203	Organic	8.00E-01	1.33E-08	6.40E-09	3.37E-09	2.11E-09	1.32E-09	1.08E-09	1.43E-09	
Hg-205		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hg-206		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hg-207		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-150		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-153		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-153m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-154		5.00E-03	4.70E-10	2.63E-10	1.30E-10	7.55E-11	5.19E-11	4.08E-11	5.40E-11	
Ho-154m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-155		5.00E-03	3.80E-10	2.34E-10	1.22E-10	7.51E-11	4.98E-11	3.95E-11	5.13E-11	
Ho-156		5.00E-03	1.01E-09	5.98E-10	3.06E-10	1.83E-10	1.23E-10	9.73E-11	1.27E-10	
Ho-157		5.00E-03	6.62E-11	4.04E-11	2.15E-11	1.33E-11	9.17E-12	7.29E-12	9.32E-12	
Ho-159		5.00E-03	7.78E-11	4.75E-11	2.52E-11	1.56E-11	1.08E-11	8.57E-12	1.09E-11	
Ho-160		5.00E-03	1.29E-10	8.31E-11	4.66E-11	3.02E-11	2.13E-11	1.71E-11	2.13E-11	
Ho-161		5.00E-03	1.44E-10	9.03E-11	4.22E-11	2.79E-11	1.59E-11	1.26E-11	1.71E-11	
Ho-162		5.00E-03	3.49E-11	1.99E-11	1.01E-11	5.94E-12	4.11E-12	3.24E-12	4.24E-12	
Ho-162m		5.00E-03	2.33E-10	1.45E-10	7.69E-11	4.78E-11	3.19E-11	2.54E-11	3.27E-11	
Ho-163		5.00E-03	5.24E-11	1.88E-11	9.62E-12	5.81E-12	3.47E-12	2.88E-12	4.00E-12	
Ho-164		5.00E-03	1.17E-10	6.48E-11	3.15E-11	1.80E-11	1.21E-11	9.47E-12	1.27E-11	
Ho-164m		5.00E-03	1.99E-10	1.13E-10	5.57E-11	3.21E-11	2.11E-11	1.66E-11	2.23E-11	
Ho-166		5.00E-03	1.63E-08	1.04E-08	5.19E-09	3.07E-09	1.75E-09	1.40E-09	1.93E-09	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ho-166m		5.00E-03	2.70E-08	9.60E-09	5.45E-09	3.59E-09	2.38E-09	1.97E-09	2.55E-09	
Ho-167		5.00E-03	9.33E-10	5.81E-10	2.96E-10	1.77E-10	1.10E-10	8.72E-11	1.17E-10	
Ho-168		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-168m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-170		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-118		1.00E+00	2.02E-09	1.56E-09	8.40E-10	4.32E-10	2.85E-10	1.95E-10	2.76E-10	
I-118m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-119		1.00E+00	4.50E-10	2.97E-10	1.55E-10	8.38E-11	5.74E-11	4.24E-11	5.75E-11	
I-120		1.00E+00	3.26E-09	2.35E-09	1.21E-09	6.13E-10	4.10E-10	2.91E-10	4.10E-10	
I-120m		1.00E+00	1.64E-09	1.09E-09	5.63E-10	3.05E-10	2.08E-10	1.55E-10	2.10E-10	
I-121		1.00E+00	5.38E-10	4.60E-10	2.72E-10	1.55E-10	1.08E-10	7.59E-11	1.00E-10	
I-122		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-123		1.00E+00	2.27E-09	2.00E-09	1.08E-09	5.10E-10	3.39E-10	2.21E-10	3.24E-10	
I-124		1.00E+00	1.20E-07	1.13E-07	6.36E-08	3.10E-08	2.04E-08	1.31E-08	1.90E-08	
I-125		1.00E+00	5.30E-08	5.85E-08	4.22E-08	3.19E-08	2.24E-08	1.55E-08	1.89E-08	
I-126		1.00E+00	2.11E-07	2.11E-07	1.28E-07	6.91E-08	4.56E-08	2.93E-08	4.09E-08	
I-128		1.00E+00	5.69E-10	3.31E-10	1.62E-10	8.87E-11	5.99E-11	4.57E-11	6.23E-11	
I-129		1.00E+00	1.88E-07	2.20E-07	1.76E-07	1.92E-07	1.43E-07	1.08E-07	1.21E-07	
I-130		1.00E+00	1.95E-08	1.72E-08	9.30E-09	4.34E-09	2.88E-09	1.87E-09	2.76E-09	
I-130m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-131		1.00E+00	1.84E-07	1.79E-07	1.03E-07	5.23E-08	3.42E-08	2.17E-08	3.13E-08	
I-132		1.00E+00	3.00E-09	2.37E-09	1.25E-09	6.17E-10	4.13E-10	2.84E-10	4.05E-10	
I-132m		1.00E+00	2.16E-09	1.78E-09	9.52E-10	4.50E-10	2.96E-10	1.98E-10	2.89E-10	
I-133		1.00E+00	4.98E-08	4.44E-08	2.35E-08	1.06E-08	6.85E-09	4.32E-09	6.60E-09	
I-134		1.00E+00	1.05E-09	7.01E-10	3.63E-10	1.98E-10	1.36E-10	1.01E-10	1.37E-10	
I-134m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-135		1.00E+00	9.75E-09	8.41E-09	4.46E-09	2.07E-09	1.36E-09	8.83E-10	1.31E-09	
In-103		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-105		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-106		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-106m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-107		4.00E-02	4.15E-10	2.48E-10	1.27E-10	7.63E-11	5.10E-11	4.05E-11	5.29E-11	
In-108		4.00E-02	5.77E-10	3.83E-10	2.16E-10	1.41E-10	9.68E-11	7.80E-11	9.72E-11	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
In-108m		4.00E-02	8.39E-10	4.93E-10	2.52E-10	1.51E-10	1.02E-10	8.10E-11	1.06E-10	
In-109		4.00E-02	4.49E-10	3.11E-10	1.74E-10	1.13E-10	7.35E-11	5.88E-11	7.46E-11	
In-109m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-110		4.00E-02	1.53E-09	1.13E-09	6.70E-10	4.55E-10	3.05E-10	2.45E-10	3.03E-10	
In-110m		4.00E-02	1.08E-09	6.43E-10	3.27E-10	1.95E-10	1.29E-10	1.02E-10	1.34E-10	
In-111		4.00E-02	2.41E-09	1.67E-09	9.18E-10	5.92E-10	3.71E-10	2.92E-10	3.79E-10	
In-111m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-112		4.00E-02	1.25E-10	6.94E-11	3.41E-11	1.96E-11	1.34E-11	1.05E-11	1.40E-11	
In-112m		4.00E-02	2.03E-10	1.14E-10	5.59E-11	3.22E-11	2.17E-11	1.70E-11	2.28E-11	
In-113m		4.00E-02	3.10E-10	1.87E-10	1.05E-10	6.28E-11	3.65E-11	2.89E-11	3.92E-11	
In-114		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-114m		4.00E-02	5.68E-08	3.15E-08	1.56E-08	9.15E-09	5.23E-09	4.14E-09	5.81E-09	
In-114m+D		–	5.68E-08	3.15E-08	1.56E-08	9.15E-09	5.23E-09	4.14E-09	5.81E-09	
In-114m+E		–	5.68E-08	3.15E-08	1.56E-08	9.15E-09	5.23E-09	4.14E-09	5.81E-09	
In-115		4.00E-02	1.35E-07	6.40E-08	4.81E-08	4.31E-08	3.66E-08	3.27E-08	3.55E-08	
In-115m		4.00E-02	9.75E-10	6.14E-10	3.09E-10	1.84E-10	1.10E-10	8.78E-11	1.19E-10	
In-116m		4.00E-02	5.82E-10	3.59E-10	1.91E-10	1.19E-10	8.07E-11	6.44E-11	8.24E-11	
In-117		4.00E-02	3.25E-10	1.90E-10	9.63E-11	5.72E-11	3.87E-11	3.06E-11	4.01E-11	
In-117m		4.00E-02	1.42E-09	8.63E-10	4.30E-10	2.54E-10	1.56E-10	1.24E-10	1.68E-10	
In-118		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-118m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-119		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-119m		4.00E-02	5.79E-10	3.17E-10	1.53E-10	8.69E-11	5.89E-11	4.60E-11	6.20E-11	
In-121		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-121m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-180		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-182		2.00E-02	5.91E-10	3.37E-10	1.68E-10	9.85E-11	6.68E-11	5.25E-11	6.95E-11	
Ir-183		2.00E-02	4.54E-10	2.94E-10	1.59E-10	1.01E-10	6.66E-11	5.33E-11	6.81E-11	
Ir-184		2.00E-02	1.70E-09	1.10E-09	5.89E-10	3.69E-10	2.36E-10	1.88E-10	2.44E-10	
Ir-185		2.00E-02	2.92E-09	1.97E-09	1.05E-09	6.64E-10	4.08E-10	3.28E-10	4.28E-10	
Ir-186		2.00E-02	4.61E-09	3.19E-09	1.75E-09	1.12E-09	7.06E-10	5.64E-10	7.27E-10	
Ir-186m		2.00E-02	6.02E-10	4.01E-10	2.19E-10	1.41E-10	9.17E-11	7.35E-11	9.38E-11	
Ir-187		2.00E-02	1.04E-09	7.01E-10	3.74E-10	2.35E-10	1.45E-10	1.16E-10	1.52E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ir-188		2.00E-02	5.34E-09	3.86E-09	2.20E-09	1.47E-09	9.57E-10	7.66E-10	9.62E-10	
Ir-189		2.00E-02	2.52E-09	1.65E-09	8.49E-10	5.16E-10	3.02E-10	2.43E-10	3.27E-10	
Ir-190		2.00E-02	8.06E-09	5.70E-09	3.21E-09	2.10E-09	1.35E-09	1.07E-09	1.36E-09	
Ir-190m		2.00E-02	6.74E-11	4.26E-11	2.24E-11	1.38E-11	8.89E-12	7.00E-12	9.18E-12	
Ir-190n		2.00E-02	9.47E-10	6.43E-10	3.56E-10	2.28E-10	1.48E-10	1.18E-10	1.51E-10	
Ir-191m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-192		2.00E-02	1.34E-08	8.75E-09	4.59E-09	2.85E-09	1.71E-09	1.37E-09	1.82E-09	
Ir-192m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-192n		2.00E-02	1.07E-08	6.18E-09	3.18E-09	1.92E-09	1.12E-09	9.15E-10	1.24E-09	
Ir-193m		2.00E-02	3.36E-09	2.16E-09	1.07E-09	6.37E-10	3.61E-10	2.90E-10	4.00E-10	
Ir-194		2.00E-02	1.54E-08	9.89E-09	4.92E-09	2.92E-09	1.66E-09	1.33E-09	1.84E-09	
Ir-194m		2.00E-02	1.66E-08	1.10E-08	6.20E-09	4.04E-09	2.59E-09	2.06E-09	2.63E-09	
Ir-195		2.00E-02	1.21E-09	7.31E-10	3.60E-10	2.11E-10	1.28E-10	1.01E-10	1.38E-10	
Ir-195m		2.00E-02	1.47E-09	9.30E-10	4.71E-10	2.83E-10	1.71E-10	1.36E-10	1.83E-10	
Ir-196		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-196m		2.00E-02	9.97E-10	6.28E-10	3.35E-10	2.08E-10	1.39E-10	1.11E-10	1.43E-10	
K-38		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
K-40		1.00E+00	6.12E-08	4.19E-08	2.11E-08	1.27E-08	7.54E-09	6.15E-09	8.22E-09	
K-42		1.00E+00	5.12E-09	3.04E-09	1.49E-09	8.73E-10	5.47E-10	4.37E-10	5.89E-10	
K-43		1.00E+00	2.25E-09	1.44E-09	7.55E-10	4.67E-10	3.02E-10	2.49E-10	3.20E-10	
K-44		1.00E+00	9.82E-10	5.47E-10	2.69E-10	1.55E-10	1.06E-10	8.36E-11	1.11E-10	
K-45		1.00E+00	5.69E-10	3.17E-10	1.57E-10	9.04E-11	6.22E-11	4.89E-11	6.48E-11	
K-46		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-74		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-75		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-77		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-79		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-81		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-81m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-83m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Kr-85		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-87		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-88		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-89		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-128		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-129		5.00E-03	3.00E-10	1.71E-10	8.53E-11	5.00E-11	3.39E-11	2.67E-11	3.53E-11	3.53E-11
La-130		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-131		5.00E-03	3.37E-10	2.03E-10	1.05E-10	6.36E-11	4.24E-11	3.36E-11	4.39E-11	4.39E-11
La-132		5.00E-03	4.03E-09	2.61E-09	1.35E-09	8.32E-10	5.11E-10	4.09E-10	5.41E-10	5.41E-10
La-132m		5.00E-03	3.58E-10	2.28E-10	1.19E-10	7.30E-11	4.61E-11	3.68E-11	4.83E-11	4.83E-11
La-133		5.00E-03	3.15E-10	2.03E-10	1.06E-10	6.46E-11	4.00E-11	3.18E-11	4.21E-11	4.21E-11
La-134		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-135		5.00E-03	2.90E-10	1.96E-10	1.05E-10	6.54E-11	3.96E-11	3.10E-11	4.12E-11	4.12E-11
La-136		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-137		5.00E-03	1.12E-09	4.69E-10	2.57E-10	1.63E-10	1.03E-10	8.40E-11	1.11E-10	1.11E-10
La-138		5.00E-03	1.28E-08	4.64E-09	2.75E-09	1.88E-09	1.30E-09	1.09E-09	1.37E-09	1.37E-09
La-140		5.00E-03	1.94E-08	1.29E-08	6.75E-09	4.18E-09	2.51E-09	2.01E-09	2.67E-09	2.67E-09
La-141		5.00E-03	4.45E-09	2.73E-09	1.35E-09	7.88E-10	4.66E-10	3.71E-10	5.10E-10	5.10E-10
La-142		5.00E-03	1.85E-09	1.12E-09	5.67E-10	3.41E-10	2.20E-10	1.75E-10	2.31E-10	2.31E-10
La-143		5.00E-03	6.87E-10	3.85E-10	1.87E-10	1.07E-10	7.11E-11	5.57E-11	7.51E-11	7.51E-11
Lu-165		5.00E-03	2.32E-10	1.34E-10	6.79E-11	4.03E-11	2.76E-11	2.18E-11	2.85E-11	2.85E-11
Lu-167		5.00E-03	4.17E-10	2.64E-10	1.42E-10	8.94E-11	6.03E-11	4.82E-11	6.14E-11	6.14E-11
Lu-169		5.00E-03	3.93E-09	2.79E-09	1.57E-09	1.04E-09	6.69E-10	5.35E-10	6.77E-10	6.77E-10
Lu-169m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-170		5.00E-03	6.74E-09	4.86E-09	2.77E-09	1.85E-09	1.21E-09	9.69E-10	1.22E-09	1.22E-09
Lu-171		5.00E-03	6.16E-09	4.18E-09	2.24E-09	1.41E-09	8.67E-10	6.91E-10	9.05E-10	9.05E-10
Lu-171m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-172		5.00E-03	1.03E-08	7.21E-09	4.01E-09	2.61E-09	1.66E-09	1.33E-09	1.69E-09	1.69E-09
Lu-172m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-173		5.00E-03	3.88E-09	2.30E-09	1.22E-09	7.57E-10	4.55E-10	3.66E-10	4.87E-10	4.87E-10
Lu-174		5.00E-03	3.39E-09	1.84E-09	9.64E-10	5.90E-10	3.52E-10	2.85E-10	3.83E-10	3.83E-10
Lu-174m		5.00E-03	6.40E-09	3.90E-09	1.97E-09	1.18E-09	6.77E-10	5.45E-10	7.47E-10	7.47E-10

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Lu-176		5.00E-03	2.46E-08	1.11E-08	5.81E-09	3.58E-09	2.19E-09	1.81E-09	2.42E-09	
Lu-176m		5.00E-03	1.98E-09	1.21E-09	5.97E-10	3.49E-10	2.08E-10	1.65E-10	2.27E-10	
Lu-177		5.00E-03	6.08E-09	3.91E-09	1.96E-09	1.16E-09	6.63E-10	5.33E-10	7.32E-10	
Lu-177m		5.00E-03	1.73E-08	1.09E-08	5.74E-09	3.56E-09	2.14E-09	1.71E-09	2.27E-09	
Lu-178		5.00E-03	5.79E-10	3.20E-10	1.55E-10	8.81E-11	5.93E-11	4.64E-11	6.25E-11	
Lu-178m		5.00E-03	3.68E-10	2.10E-10	1.05E-10	6.17E-11	4.23E-11	3.34E-11	4.39E-11	
Lu-179		5.00E-03	2.57E-09	1.59E-09	7.86E-10	4.61E-10	2.72E-10	2.16E-10	2.97E-10	
Lu-180		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-181		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mg-27		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mg-28		1.00E+00	1.16E-08	1.45E-08	7.44E-09	4.51E-09	2.70E-09	2.16E-09	2.82E-09	
Mn-50m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mn-51		2.00E-01	1.07E-09	6.13E-10	3.03E-10	1.76E-10	1.18E-10	9.26E-11	1.23E-10	
Mn-52		2.00E-01	1.23E-08	8.87E-09	5.11E-09	3.42E-09	2.26E-09	1.81E-09	2.26E-09	
Mn-52m		2.00E-01	7.81E-10	4.42E-10	2.20E-10	1.29E-10	8.83E-11	6.95E-11	9.17E-11	
Mn-53		2.00E-01	4.08E-10	2.16E-10	1.10E-10	6.42E-11	3.69E-11	2.98E-11	4.14E-11	
Mn-54		2.00E-01	5.52E-09	3.20E-09	1.91E-09	1.30E-09	8.86E-10	7.21E-10	8.90E-10	
Mn-56		2.00E-01	2.67E-09	1.69E-09	8.56E-10	5.14E-10	3.22E-10	2.56E-10	3.41E-10	
Mn-57		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mn-58m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-101		1.00E+00	4.65E-10	2.60E-10	1.28E-10	7.45E-11	5.13E-11	4.03E-11	5.33E-11	
Mo-102		1.00E+00	8.74E-10	4.77E-10	2.30E-10	1.30E-10	8.86E-11	6.92E-11	9.32E-11	
Mo-89		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-90		1.00E+00	1.75E-09	1.15E-09	6.31E-10	4.02E-10	2.68E-10	2.20E-10	2.77E-10	
Mo-91		1.00E+00	7.31E-10	4.03E-10	1.96E-10	1.12E-10	7.66E-11	6.00E-11	8.03E-11	
Mo-91m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-93		1.00E+00	7.46E-09	6.48E-09	4.67E-09	3.68E-09	3.16E-09	2.89E-09	3.12E-09	
Mo-93m		1.00E+00	8.44E-10	5.67E-10	3.22E-10	2.08E-10	1.44E-10	1.20E-10	1.47E-10	
Mo-99		1.00E+00	5.47E-09	3.50E-09	1.77E-09	1.08E-09	7.60E-10	6.05E-10	7.73E-10	
N-13		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
N-16		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Na-22		1.00E+00	2.05E-08	1.47E-08	8.45E-09	5.51E-09	3.75E-09	3.17E-09	3.88E-09	
Na-24		1.00E+00	3.54E-09	2.29E-09	1.24E-09	7.83E-10	5.26E-10	4.34E-10	5.46E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Nb-87		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-88		2.00E-02	7.85E-10	4.46E-10	2.24E-10	1.32E-10	9.13E-11	7.20E-11	9.43E-11	
Nb-88m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-89		2.00E-02	2.93E-09	1.97E-09	9.92E-10	5.91E-10	3.68E-10	2.67E-10	3.69E-10	
Nb-89m		2.00E-02	1.43E-09	8.57E-10	4.37E-10	2.62E-10	1.72E-10	1.37E-10	1.80E-10	
Nb-90		2.00E-02	1.06E-08	7.26E-09	3.92E-09	2.51E-09	1.56E-09	1.25E-09	1.62E-09	
Nb-91		2.00E-02	5.65E-10	3.51E-10	1.73E-10	1.02E-10	5.73E-11	4.39E-11	6.22E-11	
Nb-91m		2.00E-02	4.74E-09	3.03E-09	1.52E-09	9.01E-10	5.13E-10	4.10E-10	5.65E-10	
Nb-92		2.00E-02	6.97E-09	4.71E-09	2.80E-09	1.90E-09	1.28E-09	1.02E-09	1.27E-09	
Nb-92m		2.00E-02	3.32E-09	2.42E-09	1.41E-09	9.50E-10	6.35E-10	5.02E-10	6.26E-10	
Nb-93m		2.00E-02	1.51E-09	9.50E-10	4.75E-10	2.82E-10	1.61E-10	1.29E-10	1.78E-10	
Nb-94		2.00E-02	1.50E-08	9.73E-09	5.33E-09	3.42E-09	2.15E-09	1.73E-09	2.23E-09	
Nb-94m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-95		2.00E-02	4.57E-09	3.18E-09	1.78E-09	1.16E-09	7.40E-10	5.87E-10	7.50E-10	
Nb-95m		2.00E-02	6.86E-09	4.43E-09	2.23E-09	1.33E-09	7.59E-10	6.08E-10	8.34E-10	
Nb-96		2.00E-02	9.25E-09	6.36E-09	3.45E-09	2.20E-09	1.38E-09	1.10E-09	1.42E-09	
Nb-97		2.00E-02	7.72E-10	4.53E-10	2.27E-10	1.34E-10	8.73E-11	6.90E-11	9.18E-11	
Nb-98m		2.00E-02	1.11E-09	6.58E-10	3.38E-10	2.04E-10	1.37E-10	1.09E-10	1.42E-10	
Nb-99		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-99m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-134		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-135		5.00E-03	6.69E-10	3.79E-10	1.88E-10	1.10E-10	7.46E-11	5.86E-11	7.77E-11	
Nd-136		5.00E-03	1.03E-09	6.14E-10	3.15E-10	1.89E-10	1.25E-10	9.95E-11	1.30E-10	
Nd-137		5.00E-03	5.53E-10	3.32E-10	1.70E-10	1.02E-10	6.76E-11	5.36E-11	7.03E-11	
Nd-138		5.00E-03	7.22E-09	4.54E-09	2.28E-09	1.35E-09	8.03E-10	6.40E-10	8.71E-10	
Nd-139		5.00E-03	2.25E-10	1.32E-10	6.65E-11	3.93E-11	2.62E-11	2.07E-11	2.73E-11	
Nd-139m		5.00E-03	1.97E-09	1.35E-09	7.41E-10	4.76E-10	3.02E-10	2.42E-10	3.10E-10	
Nd-140		5.00E-03	2.16E-08	1.41E-08	7.14E-09	4.29E-09	2.48E-09	1.99E-09	2.71E-09	
Nd-141		5.00E-03	8.16E-11	5.25E-11	2.78E-11	1.71E-11	1.09E-11	8.61E-12	1.13E-11	
Nd-141m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-144		5.00E-03	1.15E-06	1.13E-07	7.52E-08	5.26E-08	4.31E-08	4.08E-08	5.28E-08	
Nd-147		5.00E-03	1.21E-08	7.80E-09	3.93E-09	2.35E-09	1.34E-09	1.08E-09	1.48E-09	
Nd-149		5.00E-03	1.44E-09	8.72E-10	4.34E-10	2.55E-10	1.57E-10	1.25E-10	1.69E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Nd-151		5.00E-03	3.31E-10	1.90E-10	9.40E-11	5.48E-11	3.64E-11	2.86E-11	3.82E-11	
Nd-152		5.00E-03	6.02E-10	3.30E-10	1.60E-10	9.09E-11	6.19E-11	4.83E-11	6.50E-11	
Ne-19		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ne-24		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ni-56		1.00E-01	5.46E-09	4.05E-09	2.40E-09	1.63E-09	1.10E-09	8.71E-10	1.08E-09	
Ni-57		1.00E-01	7.21E-09	5.16E-09	2.82E-09	1.82E-09	1.14E-09	9.13E-10	1.17E-09	
Ni-59		1.00E-01	6.28E-10	3.39E-10	1.86E-10	1.12E-10	7.19E-11	6.23E-11	7.96E-11	
Ni-63		1.00E-01	1.57E-09	8.50E-10	4.64E-10	2.81E-10	1.79E-10	1.55E-10	1.98E-10	
Ni-65		1.00E-01	2.05E-09	1.26E-09	6.32E-10	3.74E-10	2.29E-10	1.82E-10	2.46E-10	
Ni-66		1.00E-01	3.35E-08	2.24E-08	1.12E-08	6.63E-09	3.77E-09	3.03E-09	4.15E-09	
Np-232		5.00E-03	8.89E-11	5.18E-11	2.77E-11	1.73E-11	1.23E-11	9.86E-12	1.24E-11	
Np-233		5.00E-03	2.19E-11	1.32E-11	6.87E-12	4.17E-12	2.88E-12	2.27E-12	2.94E-12	
Np-234		5.00E-03	5.05E-09	3.53E-09	1.95E-09	1.27E-09	8.08E-10	6.46E-10	8.26E-10	
Np-235		5.00E-03	7.56E-10	4.34E-10	2.16E-10	1.27E-10	7.18E-11	5.66E-11	7.96E-11	
Np-235+D		–	7.56E-10	4.34E-10	2.16E-10	1.27E-10	7.18E-11	5.66E-11	7.95E-11	
Np-235+E		–	7.56E-10	4.34E-10	2.16E-10	1.27E-10	7.18E-11	5.66E-11	7.95E-11	
Np-236		5.00E-03	2.72E-07	3.37E-08	2.59E-08	2.52E-08	2.59E-08	2.48E-08	2.70E-08	
Np-236m		5.00E-03	2.55E-09	1.33E-09	6.77E-10	4.07E-10	2.41E-10	1.96E-10	2.67E-10	
Np-237		5.00E-03	2.00E-06	2.12E-07	1.43E-07	1.15E-07	1.08E-07	1.07E-07	1.25E-07	
Np-237+D		–	2.01E-06	2.19E-07	1.46E-07	1.17E-07	1.09E-07	1.08E-07	1.27E-07	
Np-237+E		–	2.01E-06	2.19E-07	1.46E-07	1.17E-07	1.09E-07	1.08E-07	1.27E-07	
Np-238		5.00E-03	9.31E-09	6.03E-09	3.10E-09	1.89E-09	1.11E-09	8.94E-10	1.20E-09	
Np-239		5.00E-03	9.05E-09	5.86E-09	2.95E-09	1.77E-09	1.02E-09	8.14E-10	1.11E-09	
Np-240		5.00E-03	7.90E-10	4.64E-10	2.34E-10	1.39E-10	9.17E-11	7.25E-11	9.59E-11	
Np-240m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Np-241		5.00E-03	1.96E-10	1.07E-10	5.18E-11	2.93E-11	1.99E-11	1.56E-11	2.09E-11	
Np-242		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Np-242m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-14		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-15		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-19		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Os-180		2.00E-02	1.77E-10	1.05E-10	5.51E-11	3.37E-11	2.34E-11	1.86E-11	2.39E-11	
Os-181		2.00E-02	7.63E-10	5.13E-10	2.80E-10	1.79E-10	1.15E-10	9.21E-11	1.18E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Os-182		2.00E-02	4.81E-09	3.33E-09	1.82E-09	1.16E-09	7.26E-10	5.80E-10	7.50E-10	
Os-183		2.00E-02	1.94E-09	1.33E-09	7.19E-10	4.57E-10	2.85E-10	2.27E-10	2.95E-10	
Os-183m		2.00E-02	1.56E-09	1.10E-09	6.14E-10	4.03E-10	2.60E-10	2.08E-10	2.64E-10	
Os-185		2.00E-02	3.69E-09	2.54E-09	1.46E-09	9.69E-10	6.34E-10	5.03E-10	6.35E-10	
Os-186		2.00E-02	4.65E-07	1.86E-07	1.02E-07	6.26E-08	3.89E-08	3.20E-08	4.29E-08	
Os-189m		2.00E-02	2.04E-10	1.27E-10	6.28E-11	3.69E-11	2.14E-11	1.71E-11	2.36E-11	
Os-190m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Os-191		2.00E-02	6.44E-09	4.17E-09	2.10E-09	1.26E-09	7.24E-10	5.82E-10	7.94E-10	
Os-191m		2.00E-02	1.14E-09	7.28E-10	3.63E-10	2.15E-10	1.23E-10	9.87E-11	1.36E-10	
Os-193		2.00E-02	9.46E-09	6.09E-09	3.04E-09	1.81E-09	1.03E-09	8.26E-10	1.14E-09	
Os-194		2.00E-02	2.95E-08	1.77E-08	8.96E-09	5.35E-09	3.07E-09	2.48E-09	3.40E-09	
Os-194+D		–	4.49E-08	2.76E-08	1.39E-08	8.27E-09	4.73E-09	3.81E-09	5.23E-09	
Os-194+E		–	4.49E-08	2.76E-08	1.39E-08	8.27E-09	4.73E-09	3.81E-09	5.23E-09	
Os-196		2.00E-02	1.36E-09	7.57E-10	3.68E-10	2.10E-10	1.40E-10	1.10E-10	1.48E-10	
P-30		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
P-32		1.00E+00	3.11E-08	1.93E-08	9.45E-09	5.33E-09	3.13E-09	2.40E-09	3.39E-09	
P-33		1.00E+00	2.71E-09	1.83E-09	9.12E-10	5.27E-10	3.10E-10	2.45E-10	3.37E-10	
Pa-227		5.00E-03	5.79E-09	3.19E-09	1.54E-09	8.77E-10	5.83E-10	4.55E-10	6.17E-10	
Pa-228		5.00E-03	1.18E-08	4.80E-09	2.59E-09	1.64E-09	1.04E-09	7.97E-10	1.08E-09	
Pa-229		5.00E-03	9.96E-10	5.53E-10	2.87E-10	1.76E-10	1.04E-10	8.32E-11	1.13E-10	
Pa-230		5.00E-03	2.17E-08	5.20E-09	2.78E-09	1.73E-09	1.08E-09	8.30E-10	1.21E-09	
Pa-231		5.00E-03	8.25E-06	8.18E-07	6.71E-07	5.65E-07	5.07E-07	4.79E-07	5.59E-07	
Pa-232		5.00E-03	6.27E-09	4.19E-09	2.21E-09	1.38E-09	8.44E-10	6.73E-10	8.87E-10	
Pa-233		5.00E-03	1.07E-08	6.86E-09	3.48E-09	2.09E-09	1.21E-09	9.66E-10	1.32E-09	
Pa-234		5.00E-03	4.10E-09	2.68E-09	1.40E-09	8.60E-10	5.25E-10	4.19E-10	5.56E-10	
Pa-234m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pa-235		5.00E-03	3.34E-10	1.84E-10	8.86E-11	5.02E-11	3.38E-11	2.64E-11	3.57E-11	
Pa-236		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pa-237		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pb-194		6.00E-01	2.15E-10	1.24E-10	6.27E-11	3.73E-11	2.57E-11	2.04E-11	2.66E-11	
Pb-195m		6.00E-01	2.40E-10	1.42E-10	7.39E-11	4.49E-11	3.12E-11	2.49E-11	3.20E-11	
Pb-196		6.00E-01	2.37E-10	1.49E-10	7.92E-11	4.90E-11	3.34E-11	2.72E-11	3.45E-11	
Pb-197		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Pb-197m		6.00E-01	4.11E-10	2.54E-10	1.33E-10	8.15E-11	5.53E-11	4.47E-11	5.73E-11	
Pb-198		6.00E-01	5.16E-10	3.85E-10	2.14E-10	1.38E-10	9.13E-11	7.92E-11	9.71E-11	
Pb-199		6.00E-01	2.80E-10	1.98E-10	1.09E-10	7.01E-11	4.68E-11	3.95E-11	4.89E-11	
Pb-200		6.00E-01	2.47E-09	1.99E-09	1.07E-09	6.80E-10	4.26E-10	3.87E-10	4.76E-10	
Pb-201		6.00E-01	9.54E-10	7.82E-10	4.31E-10	2.77E-10	1.77E-10	1.63E-10	1.97E-10	
Pb-201m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pb-202		6.00E-01	1.05E-07	5.10E-08	3.42E-08	3.80E-08	4.46E-08	1.56E-08	2.09E-08	
Pb-202+D		–	1.08E-07	5.31E-08	3.54E-08	3.88E-08	4.51E-08	1.61E-08	2.15E-08	
Pb-202+E		–	1.08E-07	5.31E-08	3.54E-08	3.88E-08	4.51E-08	1.61E-08	2.15E-08	
Pb-202m		6.00E-01	9.14E-10	7.04E-10	3.93E-10	2.54E-10	1.67E-10	1.48E-10	1.80E-10	
Pb-203		6.00E-01	1.59E-09	1.29E-09	6.94E-10	4.39E-10	2.73E-10	2.50E-10	3.07E-10	
Pb-204m		6.00E-01	3.40E-10	2.34E-10	1.32E-10	8.54E-11	5.86E-11	4.87E-11	6.01E-11	
Pb-205		6.00E-01	1.99E-09	9.61E-10	6.01E-10	5.97E-10	6.34E-10	2.71E-10	3.52E-10	
Pb-209		6.00E-01	5.71E-10	3.80E-10	1.87E-10	1.09E-10	6.65E-11	5.67E-11	7.47E-11	
Pb-210		6.00E-01	8.33E-06	3.64E-06	2.18E-06	1.95E-06	1.92E-06	6.96E-07	1.02E-06	
Pb-211		6.00E-01	3.14E-09	1.45E-09	7.12E-10	4.15E-10	2.72E-10	1.78E-10	2.62E-10	
Pb-212		6.00E-01	1.43E-07	6.36E-08	3.30E-08	2.04E-08	1.25E-08	6.00E-09	1.03E-08	
Pb-214		6.00E-01	2.18E-09	1.05E-09	5.22E-10	3.07E-10	2.03E-10	1.39E-10	1.99E-10	
Pd-100		5.00E-02	7.15E-09	5.05E-09	2.81E-09	1.83E-09	1.16E-09	9.19E-10	1.18E-09	
Pd-101		5.00E-02	8.03E-10	5.56E-10	3.01E-10	1.91E-10	1.19E-10	9.35E-11	1.22E-10	
Pd-103		5.00E-02	2.20E-09	1.43E-09	7.16E-10	4.25E-10	2.40E-10	1.90E-10	2.63E-10	
Pd-107		5.00E-02	4.51E-10	2.85E-10	1.42E-10	8.42E-11	4.77E-11	3.84E-11	5.29E-11	
Pd-109		5.00E-02	6.40E-09	4.16E-09	2.07E-09	1.22E-09	6.97E-10	5.58E-10	7.69E-10	
Pd-109m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-111		5.00E-02	6.26E-10	3.47E-10	1.68E-10	9.56E-11	6.39E-11	5.00E-11	6.75E-11	
Pd-112		5.00E-02	2.84E-08	1.89E-08	9.48E-09	5.66E-09	3.22E-09	2.58E-09	3.54E-09	
Pd-114		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-96		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-97		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-98		5.00E-02	7.09E-10	4.01E-10	1.99E-10	1.16E-10	7.92E-11	6.23E-11	8.25E-11	
Pd-99		5.00E-02	3.66E-10	2.14E-10	1.09E-10	6.53E-11	4.45E-11	3.52E-11	4.59E-11	
Pm-136		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-137m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Pm-139		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-140		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-140m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-141		5.00E-03	4.08E-10	2.30E-10	1.13E-10	6.57E-11	4.47E-11	3.51E-11	4.66E-11	
Pm-142		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-143		5.00E-03	1.93E-09	1.22E-09	6.96E-10	4.59E-10	2.98E-10	2.35E-10	3.00E-10	
Pm-144		5.00E-03	7.73E-09	4.77E-09	2.80E-09	1.89E-09	1.25E-09	9.86E-10	1.24E-09	
Pm-145		5.00E-03	1.46E-09	6.66E-10	3.57E-10	2.22E-10	1.36E-10	1.11E-10	1.48E-10	
Pm-146		5.00E-03	1.02E-08	5.09E-09	2.78E-09	1.77E-09	1.11E-09	8.96E-10	1.18E-09	
Pm-147		5.00E-03	3.62E-09	1.90E-09	9.55E-10	5.66E-10	3.23E-10	2.61E-10	3.63E-10	
Pm-148		5.00E-03	2.99E-08	1.94E-08	9.76E-09	5.84E-09	3.36E-09	2.69E-09	3.68E-09	
Pm-148m		5.00E-03	1.49E-08	1.01E-08	5.51E-09	3.54E-09	2.22E-09	1.76E-09	2.28E-09	
Pm-149		5.00E-03	1.15E-08	7.39E-09	3.68E-09	2.18E-09	1.24E-09	9.93E-10	1.37E-09	
Pm-150		5.00E-03	2.81E-09	1.73E-09	8.79E-10	5.28E-10	3.28E-10	2.61E-10	3.49E-10	
Pm-151		5.00E-03	7.96E-09	5.17E-09	2.62E-09	1.58E-09	9.16E-10	7.34E-10	9.97E-10	
Pm-152		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-152m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-153		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-154		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-154m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-203	Organic	1.00E+00	3.03E-10	2.51E-10	1.37E-10	8.74E-11	5.90E-11	4.73E-11	5.92E-11	
Po-203	Inorganic	2.00E-01	4.25E-10	2.85E-10	1.56E-10	1.00E-10	6.70E-11	5.36E-11	6.79E-11	
Po-204	Organic	1.00E+00	1.49E-09	1.32E-09	7.21E-10	4.63E-10	3.00E-10	2.41E-10	3.04E-10	
Po-204	Inorganic	2.00E-01	2.26E-09	1.61E-09	8.89E-10	5.75E-10	3.71E-10	2.96E-10	3.77E-10	
Po-205	Organic	1.00E+00	3.26E-10	2.70E-10	1.53E-10	1.01E-10	6.82E-11	5.52E-11	6.82E-11	
Po-205	Inorganic	2.00E-01	4.10E-10	2.80E-10	1.59E-10	1.04E-10	7.02E-11	5.65E-11	7.06E-11	
Po-206	Organic	1.00E+00	3.48E-07	1.16E-07	5.81E-08	3.50E-08	2.15E-08	1.67E-08	2.39E-08	
Po-206	Inorganic	2.00E-01	8.15E-08	3.12E-08	1.59E-08	9.68E-09	5.94E-09	4.65E-09	6.50E-09	
Po-207	Organic	1.00E+00	4.51E-10	5.58E-10	3.16E-10	2.08E-10	1.38E-10	1.11E-10	1.37E-10	
Po-207	Inorganic	2.00E-01	9.58E-10	7.04E-10	4.00E-10	2.64E-10	1.73E-10	1.39E-10	1.74E-10	
Po-208	Organic	1.00E+00	3.18E-05	1.10E-05	5.48E-06	3.24E-06	1.97E-06	1.52E-06	2.19E-06	
Po-208	Inorganic	2.00E-01	6.47E-06	2.21E-06	1.11E-06	6.55E-07	3.98E-07	3.07E-07	4.43E-07	
Po-209	Organic	1.00E+00	3.15E-05	1.09E-05	5.44E-06	3.22E-06	1.96E-06	1.51E-06	2.18E-06	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Po-209	Inorganic	2.00E-01	6.39E-06	2.19E-06	1.10E-06	6.50E-07	3.95E-07	3.05E-07	4.40E-07	
Po-210	Organic	1.00E+00	2.61E-05	8.81E-06	4.38E-06	2.59E-06	1.57E-06	1.21E-06	1.75E-06	
Po-210	Inorganic	2.00E-01	5.30E-06	1.79E-06	8.88E-07	5.25E-07	3.19E-07	2.45E-07	3.56E-07	
Po-211		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-212		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-212m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-213		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-214		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-215		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-216		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-218		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-134		5.00E-03	5.36E-10	3.10E-10	1.56E-10	9.19E-11	6.20E-11	4.91E-11	6.46E-11	
Pr-134m		5.00E-03	9.75E-10	5.56E-10	2.75E-10	1.60E-10	1.07E-10	8.45E-11	1.12E-10	
Pr-135		5.00E-03	4.74E-10	2.74E-10	1.38E-10	8.17E-11	5.53E-11	4.35E-11	5.73E-11	
Pr-136		5.00E-03	3.74E-10	2.12E-10	1.06E-10	6.24E-11	4.32E-11	3.41E-11	4.47E-11	
Pr-137		5.00E-03	3.95E-10	2.38E-10	1.21E-10	7.18E-11	4.64E-11	3.67E-11	4.87E-11	
Pr-138		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-138m		5.00E-03	1.05E-09	7.49E-10	4.11E-10	2.63E-10	1.61E-10	1.29E-10	1.67E-10	
Pr-139		5.00E-03	3.28E-10	2.11E-10	1.10E-10	6.69E-11	4.10E-11	3.26E-11	4.34E-11	
Pr-140		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-142		5.00E-03	1.54E-08	9.84E-09	4.89E-09	2.90E-09	1.65E-09	1.32E-09	1.82E-09	
Pr-142m		5.00E-03	1.96E-10	1.25E-10	6.23E-11	3.69E-11	2.09E-11	1.68E-11	2.32E-11	
Pr-143		5.00E-03	1.36E-08	8.73E-09	4.35E-09	2.57E-09	1.46E-09	1.17E-09	1.62E-09	
Pr-144		5.00E-03	6.40E-10	3.50E-10	1.69E-10	9.56E-11	6.48E-11	5.06E-11	6.82E-11	
Pr-144m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-145		5.00E-03	4.69E-09	2.93E-09	1.45E-09	8.51E-10	4.95E-10	3.95E-10	5.44E-10	
Pr-146		5.00E-03	9.37E-10	5.21E-10	2.55E-10	1.46E-10	9.91E-11	7.77E-11	1.04E-10	
Pr-147		5.00E-03	4.11E-10	2.28E-10	1.11E-10	6.35E-11	4.31E-11	3.37E-11	4.52E-11	
Pr-148		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-148m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pt-184		2.00E-02	2.85E-10	1.78E-10	9.29E-11	5.72E-11	3.76E-11	2.99E-11	3.89E-11	
Pt-186		2.00E-02	8.71E-10	5.98E-10	3.30E-10	2.13E-10	1.36E-10	1.09E-10	1.40E-10	
Pt-187		2.00E-02	8.03E-10	5.20E-10	2.74E-10	1.70E-10	1.07E-10	8.55E-11	1.12E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Pt-188		2.00E-02	7.27E-09	4.97E-09	2.69E-09	1.71E-09	1.06E-09	8.47E-10	1.10E-09	
Pt-189		2.00E-02	1.82E-09	1.22E-09	6.46E-10	4.03E-10	2.46E-10	1.97E-10	2.59E-10	
Pt-190		2.00E-02	9.91E-08	4.36E-08	2.27E-08	1.39E-08	8.54E-09	6.94E-09	9.38E-09	
Pt-191		2.00E-02	3.48E-09	2.34E-09	1.23E-09	7.66E-10	4.61E-10	3.69E-10	4.88E-10	
Pt-193		2.00E-02	4.21E-10	2.69E-10	1.33E-10	7.87E-11	4.44E-11	3.56E-11	4.93E-11	
Pt-193m		2.00E-02	5.26E-09	3.39E-09	1.69E-09	1.00E-09	5.69E-10	4.58E-10	6.30E-10	
Pt-195m		2.00E-02	7.22E-09	4.68E-09	2.35E-09	1.40E-09	8.03E-10	6.45E-10	8.83E-10	
Pt-197		2.00E-02	5.00E-09	3.20E-09	1.59E-09	9.44E-10	5.38E-10	4.32E-10	5.95E-10	
Pt-197m		2.00E-02	1.00E-09	6.10E-10	3.01E-10	1.76E-10	1.07E-10	8.48E-11	1.16E-10	
Pt-199		2.00E-02	4.85E-10	2.72E-10	1.33E-10	7.64E-11	5.07E-11	3.98E-11	5.35E-11	
Pt-200		2.00E-02	1.34E-08	8.60E-09	4.30E-09	2.56E-09	1.46E-09	1.17E-09	1.61E-09	
Pt-202		2.00E-02	5.07E-08	3.27E-08	1.63E-08	9.65E-09	5.48E-09	4.41E-09	6.07E-09	
Pt-202+D		–	5.07E-08	3.27E-08	1.63E-08	9.65E-09	5.48E-09	4.41E-09	6.07E-09	
Pt-202+E		–	5.07E-08	3.27E-08	1.63E-08	9.65E-09	5.48E-09	4.41E-09	6.07E-09	
Pu-232		5.00E-03	1.67E-09	9.27E-10	4.54E-10	2.61E-10	1.74E-10	1.37E-10	1.84E-10	
Pu-234		5.00E-03	2.05E-09	1.02E-09	5.25E-10	3.19E-10	1.90E-10	1.52E-10	2.08E-10	
Pu-235		5.00E-03	2.37E-11	1.38E-11	7.02E-12	4.17E-12	2.88E-12	2.26E-12	2.95E-12	
Pu-236		5.00E-03	2.12E-06	2.18E-07	1.47E-07	1.06E-07	8.75E-08	8.89E-08	1.10E-07	
Pu-237		5.00E-03	1.19E-09	7.60E-10	3.92E-10	2.39E-10	1.41E-10	1.12E-10	1.51E-10	
Pu-238		5.00E-03	3.98E-06	4.00E-07	3.06E-07	2.44E-07	2.20E-07	2.28E-07	2.63E-07	
Pu-239		5.00E-03	4.19E-06	4.22E-07	3.33E-07	2.71E-07	2.46E-07	2.51E-07	2.88E-07	
Pu-239+D		–	4.19E-06	4.22E-07	3.33E-07	2.71E-07	2.46E-07	2.51E-07	2.88E-07	
Pu-239+E		–	4.19E-06	4.22E-07	3.33E-07	2.71E-07	2.46E-07	2.51E-07	2.88E-07	
Pu-240		5.00E-03	4.19E-06	4.22E-07	3.33E-07	2.71E-07	2.46E-07	2.51E-07	2.88E-07	
Pu-241		5.00E-03	5.62E-08	5.79E-09	5.48E-09	5.05E-09	4.79E-09	4.74E-09	5.21E-09	
Pu-242		5.00E-03	3.98E-06	4.01E-07	3.16E-07	2.58E-07	2.34E-07	2.39E-07	2.74E-07	
Pu-243		5.00E-03	1.01E-09	6.26E-10	3.10E-10	1.83E-10	1.07E-10	8.55E-11	1.17E-10	
Pu-244		5.00E-03	3.96E-06	4.13E-07	3.21E-07	2.60E-07	2.33E-07	2.38E-07	2.73E-07	
Pu-244+D		–	3.97E-06	4.21E-07	3.25E-07	2.62E-07	2.34E-07	2.39E-07	2.75E-07	
Pu-244+E		–	3.97E-06	4.21E-07	3.25E-07	2.62E-07	2.34E-07	2.39E-07	2.75E-07	
Pu-245		5.00E-03	7.62E-09	4.91E-09	2.47E-09	1.48E-09	8.54E-10	6.84E-10	9.34E-10	
Pu-246		5.00E-03	2.97E-08	1.94E-08	9.89E-09	6.00E-09	3.50E-09	2.81E-09	3.80E-09	
Ra-219		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ra-219+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-219+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-220		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-222		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-223		6.00E-01	5.26E-06	1.10E-06	5.74E-07	4.54E-07	3.77E-07	1.03E-07	2.17E-07	2.17E-07
Ra-223+D		–	5.26E-06	1.10E-06	5.74E-07	4.54E-07	3.77E-07	1.03E-07	2.17E-07	2.17E-07
Ra-223+E		–	5.26E-06	1.10E-06	5.74E-07	4.54E-07	3.77E-07	1.03E-07	2.17E-07	2.17E-07
Ra-224		6.00E-01	2.71E-06	6.52E-07	3.45E-07	2.56E-07	1.95E-07	6.46E-08	1.26E-07	1.26E-07
Ra-224+D		–	2.71E-06	6.52E-07	3.45E-07	2.56E-07	1.95E-07	6.46E-08	1.26E-07	1.26E-07
Ra-224+E		–	2.71E-06	6.52E-07	3.45E-07	2.56E-07	1.95E-07	6.46E-08	1.26E-07	1.26E-07
Ra-225		6.00E-01	7.01E-06	1.20E-06	6.17E-07	5.03E-07	4.37E-07	9.96E-08	2.38E-07	2.38E-07
Ra-226		6.00E-01	4.65E-06	9.54E-07	6.16E-07	8.02E-07	1.52E-06	2.80E-07	4.53E-07	4.53E-07
Ra-226+D		–	4.65E-06	9.56E-07	6.17E-07	8.03E-07	1.52E-06	2.80E-07	4.54E-07	4.54E-07
Ra-226+E		–	4.65E-06	9.56E-07	6.17E-07	8.03E-07	1.52E-06	2.80E-07	4.54E-07	4.54E-07
Ra-227		6.00E-01	1.11E-09	4.36E-10	2.50E-10	1.70E-10	1.36E-10	8.19E-11	1.11E-10	1.11E-10
Ra-228		6.00E-01	2.94E-05	5.66E-06	3.43E-06	3.92E-06	5.13E-06	6.96E-07	1.60E-06	1.60E-06
Ra-228+D		–	2.94E-05	5.66E-06	3.43E-06	3.92E-06	5.13E-06	6.96E-07	1.60E-06	1.60E-06
Ra-228+E		–	2.94E-05	5.66E-06	3.43E-06	3.92E-06	5.13E-06	6.96E-07	1.60E-06	1.60E-06
Ra-230		6.00E-01	1.99E-09	1.23E-09	6.10E-10	3.52E-10	2.22E-10	1.80E-10	2.41E-10	2.41E-10
Rb-77		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-78		1.00E+00	7.86E-10	4.44E-10	2.21E-10	1.29E-10	8.94E-11	7.07E-11	9.29E-11	9.29E-11
Rb-78m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-79		1.00E+00	5.71E-10	3.20E-10	1.58E-10	9.18E-11	6.32E-11	4.98E-11	6.58E-11	6.58E-11
Rb-80		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-81		1.00E+00	4.77E-10	2.87E-10	1.48E-10	8.98E-11	6.04E-11	4.89E-11	6.31E-11	6.31E-11
Rb-81m		1.00E+00	1.05E-10	6.04E-11	3.01E-11	1.77E-11	1.19E-11	9.45E-12	1.25E-11	1.25E-11
Rb-82		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-82m		1.00E+00	9.06E-10	6.12E-10	3.51E-10	2.28E-10	1.60E-10	1.34E-10	1.63E-10	1.63E-10
Rb-83		1.00E+00	1.05E-08	7.82E-09	4.56E-09	3.02E-09	2.06E-09	1.77E-09	2.14E-09	2.14E-09
Rb-84		1.00E+00	2.06E-08	1.46E-08	8.03E-09	5.09E-09	3.34E-09	2.81E-09	3.52E-09	3.52E-09

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Rb-84m		1.00E+00	6.93E-11	4.12E-11	2.12E-11	1.28E-11	8.86E-12	7.12E-12	9.16E-12	
Rb-86		1.00E+00	3.04E-08	1.98E-08	9.90E-09	5.86E-09	3.50E-09	2.82E-09	3.81E-09	
Rb-86m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-87		1.00E+00	1.54E-08	1.07E-08	5.37E-09	3.17E-09	1.89E-09	1.53E-09	2.05E-09	
Rb-88		1.00E+00	1.13E-09	6.20E-10	3.00E-10	1.70E-10	1.16E-10	9.07E-11	1.22E-10	
Rb-89		1.00E+00	5.13E-10	2.88E-10	1.43E-10	8.32E-11	5.73E-11	4.51E-11	5.95E-11	
Rb-90		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-90m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-178		1.00E+00	3.21E-10	1.77E-10	8.81E-11	5.14E-11	3.55E-11	2.79E-11	3.68E-11	
Re-179		1.00E+00	1.26E-10	7.37E-11	3.88E-11	2.36E-11	1.65E-11	1.31E-11	1.68E-11	
Re-180		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-181		1.00E+00	4.25E-09	2.85E-09	1.47E-09	8.38E-10	5.55E-10	4.25E-10	5.68E-10	
Re-182		1.00E+00	1.36E-08	8.87E-09	4.63E-09	2.74E-09	1.83E-09	1.43E-09	1.87E-09	
Re-182m		1.00E+00	2.51E-09	1.76E-09	9.37E-10	5.51E-10	3.72E-10	2.89E-10	3.76E-10	
Re-183		1.00E+00	1.17E-08	6.77E-09	3.31E-09	1.90E-09	1.24E-09	9.64E-10	1.31E-09	
Re-184		1.00E+00	8.94E-09	5.64E-09	3.02E-09	1.86E-09	1.27E-09	1.01E-09	1.29E-09	
Re-184m		1.00E+00	1.70E-08	9.88E-09	4.91E-09	2.86E-09	1.89E-09	1.48E-09	1.98E-09	
Re-186		1.00E+00	1.84E-08	1.10E-08	5.35E-09	2.94E-09	1.89E-09	1.43E-09	1.99E-09	
Re-186m		1.00E+00	2.96E-08	1.61E-08	7.63E-09	4.35E-09	2.86E-09	2.23E-09	3.04E-09	
Re-186m+D		–	4.80E-08	2.71E-08	1.30E-08	7.29E-09	4.75E-09	3.66E-09	5.03E-09	
Re-186m+E		–	4.80E-08	2.71E-08	1.30E-08	7.29E-09	4.75E-09	3.66E-09	5.03E-09	
Re-187		1.00E+00	6.30E-11	3.56E-11	1.70E-11	9.54E-12	6.20E-12	4.79E-12	6.59E-12	
Re-188		1.00E+00	1.73E-08	1.10E-08	5.36E-09	2.85E-09	1.84E-09	1.36E-09	1.92E-09	
Re-188m		1.00E+00	3.78E-10	2.33E-10	1.14E-10	6.14E-11	3.98E-11	2.98E-11	4.16E-11	
Re-189		1.00E+00	9.34E-09	5.89E-09	2.88E-09	1.55E-09	9.95E-10	7.44E-10	1.04E-09	
Re-190		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-190m		1.00E+00	4.49E-09	2.72E-09	1.36E-09	7.38E-10	4.87E-10	3.65E-10	5.04E-10	
Rh-100		1.00E-01	4.52E-09	3.36E-09	1.93E-09	1.29E-09	8.48E-10	6.78E-10	8.48E-10	
Rh-100m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-101		1.00E-01	4.74E-09	2.67E-09	1.54E-09	1.00E-09	6.61E-10	5.50E-10	6.90E-10	
Rh-101m		1.00E-01	1.70E-09	1.20E-09	6.62E-10	4.26E-10	2.67E-10	2.10E-10	2.72E-10	
Rh-102		1.00E-01	1.25E-08	7.56E-09	3.98E-09	2.45E-09	1.48E-09	1.19E-09	1.59E-09	
Rh-102m		1.00E-01	1.97E-08	1.09E-08	6.83E-09	4.59E-09	3.24E-09	2.76E-09	3.32E-09	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Rh-103m		1.00E-01	4.71E-11	2.66E-11	1.29E-11	7.36E-12	4.82E-12	3.77E-12	5.11E-12	
Rh-104		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-104m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-105		1.00E-01	4.00E-09	2.66E-09	1.34E-09	7.97E-10	4.58E-10	3.67E-10	5.02E-10	
Rh-106		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-106m		1.00E-01	1.43E-09	1.02E-09	5.48E-10	3.20E-10	2.09E-10	1.68E-10	2.18E-10	
Rh-107		1.00E-01	2.88E-10	1.60E-10	7.83E-11	4.49E-11	3.05E-11	2.39E-11	3.20E-11	
Rh-108		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-109		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-94		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-95		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-95m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-96		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-96m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-97		1.00E-01	5.04E-10	2.92E-10	1.48E-10	8.77E-11	5.98E-11	4.72E-11	6.19E-11	
Rh-97m		1.00E-01	4.11E-10	2.58E-10	1.38E-10	8.65E-11	5.88E-11	4.70E-11	5.99E-11	
Rh-98		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-99		1.00E-01	4.96E-09	3.36E-09	1.82E-09	1.15E-09	7.14E-10	5.66E-10	7.39E-10	
Rh-99m		1.00E-01	5.06E-10	3.55E-10	1.98E-10	1.28E-10	8.33E-11	6.66E-11	8.46E-11	
Rn-207		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-209		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-210		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-211		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-212		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-215		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-216		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-217		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-218		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-220		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-222		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Rn-222+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-222+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-223		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-103		1.00E-01	6.77E-09	4.43E-09	2.35E-09	1.47E-09	8.93E-10	7.14E-10	9.41E-10	
Ru-105		1.00E-01	2.93E-09	1.90E-09	9.68E-10	5.82E-10	3.50E-10	2.79E-10	3.76E-10	
Ru-106		1.00E-01	8.39E-08	4.97E-08	2.52E-08	1.50E-08	8.65E-09	7.02E-09	9.59E-09	
Ru-106+D		–	8.39E-08	4.97E-08	2.52E-08	1.50E-08	8.65E-09	7.02E-09	9.60E-09	
Ru-106+E		–	8.39E-08	4.97E-08	2.52E-08	1.50E-08	8.65E-09	7.02E-09	9.60E-09	
Ru-107		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-108		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-92		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-94		1.00E-01	9.39E-10	5.95E-10	3.09E-10	1.89E-10	1.19E-10	9.52E-11	1.25E-10	
Ru-95		1.00E-01	4.61E-10	3.16E-10	1.77E-10	1.15E-10	7.68E-11	6.15E-11	7.75E-11	
Ru-97		1.00E-01	1.19E-09	8.48E-10	4.69E-10	3.04E-10	1.92E-10	1.50E-10	1.94E-10	
S-35	Inorganic	1.00E+00	1.27E-09	8.65E-10	4.43E-10	2.68E-10	1.62E-10	1.31E-10	1.74E-10	
S-35	Organic	1.00E+00	7.60E-09	5.34E-09	2.69E-09	1.60E-09	9.48E-10	7.74E-10	1.04E-09	
S-37		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
S-38	Inorganic	1.00E+00	3.12E-09	1.87E-09	9.92E-10	6.21E-10	4.33E-10	3.40E-10	4.34E-10	
S-38	Organic	1.00E+00	2.93E-09	1.71E-09	8.57E-10	5.04E-10	3.33E-10	2.66E-10	3.52E-10	
Sb-111		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-113		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-114		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-115		2.00E-01	2.48E-10	1.45E-10	7.44E-11	4.46E-11	3.05E-11	2.42E-11	3.15E-11	
Sb-116		2.00E-01	3.16E-10	1.82E-10	9.30E-11	5.55E-11	3.85E-11	3.04E-11	3.96E-11	
Sb-116m		2.00E-01	4.86E-10	3.23E-10	1.82E-10	1.18E-10	8.10E-11	6.52E-11	8.13E-11	
Sb-117		2.00E-01	1.61E-10	1.08E-10	5.76E-11	3.59E-11	2.31E-11	1.83E-11	2.37E-11	
Sb-118		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-118m		2.00E-01	1.36E-09	1.02E-09	5.92E-10	3.99E-10	2.66E-10	2.14E-10	2.65E-10	
Sb-119		2.00E-01	8.59E-10	5.97E-10	3.03E-10	1.81E-10	1.04E-10	8.18E-11	1.12E-10	
Sb-120		2.00E-01	1.68E-10	9.40E-11	4.64E-11	2.69E-11	1.84E-11	1.45E-11	1.92E-11	
Sb-120m		2.00E-01	8.14E-09	6.10E-09	3.53E-09	2.37E-09	1.57E-09	1.25E-09	1.56E-09	
Sb-122		2.00E-01	1.76E-08	1.22E-08	6.14E-09	3.68E-09	2.12E-09	1.70E-09	2.31E-09	
Sb-122m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Sb-124		2.00E-01	2.45E-08	1.59E-08	8.41E-09	5.22E-09	3.18E-09	2.55E-09	3.37E-09	
Sb-124m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-124n		2.00E-01	1.03E-10	5.94E-11	3.01E-11	1.79E-11	1.22E-11	9.70E-12	1.27E-11	
Sb-125		2.00E-01	1.09E-08	6.16E-09	3.44E-09	2.14E-09	1.37E-09	1.15E-09	1.47E-09	
Sb-126		2.00E-01	2.26E-08	1.58E-08	8.53E-09	5.41E-09	3.36E-09	2.68E-09	3.48E-09	
Sb-126m		2.00E-01	4.18E-10	2.38E-10	1.20E-10	7.03E-11	4.83E-11	3.81E-11	5.00E-11	
Sb-127		2.00E-01	1.68E-08	1.16E-08	5.93E-09	3.59E-09	2.09E-09	1.68E-09	2.26E-09	
Sb-128		2.00E-01	6.90E-09	4.89E-09	2.61E-09	1.64E-09	1.02E-09	8.14E-10	1.06E-09	
Sb-128m		2.00E-01	3.82E-10	2.15E-10	1.07E-10	6.22E-11	4.28E-11	3.37E-11	4.44E-11	
Sb-129		2.00E-01	4.30E-09	2.88E-09	1.47E-09	8.91E-10	5.34E-10	4.27E-10	5.72E-10	
Sb-130		2.00E-01	9.37E-10	5.56E-10	2.87E-10	1.74E-10	1.18E-10	9.39E-11	1.22E-10	
Sb-130m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-131		2.00E-01	1.10E-09	7.52E-10	4.00E-10	2.21E-10	1.48E-10	1.08E-10	1.47E-10	
Sb-133		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sc-42m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sc-43		1.00E-03	2.25E-09	1.43E-09	7.34E-10	4.45E-10	2.73E-10	2.18E-10	2.91E-10	
Sc-44		1.00E-03	3.51E-09	2.25E-09	1.17E-09	7.21E-10	4.48E-10	3.58E-10	4.72E-10	
Sc-44m		1.00E-03	2.38E-08	1.59E-08	8.31E-09	5.14E-09	3.07E-09	2.45E-09	3.26E-09	
Sc-46		1.00E-03	1.15E-08	7.97E-09	4.43E-09	2.89E-09	1.85E-09	1.47E-09	1.88E-09	
Sc-47		1.00E-03	6.05E-09	3.91E-09	1.97E-09	1.18E-09	6.81E-10	5.46E-10	7.46E-10	
Sc-48		1.00E-03	1.32E-08	9.17E-09	5.05E-09	3.28E-09	2.09E-09	1.67E-09	2.14E-09	
Sc-49		1.00E-03	1.01E-09	5.71E-10	2.77E-10	1.58E-10	1.03E-10	8.10E-11	1.10E-10	
Sc-50		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-70		1.00E+00	8.11E-10	5.77E-10	2.99E-10	1.82E-10	1.21E-10	9.69E-11	1.25E-10	
Se-71		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-72		1.00E+00	6.79E-08	4.45E-08	2.77E-08	2.09E-08	7.03E-09	5.16E-09	8.23E-09	
Se-73		1.00E+00	1.57E-09	1.39E-09	7.53E-10	4.90E-10	2.59E-10	2.07E-10	2.78E-10	
Se-73m		1.00E+00	2.50E-10	1.82E-10	9.52E-11	5.93E-11	3.45E-11	2.74E-11	3.67E-11	
Se-75		1.00E+00	1.96E-08	1.30E-08	8.30E-09	6.00E-09	3.13E-09	2.58E-09	3.35E-09	
Se-77m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-79		1.00E+00	3.85E-08	2.64E-08	1.79E-08	1.29E-08	3.81E-09	2.74E-09	4.68E-09	
Se-79m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-81		1.00E+00	3.38E-10	1.86E-10	8.96E-11	5.07E-11	3.43E-11	2.68E-11	3.61E-11	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Se-81m		1.00E+00	6.01E-10	3.76E-10	1.84E-10	1.06E-10	6.76E-11	5.29E-11	7.16E-11	
Se-83		1.00E+00	4.31E-10	2.73E-10	1.39E-10	8.36E-11	5.70E-11	4.53E-11	5.87E-11	
Se-83m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-84		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Si-31		2.00E-02	1.93E-09	1.05E-09	5.15E-10	2.99E-10	2.01E-10	1.60E-10	2.13E-10	
Si-32		2.00E-02	7.44E-09	4.19E-09	2.11E-09	1.25E-09	7.15E-10	5.79E-10	7.99E-10	
Si-32+D		–	3.85E-08	2.35E-08	1.16E-08	6.58E-09	3.84E-09	2.98E-09	4.19E-09	
Si-32+E		–	3.85E-08	2.35E-08	1.16E-08	6.58E-09	3.84E-09	2.98E-09	4.19E-09	
Sm-139		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-140		5.00E-03	1.16E-09	6.48E-10	3.18E-10	1.82E-10	1.23E-10	9.66E-11	1.29E-10	
Sm-141		5.00E-03	4.45E-10	2.50E-10	1.24E-10	7.22E-11	4.94E-11	3.89E-11	5.14E-11	
Sm-141m		5.00E-03	6.65E-10	3.86E-10	1.96E-10	1.16E-10	7.90E-11	6.25E-11	8.18E-11	
Sm-142		5.00E-03	2.12E-09	1.23E-09	6.09E-10	3.54E-10	2.30E-10	1.81E-10	2.43E-10	
Sm-143		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-143m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-145		5.00E-03	2.39E-09	1.40E-09	7.32E-10	4.49E-10	2.66E-10	2.12E-10	2.86E-10	
Sm-146		5.00E-03	1.53E-06	1.50E-07	9.98E-08	6.99E-08	5.72E-08	5.42E-08	7.01E-08	
Sm-147		5.00E-03	1.40E-06	1.37E-07	9.12E-08	6.38E-08	5.23E-08	4.95E-08	6.40E-08	
Sm-148		5.00E-03	1.20E-06	1.18E-07	7.84E-08	5.49E-08	4.49E-08	4.26E-08	5.50E-08	
Sm-151		5.00E-03	1.50E-09	6.45E-10	3.30E-10	1.99E-10	1.19E-10	9.89E-11	1.35E-10	
Sm-153		5.00E-03	8.35E-09	5.38E-09	2.70E-09	1.60E-09	9.16E-10	7.35E-10	1.01E-09	
Sm-155		5.00E-03	3.67E-10	2.02E-10	9.79E-11	5.57E-11	3.77E-11	2.95E-11	3.96E-11	
Sm-156		5.00E-03	2.84E-09	1.82E-09	9.16E-10	5.48E-10	3.20E-10	2.56E-10	3.48E-10	
Sm-157		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-106		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-108		4.00E-02	2.15E-10	1.30E-10	6.71E-11	4.08E-11	2.76E-11	2.20E-11	2.85E-11	
Sn-109		4.00E-02	1.42E-10	9.36E-11	5.26E-11	3.42E-11	2.38E-11	1.91E-11	2.38E-11	
Sn-110		4.00E-02	3.64E-09	2.41E-09	1.25E-09	7.67E-10	4.60E-10	3.68E-10	4.91E-10	
Sn-111		4.00E-02	2.23E-10	1.31E-10	6.68E-11	3.99E-11	2.68E-11	2.12E-11	2.78E-11	
Sn-113		4.00E-02	7.90E-09	5.12E-09	2.63E-09	1.60E-09	9.39E-10	7.48E-10	1.01E-09	
Sn-113m		4.00E-02	4.03E-11	2.24E-11	1.09E-11	6.20E-12	4.18E-12	3.26E-12	4.39E-12	
Sn-117m		4.00E-02	7.78E-09	5.04E-09	2.56E-09	1.54E-09	8.90E-10	7.13E-10	9.70E-10	
Sn-119m		4.00E-02	4.15E-09	2.61E-09	1.31E-09	7.75E-10	4.42E-10	3.53E-10	4.87E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Sn-121		4.00E-02	2.66E-09	1.71E-09	8.52E-10	5.04E-10	2.86E-10	2.30E-10	3.17E-10	
Sn-121m		4.00E-02	4.62E-09	2.78E-09	1.41E-09	8.31E-10	4.77E-10	3.86E-10	5.30E-10	
Sn-121m+D		–	6.68E-09	4.11E-09	2.07E-09	1.22E-09	6.99E-10	5.64E-10	7.75E-10	
Sn-121m+E		–	6.68E-09	4.11E-09	2.07E-09	1.22E-09	6.99E-10	5.64E-10	7.75E-10	
Sn-123		4.00E-02	2.48E-08	1.57E-08	7.84E-09	4.64E-09	2.63E-09	2.11E-09	2.92E-09	
Sn-123m		4.00E-02	4.72E-10	2.64E-10	1.29E-10	7.35E-11	4.91E-11	3.85E-11	5.18E-11	
Sn-125		4.00E-02	3.46E-08	2.23E-08	1.12E-08	6.66E-09	3.80E-09	3.05E-09	4.19E-09	
Sn-125m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-126		4.00E-02	5.00E-08	3.07E-08	1.61E-08	9.87E-09	5.93E-09	4.80E-09	6.39E-09	
Sn-126+D		–	5.36E-08	3.31E-08	1.74E-08	1.07E-08	6.45E-09	5.21E-09	6.92E-09	
Sn-126+E		–	5.36E-08	3.31E-08	1.74E-08	1.07E-08	6.45E-09	5.21E-09	6.92E-09	
Sn-127		4.00E-02	2.00E-09	1.26E-09	6.53E-10	3.99E-10	2.50E-10	2.00E-10	2.64E-10	
Sn-127m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-128		4.00E-02	1.63E-09	9.77E-10	4.98E-10	2.98E-10	1.95E-10	1.54E-10	2.04E-10	
Sn-129		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-130		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-130m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-79		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-80		6.00E-01	4.02E-09	2.51E-09	1.25E-09	7.30E-10	4.65E-10	3.78E-10	5.01E-10	
Sr-81		6.00E-01	7.38E-10	4.29E-10	2.14E-10	1.25E-10	8.42E-11	6.71E-11	8.84E-11	
Sr-82		6.00E-01	7.20E-08	4.10E-08	2.07E-08	1.34E-08	8.76E-09	6.19E-09	8.43E-09	
Sr-82+D		–	7.20E-08	4.10E-08	2.07E-08	1.34E-08	8.76E-09	6.19E-09	8.43E-09	
Sr-82+E		–	7.20E-08	4.10E-08	2.07E-08	1.34E-08	8.76E-09	6.19E-09	8.43E-09	
Sr-83		6.00E-01	3.53E-09	2.87E-09	1.52E-09	9.57E-10	5.97E-10	5.14E-10	6.46E-10	
Sr-85		6.00E-01	7.46E-09	3.05E-09	1.69E-09	1.45E-09	1.31E-09	5.50E-10	7.94E-10	
Sr-85m		6.00E-01	4.48E-11	2.97E-11	1.66E-11	1.09E-11	7.74E-12	6.04E-12	7.53E-12	
Sr-87m		6.00E-01	2.42E-10	1.72E-10	9.10E-11	5.62E-11	3.62E-11	3.04E-11	3.86E-11	
Sr-89		6.00E-01	3.60E-08	1.79E-08	8.90E-09	5.85E-09	3.98E-09	2.57E-09	3.61E-09	
Sr-90		6.00E-01	2.27E-07	7.23E-08	4.67E-08	5.96E-08	7.86E-08	2.76E-08	3.60E-08	
Sr-90+D		–	2.58E-07	9.23E-08	5.67E-08	6.55E-08	8.19E-08	3.03E-08	3.97E-08	
Sr-90+E		–	2.58E-07	9.23E-08	5.67E-08	6.55E-08	8.19E-08	3.03E-08	3.97E-08	
Sr-91		6.00E-01	5.25E-09	4.09E-09	2.09E-09	1.26E-09	7.53E-10	6.58E-10	8.47E-10	
Sr-92		6.00E-01	3.41E-09	2.69E-09	1.36E-09	8.15E-10	4.78E-10	4.20E-10	5.44E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Sr-93		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-94		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-170		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-172		1.00E-02	6.09E-10	3.54E-10	1.80E-10	1.07E-10	7.29E-11	5.77E-11	7.55E-11	7.55E-11
Ta-173		1.00E-02	1.04E-09	6.73E-10	3.55E-10	2.20E-10	1.37E-10	1.10E-10	1.44E-10	1.44E-10
Ta-174		1.00E-02	7.77E-10	4.59E-10	2.32E-10	1.38E-10	9.09E-11	7.20E-11	9.51E-11	9.51E-11
Ta-175		1.00E-02	1.84E-09	1.28E-09	7.14E-10	4.66E-10	2.98E-10	2.39E-10	3.04E-10	3.04E-10
Ta-176		1.00E-02	2.31E-09	1.63E-09	9.19E-10	6.09E-10	3.94E-10	3.17E-10	4.00E-10	4.00E-10
Ta-177		1.00E-02	1.06E-09	7.08E-10	3.72E-10	2.30E-10	1.37E-10	1.10E-10	1.46E-10	1.46E-10
Ta-178		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-178m		1.00E-02	7.90E-10	4.77E-10	2.80E-10	1.77E-10	1.06E-10	8.52E-11	1.11E-10	1.11E-10
Ta-179		1.00E-02	5.92E-10	3.83E-10	2.02E-10	1.25E-10	7.45E-11	6.00E-11	7.97E-11	7.97E-11
Ta-180		1.00E-02	6.05E-10	3.88E-10	1.97E-10	1.19E-10	6.97E-11	5.58E-11	7.56E-11	7.56E-11
Ta-182		1.00E-02	1.41E-08	9.31E-09	4.94E-09	3.10E-09	1.89E-09	1.52E-09	1.99E-09	1.99E-09
Ta-182m		1.00E-02	1.44E-10	8.07E-11	3.97E-11	2.29E-11	1.57E-11	1.23E-11	1.63E-11	1.63E-11
Ta-183		1.00E-02	1.48E-08	9.60E-09	4.86E-09	2.92E-09	1.69E-09	1.35E-09	1.84E-09	1.84E-09
Ta-184		1.00E-02	6.70E-09	4.38E-09	2.27E-09	1.39E-09	8.40E-10	6.72E-10	8.95E-10	8.95E-10
Ta-185		1.00E-02	8.48E-10	4.77E-10	2.32E-10	1.33E-10	8.79E-11	6.89E-11	9.30E-11	9.30E-11
Ta-186		1.00E-02	4.12E-10	2.29E-10	1.13E-10	6.51E-11	4.47E-11	3.51E-11	4.66E-11	4.66E-11
Tb-146		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-147		5.00E-03	1.08E-09	7.03E-10	3.81E-10	2.42E-10	1.59E-10	1.27E-10	1.62E-10	1.62E-10
Tb-147m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-148		5.00E-03	1.31E-09	7.75E-10	3.94E-10	2.36E-10	1.57E-10	1.24E-10	1.63E-10	1.63E-10
Tb-148m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-149		5.00E-03	1.68E-09	1.09E-09	5.83E-10	3.66E-10	2.31E-10	1.85E-10	2.40E-10	2.40E-10
Tb-149m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-150		5.00E-03	1.89E-09	1.25E-09	6.73E-10	4.26E-10	2.72E-10	2.18E-10	2.81E-10	2.81E-10
Tb-150m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-151		5.00E-03	2.91E-09	2.02E-09	1.12E-09	7.20E-10	4.55E-10	3.62E-10	4.66E-10	4.66E-10
Tb-151m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-152		5.00E-03	6.39E-09	4.30E-09	2.28E-09	1.43E-09	8.74E-10	6.99E-10	9.18E-10	9.18E-10
Tb-152m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-153		5.00E-03	2.54E-09	1.73E-09	9.33E-10	5.90E-10	3.63E-10	2.89E-10	3.78E-10	3.78E-10

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Tb-154		5.00E-03	4.50E-09	3.22E-09	1.82E-09	1.21E-09	7.84E-10	6.28E-10	7.92E-10	
Tb-155		5.00E-03	2.47E-09	1.66E-09	8.84E-10	5.52E-10	3.33E-10	2.66E-10	3.51E-10	
Tb-156		5.00E-03	8.69E-09	6.16E-09	3.46E-09	2.28E-09	1.47E-09	1.17E-09	1.48E-09	
Tb-156m		5.00E-03	1.35E-09	9.36E-10	5.14E-10	3.30E-10	2.07E-10	1.65E-10	2.13E-10	
Tb-156n		5.00E-03	8.54E-10	5.59E-10	2.91E-10	1.80E-10	1.10E-10	8.73E-11	1.16E-10	
Tb-157		5.00E-03	5.50E-10	2.47E-10	1.28E-10	7.85E-11	4.74E-11	3.90E-11	5.27E-11	
Tb-158		5.00E-03	1.34E-08	5.92E-09	3.26E-09	2.10E-09	1.36E-09	1.12E-09	1.45E-09	
Tb-160		5.00E-03	1.60E-08	1.03E-08	5.41E-09	3.36E-09	2.02E-09	1.62E-09	2.15E-09	
Tb-161		5.00E-03	8.52E-09	5.48E-09	2.74E-09	1.63E-09	9.28E-10	7.45E-10	1.02E-09	
Tb-162		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-163		5.00E-03	2.37E-10	1.35E-10	6.72E-11	3.94E-11	2.71E-11	2.14E-11	2.81E-11	
Tb-164		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-165		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-101		1.00E+00	2.38E-10	1.25E-10	6.09E-11	3.48E-11	2.38E-11	1.86E-11	2.50E-11	
Tc-102		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-102m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-104		1.00E+00	1.04E-09	5.37E-10	2.64E-10	1.52E-10	1.04E-10	8.16E-11	1.09E-10	
Tc-105		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-91		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-91m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-92		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-93		1.00E+00	4.76E-10	3.58E-10	2.02E-10	1.30E-10	8.85E-11	7.08E-11	8.84E-11	
Tc-93m		1.00E+00	2.76E-10	1.76E-10	9.53E-11	5.96E-11	4.05E-11	3.23E-11	4.11E-11	
Tc-94		1.00E+00	1.17E-09	1.00E-09	5.78E-10	3.76E-10	2.56E-10	2.05E-10	2.53E-10	
Tc-94m		1.00E+00	1.32E-09	6.53E-10	3.30E-10	1.93E-10	1.29E-10	1.01E-10	1.36E-10	
Tc-95		1.00E+00	1.01E-09	8.85E-10	5.15E-10	3.37E-10	2.30E-10	1.83E-10	2.26E-10	
Tc-95m		1.00E+00	4.80E-09	2.86E-09	1.62E-09	1.05E-09	7.13E-10	5.70E-10	7.19E-10	
Tc-96		1.00E+00	6.76E-09	5.15E-09	3.05E-09	2.04E-09	1.40E-09	1.13E-09	1.38E-09	
Tc-96m		1.00E+00	1.03E-10	6.49E-11	3.62E-11	2.31E-11	1.57E-11	1.25E-11	1.58E-11	
Tc-97		1.00E+00	9.99E-10	4.93E-10	2.43E-10	1.41E-10	8.88E-11	6.81E-11	9.47E-11	
Tc-97m		1.00E+00	8.64E-09	4.09E-09	1.98E-09	1.13E-09	7.06E-10	5.49E-10	7.70E-10	
Tc-98		1.00E+00	2.09E-08	1.09E-08	5.75E-09	3.53E-09	2.34E-09	1.86E-09	2.43E-09	
Tc-99		1.00E+00	1.03E-08	4.77E-09	2.30E-09	1.31E-09	8.24E-10	6.42E-10	9.00E-10	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Tc-99m		1.00E+00	2.04E-10	1.34E-10	7.19E-11	4.34E-11	2.85E-11	2.23E-11	2.91E-11	
Te-113		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-114		6.00E-01	7.23E-10	4.13E-10	2.07E-10	1.22E-10	8.43E-11	6.64E-11	8.71E-11	
Te-115		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-115m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-116		6.00E-01	1.65E-09	1.22E-09	6.36E-10	3.92E-10	2.48E-10	1.98E-10	2.58E-10	
Te-117		6.00E-01	4.54E-10	3.00E-10	1.59E-10	9.89E-11	6.62E-11	5.28E-11	6.77E-11	
Te-118		6.00E-01	2.96E-08	2.20E-08	1.12E-08	6.58E-09	3.85E-09	3.04E-09	4.13E-09	
Te-118+D		–	2.96E-08	2.20E-08	1.12E-08	6.58E-09	3.85E-09	3.04E-09	4.13E-09	
Te-118+E		–	2.96E-08	2.20E-08	1.12E-08	6.58E-09	3.85E-09	3.04E-09	4.13E-09	
Te-119		6.00E-01	1.01E-09	9.33E-10	5.29E-10	3.46E-10	2.24E-10	1.79E-10	2.24E-10	
Te-119m		6.00E-01	4.41E-09	3.52E-09	2.04E-09	1.35E-09	8.99E-10	7.22E-10	8.96E-10	
Te-121		6.00E-01	3.28E-09	2.15E-09	1.26E-09	8.40E-10	5.64E-10	4.54E-10	5.65E-10	
Te-121m		6.00E-01	2.69E-08	1.20E-08	7.00E-09	4.29E-09	2.81E-09	2.36E-09	3.03E-09	
Te-123		6.00E-01	6.40E-09	2.97E-09	2.18E-09	1.67E-09	1.46E-09	1.36E-09	1.49E-09	
Te-123m		6.00E-01	1.91E-08	8.80E-09	4.86E-09	2.76E-09	1.68E-09	1.37E-09	1.87E-09	
Te-125m		6.00E-01	1.28E-08	6.32E-09	3.33E-09	1.86E-09	1.09E-09	8.70E-10	1.22E-09	
Te-127		6.00E-01	1.52E-09	1.25E-09	6.22E-10	3.67E-10	2.13E-10	1.70E-10	2.30E-10	
Te-127m		6.00E-01	4.11E-08	1.85E-08	9.53E-09	5.19E-09	3.04E-09	2.35E-09	3.40E-09	
Te-129		6.00E-01	7.53E-10	4.42E-10	2.15E-10	1.23E-10	8.02E-11	6.30E-11	8.51E-11	
Te-129m		6.00E-01	4.37E-08	2.36E-08	1.19E-08	6.64E-09	3.86E-09	2.98E-09	4.25E-09	
Te-131		6.00E-01	8.94E-10	6.54E-10	3.53E-10	1.88E-10	1.25E-10	8.71E-11	1.21E-10	
Te-131m		6.00E-01	2.01E-08	1.39E-08	7.74E-09	4.30E-09	2.71E-09	1.93E-09	2.69E-09	
Te-132		6.00E-01	4.78E-08	2.95E-08	1.56E-08	8.29E-09	5.24E-09	3.78E-09	5.36E-09	
Te-133		6.00E-01	8.04E-10	6.14E-10	3.19E-10	1.55E-10	1.02E-10	6.97E-11	1.01E-10	
Te-133m		6.00E-01	2.78E-09	2.22E-09	1.17E-09	5.67E-10	3.70E-10	2.50E-10	3.64E-10	
Te-134		6.00E-01	9.89E-10	6.82E-10	3.56E-10	1.96E-10	1.31E-10	9.82E-11	1.33E-10	
Th-223		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-224		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-226		5.00E-03	4.50E-09	2.45E-09	1.19E-09	6.74E-10	4.53E-10	3.52E-10	4.76E-10	
Th-227		5.00E-03	3.02E-07	7.13E-08	3.64E-08	2.31E-08	1.49E-08	9.11E-09	1.47E-08	
Th-228		5.00E-03	3.70E-06	3.70E-07	2.19E-07	1.37E-07	9.36E-08	7.20E-08	1.16E-07	
Th-229		5.00E-03	1.09E-05	1.04E-06	7.89E-07	6.25E-07	5.40E-07	4.99E-07	6.09E-07	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Th-229+D		–	1.79E-05	2.24E-06	1.41E-06	1.13E-06	9.77E-07	5.99E-07	8.49E-07	
Th-229+E		–	1.79E-05	2.24E-06	1.41E-06	1.13E-06	9.77E-07	5.99E-07	8.49E-07	
Th-230		5.00E-03	4.14E-06	4.10E-07	3.09E-07	2.46E-07	2.19E-07	2.14E-07	2.53E-07	
Th-231		5.00E-03	3.89E-09	2.49E-09	1.24E-09	7.34E-10	4.17E-10	3.34E-10	4.61E-10	
Th-232		5.00E-03	4.63E-06	4.57E-07	3.58E-07	2.89E-07	2.53E-07	2.31E-07	2.78E-07	
Th-232+D		–	3.40E-05	6.12E-06	3.79E-06	4.21E-06	5.38E-06	9.27E-07	1.88E-06	
Th-232+E		–	3.40E-05	6.12E-06	3.79E-06	4.21E-06	5.38E-06	9.27E-07	1.88E-06	
Th-233		5.00E-03	2.73E-10	1.50E-10	7.28E-11	4.13E-11	2.78E-11	2.18E-11	2.93E-11	
Th-234		5.00E-03	3.98E-08	2.52E-08	1.26E-08	7.46E-09	4.22E-09	3.39E-09	4.68E-09	
Th-234+D		–	3.98E-08	2.53E-08	1.26E-08	7.46E-09	4.23E-09	3.40E-09	4.69E-09	
Th-234+E		–	3.98E-08	2.53E-08	1.26E-08	7.46E-09	4.23E-09	3.40E-09	4.69E-09	
Th-235		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-236		5.00E-03	1.04E-09	5.87E-10	2.89E-10	1.67E-10	1.11E-10	8.73E-11	1.17E-10	
Ti-44		2.00E-02	5.50E-08	3.12E-08	1.73E-08	1.08E-08	6.90E-09	5.80E-09	7.41E-09	
Ti-44+D		–	5.85E-08	3.34E-08	1.85E-08	1.15E-08	7.35E-09	6.16E-09	7.88E-09	
Ti-44+E		–	5.85E-08	3.34E-08	1.85E-08	1.15E-08	7.35E-09	6.16E-09	7.88E-09	
Ti-45		2.00E-02	1.56E-09	9.83E-10	5.05E-10	3.05E-10	1.90E-10	1.51E-10	2.01E-10	
Ti-51		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ti-52		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-190		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-190m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-194		1.00E+00	5.28E-10	2.96E-10	1.46E-10	8.46E-11	5.80E-11	4.57E-11	6.05E-11	
Tl-194m		1.00E+00	3.60E-10	2.14E-10	1.12E-10	6.88E-11	4.86E-11	3.89E-11	4.95E-11	
Tl-195		1.00E+00	2.05E-10	1.28E-10	6.94E-11	4.35E-11	3.05E-11	2.47E-11	3.10E-11	
Tl-196		1.00E+00	4.40E-10	2.71E-10	1.45E-10	8.99E-11	6.28E-11	5.09E-11	6.42E-11	
Tl-197		1.00E+00	2.07E-10	1.30E-10	6.85E-11	4.25E-11	2.86E-11	2.31E-11	2.96E-11	
Tl-198		1.00E+00	4.87E-10	3.33E-10	1.93E-10	1.27E-10	8.89E-11	7.41E-11	9.03E-11	
Tl-198m		1.00E+00	4.88E-10	3.00E-10	1.59E-10	9.84E-11	6.79E-11	5.53E-11	7.00E-11	
Tl-199		1.00E+00	2.48E-10	1.55E-10	8.13E-11	5.03E-11	3.34E-11	2.71E-11	3.48E-11	
Tl-200		1.00E+00	1.28E-09	8.99E-10	5.36E-10	3.52E-10	2.41E-10	2.02E-10	2.47E-10	
Tl-201		1.00E+00	8.74E-10	5.77E-10	3.00E-10	1.86E-10	1.23E-10	9.90E-11	1.27E-10	
Tl-202		1.00E+00	2.95E-09	2.11E-09	1.21E-09	7.96E-10	5.48E-10	4.58E-10	5.60E-10	
Tl-204		1.00E+00	1.30E-08	8.47E-09	4.22E-09	2.52E-09	1.47E-09	1.19E-09	1.61E-09	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Tl-206		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-206m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-207		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-208		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-209		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-210		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-161		5.00E-03	3.59E-10	2.24E-10	1.19E-10	7.36E-11	4.93E-11	3.92E-11	5.05E-11	5.05E-11
Tm-162		5.00E-03	4.23E-10	2.43E-10	1.23E-10	7.27E-11	5.00E-11	3.95E-11	5.17E-11	5.17E-11
Tm-163		5.00E-03	4.17E-10	3.00E-10	1.68E-10	1.09E-10	6.77E-11	5.44E-11	6.97E-11	6.97E-11
Tm-164		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-165		5.00E-03	3.04E-09	2.09E-09	1.13E-09	7.23E-10	4.49E-10	3.58E-10	4.65E-10	4.65E-10
Tm-166		5.00E-03	2.13E-09	1.49E-09	8.38E-10	5.52E-10	3.57E-10	2.87E-10	3.62E-10	3.62E-10
Tm-167		5.00E-03	6.26E-09	4.07E-09	2.07E-09	1.25E-09	7.27E-10	5.83E-10	7.91E-10	7.91E-10
Tm-168		5.00E-03	8.57E-09	5.75E-09	3.19E-09	2.07E-09	1.31E-09	1.04E-09	1.34E-09	1.34E-09
Tm-170		5.00E-03	1.58E-08	9.74E-09	4.86E-09	2.88E-09	1.63E-09	1.31E-09	1.81E-09	1.81E-09
Tm-171		5.00E-03	1.45E-09	7.82E-10	3.92E-10	2.32E-10	1.32E-10	1.06E-10	1.48E-10	1.48E-10
Tm-172		5.00E-03	1.88E-08	1.22E-08	6.14E-09	3.68E-09	2.12E-09	1.70E-09	2.32E-09	2.32E-09
Tm-173		5.00E-03	3.26E-09	2.09E-09	1.06E-09	6.37E-10	3.76E-10	3.01E-10	4.07E-10	4.07E-10
Tm-174		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-175		5.00E-03	2.92E-10	1.65E-10	8.24E-11	4.82E-11	3.29E-11	2.59E-11	3.42E-11	3.42E-11
Tm-176		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-227		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-228		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-230		4.00E-02	7.76E-07	2.96E-07	1.51E-07	9.89E-08	6.51E-08	5.57E-08	7.21E-08	7.21E-08
U-231		4.00E-02	3.72E-09	2.44E-09	1.23E-09	7.38E-10	4.27E-10	3.38E-10	4.63E-10	4.63E-10
U-232		4.00E-02	2.53E-06	8.21E-07	5.86E-07	5.73E-07	6.42E-07	3.34E-07	4.04E-07	4.04E-07
U-233		4.00E-02	3.80E-07	1.38E-07	9.17E-08	7.80E-08	7.80E-08	5.12E-08	6.02E-08	6.02E-08
U-234		4.00E-02	3.69E-07	1.34E-07	8.84E-08	7.45E-08	7.45E-08	4.95E-08	5.81E-08	5.81E-08
U-235		4.00E-02	3.52E-07	1.29E-07	8.50E-08	7.13E-08	7.02E-08	4.67E-08	5.49E-08	5.49E-08
U-235+D		–	3.56E-07	1.31E-07	8.62E-08	7.20E-08	7.06E-08	4.70E-08	5.54E-08	5.54E-08
U-235+E		–	3.56E-07	1.31E-07	8.62E-08	7.20E-08	7.06E-08	4.70E-08	5.54E-08	5.54E-08
U-235m		4.00E-02	5.45E-14	3.00E-14	1.45E-14	8.19E-15	5.52E-15	4.31E-15	5.82E-15	5.82E-15
U-236		4.00E-02	3.48E-07	1.26E-07	8.32E-08	7.01E-08	7.02E-08	4.66E-08	5.47E-08	5.47E-08

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
U-237		4.00E-02	8.53E-09	5.58E-09	2.82E-09	1.69E-09	9.73E-10	7.77E-10	1.06E-09	
U-238		4.00E-02	3.35E-07	1.21E-07	8.02E-08	6.77E-08	6.72E-08	4.46E-08	5.24E-08	
U-238+D		–	3.74E-07	1.46E-07	9.27E-08	7.51E-08	7.13E-08	4.79E-08	5.70E-08	
U-238+E		–	3.74E-07	1.46E-07	9.27E-08	7.51E-08	7.13E-08	4.79E-08	5.70E-08	
U-239		4.00E-02	3.37E-10	1.92E-10	9.36E-11	5.38E-11	3.51E-11	2.76E-11	3.73E-11	
U-240		4.00E-02	1.23E-08	7.97E-09	3.99E-09	2.37E-09	1.36E-09	1.09E-09	1.50E-09	
U-242		4.00E-02	6.56E-10	3.60E-10	1.75E-10	9.92E-11	6.73E-11	5.26E-11	7.07E-11	
V-47		2.00E-02	7.29E-10	4.12E-10	2.04E-10	1.18E-10	8.00E-11	6.30E-11	8.37E-11	
V-48		2.00E-02	1.52E-08	1.07E-08	5.97E-09	3.90E-09	2.50E-09	1.99E-09	2.54E-09	
V-49		2.00E-02	2.15E-10	1.36E-10	6.80E-11	4.02E-11	2.28E-11	1.84E-11	2.53E-11	
V-50		2.00E-02	1.43E-08	8.01E-09	5.74E-09	4.53E-09	3.76E-09	3.41E-09	3.75E-09	
V-52		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
V-53		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-177		6.00E-01	4.30E-10	3.10E-10	1.69E-10	1.08E-10	7.06E-11	5.65E-11	7.19E-11	
W-178		6.00E-01	2.06E-09	1.61E-09	8.41E-10	5.19E-10	3.10E-10	2.49E-10	3.28E-10	
W-178+D		–	2.06E-09	1.61E-09	8.41E-10	5.19E-10	3.10E-10	2.49E-10	3.28E-10	
W-178+E		–	2.06E-09	1.61E-09	8.41E-10	5.19E-10	3.10E-10	2.49E-10	3.28E-10	
W-179		6.00E-01	3.88E-11	2.26E-11	1.14E-11	6.73E-12	4.57E-12	3.59E-12	4.72E-12	
W-179m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-181		6.00E-01	7.24E-10	5.44E-10	2.88E-10	1.79E-10	1.07E-10	8.64E-11	1.13E-10	
W-185		6.00E-01	4.41E-09	3.28E-09	1.64E-09	9.71E-10	5.53E-10	4.44E-10	6.06E-10	
W-185m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-187		6.00E-01	5.27E-09	4.09E-09	2.09E-09	1.27E-09	7.47E-10	5.97E-10	7.98E-10	
W-188		6.00E-01	2.08E-08	1.54E-08	7.70E-09	4.57E-09	2.59E-09	2.09E-09	2.85E-09	
W-190		6.00E-01	9.62E-10	5.46E-10	2.70E-10	1.57E-10	1.06E-10	8.37E-11	1.11E-10	
Xe-120		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-121		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-122		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-123		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-125		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-127		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-127m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-129m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Xe-131m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-133		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-133m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-135		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-135m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-137		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-138		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-81		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-83		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-83m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-84m		1.00E-03	1.43E-09	8.37E-10	4.27E-10	2.55E-10	1.73E-10	1.37E-10	1.79E-10	1.79E-10
Y-85		1.00E-03	1.87E-09	1.17E-09	6.04E-10	3.66E-10	2.30E-10	1.83E-10	2.43E-10	2.43E-10
Y-85m		1.00E-03	3.84E-09	2.45E-09	1.26E-09	7.63E-10	4.63E-10	3.70E-10	4.94E-10	4.94E-10
Y-86		1.00E-03	7.50E-09	5.21E-09	2.88E-09	1.88E-09	1.19E-09	9.56E-10	1.22E-09	1.22E-09
Y-86m		1.00E-03	4.43E-10	3.06E-10	1.69E-10	1.10E-10	7.01E-11	5.61E-11	7.17E-11	7.17E-11
Y-87		1.00E-03	4.63E-09	3.20E-09	1.75E-09	1.12E-09	6.93E-10	5.47E-10	7.12E-10	7.12E-10
Y-87m		1.00E-03	2.04E-09	1.37E-09	7.25E-10	4.53E-10	2.76E-10	2.19E-10	2.89E-10	2.89E-10
Y-88		1.00E-03	8.27E-09	6.08E-09	3.57E-09	2.45E-09	1.64E-09	1.30E-09	1.61E-09	1.61E-09
Y-89m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-90		1.00E-03	3.12E-08	2.00E-08	9.96E-09	5.89E-09	3.34E-09	2.68E-09	3.70E-09	3.70E-09
Y-90m		1.00E-03	1.83E-09	1.20E-09	6.12E-10	3.70E-10	2.17E-10	1.74E-10	2.35E-10	2.35E-10
Y-91		1.00E-03	2.76E-08	1.76E-08	8.79E-09	5.21E-09	2.95E-09	2.37E-09	3.27E-09	3.27E-09
Y-91m		1.00E-03	9.37E-11	6.11E-11	3.35E-11	2.13E-11	1.43E-11	1.16E-11	1.46E-11	1.46E-11
Y-92		1.00E-03	5.90E-09	3.60E-09	1.78E-09	1.04E-09	6.24E-10	4.95E-10	6.79E-10	6.79E-10
Y-93		1.00E-03	1.36E-08	8.62E-09	4.28E-09	2.53E-09	1.45E-09	1.16E-09	1.60E-09	1.60E-09
Y-94		1.00E-03	1.04E-09	5.74E-10	2.79E-10	1.59E-10	1.08E-10	8.45E-11	1.13E-10	1.13E-10
Y-95		1.00E-03	5.21E-10	2.87E-10	1.40E-10	7.99E-11	5.46E-11	4.27E-11	5.71E-11	5.71E-11
Yb-162		5.00E-03	3.19E-10	1.88E-10	9.62E-11	5.78E-11	3.92E-11	3.11E-11	4.05E-11	4.05E-11
Yb-163		5.00E-03	1.58E-10	9.41E-11	4.87E-11	2.96E-11	2.02E-11	1.60E-11	2.07E-11	2.07E-11
Yb-164		5.00E-03	1.02E-09	6.04E-10	3.02E-10	1.78E-10	1.16E-10	9.16E-11	1.22E-10	1.22E-10
Yb-165		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Yb-166		5.00E-03	7.65E-09	5.35E-09	2.94E-09	1.90E-09	1.20E-09	9.57E-10	1.23E-09	1.23E-09
Yb-167		5.00E-03	7.26E-11	4.24E-11	2.15E-11	1.28E-11	8.72E-12	6.88E-12	9.01E-12	9.01E-12

Continued on next page

Table 1.2: Dose coefficients for ingestion

Nuclide	Form	f1	(Sv Bq ⁻¹)							PerCapita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Yb-169		5.00E-03	8.27E-09	5.41E-09	2.81E-09	1.73E-09	1.02E-09	8.20E-10	1.10E-09	
Yb-175		5.00E-03	4.99E-09	3.22E-09	1.61E-09	9.58E-10	5.47E-10	4.39E-10	6.03E-10	
Yb-177		5.00E-03	1.06E-09	7.00E-10	3.46E-10	2.03E-10	1.13E-10	8.97E-11	1.25E-10	
Yb-178		5.00E-03	1.40E-09	8.31E-10	4.09E-10	2.38E-10	1.47E-10	1.16E-10	1.58E-10	
Yb-179		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-60		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-61		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-62		1.00E+00	4.24E-09	6.51E-09	3.29E-09	1.97E-09	1.17E-09	9.36E-10	1.22E-09	
Zn-63		1.00E+00	8.74E-10	5.25E-10	2.59E-10	1.51E-10	1.01E-10	7.99E-11	1.06E-10	
Zn-65		1.00E+00	3.62E-08	1.56E-08	9.72E-09	6.42E-09	4.51E-09	3.92E-09	4.77E-09	
Zn-69		1.00E+00	3.52E-10	2.16E-10	1.05E-10	5.97E-11	3.93E-11	3.08E-11	4.14E-11	
Zn-69m		1.00E+00	1.29E-09	2.31E-09	1.17E-09	7.08E-10	4.16E-10	3.33E-10	4.33E-10	
Zn-71		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-71m		1.00E+00	1.38E-09	1.53E-09	7.89E-10	4.80E-10	3.01E-10	2.41E-10	3.10E-10	
Zn-72		1.00E+00	8.75E-09	8.70E-09	4.59E-09	2.85E-09	1.75E-09	1.42E-09	1.82E-09	
Zr-85		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zr-86		2.00E-02	6.89E-09	4.82E-09	2.65E-09	1.71E-09	1.08E-09	8.57E-10	1.10E-09	
Zr-87		2.00E-02	2.00E-09	1.34E-09	6.75E-10	4.02E-10	2.30E-10	1.82E-10	2.51E-10	
Zr-88		2.00E-02	2.78E-09	1.93E-09	1.14E-09	7.88E-10	5.32E-10	4.41E-10	5.37E-10	
Zr-89		2.00E-02	6.57E-09	4.54E-09	2.48E-09	1.58E-09	9.94E-10	7.91E-10	1.02E-09	
Zr-89m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zr-93		2.00E-02	1.14E-09	7.48E-10	5.00E-10	5.71E-10	8.53E-10	1.07E-09	1.00E-09	
Zr-95		2.00E-02	8.63E-09	5.72E-09	3.09E-09	1.94E-09	1.20E-09	9.67E-10	1.26E-09	
Zr-97		2.00E-02	2.23E-08	1.45E-08	7.35E-09	4.43E-09	2.58E-09	2.06E-09	2.80E-09	

1.3 Dose rate coefficients for inhalation

Explanation of Entries:

Table 1.3 contains the dose coefficients for internal exposure due to inhalation of a radionuclide.

Type (F, M, S, V, G): Type F, Type M, and Type S are particulate aerosols that represent, respectively, fast, medium, and slow absorption to the blood. There are a few specific elements that have a vapor (Type V) or gaseous (Type G).

Special: Cases where Type V and Type G are present include: tritium as a vapor (HTO) or gas (HT), carbon in gaseous for as carbon monoxide (CO) or carbon dioxide (CO₂), sulfur as a vapor (SO₂ or CS₂), nickel as a vapor, ruthenium.

f: This is the fractional uptake from the small intestine to the blood, also called the gastrointestinal uptake.

Per Capita: This is the population weighted effective dose equivalent based upon fractional distributions in U.S. census data.

Special note on Radon: Radon dose rate coefficients are based on epidemiological data and the coefficients include dose from both radon and its progeny products. The values for radon are per capita numbers and should not be applied to specific age groups.

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Ac-223			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-224	F		5.00E-03	5.86E-08	3.11E-08	1.62E-08	1.09E-08	7.69E-09	8.14E-09	8.86E-09
Ac-224	M		5.00E-03	3.77E-07	2.80E-07	1.81E-07	1.35E-07	1.28E-07	1.02E-07	1.10E-07
Ac-224	S		5.00E-03	4.16E-07	3.12E-07	2.03E-07	1.51E-07	1.44E-07	1.14E-07	1.24E-07
Ac-225	F		5.00E-03	9.99E-06	6.74E-06	3.02E-06	1.75E-06	1.06E-06	7.96E-07	1.02E-06
Ac-225	M		5.00E-03	2.74E-05	2.07E-05	1.32E-05	9.83E-06	9.31E-06	7.38E-06	8.01E-06
Ac-225	S		5.00E-03	3.06E-05	2.32E-05	1.50E-05	1.12E-05	1.07E-05	8.48E-06	9.18E-06
Ac-225+D	S			3.06E-05	2.32E-05	1.50E-05	1.12E-05	1.07E-05	8.48E-06	9.18E-06
Ac-225+E	S			3.06E-05	2.32E-05	1.50E-05	1.12E-05	1.07E-05	8.48E-06	9.18E-06
Ac-226	F		5.00E-03	1.01E-06	6.66E-07	2.99E-07	1.74E-07	1.06E-07	1.27E-07	1.41E-07
Ac-226	M		5.00E-03	4.32E-06	3.22E-06	2.08E-06	1.55E-06	1.48E-06	1.18E-06	1.27E-06
Ac-226	S		5.00E-03	4.71E-06	3.53E-06	2.30E-06	1.72E-06	1.64E-06	1.31E-06	1.41E-06
Ac-227	F		5.00E-03	3.68E-04	3.46E-04	2.38E-04	1.78E-04	1.50E-04	1.56E-04	1.61E-04
Ac-227	M		5.00E-03	1.63E-04	1.52E-04	1.08E-04	7.82E-05	7.18E-05	7.28E-05	7.50E-05
Ac-227	S		5.00E-03	1.77E-04	1.61E-04	1.06E-04	6.93E-05	5.91E-05	5.53E-05	5.91E-05
Ac-228	F		5.00E-03	6.45E-08	5.36E-08	3.12E-08	1.97E-08	1.34E-08	1.20E-08	1.36E-08
Ac-228	M		5.00E-03	4.93E-08	4.04E-08	2.52E-08	1.70E-08	1.43E-08	1.19E-08	1.32E-08
Ac-228	S		5.00E-03	5.86E-08	4.86E-08	3.05E-08	2.05E-08	1.74E-08	1.46E-08	1.61E-08
Ac-230			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ac-231			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-232			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-233			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-100m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-101	F		1.00E-01	9.20E-11	6.45E-11	3.02E-11	1.87E-11	1.13E-11	9.42E-12	1.14E-11	
Ag-101	M		1.00E-01	1.25E-10	8.66E-11	4.06E-11	2.55E-11	1.60E-11	1.33E-11	1.60E-11	
Ag-101	S		2.00E-02	1.29E-10	8.91E-11	4.17E-11	2.63E-11	1.65E-11	1.38E-11	1.65E-11	
Ag-102	F		1.00E-01	1.22E-10	8.91E-11	4.30E-11	2.63E-11	1.59E-11	1.30E-11	1.59E-11	
Ag-102	M		1.00E-01	1.63E-10	1.17E-10	5.61E-11	3.48E-11	2.16E-11	1.78E-11	2.15E-11	
Ag-102	S		2.00E-02	1.67E-10	1.20E-10	5.75E-11	3.58E-11	2.22E-11	1.83E-11	2.21E-11	
Ag-102m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-103	F		1.00E-01	1.35E-10	1.00E-10	4.83E-11	2.95E-11	1.74E-11	1.42E-11	1.75E-11	
Ag-103	M		1.00E-01	2.04E-10	1.48E-10	7.28E-11	4.63E-11	3.02E-11	2.46E-11	2.93E-11	
Ag-103	S		2.00E-02	2.13E-10	1.53E-10	7.57E-11	4.83E-11	3.18E-11	2.58E-11	3.07E-11	
Ag-104	F		1.00E-01	2.32E-10	1.93E-10	1.00E-10	6.02E-11	3.55E-11	2.82E-11	3.48E-11	
Ag-104	M		1.00E-01	2.92E-10	2.37E-10	1.23E-10	7.56E-11	4.61E-11	3.65E-11	4.45E-11	
Ag-104	S		2.00E-02	2.99E-10	2.42E-10	1.26E-10	7.74E-11	4.74E-11	3.74E-11	4.57E-11	
Ag-104m	F		1.00E-01	1.86E-10	1.30E-10	6.11E-11	3.73E-11	2.20E-11	1.81E-11	2.23E-11	
Ag-104m	M		1.00E-01	2.76E-10	1.89E-10	8.90E-11	5.55E-11	3.47E-11	2.86E-11	3.46E-11	
Ag-104m	S		2.00E-02	2.86E-10	1.95E-10	9.21E-11	5.75E-11	3.61E-11	2.98E-11	3.59E-11	
Ag-105	F		1.00E-01	3.85E-09	3.35E-09	1.73E-09	9.94E-10	6.30E-10	5.37E-10	6.40E-10	
Ag-105	M		1.00E-01	4.44E-09	3.45E-09	1.97E-09	1.31E-09	8.94E-10	7.33E-10	8.50E-10	
Ag-105	S		2.00E-02	4.49E-09	3.62E-09	2.12E-09	1.27E-09	1.00E-09	8.15E-10	9.29E-10	
Ag-105m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-106	F		1.00E-01	9.31E-11	6.29E-11	2.87E-11	1.78E-11	1.07E-11	8.96E-12	1.09E-11	
Ag-106	M		1.00E-01	1.40E-10	9.37E-11	4.32E-11	2.74E-11	1.75E-11	1.46E-11	1.75E-11	
Ag-106	S		2.00E-02	1.46E-10	9.71E-11	4.48E-11	2.85E-11	1.83E-11	1.53E-11	1.82E-11	
Ag-106m	F		1.00E-01	7.62E-09	6.11E-09	3.22E-09	2.06E-09	1.27E-09	1.06E-09	1.26E-09	
Ag-106m	M		1.00E-01	7.20E-09	5.78E-09	3.18E-09	2.06E-09	1.38E-09	1.11E-09	1.30E-09	
Ag-106m	S		2.00E-02	6.98E-09	5.70E-09	3.16E-09	2.06E-09	1.40E-09	1.11E-09	1.30E-09	
Ag-108			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-108m	F		1.00E-01	3.45E-08	2.82E-08	1.56E-08	1.03E-08	6.88E-09	6.14E-09	6.99E-09	
Ag-108m	M		1.00E-01	3.26E-08	2.71E-08	1.67E-08	1.11E-08	8.62E-09	7.49E-09	8.30E-09	
Ag-108m	S		2.00E-02	8.97E-08	8.78E-08	6.37E-08	4.52E-08	4.01E-08	3.85E-08	4.03E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ag-108m+D	S			8.97E-08	8.78E-08	6.37E-08	4.52E-08	4.01E-08	3.85E-08	4.03E-08	
Ag-108m+E	S			8.97E-08	8.78E-08	6.37E-08	4.52E-08	4.01E-08	3.85E-08	4.03E-08	
Ag-109m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-110			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-110m	F		1.00E-01	3.54E-08	2.80E-08	1.50E-08	9.87E-09	6.41E-09	5.58E-09	6.46E-09	
Ag-110m	M		1.00E-01	3.58E-08	2.88E-08	1.75E-08	1.18E-08	9.28E-09	7.79E-09	8.68E-09	
Ag-110m	S		2.00E-02	4.71E-08	4.14E-08	2.67E-08	1.81E-08	1.48E-08	1.25E-08	1.38E-08	
Ag-110m+D	S			4.71E-08	4.14E-08	2.67E-08	1.81E-08	1.48E-08	1.25E-08	1.38E-08	
Ag-110m+E	S			4.71E-08	4.14E-08	2.67E-08	1.81E-08	1.48E-08	1.25E-08	1.38E-08	
Ag-111	F		1.00E-01	4.80E-09	3.23E-09	1.41E-09	8.76E-10	4.78E-10	3.95E-10	4.98E-10	
Ag-111	M		1.00E-01	9.13E-09	6.56E-09	3.49E-09	2.42E-09	1.91E-09	1.54E-09	1.75E-09	
Ag-111	S		2.00E-02	9.85E-09	7.09E-09	3.81E-09	2.66E-09	2.14E-09	1.72E-09	1.94E-09	
Ag-111m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-112	F		1.00E-01	9.75E-10	6.43E-10	2.79E-10	1.70E-10	9.08E-11	7.57E-11	9.60E-11	
Ag-112	M		1.00E-01	1.69E-09	1.12E-09	5.09E-10	3.20E-10	1.94E-10	1.63E-10	1.97E-10	
Ag-112	S		2.00E-02	1.80E-09	1.18E-09	5.38E-10	3.39E-10	2.06E-10	1.73E-10	2.10E-10	
Ag-113	F		1.00E-01	8.90E-10	5.81E-10	2.44E-10	1.50E-10	7.75E-11	6.55E-11	8.36E-11	
Ag-113	M		1.00E-01	1.51E-09	9.99E-10	4.57E-10	2.93E-10	1.84E-10	1.52E-10	1.83E-10	
Ag-113	S		2.00E-02	1.63E-09	1.07E-09	4.90E-10	3.14E-10	1.99E-10	1.64E-10	1.97E-10	
Ag-113m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-114			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-115	F		1.00E-01	1.62E-10	1.04E-10	4.53E-11	2.83E-11	1.68E-11	1.43E-11	1.74E-11	
Ag-115	M		1.00E-01	2.56E-10	1.66E-10	7.56E-11	4.89E-11	3.21E-11	2.70E-11	3.20E-11	
Ag-115	S		2.00E-02	2.68E-10	1.73E-10	7.92E-11	5.13E-11	3.40E-11	2.85E-11	3.37E-11	
Ag-116			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-117			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-99			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Al-26	F		2.00E-02	8.01E-08	6.19E-08	3.20E-08	2.00E-08	1.29E-08	1.12E-08	1.31E-08	
Al-26	M		2.00E-02	8.70E-08	7.31E-08	4.36E-08	2.86E-08	2.24E-08	1.95E-08	2.16E-08	
Al-26	S		2.00E-02	2.66E-07	2.56E-07	1.80E-07	1.26E-07	1.12E-07	1.09E-07	1.14E-07	
Al-28			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Al-29			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Am-237	F		5.00E-03	1.01E-10	7.46E-11	3.57E-11	2.23E-11	1.37E-11	1.13E-11	1.36E-11	
Am-237	M		5.00E-03	1.69E-10	1.23E-10	6.30E-11	4.20E-11	3.08E-11	2.50E-11	2.88E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Am-237	S		5.00E-03	1.77E-10	1.29E-10	6.61E-11	4.42E-11	3.27E-11	2.66E-11	3.05E-11	
Am-238	F		5.00E-03	4.22E-10	3.87E-10	2.55E-10	2.03E-10	1.81E-10	1.88E-10	1.93E-10	
Am-238	M		5.00E-03	3.08E-10	2.66E-10	1.28E-10	9.66E-11	8.87E-11	8.96E-11	9.33E-11	
Am-238	S		5.00E-03	2.67E-10	2.20E-10	1.27E-10	8.20E-11	6.10E-11	5.37E-11	6.01E-11	
Am-239	F		5.00E-03	8.38E-10	5.95E-10	2.72E-10	1.66E-10	9.25E-11	7.75E-11	9.63E-11	
Am-239	M		5.00E-03	1.57E-09	1.12E-09	5.72E-10	3.84E-10	2.81E-10	2.27E-10	2.62E-10	
Am-239	S		5.00E-03	1.65E-09	1.18E-09	6.05E-10	4.07E-10	2.61E-10	2.43E-10	2.77E-10	
Am-240	F		5.00E-03	2.15E-09	1.69E-09	8.94E-10	5.72E-10	3.62E-10	2.35E-10	3.02E-10	
Am-240	M		5.00E-03	2.94E-09	2.26E-09	1.20E-09	7.80E-10	5.36E-10	4.37E-10	5.10E-10	
Am-240	S		5.00E-03	3.03E-09	2.31E-09	1.22E-09	7.94E-10	5.43E-10	4.36E-10	5.12E-10	
Am-241	F		5.00E-03	1.86E-04	1.78E-04	1.23E-04	1.01E-04	9.28E-05	9.64E-05	9.81E-05	
Am-241	M		5.00E-03	7.37E-05	6.97E-05	5.11E-05	4.06E-05	4.03E-05	4.17E-05	4.21E-05	
Am-241	S		5.00E-03	4.59E-05	4.01E-05	2.73E-05	1.89E-05	1.70E-05	1.60E-05	1.69E-05	
Am-242	F		5.00E-03	9.13E-08	7.05E-08	3.46E-08	2.09E-08	1.36E-08	1.12E-08	1.34E-08	
Am-242	M		5.00E-03	7.51E-08	5.88E-08	3.55E-08	2.44E-08	2.11E-08	1.73E-08	1.91E-08	
Am-242	S		5.00E-03	7.90E-08	6.19E-08	3.88E-08	2.71E-08	2.41E-08	1.97E-08	2.16E-08	
Am-242m	F		5.00E-03	1.56E-04	1.53E-04	1.11E-04	9.37E-05	8.78E-05	9.16E-05	9.28E-05	
Am-242m	M		5.00E-03	5.27E-05	5.30E-05	4.10E-05	3.39E-05	3.46E-05	3.67E-05	3.67E-05	
Am-242m	S		5.00E-03	2.51E-05	2.39E-05	1.71E-05	1.21E-05	1.11E-05	1.11E-05	1.15E-05	
Am-242m+D	F			1.56E-04	1.53E-04	1.11E-04	9.37E-05	8.78E-05	9.16E-05	9.27E-05	
Am-242m+E	F			1.56E-04	1.53E-04	1.11E-04	9.37E-05	8.78E-05	9.16E-05	9.27E-05	
Am-243	F		5.00E-03	1.83E-04	1.75E-04	1.21E-04	1.00E-04	9.23E-05	9.57E-05	9.75E-05	
Am-243	M		5.00E-03	7.19E-05	6.81E-05	5.02E-05	4.00E-05	3.98E-05	4.12E-05	4.16E-05	
Am-243	S		5.00E-03	4.40E-05	3.86E-05	2.63E-05	1.82E-05	1.64E-05	1.55E-05	1.63E-05	
Am-243+D	F			1.83E-04	1.75E-04	1.21E-04	1.00E-04	9.23E-05	9.57E-05	9.74E-05	
Am-243+E	F			1.83E-04	1.75E-04	1.21E-04	1.00E-04	9.23E-05	9.57E-05	9.74E-05	
Am-244	F		5.00E-03	1.02E-08	9.19E-09	5.61E-09	4.09E-09	3.51E-09	3.71E-09	3.84E-09	
Am-244	M		5.00E-03	6.03E-09	5.04E-09	3.15E-09	2.26E-09	2.04E-09	2.01E-09	2.10E-09	
Am-244	S		5.00E-03	5.99E-09	4.74E-09	2.39E-09	1.63E-09	1.36E-09	1.20E-09	1.32E-09	
Am-244m	F		5.00E-03	4.56E-10	4.02E-10	2.44E-10	1.78E-10	1.53E-10	1.61E-10	1.67E-10	
Am-244m	M		5.00E-03	3.34E-10	2.13E-10	1.31E-10	9.28E-11	8.41E-11	8.37E-11	8.75E-11	
Am-244m	S		5.00E-03	3.04E-10	2.24E-10	1.22E-10	8.19E-11	6.41E-11	5.76E-11	6.36E-11	
Am-245	F		5.00E-03	2.16E-10	1.41E-10	6.19E-11	4.02E-11	2.45E-11	2.15E-11	2.56E-11	
Am-245	M		5.00E-03	3.97E-10	2.66E-10	1.28E-10	8.77E-11	6.44E-11	5.33E-11	6.12E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Am-245	S		5.00E-03	4.17E-10	2.80E-10	1.35E-10	9.25E-11	6.84E-11	5.62E-11	6.46E-11	
Am-246	F		5.00E-03	3.33E-10	2.27E-10	1.03E-10	6.69E-11	4.23E-11	3.64E-11	4.32E-11	
Am-246	M		5.00E-03	5.59E-10	3.82E-10	1.81E-10	1.23E-10	8.75E-11	7.29E-11	8.43E-11	
Am-246	S		5.00E-03	5.84E-10	3.99E-10	1.90E-10	1.29E-10	9.22E-11	7.67E-11	8.85E-11	
Am-246m	F		5.00E-03	1.31E-10	9.02E-11	4.19E-11	2.67E-11	1.67E-11	1.43E-11	1.70E-11	
Am-246m	M		5.00E-03	1.96E-10	1.34E-10	6.27E-11	4.08E-11	2.70E-11	2.27E-11	2.67E-11	
Am-246m	S		5.00E-03	2.04E-10	1.39E-10	6.49E-11	4.22E-11	2.80E-11	2.34E-11	2.76E-11	
Am-247	F		5.00E-03	1.37E-10	8.95E-11	3.91E-11	2.57E-11	1.62E-11	1.41E-11	1.67E-11	
Am-247	M		5.00E-03	2.20E-10	1.45E-10	6.61E-11	4.45E-11	3.06E-11	2.59E-11	3.02E-11	
Am-247	S		5.00E-03	2.30E-10	1.51E-10	6.90E-11	4.66E-11	3.21E-11	2.72E-11	3.17E-11	
Ar-37			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-39			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-41			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-42			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-42+D	G			2.71E-09	1.83E-09	8.82E-10	5.77E-10	4.16E-10	3.56E-10	4.09E-10	
Ar-42+E	G			2.71E-09	1.83E-09	8.82E-10	5.77E-10	4.16E-10	3.56E-10	4.09E-10	
Ar-43			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-44			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
As-68			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
As-69	F		1.00E+00	1.40E-10	9.42E-11	4.27E-11	2.66E-11	1.60E-11	1.35E-11	1.64E-11	
As-69	M		1.00E+00	2.01E-10	1.34E-10	6.14E-11	3.88E-11	2.45E-11	2.07E-11	2.47E-11	
As-69	S		1.00E+00	2.07E-10	1.38E-10	6.34E-11	4.02E-11	2.55E-11	2.15E-11	2.57E-11	
As-70	F		1.00E+00	4.18E-10	3.25E-10	1.59E-10	9.68E-11	5.71E-11	4.63E-11	5.70E-11	
As-70	M		1.00E+00	5.85E-10	4.47E-10	2.19E-10	1.36E-10	8.50E-11	6.91E-11	8.34E-11	
As-70	S		1.00E+00	6.04E-10	4.60E-10	2.25E-10	1.40E-10	8.81E-11	7.16E-11	8.64E-11	
As-71	F		1.00E+00	1.43E-09	1.19E-09	5.75E-10	3.57E-10	2.02E-10	1.67E-10	2.05E-10	
As-71	M		1.00E+00	2.21E-09	1.92E-09	1.01E-09	6.77E-10	4.92E-10	3.94E-10	4.54E-10	
As-71	S		1.00E+00	2.30E-09	2.01E-09	1.06E-09	7.18E-10	4.64E-10	3.71E-10	4.39E-10	
As-72	F		1.00E+00	4.66E-09	4.06E-09	1.88E-09	1.15E-09	6.28E-10	5.17E-10	6.46E-10	
As-72	M		1.00E+00	5.90E-09	5.74E-09	2.77E-09	1.76E-09	1.10E-09	9.12E-10	1.09E-09	
As-72	S		1.00E+00	6.05E-09	5.93E-09	2.87E-09	1.83E-09	1.15E-09	9.58E-10	1.14E-09	
As-73	F		1.00E+00	9.65E-10	6.72E-10	2.97E-10	1.80E-10	9.60E-11	8.01E-11	1.01E-10	
As-73	M		1.00E+00	5.35E-09	3.98E-09	2.34E-09	1.53E-09	1.22E-09	1.04E-09	1.16E-09	
As-73	S		1.00E+00	6.93E-09	5.23E-09	3.08E-09	2.01E-09	1.60E-09	1.36E-09	1.52E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
As-74	F		1.00E+00	4.59E-09	3.45E-09	1.63E-09	1.01E-09	5.67E-10	4.72E-10	5.83E-10	
As-74	M		1.00E+00	1.06E-08	8.33E-09	4.66E-09	3.23E-09	2.61E-09	2.13E-09	2.38E-09	
As-74	S		1.00E+00	1.19E-08	9.48E-09	5.36E-09	3.74E-09	3.05E-09	2.49E-09	2.78E-09	
As-76	F		1.00E+00	3.41E-09	2.93E-09	1.29E-09	7.84E-10	4.10E-10	3.42E-10	4.32E-10	
As-76	M		1.00E+00	4.60E-09	4.53E-09	2.13E-09	1.37E-09	8.66E-10	7.29E-10	8.62E-10	
As-76	S		1.00E+00	4.74E-09	4.71E-09	2.23E-09	1.44E-09	9.19E-10	7.73E-10	9.12E-10	
As-77	F		1.00E+00	1.12E-09	9.06E-10	3.40E-10	2.42E-10	1.28E-10	1.09E-10	1.35E-10	
As-77	M		1.00E+00	2.14E-09	1.69E-09	8.87E-10	6.20E-10	4.94E-10	3.92E-10	4.44E-10	
As-77	S		1.00E+00	2.02E-09	1.79E-09	9.52E-10	6.69E-10	5.40E-10	4.29E-10	4.83E-10	
As-78	F		1.00E+00	4.89E-10	3.58E-10	1.63E-10	9.93E-11	5.69E-11	4.71E-11	5.83E-11	
As-78	M		1.00E+00	7.59E-10	5.59E-10	2.60E-10	1.63E-10	1.03E-10	8.59E-11	1.03E-10	
As-78	S		1.00E+00	7.89E-10	5.82E-10	2.70E-10	1.71E-10	1.08E-10	9.02E-11	1.08E-10	
As-79			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-204			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-205	F		1.00E+00	1.27E-09	9.14E-10	5.22E-10	3.66E-10	2.75E-10	2.21E-10	2.52E-10	
At-205	M		1.00E+00	2.55E-09	1.87E-09	1.22E-09	8.85E-10	8.36E-10	6.73E-10	7.29E-10	
At-205	S		1.00E+00	2.72E-09	2.00E-09	1.30E-09	9.49E-10	8.98E-10	7.23E-10	7.83E-10	
At-206	F		1.00E+00	3.36E-10	2.44E-10	1.24E-10	7.90E-11	5.42E-11	4.43E-11	5.20E-11	
At-206	M		1.00E+00	9.42E-10	6.77E-10	4.18E-10	2.94E-10	2.59E-10	2.13E-10	2.33E-10	
At-206	S		1.00E+00	1.04E-09	7.53E-10	4.67E-10	3.29E-10	2.91E-10	2.39E-10	2.62E-10	
At-207	F		1.00E+00	2.22E-09	1.57E-09	8.32E-10	5.51E-10	4.14E-10	3.40E-10	3.89E-10	
At-207	M		1.00E+00	8.03E-09	5.82E-09	3.75E-09	2.69E-09	2.48E-09	2.03E-09	2.20E-09	
At-207	S		1.00E+00	8.72E-09	6.33E-09	4.10E-09	2.94E-09	2.72E-09	2.22E-09	2.41E-09	
At-208	F		1.00E+00	5.50E-10	4.24E-10	2.15E-10	1.32E-10	8.33E-11	6.75E-11	8.14E-11	
At-208	M		1.00E+00	2.02E-09	1.54E-09	9.09E-10	5.23E-10	4.51E-10	3.73E-10	4.18E-10	
At-208	S		1.00E+00	3.07E-09	2.47E-09	1.25E-09	8.31E-10	6.93E-10	5.91E-10	6.56E-10	
At-209	F		1.00E+00	2.52E-09	1.80E-09	8.90E-10	5.57E-10	3.64E-10	3.00E-10	3.57E-10	
At-209	M		1.00E+00	1.03E-08	7.45E-09	4.75E-09	3.37E-09	3.05E-09	2.51E-09	2.73E-09	
At-209	S		1.00E+00	1.14E-08	8.24E-09	5.27E-09	3.74E-09	3.39E-09	2.79E-09	3.04E-09	
At-210	F		1.00E+00	4.19E-09	2.98E-09	1.38E-09	8.24E-10	4.62E-10	3.82E-10	4.77E-10	
At-210	M		1.00E+00	3.41E-08	2.56E-08	1.58E-08	1.09E-08	9.49E-09	7.87E-09	8.63E-09	
At-210	S		1.00E+00	4.61E-08	3.54E-08	2.19E-08	1.49E-08	1.28E-08	1.06E-08	1.17E-08	
At-211	F		1.00E+00	1.45E-07	9.78E-08	4.33E-08	2.86E-08	1.76E-08	1.57E-08	1.85E-08	
At-211	M		1.00E+00	5.18E-07	3.75E-07	1.94E-07	1.43E-07	1.34E-07	1.08E-07	1.18E-07	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
At-211	S		1.00E+00	5.60E-07	4.06E-07	2.13E-07	1.57E-07	1.48E-07	1.19E-07	1.30E-07	
At-211+D	S			5.60E-07	4.06E-07	2.13E-07	1.57E-07	1.48E-07	1.19E-07	1.30E-07	
At-211+E	S			5.60E-07	4.06E-07	2.13E-07	1.57E-07	1.48E-07	1.19E-07	1.30E-07	
At-215			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-216			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-217			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-218			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-219			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-220			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-186	F		2.00E-01	1.26E-10	8.96E-11	4.21E-11	2.62E-11	1.58E-11	1.32E-11	1.60E-11	
Au-186	M		2.00E-01	1.76E-10	1.23E-10	5.85E-11	3.72E-11	2.36E-11	1.97E-11	2.35E-11	
Au-186	S		2.00E-01	1.82E-10	1.27E-10	6.04E-11	3.84E-11	2.45E-11	2.04E-11	2.43E-11	
Au-187			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-190	F		2.00E-01	1.46E-10	1.15E-10	5.76E-11	3.51E-11	2.08E-11	1.68E-11	2.06E-11	
Au-190	M		2.00E-01	1.97E-10	1.50E-10	7.51E-11	4.67E-11	2.88E-11	2.32E-11	2.81E-11	
Au-190	S		2.00E-01	2.02E-10	1.54E-10	7.70E-11	4.79E-11	2.97E-11	2.39E-11	2.90E-11	
Au-191	F		2.00E-01	2.41E-10	1.88E-10	9.19E-11	5.63E-11	3.25E-11	2.65E-11	3.27E-11	
Au-191	M		2.00E-01	4.18E-10	3.18E-10	1.65E-10	1.08E-10	7.58E-11	6.09E-11	7.11E-11	
Au-191	S		2.00E-01	4.38E-10	3.33E-10	1.73E-10	1.14E-10	8.09E-11	6.49E-11	7.56E-11	
Au-192	F		2.00E-01	5.48E-10	4.55E-10	2.34E-10	1.43E-10	8.26E-11	6.64E-11	8.19E-11	
Au-192	M		2.00E-01	7.26E-10	5.89E-10	3.03E-10	1.90E-10	1.15E-10	9.19E-11	1.12E-10	
Au-192	S		2.00E-01	7.46E-10	6.04E-10	3.10E-10	1.95E-10	1.18E-10	9.47E-11	1.15E-10	
Au-193	F		2.00E-01	3.52E-10	2.68E-10	1.25E-10	7.63E-11	4.19E-11	3.45E-11	4.32E-11	
Au-193	M		2.00E-01	6.80E-10	5.10E-10	2.60E-10	1.73E-10	1.22E-10	9.84E-11	1.15E-10	
Au-193	S		2.00E-01	7.18E-10	5.38E-10	2.75E-10	1.84E-10	1.32E-10	1.06E-10	1.23E-10	
Au-193m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-194	F		2.00E-01	1.12E-09	9.25E-10	4.75E-10	2.93E-10	1.70E-10	1.38E-10	1.69E-10	
Au-194	M		2.00E-01	1.62E-09	1.32E-09	6.87E-10	4.41E-10	2.79E-10	2.24E-10	2.68E-10	
Au-194	S		2.00E-01	1.68E-09	1.36E-09	7.12E-10	4.59E-10	2.92E-10	2.34E-10	2.79E-10	
Au-195	F		2.00E-01	7.29E-10	5.42E-10	2.49E-10	1.51E-10	8.23E-11	6.74E-11	8.49E-11	
Au-195	M		2.00E-01	5.35E-09	4.19E-09	2.44E-09	1.67E-09	1.39E-09	1.12E-09	1.25E-09	
Au-195	S		2.00E-01	8.29E-09	6.77E-09	4.01E-09	2.68E-09	2.18E-09	1.79E-09	2.00E-09	
Au-195m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-196	F		2.00E-01	9.62E-10	7.73E-10	3.88E-10	2.43E-10	1.40E-10	1.15E-10	1.40E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Au-196	M		2.00E-01	1.95E-09	1.54E-09	8.39E-10	5.63E-10	4.11E-10	3.28E-10	3.78E-10	
Au-196	S		2.00E-01	2.09E-09	1.65E-09	9.04E-10	6.09E-10	4.50E-10	3.14E-10	3.75E-10	
Au-196m	F		2.00E-01	1.19E-09	8.45E-10	3.72E-10	2.34E-10	1.28E-10	1.10E-10	1.36E-10	
Au-196m	M		2.00E-01	2.77E-09	2.01E-09	1.04E-09	7.21E-10	4.93E-10	3.91E-10	4.59E-10	
Au-196m	S		2.00E-01	2.95E-09	2.14E-09	1.12E-09	7.77E-10	5.41E-10	4.29E-10	5.00E-10	
Au-198	F		2.00E-01	2.33E-09	1.69E-09	7.56E-10	4.70E-10	2.50E-10	2.09E-10	2.63E-10	
Au-198	M		2.00E-01	5.00E-09	4.07E-09	1.89E-09	1.29E-09	9.69E-10	7.79E-10	8.97E-10	
Au-198	S		2.00E-01	5.37E-09	4.36E-09	2.05E-09	1.41E-09	1.07E-09	8.57E-10	9.84E-10	
Au-198m	F		2.00E-01	3.15E-09	2.29E-09	1.04E-09	6.51E-10	3.54E-10	2.99E-10	3.71E-10	
Au-198m	M		2.00E-01	9.30E-09	6.19E-09	3.45E-09	2.48E-09	2.09E-09	1.65E-09	1.85E-09	
Au-198m	S		2.00E-01	9.03E-09	6.78E-09	3.80E-09	2.74E-09	2.33E-09	1.84E-09	2.05E-09	
Au-199	F		2.00E-01	1.15E-09	8.15E-10	3.56E-10	2.23E-10	1.18E-10	1.01E-10	1.27E-10	
Au-199	M		2.00E-01	3.50E-09	2.60E-09	1.47E-09	1.07E-09	9.21E-10	7.26E-10	8.06E-10	
Au-199	S		2.00E-01	3.84E-09	2.86E-09	1.63E-09	1.18E-09	1.03E-09	8.11E-10	8.99E-10	
Au-200	F		2.00E-01	1.88E-10	1.20E-10	5.20E-11	3.27E-11	1.95E-11	1.65E-11	2.01E-11	
Au-200	M		2.00E-01	3.19E-10	2.04E-10	9.25E-11	5.98E-11	3.96E-11	3.32E-11	3.93E-11	
Au-200	S		2.00E-01	3.33E-10	2.13E-10	9.70E-11	6.28E-11	4.18E-11	3.50E-11	4.14E-11	
Au-200m	F		2.00E-01	2.59E-09	2.02E-09	9.75E-10	6.04E-10	3.38E-10	2.77E-10	3.43E-10	
Au-200m	M		2.00E-01	4.56E-09	3.50E-09	1.78E-09	1.17E-09	7.90E-10	6.36E-10	7.48E-10	
Au-200m	S		2.00E-01	4.78E-09	3.66E-09	1.87E-09	1.23E-09	8.42E-10	6.76E-10	7.95E-10	
Au-201	F		2.00E-01	8.98E-11	5.74E-11	2.48E-11	1.62E-11	1.01E-11	8.73E-12	1.04E-11	
Au-201	M		2.00E-01	1.48E-10	9.55E-11	4.29E-11	2.87E-11	1.94E-11	1.65E-11	1.93E-11	
Au-201	S		2.00E-01	1.54E-10	9.97E-11	4.49E-11	3.00E-11	2.05E-11	1.74E-11	2.03E-11	
Au-202			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ba-124	F		6.00E-01	1.64E-10	1.10E-10	4.99E-11	3.04E-11	1.80E-11	1.60E-11	1.92E-11	
Ba-124	M		2.00E-01	2.24E-10	1.46E-10	6.59E-11	4.13E-11	2.57E-11	2.19E-11	2.63E-11	
Ba-124	S		2.00E-02	2.31E-10	1.50E-10	6.77E-11	4.25E-11	2.66E-11	2.25E-11	2.71E-11	
Ba-126	F		6.00E-01	6.83E-10	5.46E-10	2.57E-10	1.44E-10	7.51E-11	7.85E-11	9.32E-11	
Ba-126	M		2.00E-01	1.05E-09	7.17E-10	3.35E-10	2.07E-10	1.27E-10	1.07E-10	1.29E-10	
Ba-126	S		2.00E-02	1.10E-09	7.38E-10	3.44E-10	2.15E-10	1.33E-10	1.10E-10	1.33E-10	
Ba-127	F		6.00E-01	7.21E-11	5.15E-11	2.39E-11	1.47E-11	8.78E-12	7.81E-12	9.34E-12	
Ba-127	M		2.00E-01	1.01E-10	6.86E-11	3.19E-11	2.03E-11	1.29E-11	1.09E-11	1.30E-11	
Ba-127	S		2.00E-02	1.04E-10	7.05E-11	3.28E-11	2.10E-11	1.34E-11	1.12E-11	1.34E-11	
Ba-128	F		6.00E-01	6.02E-09	5.54E-09	2.56E-09	1.40E-09	7.53E-10	7.83E-10	9.26E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ba-128	M		2.00E-01	1.10E-08	8.06E-09	3.84E-09	2.44E-09	1.51E-09	1.31E-09	1.56E-09	
Ba-128	S		2.00E-02	1.24E-08	8.53E-09	4.06E-09	2.62E-09	1.64E-09	1.39E-09	1.65E-09	
Ba-129	F		6.00E-01	1.50E-10	1.28E-10	6.27E-11	3.64E-11	1.97E-11	1.94E-11	2.30E-11	
Ba-129	M		2.00E-01	2.30E-10	1.69E-10	8.31E-11	5.29E-11	3.36E-11	2.77E-11	3.31E-11	
Ba-129	S		2.00E-02	2.43E-10	1.75E-10	8.59E-11	5.50E-11	3.54E-11	2.87E-11	3.44E-11	
Ba-129m	F		6.00E-01	2.59E-10	2.33E-10	1.22E-10	7.25E-11	4.13E-11	3.70E-11	4.43E-11	
Ba-129m	M		2.00E-01	3.40E-10	2.79E-10	1.45E-10	9.07E-11	5.60E-11	4.50E-11	5.44E-11	
Ba-129m	S		2.00E-02	3.54E-10	2.85E-10	1.49E-10	9.33E-11	5.80E-11	4.61E-11	5.57E-11	
Ba-131	F		6.00E-01	2.16E-09	1.47E-09	7.26E-10	4.81E-10	3.11E-10	2.20E-10	2.74E-10	
Ba-131	M		2.00E-01	4.15E-09	3.14E-09	1.58E-09	1.14E-09	9.60E-10	7.54E-10	8.46E-10	
Ba-131	S		2.00E-02	3.98E-09	3.01E-09	1.77E-09	1.27E-09	1.08E-09	8.56E-10	9.52E-10	
Ba-131m	F		6.00E-01	3.06E-11	2.11E-11	1.01E-11	6.81E-12	4.76E-12	4.05E-12	4.67E-12	
Ba-131m	M		2.00E-01	4.86E-11	3.37E-11	1.70E-11	1.18E-11	9.04E-12	7.48E-12	8.48E-12	
Ba-131m	S		2.00E-02	5.07E-11	3.52E-11	1.78E-11	1.24E-11	9.55E-12	7.89E-12	8.94E-12	
Ba-133	F		6.00E-01	1.13E-08	4.53E-09	2.66E-09	3.70E-09	5.95E-09	1.52E-09	2.06E-09	
Ba-133	M		2.00E-01	1.49E-08	1.05E-08	6.53E-09	5.19E-09	5.47E-09	3.20E-09	3.68E-09	
Ba-133	S		2.00E-02	3.24E-08	2.97E-08	2.01E-08	1.36E-08	1.15E-08	1.04E-08	1.12E-08	
Ba-133m	F		6.00E-01	1.41E-09	1.09E-09	5.02E-10	3.22E-10	1.51E-10	1.53E-10	1.85E-10	
Ba-133m	M		2.00E-01	3.09E-09	2.26E-09	1.04E-09	7.08E-10	5.37E-10	4.33E-10	4.98E-10	
Ba-133m	S		2.00E-02	3.14E-09	2.43E-09	1.12E-09	7.76E-10	5.95E-10	4.72E-10	5.43E-10	
Ba-135m	F		6.00E-01	1.09E-09	1.00E-09	4.58E-10	2.51E-10	1.16E-10	1.42E-10	1.66E-10	
Ba-135m	M		2.00E-01	2.43E-09	1.78E-09	8.89E-10	5.45E-10	4.12E-10	3.33E-10	3.86E-10	
Ba-135m	S		2.00E-02	2.72E-09	1.90E-09	8.59E-10	5.94E-10	4.55E-10	3.60E-10	4.16E-10	
Ba-137m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ba-139	F		6.00E-01	3.30E-10	2.41E-10	1.07E-10	6.04E-11	3.13E-11	3.41E-11	4.03E-11	
Ba-139	M		2.00E-01	5.50E-10	3.52E-10	1.59E-10	1.02E-10	6.63E-11	5.66E-11	6.70E-11	
Ba-139	S		2.00E-02	5.77E-10	3.65E-10	1.65E-10	1.07E-10	7.03E-11	5.90E-11	7.00E-11	
Ba-140	F		6.00E-01	1.35E-08	7.88E-09	3.59E-09	2.43E-09	1.59E-09	1.04E-09	1.33E-09	
Ba-140	M		2.00E-01	2.69E-08	1.97E-08	1.10E-08	7.70E-09	6.29E-09	5.09E-09	5.70E-09	
Ba-140	S		2.00E-02	2.91E-08	2.19E-08	1.25E-08	8.69E-09	7.17E-09	5.86E-09	6.52E-09	
Ba-141	F		6.00E-01	2.00E-10	1.49E-10	6.72E-11	3.93E-11	2.15E-11	2.16E-11	2.57E-11	
Ba-141	M		2.00E-01	3.18E-10	2.12E-10	9.68E-11	6.18E-11	3.93E-11	3.35E-11	3.98E-11	
Ba-141	S		2.00E-02	3.36E-10	2.20E-10	1.01E-10	6.47E-11	4.15E-11	3.50E-11	4.17E-11	
Ba-142	F		6.00E-01	1.24E-10	9.41E-11	4.44E-11	2.69E-11	1.55E-11	1.45E-11	1.72E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ba-142	M		2.00E-01	1.81E-10	1.26E-10	5.96E-11	3.83E-11	2.44E-11	2.06E-11	2.45E-11	
Ba-142	S		2.00E-02	1.88E-10	1.30E-10	6.13E-11	3.96E-11	2.54E-11	2.13E-11	2.53E-11	
Be-10	F		2.00E-02	3.69E-08	3.14E-08	1.71E-08	1.01E-08	7.04E-09	6.57E-09	7.43E-09	
Be-10	M		2.00E-02	4.10E-08	3.41E-08	2.03E-08	1.34E-08	1.11E-08	9.60E-09	1.05E-08	
Be-10	S		2.00E-02	9.76E-08	9.04E-08	6.05E-08	4.12E-08	3.62E-08	3.47E-08	3.66E-08	
Be-7	F		2.00E-02	2.25E-10	1.84E-10	9.91E-11	6.71E-11	4.44E-11	3.80E-11	4.38E-11	
Be-7	M		2.00E-02	2.49E-10	2.10E-10	1.25E-10	8.34E-11	6.23E-11	5.08E-11	5.77E-11	
Be-7	S		2.00E-02	2.81E-10	2.40E-10	1.45E-10	9.73E-11	6.83E-11	5.58E-11	6.40E-11	
Bi-197			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-200	F		1.00E-01	2.06E-10	1.60E-10	8.00E-11	4.91E-11	2.92E-11	2.35E-11	2.89E-11	
Bi-200	M		1.00E-01	2.80E-10	2.13E-10	1.08E-10	6.80E-11	4.41E-11	3.54E-11	4.23E-11	
Bi-200	S		1.00E-01	2.89E-10	2.19E-10	1.11E-10	7.01E-11	4.58E-11	3.67E-11	4.39E-11	
Bi-201	F		1.00E-01	4.24E-10	3.36E-10	1.70E-10	1.04E-10	6.06E-11	4.86E-11	5.99E-11	
Bi-201	M		1.00E-01	5.68E-10	4.38E-10	2.24E-10	1.41E-10	9.04E-11	7.22E-11	8.67E-11	
Bi-201	S		1.00E-01	5.84E-10	4.50E-10	2.30E-10	1.46E-10	9.38E-11	7.49E-11	8.98E-11	
Bi-202	F		1.00E-01	3.86E-10	3.14E-10	1.63E-10	9.94E-11	5.89E-11	4.70E-11	5.77E-11	
Bi-202	M		1.00E-01	4.83E-10	3.84E-10	1.98E-10	1.23E-10	7.62E-11	6.06E-11	7.35E-11	
Bi-202	S		1.00E-01	4.94E-10	3.92E-10	2.02E-10	1.26E-10	7.81E-11	6.21E-11	7.53E-11	
Bi-203	F		1.00E-01	1.62E-09	1.32E-09	6.78E-10	4.18E-10	2.42E-10	1.94E-10	2.39E-10	
Bi-203	M		1.00E-01	2.09E-09	1.67E-09	8.65E-10	5.51E-10	3.45E-10	2.75E-10	3.31E-10	
Bi-203	S		1.00E-01	2.14E-09	1.71E-09	8.87E-10	5.66E-10	3.57E-10	2.84E-10	3.42E-10	
Bi-204	F		1.00E-01	1.89E-09	1.56E-09	8.10E-10	4.99E-10	2.91E-10	2.33E-10	2.86E-10	
Bi-204	M		1.00E-01	2.35E-09	1.90E-09	9.90E-10	6.26E-10	3.85E-10	3.06E-10	3.71E-10	
Bi-204	S		1.00E-01	2.40E-09	1.94E-09	1.01E-09	6.40E-10	3.96E-10	3.15E-10	3.81E-10	
Bi-205	F		1.00E-01	3.05E-09	2.47E-09	1.29E-09	8.10E-10	4.77E-10	3.86E-10	4.70E-10	
Bi-205	M		1.00E-01	5.58E-09	4.53E-09	2.53E-09	1.66E-09	1.19E-09	9.54E-10	1.10E-09	
Bi-205	S		1.00E-01	6.08E-09	4.94E-09	2.79E-09	1.83E-09	1.33E-09	1.07E-09	1.23E-09	
Bi-206	F		1.00E-01	6.26E-09	4.99E-09	2.56E-09	1.60E-09	9.34E-10	7.54E-10	9.24E-10	
Bi-206	M		1.00E-01	1.04E-08	8.25E-09	4.51E-09	3.00E-09	2.16E-09	1.72E-09	1.99E-09	
Bi-206	S		1.00E-01	1.10E-08	8.72E-09	4.79E-09	3.21E-09	2.34E-09	1.86E-09	2.15E-09	
Bi-207	F		1.00E-01	4.32E-09	3.34E-09	1.68E-09	1.05E-09	6.09E-10	4.94E-10	6.07E-10	
Bi-207	M		1.00E-01	2.38E-08	2.04E-08	1.25E-08	8.38E-09	6.62E-09	5.68E-09	6.29E-09	
Bi-207	S		1.00E-01	9.61E-08	9.35E-08	6.63E-08	4.61E-08	4.03E-08	3.88E-08	4.08E-08	
Bi-208	F		1.00E-01	3.95E-09	3.25E-09	1.71E-09	1.10E-09	6.51E-10	5.31E-10	6.42E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Bi-208	M		1.00E-01	1.77E-08	1.57E-08	9.84E-09	6.68E-09	5.34E-09	4.48E-09	4.97E-09	
Bi-208	S		1.00E-01	8.15E-08	8.10E-08	5.95E-08	4.29E-08	3.83E-08	3.67E-08	3.83E-08	
Bi-210	F		1.00E-01	1.06E-08	6.88E-09	3.24E-09	2.07E-09	1.28E-09	1.07E-09	1.29E-09	
Bi-210	M		1.00E-01	3.86E-07	2.95E-07	1.85E-07	1.28E-07	1.12E-07	9.33E-08	1.02E-07	
Bi-210	S		1.00E-01	5.61E-07	4.38E-07	2.73E-07	1.86E-07	1.59E-07	1.33E-07	1.46E-07	
Bi-210m	F		1.00E-01	4.04E-07	2.59E-07	1.27E-07	8.32E-08	5.56E-08	4.62E-08	5.43E-08	
Bi-210m	M		1.00E-01	1.46E-05	1.12E-05	7.04E-06	4.77E-06	4.09E-06	3.43E-06	3.77E-06	
Bi-210m	S		1.00E-01	3.46E-05	3.02E-05	1.96E-05	1.28E-05	1.08E-05	9.89E-06	1.07E-05	
Bi-210m+D	S			3.46E-05	3.02E-05	1.96E-05	1.28E-05	1.08E-05	9.89E-06	1.07E-05	
Bi-210m+E	S			3.46E-05	3.02E-05	1.96E-05	1.28E-05	1.08E-05	9.89E-06	1.07E-05	
Bi-211			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-212	F		1.00E-01	6.51E-08	4.52E-08	2.11E-08	1.48E-08	1.04E-08	9.03E-09	1.03E-08	
Bi-212	M		1.00E-01	1.55E-07	1.11E-07	6.05E-08	4.43E-08	3.77E-08	3.08E-08	3.41E-08	
Bi-212	S		1.00E-01	1.65E-07	1.18E-07	6.49E-08	4.75E-08	4.07E-08	3.32E-08	3.67E-08	
Bi-212+D	S			1.65E-07	1.18E-07	6.49E-08	4.75E-08	4.07E-08	3.32E-08	3.66E-08	
Bi-212+E	S			1.65E-07	1.18E-07	6.49E-08	4.75E-08	4.07E-08	3.32E-08	3.66E-08	
Bi-212n			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-213	F		1.00E-01	7.70E-08	5.34E-08	2.46E-08	1.73E-08	1.20E-08	1.05E-08	1.20E-08	
Bi-213	M		1.00E-01	1.62E-07	1.16E-07	6.03E-08	4.40E-08	3.63E-08	2.98E-08	3.32E-08	
Bi-213	S		1.00E-01	1.71E-07	1.22E-07	6.43E-08	4.70E-08	3.89E-08	3.20E-08	3.55E-08	
Bi-213+D	S			1.71E-07	1.22E-07	6.43E-08	4.70E-08	3.89E-08	3.20E-08	3.55E-08	
Bi-213+E	S			1.71E-07	1.22E-07	6.43E-08	4.70E-08	3.89E-08	3.20E-08	3.55E-08	
Bi-214	F		1.00E-01	5.14E-08	3.57E-08	1.67E-08	1.17E-08	8.35E-09	7.23E-09	8.24E-09	
Bi-214	M		1.00E-01	8.83E-08	6.23E-08	3.10E-08	2.23E-08	1.74E-08	1.46E-08	1.63E-08	
Bi-214	S		1.00E-01	9.24E-08	6.53E-08	3.26E-08	2.35E-08	1.84E-08	1.54E-08	1.72E-08	
Bi-214+D	S			9.24E-08	6.53E-08	3.26E-08	2.35E-08	1.84E-08	1.54E-08	1.73E-08	
Bi-214+E	S			9.24E-08	6.53E-08	3.26E-08	2.35E-08	1.84E-08	1.54E-08	1.73E-08	
Bi-215			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-215+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-215+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-216			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bk-245	F		5.00E-03	4.66E-09	3.41E-09	1.85E-09	1.22E-09	6.74E-10	5.91E-10	7.08E-10	
Bk-245	M		5.00E-03	8.99E-09	6.67E-09	4.05E-09	2.94E-09	2.62E-09	2.11E-09	2.31E-09	
Bk-245	S		5.00E-03	9.54E-09	7.06E-09	4.29E-09	3.14E-09	2.84E-09	2.26E-09	2.48E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Bk-246	F		5.00E-03	1.99E-09	1.64E-09	6.44E-10	4.46E-10	3.06E-10	2.79E-10	3.18E-10	
Bk-246	M		5.00E-03	2.16E-09	1.69E-09	9.01E-10	5.79E-10	3.85E-10	2.54E-10	3.20E-10	
Bk-246	S		5.00E-03	2.11E-09	1.63E-09	8.48E-10	5.39E-10	3.46E-10	2.80E-10	3.34E-10	
Bk-247	F		5.00E-03	4.47E-04	4.26E-04	2.92E-04	2.15E-04	1.75E-04	1.67E-04	1.77E-04	
Bk-247	M		5.00E-03	1.55E-04	1.50E-04	1.10E-04	7.93E-05	7.16E-05	6.93E-05	7.22E-05	
Bk-247	S		5.00E-03	5.59E-05	4.89E-05	3.38E-05	2.35E-05	2.12E-05	1.98E-05	2.09E-05	
Bk-248m	F		5.00E-03	1.53E-07	1.33E-07	7.92E-08	4.83E-08	2.60E-08	2.34E-08	2.81E-08	
Bk-248m	M		5.00E-03	7.87E-08	6.66E-08	4.26E-08	2.76E-08	2.08E-08	1.79E-08	2.00E-08	
Bk-248m	S		5.00E-03	6.42E-08	5.17E-08	3.24E-08	2.22E-08	1.92E-08	1.60E-08	1.75E-08	
Bk-249	F		5.00E-03	1.04E-06	1.00E-06	6.96E-07	5.19E-07	4.35E-07	4.18E-07	4.40E-07	
Bk-249	M		5.00E-03	3.35E-07	3.35E-07	2.50E-07	1.82E-07	1.69E-07	1.66E-07	1.72E-07	
Bk-249	S		5.00E-03	8.78E-08	8.15E-08	5.92E-08	4.17E-08	3.85E-08	3.77E-08	3.92E-08	
Bk-250	F		5.00E-03	8.22E-09	7.55E-09	4.70E-09	2.99E-09	2.18E-09	2.13E-09	2.33E-09	
Bk-250	M		5.00E-03	3.44E-09	3.08E-09	2.01E-09	1.29E-09	1.06E-09	1.02E-09	1.09E-09	
Bk-250	S		5.00E-03	2.30E-09	1.86E-09	9.60E-10	6.38E-10	5.36E-10	4.78E-10	5.23E-10	
Bk-251	F		5.00E-03	2.15E-10	1.57E-10	5.84E-11	4.06E-11	3.09E-11	2.79E-11	3.15E-11	
Bk-251	M		5.00E-03	3.08E-10	2.11E-10	1.04E-10	7.08E-11	5.24E-11	4.48E-11	5.09E-11	
Bk-251	S		5.00E-03	3.11E-10	2.09E-10	1.00E-10	6.78E-11	4.93E-11	4.12E-11	4.74E-11	
Br-72			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-73			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-74	F		1.00E+00	2.51E-10	1.82E-10	8.66E-11	5.32E-11	3.16E-11	2.59E-11	3.17E-11	
Br-74	M		1.00E+00	3.55E-10	2.50E-10	1.19E-10	7.44E-11	4.63E-11	3.80E-11	4.60E-11	
Br-74	S		1.00E+00	3.66E-10	2.58E-10	1.23E-10	7.68E-11	4.80E-11	3.94E-11	4.75E-11	
Br-74m	F		1.00E+00	4.15E-10	2.97E-10	1.42E-10	8.58E-11	5.06E-11	4.12E-11	5.08E-11	
Br-74m	M		1.00E+00	6.07E-10	4.21E-10	2.02E-10	1.25E-10	7.83E-11	6.42E-11	7.76E-11	
Br-74m	S		1.00E+00	6.28E-10	4.35E-10	2.08E-10	1.29E-10	8.14E-11	6.68E-11	8.06E-11	
Br-75	F		1.00E+00	2.89E-10	2.07E-10	9.79E-11	5.94E-11	3.51E-11	2.88E-11	3.54E-11	
Br-75	M		1.00E+00	4.50E-10	3.15E-10	1.53E-10	9.73E-11	6.50E-11	5.32E-11	6.30E-11	
Br-75	S		1.00E+00	4.68E-10	3.27E-10	1.60E-10	1.02E-10	6.85E-11	5.61E-11	6.63E-11	
Br-76	F		1.00E+00	2.28E-09	1.76E-09	8.81E-10	5.31E-10	3.09E-10	2.52E-10	3.11E-10	
Br-76	M		1.00E+00	3.03E-09	2.32E-09	1.21E-09	7.61E-10	5.03E-10	4.14E-10	4.89E-10	
Br-76	S		1.00E+00	3.12E-09	2.38E-09	1.24E-09	7.87E-10	5.26E-10	4.33E-10	5.09E-10	
Br-76m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-77	F		1.00E+00	5.45E-10	4.51E-10	2.28E-10	1.34E-10	7.91E-11	6.36E-11	7.85E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Br-77	M		1.00E+00	6.44E-10	5.28E-10	2.76E-10	1.68E-10	1.10E-10	8.64E-11	1.04E-10	
Br-77	S		1.00E+00	6.57E-10	5.38E-10	2.82E-10	1.73E-10	1.13E-10	8.93E-11	1.07E-10	
Br-77m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-78			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-80	F		1.00E+00	8.95E-11	5.63E-11	2.42E-11	1.55E-11	9.48E-12	8.21E-12	9.87E-12	
Br-80	M		1.00E+00	1.38E-10	8.74E-11	3.86E-11	2.51E-11	1.63E-11	1.40E-11	1.66E-11	
Br-80	S		1.00E+00	1.43E-10	9.09E-11	4.02E-11	2.62E-11	1.71E-11	1.46E-11	1.73E-11	
Br-80m	F		1.00E+00	4.53E-10	3.00E-10	1.31E-10	7.70E-11	4.26E-11	3.51E-11	4.45E-11	
Br-80m	M		1.00E+00	8.43E-10	5.71E-10	2.84E-10	1.84E-10	1.17E-10	9.72E-11	1.16E-10	
Br-80m	S		1.00E+00	8.86E-10	6.01E-10	3.01E-10	1.96E-10	1.27E-10	1.05E-10	1.25E-10	
Br-82	F		1.00E+00	2.77E-09	2.24E-09	1.16E-09	7.08E-10	4.24E-10	3.50E-10	4.24E-10	
Br-82	M		1.00E+00	3.82E-09	3.05E-09	1.68E-09	1.10E-09	7.94E-10	6.35E-10	7.35E-10	
Br-82	S		1.00E+00	3.95E-09	3.15E-09	1.74E-09	1.14E-09	8.38E-10	6.69E-10	7.72E-10	
Br-82m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-83	F		1.00E+00	1.82E-10	1.17E-10	4.99E-11	3.15E-11	1.86E-11	1.61E-11	1.96E-11	
Br-83	M		1.00E+00	3.58E-10	2.38E-10	1.16E-10	7.91E-11	5.98E-11	4.92E-11	5.63E-11	
Br-83	S		1.00E+00	3.77E-10	2.51E-10	1.23E-10	8.44E-11	6.44E-11	5.29E-11	6.04E-11	
Br-84	F		1.00E+00	2.39E-10	1.57E-10	7.12E-11	4.37E-11	2.60E-11	2.17E-11	2.66E-11	
Br-84	M		1.00E+00	3.69E-10	2.41E-10	1.10E-10	6.94E-11	4.41E-11	3.69E-11	4.43E-11	
Br-84	S		1.00E+00	3.84E-10	2.50E-10	1.15E-10	7.22E-11	4.61E-11	3.85E-11	4.62E-11	
Br-84m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-85			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
C-10			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
C-11	F		1.00E+00	1.01E-10	7.05E-11	3.25E-11	2.07E-11	1.28E-11	1.08E-11	1.30E-11	
C-11	M		2.00E-01	1.52E-10	1.05E-10	4.93E-11	3.22E-11	2.12E-11	1.77E-11	2.09E-11	
C-11	S		2.00E-02	1.58E-10	1.09E-10	5.11E-11	3.35E-11	2.21E-11	1.85E-11	2.18E-11	
C-11	G	Monoxide	1.00E+00	1.01E-11	6.71E-12	3.56E-12	2.22E-12	1.40E-12	1.18E-12	1.40E-12	
C-11	G	Dioxide	1.00E+00	1.85E-11	1.22E-11	6.50E-12	4.06E-12	2.55E-12	2.16E-12	2.56E-12	
C-14	F		1.00E+00	6.04E-10	6.77E-10	3.65E-10	2.94E-10	1.94E-10	2.03E-10	2.18E-10	
C-14	M		2.00E-01	8.21E-09	6.50E-09	3.98E-09	2.82E-09	2.48E-09	2.03E-09	2.22E-09	
C-14	S		2.00E-02	1.90E-08	1.67E-08	1.08E-08	7.29E-09	6.33E-09	5.73E-09	6.15E-09	
C-14	G	Monoxide	1.00E+00	9.18E-12	5.78E-12	2.83E-12	1.69E-12	9.88E-13	8.01E-13	9.96E-13	
C-14	G	Dioxide	1.00E+00	1.88E-11	1.91E-11	1.14E-11	8.90E-12	6.28E-12	6.24E-12	6.70E-12	
Ca-41	F		6.00E-01	7.79E-10	4.43E-10	3.11E-10	3.84E-10	3.88E-10	1.97E-10	2.29E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Ca-41	M		2.00E-01	4.86E-10	3.07E-10	2.01E-10	1.94E-10	1.88E-10	1.11E-10	1.27E-10	
Ca-41	S		2.00E-02	7.74E-10	7.03E-10	4.46E-10	2.82E-10	2.26E-10	2.12E-10	2.30E-10	
Ca-45	F		6.00E-01	5.61E-09	2.94E-09	1.41E-09	1.05E-09	7.51E-10	4.65E-10	5.85E-10	
Ca-45	M		2.00E-01	1.19E-08	8.72E-09	5.25E-09	3.83E-09	3.45E-09	2.71E-09	2.99E-09	
Ca-45	S		2.00E-02	1.46E-08	1.16E-08	7.10E-09	5.06E-09	4.51E-09	3.64E-09	3.99E-09	
Ca-47	F		6.00E-01	4.91E-09	3.61E-09	1.72E-09	1.06E-09	6.15E-10	5.60E-10	6.68E-10	
Ca-47	M		2.00E-01	1.04E-08	7.72E-09	4.19E-09	2.94E-09	2.36E-09	1.90E-09	2.14E-09	
Ca-47	S		2.00E-02	1.17E-08	8.51E-09	4.65E-09	3.27E-09	2.65E-09	2.12E-09	2.38E-09	
Ca-49			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-101			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-102			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-103			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-104	F		1.00E-01	2.68E-10	1.95E-10	9.33E-11	5.62E-11	3.19E-11	2.58E-11	3.22E-11	
Cd-104	M		1.00E-01	4.23E-10	2.99E-10	1.45E-10	9.07E-11	5.70E-11	4.64E-11	5.60E-11	
Cd-104	S		1.00E-01	4.40E-10	3.10E-10	1.51E-10	9.45E-11	5.98E-11	4.87E-11	5.86E-11	
Cd-105	F		1.00E-01	1.42E-10	1.07E-10	5.28E-11	3.21E-11	1.89E-11	1.53E-11	1.88E-11	
Cd-105	M		1.00E-01	2.00E-10	1.47E-10	7.22E-11	4.51E-11	2.82E-11	2.29E-11	2.76E-11	
Cd-105	S		1.00E-01	2.07E-10	1.51E-10	7.45E-11	4.65E-11	2.93E-11	2.37E-11	2.86E-11	
Cd-107	F		1.00E-01	2.38E-10	1.70E-10	7.66E-11	4.68E-11	2.59E-11	2.16E-11	2.70E-11	
Cd-107	M		1.00E-01	5.27E-10	3.79E-10	1.99E-10	1.35E-10	8.92E-11	8.43E-11	9.49E-11	
Cd-107	S		1.00E-01	5.59E-10	4.02E-10	2.12E-10	1.45E-10	9.77E-11	7.78E-11	9.14E-11	
Cd-109	F		1.00E-01	4.48E-08	3.68E-08	2.06E-08	1.35E-08	9.19E-09	8.13E-09	9.25E-09	
Cd-109	M		1.00E-01	3.01E-08	2.31E-08	1.40E-08	9.55E-09	7.82E-09	6.62E-09	7.31E-09	
Cd-109	S		1.00E-01	2.68E-08	2.12E-08	1.30E-08	8.92E-09	7.58E-09	6.26E-09	6.90E-09	
Cd-111m	F		1.00E-01	9.07E-11	6.37E-11	2.90E-11	1.89E-11	1.17E-11	1.01E-11	1.20E-11	
Cd-111m	M		1.00E-01	1.59E-10	1.11E-10	5.35E-11	3.66E-11	2.62E-11	2.18E-11	2.51E-11	
Cd-111m	S		1.00E-01	1.66E-10	1.17E-10	5.62E-11	3.86E-11	2.78E-11	2.31E-11	2.66E-11	
Cd-113	F		1.00E-01	2.57E-07	2.39E-07	1.72E-07	1.41E-07	1.22E-07	1.19E-07	1.24E-07	
Cd-113	M		1.00E-01	1.17E-07	9.99E-08	7.51E-08	6.01E-08	5.61E-08	5.49E-08	5.65E-08	
Cd-113	S		1.00E-01	7.72E-08	5.75E-08	4.00E-08	3.01E-08	2.67E-08	2.54E-08	2.66E-08	
Cd-113m	F		1.00E-01	3.05E-07	2.75E-07	1.81E-07	1.37E-07	1.14E-07	1.12E-07	1.17E-07	
Cd-113m	M		1.00E-01	1.43E-07	1.18E-07	8.14E-08	6.02E-08	5.39E-08	5.32E-08	5.53E-08	
Cd-113m	S		1.00E-01	1.09E-07	8.32E-08	5.48E-08	3.85E-08	3.29E-08	3.14E-08	3.33E-08	
Cd-115	F		1.00E-01	4.03E-09	2.70E-09	1.21E-09	7.69E-10	4.34E-10	3.62E-10	4.47E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Cd-115	M		1.00E-01	6.86E-09	4.87E-09	2.46E-09	1.68E-09	1.24E-09	9.95E-10	1.15E-09	
Cd-115	S		1.00E-01	7.31E-09	5.21E-09	2.65E-09	1.82E-09	1.36E-09	1.09E-09	1.25E-09	
Cd-115m	F		1.00E-01	4.52E-08	3.17E-08	1.53E-08	9.93E-09	6.36E-09	5.29E-09	6.29E-09	
Cd-115m	M		1.00E-01	3.99E-08	2.54E-08	1.39E-08	9.37E-09	7.28E-09	6.19E-09	6.95E-09	
Cd-115m	S		1.00E-01	3.89E-08	2.97E-08	1.67E-08	1.13E-08	8.92E-09	7.64E-09	8.50E-09	
Cd-117	F		1.00E-01	7.46E-10	5.27E-10	2.40E-10	1.48E-10	8.09E-11	6.73E-11	8.42E-11	
Cd-117	M		1.00E-01	1.33E-09	9.36E-10	4.54E-10	2.96E-10	1.97E-10	1.61E-10	1.90E-10	
Cd-117	S		1.00E-01	1.40E-09	9.81E-10	4.77E-10	3.12E-10	2.09E-10	1.71E-10	2.02E-10	
Cd-117m	F		1.00E-01	8.91E-10	6.80E-10	3.30E-10	2.03E-10	1.15E-10	9.45E-11	1.17E-10	
Cd-117m	M		1.00E-01	1.46E-09	1.09E-09	5.52E-10	3.61E-10	2.44E-10	1.96E-10	2.32E-10	
Cd-117m	S		1.00E-01	1.53E-09	1.13E-09	5.77E-10	3.79E-10	2.58E-10	2.08E-10	2.44E-10	
Cd-118	F		1.00E-01	4.53E-10	2.76E-10	1.17E-10	7.20E-11	4.17E-11	3.56E-11	4.39E-11	
Cd-118	M		1.00E-01	7.87E-10	4.88E-10	2.17E-10	1.39E-10	9.01E-11	7.62E-11	9.08E-11	
Cd-118	S		1.00E-01	8.23E-10	5.11E-10	2.29E-10	1.46E-10	9.54E-11	8.07E-11	9.60E-11	
Cd-119			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-119m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ce-130	F		5.00E-03	2.10E-10	1.45E-10	6.75E-11	4.12E-11	2.45E-11	2.01E-11	2.47E-11	
Ce-130	M		5.00E-03	3.27E-10	2.20E-10	1.04E-10	6.49E-11	4.12E-11	3.40E-11	4.09E-11	
Ce-130	S		5.00E-03	3.39E-10	2.28E-10	1.07E-10	6.75E-11	4.31E-11	3.55E-11	4.27E-11	
Ce-131	F		5.00E-03	8.58E-11	6.13E-11	2.90E-11	1.80E-11	1.09E-11	9.09E-12	1.10E-11	
Ce-131	M		5.00E-03	1.19E-10	8.40E-11	4.02E-11	2.55E-11	1.64E-11	1.36E-11	1.62E-11	
Ce-131	S		5.00E-03	1.23E-10	8.66E-11	4.15E-11	2.64E-11	1.70E-11	1.41E-11	1.68E-11	
Ce-132	F		5.00E-03	8.46E-10	6.24E-10	2.96E-10	1.81E-10	9.90E-11	8.08E-11	1.01E-10	
Ce-132	M		5.00E-03	1.29E-09	9.33E-10	4.47E-10	2.82E-10	1.64E-10	1.35E-10	1.65E-10	
Ce-132	S		5.00E-03	1.33E-09	9.67E-10	4.64E-10	2.93E-10	1.72E-10	1.41E-10	1.72E-10	
Ce-133	F		5.00E-03	2.57E-10	1.80E-10	8.41E-11	5.16E-11	2.98E-11	2.47E-11	3.04E-11	
Ce-133	M		5.00E-03	4.25E-10	2.93E-10	1.43E-10	9.16E-11	6.06E-11	4.98E-11	5.90E-11	
Ce-133	S		5.00E-03	4.44E-10	3.06E-10	1.49E-10	9.60E-11	6.39E-11	5.25E-11	6.21E-11	
Ce-133m	F		5.00E-03	6.68E-10	5.42E-10	2.76E-10	1.69E-10	9.80E-11	7.93E-11	9.76E-11	
Ce-133m	M		5.00E-03	9.09E-10	7.13E-10	3.66E-10	2.31E-10	1.42E-10	1.14E-10	1.38E-10	
Ce-133m	S		5.00E-03	9.36E-10	7.32E-10	3.76E-10	2.38E-10	1.47E-10	1.17E-10	1.42E-10	
Ce-134	F		5.00E-03	8.08E-09	5.66E-09	2.51E-09	1.52E-09	8.25E-10	6.11E-10	8.03E-10	
Ce-134	M		5.00E-03	1.19E-08	8.14E-09	3.90E-09	2.51E-09	1.60E-09	1.35E-09	1.60E-09	
Ce-134	S		5.00E-03	1.23E-08	8.51E-09	4.11E-09	2.66E-09	1.71E-09	1.45E-09	1.71E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ce-135	F		5.00E-03	7.82E-10	6.40E-10	3.27E-10	2.04E-10	1.18E-10	9.59E-11	1.17E-10	
Ce-135	M		5.00E-03	1.05E-09	8.33E-10	4.30E-10	2.75E-10	1.69E-10	1.35E-10	1.63E-10	
Ce-135	S		5.00E-03	1.09E-09	8.55E-10	4.42E-10	2.83E-10	1.75E-10	1.39E-10	1.68E-10	
Ce-137	F		5.00E-03	8.02E-11	5.97E-11	2.85E-11	1.71E-11	9.32E-12	7.48E-12	9.47E-12	
Ce-137	M		5.00E-03	1.12E-10	8.11E-11	3.84E-11	2.35E-11	1.30E-11	1.04E-11	1.31E-11	
Ce-137	S		5.00E-03	1.15E-10	8.34E-11	3.95E-11	2.42E-11	1.34E-11	1.08E-11	1.35E-11	
Ce-137m	F		5.00E-03	1.67E-09	1.09E-09	4.74E-10	2.89E-10	1.52E-10	1.28E-10	1.63E-10	
Ce-137m	M		5.00E-03	3.18E-09	2.22E-09	1.11E-09	6.87E-10	5.23E-10	4.14E-10	4.82E-10	
Ce-137m	S		5.00E-03	3.36E-09	2.35E-09	1.07E-09	7.41E-10	5.71E-10	4.51E-10	5.20E-10	
Ce-139	F		5.00E-03	1.08E-08	8.57E-09	4.56E-09	2.84E-09	1.81E-09	1.56E-09	1.83E-09	
Ce-139	M		5.00E-03	7.57E-09	6.10E-09	3.65E-09	2.51E-09	2.10E-09	1.71E-09	1.89E-09	
Ce-139	S		5.00E-03	7.79E-09	6.35E-09	3.90E-09	2.76E-09	2.40E-09	1.93E-09	2.13E-09	
Ce-141	F		5.00E-03	1.13E-08	7.28E-09	3.54E-09	1.98E-09	1.16E-09	9.42E-10	1.18E-09	
Ce-141	M		5.00E-03	1.44E-08	1.08E-08	6.35E-09	4.57E-09	4.06E-09	3.21E-09	3.54E-09	
Ce-141	S		5.00E-03	1.56E-08	1.19E-08	7.13E-09	5.24E-09	4.76E-09	3.76E-09	4.12E-09	
Ce-143	F		5.00E-03	3.66E-09	2.37E-09	1.04E-09	6.24E-10	3.33E-10	2.77E-10	3.52E-10	
Ce-143	M		5.00E-03	5.64E-09	3.90E-09	1.94E-09	1.31E-09	9.38E-10	7.62E-10	8.83E-10	
Ce-143	S		5.00E-03	5.95E-09	4.14E-09	2.09E-09	1.41E-09	1.03E-09	8.35E-10	9.64E-10	
Ce-144	F		5.00E-03	3.58E-07	2.69E-07	1.35E-07	7.81E-08	4.79E-08	4.06E-08	4.90E-08	
Ce-144	M		5.00E-03	1.92E-07	1.56E-07	8.81E-08	5.49E-08	4.07E-08	3.60E-08	4.05E-08	
Ce-144	S		5.00E-03	2.13E-07	1.82E-07	1.11E-07	7.30E-08	5.73E-08	5.27E-08	5.76E-08	
Ce-144+D	F			3.58E-07	2.69E-07	1.35E-07	7.81E-08	5.73E-08	5.27E-08	5.97E-08	
Ce-144+E	F			3.58E-07	2.69E-07	1.35E-07	7.81E-08	5.73E-08	5.27E-08	5.97E-08	
Ce-145			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cf-244	F		5.00E-03	4.57E-08	3.25E-08	1.60E-08	1.11E-08	7.74E-09	6.71E-09	7.66E-09	
Cf-244	M		5.00E-03	7.53E-08	5.38E-08	2.80E-08	2.01E-08	1.61E-08	1.35E-08	1.50E-08	
Cf-244	S		5.00E-03	7.88E-08	5.61E-08	2.93E-08	2.11E-08	1.71E-08	1.42E-08	1.58E-08	
Cf-246	F		5.00E-03	7.39E-07	5.54E-07	3.04E-07	1.91E-07	8.80E-08	7.28E-08	9.39E-08	
Cf-246	M		5.00E-03	1.71E-06	1.29E-06	8.31E-07	6.10E-07	5.65E-07	4.52E-07	4.92E-07	
Cf-246	S		5.00E-03	1.83E-06	1.38E-06	8.94E-07	6.61E-07	6.26E-07	5.01E-07	5.42E-07	
Cf-247	F		5.00E-03	1.72E-10	1.47E-10	9.26E-11	6.64E-11	5.16E-11	4.84E-11	5.22E-11	
Cf-247	M		5.00E-03	2.32E-10	1.80E-10	1.03E-10	5.59E-11	4.74E-11	4.13E-11	4.62E-11	
Cf-247	S		5.00E-03	2.17E-10	1.62E-10	8.81E-11	5.81E-11	4.47E-11	3.67E-11	4.17E-11	
Cf-248	F		5.00E-03	7.34E-05	6.38E-05	3.81E-05	2.33E-05	1.25E-05	1.13E-05	1.35E-05	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Cf-248	M		5.00E-03	3.80E-05	3.22E-05	2.07E-05	1.34E-05	1.02E-05	8.78E-06	9.79E-06	
Cf-248	S		5.00E-03	3.11E-05	2.50E-05	1.58E-05	1.08E-05	9.44E-06	7.86E-06	8.60E-06	
Cf-249	F		5.00E-03	4.53E-04	4.31E-04	2.95E-04	2.16E-04	1.75E-04	1.68E-04	1.78E-04	
Cf-249	M		5.00E-03	1.57E-04	1.52E-04	1.11E-04	8.00E-05	7.22E-05	7.00E-05	7.29E-05	
Cf-249	S		5.00E-03	5.81E-05	5.08E-05	3.50E-05	2.43E-05	2.20E-05	2.05E-05	2.16E-05	
Cf-250	F		5.00E-03	2.84E-04	2.63E-04	1.65E-04	1.05E-04	7.69E-05	7.53E-05	8.21E-05	
Cf-250	M		5.00E-03	1.05E-04	9.79E-05	6.57E-05	4.18E-05	3.48E-05	3.39E-05	3.61E-05	
Cf-250	S		5.00E-03	4.99E-05	4.26E-05	2.78E-05	1.84E-05	1.60E-05	1.45E-05	1.56E-05	
Cf-251	F		5.00E-03	4.59E-04	4.37E-04	2.99E-04	2.20E-04	1.79E-04	1.71E-04	1.81E-04	
Cf-251	M		5.00E-03	1.59E-04	1.54E-04	1.13E-04	8.14E-05	7.35E-05	7.12E-05	7.41E-05	
Cf-251	S		5.00E-03	5.81E-05	5.08E-05	3.51E-05	2.45E-05	2.21E-05	2.06E-05	2.17E-05	
Cf-252	F		5.00E-03	2.44E-04	2.18E-04	1.31E-04	7.43E-05	4.02E-05	3.68E-05	4.42E-05	
Cf-252	M		5.00E-03	9.62E-05	8.58E-05	5.53E-05	3.21E-05	2.18E-05	1.97E-05	2.25E-05	
Cf-252	S		5.00E-03	5.94E-05	4.94E-05	3.10E-05	1.97E-05	1.59E-05	1.38E-05	1.53E-05	
Cf-253	F		5.00E-03	4.74E-06	3.58E-06	1.93E-06	1.22E-06	5.23E-07	4.28E-07	5.66E-07	
Cf-253	M		5.00E-03	5.40E-06	4.18E-06	2.62E-06	1.88E-06	1.66E-06	1.33E-06	1.46E-06	
Cf-253	S		5.00E-03	6.03E-06	4.66E-06	2.96E-06	2.17E-06	2.02E-06	1.62E-06	1.76E-06	
Cf-254	F		5.00E-03	4.33E-04	3.32E-04	1.80E-04	1.12E-04	4.78E-05	3.90E-05	5.19E-05	
Cf-254	M		5.00E-03	2.47E-04	1.85E-04	1.10E-04	6.90E-05	4.71E-05	4.08E-05	4.68E-05	
Cf-254	S		5.00E-03	2.29E-04	1.68E-04	1.01E-04	6.37E-05	4.93E-05	4.31E-05	4.81E-05	
Cf-255	F		5.00E-03	1.65E-08	1.24E-08	6.67E-09	4.18E-09	1.78E-09	1.45E-09	1.93E-09	
Cf-255	M		5.00E-03	2.25E-08	1.73E-08	1.09E-08	7.95E-09	7.17E-09	5.70E-09	6.24E-09	
Cf-255	S		5.00E-03	2.49E-08	1.92E-08	1.22E-08	9.04E-09	8.52E-09	6.77E-09	7.35E-09	
Cl-34			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cl-34m	F		1.00E+00	2.87E-10	1.94E-10	8.94E-11	5.46E-11	3.24E-11	2.68E-11	3.30E-11	
Cl-34m	M		1.00E+00	4.34E-10	2.88E-10	1.34E-10	8.37E-11	5.28E-11	4.39E-11	5.28E-11	
Cl-34m	S		1.00E+00	4.50E-10	2.99E-10	1.39E-10	8.68E-11	5.50E-11	4.58E-11	5.50E-11	
Cl-36	F		1.00E+00	3.90E-09	2.60E-09	1.15E-09	7.05E-10	3.91E-10	3.31E-10	4.12E-10	
Cl-36	M		1.00E+00	3.11E-08	2.55E-08	1.51E-08	1.04E-08	8.69E-09	7.31E-09	8.05E-09	
Cl-36	S		1.00E+00	1.03E-07	9.69E-08	6.54E-08	4.46E-08	3.92E-08	3.79E-08	3.99E-08	
Cl-38	F		1.00E+00	2.97E-10	1.90E-10	8.47E-11	5.16E-11	3.03E-11	2.54E-11	3.13E-11	
Cl-38	M		1.00E+00	4.71E-10	3.00E-10	1.36E-10	8.50E-11	5.39E-11	4.53E-11	5.44E-11	
Cl-38	S		1.00E+00	4.90E-10	3.12E-10	1.42E-10	8.87E-11	5.65E-11	4.75E-11	5.70E-11	
Cl-39	F		1.00E+00	2.69E-10	1.83E-10	8.47E-11	5.17E-11	3.07E-11	2.55E-11	3.13E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Cl-39	M		1.00E+00	4.26E-10	2.86E-10	1.35E-10	8.55E-11	5.61E-11	4.64E-11	5.53E-11	
Cl-39	S		1.00E+00	4.44E-10	2.97E-10	1.41E-10	8.92E-11	5.89E-11	4.87E-11	5.79E-11	
Cl-40			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cm-238	F		5.00E-03	3.35E-09	2.45E-09	8.75E-10	6.22E-10	5.16E-10	4.69E-10	5.20E-10	
Cm-238	M		5.00E-03	8.17E-09	6.01E-09	3.15E-09	2.33E-09	2.21E-09	1.80E-09	1.95E-09	
Cm-238	S		5.00E-03	8.71E-09	6.40E-09	3.38E-09	2.49E-09	2.37E-09	1.91E-09	2.08E-09	
Cm-239	F		5.00E-03	2.69E-10	1.98E-10	9.31E-11	5.62E-11	3.12E-11	2.57E-11	3.21E-11	
Cm-239	M		5.00E-03	4.68E-10	3.41E-10	1.74E-10	1.15E-10	8.10E-11	6.50E-11	7.59E-11	
Cm-239	S		5.00E-03	4.91E-10	3.57E-10	1.83E-10	1.21E-10	8.64E-11	6.92E-11	8.06E-11	
Cm-240	F		5.00E-03	8.29E-06	6.29E-06	3.21E-06	2.07E-06	1.49E-06	1.35E-06	1.52E-06	
Cm-240	M		5.00E-03	1.19E-05	9.13E-06	5.78E-06	4.18E-06	3.85E-06	3.17E-06	3.43E-06	
Cm-240	S		5.00E-03	1.29E-05	9.92E-06	6.37E-06	4.63E-06	4.30E-06	3.48E-06	3.78E-06	
Cm-241	F		5.00E-03	1.14E-07	8.92E-08	4.95E-08	3.51E-08	2.78E-08	2.66E-08	2.86E-08	
Cm-241	M		5.00E-03	1.33E-07	1.03E-07	6.58E-08	4.77E-08	4.37E-08	3.73E-08	4.00E-08	
Cm-241	S		5.00E-03	1.41E-07	1.08E-07	6.90E-08	4.95E-08	4.52E-08	3.71E-08	4.03E-08	
Cm-242	F		5.00E-03	2.68E-05	2.07E-05	1.02E-05	6.14E-06	4.00E-06	3.31E-06	3.95E-06	
Cm-242	M		5.00E-03	2.23E-05	1.75E-05	1.06E-05	7.30E-06	6.34E-06	5.20E-06	5.72E-06	
Cm-242	S		5.00E-03	2.35E-05	1.84E-05	1.16E-05	8.12E-06	7.23E-06	5.92E-06	6.47E-06	
Cm-243	F		5.00E-03	1.60E-04	1.50E-04	9.65E-05	7.39E-05	6.60E-05	6.99E-05	7.16E-05	
Cm-243	M		5.00E-03	6.68E-05	6.15E-05	4.23E-05	3.16E-05	3.05E-05	3.17E-05	3.23E-05	
Cm-243	S		5.00E-03	4.59E-05	3.98E-05	2.63E-05	1.79E-05	1.58E-05	1.47E-05	1.56E-05	
Cm-244	F		5.00E-03	1.46E-04	1.35E-04	8.38E-05	6.16E-05	5.37E-05	5.71E-05	5.89E-05	
Cm-244	M		5.00E-03	6.19E-05	5.64E-05	3.77E-05	2.73E-05	2.58E-05	2.66E-05	2.73E-05	
Cm-244	S		5.00E-03	4.42E-05	3.81E-05	2.49E-05	1.68E-05	1.47E-05	1.35E-05	1.44E-05	
Cm-245	F		5.00E-03	1.87E-04	1.79E-04	1.25E-04	1.03E-04	9.52E-05	9.85E-05	1.00E-04	
Cm-245	M		5.00E-03	7.36E-05	6.98E-05	5.16E-05	4.12E-05	4.10E-05	4.24E-05	4.28E-05	
Cm-245	S		5.00E-03	4.50E-05	3.94E-05	2.69E-05	1.87E-05	1.68E-05	1.59E-05	1.67E-05	
Cm-246	F		5.00E-03	1.87E-04	1.79E-04	1.24E-04	1.03E-04	9.46E-05	9.81E-05	9.99E-05	
Cm-246	M		5.00E-03	7.38E-05	6.99E-05	5.15E-05	4.11E-05	4.08E-05	4.23E-05	4.27E-05	
Cm-246	S		5.00E-03	4.53E-05	3.97E-05	2.70E-05	1.88E-05	1.69E-05	1.60E-05	1.68E-05	
Cm-247	F		5.00E-03	1.71E-04	1.64E-04	1.14E-04	9.44E-05	8.68E-05	9.00E-05	9.16E-05	
Cm-247	M		5.00E-03	6.72E-05	6.36E-05	4.70E-05	3.74E-05	3.72E-05	3.86E-05	3.90E-05	
Cm-247	S		5.00E-03	4.08E-05	3.57E-05	2.43E-05	1.68E-05	1.50E-05	1.43E-05	1.50E-05	
Cm-247+D	F			1.71E-04	1.64E-04	1.14E-04	9.44E-05	8.68E-05	9.00E-05	9.16E-05	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special									Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)	
Cm-247+E	F			1.71E-04	1.64E-04	1.14E-04	9.44E-05	8.68E-05	9.00E-05	9.16E-05	
Cm-248	F		5.00E-03	6.89E-04	6.59E-04	4.59E-04	3.80E-04	3.49E-04	3.62E-04	3.68E-04	
Cm-248	M		5.00E-03	2.49E-04	2.40E-04	1.78E-04	1.43E-04	1.42E-04	1.49E-04	1.50E-04	
Cm-248	S		5.00E-03	1.35E-04	1.21E-04	8.25E-05	5.65E-05	4.99E-05	4.86E-05	5.10E-05	
Cm-249	F		5.00E-03	1.79E-10	9.86E-11	5.93E-11	4.62E-11	4.02E-11	4.02E-11	4.20E-11	
Cm-249	M		5.00E-03	2.40E-10	1.64E-10	8.25E-11	5.82E-11	3.72E-11	3.29E-11	3.79E-11	
Cm-249	S		5.00E-03	2.41E-10	1.61E-10	7.79E-11	5.32E-11	3.93E-11	3.34E-11	3.80E-11	
Cm-250	F		5.00E-03	4.69E-03	4.48E-03	3.12E-03	2.58E-03	2.37E-03	2.46E-03	2.51E-03	
Cm-250	M		5.00E-03	1.66E-03	1.60E-03	1.19E-03	9.55E-04	9.52E-04	1.00E-03	1.01E-03	
Cm-250	S		5.00E-03	8.63E-04	7.76E-04	5.30E-04	3.61E-04	3.18E-04	3.12E-04	3.27E-04	
Cm-250+D	F			4.69E-03	4.48E-03	3.12E-03	2.58E-03	2.37E-03	2.46E-03	2.50E-03	
Cm-250+E	F			4.69E-03	4.48E-03	3.12E-03	2.58E-03	2.37E-03	2.46E-03	2.50E-03	
Cm-251	F		5.00E-03	1.18E-10	7.88E-11	3.61E-11	2.41E-11	1.60E-11	1.44E-11	1.66E-11	
Cm-251	M		5.00E-03	1.89E-10	1.25E-10	5.85E-11	3.95E-11	2.80E-11	2.37E-11	2.74E-11	
Cm-251	S		5.00E-03	1.96E-10	1.30E-10	6.04E-11	4.06E-11	2.86E-11	2.41E-11	2.79E-11	
Co-54m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Co-55	F		6.00E-01	2.17E-09	1.85E-09	9.01E-10	5.54E-10	3.12E-10	2.67E-10	3.25E-10	
Co-55	M		2.00E-01	4.10E-09	3.12E-09	1.53E-09	9.83E-10	6.14E-10	4.98E-10	5.99E-10	
Co-55	S		2.00E-02	4.61E-09	3.36E-09	1.65E-09	1.06E-09	6.61E-10	5.36E-10	6.45E-10	
Co-56	F		6.00E-01	1.38E-08	1.05E-08	5.57E-09	3.57E-09	2.24E-09	1.86E-09	2.21E-09	
Co-56	M		2.00E-01	2.52E-08	2.06E-08	1.09E-08	7.37E-09	5.75E-09	4.81E-09	5.40E-09	
Co-56	S		2.00E-02	2.88E-08	2.42E-08	1.47E-08	9.97E-09	7.93E-09	6.64E-09	7.38E-09	
Co-57	F		6.00E-01	1.45E-09	1.09E-09	5.66E-10	3.69E-10	2.30E-10	1.88E-10	2.24E-10	
Co-57	M		2.00E-01	2.75E-09	2.17E-09	1.27E-09	8.51E-10	6.68E-10	5.50E-10	6.18E-10	
Co-57	S		2.00E-02	4.35E-09	3.71E-09	2.27E-09	1.51E-09	1.19E-09	1.00E-09	1.12E-09	
Co-58	F		6.00E-01	3.99E-09	3.04E-09	1.60E-09	1.03E-09	6.41E-10	5.35E-10	6.35E-10	
Co-58	M		2.00E-01	7.26E-09	6.49E-09	3.48E-09	2.40E-09	1.95E-09	1.59E-09	1.78E-09	
Co-58	S		2.00E-02	9.00E-09	7.44E-09	4.55E-09	3.15E-09	2.60E-09	2.11E-09	2.34E-09	
Co-58m	F		6.00E-01	4.75E-11	3.63E-11	1.67E-11	1.05E-11	5.89E-12	5.17E-12	6.27E-12	
Co-58m	M		2.00E-01	1.06E-10	7.57E-11	3.75E-11	2.42E-11	1.61E-11	1.32E-11	1.56E-11	
Co-58m	S		2.00E-02	1.25E-10	8.88E-11	4.51E-11	2.93E-11	2.01E-11	1.64E-11	1.93E-11	
Co-60	F		6.00E-01	3.01E-08	2.34E-08	1.36E-08	8.89E-09	6.09E-09	5.27E-09	6.02E-09	
Co-60	M		2.00E-01	4.16E-08	3.39E-08	2.13E-08	1.46E-08	1.21E-08	1.02E-08	1.12E-08	
Co-60	S		2.00E-02	9.16E-08	8.58E-08	5.89E-08	4.03E-08	3.42E-08	3.08E-08	3.30E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Co-60m	F		6.00E-01	4.33E-12	2.78E-12	1.52E-12	1.01E-12	8.14E-13	6.76E-13	7.60E-13	
Co-60m	M		2.00E-01	6.99E-12	4.57E-12	2.61E-12	1.76E-12	1.47E-12	1.22E-12	1.36E-12	
Co-60m	S		2.00E-02	7.47E-12	4.96E-12	2.87E-12	1.93E-12	1.62E-12	1.36E-12	1.50E-12	
Co-61	F		6.00E-01	2.14E-10	1.41E-10	6.12E-11	3.87E-11	2.26E-11	1.95E-11	2.37E-11	
Co-61	M		2.00E-01	4.07E-10	2.68E-10	1.25E-10	8.30E-11	5.75E-11	4.77E-11	5.58E-11	
Co-61	S		2.00E-02	4.33E-10	2.83E-10	1.33E-10	8.82E-11	6.15E-11	5.10E-11	5.95E-11	
Co-62			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Co-62m	F		6.00E-01	1.39E-10	9.69E-11	4.55E-11	2.81E-11	1.70E-11	1.41E-11	1.72E-11	
Co-62m	M		2.00E-01	1.93E-10	1.32E-10	6.20E-11	3.89E-11	2.43E-11	2.03E-11	2.44E-11	
Co-62m	S		2.00E-02	1.99E-10	1.36E-10	6.39E-11	4.00E-11	2.51E-11	2.10E-11	2.52E-11	
Cr-48	F		2.00E-01	7.28E-10	5.75E-10	2.99E-10	1.89E-10	1.15E-10	9.56E-11	1.15E-10	
Cr-48	M		2.00E-01	1.10E-09	8.79E-10	4.90E-10	3.28E-10	2.40E-10	1.92E-10	2.21E-10	
Cr-48	S		2.00E-01	1.18E-09	9.40E-10	5.28E-10	3.56E-10	2.64E-10	2.12E-10	2.43E-10	
Cr-49	F		2.00E-01	1.92E-10	1.32E-10	6.06E-11	3.77E-11	2.25E-11	1.88E-11	2.29E-11	
Cr-49	M		2.00E-01	3.03E-10	2.05E-10	9.62E-11	6.19E-11	4.05E-11	3.36E-11	3.99E-11	
Cr-49	S		2.00E-01	3.15E-10	2.13E-10	1.00E-10	6.46E-11	4.25E-11	3.52E-11	4.18E-11	
Cr-51	F		2.00E-01	1.72E-10	1.27E-10	6.29E-11	3.99E-11	2.39E-11	2.01E-11	2.42E-11	
Cr-51	M		2.00E-01	2.54E-10	1.90E-10	1.01E-10	6.39E-11	3.92E-11	3.24E-11	3.88E-11	
Cr-51	S		2.00E-01	2.59E-10	2.10E-10	1.02E-10	6.56E-11	4.51E-11	3.71E-11	4.34E-11	
Cr-55			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cr-56			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-121			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-121m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-123			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-124			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-125	F		1.00E+00	1.12E-10	7.84E-11	3.67E-11	2.25E-11	1.34E-11	1.11E-11	1.35E-11	
Cs-125	M		2.00E-01	1.81E-10	1.24E-10	5.88E-11	3.72E-11	2.39E-11	1.97E-11	2.36E-11	
Cs-125	S		2.00E-02	1.89E-10	1.29E-10	6.11E-11	3.88E-11	2.50E-11	2.06E-11	2.46E-11	
Cs-126			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-127	F		1.00E+00	1.66E-10	1.38E-10	7.10E-11	4.26E-11	2.53E-11	2.03E-11	2.49E-11	
Cs-127	M		2.00E-01	2.84E-10	2.27E-10	1.17E-10	7.43E-11	4.66E-11	3.72E-11	4.48E-11	
Cs-127	S		2.00E-02	3.05E-10	2.38E-10	1.22E-10	7.81E-11	4.92E-11	3.92E-11	4.72E-11	
Cs-128			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-129	F		1.00E+00	3.42E-10	2.80E-10	1.44E-10	8.74E-11	5.19E-11	4.22E-11	5.16E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Cs-129	M		2.00E-01	5.76E-10	4.62E-10	2.37E-10	1.50E-10	9.14E-11	7.29E-11	8.85E-11	
Cs-129	S		2.00E-02	6.29E-10	4.88E-10	2.50E-10	1.58E-10	9.68E-11	7.71E-11	9.36E-11	
Cs-130	F		1.00E+00	7.97E-11	5.35E-11	2.43E-11	1.50E-11	9.03E-12	7.55E-12	9.21E-12	
Cs-130	M		2.00E-01	1.25E-10	8.31E-11	3.83E-11	2.43E-11	1.56E-11	1.30E-11	1.55E-11	
Cs-130	S		2.00E-02	1.30E-10	8.63E-11	3.98E-11	2.53E-11	1.63E-11	1.36E-11	1.62E-11	
Cs-130m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-131	F		1.00E+00	2.41E-10	1.73E-10	8.59E-11	5.37E-11	3.29E-11	2.74E-11	3.30E-11	
Cs-131	M		2.00E-01	3.56E-10	2.67E-10	1.37E-10	8.62E-11	5.55E-11	4.47E-11	5.35E-11	
Cs-131	S		2.00E-02	3.79E-10	2.83E-10	1.46E-10	9.19E-11	5.94E-11	4.77E-11	5.71E-11	
Cs-132	F		1.00E+00	1.57E-09	1.22E-09	6.57E-10	4.22E-10	2.72E-10	2.36E-10	2.74E-10	
Cs-132	M		2.00E-01	1.97E-09	1.58E-09	8.58E-10	5.58E-10	3.75E-10	3.01E-10	3.54E-10	
Cs-132	S		2.00E-02	2.04E-09	1.63E-09	8.89E-10	5.79E-10	3.91E-10	3.11E-10	3.66E-10	
Cs-134	F		1.00E+00	1.13E-08	7.38E-09	5.24E-09	5.35E-09	6.37E-09	6.69E-09	6.56E-09	
Cs-134	M		2.00E-01	3.18E-08	2.58E-08	1.62E-08	1.17E-08	1.05E-08	9.18E-09	9.84E-09	
Cs-134	S		2.00E-02	6.97E-08	6.31E-08	4.15E-08	2.80E-08	2.32E-08	2.04E-08	2.22E-08	
Cs-134m	F		1.00E+00	1.30E-10	8.71E-11	3.85E-11	2.56E-11	1.61E-11	1.44E-11	1.69E-11	
Cs-134m	M		2.00E-01	3.33E-10	2.33E-10	1.19E-10	8.39E-11	6.63E-11	5.41E-11	6.10E-11	
Cs-134m	S		2.00E-02	3.64E-10	2.55E-10	1.32E-10	9.29E-11	7.38E-11	6.03E-11	6.79E-11	
Cs-135	F		1.00E+00	2.24E-09	1.32E-09	8.23E-10	8.12E-10	8.97E-10	9.15E-10	9.13E-10	
Cs-135	M		2.00E-01	1.47E-08	1.16E-08	7.14E-09	5.18E-09	4.73E-09	3.88E-09	4.21E-09	
Cs-135	S		2.00E-02	3.58E-08	3.22E-08	2.12E-08	1.45E-08	1.28E-08	1.17E-08	1.25E-08	
Cs-135m	F		1.00E+00	9.33E-11	7.92E-11	4.18E-11	2.48E-11	1.49E-11	1.17E-11	1.45E-11	
Cs-135m	M		2.00E-01	1.22E-10	1.01E-10	5.29E-11	3.23E-11	1.96E-11	1.54E-11	1.89E-11	
Cs-135m	S		2.00E-02	1.25E-10	1.03E-10	5.39E-11	3.30E-11	2.00E-11	1.58E-11	1.93E-11	
Cs-136	F		1.00E+00	7.21E-09	5.21E-09	2.89E-09	1.97E-09	1.36E-09	1.22E-09	1.38E-09	
Cs-136	M		2.00E-01	1.33E-08	1.02E-08	5.89E-09	3.66E-09	3.07E-09	2.46E-09	2.77E-09	
Cs-136	S		2.00E-02	1.43E-08	1.11E-08	5.66E-09	4.05E-09	3.43E-09	2.72E-09	3.04E-09	
Cs-137	F		1.00E+00	8.79E-09	5.43E-09	3.67E-09	3.76E-09	4.47E-09	4.68E-09	4.60E-09	
Cs-137	M		2.00E-01	3.60E-08	2.92E-08	1.78E-08	1.27E-08	1.12E-08	9.72E-09	1.05E-08	
Cs-137	S		2.00E-02	1.10E-07	1.03E-07	6.98E-08	4.76E-08	4.14E-08	3.94E-08	4.17E-08	
Cs-137+D	S			1.10E-07	1.03E-07	6.98E-08	4.76E-08	4.14E-08	3.94E-08	4.17E-08	
Cs-137+E	S			1.10E-07	1.03E-07	6.98E-08	4.76E-08	4.14E-08	3.94E-08	4.17E-08	
Cs-138	F		1.00E+00	2.72E-10	1.84E-10	8.52E-11	5.19E-11	3.08E-11	2.55E-11	3.13E-11	
Cs-138	M		2.00E-01	4.25E-10	2.83E-10	1.32E-10	8.25E-11	5.18E-11	4.30E-11	5.18E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Cs-138	S		2.00E-02	4.42E-10	2.94E-10	1.37E-10	8.57E-11	5.40E-11	4.49E-11	5.40E-11	
Cs-138m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-139			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-140			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-57			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-59			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-60	F		1.00E+00	2.17E-10	1.60E-10	7.72E-11	4.72E-11	2.82E-11	2.31E-11	2.82E-11	
Cu-60	M		1.00E+00	3.05E-10	2.20E-10	1.06E-10	6.61E-11	4.13E-11	3.38E-11	4.09E-11	
Cu-60	S		1.00E+00	3.14E-10	2.27E-10	1.09E-10	6.82E-11	4.27E-11	3.50E-11	4.22E-11	
Cu-61	F		1.00E+00	3.07E-10	2.69E-10	1.27E-10	7.77E-11	4.43E-11	3.64E-11	4.49E-11	
Cu-61	M		1.00E+00	4.80E-10	4.27E-10	2.09E-10	1.35E-10	8.91E-11	7.25E-11	8.57E-11	
Cu-61	S		1.00E+00	4.99E-10	4.44E-10	2.18E-10	1.41E-10	9.41E-11	7.65E-11	9.02E-11	
Cu-62			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-64	F		1.00E+00	2.86E-10	2.74E-10	1.24E-10	7.65E-11	4.19E-11	3.54E-11	4.37E-11	
Cu-64	M		1.00E+00	5.61E-10	5.44E-10	2.76E-10	1.88E-10	1.38E-10	1.12E-10	1.28E-10	
Cu-64	S		1.00E+00	5.92E-10	5.74E-10	2.93E-10	2.00E-10	1.29E-10	1.20E-10	1.36E-10	
Cu-66			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-67	F		1.00E+00	9.21E-10	7.82E-10	3.42E-10	2.12E-10	1.15E-10	9.85E-11	1.22E-10	
Cu-67	M		1.00E+00	2.21E-09	1.94E-09	1.09E-09	7.91E-10	6.82E-10	5.38E-10	5.97E-10	
Cu-67	S		1.00E+00	2.41E-09	2.11E-09	1.20E-09	8.70E-10	7.58E-10	5.97E-10	6.61E-10	
Cu-69			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-148			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-149			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-150			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-151	F		5.00E-03	2.63E-10	1.83E-10	1.13E-10	7.62E-11	6.39E-11	5.43E-11	5.98E-11	
Dy-151	M		5.00E-03	5.55E-10	3.93E-10	2.56E-10	1.75E-10	1.54E-10	1.31E-10	1.42E-10	
Dy-151	S		5.00E-03	5.87E-10	4.17E-10	2.71E-10	1.86E-10	1.63E-10	1.39E-10	1.51E-10	
Dy-152	F		5.00E-03	3.17E-10	2.38E-10	1.16E-10	7.18E-11	4.08E-11	3.32E-11	4.11E-11	
Dy-152	M		5.00E-03	4.74E-10	3.51E-10	1.79E-10	1.14E-10	7.27E-11	5.98E-11	7.13E-11	
Dy-152	S		5.00E-03	4.91E-10	3.63E-10	1.86E-10	1.19E-10	7.63E-11	6.28E-11	7.46E-11	
Dy-153	F		5.00E-03	5.84E-10	4.51E-10	2.26E-10	1.39E-10	8.00E-11	6.53E-11	8.04E-11	
Dy-153	M		5.00E-03	8.76E-10	6.61E-10	3.46E-10	2.24E-10	1.50E-10	1.22E-10	1.43E-10	
Dy-153	S		5.00E-03	9.11E-10	6.86E-10	3.60E-10	2.35E-10	1.59E-10	1.29E-10	1.51E-10	
Dy-154	F		5.00E-03	8.16E-05	7.49E-05	4.64E-05	3.18E-05	2.61E-05	2.58E-05	2.74E-05	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Dy-154	M		5.00E-03	3.01E-05	2.79E-05	1.86E-05	1.25E-05	1.12E-05	1.12E-05	1.17E-05	
Dy-154	S		5.00E-03	1.86E-05	1.65E-05	1.08E-05	7.01E-06	5.93E-06	5.74E-06	6.10E-06	
Dy-155	F		5.00E-03	4.65E-10	3.70E-10	1.89E-10	1.17E-10	6.77E-11	5.49E-11	6.74E-11	
Dy-155	M		5.00E-03	6.38E-10	4.98E-10	2.61E-10	1.69E-10	1.10E-10	8.78E-11	1.04E-10	
Dy-155	S		5.00E-03	6.59E-10	5.13E-10	2.70E-10	1.75E-10	1.15E-10	9.20E-11	1.09E-10	
Dy-157	F		5.00E-03	1.85E-10	1.51E-10	7.79E-11	4.83E-11	2.82E-11	2.26E-11	2.78E-11	
Dy-157	M		5.00E-03	2.40E-10	1.91E-10	9.87E-11	6.25E-11	3.78E-11	3.02E-11	3.67E-11	
Dy-157	S		5.00E-03	2.46E-10	1.95E-10	1.01E-10	6.41E-11	3.89E-11	3.11E-11	3.77E-11	
Dy-159	F		5.00E-03	3.50E-09	2.76E-09	1.46E-09	8.54E-10	5.23E-10	4.50E-10	5.38E-10	
Dy-159	M		5.00E-03	2.20E-09	1.74E-09	1.01E-09	6.33E-10	4.66E-10	3.95E-10	4.49E-10	
Dy-159	S		5.00E-03	2.28E-09	1.83E-09	1.08E-09	7.08E-10	5.42E-10	4.56E-10	5.13E-10	
Dy-165	F		5.00E-03	2.92E-10	1.85E-10	7.90E-11	4.93E-11	2.76E-11	2.36E-11	2.92E-11	
Dy-165	M		5.00E-03	5.21E-10	3.41E-10	1.59E-10	1.05E-10	7.28E-11	6.03E-11	7.06E-11	
Dy-165	S		5.00E-03	5.47E-10	3.58E-10	1.68E-10	1.12E-10	7.78E-11	6.43E-11	7.52E-11	
Dy-165m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-166	F		5.00E-03	7.06E-09	4.52E-09	1.99E-09	1.14E-09	6.04E-10	4.88E-10	6.34E-10	
Dy-166	M		5.00E-03	1.19E-08	8.40E-09	4.45E-09	3.04E-09	2.36E-09	1.93E-09	2.18E-09	
Dy-166	S		5.00E-03	1.25E-08	8.93E-09	4.79E-09	3.30E-09	2.61E-09	2.12E-09	2.40E-09	
Dy-167			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-168			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-154			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-156	F		5.00E-03	1.03E-10	7.33E-11	3.52E-11	2.15E-11	1.26E-11	1.03E-11	1.27E-11	
Er-156	M		5.00E-03	1.63E-10	1.13E-10	5.58E-11	3.55E-11	2.34E-11	1.91E-11	2.27E-11	
Er-156	S		5.00E-03	1.70E-10	1.18E-10	5.81E-11	3.70E-11	2.46E-11	2.01E-11	2.38E-11	
Er-159	F		5.00E-03	8.90E-11	6.91E-11	3.45E-11	2.13E-11	1.27E-11	1.04E-11	1.26E-11	
Er-159	M		5.00E-03	1.29E-10	9.73E-11	4.93E-11	3.15E-11	2.07E-11	1.68E-11	1.99E-11	
Er-159	S		5.00E-03	1.34E-10	1.00E-10	5.10E-11	3.27E-11	2.16E-11	1.75E-11	2.07E-11	
Er-161	F		5.00E-03	2.90E-10	2.31E-10	1.17E-10	7.13E-11	4.13E-11	3.33E-11	4.11E-11	
Er-161	M		5.00E-03	4.04E-10	3.12E-10	1.60E-10	1.02E-10	6.43E-11	5.16E-11	6.20E-11	
Er-161	S		5.00E-03	4.17E-10	3.21E-10	1.65E-10	1.05E-10	6.69E-11	5.36E-11	6.43E-11	
Er-163	F		5.00E-03	8.00E-12	6.11E-12	3.03E-12	1.85E-12	1.08E-12	8.71E-13	1.07E-12	
Er-163	M		5.00E-03	1.10E-11	8.09E-12	4.06E-12	2.52E-12	1.54E-12	1.25E-12	1.51E-12	
Er-163	S		5.00E-03	1.13E-11	8.31E-12	4.17E-12	2.59E-12	1.59E-12	1.29E-12	1.56E-12	
Er-165	F		5.00E-03	5.44E-11	4.08E-11	1.99E-11	1.22E-11	6.83E-12	5.57E-12	6.93E-12	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Er-165	M		5.00E-03	7.56E-11	5.55E-11	2.73E-11	1.72E-11	1.01E-11	8.22E-12	1.01E-11	
Er-165	S		5.00E-03	7.80E-11	5.71E-11	2.81E-11	1.78E-11	1.04E-11	8.51E-12	1.04E-11	
Er-167m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-169	F		5.00E-03	2.19E-09	1.45E-09	6.84E-10	3.83E-10	2.08E-10	1.76E-10	2.23E-10	
Er-169	M		5.00E-03	4.71E-09	3.46E-09	2.01E-09	1.47E-09	1.30E-09	1.03E-09	1.13E-09	
Er-169	S		5.00E-03	5.13E-09	3.80E-09	2.23E-09	1.64E-09	1.48E-09	1.17E-09	1.28E-09	
Er-171	F		5.00E-03	1.01E-09	6.79E-10	3.02E-10	1.85E-10	1.00E-10	8.38E-11	1.05E-10	
Er-171	M		5.00E-03	1.77E-09	1.21E-09	5.89E-10	3.90E-10	2.66E-10	2.18E-10	2.56E-10	
Er-171	S		5.00E-03	1.85E-09	1.27E-09	6.21E-10	4.13E-10	2.52E-10	2.33E-10	2.70E-10	
Er-172	F		5.00E-03	4.31E-09	2.91E-09	1.34E-09	7.96E-10	4.41E-10	3.04E-10	4.08E-10	
Er-172	M		5.00E-03	6.66E-09	4.77E-09	2.57E-09	1.77E-09	1.39E-09	1.12E-09	1.27E-09	
Er-172	S		5.00E-03	7.04E-09	5.07E-09	2.76E-09	1.92E-09	1.53E-09	1.23E-09	1.39E-09	
Er-173			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Es-249	F		5.00E-03	6.74E-10	5.38E-10	2.25E-10	1.63E-10	1.32E-10	1.20E-10	1.32E-10	
Es-249	M		5.00E-03	1.13E-09	8.42E-10	4.95E-10	3.56E-10	2.70E-10	2.22E-10	2.49E-10	
Es-249	S		5.00E-03	1.14E-09	8.38E-10	4.86E-10	3.50E-10	2.64E-10	2.12E-10	2.40E-10	
Es-250	F		5.00E-03	2.19E-08	2.01E-08	1.25E-08	7.94E-09	5.77E-09	5.65E-09	6.16E-09	
Es-250	M		5.00E-03	9.57E-09	8.49E-09	5.50E-09	3.52E-09	2.88E-09	2.76E-09	2.96E-09	
Es-250	S		5.00E-03	6.65E-09	5.35E-09	2.74E-09	1.82E-09	1.52E-09	1.35E-09	1.48E-09	
Es-250m	F		5.00E-03	5.54E-09	5.13E-09	3.21E-09	2.04E-09	1.49E-09	1.46E-09	1.59E-09	
Es-250m	M		5.00E-03	2.10E-09	1.94E-09	1.30E-09	8.25E-10	6.83E-10	6.65E-10	7.10E-10	
Es-250m	S		5.00E-03	1.04E-09	8.77E-10	5.64E-10	3.73E-10	3.19E-10	2.90E-10	3.12E-10	
Es-251	F		5.00E-03	4.19E-09	3.39E-09	2.06E-09	1.43E-09	9.79E-10	9.03E-10	1.00E-09	
Es-251	M		5.00E-03	7.96E-09	6.02E-09	3.88E-09	2.84E-09	2.62E-09	2.15E-09	2.32E-09	
Es-251	S		5.00E-03	8.15E-09	6.06E-09	3.88E-09	2.84E-09	2.65E-09	2.14E-09	2.32E-09	
Es-253	F		5.00E-03	5.68E-06	4.15E-06	2.22E-06	1.40E-06	6.04E-07	4.93E-07	6.53E-07	
Es-253	M		5.00E-03	1.04E-05	7.91E-06	5.04E-06	3.70E-06	3.41E-06	2.72E-06	2.96E-06	
Es-253	S		5.00E-03	1.16E-05	8.80E-06	5.66E-06	4.19E-06	3.97E-06	3.16E-06	3.43E-06	
Es-254	F		5.00E-03	6.78E-05	5.86E-05	3.47E-05	2.12E-05	1.14E-05	1.03E-05	1.23E-05	
Es-254	M		5.00E-03	3.68E-05	3.10E-05	1.98E-05	1.30E-05	1.00E-05	8.57E-06	9.54E-06	
Es-254	S		5.00E-03	3.10E-05	2.49E-05	1.57E-05	1.09E-05	9.59E-06	7.93E-06	8.67E-06	
Es-254+D	F			6.78E-05	5.86E-05	3.47E-05	2.12E-05	1.14E-05	1.03E-05	1.23E-05	
Es-254+E	F			6.78E-05	5.86E-05	3.47E-05	2.12E-05	1.14E-05	1.03E-05	1.23E-05	
Es-254m	F		5.00E-03	6.08E-07	4.44E-07	2.43E-07	1.53E-07	7.57E-08	6.56E-08	8.17E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Es-254m	M		5.00E-03	1.74E-06	1.31E-06	8.48E-07	6.32E-07	5.98E-07	4.76E-07	5.16E-07	
Es-254m	S		5.00E-03	1.87E-06	1.41E-06	9.14E-07	6.86E-07	6.57E-07	5.22E-07	5.64E-07	
Es-255	F		5.00E-03	1.11E-05	8.33E-06	4.48E-06	2.81E-06	1.20E-06	9.73E-07	1.30E-06	
Es-255	M		5.00E-03	1.51E-05	1.16E-05	7.34E-06	5.35E-06	4.83E-06	3.84E-06	4.21E-06	
Es-255	S		5.00E-03	1.67E-05	1.29E-05	8.22E-06	6.09E-06	5.74E-06	4.56E-06	4.95E-06	
Es-256	F		5.00E-03	9.00E-08	6.07E-08	3.03E-08	1.88E-08	9.30E-09	7.74E-09	9.88E-09	
Es-256	M		5.00E-03	1.90E-07	1.32E-07	8.22E-08	5.36E-08	4.35E-08	3.81E-08	4.19E-08	
Es-256	S		5.00E-03	2.01E-07	1.40E-07	8.82E-08	5.76E-08	4.73E-08	4.14E-08	4.55E-08	
Eu-142			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-142m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-143			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-144			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-145	F		5.00E-03	3.18E-09	2.55E-09	1.34E-09	8.59E-10	5.31E-10	4.43E-10	5.26E-10	
Eu-145	M		5.00E-03	3.28E-09	2.63E-09	1.43E-09	9.30E-10	6.26E-10	5.06E-10	5.93E-10	
Eu-145	S		5.00E-03	3.32E-09	2.66E-09	1.46E-09	9.50E-10	6.47E-10	5.20E-10	6.09E-10	
Eu-146	F		5.00E-03	4.79E-09	3.85E-09	2.01E-09	1.29E-09	7.89E-10	6.49E-10	7.77E-10	
Eu-146	M		5.00E-03	5.27E-09	4.23E-09	2.27E-09	1.47E-09	9.58E-10	7.68E-10	9.11E-10	
Eu-146	S		5.00E-03	5.34E-09	4.28E-09	2.31E-09	1.50E-09	9.83E-10	7.86E-10	9.31E-10	
Eu-147	F		5.00E-03	3.99E-09	2.99E-09	1.53E-09	9.82E-10	6.18E-10	5.25E-10	6.20E-10	
Eu-147	M		5.00E-03	4.92E-09	3.76E-09	2.22E-09	1.57E-09	1.32E-09	1.06E-09	1.17E-09	
Eu-147	S		5.00E-03	5.25E-09	4.03E-09	2.42E-09	1.73E-09	1.49E-09	1.19E-09	1.31E-09	
Eu-148	F		5.00E-03	2.08E-08	1.69E-08	9.12E-09	6.26E-09	4.18E-09	3.62E-09	4.14E-09	
Eu-148	M		5.00E-03	1.43E-08	1.20E-08	7.05E-09	4.70E-09	3.25E-09	2.70E-09	3.10E-09	
Eu-148	S		5.00E-03	1.41E-08	1.19E-08	7.15E-09	4.30E-09	3.39E-09	2.78E-09	3.15E-09	
Eu-149	F		5.00E-03	4.30E-09	3.32E-09	1.69E-09	1.03E-09	6.33E-10	5.34E-10	6.40E-10	
Eu-149	M		5.00E-03	2.53E-09	1.96E-09	1.08E-09	6.78E-10	4.81E-10	4.03E-10	4.64E-10	
Eu-149	S		5.00E-03	2.48E-09	1.94E-09	1.09E-09	6.99E-10	5.13E-10	4.27E-10	4.88E-10	
Eu-150	F		5.00E-03	3.14E-07	2.96E-07	2.02E-07	1.54E-07	1.30E-07	1.28E-07	1.34E-07	
Eu-150	M		5.00E-03	1.10E-07	1.07E-07	7.81E-08	5.81E-08	5.35E-08	5.37E-08	5.53E-08	
Eu-150	S		5.00E-03	7.37E-08	7.12E-08	5.25E-08	3.78E-08	3.40E-08	3.27E-08	3.41E-08	
Eu-150m	F		5.00E-03	9.97E-10	6.51E-10	2.77E-10	1.70E-10	8.76E-11	7.37E-11	9.42E-11	
Eu-150m	M		5.00E-03	1.64E-09	1.10E-09	5.27E-10	3.49E-10	2.38E-10	1.93E-10	2.27E-10	
Eu-150m	S		5.00E-03	1.73E-09	1.17E-09	5.60E-10	3.72E-10	2.57E-10	2.08E-10	2.44E-10	
Eu-152	F		5.00E-03	2.86E-07	2.63E-07	1.68E-07	1.20E-07	9.56E-08	9.33E-08	9.93E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Eu-152	M		5.00E-03	1.10E-07	1.03E-07	7.02E-08	4.90E-08	4.31E-08	4.21E-08	4.41E-08	
Eu-152	S		5.00E-03	8.84E-08	8.25E-08	5.71E-08	3.94E-08	3.44E-08	3.25E-08	3.44E-08	
Eu-152m	F		5.00E-03	1.24E-09	8.28E-10	3.61E-10	2.20E-10	1.15E-10	9.56E-11	1.22E-10	
Eu-152m	M		5.00E-03	1.91E-09	1.27E-09	6.59E-10	4.23E-10	2.37E-10	2.17E-10	2.58E-10	
Eu-152m	S		5.00E-03	2.00E-09	1.34E-09	6.20E-10	4.01E-10	2.53E-10	2.09E-10	2.51E-10	
Eu-152n	F		5.00E-03	3.84E-11	2.69E-11	1.32E-11	8.31E-12	5.24E-12	4.51E-12	5.34E-12	
Eu-152n	M		5.00E-03	6.58E-11	4.44E-11	2.29E-11	1.47E-11	1.03E-11	8.72E-12	1.01E-11	
Eu-152n	S		5.00E-03	6.88E-11	4.64E-11	2.40E-11	1.54E-11	9.56E-12	8.07E-12	9.60E-12	
Eu-154	F		5.00E-03	3.81E-07	3.46E-07	2.13E-07	1.44E-07	1.11E-07	1.07E-07	1.15E-07	
Eu-154	M		5.00E-03	1.56E-07	1.43E-07	9.35E-08	6.29E-08	5.37E-08	5.13E-08	5.45E-08	
Eu-154	S		5.00E-03	1.35E-07	1.24E-07	8.35E-08	5.66E-08	4.86E-08	4.53E-08	4.83E-08	
Eu-154m	F		5.00E-03	2.34E-11	1.65E-11	8.18E-12	5.12E-12	3.31E-12	2.87E-12	3.37E-12	
Eu-154m	M		5.00E-03	3.34E-11	2.22E-11	1.10E-11	6.90E-12	4.68E-12	3.93E-12	4.61E-12	
Eu-154m	S		5.00E-03	3.46E-11	2.29E-11	1.14E-11	7.13E-12	4.85E-12	4.06E-12	4.76E-12	
Eu-155	F		5.00E-03	5.68E-08	5.04E-08	2.94E-08	1.83E-08	1.31E-08	1.24E-08	1.38E-08	
Eu-155	M		5.00E-03	2.63E-08	2.30E-08	1.45E-08	9.27E-09	7.63E-09	6.99E-09	7.59E-09	
Eu-155	S		5.00E-03	2.25E-08	1.93E-08	1.23E-08	8.10E-09	6.77E-09	5.98E-09	6.51E-09	
Eu-156	F		5.00E-03	1.49E-08	1.03E-08	4.84E-09	2.99E-09	1.78E-09	1.46E-09	1.79E-09	
Eu-156	M		5.00E-03	1.96E-08	1.44E-08	7.93E-09	5.43E-09	4.27E-09	3.51E-09	3.95E-09	
Eu-156	S		5.00E-03	2.07E-08	1.54E-08	8.62E-09	5.95E-09	4.78E-09	3.94E-09	4.41E-09	
Eu-157	F		5.00E-03	1.61E-09	1.08E-09	4.75E-10	2.91E-10	1.53E-10	1.27E-10	1.62E-10	
Eu-157	M		5.00E-03	2.52E-09	1.93E-09	9.20E-10	6.03E-10	3.60E-10	2.92E-10	3.55E-10	
Eu-157	S		5.00E-03	2.65E-09	2.02E-09	9.70E-10	6.38E-10	3.87E-10	3.14E-10	3.80E-10	
Eu-158	F		5.00E-03	2.69E-10	1.80E-10	8.26E-11	5.11E-11	3.04E-11	2.53E-11	3.10E-11	
Eu-158	M		5.00E-03	4.29E-10	2.86E-10	1.34E-10	8.59E-11	5.65E-11	4.69E-11	5.57E-11	
Eu-158	S		5.00E-03	4.47E-10	2.97E-10	1.40E-10	8.98E-11	5.94E-11	4.92E-11	5.84E-11	
Eu-159	F		5.00E-03	1.37E-10	8.75E-11	3.82E-11	2.41E-11	1.44E-11	1.23E-11	1.50E-11	
Eu-159	M		5.00E-03	2.16E-10	1.40E-10	6.35E-11	4.13E-11	2.72E-11	2.30E-11	2.71E-11	
Eu-159	S		5.00E-03	2.24E-10	1.45E-10	6.63E-11	4.32E-11	2.86E-11	2.42E-11	2.85E-11	
F-17			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
F-18	F		1.00E+00	2.56E-10	1.86E-10	8.85E-11	5.45E-11	3.28E-11	2.69E-11	3.28E-11	
F-18	M		1.00E+00	3.96E-10	2.85E-10	1.43E-10	9.41E-11	6.69E-11	5.41E-11	6.30E-11	
F-18	S		1.00E+00	4.11E-10	2.96E-10	1.49E-10	9.85E-11	7.06E-11	5.71E-11	6.64E-11	
Fe-52	F		6.00E-01	5.20E-09	3.56E-09	1.54E-09	8.94E-10	4.89E-10	3.88E-10	5.01E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Fe-52	M		2.00E-01	5.82E-09	4.11E-09	1.94E-09	1.22E-09	7.34E-10	6.01E-10	7.33E-10	
Fe-52	S		2.00E-02	6.00E-09	4.23E-09	2.01E-09	1.28E-09	7.71E-10	6.34E-10	7.70E-10	
Fe-53			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fe-53m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fe-55	F		6.00E-01	4.11E-09	3.19E-09	2.19E-09	1.41E-09	9.43E-10	7.82E-10	9.03E-10	
Fe-55	M		2.00E-01	1.90E-09	1.44E-09	9.87E-10	6.22E-10	4.39E-10	3.88E-10	4.37E-10	
Fe-55	S		2.00E-02	9.85E-10	8.36E-10	4.96E-10	2.91E-10	2.02E-10	1.83E-10	2.08E-10	
Fe-59	F		6.00E-01	2.04E-08	1.31E-08	7.10E-09	4.43E-09	2.65E-09	2.23E-09	2.68E-09	
Fe-59	M		2.00E-01	1.84E-08	1.33E-08	7.87E-09	5.50E-09	4.58E-09	3.70E-09	4.12E-09	
Fe-59	S		2.00E-02	1.71E-08	1.34E-08	8.10E-09	5.79E-09	5.04E-09	4.03E-09	4.45E-09	
Fe-60	F		6.00E-01	4.52E-07	4.07E-07	3.70E-07	3.34E-07	3.05E-07	2.90E-07	2.97E-07	
Fe-60	M		2.00E-01	2.07E-07	1.81E-07	1.66E-07	1.47E-07	1.44E-07	1.44E-07	1.45E-07	
Fe-60	S		2.00E-02	9.99E-08	9.41E-08	7.18E-08	5.50E-08	5.24E-08	5.18E-08	5.31E-08	
Fe-60+D	F			5.43E-07	4.93E-07	4.29E-07	3.74E-07	3.39E-07	3.21E-07	3.31E-07	
Fe-60+E	F			5.43E-07	4.93E-07	4.29E-07	3.74E-07	3.39E-07	3.21E-07	3.31E-07	
Fe-61			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fe-62			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fm-251	F		5.00E-03	3.28E-09	2.34E-09	1.17E-09	7.85E-10	3.25E-10	2.79E-10	3.66E-10	
Fm-251	M		5.00E-03	8.62E-09	6.31E-09	3.25E-09	2.40E-09	2.28E-09	1.83E-09	2.00E-09	
Fm-251	S		5.00E-03	9.19E-09	6.72E-09	3.50E-09	2.60E-09	2.47E-09	1.98E-09	2.16E-09	
Fm-252	F		5.00E-03	5.39E-07	4.15E-07	2.33E-07	1.45E-07	7.32E-08	6.27E-08	7.79E-08	
Fm-252	M		5.00E-03	1.31E-06	9.91E-07	6.43E-07	4.73E-07	4.42E-07	3.54E-07	3.84E-07	
Fm-252	S		5.00E-03	1.39E-06	1.05E-06	6.82E-07	5.07E-07	4.84E-07	3.86E-07	4.17E-07	
Fm-253	F		5.00E-03	8.37E-07	6.12E-07	3.27E-07	2.07E-07	8.91E-08	7.26E-08	9.62E-08	
Fm-253	M		5.00E-03	1.51E-06	1.15E-06	7.32E-07	5.38E-07	4.95E-07	3.94E-07	4.30E-07	
Fm-253	S		5.00E-03	1.68E-06	1.28E-06	8.22E-07	6.10E-07	5.77E-07	4.60E-07	4.98E-07	
Fm-254	F		5.00E-03	1.23E-07	8.64E-08	4.11E-08	2.76E-08	1.75E-08	1.57E-08	1.82E-08	
Fm-254	M		5.00E-03	3.17E-07	2.31E-07	1.34E-07	9.82E-08	7.64E-08	6.08E-08	6.85E-08	
Fm-254	S		5.00E-03	3.38E-07	2.46E-07	1.44E-07	1.06E-07	8.34E-08	6.62E-08	7.44E-08	
Fm-255	F		5.00E-03	4.10E-07	2.82E-07	8.83E-08	8.80E-08	4.43E-08	3.88E-08	4.69E-08	
Fm-255	M		5.00E-03	1.18E-06	7.28E-07	4.73E-07	3.52E-07	3.35E-07	2.67E-07	2.90E-07	
Fm-255	S		5.00E-03	1.06E-06	7.93E-07	5.17E-07	3.87E-07	3.71E-07	2.95E-07	3.19E-07	
Fm-256	F		5.00E-03	5.77E-07	3.89E-07	1.99E-07	1.24E-07	6.74E-08	5.68E-08	7.02E-08	
Fm-256	M		5.00E-03	1.19E-06	8.23E-07	5.16E-07	3.36E-07	2.73E-07	2.39E-07	2.63E-07	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Fm-256	S		5.00E-03	1.26E-06	8.73E-07	5.52E-07	3.60E-07	2.96E-07	2.60E-07	2.85E-07	
Fm-257	F		5.00E-03	4.75E-05	3.84E-05	2.14E-05	1.33E-05	5.78E-06	4.77E-06	6.26E-06	
Fm-257	M		5.00E-03	3.30E-05	2.64E-05	1.64E-05	1.12E-05	8.89E-06	7.22E-06	8.09E-06	
Fm-257	S		5.00E-03	3.31E-05	2.61E-05	1.63E-05	1.15E-05	1.03E-05	8.37E-06	9.15E-06	
Fr-212	F		1.00E+00	1.22E-08	8.69E-09	4.53E-09	3.15E-09	2.46E-09	2.07E-09	2.32E-09	
Fr-212	M		1.00E+00	2.95E-08	2.15E-08	1.27E-08	7.73E-09	7.35E-09	5.88E-09	6.50E-09	
Fr-212	S		1.00E+00	3.15E-08	2.30E-08	1.14E-08	8.38E-09	7.98E-09	6.38E-09	6.98E-09	
Fr-219			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-222	F		1.00E+00	9.12E-08	6.37E-08	3.06E-08	2.16E-08	1.59E-08	1.36E-08	1.54E-08	
Fr-222	M		1.00E+00	1.54E-07	1.09E-07	5.51E-08	3.96E-08	3.12E-08	2.61E-08	2.92E-08	
Fr-222	S		1.00E+00	1.61E-07	1.14E-07	5.78E-08	4.15E-08	3.29E-08	2.75E-08	3.08E-08	
Fr-223	F		1.00E+00	1.11E-08	7.43E-09	3.22E-09	1.95E-09	1.06E-09	9.03E-10	1.13E-09	
Fr-223	M		1.00E+00	4.42E-08	3.27E-08	1.99E-08	1.45E-08	1.31E-08	1.05E-08	1.15E-08	
Fr-223	S		1.00E+00	4.99E-08	3.71E-08	2.28E-08	1.66E-08	1.52E-08	1.21E-08	1.33E-08	
Fr-224			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-227			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ga-64			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ga-65	F		1.00E-02	1.08E-10	7.29E-11	3.33E-11	2.09E-11	1.28E-11	1.08E-11	1.31E-11	
Ga-65	M		1.00E-02	1.56E-10	1.05E-10	4.82E-11	3.08E-11	1.98E-11	1.66E-11	1.98E-11	
Ga-65	S		1.00E-02	1.62E-10	1.08E-10	4.99E-11	3.20E-11	2.06E-11	1.73E-11	2.06E-11	
Ga-66	F		1.00E-02	2.87E-09	2.03E-09	9.35E-10	5.72E-10	3.06E-10	2.51E-10	3.17E-10	
Ga-66	M		1.00E-02	4.51E-09	3.16E-09	1.48E-09	9.28E-10	5.34E-10	4.43E-10	5.45E-10	
Ga-66	S		1.00E-02	4.69E-09	3.29E-09	1.54E-09	9.68E-10	5.59E-10	4.64E-10	5.70E-10	
Ga-67	F		1.00E-02	6.56E-10	4.69E-10	2.22E-10	1.39E-10	7.82E-11	6.58E-11	8.09E-11	
Ga-67	M		1.00E-02	1.42E-09	1.04E-09	5.14E-10	3.69E-10	3.08E-10	2.44E-10	2.74E-10	
Ga-67	S		1.00E-02	1.35E-09	1.11E-09	5.59E-10	4.03E-10	3.41E-10	2.69E-10	3.01E-10	
Ga-68	F		1.00E-02	2.85E-10	1.92E-10	8.74E-11	5.36E-11	3.10E-11	2.58E-11	3.18E-11	
Ga-68	M		1.00E-02	4.63E-10	3.09E-10	1.44E-10	9.17E-11	5.91E-11	4.89E-11	5.85E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ga-68	S		1.00E-02	4.82E-10	3.22E-10	1.50E-10	9.59E-11	6.21E-11	5.14E-11	6.14E-11	
Ga-70	F		1.00E-02	9.54E-11	5.97E-11	2.56E-11	1.64E-11	1.01E-11	8.75E-12	1.05E-11	
Ga-70	M		1.00E-02	1.52E-10	9.63E-11	4.26E-11	2.80E-11	1.84E-11	1.58E-11	1.86E-11	
Ga-70	S		1.00E-02	1.58E-10	1.00E-10	4.44E-11	2.92E-11	1.93E-11	1.65E-11	1.95E-11	
Ga-72	F		1.00E-02	2.98E-09	2.21E-09	1.06E-09	6.52E-10	3.61E-10	2.95E-10	3.68E-10	
Ga-72	M		1.00E-02	4.59E-09	3.35E-09	1.64E-09	1.05E-09	6.54E-10	5.32E-10	6.41E-10	
Ga-72	S		1.00E-02	4.77E-09	3.48E-09	1.71E-09	1.10E-09	6.87E-10	5.59E-10	6.72E-10	
Ga-73	F		1.00E-02	6.81E-10	4.55E-10	2.00E-10	1.23E-10	6.59E-11	5.53E-11	6.96E-11	
Ga-73	M		1.00E-02	1.26E-09	8.51E-10	4.06E-10	2.65E-10	1.76E-10	1.45E-10	1.72E-10	
Ga-73	S		1.00E-02	1.32E-09	8.95E-10	4.29E-10	2.81E-10	1.88E-10	1.55E-10	1.83E-10	
Ga-74			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-142			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-143m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-144			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-145	F		5.00E-03	1.11E-10	8.42E-11	4.18E-11	2.56E-11	1.53E-11	1.24E-11	1.52E-11	
Gd-145	M		5.00E-03	1.48E-10	1.09E-10	5.41E-11	3.36E-11	2.08E-11	1.69E-11	2.05E-11	
Gd-145	S		5.00E-03	1.52E-10	1.12E-10	5.55E-11	3.45E-11	2.15E-11	1.74E-11	2.11E-11	
Gd-145m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-146	F		5.00E-03	2.82E-08	2.20E-08	1.16E-08	7.57E-09	4.95E-09	4.25E-09	4.94E-09	
Gd-146	M		5.00E-03	2.69E-08	2.13E-08	1.29E-08	9.00E-09	7.62E-09	6.21E-09	6.86E-09	
Gd-146	S		5.00E-03	2.90E-08	2.31E-08	1.43E-08	1.01E-08	8.76E-09	7.08E-09	7.79E-09	
Gd-147	F		5.00E-03	2.19E-09	1.73E-09	8.84E-10	5.55E-10	3.29E-10	2.69E-10	3.27E-10	
Gd-147	M		5.00E-03	2.88E-09	2.25E-09	1.19E-09	7.83E-10	5.26E-10	4.19E-10	4.94E-10	
Gd-147	S		5.00E-03	2.97E-09	2.32E-09	1.24E-09	8.16E-10	5.55E-10	4.42E-10	5.20E-10	
Gd-148	F		5.00E-03	8.13E-05	7.44E-05	4.60E-05	3.16E-05	2.56E-05	2.53E-05	2.68E-05	
Gd-148	M		5.00E-03	3.13E-05	2.87E-05	1.90E-05	1.28E-05	1.13E-05	1.13E-05	1.18E-05	
Gd-148	S		5.00E-03	2.09E-05	1.83E-05	1.20E-05	7.72E-06	6.48E-06	6.20E-06	6.63E-06	
Gd-149	F		5.00E-03	2.78E-09	2.41E-09	9.95E-10	6.31E-10	3.83E-10	3.22E-10	3.90E-10	
Gd-149	M		5.00E-03	4.72E-09	3.59E-09	1.80E-09	1.28E-09	1.07E-09	8.46E-10	9.52E-10	
Gd-149	S		5.00E-03	4.48E-09	3.37E-09	1.95E-09	1.40E-09	1.19E-09	9.39E-10	1.05E-09	
Gd-150	F		5.00E-03	7.43E-05	6.82E-05	4.28E-05	2.99E-05	2.45E-05	2.42E-05	2.56E-05	
Gd-150	M		5.00E-03	2.74E-05	2.54E-05	1.71E-05	1.16E-05	1.04E-05	1.04E-05	1.09E-05	
Gd-150	S		5.00E-03	1.72E-05	1.53E-05	1.01E-05	6.53E-06	5.51E-06	5.33E-06	5.68E-06	
Gd-151	F		5.00E-03	7.49E-09	5.83E-09	3.02E-09	1.79E-09	1.09E-09	9.29E-10	1.11E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Gd-151	M		5.00E-03	5.27E-09	4.15E-09	2.39E-09	1.58E-09	1.25E-09	1.02E-09	1.15E-09	
Gd-151	S		5.00E-03	5.49E-09	4.36E-09	2.57E-09	1.75E-09	1.44E-09	1.17E-09	1.31E-09	
Gd-152	F		5.00E-03	5.83E-05	5.36E-05	3.36E-05	2.35E-05	1.92E-05	1.90E-05	2.01E-05	
Gd-152	M		5.00E-03	2.06E-05	1.93E-05	1.29E-05	8.83E-06	7.91E-06	7.96E-06	8.29E-06	
Gd-152	S		5.00E-03	1.24E-05	1.12E-05	7.32E-06	4.71E-06	3.96E-06	3.87E-06	4.11E-06	
Gd-153	F		5.00E-03	1.47E-08	1.20E-08	6.48E-09	3.88E-09	2.44E-09	2.11E-09	2.49E-09	
Gd-153	M		5.00E-03	9.91E-09	7.97E-09	4.79E-09	3.12E-09	2.48E-09	2.09E-09	2.33E-09	
Gd-153	S		5.00E-03	1.04E-08	8.39E-09	5.17E-09	3.48E-09	2.87E-09	2.40E-09	2.65E-09	
Gd-159	F		5.00E-03	1.22E-09	9.05E-10	3.88E-10	2.36E-10	1.22E-10	1.02E-10	1.31E-10	
Gd-159	M		5.00E-03	2.26E-09	1.53E-09	7.41E-10	4.94E-10	3.45E-10	2.78E-10	3.26E-10	
Gd-159	S		5.00E-03	2.38E-09	1.61E-09	7.88E-10	5.27E-10	3.73E-10	3.00E-10	3.51E-10	
Gd-162			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ge-66	F		1.00E+00	4.51E-10	3.48E-10	1.78E-10	1.11E-10	6.66E-11	5.37E-11	6.54E-11	
Ge-66	M		1.00E+00	6.32E-10	4.81E-10	2.53E-10	1.63E-10	1.09E-10	9.00E-11	1.05E-10	
Ge-66	S		1.00E+00	6.52E-10	4.95E-10	2.61E-10	1.68E-10	1.14E-10	9.41E-11	1.10E-10	
Ge-67	F		1.00E+00	1.57E-10	1.04E-10	4.74E-11	2.93E-11	1.77E-11	1.48E-11	1.80E-11	
Ge-67	M		1.00E+00	2.33E-10	1.54E-10	7.05E-11	4.45E-11	2.84E-11	2.38E-11	2.85E-11	
Ge-67	S		1.00E+00	2.42E-10	1.59E-10	7.30E-11	4.62E-11	2.96E-11	2.48E-11	2.97E-11	
Ge-68	F		1.00E+00	5.39E-09	3.80E-09	1.80E-09	1.11E-09	6.28E-10	5.15E-10	6.40E-10	
Ge-68	M		1.00E+00	5.83E-08	4.87E-08	2.90E-08	1.94E-08	1.54E-08	1.36E-08	1.50E-08	
Ge-68	S		1.00E+00	1.17E-07	1.03E-07	6.42E-08	4.23E-08	3.37E-08	3.07E-08	3.35E-08	
Ge-68+D	S			1.17E-07	1.03E-07	6.44E-08	4.24E-08	3.38E-08	3.08E-08	3.36E-08	
Ge-68+E	S			1.17E-07	1.03E-07	6.44E-08	4.24E-08	3.38E-08	3.08E-08	3.36E-08	
Ge-69	F		1.00E+00	1.05E-09	8.40E-10	4.36E-10	2.66E-10	1.58E-10	1.27E-10	1.56E-10	
Ge-69	M		1.00E+00	1.51E-09	1.19E-09	6.50E-10	4.21E-10	2.98E-10	2.39E-10	2.78E-10	
Ge-69	S		1.00E+00	1.57E-09	1.23E-09	6.75E-10	4.40E-10	3.14E-10	2.52E-10	2.93E-10	
Ge-71	F		1.00E+00	5.86E-11	4.20E-11	1.91E-11	1.09E-11	5.92E-12	4.67E-12	6.03E-12	
Ge-71	M		1.00E+00	1.17E-10	8.29E-11	4.00E-11	2.03E-11	1.25E-11	1.03E-11	1.29E-11	
Ge-71	S		1.00E+00	1.13E-10	9.06E-11	4.39E-11	2.26E-11	1.41E-11	1.16E-11	1.44E-11	
Ge-75	F		1.00E+00	1.59E-10	1.01E-10	4.36E-11	2.82E-11	1.73E-11	1.48E-11	1.78E-11	
Ge-75	M		1.00E+00	2.94E-10	1.91E-10	8.99E-11	6.07E-11	4.39E-11	3.64E-11	4.21E-11	
Ge-75	S		1.00E+00	3.09E-10	2.01E-10	9.50E-11	6.43E-11	4.68E-11	3.88E-11	4.48E-11	
Ge-77	F		1.00E+00	1.32E-09	9.56E-10	4.69E-10	2.94E-10	1.74E-10	1.43E-10	1.74E-10	
Ge-77	M		1.00E+00	2.28E-09	1.67E-09	8.90E-10	6.02E-10	4.53E-10	3.69E-10	4.21E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ge-77	S		1.00E+00	2.40E-09	1.75E-09	9.39E-10	6.38E-10	4.86E-10	3.95E-10	4.50E-10	
Ge-78	F		1.00E+00	4.16E-10	2.90E-10	1.39E-10	8.81E-11	5.38E-11	4.43E-11	5.36E-11	
Ge-78	M		1.00E+00	7.08E-10	4.89E-10	2.44E-10	1.61E-10	1.13E-10	9.37E-11	1.09E-10	
Ge-78	S		1.00E+00	7.40E-10	5.11E-10	2.56E-10	1.69E-10	1.20E-10	9.92E-11	1.15E-10	
H-3	F		1.00E+00	2.63E-11	2.02E-11	1.11E-11	8.22E-12	5.94E-12	6.25E-12	6.67E-12	
H-3	M		2.00E-01	3.38E-10	2.65E-10	1.39E-10	8.17E-11	5.22E-11	4.51E-11	5.33E-11	
H-3	S		2.00E-02	1.14E-09	1.03E-09	6.27E-10	3.73E-10	2.78E-10	2.62E-10	2.89E-10	
H-3	V		1.00E+00	6.34E-11	4.85E-11	3.07E-11	2.27E-11	1.80E-11	1.83E-11	1.93E-11	
H-3	G	Elemental	1.00E+00	6.34E-15	4.85E-15	3.07E-15	2.27E-15	1.80E-15	1.83E-15	1.93E-15	
H-3	G	Organic	1.00E+00	1.07E-10	1.12E-10	6.99E-11	5.55E-11	4.08E-11	4.13E-11	4.38E-11	
Hf-167			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hf-169			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hf-170	F		2.00E-02	1.24E-09	9.59E-10	4.85E-10	3.06E-10	1.80E-10	1.49E-10	1.81E-10	
Hf-170	M		2.00E-02	1.88E-09	1.43E-09	7.60E-10	5.01E-10	3.42E-10	2.76E-10	3.24E-10	
Hf-170	S		2.00E-02	1.95E-09	1.49E-09	7.93E-10	5.24E-10	3.62E-10	2.92E-10	3.41E-10	
Hf-172	F		2.00E-02	1.55E-07	1.35E-07	7.99E-08	5.04E-08	3.56E-08	3.32E-08	3.70E-08	
Hf-172	M		2.00E-02	8.26E-08	7.00E-08	4.44E-08	2.87E-08	2.32E-08	2.08E-08	2.27E-08	
Hf-172	S		2.00E-02	9.31E-08	8.02E-08	5.24E-08	3.48E-08	2.85E-08	2.49E-08	2.72E-08	
Hf-172+D	F			1.55E-07	1.35E-07	8.00E-08	5.04E-08	3.56E-08	3.32E-08	3.70E-08	
Hf-172+E	F			1.55E-07	1.35E-07	8.00E-08	5.04E-08	3.56E-08	3.32E-08	3.70E-08	
Hf-173	F		2.00E-02	6.62E-10	5.04E-10	2.50E-10	1.55E-10	8.94E-11	7.46E-11	9.10E-11	
Hf-173	M		2.00E-02	1.09E-09	8.13E-10	4.30E-10	2.87E-10	2.03E-10	1.64E-10	1.90E-10	
Hf-173	S		2.00E-02	1.14E-09	8.53E-10	4.53E-10	3.05E-10	2.18E-10	1.76E-10	2.03E-10	
Hf-174	F		2.00E-02	7.73E-05	7.20E-05	4.82E-05	3.64E-05	3.13E-05	3.06E-05	3.20E-05	
Hf-174	M		2.00E-02	2.86E-05	2.61E-05	1.86E-05	1.36E-05	1.27E-05	1.27E-05	1.31E-05	
Hf-174	S		2.00E-02	1.66E-05	1.37E-05	9.14E-06	6.03E-06	5.15E-06	4.99E-06	5.30E-06	
Hf-175	F		2.00E-02	5.31E-09	3.93E-09	2.03E-09	1.28E-09	8.22E-10	7.01E-10	8.25E-10	
Hf-175	M		2.00E-02	5.64E-09	4.39E-09	2.56E-09	1.75E-09	1.40E-09	1.15E-09	1.29E-09	
Hf-175	S		2.00E-02	6.38E-09	5.06E-09	3.02E-09	2.08E-09	1.71E-09	1.40E-09	1.55E-09	
Hf-177m	F		2.00E-02	3.95E-10	2.85E-10	1.34E-10	8.60E-11	5.30E-11	4.47E-11	5.36E-11	
Hf-177m	M		2.00E-02	6.62E-10	4.72E-10	2.32E-10	1.56E-10	1.10E-10	9.07E-11	1.05E-10	
Hf-177m	S		2.00E-02	6.91E-10	4.92E-10	2.43E-10	1.64E-10	1.16E-10	9.58E-11	1.11E-10	
Hf-178m	F		2.00E-02	4.97E-07	4.66E-07	3.26E-07	2.57E-07	2.24E-07	2.21E-07	2.30E-07	
Hf-178m	M		2.00E-02	2.05E-07	1.88E-07	1.37E-07	1.05E-07	9.90E-08	9.80E-08	1.01E-07	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Hf-178m	S		2.00E-02	1.79E-07	1.61E-07	1.14E-07	8.06E-08	7.18E-08	6.79E-08	7.14E-08	
Hf-179m	F		2.00E-02	9.75E-09	6.86E-09	3.44E-09	2.09E-09	1.27E-09	1.09E-09	1.30E-09	
Hf-179m	M		2.00E-02	1.72E-08	1.30E-08	7.72E-09	5.53E-09	4.81E-09	3.83E-09	4.24E-09	
Hf-179m	S		2.00E-02	1.91E-08	1.45E-08	8.75E-09	6.33E-09	5.60E-09	4.45E-09	4.90E-09	
Hf-180m	F		2.00E-02	5.41E-10	4.13E-10	2.01E-10	1.25E-10	7.19E-11	5.92E-11	7.27E-11	
Hf-180m	M		2.00E-02	9.24E-10	6.90E-10	3.59E-10	2.38E-10	1.67E-10	1.35E-10	1.57E-10	
Hf-180m	S		2.00E-02	9.67E-10	7.21E-10	3.76E-10	2.51E-10	1.78E-10	1.43E-10	1.67E-10	
Hf-181	F		2.00E-02	1.34E-08	9.55E-09	4.80E-09	2.79E-09	1.66E-09	1.43E-09	1.73E-09	
Hf-181	M		2.00E-02	2.17E-08	1.65E-08	9.86E-09	7.08E-09	6.26E-09	4.98E-09	5.49E-09	
Hf-181	S		2.00E-02	2.45E-08	1.88E-08	1.14E-08	8.31E-09	7.48E-09	5.94E-09	6.52E-09	
Hf-182	F		2.00E-02	6.20E-07	5.91E-07	4.23E-07	3.41E-07	3.00E-07	2.94E-07	3.04E-07	
Hf-182	M		2.00E-02	2.25E-07	2.12E-07	1.61E-07	1.26E-07	1.22E-07	1.21E-07	1.24E-07	
Hf-182	S		2.00E-02	1.52E-07	1.37E-07	1.00E-07	7.18E-08	6.56E-08	6.40E-08	6.65E-08	
Hf-182+D	F			6.62E-07	6.25E-07	4.44E-07	3.56E-07	3.13E-07	3.04E-07	3.16E-07	
Hf-182+E	F			6.62E-07	6.25E-07	4.44E-07	3.56E-07	3.13E-07	3.04E-07	3.16E-07	
Hf-182m	F		2.00E-02	2.03E-10	1.46E-10	6.91E-11	4.37E-11	2.69E-11	2.26E-11	2.71E-11	
Hf-182m	M		2.00E-02	3.49E-10	2.48E-10	1.25E-10	8.38E-11	6.08E-11	4.98E-11	5.74E-11	
Hf-182m	S		2.00E-02	3.66E-10	2.60E-10	1.31E-10	8.87E-11	6.50E-11	5.31E-11	6.11E-11	
Hf-183	F		2.00E-02	2.57E-10	1.76E-10	8.07E-11	4.98E-11	2.90E-11	2.44E-11	2.99E-11	
Hf-183	M		2.00E-02	4.44E-10	3.06E-10	1.51E-10	1.01E-10	7.21E-11	5.89E-11	6.83E-11	
Hf-183	S		2.00E-02	4.66E-10	3.22E-10	1.60E-10	1.07E-10	7.74E-11	6.31E-11	7.30E-11	
Hf-184	F		2.00E-02	1.38E-09	9.54E-10	4.31E-10	2.65E-10	1.43E-10	1.20E-10	1.50E-10	
Hf-184	M		2.00E-02	2.56E-09	1.79E-09	8.83E-10	5.84E-10	3.99E-10	3.26E-10	3.82E-10	
Hf-184	S		2.00E-02	2.69E-09	1.88E-09	9.33E-10	6.19E-10	4.28E-10	3.49E-10	4.08E-10	
Hg-190	F	Inorganic	4.00E-02	7.78E-11	6.03E-11	3.00E-11	1.83E-11	1.08E-11	8.76E-12	1.08E-11	
Hg-190	M	Inorganic	4.00E-02	1.10E-10	8.26E-11	4.12E-11	2.59E-11	1.64E-11	1.32E-11	1.59E-11	
Hg-190	S	Inorganic	4.00E-02	1.14E-10	8.51E-11	4.24E-11	2.68E-11	1.70E-11	1.37E-11	1.65E-11	
Hg-190	F	Organic	8.00E-01	7.52E-11	5.97E-11	2.97E-11	1.81E-11	1.07E-11	8.68E-12	1.06E-11	
Hg-190	M	Organic	8.00E-01	1.06E-10	8.17E-11	4.08E-11	2.56E-11	1.62E-11	1.31E-11	1.58E-11	
Hg-190	S	Organic	8.00E-01	1.09E-10	8.41E-11	4.20E-11	2.65E-11	1.68E-11	1.36E-11	1.64E-11	
Hg-190	V		4.00E-02	2.92E-10	2.36E-10	1.51E-10	1.12E-10	8.34E-11	7.65E-11	8.33E-11	
Hg-191m	F	Inorganic	4.00E-02	2.00E-10	1.55E-10	7.64E-11	4.67E-11	2.74E-11	2.24E-11	2.74E-11	
Hg-191m	M	Inorganic	4.00E-02	3.05E-10	2.30E-10	1.17E-10	7.52E-11	5.02E-11	4.05E-11	4.79E-11	
Hg-191m	S	Inorganic	4.00E-02	3.17E-10	2.39E-10	1.21E-10	7.84E-11	5.28E-11	4.25E-11	5.02E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Hg-191m	F	Organic	8.00E-01	1.85E-10	1.51E-10	7.43E-11	4.54E-11	2.67E-11	2.18E-11	2.67E-11
Hg-191m	M	Organic	8.00E-01	2.79E-10	2.23E-10	1.13E-10	7.31E-11	4.92E-11	3.96E-11	4.68E-11
Hg-191m	S	Organic	8.00E-01	2.89E-10	2.31E-10	1.18E-10	7.62E-11	5.17E-11	4.16E-11	4.90E-11
Hg-191m	V		4.00E-02	1.19E-09	9.68E-10	6.24E-10	4.62E-10	3.46E-10	3.20E-10	3.47E-10
Hg-192	F	Inorganic	4.00E-02	6.49E-10	5.18E-10	2.59E-10	1.59E-10	9.00E-11	7.29E-11	9.03E-11
Hg-192	M	Inorganic	4.00E-02	9.44E-10	7.31E-10	3.71E-10	2.37E-10	1.47E-10	1.19E-10	1.43E-10
Hg-192	S	Inorganic	4.00E-02	9.77E-10	7.55E-10	3.84E-10	2.46E-10	1.54E-10	1.24E-10	1.49E-10
Hg-192	F	Organic	8.00E-01	5.12E-10	4.71E-10	2.37E-10	1.44E-10	8.23E-11	6.65E-11	8.21E-11
Hg-192	M	Organic	8.00E-01	6.89E-10	6.50E-10	3.34E-10	2.12E-10	1.35E-10	1.08E-10	1.29E-10
Hg-192	S	Organic	8.00E-01	7.08E-10	6.70E-10	3.45E-10	2.20E-10	1.41E-10	1.13E-10	1.35E-10
Hg-192	V		4.00E-02	3.74E-09	3.04E-09	1.96E-09	1.44E-09	1.08E-09	9.94E-10	1.08E-09
Hg-193	F	Inorganic	4.00E-02	3.46E-10	2.70E-10	1.32E-10	8.03E-11	4.56E-11	3.70E-11	4.60E-11
Hg-193	M	Inorganic	4.00E-02	5.47E-10	4.14E-10	2.11E-10	1.36E-10	9.07E-11	7.28E-11	8.63E-11
Hg-193	S	Inorganic	4.00E-02	5.69E-10	4.30E-10	2.20E-10	1.43E-10	9.58E-11	7.68E-11	9.09E-11
Hg-193	F	Organic	8.00E-01	2.86E-10	2.51E-10	1.24E-10	7.46E-11	4.28E-11	3.46E-11	4.28E-11
Hg-193	M	Organic	8.00E-01	4.36E-10	3.81E-10	1.97E-10	1.27E-10	8.61E-11	6.89E-11	8.12E-11
Hg-193	S	Organic	8.00E-01	4.53E-10	3.96E-10	2.05E-10	1.33E-10	9.10E-11	7.28E-11	8.55E-11
Hg-193	V		4.00E-02	3.21E-09	2.62E-09	1.69E-09	1.25E-09	9.41E-10	8.70E-10	9.44E-10
Hg-193+D	V			3.21E-09	2.62E-09	1.69E-09	1.25E-09	9.41E-10	8.70E-10	9.44E-10
Hg-193+E	V			3.21E-09	2.62E-09	1.69E-09	1.25E-09	9.41E-10	8.70E-10	9.44E-10
Hg-193m	F	Inorganic	4.00E-02	1.23E-09	9.49E-10	4.63E-10	2.83E-10	1.59E-10	1.29E-10	1.61E-10
Hg-193m	M	Inorganic	4.00E-02	1.98E-09	1.49E-09	7.59E-10	4.93E-10	3.26E-10	2.61E-10	3.10E-10
Hg-193m	S	Inorganic	4.00E-02	2.06E-09	1.55E-09	7.93E-10	5.17E-10	3.44E-10	2.76E-10	3.27E-10
Hg-193m	F	Organic	8.00E-01	9.32E-10	8.48E-10	4.17E-10	2.52E-10	1.43E-10	1.16E-10	1.44E-10
Hg-193m	M	Organic	8.00E-01	1.43E-09	1.32E-09	6.80E-10	4.42E-10	3.00E-10	2.40E-10	2.82E-10
Hg-193m	S	Organic	8.00E-01	1.49E-09	1.37E-09	7.10E-10	4.64E-10	3.18E-10	2.54E-10	2.98E-10
Hg-193m	V		4.00E-02	1.11E-08	9.07E-09	5.85E-09	4.33E-09	3.24E-09	3.00E-09	3.25E-09
Hg-194	F	Inorganic	4.00E-02	3.16E-08	2.87E-08	2.00E-08	1.61E-08	1.37E-08	1.32E-08	1.38E-08
Hg-194	M	Inorganic	4.00E-02	2.12E-08	1.88E-08	1.29E-08	1.01E-08	8.89E-09	8.28E-09	8.70E-09
Hg-194	S	Inorganic	4.00E-02	5.54E-08	5.37E-08	3.88E-08	2.75E-08	2.45E-08	2.35E-08	2.46E-08
Hg-194	F	Organic	8.00E-01	4.82E-08	3.68E-08	2.41E-08	1.88E-08	1.51E-08	1.45E-08	1.54E-08
Hg-194	M	Organic	8.00E-01	5.36E-08	3.40E-08	2.23E-08	1.67E-08	1.37E-08	1.28E-08	1.37E-08
Hg-194	S	Organic	8.00E-01	8.64E-08	6.83E-08	4.82E-08	3.49E-08	3.02E-08	2.89E-08	3.04E-08
Hg-194	V		4.00E-02	9.46E-08	8.38E-08	6.30E-08	5.05E-08	4.35E-08	4.05E-08	4.25E-08

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Hg-194+D	V			9.63E-08	8.52E-08	6.37E-08	5.10E-08	4.38E-08	4.07E-08	4.28E-08
Hg-194+E	V			9.63E-08	8.52E-08	6.37E-08	5.10E-08	4.38E-08	4.07E-08	4.28E-08
Hg-195	F	Inorganic	4.00E-02	2.84E-10	2.13E-10	9.99E-11	5.98E-11	3.28E-11	2.65E-11	3.35E-11
Hg-195	M	Inorganic	4.00E-02	5.59E-10	4.06E-10	2.11E-10	1.36E-10	9.39E-11	7.69E-11	8.99E-11
Hg-195	S	Inorganic	4.00E-02	5.95E-10	4.33E-10	2.26E-10	1.46E-10	1.02E-10	8.38E-11	9.75E-11
Hg-195	F	Organic	8.00E-01	2.11E-10	1.90E-10	9.01E-11	5.34E-11	2.97E-11	2.39E-11	3.00E-11
Hg-195	M	Organic	8.00E-01	4.20E-10	3.65E-10	1.93E-10	1.24E-10	8.85E-11	7.25E-11	8.38E-11
Hg-195	S	Organic	8.00E-01	4.49E-10	3.89E-10	2.07E-10	1.34E-10	9.66E-11	7.92E-11	9.12E-11
Hg-195	V		4.00E-02	5.49E-09	4.50E-09	2.91E-09	2.16E-09	1.62E-09	1.50E-09	1.63E-09
Hg-195m	F	Inorganic	4.00E-02	1.58E-09	1.12E-09	5.03E-10	3.07E-10	1.64E-10	1.37E-10	1.73E-10
Hg-195m	M	Inorganic	4.00E-02	3.59E-09	2.58E-09	1.36E-09	8.29E-10	6.50E-10	5.22E-10	6.01E-10
Hg-195m	S	Inorganic	4.00E-02	3.85E-09	2.77E-09	1.31E-09	9.09E-10	7.21E-10	5.78E-10	6.58E-10
Hg-195m	F	Organic	8.00E-01	1.11E-09	9.53E-10	4.30E-10	2.60E-10	1.41E-10	1.18E-10	1.47E-10
Hg-195m	M	Organic	8.00E-01	2.72E-09	2.30E-09	1.24E-09	7.55E-10	6.16E-10	4.94E-10	5.62E-10
Hg-195m	S	Organic	8.00E-01	2.94E-09	2.48E-09	1.18E-09	8.32E-10	6.85E-10	5.49E-10	6.18E-10
Hg-195m	V		4.00E-02	2.98E-08	2.44E-08	1.57E-08	1.17E-08	8.74E-09	8.12E-09	8.80E-09
Hg-197	F	Inorganic	4.00E-02	7.27E-10	5.11E-10	2.28E-10	1.38E-10	7.32E-11	6.05E-11	7.69E-11
Hg-197	M	Inorganic	4.00E-02	1.78E-09	1.26E-09	7.04E-10	4.91E-10	4.01E-10	3.24E-10	3.63E-10
Hg-197	S	Inorganic	4.00E-02	1.92E-09	1.37E-09	7.71E-10	5.40E-10	4.44E-10	3.59E-10	4.01E-10
Hg-197	F	Organic	8.00E-01	5.12E-10	4.33E-10	1.93E-10	1.15E-10	6.20E-11	5.11E-11	6.45E-11
Hg-197	M	Organic	8.00E-01	1.39E-09	1.14E-09	6.51E-10	4.58E-10	3.85E-10	3.11E-10	3.45E-10
Hg-197	S	Organic	8.00E-01	1.52E-09	1.24E-09	7.16E-10	5.05E-10	4.28E-10	3.46E-10	3.83E-10
Hg-197	V		4.00E-02	1.72E-08	1.40E-08	9.06E-09	6.71E-09	5.03E-09	4.67E-09	5.06E-09
Hg-197m	F	Inorganic	4.00E-02	1.41E-09	9.60E-10	4.14E-10	2.56E-10	1.34E-10	1.15E-10	1.45E-10
Hg-197m	M	Inorganic	4.00E-02	3.53E-09	2.51E-09	1.17E-09	8.30E-10	6.84E-10	5.41E-10	6.13E-10
Hg-197m	S	Inorganic	4.00E-02	3.78E-09	2.69E-09	1.28E-09	9.08E-10	7.55E-10	5.97E-10	6.74E-10
Hg-197m	F	Organic	8.00E-01	9.57E-10	8.06E-10	3.47E-10	2.15E-10	1.14E-10	9.87E-11	1.23E-10
Hg-197m	M	Organic	8.00E-01	2.69E-09	2.24E-09	1.06E-09	7.62E-10	6.52E-10	5.15E-10	5.77E-10
Hg-197m	S	Organic	8.00E-01	2.90E-09	2.41E-09	1.16E-09	8.36E-10	7.22E-10	5.70E-10	6.37E-10
Hg-197m	V		4.00E-02	2.16E-08	1.76E-08	1.14E-08	8.43E-09	6.33E-09	5.89E-09	6.38E-09
Hg-199m	F	Inorganic	4.00E-02	1.44E-10	9.54E-11	4.19E-11	2.72E-11	1.68E-11	1.46E-11	1.74E-11
Hg-199m	M	Inorganic	4.00E-02	2.52E-10	1.69E-10	7.88E-11	5.35E-11	3.78E-11	3.16E-11	3.66E-11
Hg-199m	S	Inorganic	4.00E-02	2.64E-10	1.77E-10	8.29E-11	5.63E-11	4.01E-11	3.35E-11	3.87E-11
Hg-199m	F	Organic	8.00E-01	1.42E-10	9.50E-11	4.17E-11	2.71E-11	1.68E-11	1.45E-11	1.73E-11

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Hg-199m	M	Organic	8.00E-01	2.50E-10	1.69E-10	7.86E-11	5.33E-11	3.78E-11	3.15E-11	3.65E-11	
Hg-199m	S	Organic	8.00E-01	2.62E-10	1.77E-10	8.26E-11	5.62E-11	4.01E-11	3.34E-11	3.86E-11	
Hg-199m	V		4.00E-02	6.53E-10	5.28E-10	3.41E-10	2.53E-10	1.90E-10	1.77E-10	1.91E-10	
Hg-203	F	Inorganic	4.00E-02	4.14E-09	2.93E-09	1.41E-09	8.98E-10	5.48E-10	4.67E-10	5.59E-10	
Hg-203	M	Inorganic	4.00E-02	1.02E-08	7.80E-09	4.68E-09	3.38E-09	3.00E-09	2.39E-09	2.63E-09	
Hg-203	S	Inorganic	4.00E-02	1.21E-08	9.37E-09	5.68E-09	4.11E-09	3.68E-09	2.93E-09	3.22E-09	
Hg-203	F	Organic	8.00E-01	5.66E-09	3.67E-09	1.74E-09	1.10E-09	6.64E-10	5.67E-10	6.83E-10	
Hg-203	M	Organic	8.00E-01	1.19E-08	8.47E-09	4.97E-09	3.56E-09	3.10E-09	2.48E-09	2.74E-09	
Hg-203	S	Organic	8.00E-01	1.39E-08	1.00E-08	5.98E-09	4.30E-09	3.79E-09	3.03E-09	3.34E-09	
Hg-203	V		4.00E-02	2.96E-08	2.34E-08	1.46E-08	1.05E-08	7.67E-09	7.03E-09	7.71E-09	
Hg-205			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hg-206			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hg-207			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-150			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-153			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-153m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-154	F		5.00E-03	1.04E-10	7.12E-11	3.31E-11	2.05E-11	1.24E-11	1.04E-11	1.26E-11	
Ho-154	M		5.00E-03	1.42E-10	9.61E-11	4.48E-11	2.80E-11	1.75E-11	1.46E-11	1.76E-11	
Ho-154	S		5.00E-03	1.46E-10	9.88E-11	4.60E-11	2.88E-11	1.80E-11	1.51E-11	1.82E-11	
Ho-154m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-155	F		5.00E-03	1.26E-10	9.27E-11	4.50E-11	2.78E-11	1.65E-11	1.35E-11	1.65E-11	
Ho-155	M		5.00E-03	1.89E-10	1.35E-10	6.73E-11	4.32E-11	2.84E-11	2.31E-11	2.75E-11	
Ho-155	S		5.00E-03	1.96E-10	1.40E-10	6.99E-11	4.50E-11	2.97E-11	2.43E-11	2.87E-11	
Ho-156	F		5.00E-03	3.04E-10	2.18E-10	1.04E-10	6.37E-11	3.77E-11	3.10E-11	3.80E-11	
Ho-156	M		5.00E-03	4.63E-10	3.24E-10	1.56E-10	9.93E-11	6.42E-11	5.27E-11	6.29E-11	
Ho-156	S		5.00E-03	4.80E-10	3.35E-10	1.62E-10	1.03E-10	6.71E-11	5.50E-11	6.56E-11	
Ho-157	F		5.00E-03	2.85E-11	2.16E-11	1.06E-11	6.66E-12	4.12E-12	3.39E-12	4.08E-12	
Ho-157	M		5.00E-03	3.86E-11	2.86E-11	1.41E-11	9.04E-12	5.82E-12	4.79E-12	5.70E-12	
Ho-157	S		5.00E-03	3.97E-11	2.94E-11	1.45E-11	9.31E-12	6.01E-12	4.94E-12	5.87E-12	
Ho-159	F		5.00E-03	3.32E-11	2.49E-11	1.23E-11	7.70E-12	4.77E-12	3.92E-12	4.72E-12	
Ho-159	M		5.00E-03	4.90E-11	3.59E-11	1.81E-11	1.17E-11	7.93E-12	6.49E-12	7.62E-12	
Ho-159	S		5.00E-03	5.08E-11	3.71E-11	1.88E-11	1.22E-11	8.29E-12	6.78E-12	7.95E-12	
Ho-160	F		5.00E-03	7.29E-11	5.86E-11	3.01E-11	1.85E-11	1.14E-11	9.14E-12	1.11E-11	
Ho-160	M		5.00E-03	9.82E-11	7.71E-11	3.99E-11	2.52E-11	1.65E-11	1.32E-11	1.58E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ho-160	S		5.00E-03	1.01E-10	7.92E-11	4.10E-11	2.59E-11	1.71E-11	1.37E-11	1.63E-11	
Ho-161	F		5.00E-03	4.02E-11	2.94E-11	1.40E-11	8.45E-12	4.80E-12	3.87E-12	4.84E-12	
Ho-161	M		5.00E-03	6.21E-11	4.42E-11	2.18E-11	1.37E-11	8.82E-12	7.14E-12	8.57E-12	
Ho-161	S		5.00E-03	6.46E-11	4.58E-11	2.27E-11	1.43E-11	9.26E-12	7.50E-12	8.98E-12	
Ho-162	F		5.00E-03	1.41E-11	1.00E-11	4.82E-12	3.13E-12	2.08E-12	1.73E-12	2.04E-12	
Ho-162	M		5.00E-03	2.10E-11	1.47E-11	7.27E-12	4.84E-12	3.44E-12	2.84E-12	3.29E-12	
Ho-162	S		5.00E-03	2.17E-11	1.53E-11	7.54E-12	5.03E-12	3.59E-12	2.96E-12	3.43E-12	
Ho-162m	F		5.00E-03	9.23E-11	6.95E-11	3.43E-11	2.11E-11	1.27E-11	1.04E-11	1.26E-11	
Ho-162m	M		5.00E-03	1.48E-10	1.08E-10	5.58E-11	3.63E-11	2.52E-11	2.04E-11	2.39E-11	
Ho-162m	S		5.00E-03	1.54E-10	1.13E-10	5.82E-11	3.80E-11	2.66E-11	2.15E-11	2.51E-11	
Ho-163	F		5.00E-03	1.29E-09	7.40E-10	4.65E-10	3.28E-10	2.68E-10	2.65E-10	2.82E-10	
Ho-163	M		5.00E-03	2.79E-10	2.62E-10	1.75E-10	1.20E-10	1.07E-10	1.08E-10	1.13E-10	
Ho-163	S		5.00E-03	1.61E-10	1.46E-10	9.45E-11	6.09E-11	5.09E-11	5.00E-11	5.31E-11	
Ho-164	F		5.00E-03	4.03E-11	2.62E-11	1.15E-11	7.58E-12	4.80E-12	4.15E-12	4.92E-12	
Ho-164	M		5.00E-03	6.82E-11	4.50E-11	2.09E-11	1.41E-11	9.98E-12	8.40E-12	9.72E-12	
Ho-164	S		5.00E-03	7.13E-11	4.70E-11	2.19E-11	1.49E-11	1.06E-11	8.86E-12	1.02E-11	
Ho-164m	F		5.00E-03	4.65E-11	2.97E-11	1.33E-11	8.26E-12	5.00E-12	4.20E-12	5.11E-12	
Ho-164m	M		5.00E-03	9.28E-11	6.05E-11	3.02E-11	1.99E-11	1.30E-11	1.22E-11	1.39E-11	
Ho-164m	S		5.00E-03	9.79E-11	6.39E-11	3.21E-11	2.12E-11	1.40E-11	1.13E-11	1.35E-11	
Ho-166	F		5.00E-03	4.15E-09	2.60E-09	1.09E-09	6.87E-10	3.42E-10	2.72E-10	3.58E-10	
Ho-166	M		5.00E-03	6.01E-09	4.04E-09	1.90E-09	1.23E-09	8.00E-10	6.60E-10	7.86E-10	
Ho-166	S		5.00E-03	6.30E-09	4.25E-09	2.01E-09	1.31E-09	8.60E-10	7.09E-10	8.42E-10	
Ho-166m	F		5.00E-03	7.43E-07	6.92E-07	4.64E-07	3.48E-07	2.86E-07	2.82E-07	2.96E-07	
Ho-166m	M		5.00E-03	2.60E-07	2.48E-07	1.79E-07	1.31E-07	1.19E-07	1.19E-07	1.23E-07	
Ho-166m	S		5.00E-03	1.36E-07	1.28E-07	9.19E-08	6.61E-08	6.01E-08	5.76E-08	6.01E-08	
Ho-167	F		5.00E-03	2.97E-10	2.06E-10	9.36E-11	5.88E-11	3.37E-11	2.85E-11	3.49E-11	
Ho-167	M		5.00E-03	5.41E-10	3.77E-10	1.87E-10	1.26E-10	9.06E-11	7.39E-11	8.56E-11	
Ho-167	S		5.00E-03	5.68E-10	3.96E-10	1.97E-10	1.34E-10	9.69E-11	7.89E-11	9.12E-11	
Ho-168			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-168m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-170			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-118	F		1.00E+00	5.67E-10	5.05E-10	2.47E-10	1.25E-10	7.52E-11	5.13E-11	6.86E-11	
I-118	M		2.00E-01	3.63E-10	2.40E-10	1.13E-10	6.63E-11	4.11E-11	3.30E-11	4.07E-11	
I-118	S		2.00E-02	2.90E-10	1.90E-10	8.76E-11	5.45E-11	3.42E-11	2.87E-11	3.46E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
I-118	V	Vapor	1.00E+00	1.33E-09	1.18E-09	6.67E-10	3.46E-10	2.31E-10	1.60E-10	2.03E-10	
I-118	V	Methyl Iodide	1.00E+00	9.11E-10	8.47E-10	4.72E-10	2.32E-10	1.50E-10	9.61E-11	1.28E-10	
I-118m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-119	F		1.00E+00	1.49E-10	1.17E-10	5.62E-11	3.12E-11	1.92E-11	1.47E-11	1.85E-11	
I-119	M		2.00E-01	1.49E-10	1.03E-10	4.85E-11	3.02E-11	1.90E-11	1.56E-11	1.88E-11	
I-119	S		2.00E-02	1.46E-10	1.00E-10	4.72E-11	2.99E-11	1.89E-11	1.56E-11	1.88E-11	
I-119	V	Vapor	1.00E+00	3.01E-10	2.41E-10	1.40E-10	8.36E-11	5.98E-11	4.86E-11	5.66E-11	
I-119	V	Methyl Iodide	1.00E+00	1.50E-10	1.29E-10	7.08E-11	3.51E-11	2.35E-11	1.59E-11	2.06E-11	
I-120	F		1.00E+00	1.07E-09	8.80E-10	4.07E-10	1.98E-10	1.20E-10	8.47E-11	1.13E-10	
I-120	M		2.00E-01	9.25E-10	6.42E-10	3.04E-10	1.84E-10	1.12E-10	9.13E-11	1.12E-10	
I-120	S		2.00E-02	8.86E-10	6.06E-10	2.86E-10	1.78E-10	1.09E-10	9.01E-11	1.09E-10	
I-120	V	Vapor	1.00E+00	2.49E-09	2.04E-09	1.09E-09	5.38E-10	3.61E-10	2.52E-10	3.24E-10	
I-120	V	Methyl Iodide	1.00E+00	1.90E-09	1.64E-09	8.61E-10	4.02E-10	2.64E-10	1.73E-10	2.31E-10	
I-120m	F		1.00E+00	6.23E-10	5.02E-10	2.41E-10	1.30E-10	7.86E-11	5.90E-11	7.55E-11	
I-120m	M		2.00E-01	6.00E-10	4.30E-10	2.08E-10	1.28E-10	7.90E-11	6.39E-11	7.78E-11	
I-120m	S		2.00E-02	5.98E-10	4.25E-10	2.06E-10	1.28E-10	7.92E-11	6.45E-11	7.82E-11	
I-120m	V	Vapor	1.00E+00	1.10E-09	8.67E-10	4.72E-10	2.55E-10	1.76E-10	1.33E-10	1.62E-10	
I-120m	V	Methyl Iodide	1.00E+00	7.44E-10	6.32E-10	3.36E-10	1.63E-10	1.08E-10	7.27E-11	9.51E-11	
I-121	F		1.00E+00	2.02E-10	1.84E-10	9.67E-11	5.45E-11	3.51E-11	2.52E-11	3.16E-11	
I-121	M		2.00E-01	1.87E-10	1.41E-10	7.22E-11	4.55E-11	2.99E-11	2.36E-11	2.83E-11	
I-121	S		2.00E-02	1.71E-10	1.28E-10	6.48E-11	4.16E-11	2.74E-11	2.20E-11	2.62E-11	
I-121	V	Vapor	1.00E+00	5.00E-10	4.49E-10	2.70E-10	1.56E-10	1.10E-10	7.93E-11	9.60E-11	
I-121	V	Methyl Iodide	1.00E+00	3.60E-10	3.32E-10	1.97E-10	1.09E-10	7.54E-11	5.15E-11	6.42E-11	
I-122			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-123	F		1.00E+00	9.00E-10	8.16E-10	3.90E-10	1.84E-10	1.13E-10	7.62E-11	1.03E-10	
I-123	M		2.00E-01	5.48E-10	4.00E-10	2.02E-10	1.24E-10	8.40E-11	6.52E-11	7.84E-11	
I-123	S		2.00E-02	4.47E-10	3.31E-10	1.70E-10	1.12E-10	7.75E-11	6.17E-11	7.24E-11	
I-123	V	Vapor	1.00E+00	2.13E-09	1.89E-09	1.03E-09	4.89E-10	3.27E-10	2.17E-10	2.85E-10	
I-123	V	Methyl Iodide	1.00E+00	1.64E-09	1.46E-09	7.91E-10	3.70E-10	2.45E-10	1.59E-10	2.12E-10	
I-124	F		1.00E+00	4.71E-08	4.53E-08	2.25E-08	1.10E-08	6.69E-09	4.45E-09	6.00E-09	
I-124	M		2.00E-01	1.38E-08	9.34E-09	4.67E-09	2.56E-09	1.63E-09	1.19E-09	1.51E-09	
I-124	S		2.00E-02	6.21E-09	4.45E-09	2.27E-09	1.45E-09	9.57E-10	7.77E-10	9.22E-10	
I-124	V	Vapor	1.00E+00	1.09E-07	1.03E-07	5.79E-08	2.82E-08	1.86E-08	1.19E-08	1.57E-08	
I-124	V	Methyl Iodide	1.00E+00	8.53E-08	8.02E-08	4.52E-08	2.20E-08	1.45E-08	9.27E-09	1.23E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
I-125	F		1.00E+00	2.07E-08	2.34E-08	1.49E-08	1.13E-08	7.32E-09	5.25E-09	6.25E-09	
I-125	M		2.00E-01	7.08E-09	5.73E-09	3.69E-09	2.70E-09	1.88E-09	1.39E-09	1.62E-09	
I-125	S		2.00E-02	2.44E-09	1.82E-09	1.04E-09	6.84E-10	4.93E-10	3.96E-10	4.57E-10	
I-125	V	Vapor	1.00E+00	4.80E-08	5.30E-08	3.83E-08	2.90E-08	2.03E-08	1.40E-08	1.65E-08	
I-125	V	Methyl Iodide	1.00E+00	3.75E-08	4.13E-08	2.99E-08	2.26E-08	1.58E-08	1.09E-08	1.29E-08	
I-126	F		1.00E+00	8.25E-08	8.45E-08	4.52E-08	2.45E-08	1.49E-08	9.95E-09	1.31E-08	
I-126	M		2.00E-01	2.45E-08	1.76E-08	9.60E-09	5.60E-09	3.82E-09	2.74E-09	3.38E-09	
I-126	S		2.00E-02	8.41E-09	6.00E-09	3.32E-09	2.27E-09	1.81E-09	1.44E-09	1.63E-09	
I-126	V	Vapor	1.00E+00	1.91E-07	1.92E-07	1.16E-07	6.28E-08	4.15E-08	2.66E-08	3.44E-08	
I-126	V	Methyl Iodide	1.00E+00	1.49E-07	1.50E-07	9.06E-08	4.89E-08	3.23E-08	2.07E-08	2.68E-08	
I-128	F		1.00E+00	1.52E-10	1.06E-10	4.64E-11	2.65E-11	1.62E-11	1.30E-11	1.62E-11	
I-128	M		2.00E-01	1.88E-10	1.19E-10	5.27E-11	3.38E-11	2.21E-11	1.87E-11	2.22E-11	
I-128	S		2.00E-02	1.92E-10	1.21E-10	5.35E-11	3.47E-11	2.27E-11	1.94E-11	2.29E-11	
I-128	V	Vapor	1.00E+00	4.19E-10	2.77E-10	1.60E-10	1.02E-10	7.39E-11	6.39E-11	7.26E-11	
I-128	V	Methyl Iodide	1.00E+00	1.47E-10	1.22E-10	6.25E-11	2.97E-11	1.92E-11	1.27E-11	1.70E-11	
I-129	F		1.00E+00	7.36E-08	8.80E-08	6.23E-08	6.82E-08	4.66E-08	3.67E-08	4.06E-08	
I-129	M		2.00E-01	3.73E-08	3.32E-08	2.47E-08	2.44E-08	1.90E-08	1.54E-08	1.67E-08	
I-129	S		2.00E-02	2.97E-08	2.66E-08	1.81E-08	1.28E-08	1.10E-08	1.01E-08	1.08E-08	
I-129	V	Vapor	1.00E+00	1.71E-07	2.00E-07	1.60E-07	1.74E-07	1.29E-07	9.81E-08	1.08E-07	
I-129	V	Methyl Iodide	1.00E+00	1.33E-07	1.56E-07	1.25E-07	1.36E-07	1.01E-07	7.64E-08	8.41E-08	
I-130	F		1.00E+00	7.74E-09	7.02E-09	3.35E-09	1.57E-09	9.58E-10	6.44E-10	8.76E-10	
I-130	M		2.00E-01	4.12E-09	3.01E-09	1.50E-09	8.99E-10	5.74E-10	4.45E-10	5.45E-10	
I-130	S		2.00E-02	3.23E-09	2.40E-09	1.21E-09	7.83E-10	5.07E-10	4.06E-10	4.85E-10	
I-130	V	Vapor	1.00E+00	1.81E-08	1.61E-08	8.71E-09	4.09E-09	2.72E-09	1.78E-09	2.36E-09	
I-130	V	Methyl Iodide	1.00E+00	1.41E-08	1.26E-08	6.80E-09	3.15E-09	2.09E-09	1.35E-09	1.80E-09	
I-130m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-131	F		1.00E+00	7.20E-08	7.15E-08	3.66E-08	1.86E-08	1.12E-08	7.38E-09	9.91E-09	
I-131	M		2.00E-01	2.21E-08	1.54E-08	8.17E-09	4.73E-09	3.36E-09	2.43E-09	2.97E-09	
I-131	S		2.00E-02	8.74E-09	6.20E-09	3.47E-09	2.43E-09	2.03E-09	1.60E-09	1.79E-09	
I-131	V	Vapor	1.00E+00	1.67E-07	1.63E-07	9.41E-08	4.76E-08	3.11E-08	1.98E-08	2.61E-08	
I-131	V	Methyl Iodide	1.00E+00	1.30E-07	1.27E-07	7.33E-08	3.71E-08	2.42E-08	1.54E-08	2.03E-08	
I-132	F		1.00E+00	1.12E-09	9.57E-10	4.51E-10	2.18E-10	1.34E-10	9.31E-11	1.24E-10	
I-132	M		2.00E-01	9.91E-10	7.27E-10	3.58E-10	2.22E-10	1.42E-10	1.13E-10	1.37E-10	
I-132	S		2.00E-02	9.35E-10	6.80E-10	3.36E-10	2.15E-10	1.39E-10	1.12E-10	1.34E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult			
I-132	V	Vapor	1.00E+00	2.74E-09	2.32E-09	1.26E-09	6.35E-10	4.30E-10	3.06E-10	3.87E-10	
I-132	V	Methyl Iodide	1.00E+00	2.03E-09	1.77E-09	9.42E-10	4.42E-10	2.92E-10	1.92E-10	2.54E-10	
I-132m	F		1.00E+00	8.14E-10	7.09E-10	3.39E-10	1.60E-10	9.72E-11	6.65E-11	9.00E-11	
I-132m	M		2.00E-01	7.86E-10	6.16E-10	3.01E-10	1.75E-10	1.16E-10	8.96E-11	1.09E-10	
I-132m	S		2.00E-02	7.52E-10	5.89E-10	2.89E-10	1.72E-10	1.15E-10	9.00E-11	1.09E-10	
I-132m	V	Vapor	1.00E+00	2.05E-09	1.76E-09	9.74E-10	4.86E-10	3.27E-10	2.34E-10	2.96E-10	
I-132m	V	Methyl Iodide	1.00E+00	1.42E-09	1.24E-09	6.74E-10	3.10E-10	2.02E-10	1.31E-10	1.76E-10	
I-133	F		1.00E+00	1.96E-08	1.79E-08	8.38E-09	3.80E-09	2.27E-09	1.48E-09	2.07E-09	
I-133	M		2.00E-01	6.65E-09	4.42E-09	2.09E-09	1.17E-09	7.43E-10	5.58E-10	7.04E-10	
I-133	S		2.00E-02	3.81E-09	2.91E-09	1.40E-09	9.06E-10	5.32E-10	4.81E-10	5.68E-10	
I-133	V	Vapor	1.00E+00	4.57E-08	4.09E-08	2.17E-08	9.81E-09	6.35E-09	4.02E-09	5.48E-09	
I-133	V	Methyl Iodide	1.00E+00	3.58E-08	3.21E-08	1.70E-08	7.65E-09	4.95E-09	3.10E-09	4.26E-09	
I-134	F		1.00E+00	4.43E-10	3.54E-10	1.70E-10	9.37E-11	5.71E-11	4.36E-11	5.51E-11	
I-134	M		2.00E-01	4.65E-10	3.35E-10	1.64E-10	1.03E-10	6.60E-11	5.35E-11	6.43E-11	
I-134	S		2.00E-02	4.68E-10	3.34E-10	1.63E-10	1.04E-10	6.71E-11	5.47E-11	6.54E-11	
I-134	V	Vapor	1.00E+00	8.33E-10	6.61E-10	3.74E-10	2.18E-10	1.54E-10	1.44E-10	1.62E-10	
I-134	V	Methyl Iodide	1.00E+00	4.74E-10	4.02E-10	2.15E-10	1.05E-10	6.94E-11	4.71E-11	6.14E-11	
I-134m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-135	F		1.00E+00	3.86E-09	3.46E-09	1.62E-09	7.52E-10	4.56E-10	3.05E-10	4.19E-10	
I-135	M		2.00E-01	2.16E-09	1.55E-09	7.60E-10	4.58E-10	2.93E-10	2.30E-10	2.81E-10	
I-135	S		2.00E-02	1.77E-09	1.28E-09	6.34E-10	4.10E-10	2.66E-10	2.15E-10	2.56E-10	
I-135	V	Vapor	1.00E+00	9.13E-09	8.01E-09	4.29E-09	2.00E-09	1.32E-09	8.74E-10	1.16E-09	
I-135	V	Methyl Iodide	1.00E+00	7.10E-09	6.28E-09	3.34E-09	1.53E-09	1.00E-09	6.42E-10	8.66E-10	
In-103			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-105			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-106			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-106m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-107	F		4.00E-02	1.34E-10	9.79E-11	4.68E-11	2.84E-11	1.66E-11	1.36E-11	1.68E-11	
In-107	M		4.00E-02	2.03E-10	1.46E-10	7.18E-11	4.57E-11	3.02E-11	2.45E-11	2.92E-11	
In-107	S		4.00E-02	2.11E-10	1.51E-10	7.46E-11	4.76E-11	3.17E-11	2.58E-11	3.06E-11	
In-108	F		4.00E-02	2.89E-10	2.38E-10	1.23E-10	7.42E-11	4.39E-11	3.50E-11	4.30E-11	
In-108	M		4.00E-02	3.68E-10	2.95E-10	1.53E-10	9.41E-11	5.76E-11	4.57E-11	5.57E-11	
In-108	S		4.00E-02	3.77E-10	3.02E-10	1.56E-10	9.63E-11	5.91E-11	4.69E-11	5.71E-11	
In-108m	F		4.00E-02	2.38E-10	1.72E-10	8.21E-11	5.00E-11	2.93E-11	2.38E-11	2.94E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
In-108m	M		4.00E-02	3.40E-10	2.39E-10	1.15E-10	7.13E-11	4.40E-11	3.60E-11	4.37E-11	
In-108m	S		4.00E-02	3.51E-10	2.47E-10	1.18E-10	7.36E-11	4.56E-11	3.74E-11	4.53E-11	
In-109	F		4.00E-02	2.38E-10	1.93E-10	9.80E-11	5.88E-11	3.43E-11	2.75E-11	3.40E-11	
In-109	M		4.00E-02	2.93E-10	2.33E-10	1.20E-10	7.54E-11	4.72E-11	3.76E-11	4.54E-11	
In-109	S		4.00E-02	2.99E-10	2.37E-10	1.23E-10	7.73E-11	4.89E-11	3.89E-11	4.69E-11	
In-109m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-110	F		4.00E-02	8.50E-10	7.27E-10	3.84E-10	2.33E-10	1.37E-10	1.09E-10	1.34E-10	
In-110	M		4.00E-02	1.02E-09	8.58E-10	4.52E-10	2.80E-10	1.66E-10	1.31E-10	1.61E-10	
In-110	S		4.00E-02	1.04E-09	8.72E-10	4.59E-10	2.85E-10	1.69E-10	1.33E-10	1.64E-10	
In-110m	F		4.00E-02	3.01E-10	2.13E-10	1.00E-10	6.07E-11	3.52E-11	2.87E-11	3.56E-11	
In-110m	M		4.00E-02	4.49E-10	3.11E-10	1.48E-10	9.30E-11	5.83E-11	4.78E-11	5.77E-11	
In-110m	S		4.00E-02	4.65E-10	3.22E-10	1.54E-10	9.66E-11	6.08E-11	4.99E-11	6.01E-11	
In-111	F		4.00E-02	1.17E-09	8.72E-10	4.28E-10	2.66E-10	1.56E-10	1.27E-10	1.56E-10	
In-111	M		4.00E-02	1.55E-09	1.18E-09	6.24E-10	4.17E-10	2.95E-10	2.33E-10	2.72E-10	
In-111	S		4.00E-02	1.60E-09	1.22E-09	6.49E-10	4.36E-10	3.12E-10	2.46E-10	2.87E-10	
In-111m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-112	F		4.00E-02	4.55E-11	3.08E-11	1.38E-11	8.96E-12	5.59E-12	4.81E-12	5.72E-12	
In-112	M		4.00E-02	6.76E-11	4.56E-11	2.08E-11	1.37E-11	9.04E-12	7.70E-12	9.05E-12	
In-112	S		4.00E-02	7.00E-11	4.73E-11	2.15E-11	1.43E-11	9.42E-12	8.02E-12	9.42E-12	
In-112m	F		4.00E-02	1.02E-10	6.87E-11	3.04E-11	1.99E-11	1.24E-11	1.08E-11	1.28E-11	
In-112m	M		4.00E-02	1.73E-10	1.17E-10	5.39E-11	3.65E-11	2.51E-11	2.13E-11	2.47E-11	
In-112m	S		4.00E-02	1.81E-10	1.22E-10	5.64E-11	3.83E-11	2.66E-11	2.24E-11	2.60E-11	
In-113m	F		4.00E-02	1.02E-10	7.17E-11	3.30E-11	2.04E-11	1.19E-11	9.86E-12	1.21E-11	
In-113m	M		4.00E-02	1.66E-10	1.16E-10	5.56E-11	3.64E-11	2.47E-11	2.02E-11	2.38E-11	
In-113m	S		4.00E-02	1.73E-10	1.20E-10	5.81E-11	3.82E-11	2.61E-11	2.13E-11	2.50E-11	
In-114			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-114m	F		4.00E-02	1.17E-07	7.85E-08	3.44E-08	1.90E-08	1.09E-08	9.45E-09	1.18E-08	
In-114m	M		4.00E-02	7.21E-08	5.24E-08	2.81E-08	1.84E-08	1.42E-08	1.18E-08	1.34E-08	
In-114m	S		4.00E-02	6.83E-08	5.11E-08	2.90E-08	1.98E-08	1.60E-08	1.35E-08	1.50E-08	
In-114m+D	F			1.17E-07	7.85E-08	3.44E-08	1.98E-08	1.60E-08	1.35E-08	1.55E-08	
In-114m+E	F			1.17E-07	7.85E-08	3.44E-08	1.98E-08	1.60E-08	1.35E-08	1.55E-08	
In-115	F		4.00E-02	8.31E-07	7.83E-07	5.53E-07	5.01E-07	4.22E-07	3.91E-07	4.09E-07	
In-115	M		4.00E-02	3.05E-07	2.83E-07	2.40E-07	1.88E-07	1.73E-07	1.64E-07	1.69E-07	
In-115	S		4.00E-02	1.26E-07	1.01E-07	7.15E-08	5.32E-08	4.72E-08	4.44E-08	4.67E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
In-115m	F		4.00E-02	2.85E-10	1.93E-10	8.53E-11	5.22E-11	2.88E-11	2.40E-11	3.01E-11	
In-115m	M		4.00E-02	4.81E-10	3.32E-10	1.60E-10	1.06E-10	7.30E-11	5.93E-11	6.97E-11	
In-115m	S		4.00E-02	5.02E-10	3.47E-10	1.68E-10	1.12E-10	7.79E-11	6.33E-11	7.41E-11	
In-116m	F		4.00E-02	2.49E-10	1.88E-10	9.29E-11	5.71E-11	3.41E-11	2.79E-11	3.41E-11	
In-116m	M		4.00E-02	3.65E-10	2.69E-10	1.34E-10	8.59E-11	5.62E-11	4.56E-11	5.43E-11	
In-116m	S		4.00E-02	3.77E-10	2.78E-10	1.39E-10	8.90E-11	5.86E-11	4.76E-11	5.65E-11	
In-117	F		4.00E-02	1.38E-10	9.66E-11	4.45E-11	2.84E-11	1.74E-11	1.48E-11	1.77E-11	
In-117	M		4.00E-02	2.26E-10	1.57E-10	7.52E-11	5.02E-11	3.47E-11	2.88E-11	3.35E-11	
In-117	S		4.00E-02	2.36E-10	1.64E-10	7.86E-11	5.26E-11	3.66E-11	3.03E-11	3.53E-11	
In-117m	F		4.00E-02	3.46E-10	2.29E-10	1.01E-10	6.18E-11	3.48E-11	2.92E-11	3.63E-11	
In-117m	M		4.00E-02	5.98E-10	4.02E-10	1.92E-10	1.27E-10	8.75E-11	7.18E-11	8.41E-11	
In-117m	S		4.00E-02	6.26E-10	4.22E-10	2.02E-10	1.34E-10	9.33E-11	7.65E-11	8.94E-11	
In-118			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-118m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-119			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-119m	F		4.00E-02	1.19E-10	7.36E-11	3.16E-11	1.99E-11	1.20E-11	1.04E-11	1.26E-11	
In-119m	M		4.00E-02	1.82E-10	1.13E-10	4.99E-11	3.21E-11	2.05E-11	1.76E-11	2.09E-11	
In-119m	S		4.00E-02	1.89E-10	1.18E-10	5.19E-11	3.34E-11	2.15E-11	1.84E-11	2.19E-11	
In-121			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-121m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-180			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-182	F		2.00E-02	1.53E-10	1.05E-10	4.84E-11	3.03E-11	1.84E-11	1.54E-11	1.87E-11	
Ir-182	M		2.00E-02	2.24E-10	1.52E-10	7.14E-11	4.58E-11	2.97E-11	2.48E-11	2.95E-11	
Ir-182	S		2.00E-02	2.32E-10	1.57E-10	7.40E-11	4.75E-11	3.09E-11	2.58E-11	3.07E-11	
Ir-183	F		2.00E-02	1.90E-10	1.48E-10	7.33E-11	4.49E-11	2.66E-11	2.16E-11	2.64E-11	
Ir-183	M		2.00E-02	2.84E-10	2.14E-10	1.09E-10	7.03E-11	4.70E-11	3.79E-11	4.48E-11	
Ir-183	S		2.00E-02	2.95E-10	2.22E-10	1.14E-10	7.35E-11	4.95E-11	3.99E-11	4.71E-11	
Ir-184	F		2.00E-02	6.22E-10	4.75E-10	2.33E-10	1.43E-10	8.23E-11	6.71E-11	8.28E-11	
Ir-184	M		2.00E-02	9.44E-10	7.01E-10	3.53E-10	2.27E-10	1.48E-10	1.20E-10	1.43E-10	
Ir-184	S		2.00E-02	9.79E-10	7.26E-10	3.66E-10	2.36E-10	1.56E-10	1.26E-10	1.49E-10	
Ir-185	F		2.00E-02	1.00E-09	7.67E-10	3.74E-10	2.30E-10	1.30E-10	1.06E-10	1.31E-10	
Ir-185	M		2.00E-02	1.62E-09	1.20E-09	6.19E-10	4.04E-10	2.73E-10	2.20E-10	2.60E-10	
Ir-185	S		2.00E-02	1.69E-09	1.26E-09	6.51E-10	4.26E-10	2.91E-10	2.35E-10	2.76E-10	
Ir-186	F		2.00E-02	1.67E-09	1.30E-09	6.47E-10	4.00E-10	2.28E-10	1.86E-10	2.29E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ir-186	M		2.00E-02	2.51E-09	1.92E-09	9.84E-10	6.42E-10	4.22E-10	3.39E-10	4.02E-10	
Ir-186	S		2.00E-02	2.61E-09	1.98E-09	1.02E-09	6.69E-10	4.44E-10	3.56E-10	4.21E-10	
Ir-186m	F		2.00E-02	2.55E-10	2.01E-10	1.01E-10	6.18E-11	3.60E-11	2.92E-11	3.59E-11	
Ir-186m	M		2.00E-02	3.68E-10	2.82E-10	1.44E-10	9.21E-11	5.98E-11	4.80E-11	5.73E-11	
Ir-186m	S		2.00E-02	3.81E-10	2.91E-10	1.49E-10	9.55E-11	6.24E-11	5.01E-11	5.97E-11	
Ir-187	F		2.00E-02	3.43E-10	2.62E-10	1.27E-10	7.70E-11	4.32E-11	3.49E-11	4.36E-11	
Ir-187	M		2.00E-02	5.57E-10	4.13E-10	2.11E-10	1.36E-10	9.00E-11	7.27E-11	8.62E-11	
Ir-187	S		2.00E-02	5.81E-10	4.30E-10	2.21E-10	1.42E-10	9.53E-11	7.70E-11	9.10E-11	
Ir-188	F		2.00E-02	2.43E-09	1.96E-09	1.01E-09	6.33E-10	3.70E-10	3.02E-10	3.68E-10	
Ir-188	M		2.00E-02	3.24E-09	2.57E-09	1.36E-09	8.87E-10	5.79E-10	4.63E-10	5.49E-10	
Ir-188	S		2.00E-02	3.33E-09	2.64E-09	1.40E-09	9.17E-10	6.04E-10	4.82E-10	5.71E-10	
Ir-189	F		2.00E-02	1.14E-09	8.16E-10	3.79E-10	2.33E-10	1.33E-10	1.09E-10	1.35E-10	
Ir-189	M		2.00E-02	2.56E-09	1.85E-09	1.06E-09	7.33E-10	6.02E-10	4.92E-10	5.49E-10	
Ir-189	S		2.00E-02	2.83E-09	2.05E-09	1.20E-09	8.28E-10	6.89E-10	5.63E-10	6.26E-10	
Ir-190	F		2.00E-02	5.30E-09	4.13E-09	2.12E-09	1.36E-09	8.29E-10	6.95E-10	8.30E-10	
Ir-190	M		2.00E-02	7.42E-09	5.82E-09	3.27E-09	2.24E-09	1.53E-09	1.22E-09	1.42E-09	
Ir-190	S		2.00E-02	7.84E-09	6.15E-09	3.50E-09	2.40E-09	1.69E-09	1.35E-09	1.56E-09	
Ir-190m	F		2.00E-02	2.73E-11	2.03E-11	1.00E-11	6.28E-12	3.76E-12	3.14E-12	3.79E-12	
Ir-190m	M		2.00E-02	3.92E-11	2.90E-11	1.54E-11	1.03E-11	6.79E-12	5.44E-12	6.42E-12	
Ir-190m	S		2.00E-02	4.13E-11	3.05E-11	1.64E-11	1.10E-11	7.46E-12	5.95E-12	6.98E-12	
Ir-190n	F		2.00E-02	4.08E-10	3.25E-10	1.63E-10	9.94E-11	5.76E-11	4.65E-11	5.73E-11	
Ir-190n	M		2.00E-02	5.98E-10	4.61E-10	2.37E-10	1.52E-10	9.98E-11	7.99E-11	9.51E-11	
Ir-190n	S		2.00E-02	6.19E-10	4.76E-10	2.46E-10	1.58E-10	1.05E-10	8.36E-11	9.93E-11	
Ir-191m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-192	F		2.00E-02	1.52E-08	1.14E-08	5.69E-09	3.32E-09	2.05E-09	1.76E-09	2.11E-09	
Ir-192	M		2.00E-02	2.34E-08	1.83E-08	1.08E-08	7.59E-09	6.44E-09	5.21E-09	5.77E-09	
Ir-192	S		2.00E-02	2.82E-08	2.25E-08	1.35E-08	9.49E-09	8.15E-09	6.62E-09	7.30E-09	
Ir-192m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-192n	F		2.00E-02	4.47E-08	3.67E-08	1.96E-08	1.24E-08	7.92E-09	6.91E-09	8.05E-09	
Ir-192n	M		2.00E-02	5.03E-08	4.24E-08	2.57E-08	1.75E-08	1.45E-08	1.22E-08	1.34E-08	
Ir-192n	S		2.00E-02	1.52E-07	1.45E-07	1.00E-07	6.88E-08	6.08E-08	5.81E-08	6.12E-08	
Ir-193m	F		2.00E-02	1.09E-09	8.09E-10	3.53E-10	2.17E-10	1.17E-10	9.86E-11	1.24E-10	
Ir-193m	M		2.00E-02	4.63E-09	3.41E-09	2.05E-09	1.49E-09	1.34E-09	1.06E-09	1.17E-09	
Ir-193m	S		2.00E-02	5.22E-09	3.85E-09	2.33E-09	1.70E-09	1.54E-09	1.23E-09	1.35E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ir-194	F		2.00E-02	2.95E-09	1.92E-09	8.14E-10	4.96E-10	2.48E-10	2.06E-10	2.68E-10	
Ir-194	M		2.00E-02	5.29E-09	3.53E-09	1.61E-09	1.03E-09	6.29E-10	5.24E-10	6.34E-10	
Ir-194	S		2.00E-02	5.55E-09	3.71E-09	1.71E-09	1.09E-09	6.72E-10	5.60E-10	6.75E-10	
Ir-194m	F		2.00E-02	3.30E-08	2.66E-08	1.43E-08	9.39E-09	6.13E-09	5.38E-09	6.20E-09	
Ir-194m	M		2.00E-02	3.68E-08	3.01E-08	1.83E-08	1.27E-08	1.04E-08	8.60E-09	9.52E-09	
Ir-194m	S		2.00E-02	4.74E-08	4.00E-08	2.52E-08	1.74E-08	1.46E-08	1.20E-08	1.33E-08	
Ir-195	F		2.00E-02	2.90E-10	1.89E-10	8.12E-11	5.09E-11	2.88E-11	2.46E-11	3.03E-11	
Ir-195	M		2.00E-02	5.42E-10	3.61E-10	1.72E-10	1.15E-10	8.16E-11	6.70E-11	7.80E-11	
Ir-195	S		2.00E-02	5.70E-10	3.80E-10	1.82E-10	1.22E-10	8.74E-11	7.17E-11	8.32E-11	
Ir-195m	F		2.00E-02	4.42E-10	3.07E-10	1.38E-10	8.62E-11	4.83E-11	4.07E-11	5.03E-11	
Ir-195m	M		2.00E-02	8.44E-10	5.91E-10	2.96E-10	2.01E-10	1.47E-10	1.19E-10	1.37E-10	
Ir-195m	S		2.00E-02	8.89E-10	6.24E-10	3.15E-10	2.14E-10	1.58E-10	1.28E-10	1.47E-10	
Ir-196			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-196m	F		2.00E-02	4.26E-10	3.23E-10	1.58E-10	9.79E-11	5.84E-11	4.79E-11	5.83E-11	
Ir-196m	M		2.00E-02	6.58E-10	4.86E-10	2.44E-10	1.59E-10	1.08E-10	8.74E-11	1.03E-10	
Ir-196m	S		2.00E-02	6.83E-10	5.04E-10	2.54E-10	1.66E-10	1.14E-10	9.18E-11	1.08E-10	
K-38			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
K-40	F		1.00E+00	2.37E-08	1.66E-08	7.39E-09	4.46E-09	2.44E-09	2.07E-09	2.58E-09	
K-40	M		1.00E+00	6.98E-08	5.65E-08	3.18E-08	2.08E-08	1.57E-08	1.39E-08	1.55E-08	
K-40	S		1.00E+00	2.25E-07	2.12E-07	1.43E-07	9.80E-08	8.56E-08	8.46E-08	8.87E-08	
K-42	F		1.00E+00	1.58E-09	1.01E-09	4.44E-10	2.68E-10	1.48E-10	1.25E-10	1.57E-10	
K-42	M		1.00E+00	2.71E-09	1.83E-09	8.30E-10	5.41E-10	3.86E-10	3.30E-10	3.82E-10	
K-42	S		1.00E+00	2.60E-09	1.75E-09	8.82E-10	5.77E-10	4.16E-10	3.56E-10	4.08E-10	
K-43	F		1.00E+00	1.29E-09	9.64E-10	4.70E-10	2.88E-10	1.68E-10	1.40E-10	1.71E-10	
K-43	M		1.00E+00	2.13E-09	1.59E-09	8.58E-10	5.79E-10	4.39E-10	3.54E-10	4.05E-10	
K-43	S		1.00E+00	2.22E-09	1.67E-09	9.03E-10	6.13E-10	4.71E-10	3.79E-10	4.32E-10	
K-44	F		1.00E+00	2.18E-10	1.45E-10	6.64E-11	4.07E-11	2.43E-11	2.03E-11	2.48E-11	
K-44	M		1.00E+00	3.22E-10	2.12E-10	9.75E-11	6.08E-11	3.81E-11	3.19E-11	3.84E-11	
K-44	S		1.00E+00	3.34E-10	2.19E-10	1.01E-10	6.31E-11	3.97E-11	3.32E-11	3.99E-11	
K-45	F		1.00E+00	1.40E-10	9.45E-11	4.34E-11	2.69E-11	1.63E-11	1.37E-11	1.66E-11	
K-45	M		1.00E+00	2.03E-10	1.36E-10	6.28E-11	3.97E-11	2.52E-11	2.11E-11	2.53E-11	
K-45	S		1.00E+00	2.11E-10	1.41E-10	6.50E-11	4.12E-11	2.62E-11	2.20E-11	2.63E-11	
K-46			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-74			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Kr-75			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-77			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-79			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-81			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-81m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-83m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-87			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-88			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-89			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-128			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-129	F		5.00E-03	7.78E-11	5.41E-11	2.51E-11	1.57E-11	9.50E-12	7.95E-12	9.64E-12	9.64E-12
La-129	M		5.00E-03	1.10E-10	7.52E-11	3.52E-11	2.25E-11	1.43E-11	1.19E-11	1.42E-11	1.42E-11
La-129	S		5.00E-03	1.13E-10	7.76E-11	3.63E-11	2.32E-11	1.48E-11	1.24E-11	1.48E-11	1.48E-11
La-130			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-131	F		5.00E-03	1.18E-10	8.60E-11	4.13E-11	2.56E-11	1.53E-11	1.25E-11	1.53E-11	1.53E-11
La-131	M		5.00E-03	1.79E-10	1.28E-10	6.35E-11	4.11E-11	2.78E-11	2.26E-11	2.67E-11	2.67E-11
La-131	S		5.00E-03	1.86E-10	1.33E-10	6.61E-11	4.29E-11	2.94E-11	2.38E-11	2.80E-11	2.80E-11
La-132	F		5.00E-03	1.09E-09	8.00E-10	3.81E-10	2.33E-10	1.29E-10	1.05E-10	1.31E-10	1.31E-10
La-132	M		5.00E-03	1.64E-09	1.18E-09	5.65E-10	3.55E-10	2.10E-10	1.72E-10	2.10E-10	2.10E-10
La-132	S		5.00E-03	1.70E-09	1.22E-09	5.86E-10	3.68E-10	2.19E-10	1.79E-10	2.19E-10	2.19E-10
La-132m	F		5.00E-03	1.15E-10	8.51E-11	4.09E-11	2.53E-11	1.48E-11	1.21E-11	1.49E-11	1.49E-11
La-132m	M		5.00E-03	1.74E-10	1.26E-10	6.12E-11	3.90E-11	2.45E-11	2.01E-11	2.41E-11	2.41E-11
La-132m	S		5.00E-03	1.80E-10	1.30E-10	6.34E-11	4.05E-11	2.55E-11	2.09E-11	2.51E-11	2.51E-11
La-133	F		5.00E-03	1.03E-10	7.77E-11	3.80E-11	2.34E-11	1.37E-11	1.14E-11	1.39E-11	1.39E-11
La-133	M		5.00E-03	1.47E-10	1.07E-10	5.25E-11	3.31E-11	2.06E-11	1.68E-11	2.02E-11	2.02E-11
La-133	S		5.00E-03	1.52E-10	1.10E-10	5.39E-11	3.41E-11	2.12E-11	1.72E-11	2.08E-11	2.08E-11
La-134			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-135	F		5.00E-03	1.04E-10	7.98E-11	3.90E-11	2.36E-11	1.32E-11	1.05E-11	1.32E-11	1.32E-11
La-135	M		5.00E-03	1.38E-10	1.04E-10	5.09E-11	3.14E-11	1.80E-11	1.43E-11	1.78E-11	1.78E-11

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
La-135	S		5.00E-03	1.42E-10	1.06E-10	5.23E-11	3.23E-11	1.86E-11	1.48E-11	1.84E-11	
La-136			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
La-137	F		5.00E-03	2.52E-08	2.33E-08	1.51E-08	1.10E-08	9.09E-09	8.94E-09	9.43E-09	
La-137	M		5.00E-03	8.79E-09	8.35E-09	5.79E-09	4.13E-09	3.72E-09	3.72E-09	3.86E-09	
La-137	S		5.00E-03	5.57E-09	5.26E-09	3.72E-09	2.61E-09	2.30E-09	2.22E-09	2.32E-09	
La-138	F		5.00E-03	3.69E-07	3.49E-07	2.40E-07	1.85E-07	1.57E-07	1.56E-07	1.62E-07	
La-138	M		5.00E-03	1.27E-07	1.24E-07	9.11E-08	6.85E-08	6.42E-08	6.46E-08	6.63E-08	
La-138	S		5.00E-03	6.95E-08	6.65E-08	4.92E-08	3.61E-08	3.32E-08	3.21E-08	3.33E-08	
La-140	F		5.00E-03	5.76E-09	4.19E-09	1.99E-09	1.23E-09	6.91E-10	5.67E-10	7.05E-10	
La-140	M		5.00E-03	8.77E-09	6.34E-09	3.14E-09	2.04E-09	1.32E-09	1.07E-09	1.28E-09	
La-140	S		5.00E-03	9.12E-09	6.59E-09	3.27E-09	2.13E-09	1.39E-09	1.13E-09	1.35E-09	
La-141	F		5.00E-03	8.07E-10	5.64E-10	2.38E-10	1.45E-10	7.62E-11	6.42E-11	8.15E-11	
La-141	M		5.00E-03	1.47E-09	9.58E-10	4.41E-10	2.82E-10	1.81E-10	1.49E-10	1.79E-10	
La-141	S		5.00E-03	1.55E-09	1.01E-09	4.68E-10	3.01E-10	1.95E-10	1.61E-10	1.93E-10	
La-142	F		5.00E-03	5.03E-10	3.56E-10	1.67E-10	1.02E-10	5.85E-11	4.82E-11	5.97E-11	
La-142	M		5.00E-03	7.85E-10	5.44E-10	2.59E-10	1.64E-10	1.04E-10	8.52E-11	1.02E-10	
La-142	S		5.00E-03	8.16E-10	5.64E-10	2.70E-10	1.71E-10	1.08E-10	8.93E-11	1.07E-10	
La-143	F		5.00E-03	1.38E-10	8.72E-11	3.78E-11	2.37E-11	1.40E-11	1.20E-11	1.46E-11	
La-143	M		5.00E-03	2.10E-10	1.35E-10	6.09E-11	3.93E-11	2.56E-11	2.17E-11	2.57E-11	
La-143	S		5.00E-03	2.18E-10	1.40E-10	6.36E-11	4.11E-11	2.70E-11	2.29E-11	2.71E-11	
Lu-165	F		5.00E-03	7.43E-11	5.26E-11	2.51E-11	1.59E-11	9.96E-12	8.30E-12	9.94E-12	
Lu-165	M		5.00E-03	1.08E-10	7.55E-11	3.68E-11	2.38E-11	1.60E-11	1.33E-11	1.56E-11	
Lu-165	S		5.00E-03	1.12E-10	7.80E-11	3.80E-11	2.47E-11	1.67E-11	1.38E-11	1.63E-11	
Lu-167	F		5.00E-03	1.75E-10	1.35E-10	6.77E-11	4.13E-11	2.46E-11	1.99E-11	2.44E-11	
Lu-167	M		5.00E-03	2.66E-10	1.99E-10	1.04E-10	6.68E-11	4.57E-11	3.69E-11	4.33E-11	
Lu-167	S		5.00E-03	2.77E-10	2.07E-10	1.08E-10	6.98E-11	4.83E-11	3.89E-11	4.56E-11	
Lu-169	F		5.00E-03	1.92E-09	1.50E-09	7.70E-10	4.74E-10	2.79E-10	2.29E-10	2.79E-10	
Lu-169	M		5.00E-03	2.65E-09	2.06E-09	1.11E-09	7.35E-10	5.11E-10	4.11E-10	4.79E-10	
Lu-169	S		5.00E-03	2.78E-09	2.16E-09	1.18E-09	7.81E-10	5.53E-10	4.45E-10	5.16E-10	
Lu-169m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-170	F		5.00E-03	3.02E-09	2.42E-09	1.26E-09	7.95E-10	4.71E-10	3.86E-10	4.68E-10	
Lu-170	M		5.00E-03	4.17E-09	3.30E-09	1.76E-09	1.16E-09	7.67E-10	6.15E-10	7.26E-10	
Lu-170	S		5.00E-03	4.30E-09	3.40E-09	1.82E-09	1.20E-09	8.03E-10	6.43E-10	7.57E-10	
Lu-171	F		5.00E-03	2.76E-09	1.92E-09	9.44E-10	5.85E-10	3.45E-10	2.95E-10	3.56E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Lu-171	M		5.00E-03	4.83E-09	3.99E-09	1.99E-09	1.38E-09	1.10E-09	8.94E-10	1.01E-09	
Lu-171	S		5.00E-03	5.17E-09	4.26E-09	2.16E-09	1.51E-09	1.22E-09	9.90E-10	1.11E-09	
Lu-171m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-172	F		5.00E-03	5.40E-09	4.11E-09	2.11E-09	1.33E-09	8.07E-10	6.74E-10	8.09E-10	
Lu-172	M		5.00E-03	8.77E-09	6.73E-09	3.78E-09	2.58E-09	1.77E-09	1.42E-09	1.65E-09	
Lu-172	S		5.00E-03	9.28E-09	7.13E-09	4.04E-09	2.78E-09	1.95E-09	1.56E-09	1.80E-09	
Lu-172m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-173	F		5.00E-03	2.72E-08	2.30E-08	1.31E-08	7.70E-09	5.05E-09	4.57E-09	5.27E-09	
Lu-173	M		5.00E-03	1.45E-08	1.22E-08	7.43E-09	4.66E-09	3.62E-09	3.16E-09	3.52E-09	
Lu-173	S		5.00E-03	1.47E-08	1.25E-08	7.83E-09	5.17E-09	4.15E-09	3.55E-09	3.93E-09	
Lu-174	F		5.00E-03	3.63E-08	3.19E-08	1.84E-08	1.10E-08	7.66E-09	7.22E-09	8.10E-09	
Lu-174	M		5.00E-03	1.81E-08	1.57E-08	9.76E-09	6.14E-09	5.00E-09	4.50E-09	4.93E-09	
Lu-174	S		5.00E-03	1.72E-08	1.48E-08	9.43E-09	6.25E-09	5.19E-09	4.52E-09	4.94E-09	
Lu-174m	F		5.00E-03	2.39E-08	1.90E-08	1.01E-08	5.66E-09	3.47E-09	3.09E-09	3.67E-09	
Lu-174m	M		5.00E-03	1.91E-08	1.48E-08	8.86E-09	5.65E-09	4.49E-09	3.84E-09	4.28E-09	
Lu-174m	S		5.00E-03	2.03E-08	1.57E-08	9.56E-09	6.34E-09	5.19E-09	4.39E-09	4.86E-09	
Lu-176	F		5.00E-03	4.53E-07	4.17E-07	2.63E-07	1.85E-07	1.54E-07	1.52E-07	1.61E-07	
Lu-176	M		5.00E-03	1.83E-07	1.69E-07	1.14E-07	7.92E-08	7.22E-08	7.09E-08	7.39E-08	
Lu-176	S		5.00E-03	1.51E-07	1.38E-07	9.45E-08	6.60E-08	5.92E-08	5.62E-08	5.91E-08	
Lu-176m	F		5.00E-03	4.94E-10	3.16E-10	1.35E-10	8.40E-11	4.60E-11	3.91E-11	4.89E-11	
Lu-176m	M		5.00E-03	8.84E-10	5.86E-10	2.78E-10	1.86E-10	1.15E-10	1.07E-10	1.24E-10	
Lu-176m	S		5.00E-03	9.27E-10	6.16E-10	2.94E-10	1.97E-10	1.24E-10	1.15E-10	1.32E-10	
Lu-177	F		5.00E-03	2.50E-09	1.65E-09	7.72E-10	4.38E-10	2.36E-10	1.99E-10	2.52E-10	
Lu-177	M		5.00E-03	5.22E-09	3.79E-09	2.15E-09	1.55E-09	1.35E-09	1.06E-09	1.18E-09	
Lu-177	S		5.00E-03	5.63E-09	4.11E-09	2.36E-09	1.72E-09	1.51E-09	1.19E-09	1.32E-09	
Lu-177m	F		5.00E-03	6.29E-08	4.96E-08	2.67E-08	1.56E-08	9.75E-09	8.53E-09	1.01E-08	
Lu-177m	M		5.00E-03	5.70E-08	4.55E-08	2.76E-08	1.89E-08	1.60E-08	1.31E-08	1.45E-08	
Lu-177m	S		5.00E-03	6.42E-08	5.20E-08	3.21E-08	2.26E-08	1.97E-08	1.60E-08	1.76E-08	
Lu-178	F		5.00E-03	1.39E-10	8.75E-11	3.78E-11	2.41E-11	1.47E-11	1.26E-11	1.52E-11	
Lu-178	M		5.00E-03	2.26E-10	1.43E-10	6.45E-11	4.22E-11	2.82E-11	2.39E-11	2.81E-11	
Lu-178	S		5.00E-03	2.36E-10	1.50E-10	6.74E-11	4.42E-11	2.97E-11	2.51E-11	2.95E-11	
Lu-178m	F		5.00E-03	1.56E-10	1.08E-10	4.93E-11	3.21E-11	2.03E-11	1.72E-11	2.05E-11	
Lu-178m	M		5.00E-03	2.44E-10	1.68E-10	7.90E-11	5.29E-11	3.62E-11	3.04E-11	3.54E-11	
Lu-178m	S		5.00E-03	2.54E-10	1.75E-10	8.23E-11	5.51E-11	3.80E-11	3.18E-11	3.71E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Lu-179	F		5.00E-03	6.05E-10	3.88E-10	1.65E-10	1.02E-10	5.43E-11	4.58E-11	5.79E-11	
Lu-179	M		5.00E-03	1.03E-09	6.78E-10	3.14E-10	2.06E-10	1.22E-10	1.13E-10	1.32E-10	
Lu-179	S		5.00E-03	1.07E-09	7.10E-10	3.31E-10	2.17E-10	1.31E-10	1.06E-10	1.30E-10	
Lu-180			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-181			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mg-27			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mg-28	F		1.00E+00	5.32E-09	4.75E-09	2.21E-09	1.34E-09	7.32E-10	6.02E-10	7.52E-10	
Mg-28	M		1.00E+00	7.27E-09	7.20E-09	3.52E-09	2.26E-09	1.45E-09	1.20E-09	1.42E-09	
Mg-28	S		1.00E+00	7.49E-09	7.47E-09	3.67E-09	2.36E-09	1.54E-09	1.27E-09	1.50E-09	
Mn-50m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mn-51	F		2.00E-01	2.52E-10	1.67E-10	7.52E-11	4.62E-11	2.71E-11	2.26E-11	2.78E-11	
Mn-51	M		2.00E-01	4.03E-10	2.65E-10	1.22E-10	7.73E-11	4.95E-11	4.12E-11	4.93E-11	
Mn-51	S		2.00E-01	4.20E-10	2.76E-10	1.27E-10	8.07E-11	5.19E-11	4.32E-11	5.17E-11	
Mn-52	F		2.00E-01	7.00E-09	5.56E-09	2.91E-09	1.86E-09	1.14E-09	9.48E-10	1.13E-09	
Mn-52	M		2.00E-01	8.61E-09	6.85E-09	3.74E-09	2.46E-09	1.71E-09	1.36E-09	1.59E-09	
Mn-52	S		2.00E-01	8.85E-09	7.04E-09	3.86E-09	2.55E-09	1.79E-09	1.42E-09	1.66E-09	
Mn-52m	F		2.00E-01	1.90E-10	1.31E-10	6.11E-11	3.75E-11	2.24E-11	1.86E-11	2.27E-11	
Mn-52m	M		2.00E-01	2.76E-10	1.87E-10	8.73E-11	5.46E-11	3.42E-11	2.84E-11	3.42E-11	
Mn-52m	S		2.00E-01	2.86E-10	1.93E-10	9.02E-11	5.65E-11	3.55E-11	2.95E-11	3.55E-11	
Mn-53	F		2.00E-01	3.18E-10	2.18E-10	1.05E-10	5.94E-11	3.36E-11	2.84E-11	3.54E-11	
Mn-53	M		2.00E-01	4.50E-10	3.30E-10	1.72E-10	9.95E-11	6.27E-11	5.38E-11	6.42E-11	
Mn-53	S		2.00E-01	1.29E-09	1.16E-09	7.23E-10	4.45E-10	3.50E-10	3.37E-10	3.65E-10	
Mn-54	F		2.00E-01	5.29E-09	4.15E-09	2.26E-09	1.51E-09	1.00E-09	8.67E-10	9.98E-10	
Mn-54	M		2.00E-01	7.64E-09	6.30E-09	3.86E-09	2.40E-09	1.88E-09	1.57E-09	1.77E-09	
Mn-54	S		2.00E-01	1.21E-08	1.06E-08	7.04E-09	4.77E-09	3.86E-09	3.27E-09	3.60E-09	
Mn-56	F		2.00E-01	6.96E-10	4.94E-10	2.29E-10	1.39E-10	7.81E-11	6.42E-11	8.02E-11	
Mn-56	M		2.00E-01	1.12E-09	7.83E-10	3.73E-10	2.36E-10	1.48E-10	1.22E-10	1.47E-10	
Mn-56	S		2.00E-01	1.16E-09	8.14E-10	3.88E-10	2.47E-10	1.56E-10	1.28E-10	1.54E-10	
Mn-57			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mn-58m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-101	F		1.00E+00	1.43E-10	9.76E-11	4.46E-11	2.81E-11	1.72E-11	1.45E-11	1.75E-11	
Mo-101	M		2.00E-01	2.24E-10	1.51E-10	7.00E-11	4.54E-11	2.98E-11	2.50E-11	2.96E-11	
Mo-101	S		2.00E-02	2.33E-10	1.57E-10	7.28E-11	4.73E-11	3.12E-11	2.61E-11	3.09E-11	
Mo-102	F		1.00E+00	1.72E-10	1.08E-10	4.63E-11	2.96E-11	1.81E-11	1.58E-11	1.89E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Mo-102	M		2.00E-01	2.49E-10	1.56E-10	6.83E-11	4.41E-11	2.81E-11	2.44E-11	2.89E-11	
Mo-102	S		2.00E-02	2.57E-10	1.61E-10	7.07E-11	4.57E-11	2.92E-11	2.53E-11	3.00E-11	
Mo-89			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-90	F		1.00E+00	1.24E-09	1.06E-09	5.32E-10	3.25E-10	1.89E-10	1.55E-10	1.89E-10	
Mo-90	M		2.00E-01	2.57E-09	1.99E-09	9.96E-10	6.45E-10	4.15E-10	3.35E-10	4.00E-10	
Mo-90	S		2.00E-02	2.85E-09	2.12E-09	1.06E-09	6.90E-10	4.45E-10	3.59E-10	4.28E-10	
Mo-91	F		1.00E+00	1.42E-10	9.18E-11	4.08E-11	2.52E-11	1.52E-11	1.28E-11	1.56E-11	
Mo-91	M		2.00E-01	2.08E-10	1.33E-10	5.97E-11	3.75E-11	2.34E-11	1.99E-11	2.39E-11	
Mo-91	S		2.00E-02	2.15E-10	1.38E-10	6.18E-11	3.89E-11	2.43E-11	2.07E-11	2.48E-11	
Mo-91m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-93	F		1.00E+00	2.91E-09	2.43E-09	1.55E-09	1.23E-09	9.78E-10	9.29E-10	9.87E-10	
Mo-93	M		2.00E-01	2.19E-09	1.73E-09	1.08E-09	7.60E-10	6.30E-10	5.59E-10	6.06E-10	
Mo-93	S		2.00E-02	5.89E-09	5.67E-09	3.93E-09	2.72E-09	2.36E-09	2.23E-09	2.36E-09	
Mo-93m	F		1.00E+00	7.79E-10	6.83E-10	3.55E-10	2.14E-10	1.26E-10	1.02E-10	1.25E-10	
Mo-93m	M		2.00E-01	1.27E-09	1.03E-09	5.33E-10	3.39E-10	2.14E-10	1.70E-10	2.05E-10	
Mo-93m	S		2.00E-02	1.36E-09	1.07E-09	5.56E-10	3.56E-10	2.25E-10	1.79E-10	2.15E-10	
Mo-99	F		1.00E+00	2.30E-09	1.72E-09	7.68E-10	4.75E-10	2.65E-10	2.22E-10	2.75E-10	
Mo-99	M		2.00E-01	6.03E-09	4.36E-09	2.21E-09	1.50E-09	1.11E-09	8.94E-10	1.03E-09	
Mo-99	S		2.00E-02	6.86E-09	4.80E-09	2.43E-09	1.66E-09	1.23E-09	9.91E-10	1.14E-09	
N-13			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
N-16			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Na-22	F		1.00E+00	9.63E-09	7.33E-09	3.77E-09	2.41E-09	1.48E-09	1.28E-09	1.51E-09	
Na-22	M		1.00E+00	4.08E-08	3.40E-08	2.08E-08	1.43E-08	1.19E-08	9.88E-09	1.09E-08	
Na-22	S		1.00E+00	9.66E-08	8.83E-08	5.84E-08	3.95E-08	3.28E-08	2.91E-08	3.15E-08	
Na-24	F		1.00E+00	2.36E-09	1.88E-09	9.56E-10	5.81E-10	3.42E-10	2.79E-10	3.42E-10	
Na-24	M		1.00E+00	3.24E-09	2.53E-09	1.34E-09	8.60E-10	5.87E-10	4.76E-10	5.58E-10	
Na-24	S		1.00E+00	3.33E-09	2.60E-09	1.39E-09	8.91E-10	6.15E-10	4.99E-10	5.83E-10	
Nb-87			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-88	F		2.00E-02	1.99E-10	1.42E-10	6.82E-11	4.17E-11	2.53E-11	2.08E-11	2.53E-11	
Nb-88	M		2.00E-02	2.72E-10	1.91E-10	9.15E-11	5.67E-11	3.57E-11	2.94E-11	3.54E-11	
Nb-88	S		2.00E-02	2.81E-10	1.97E-10	9.44E-11	5.86E-11	3.70E-11	3.05E-11	3.67E-11	
Nb-88m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-89	F		2.00E-02	6.97E-10	4.77E-10	2.18E-10	1.32E-10	7.38E-11	6.07E-11	7.60E-11	
Nb-89	M		2.00E-02	1.11E-09	7.52E-10	3.53E-10	2.22E-10	1.37E-10	1.13E-10	1.37E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Nb-89	S		2.00E-02	1.15E-09	7.82E-10	3.68E-10	2.32E-10	1.44E-10	1.19E-10	1.44E-10	
Nb-89m	F		2.00E-02	4.01E-10	2.85E-10	1.35E-10	8.21E-11	4.77E-11	3.90E-11	4.82E-11	
Nb-89m	M		2.00E-02	6.10E-10	4.25E-10	2.04E-10	1.29E-10	8.16E-11	6.68E-11	8.03E-11	
Nb-89m	S		2.00E-02	6.33E-10	4.41E-10	2.12E-10	1.34E-10	8.54E-11	6.99E-11	8.39E-11	
Nb-90	F		2.00E-02	3.56E-09	2.75E-09	1.36E-09	8.36E-10	4.73E-10	3.85E-10	4.76E-10	
Nb-90	M		2.00E-02	5.18E-09	3.92E-09	1.97E-09	1.26E-09	7.85E-10	6.33E-10	7.63E-10	
Nb-90	S		2.00E-02	5.36E-09	4.06E-09	2.04E-09	1.31E-09	8.20E-10	6.61E-10	7.95E-10	
Nb-91	F		2.00E-02	9.73E-10	8.16E-10	4.00E-10	2.15E-10	1.32E-10	1.12E-10	1.36E-10	
Nb-91	M		2.00E-02	1.46E-09	1.22E-09	6.88E-10	4.40E-10	3.31E-10	2.63E-10	3.03E-10	
Nb-91	S		2.00E-02	5.32E-09	5.08E-09	3.45E-09	2.35E-09	1.99E-09	1.84E-09	1.97E-09	
Nb-91m	F		2.00E-02	2.95E-09	2.16E-09	9.84E-10	6.17E-10	3.11E-10	2.94E-10	3.59E-10	
Nb-91m	M		2.00E-02	1.30E-08	1.01E-08	6.17E-09	4.58E-09	4.26E-09	3.34E-09	3.65E-09	
Nb-91m	S		2.00E-02	1.61E-08	1.25E-08	7.72E-09	5.72E-09	5.33E-09	4.19E-09	4.57E-09	
Nb-92	F		2.00E-02	2.22E-08	1.95E-08	1.06E-08	7.35E-09	5.01E-09	4.48E-09	5.05E-09	
Nb-92	M		2.00E-02	1.90E-08	1.69E-08	1.08E-08	7.30E-09	5.76E-09	4.95E-09	5.46E-09	
Nb-92	S		2.00E-02	6.09E-08	6.02E-08	4.45E-08	3.20E-08	2.85E-08	2.71E-08	2.84E-08	
Nb-92m	F		2.00E-02	2.37E-09	1.94E-09	1.03E-09	6.64E-10	4.15E-10	3.46E-10	4.10E-10	
Nb-92m	M		2.00E-02	2.73E-09	2.23E-09	1.23E-09	7.87E-10	5.34E-10	4.24E-10	5.00E-10	
Nb-92m	S		2.00E-02	2.81E-09	2.29E-09	1.27E-09	8.14E-10	5.58E-10	4.41E-10	5.19E-10	
Nb-93m	F		2.00E-02	1.83E-09	1.49E-09	7.28E-10	4.59E-10	2.75E-10	2.31E-10	2.78E-10	
Nb-93m	M		2.00E-02	3.21E-09	2.49E-09	1.40E-09	8.66E-10	6.20E-10	5.35E-10	6.11E-10	
Nb-93m	S		2.00E-02	7.77E-09	6.86E-09	4.28E-09	2.63E-09	2.04E-09	1.90E-09	2.09E-09	
Nb-94	F		2.00E-02	3.13E-08	2.69E-08	1.47E-08	9.98E-09	6.61E-09	5.83E-09	6.65E-09	
Nb-94	M		2.00E-02	4.30E-08	3.65E-08	2.25E-08	1.54E-08	1.27E-08	1.07E-08	1.18E-08	
Nb-94	S		2.00E-02	1.22E-07	1.17E-07	8.23E-08	5.78E-08	5.13E-08	4.86E-08	5.11E-08	
Nb-94m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-95	F		2.00E-02	3.83E-09	3.07E-09	1.59E-09	1.05E-09	6.64E-10	5.64E-10	6.62E-10	
Nb-95	M		2.00E-02	6.63E-09	5.14E-09	3.09E-09	2.17E-09	1.83E-09	1.48E-09	1.64E-09	
Nb-95	S		2.00E-02	7.60E-09	5.92E-09	3.61E-09	2.54E-09	2.17E-09	1.75E-09	1.93E-09	
Nb-95m	F		2.00E-02	2.43E-09	1.62E-09	7.30E-10	4.39E-10	2.43E-10	2.04E-10	2.55E-10	
Nb-95m	M		2.00E-02	4.43E-09	3.19E-09	1.73E-09	1.23E-09	1.01E-09	7.97E-10	8.97E-10	
Nb-95m	S		2.00E-02	4.79E-09	3.47E-09	1.91E-09	1.36E-09	1.13E-09	8.95E-10	1.00E-09	
Nb-96	F		2.00E-02	3.14E-09	2.40E-09	1.19E-09	7.33E-10	4.19E-10	3.41E-10	4.21E-10	
Nb-96	M		2.00E-02	4.77E-09	3.60E-09	1.84E-09	1.20E-09	7.87E-10	6.30E-10	7.48E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Nb-96	S		2.00E-02	4.95E-09	3.74E-09	1.91E-09	1.25E-09	8.29E-10	6.63E-10	7.86E-10	
Nb-97	F		2.00E-02	2.22E-10	1.50E-10	6.84E-11	4.25E-11	2.50E-11	2.09E-11	2.56E-11	
Nb-97	M		2.00E-02	3.70E-10	2.51E-10	1.19E-10	7.73E-11	5.20E-11	4.29E-11	5.06E-11	
Nb-97	S		2.00E-02	3.87E-10	2.61E-10	1.24E-10	8.11E-11	5.50E-11	4.53E-11	5.33E-11	
Nb-98m	F		2.00E-02	3.39E-10	2.45E-10	1.18E-10	7.19E-11	4.24E-11	3.47E-11	4.26E-11	
Nb-98m	M		2.00E-02	5.05E-10	3.57E-10	1.72E-10	1.09E-10	6.90E-11	5.64E-11	6.78E-11	
Nb-98m	S		2.00E-02	5.23E-10	3.69E-10	1.79E-10	1.13E-10	7.19E-11	5.88E-11	7.06E-11	
Nb-99			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-99m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nd-134			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nd-135	F		5.00E-03	1.64E-10	1.11E-10	5.12E-11	3.19E-11	1.93E-11	1.61E-11	1.96E-11	
Nd-135	M		5.00E-03	2.41E-10	1.61E-10	7.53E-11	4.78E-11	3.06E-11	2.56E-11	3.06E-11	
Nd-135	S		5.00E-03	2.49E-10	1.67E-10	7.79E-11	4.96E-11	3.19E-11	2.66E-11	3.18E-11	
Nd-136	F		5.00E-03	2.98E-10	2.13E-10	1.02E-10	6.17E-11	3.60E-11	2.92E-11	3.61E-11	
Nd-136	M		5.00E-03	4.63E-10	3.21E-10	1.56E-10	9.77E-11	6.22E-11	5.08E-11	6.11E-11	
Nd-136	S		5.00E-03	4.81E-10	3.33E-10	1.62E-10	1.02E-10	6.51E-11	5.32E-11	6.38E-11	
Nd-137	F		5.00E-03	1.63E-10	1.18E-10	5.64E-11	3.44E-11	2.01E-11	1.64E-11	2.02E-11	
Nd-137	M		5.00E-03	2.44E-10	1.72E-10	8.32E-11	5.23E-11	3.32E-11	2.71E-11	3.26E-11	
Nd-137	S		5.00E-03	2.53E-10	1.78E-10	8.62E-11	5.43E-11	3.46E-11	2.82E-11	3.39E-11	
Nd-138	F		5.00E-03	1.55E-09	1.04E-09	4.60E-10	2.79E-10	1.48E-10	1.21E-10	1.55E-10	
Nd-138	M		5.00E-03	2.29E-09	1.69E-09	7.72E-10	4.83E-10	2.82E-10	2.36E-10	2.88E-10	
Nd-138	S		5.00E-03	2.40E-09	1.76E-09	8.06E-10	5.05E-10	2.97E-10	2.48E-10	3.03E-10	
Nd-139	F		5.00E-03	6.44E-11	4.55E-11	2.13E-11	1.31E-11	7.78E-12	6.42E-12	7.87E-12	
Nd-139	M		5.00E-03	9.54E-11	6.59E-11	3.13E-11	1.99E-11	1.27E-11	1.05E-11	1.25E-11	
Nd-139	S		5.00E-03	9.89E-11	6.83E-11	3.25E-11	2.06E-11	1.33E-11	1.09E-11	1.31E-11	
Nd-139m	F		5.00E-03	7.87E-10	6.24E-10	3.14E-10	1.93E-10	1.11E-10	8.96E-11	1.11E-10	
Nd-139m	M		5.00E-03	1.11E-09	8.56E-10	4.40E-10	2.82E-10	1.81E-10	1.45E-10	1.73E-10	
Nd-139m	S		5.00E-03	1.15E-09	8.83E-10	4.55E-10	2.93E-10	1.89E-10	1.51E-10	1.81E-10	
Nd-140	F		5.00E-03	6.16E-09	4.47E-09	2.00E-09	1.21E-09	5.88E-10	4.79E-10	6.27E-10	
Nd-140	M		5.00E-03	9.02E-09	6.21E-09	3.00E-09	1.94E-09	1.25E-09	1.05E-09	1.25E-09	
Nd-140	S		5.00E-03	9.37E-09	6.48E-09	3.16E-09	2.05E-09	1.34E-09	1.13E-09	1.33E-09	
Nd-141	F		5.00E-03	3.11E-11	2.39E-11	1.17E-11	7.10E-12	4.07E-12	3.28E-12	4.07E-12	
Nd-141	M		5.00E-03	4.38E-11	3.27E-11	1.62E-11	1.02E-11	6.32E-12	5.08E-12	6.15E-12	
Nd-141	S		5.00E-03	4.52E-11	3.37E-11	1.68E-11	1.05E-11	6.57E-12	5.28E-12	6.38E-12	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Nd-141m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-144	F		5.00E-03	5.75E-05	5.29E-05	3.33E-05	2.35E-05	1.93E-05	1.90E-05	2.01E-05	
Nd-144	M		5.00E-03	1.96E-05	1.86E-05	1.25E-05	8.62E-06	7.75E-06	7.81E-06	8.12E-06	
Nd-144	S		5.00E-03	1.05E-05	9.53E-06	6.28E-06	4.06E-06	3.43E-06	3.37E-06	3.57E-06	
Nd-147	F		5.00E-03	6.65E-09	4.53E-09	2.09E-09	1.25E-09	7.21E-10	5.93E-10	7.37E-10	
Nd-147	M		5.00E-03	1.10E-08	8.03E-09	4.52E-09	3.17E-09	2.66E-09	2.14E-09	2.38E-09	
Nd-147	S		5.00E-03	1.18E-08	8.67E-09	4.95E-09	3.52E-09	3.00E-09	2.41E-09	2.67E-09	
Nd-149	F		5.00E-03	3.89E-10	2.57E-10	1.13E-10	7.01E-11	3.97E-11	3.34E-11	4.13E-11	
Nd-149	M		5.00E-03	6.89E-10	4.65E-10	2.23E-10	1.49E-10	1.04E-10	8.53E-11	9.96E-11	
Nd-149	S		5.00E-03	7.23E-10	4.88E-10	2.36E-10	1.57E-10	1.11E-10	9.13E-11	1.06E-10	
Nd-151	F		5.00E-03	9.80E-11	6.64E-11	3.00E-11	1.91E-11	1.17E-11	9.93E-12	1.19E-11	
Nd-151	M		5.00E-03	1.46E-10	9.87E-11	4.59E-11	3.01E-11	1.98E-11	1.67E-11	1.97E-11	
Nd-151	S		5.00E-03	1.51E-10	1.02E-10	4.76E-11	3.13E-11	2.07E-11	1.74E-11	2.05E-11	
Nd-152	F		5.00E-03	1.46E-10	9.24E-11	4.01E-11	2.56E-11	1.57E-11	1.35E-11	1.63E-11	
Nd-152	M		5.00E-03	2.24E-10	1.42E-10	6.31E-11	4.09E-11	2.65E-11	2.27E-11	2.69E-11	
Nd-152	S		5.00E-03	2.32E-10	1.48E-10	6.56E-11	4.26E-11	2.76E-11	2.37E-11	2.80E-11	
Ne-19			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ne-24			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ni-56	F		1.00E-01	3.38E-09	2.78E-09	1.49E-09	9.44E-10	5.84E-10	4.92E-10	5.83E-10	
Ni-56	M		1.00E-01	4.96E-09	4.10E-09	2.33E-09	1.53E-09	1.08E-09	8.80E-10	1.01E-09	
Ni-56	S		2.00E-02	5.58E-09	4.66E-09	2.69E-09	1.78E-09	1.29E-09	1.05E-09	1.20E-09	
Ni-56	V		1.00E-01	6.97E-09	5.37E-09	3.26E-09	2.14E-09	1.49E-09	1.28E-09	1.46E-09	
Ni-57	F		1.00E-01	2.29E-09	1.82E-09	9.18E-10	5.69E-10	3.23E-10	2.63E-10	3.24E-10	
Ni-57	M		1.00E-01	3.80E-09	2.95E-09	1.52E-09	9.88E-10	6.43E-10	5.16E-10	6.13E-10	
Ni-57	S		2.00E-02	4.11E-09	3.13E-09	1.61E-09	1.05E-09	6.89E-10	5.53E-10	6.57E-10	
Ni-57	V		1.00E-01	3.38E-09	2.48E-09	1.47E-09	9.85E-10	7.00E-10	6.06E-10	6.85E-10	
Ni-59	F		1.00E-01	9.44E-10	7.98E-10	4.44E-10	2.74E-10	1.91E-10	1.81E-10	2.02E-10	
Ni-59	M		1.00E-01	7.71E-10	6.04E-10	3.38E-10	2.02E-10	1.42E-10	1.31E-10	1.48E-10	
Ni-59	S		2.00E-02	1.63E-09	1.49E-09	9.34E-10	5.77E-10	4.56E-10	4.40E-10	4.76E-10	
Ni-59	V		1.00E-01	3.90E-09	3.25E-09	1.98E-09	1.24E-09	8.91E-10	8.19E-10	9.13E-10	
Ni-63	F		1.00E-01	2.34E-09	1.98E-09	1.10E-09	6.76E-10	4.68E-10	4.43E-10	4.97E-10	
Ni-63	M		1.00E-01	2.54E-09	1.96E-09	1.15E-09	7.15E-10	5.41E-10	4.87E-10	5.43E-10	
Ni-63	S		2.00E-02	4.86E-09	4.29E-09	2.71E-09	1.70E-09	1.36E-09	1.29E-09	1.40E-09	
Ni-63	V		1.00E-01	9.61E-09	8.01E-09	4.86E-09	3.05E-09	2.18E-09	2.00E-09	2.23E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Ni-65	F		1.00E-01	4.41E-10	2.98E-10	1.35E-10	8.52E-11	4.92E-11	4.08E-11	5.03E-11
Ni-65	M		1.00E-01	7.68E-10	5.17E-10	2.43E-10	1.57E-10	1.02E-10	8.47E-11	1.01E-10
Ni-65	S		2.00E-02	8.12E-10	5.44E-10	2.56E-10	1.65E-10	1.08E-10	8.97E-11	1.07E-10
Ni-65	V		1.00E-01	2.01E-09	1.45E-09	8.13E-10	5.60E-10	4.00E-10	3.64E-10	4.05E-10
Ni-66	F		1.00E-01	5.76E-09	3.87E-09	1.65E-09	1.02E-09	5.10E-10	4.24E-10	5.47E-10
Ni-66	M		1.00E-01	1.36E-08	9.49E-09	4.57E-09	2.98E-09	1.98E-09	1.65E-09	1.94E-09
Ni-66	S		2.00E-02	1.51E-08	1.04E-08	5.01E-09	3.27E-09	2.18E-09	1.82E-09	2.14E-09
Ni-66	V		1.00E-01	1.04E-08	7.23E-09	4.00E-09	2.70E-09	1.86E-09	1.63E-09	1.86E-09
Np-232	F		5.00E-03	2.08E-10	2.01E-10	1.31E-10	1.13E-10	1.13E-10	1.20E-10	1.20E-10
Np-232	M		5.00E-03	9.30E-11	8.46E-11	5.75E-11	4.71E-11	4.94E-11	5.19E-11	5.20E-11
Np-232	S		5.00E-03	1.18E-10	9.94E-11	5.91E-11	3.96E-11	2.54E-11	2.45E-11	2.74E-11
Np-233	F		5.00E-03	1.16E-11	9.19E-12	4.44E-12	2.59E-12	1.54E-12	1.21E-12	1.52E-12
Np-233	M		5.00E-03	1.59E-11	1.21E-11	5.94E-12	3.59E-12	2.29E-12	1.81E-12	2.20E-12
Np-233	S		5.00E-03	1.64E-11	1.25E-11	6.11E-12	3.69E-12	2.37E-12	1.87E-12	2.27E-12
Np-234	F		5.00E-03	2.32E-09	1.81E-09	9.19E-10	5.75E-10	3.43E-10	2.79E-10	3.39E-10
Np-234	M		5.00E-03	3.10E-09	2.40E-09	1.26E-09	8.11E-10	5.33E-10	4.30E-10	5.09E-10
Np-234	S		5.00E-03	3.21E-09	2.48E-09	1.31E-09	8.43E-10	5.59E-10	4.50E-10	5.33E-10
Np-235	F		5.00E-03	4.85E-09	4.03E-09	2.21E-09	1.31E-09	8.60E-10	7.26E-10	8.55E-10
Np-235	M		5.00E-03	2.60E-09	2.14E-09	1.25E-09	7.64E-10	5.62E-10	4.74E-10	5.41E-10
Np-235	S		5.00E-03	2.84E-09	2.38E-09	1.41E-09	8.80E-10	6.62E-10	5.54E-10	6.29E-10
Np-235+D	F			4.85E-09	4.03E-09	2.21E-09	1.31E-09	8.60E-10	7.26E-10	8.55E-10
Np-235+E	F			4.85E-09	4.03E-09	2.21E-09	1.31E-09	8.60E-10	7.26E-10	8.55E-10
Np-236	F		5.00E-03	1.31E-05	1.34E-05	1.05E-05	1.08E-05	1.15E-05	1.15E-05	1.14E-05
Np-236	M		5.00E-03	4.42E-06	4.60E-06	3.89E-06	3.90E-06	4.49E-06	4.58E-06	4.51E-06
Np-236	S		5.00E-03	2.33E-06	2.33E-06	1.84E-06	1.47E-06	1.47E-06	1.47E-06	1.49E-06
Np-236m	F		5.00E-03	2.85E-08	2.59E-08	1.54E-08	1.08E-08	9.11E-09	9.18E-09	9.65E-09
Np-236m	M		5.00E-03	1.62E-08	1.40E-08	8.93E-09	6.27E-09	5.69E-09	5.40E-09	5.68E-09
Np-236m	S		5.00E-03	1.59E-08	1.33E-08	8.47E-09	5.66E-09	4.83E-09	4.26E-09	4.62E-09
Np-237	F		5.00E-03	9.88E-05	9.42E-05	6.09E-05	5.02E-05	4.82E-05	4.97E-05	5.05E-05
Np-237	M		5.00E-03	4.41E-05	4.06E-05	2.80E-05	2.20E-05	2.22E-05	2.27E-05	2.30E-05
Np-237	S		5.00E-03	3.66E-05	3.19E-05	2.13E-05	1.44E-05	1.26E-05	1.19E-05	1.26E-05
Np-237+D	F			9.88E-05	9.42E-05	6.09E-05	5.02E-05	4.82E-05	4.97E-05	5.05E-05
Np-237+E	F			9.88E-05	9.42E-05	6.09E-05	5.02E-05	4.82E-05	4.97E-05	5.05E-05
Np-238	F		5.00E-03	9.02E-09	7.99E-09	4.82E-09	3.74E-09	3.39E-09	3.48E-09	3.58E-09

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Np-238	M		5.00E-03	7.29E-09	5.78E-09	3.43E-09	2.50E-09	2.23E-09	2.13E-09	2.24E-09	
Np-238	S		5.00E-03	7.99E-09	6.19E-09	3.14E-09	2.13E-09	1.72E-09	1.50E-09	1.66E-09	
Np-239	F		5.00E-03	2.64E-09	1.41E-09	6.49E-10	3.94E-10	2.14E-10	1.77E-10	2.25E-10	
Np-239	M		5.00E-03	5.97E-09	4.26E-09	2.07E-09	1.46E-09	1.20E-09	9.51E-10	1.08E-09	
Np-239	S		5.00E-03	5.75E-09	4.08E-09	2.24E-09	1.59E-09	1.32E-09	1.05E-09	1.17E-09	
Np-240	F		5.00E-03	3.05E-10	2.15E-10	1.00E-10	6.33E-11	3.88E-11	3.28E-11	3.94E-11	
Np-240	M		5.00E-03	5.23E-10	3.64E-10	1.78E-10	1.19E-10	8.43E-11	6.92E-11	8.03E-11	
Np-240	S		5.00E-03	5.46E-10	3.81E-10	1.87E-10	1.25E-10	8.92E-11	7.30E-11	8.47E-11	
Np-240m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Np-241	F		5.00E-03	6.85E-11	4.53E-11	2.04E-11	1.40E-11	9.51E-12	8.54E-12	9.79E-12	
Np-241	M		5.00E-03	1.02E-10	6.70E-11	3.02E-11	2.04E-11	1.38E-11	1.20E-11	1.40E-11	
Np-241	S		5.00E-03	1.05E-10	6.92E-11	3.11E-11	2.09E-11	1.40E-11	1.21E-11	1.41E-11	
Np-242			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Np-242m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-14			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-15			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-19			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Os-180	F		2.00E-02	7.53E-11	5.60E-11	2.73E-11	1.70E-11	1.05E-11	8.59E-12	1.04E-11	
Os-180	M		2.00E-02	1.14E-10	8.29E-11	4.09E-11	2.64E-11	1.77E-11	1.44E-11	1.70E-11	
Os-180	S		2.00E-02	1.18E-10	8.59E-11	4.24E-11	2.74E-11	1.85E-11	1.50E-11	1.77E-11	
Os-181	F		2.00E-02	3.04E-10	2.39E-10	1.20E-10	7.32E-11	4.25E-11	3.44E-11	4.24E-11	
Os-181	M		2.00E-02	4.53E-10	3.46E-10	1.78E-10	1.15E-10	7.54E-11	6.06E-11	7.20E-11	
Os-181	S		2.00E-02	4.70E-10	3.58E-10	1.85E-10	1.19E-10	7.92E-11	6.36E-11	7.54E-11	
Os-182	F		2.00E-02	1.65E-09	1.27E-09	6.26E-10	3.89E-10	2.22E-10	1.81E-10	2.23E-10	
Os-182	M		2.00E-02	2.65E-09	1.99E-09	1.04E-09	6.87E-10	4.71E-10	3.78E-10	4.43E-10	
Os-182	S		2.00E-02	2.76E-09	2.07E-09	1.09E-09	7.22E-10	5.00E-10	4.01E-10	4.69E-10	
Os-183	F		2.00E-02	7.07E-10	5.45E-10	2.66E-10	1.64E-10	9.33E-11	7.61E-11	9.41E-11	
Os-183	M		2.00E-02	1.19E-09	8.95E-10	4.70E-10	3.09E-10	2.16E-10	1.74E-10	2.03E-10	
Os-183	S		2.00E-02	1.26E-09	9.46E-10	5.01E-10	3.31E-10	2.34E-10	1.89E-10	2.20E-10	
Os-183m	F		2.00E-02	6.78E-10	5.45E-10	2.77E-10	1.70E-10	9.82E-11	7.94E-11	9.77E-11	
Os-183m	M		2.00E-02	9.81E-10	7.68E-10	4.04E-10	2.61E-10	1.73E-10	1.39E-10	1.64E-10	
Os-183m	S		2.00E-02	1.03E-09	8.02E-10	4.24E-10	2.75E-10	1.85E-10	1.48E-10	1.74E-10	
Os-185	F		2.00E-02	6.98E-09	5.66E-09	3.03E-09	1.84E-09	1.20E-09	1.05E-09	1.22E-09	
Os-185	M		2.00E-02	6.39E-09	5.29E-09	2.85E-09	1.92E-09	1.48E-09	1.24E-09	1.39E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult			
			(Sv Bq ⁻¹)								
Os-185	S		2.00E-02	6.77E-09	5.67E-09	3.49E-09	2.36E-09	1.88E-09	1.55E-09	1.73E-09	
Os-186	F		2.00E-02	5.62E-06	4.45E-06	2.25E-06	1.38E-06	8.50E-07	7.25E-07	8.65E-07	
Os-186	M		2.00E-02	6.43E-06	5.03E-06	2.97E-06	1.85E-06	1.39E-06	1.22E-06	1.37E-06	
Os-186	S		2.00E-02	1.52E-05	1.36E-05	8.71E-06	5.44E-06	4.39E-06	4.17E-06	4.51E-06	
Os-189m	F		2.00E-02	3.67E-11	2.67E-11	1.13E-11	5.94E-12	3.36E-12	2.48E-12	3.32E-12	
Os-189m	M		2.00E-02	6.29E-11	4.00E-11	1.75E-11	1.06E-11	5.76E-12	4.83E-12	6.10E-12	
Os-189m	S		2.00E-02	6.58E-11	4.18E-11	1.83E-11	1.12E-11	6.07E-12	5.10E-12	6.42E-12	
Os-190m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Os-191	F		2.00E-02	2.81E-09	1.92E-09	8.70E-10	5.40E-10	3.05E-10	2.54E-10	3.15E-10	
Os-191	M		2.00E-02	8.24E-09	5.99E-09	3.54E-09	2.48E-09	2.12E-09	1.73E-09	1.91E-09	
Os-191	S		2.00E-02	9.29E-09	6.78E-09	4.06E-09	2.85E-09	2.47E-09	2.01E-09	2.21E-09	
Os-191m	F		2.00E-02	3.05E-10	2.06E-10	9.01E-11	5.52E-11	2.97E-11	2.49E-11	3.13E-11	
Os-191m	M		2.00E-02	7.99E-10	5.62E-10	3.17E-10	2.19E-10	1.80E-10	1.47E-10	1.64E-10	
Os-191m	S		2.00E-02	8.74E-10	6.17E-10	3.51E-10	2.44E-10	2.03E-10	1.65E-10	1.84E-10	
Os-193	F		2.00E-02	1.89E-09	1.24E-09	5.29E-10	3.23E-10	1.89E-10	1.59E-10	1.97E-10	
Os-193	M		2.00E-02	3.88E-09	2.65E-09	1.30E-09	8.73E-10	6.19E-10	5.01E-10	5.84E-10	
Os-193	S		2.00E-02	4.11E-09	2.81E-09	1.39E-09	9.37E-10	6.73E-10	5.44E-10	6.32E-10	
Os-194	F		2.00E-02	8.77E-08	6.87E-08	3.43E-08	2.12E-08	1.29E-08	1.10E-08	1.31E-08	
Os-194	M		2.00E-02	9.97E-08	8.32E-08	4.86E-08	3.15E-08	2.41E-08	2.16E-08	2.39E-08	
Os-194	S		2.00E-02	2.62E-07	2.44E-07	1.61E-07	1.06E-07	8.79E-08	8.54E-08	9.09E-08	
Os-194+D	S			2.68E-07	2.48E-07	1.63E-07	1.07E-07	8.86E-08	8.60E-08	9.16E-08	
Os-194+E	S			2.68E-07	2.48E-07	1.63E-07	1.07E-07	8.86E-08	8.60E-08	9.16E-08	
Os-196	F		2.00E-02	3.11E-10	1.94E-10	8.34E-11	5.24E-11	3.14E-11	2.68E-11	3.27E-11	
Os-196	M		2.00E-02	5.20E-10	3.28E-10	1.48E-10	9.54E-11	6.31E-11	5.33E-11	6.31E-11	
Os-196	S		2.00E-02	5.43E-10	3.43E-10	1.55E-10	1.00E-10	6.66E-11	5.62E-11	6.64E-11	
P-30			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
P-32	F		1.00E+00	1.18E-08	7.51E-09	3.24E-09	1.82E-09	9.87E-10	7.78E-10	1.02E-09	
P-32	M		1.00E+00	2.14E-08	1.53E-08	8.02E-09	5.30E-09	4.05E-09	3.38E-09	3.83E-09	
P-32	S		1.00E+00	2.33E-08	1.68E-08	8.97E-09	5.99E-09	4.64E-09	3.89E-09	4.38E-09	
P-33	F		1.00E+00	1.16E-09	7.82E-10	3.04E-10	2.02E-10	1.11E-10	9.26E-11	1.16E-10	
P-33	M		1.00E+00	5.99E-09	4.56E-09	2.78E-09	2.05E-09	1.90E-09	1.50E-09	1.64E-09	
P-33	S		1.00E+00	7.05E-09	5.40E-09	3.31E-09	2.45E-09	2.28E-09	1.80E-09	1.96E-09	
Pa-227	F		5.00E-03	1.49E-07	1.04E-07	5.00E-08	3.49E-08	2.55E-08	2.18E-08	2.47E-08	
Pa-227	M		5.00E-03	3.57E-07	2.57E-07	1.42E-07	1.04E-07	8.93E-08	7.30E-08	8.05E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Pa-227	S		5.00E-03	3.81E-07	2.74E-07	1.53E-07	1.12E-07	8.00E-08	7.89E-08	8.57E-08	
Pa-228	F		5.00E-03	2.40E-07	1.97E-07	1.11E-07	6.88E-08	4.68E-08	3.90E-08	4.54E-08	
Pa-228	M		5.00E-03	2.37E-07	1.89E-07	1.19E-07	8.24E-08	7.20E-08	5.90E-08	6.47E-08	
Pa-228	S		5.00E-03	2.76E-07	2.24E-07	1.42E-07	9.77E-08	8.57E-08	7.11E-08	7.78E-08	
Pa-229	F		5.00E-03	9.33E-09	6.36E-09	3.26E-09	1.85E-09	1.14E-09	9.00E-10	1.12E-09	
Pa-229	M		5.00E-03	2.38E-08	1.79E-08	1.14E-08	8.40E-09	7.87E-09	6.29E-09	6.83E-09	
Pa-229	S		5.00E-03	2.64E-08	1.99E-08	1.28E-08	9.51E-09	8.99E-09	7.18E-09	7.78E-09	
Pa-230	F		5.00E-03	7.72E-07	4.44E-07	2.17E-07	1.27E-07	8.22E-08	5.57E-08	7.21E-08	
Pa-230	M		5.00E-03	2.03E-06	1.55E-06	9.79E-07	7.15E-07	6.65E-07	5.29E-07	5.77E-07	
Pa-230	S		5.00E-03	2.51E-06	1.95E-06	1.24E-06	9.05E-07	8.45E-07	6.75E-07	7.34E-07	
Pa-231	F		5.00E-03	4.15E-04	4.09E-04	3.13E-04	2.64E-04	2.35E-04	2.30E-04	2.37E-04	
Pa-231	M		5.00E-03	1.45E-04	1.45E-04	1.18E-04	9.66E-05	9.39E-05	9.35E-05	9.50E-05	
Pa-231	S		5.00E-03	6.39E-05	5.87E-05	4.32E-05	3.17E-05	2.98E-05	2.89E-05	2.99E-05	
Pa-232	F		5.00E-03	3.34E-09	2.72E-09	1.69E-09	1.32E-09	1.26E-09	1.15E-09	1.20E-09	
Pa-232	M		5.00E-03	5.36E-09	4.10E-09	2.31E-09	1.59E-09	1.16E-09	9.35E-10	1.07E-09	
Pa-232	S		5.00E-03	9.87E-09	8.50E-09	4.57E-09	3.05E-09	2.58E-09	2.41E-09	2.60E-09	
Pa-233	F		5.00E-03	1.30E-08	8.74E-09	4.30E-09	2.46E-09	1.44E-09	1.13E-09	1.43E-09	
Pa-233	M		5.00E-03	1.67E-08	1.24E-08	7.28E-09	5.17E-09	4.51E-09	3.58E-09	3.96E-09	
Pa-233	S		5.00E-03	1.79E-08	1.36E-08	8.08E-09	5.85E-09	5.21E-09	4.14E-09	4.56E-09	
Pa-234	F		5.00E-03	1.34E-09	9.83E-10	4.65E-10	2.84E-10	1.59E-10	1.31E-10	1.63E-10	
Pa-234	M		5.00E-03	2.35E-09	1.70E-09	8.61E-10	5.69E-10	3.97E-10	3.20E-10	3.75E-10	
Pa-234	S		5.00E-03	2.46E-09	1.78E-09	9.06E-10	6.01E-10	4.23E-10	3.41E-10	3.98E-10	
Pa-234m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pa-235	F		5.00E-03	9.07E-11	5.72E-11	2.45E-11	1.59E-11	9.81E-12	8.53E-12	1.02E-11	
Pa-235	M		5.00E-03	1.48E-10	9.49E-11	4.23E-11	2.81E-11	1.89E-11	1.61E-11	1.88E-11	
Pa-235	S		5.00E-03	1.55E-10	9.90E-11	4.43E-11	2.94E-11	1.99E-11	1.69E-11	1.98E-11	
Pa-236			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pa-237			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pb-194	F		6.00E-01	7.79E-11	5.59E-11	2.64E-11	1.62E-11	9.75E-12	8.05E-12	9.82E-12	
Pb-194	M		2.00E-01	1.15E-10	8.06E-11	3.82E-11	2.40E-11	1.52E-11	1.26E-11	1.51E-11	
Pb-194	S		2.00E-02	1.20E-10	8.34E-11	3.95E-11	2.48E-11	1.59E-11	1.31E-11	1.57E-11	
Pb-195m	F		6.00E-01	1.22E-10	9.16E-11	4.44E-11	2.77E-11	1.72E-11	1.42E-11	1.71E-11	
Pb-195m	M		2.00E-01	1.74E-10	1.28E-10	6.30E-11	4.05E-11	2.71E-11	2.22E-11	2.62E-11	
Pb-195m	S		2.00E-02	1.80E-10	1.32E-10	6.51E-11	4.20E-11	2.82E-11	2.31E-11	2.73E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Pb-196	F		6.00E-01	1.36E-10	1.06E-10	5.28E-11	3.21E-11	1.91E-11	1.57E-11	1.91E-11	
Pb-196	M		2.00E-01	1.92E-10	1.45E-10	7.24E-11	4.57E-11	2.97E-11	2.41E-11	2.88E-11	
Pb-196	S		2.00E-02	1.98E-10	1.49E-10	7.46E-11	4.72E-11	3.09E-11	2.51E-11	2.99E-11	
Pb-197			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pb-197m	F		6.00E-01	2.12E-10	1.59E-10	7.64E-11	4.73E-11	2.85E-11	2.38E-11	2.88E-11	
Pb-197m	M		2.00E-01	3.38E-10	2.47E-10	1.22E-10	8.01E-11	5.51E-11	4.50E-11	5.27E-11	
Pb-197m	S		2.00E-02	3.53E-10	2.57E-10	1.28E-10	8.38E-11	5.82E-11	4.74E-11	5.54E-11	
Pb-198	F		6.00E-01	3.34E-10	2.80E-10	1.43E-10	8.59E-11	5.03E-11	4.14E-11	5.06E-11	
Pb-198	M		2.00E-01	4.63E-10	3.69E-10	1.90E-10	1.20E-10	7.69E-11	6.15E-11	7.37E-11	
Pb-198	S		2.00E-02	4.83E-10	3.81E-10	1.97E-10	1.24E-10	8.01E-11	6.40E-11	7.66E-11	
Pb-199	F		6.00E-01	1.53E-10	1.26E-10	6.38E-11	3.82E-11	2.23E-11	1.82E-11	2.23E-11	
Pb-199	M		2.00E-01	2.19E-10	1.72E-10	8.90E-11	5.60E-11	3.64E-11	2.90E-11	3.47E-11	
Pb-199	S		2.00E-02	2.28E-10	1.78E-10	9.20E-11	5.81E-11	3.81E-11	3.03E-11	3.62E-11	
Pb-200	F		6.00E-01	1.16E-09	9.37E-10	4.59E-10	2.82E-10	1.63E-10	1.41E-10	1.70E-10	
Pb-200	M		2.00E-01	2.14E-09	1.64E-09	8.56E-10	5.68E-10	4.04E-10	3.24E-10	3.77E-10	
Pb-200	S		2.00E-02	2.35E-09	1.75E-09	9.14E-10	6.09E-10	4.36E-10	3.48E-10	4.05E-10	
Pb-201	F		6.00E-01	4.92E-10	4.15E-10	2.08E-10	1.25E-10	7.19E-11	6.06E-11	7.39E-11	
Pb-201	M		2.00E-01	8.13E-10	6.42E-10	3.31E-10	2.13E-10	1.41E-10	1.12E-10	1.33E-10	
Pb-201	S		2.00E-02	8.83E-10	6.79E-10	3.50E-10	2.26E-10	1.50E-10	1.20E-10	1.42E-10	
Pb-201m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pb-202	F		6.00E-01	5.82E-08	4.00E-08	2.42E-08	2.70E-08	3.01E-08	2.03E-08	2.18E-08	
Pb-202	M		2.00E-01	6.83E-08	5.03E-08	3.09E-08	2.35E-08	2.23E-08	1.83E-08	1.97E-08	
Pb-202	S		2.00E-02	1.62E-07	1.48E-07	9.74E-08	6.27E-08	5.19E-08	4.93E-08	5.29E-08	
Pb-202+D	S			1.64E-07	1.50E-07	9.84E-08	6.34E-08	5.24E-08	4.97E-08	5.33E-08	
Pb-202+E	S			1.64E-07	1.50E-07	9.84E-08	6.34E-08	5.24E-08	4.97E-08	5.33E-08	
Pb-202m	F		6.00E-01	4.98E-10	4.19E-10	2.14E-10	1.29E-10	7.58E-11	6.29E-11	7.66E-11	
Pb-202m	M		2.00E-01	7.40E-10	5.88E-10	3.03E-10	1.93E-10	1.23E-10	9.85E-11	1.18E-10	
Pb-202m	S		2.00E-02	7.83E-10	6.12E-10	3.15E-10	2.01E-10	1.29E-10	1.03E-10	1.24E-10	
Pb-203	F		6.00E-01	7.29E-10	5.94E-10	2.88E-10	1.76E-10	1.00E-10	8.68E-11	1.05E-10	
Pb-203	M		2.00E-01	1.37E-09	1.06E-09	5.47E-10	3.63E-10	2.58E-10	2.05E-10	2.39E-10	
Pb-203	S		2.00E-02	1.51E-09	1.13E-09	5.87E-10	3.91E-10	2.80E-10	2.22E-10	2.58E-10	
Pb-204m	F		6.00E-01	1.73E-10	1.44E-10	7.46E-11	4.49E-11	2.66E-11	2.15E-11	2.63E-11	
Pb-204m	M		2.00E-01	2.27E-10	1.82E-10	9.39E-11	5.79E-11	3.55E-11	2.82E-11	3.44E-11	
Pb-204m	S		2.00E-02	2.34E-10	1.86E-10	9.62E-11	5.95E-11	3.66E-11	2.91E-11	3.54E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Pb-205	F		6.00E-01	1.05E-09	6.71E-10	3.87E-10	4.01E-10	4.16E-10	3.26E-10	3.44E-10	
Pb-205	M		2.00E-01	1.02E-09	7.42E-10	4.19E-10	3.12E-10	2.78E-10	2.39E-10	2.58E-10	
Pb-205	S		2.00E-02	2.76E-09	2.57E-09	1.66E-09	1.07E-09	8.78E-10	8.24E-10	8.88E-10	
Pb-209	F		6.00E-01	1.82E-10	1.23E-10	5.27E-11	3.39E-11	1.95E-11	1.73E-11	2.09E-11	
Pb-209	M		2.00E-01	4.04E-10	2.75E-10	1.34E-10	9.23E-11	6.89E-11	5.64E-11	6.46E-11	
Pb-209	S		2.00E-02	4.36E-10	2.94E-10	1.44E-10	9.94E-11	7.46E-11	6.10E-11	6.98E-11	
Pb-210	F		6.00E-01	4.63E-06	2.86E-06	1.55E-06	1.39E-06	1.30E-06	9.07E-07	1.01E-06	
Pb-210	M		2.00E-01	4.94E-06	3.71E-06	2.22E-06	1.55E-06	1.33E-06	1.11E-06	1.21E-06	
Pb-210	S		2.00E-02	1.83E-05	1.75E-05	1.15E-05	7.14E-06	5.84E-06	5.61E-06	6.03E-06	
Pb-211	F		6.00E-01	2.49E-08	1.72E-08	8.63E-09	6.06E-09	4.60E-09	3.88E-09	4.38E-09	
Pb-211	M		2.00E-01	6.13E-08	4.42E-08	2.54E-08	1.85E-08	1.40E-08	1.11E-08	1.26E-08	
Pb-211	S		2.00E-02	6.53E-08	4.72E-08	2.72E-08	1.99E-08	1.52E-08	1.20E-08	1.36E-08	
Pb-212	F		6.00E-01	1.96E-07	1.26E-07	5.52E-08	3.60E-08	2.05E-08	1.80E-08	2.18E-08	
Pb-212	M		2.00E-01	7.49E-07	4.61E-07	3.00E-07	2.25E-07	2.17E-07	1.72E-07	1.86E-07	
Pb-212	S		2.00E-02	6.76E-07	5.06E-07	3.30E-07	2.48E-07	2.40E-07	1.90E-07	2.05E-07	
Pb-214	F		6.00E-01	2.21E-08	1.52E-08	7.03E-09	4.88E-09	3.36E-09	2.92E-09	3.35E-09	
Pb-214	M		2.00E-01	6.45E-08	4.66E-08	2.60E-08	1.91E-08	1.39E-08	1.36E-08	1.47E-08	
Pb-214	S		2.00E-02	6.92E-08	5.01E-08	2.81E-08	2.07E-08	1.53E-08	1.47E-08	1.60E-08	
Pd-100	F		5.00E-02	3.80E-09	2.97E-09	1.52E-09	9.67E-10	5.76E-10	4.71E-10	5.70E-10	
Pd-100	M		5.00E-02	4.98E-09	3.86E-09	2.09E-09	1.37E-09	9.50E-10	7.66E-10	8.93E-10	
Pd-100	S		5.00E-02	5.14E-09	3.98E-09	2.17E-09	1.42E-09	1.00E-09	8.07E-10	9.38E-10	
Pd-101	F		5.00E-02	3.64E-10	2.92E-10	1.45E-10	8.75E-11	4.98E-11	3.94E-11	4.93E-11	
Pd-101	M		5.00E-02	4.79E-10	3.76E-10	1.90E-10	1.19E-10	7.43E-11	5.84E-11	7.10E-11	
Pd-101	S		5.00E-02	4.93E-10	3.87E-10	1.96E-10	1.23E-10	7.73E-11	6.07E-11	7.37E-11	
Pd-103	F		5.00E-02	9.63E-10	6.48E-10	2.95E-10	1.86E-10	1.08E-10	8.84E-11	1.09E-10	
Pd-103	M		5.00E-02	2.24E-09	1.58E-09	9.02E-10	5.88E-10	4.51E-10	3.84E-10	4.32E-10	
Pd-103	S		5.00E-02	2.53E-09	1.79E-09	1.03E-09	6.74E-10	5.24E-10	4.45E-10	5.00E-10	
Pd-107	F		5.00E-02	2.71E-10	1.83E-10	8.43E-11	5.35E-11	3.19E-11	2.63E-11	3.21E-11	
Pd-107	M		5.00E-02	6.69E-10	5.12E-10	2.70E-10	1.60E-10	1.04E-10	8.94E-11	1.05E-10	
Pd-107	S		5.00E-02	2.26E-09	2.07E-09	1.30E-09	8.01E-10	6.33E-10	6.09E-10	6.59E-10	
Pd-109	F		5.00E-02	1.52E-09	1.01E-09	4.33E-10	2.68E-10	1.39E-10	1.18E-10	1.50E-10	
Pd-109	M		5.00E-02	2.63E-09	1.81E-09	8.95E-10	6.02E-10	4.36E-10	3.51E-10	4.08E-10	
Pd-109	S		5.00E-02	2.78E-09	1.91E-09	9.54E-10	6.44E-10	4.72E-10	3.80E-10	4.40E-10	
Pd-109m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult			
			(Sv Bq ⁻¹)								
Pd-111	F		5.00E-02	1.40E-10	8.74E-11	3.78E-11	2.39E-11	1.46E-11	1.25E-11	1.51E-11	
Pd-111	M		5.00E-02	2.30E-10	1.47E-10	6.72E-11	4.39E-11	3.00E-11	2.53E-11	2.96E-11	
Pd-111	S		5.00E-02	2.41E-10	1.53E-10	7.06E-11	4.63E-11	3.18E-11	2.68E-11	3.14E-11	
Pd-112	F		5.00E-02	6.07E-09	4.06E-09	1.75E-09	1.08E-09	5.47E-10	4.54E-10	5.84E-10	
Pd-112	M		5.00E-02	1.01E-08	6.89E-09	3.18E-09	2.03E-09	1.23E-09	1.03E-09	1.24E-09	
Pd-112	S		5.00E-02	1.05E-08	7.21E-09	3.34E-09	2.14E-09	1.30E-09	1.09E-09	1.32E-09	
Pd-114			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-96			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-97			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-98	F		5.00E-02	1.73E-10	1.16E-10	5.33E-11	3.24E-11	1.92E-11	1.58E-11	1.95E-11	
Pd-98	M		5.00E-02	2.69E-10	1.77E-10	8.20E-11	5.11E-11	3.22E-11	2.66E-11	3.21E-11	
Pd-98	S		5.00E-02	2.80E-10	1.84E-10	8.51E-11	5.31E-11	3.36E-11	2.78E-11	3.35E-11	
Pd-99	F		5.00E-02	1.16E-10	8.38E-11	4.00E-11	2.47E-11	1.48E-11	1.22E-11	1.49E-11	
Pd-99	M		5.00E-02	1.64E-10	1.17E-10	5.57E-11	3.52E-11	2.23E-11	1.83E-11	2.20E-11	
Pd-99	S		5.00E-02	1.70E-10	1.20E-10	5.75E-11	3.64E-11	2.31E-11	1.90E-11	2.28E-11	
Pm-136			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-137m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-139			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-140			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-140m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-141	F		5.00E-03	9.34E-11	6.25E-11	2.85E-11	1.76E-11	1.05E-11	8.75E-12	1.07E-11	
Pm-141	M		5.00E-03	1.38E-10	9.12E-11	4.19E-11	2.63E-11	1.66E-11	1.38E-11	1.67E-11	
Pm-141	S		5.00E-03	1.43E-10	9.43E-11	4.34E-11	2.73E-11	1.72E-11	1.44E-11	1.73E-11	
Pm-142			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-143	F		5.00E-03	1.47E-08	1.26E-08	7.21E-09	4.81E-09	3.26E-09	2.88E-09	3.27E-09	
Pm-143	M		5.00E-03	6.34E-09	5.52E-09	3.42E-09	2.26E-09	1.72E-09	1.50E-09	1.67E-09	
Pm-143	S		5.00E-03	5.62E-09	4.96E-09	3.20E-09	2.14E-09	1.71E-09	1.45E-09	1.60E-09	
Pm-144	F		5.00E-03	7.70E-08	6.73E-08	3.98E-08	2.73E-08	1.90E-08	1.71E-08	1.91E-08	
Pm-144	M		5.00E-03	3.12E-08	2.79E-08	1.79E-08	1.21E-08	9.39E-09	8.36E-09	9.17E-09	
Pm-144	S		5.00E-03	2.67E-08	2.42E-08	1.61E-08	1.10E-08	8.91E-09	7.63E-09	8.37E-09	
Pm-145	F		5.00E-03	2.75E-08	2.50E-08	1.54E-08	1.05E-08	8.24E-09	8.04E-09	8.62E-09	
Pm-145	M		5.00E-03	1.01E-08	9.39E-09	6.19E-09	4.14E-09	3.57E-09	3.51E-09	3.70E-09	
Pm-145	S		5.00E-03	6.94E-09	6.33E-09	4.26E-09	2.85E-09	2.41E-09	2.27E-09	2.42E-09	
Pm-146	F		5.00E-03	1.63E-07	1.47E-07	9.02E-08	6.14E-08	4.62E-08	4.40E-08	4.78E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Pm-146	M		5.00E-03	6.35E-08	5.83E-08	3.83E-08	2.58E-08	2.15E-08	2.04E-08	2.18E-08	
Pm-146	S		5.00E-03	5.22E-08	4.82E-08	3.26E-08	2.20E-08	1.86E-08	1.72E-08	1.84E-08	
Pm-147	F		5.00E-03	3.95E-08	3.42E-08	1.92E-08	1.14E-08	7.58E-09	6.98E-09	7.97E-09	
Pm-147	M		5.00E-03	2.07E-08	1.76E-08	1.08E-08	6.91E-09	5.66E-09	4.94E-09	5.44E-09	
Pm-147	S		5.00E-03	1.89E-08	1.59E-08	9.94E-09	6.68E-09	5.69E-09	4.86E-09	5.31E-09	
Pm-148	F		5.00E-03	1.02E-08	6.71E-09	2.96E-09	1.79E-09	9.85E-10	7.97E-10	1.01E-09	
Pm-148	M		5.00E-03	1.48E-08	1.03E-08	5.19E-09	3.43E-09	2.40E-09	2.00E-09	2.32E-09	
Pm-148	S		5.00E-03	1.54E-08	1.09E-08	5.51E-09	3.66E-09	2.61E-09	2.18E-09	2.51E-09	
Pm-148m	F		5.00E-03	2.72E-08	2.09E-08	1.07E-08	6.97E-09	4.48E-09	3.81E-09	4.47E-09	
Pm-148m	M		5.00E-03	2.38E-08	1.87E-08	1.10E-08	7.64E-09	6.29E-09	5.11E-09	5.69E-09	
Pm-148m	S		5.00E-03	2.48E-08	1.96E-08	1.18E-08	8.30E-09	7.04E-09	5.69E-09	6.29E-09	
Pm-149	F		5.00E-03	2.78E-09	1.79E-09	7.66E-10	4.59E-10	2.38E-10	1.93E-10	2.51E-10	
Pm-149	M		5.00E-03	5.02E-09	3.45E-09	1.71E-09	1.15E-09	8.25E-10	6.67E-10	7.74E-10	
Pm-149	S		5.00E-03	5.28E-09	3.65E-09	1.82E-09	1.23E-09	8.97E-10	7.25E-10	8.38E-10	
Pm-150	F		5.00E-03	7.22E-10	5.03E-10	2.32E-10	1.42E-10	7.94E-11	6.53E-11	8.16E-11	
Pm-150	M		5.00E-03	1.15E-09	7.91E-10	3.75E-10	2.39E-10	1.50E-10	1.24E-10	1.49E-10	
Pm-150	S		5.00E-03	1.20E-09	8.23E-10	3.91E-10	2.50E-10	1.58E-10	1.30E-10	1.56E-10	
Pm-151	F		5.00E-03	2.06E-09	1.40E-09	6.21E-10	3.81E-10	2.04E-10	1.69E-10	2.14E-10	
Pm-151	M		5.00E-03	3.30E-09	2.56E-09	1.27E-09	8.46E-10	5.44E-10	4.38E-10	5.21E-10	
Pm-151	S		5.00E-03	3.48E-09	2.69E-09	1.34E-09	8.13E-10	5.88E-10	4.73E-10	5.55E-10	
Pm-152			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-152m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-153			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-154			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-154m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-203	F		2.00E-01	2.12E-10	1.66E-10	8.38E-11	5.17E-11	3.15E-11	2.56E-11	3.10E-11	
Po-203	M		2.00E-01	3.11E-10	2.39E-10	1.24E-10	7.99E-11	5.43E-11	4.39E-11	5.16E-11	
Po-203	S		2.00E-02	3.27E-10	2.48E-10	1.29E-10	8.37E-11	5.71E-11	4.62E-11	5.42E-11	
Po-204	F		2.00E-01	1.12E-09	8.76E-10	4.42E-10	2.71E-10	1.63E-10	1.32E-10	1.61E-10	
Po-204	M		2.00E-01	2.30E-09	1.75E-09	9.97E-10	6.67E-10	4.41E-10	3.64E-10	4.24E-10	
Po-204	S		2.00E-02	2.48E-09	1.86E-09	1.07E-09	7.17E-10	4.83E-10	3.98E-10	4.61E-10	
Po-205	F		2.00E-01	2.32E-10	1.90E-10	9.81E-11	5.95E-11	3.56E-11	2.85E-11	3.49E-11	
Po-205	M		2.00E-01	3.11E-10	2.48E-10	1.32E-10	8.30E-11	5.48E-11	4.39E-11	5.21E-11	
Po-205	S		2.00E-02	3.20E-10	2.54E-10	1.36E-10	8.58E-11	5.71E-11	4.57E-11	5.41E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Po-206	F		2.00E-01	1.00E-07	6.27E-08	2.87E-08	1.72E-08	1.03E-08	8.28E-09	1.03E-08	
Po-206	M		2.00E-01	2.48E-07	1.76E-07	1.11E-07	7.80E-08	6.95E-08	5.74E-08	6.27E-08	
Po-206	S		2.00E-02	2.61E-07	1.92E-07	1.24E-07	8.75E-08	7.88E-08	6.52E-08	7.09E-08	
Po-207	F		2.00E-01	4.81E-10	4.00E-10	2.05E-10	1.24E-10	7.20E-11	5.74E-11	7.10E-11	
Po-207	M		2.00E-01	6.46E-10	5.25E-10	2.75E-10	1.73E-10	1.09E-10	8.72E-11	1.05E-10	
Po-207	S		2.00E-02	6.87E-10	5.48E-10	2.87E-10	1.81E-10	1.15E-10	9.22E-11	1.11E-10	
Po-208	F		2.00E-01	9.00E-06	6.00E-06	2.74E-06	1.62E-06	9.58E-07	7.65E-07	9.57E-07	
Po-208	M		2.00E-01	1.79E-05	1.31E-05	7.98E-06	5.36E-06	4.51E-06	3.76E-06	4.16E-06	
Po-208	S		2.00E-02	2.80E-05	2.32E-05	1.46E-05	9.47E-06	7.79E-06	6.75E-06	7.42E-06	
Po-209	F		2.00E-01	8.90E-06	5.95E-06	2.72E-06	1.61E-06	9.51E-07	7.59E-07	9.51E-07	
Po-209	M		2.00E-01	1.75E-05	1.29E-05	7.82E-06	5.20E-06	4.33E-06	3.63E-06	4.02E-06	
Po-209	S		2.00E-02	3.38E-05	2.93E-05	1.89E-05	1.23E-05	1.03E-05	9.44E-06	1.02E-05	
Po-210	F		2.00E-01	7.37E-06	4.83E-06	2.19E-06	1.29E-06	7.66E-07	6.10E-07	7.65E-07	
Po-210	M		2.00E-01	1.50E-05	1.09E-05	6.68E-06	4.58E-06	3.96E-06	3.28E-06	3.60E-06	
Po-210	S		2.00E-02	1.79E-05	1.38E-05	8.64E-06	5.92E-06	5.13E-06	4.27E-06	4.68E-06	
Po-211			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-212			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-212m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-213			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-214			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-215			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-216			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-218			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-134	F		5.00E-03	1.39E-10	9.85E-11	4.65E-11	2.86E-11	1.71E-11	1.41E-11	1.72E-11	
Pr-134	M		5.00E-03	1.87E-10	1.32E-10	6.27E-11	3.92E-11	2.44E-11	2.03E-11	2.44E-11	
Pr-134	S		5.00E-03	1.93E-10	1.35E-10	6.45E-11	4.04E-11	2.52E-11	2.10E-11	2.52E-11	
Pr-134m	F		5.00E-03	2.12E-10	1.43E-10	6.54E-11	4.00E-11	2.36E-11	1.96E-11	2.41E-11	
Pr-134m	M		5.00E-03	3.04E-10	2.03E-10	9.42E-11	5.88E-11	3.65E-11	3.06E-11	3.69E-11	
Pr-134m	S		5.00E-03	3.15E-10	2.10E-10	9.75E-11	6.09E-11	3.80E-11	3.18E-11	3.83E-11	
Pr-135	F		5.00E-03	1.24E-10	8.61E-11	4.03E-11	2.50E-11	1.50E-11	1.24E-11	1.51E-11	
Pr-135	M		5.00E-03	1.82E-10	1.24E-10	5.88E-11	3.73E-11	2.37E-11	1.97E-11	2.35E-11	
Pr-135	S		5.00E-03	1.88E-10	1.29E-10	6.09E-11	3.86E-11	2.47E-11	2.05E-11	2.45E-11	
Pr-136	F		5.00E-03	9.42E-11	6.70E-11	3.18E-11	1.95E-11	1.18E-11	9.71E-12	1.18E-11	
Pr-136	M		5.00E-03	1.28E-10	8.92E-11	4.22E-11	2.63E-11	1.63E-11	1.35E-11	1.63E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Pr-136	S		5.00E-03	1.31E-10	9.16E-11	4.34E-11	2.70E-11	1.68E-11	1.39E-11	1.68E-11	
Pr-137	F		5.00E-03	1.10E-10	7.77E-11	3.63E-11	2.22E-11	1.28E-11	1.05E-11	1.30E-11	
Pr-137	M		5.00E-03	1.70E-10	1.17E-10	5.57E-11	3.52E-11	2.23E-11	1.83E-11	2.20E-11	
Pr-137	S		5.00E-03	1.77E-10	1.22E-10	5.79E-11	3.67E-11	2.33E-11	1.91E-11	2.30E-11	
Pr-138			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-138m	F		5.00E-03	4.39E-10	3.50E-10	1.78E-10	1.08E-10	6.31E-11	5.07E-11	6.24E-11	
Pr-138m	M		5.00E-03	5.94E-10	4.59E-10	2.34E-10	1.46E-10	9.07E-11	7.27E-11	8.80E-11	
Pr-138m	S		5.00E-03	6.11E-10	4.71E-10	2.40E-10	1.50E-10	9.38E-11	7.51E-11	9.08E-11	
Pr-139	F		5.00E-03	1.12E-10	8.32E-11	4.01E-11	2.46E-11	1.40E-11	1.15E-11	1.42E-11	
Pr-139	M		5.00E-03	1.59E-10	1.16E-10	5.71E-11	3.65E-11	2.35E-11	1.90E-11	2.28E-11	
Pr-139	S		5.00E-03	1.66E-10	1.20E-10	5.96E-11	3.83E-11	2.49E-11	2.02E-11	2.41E-11	
Pr-140			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-142	F		5.00E-03	3.02E-09	1.95E-09	8.24E-10	5.01E-10	2.53E-10	2.09E-10	2.71E-10	
Pr-142	M		5.00E-03	5.28E-09	3.50E-09	1.60E-09	1.02E-09	6.21E-10	5.17E-10	6.26E-10	
Pr-142	S		5.00E-03	5.53E-09	3.68E-09	1.69E-09	1.08E-09	6.63E-10	5.52E-10	6.67E-10	
Pr-142m	F		5.00E-03	3.84E-11	2.48E-11	1.05E-11	6.38E-12	3.21E-12	2.64E-12	3.44E-12	
Pr-142m	M		5.00E-03	6.73E-11	4.47E-11	2.04E-11	1.30E-11	7.90E-12	6.58E-12	7.98E-12	
Pr-142m	S		5.00E-03	7.05E-11	4.69E-11	2.15E-11	1.38E-11	8.43E-12	7.03E-12	8.49E-12	
Pr-143	F		5.00E-03	7.03E-09	4.72E-09	2.09E-09	1.28E-09	7.30E-10	5.85E-10	7.36E-10	
Pr-143	M		5.00E-03	1.15E-08	8.44E-09	4.63E-09	3.24E-09	2.67E-09	2.15E-09	2.41E-09	
Pr-143	S		5.00E-03	1.25E-08	9.18E-09	5.12E-09	3.62E-09	3.03E-09	2.44E-09	2.72E-09	
Pr-144	F		5.00E-03	1.22E-10	7.47E-11	3.18E-11	2.00E-11	1.21E-11	1.05E-11	1.27E-11	
Pr-144	M		5.00E-03	1.86E-10	1.15E-10	5.01E-11	3.20E-11	2.04E-11	1.75E-11	2.09E-11	
Pr-144	S		5.00E-03	1.93E-10	1.19E-10	5.22E-11	3.34E-11	2.13E-11	1.83E-11	2.18E-11	
Pr-144m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-145	F		5.00E-03	8.52E-10	5.42E-10	2.29E-10	1.57E-10	8.12E-11	6.84E-11	8.58E-11	
Pr-145	M		5.00E-03	1.56E-09	1.02E-09	4.68E-10	3.00E-10	1.90E-10	1.57E-10	1.88E-10	
Pr-145	S		5.00E-03	1.64E-09	1.07E-09	4.95E-10	3.18E-10	2.03E-10	1.67E-10	2.01E-10	
Pr-146	F		5.00E-03	1.94E-10	1.24E-10	5.50E-11	3.40E-11	2.02E-11	1.70E-11	2.09E-11	
Pr-146	M		5.00E-03	2.97E-10	1.89E-10	8.52E-11	5.36E-11	3.38E-11	2.86E-11	3.43E-11	
Pr-146	S		5.00E-03	3.08E-10	1.96E-10	8.85E-11	5.58E-11	3.53E-11	2.98E-11	3.58E-11	
Pr-147	F		5.00E-03	1.04E-10	6.81E-11	3.04E-11	1.94E-11	1.20E-11	1.03E-11	1.23E-11	
Pr-147	M		5.00E-03	1.54E-10	1.01E-10	4.65E-11	3.04E-11	2.03E-11	1.72E-11	2.02E-11	
Pr-147	S		5.00E-03	1.60E-10	1.05E-10	4.84E-11	3.17E-11	2.13E-11	1.81E-11	2.12E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Pr-148			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-148m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt-184	F		2.00E-02	1.24E-10	9.17E-11	4.43E-11	2.78E-11	1.71E-11	1.42E-11	1.71E-11	1.71E-11
Pt-184	M		2.00E-02	1.90E-10	1.38E-10	6.82E-11	4.47E-11	3.03E-11	2.49E-11	2.92E-11	2.92E-11
Pt-184	S		2.00E-02	1.97E-10	1.43E-10	7.09E-11	4.65E-11	3.18E-11	2.61E-11	3.06E-11	3.06E-11
Pt-186	F		2.00E-02	3.57E-10	2.85E-10	1.43E-10	8.76E-11	5.04E-11	4.07E-11	5.02E-11	5.02E-11
Pt-186	M		2.00E-02	5.15E-10	3.99E-10	2.05E-10	1.31E-10	8.48E-11	6.79E-11	8.11E-11	8.11E-11
Pt-186	S		2.00E-02	5.32E-10	4.11E-10	2.12E-10	1.36E-10	8.86E-11	7.10E-11	8.46E-11	8.46E-11
Pt-187	F		2.00E-02	2.95E-10	2.20E-10	1.05E-10	6.48E-11	3.74E-11	3.07E-11	3.78E-11	3.78E-11
Pt-187	M		2.00E-02	4.93E-10	3.60E-10	1.82E-10	1.20E-10	8.26E-11	6.69E-11	7.84E-11	7.84E-11
Pt-187	S		2.00E-02	5.15E-10	3.75E-10	1.91E-10	1.26E-10	8.77E-11	7.09E-11	8.29E-11	8.29E-11
Pt-188	F		2.00E-02	4.08E-09	3.05E-09	1.53E-09	9.78E-10	5.87E-10	4.94E-10	5.93E-10	5.93E-10
Pt-188	M		2.00E-02	8.37E-09	6.37E-09	3.75E-09	2.68E-09	2.28E-09	1.82E-09	2.02E-09	2.02E-09
Pt-188	S		2.00E-02	9.25E-09	7.07E-09	4.20E-09	3.01E-09	2.60E-09	2.06E-09	2.28E-09	2.28E-09
Pt-189	F		2.00E-02	6.18E-10	4.63E-10	2.21E-10	1.35E-10	7.57E-11	6.20E-11	7.72E-11	7.72E-11
Pt-189	M		2.00E-02	1.12E-09	8.27E-10	4.31E-10	2.87E-10	2.05E-10	1.65E-10	1.92E-10	1.92E-10
Pt-189	S		2.00E-02	1.18E-09	8.71E-10	4.57E-10	3.05E-10	2.21E-10	1.78E-10	2.06E-10	2.06E-10
Pt-190	F		2.00E-02	9.03E-07	6.56E-07	3.22E-07	2.02E-07	1.28E-07	1.08E-07	1.29E-07	1.29E-07
Pt-190	M		2.00E-02	6.97E-06	5.34E-06	3.26E-06	2.09E-06	1.66E-06	1.44E-06	1.59E-06	1.59E-06
Pt-190	S		2.00E-02	1.87E-05	1.65E-05	1.07E-05	6.73E-06	5.48E-06	5.17E-06	5.58E-06	5.58E-06
Pt-191	F		2.00E-02	1.16E-09	8.54E-10	4.03E-10	2.48E-10	1.38E-10	1.13E-10	1.41E-10	1.41E-10
Pt-191	M		2.00E-02	2.27E-09	1.67E-09	8.92E-10	6.05E-10	4.12E-10	3.30E-10	3.86E-10	3.86E-10
Pt-191	S		2.00E-02	2.41E-09	1.77E-09	9.54E-10	6.50E-10	4.52E-10	3.62E-10	4.21E-10	4.21E-10
Pt-193	F		2.00E-02	2.37E-10	1.65E-10	7.73E-11	4.78E-11	2.79E-11	2.35E-11	2.87E-11	2.87E-11
Pt-193	M		2.00E-02	7.00E-10	5.47E-10	2.88E-10	1.72E-10	1.14E-10	9.46E-11	1.12E-10	1.12E-10
Pt-193	S		2.00E-02	2.48E-09	2.29E-09	1.44E-09	8.99E-10	7.09E-10	6.69E-10	7.27E-10	7.27E-10
Pt-193m	F		2.00E-02	1.57E-09	1.05E-09	4.51E-10	2.77E-10	1.45E-10	1.24E-10	1.57E-10	1.57E-10
Pt-193m	M		2.00E-02	4.21E-09	3.05E-09	1.74E-09	1.27E-09	1.11E-09	8.72E-10	9.67E-10	9.67E-10
Pt-193m	S		2.00E-02	4.60E-09	3.35E-09	1.92E-09	1.41E-09	1.25E-09	9.78E-10	1.08E-09	1.08E-09
Pt-195m	F		2.00E-02	2.19E-09	1.48E-09	6.50E-10	3.98E-10	2.10E-10	1.78E-10	2.24E-10	2.24E-10
Pt-195m	M		2.00E-02	5.28E-09	3.80E-09	2.13E-09	1.54E-09	1.32E-09	1.04E-09	1.16E-09	1.16E-09
Pt-195m	S		2.00E-02	5.74E-09	4.15E-09	2.35E-09	1.71E-09	1.48E-09	1.16E-09	1.29E-09	1.29E-09
Pt-197	F		2.00E-02	1.18E-09	7.81E-10	3.33E-10	2.05E-10	1.06E-10	9.04E-11	1.15E-10	1.15E-10
Pt-197	M		2.00E-02	2.57E-09	1.77E-09	8.18E-10	5.61E-10	4.30E-10	3.45E-10	3.97E-10	3.97E-10

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Pt-197	S		2.00E-02	2.46E-09	1.88E-09	8.81E-10	6.07E-10	4.70E-10	3.76E-10	4.31E-10	
Pt-197m	F		2.00E-02	2.78E-10	1.83E-10	7.93E-11	4.96E-11	2.80E-11	2.39E-11	2.95E-11	
Pt-197m	M		2.00E-02	5.53E-10	3.74E-10	1.83E-10	1.24E-10	9.07E-11	7.43E-11	8.57E-11	
Pt-197m	S		2.00E-02	5.83E-10	3.95E-10	1.95E-10	1.32E-10	9.77E-11	8.00E-11	9.20E-11	
Pt-199	F		2.00E-02	1.32E-10	8.52E-11	3.72E-11	2.37E-11	1.44E-11	1.23E-11	1.49E-11	
Pt-199	M		2.00E-02	2.29E-10	1.50E-10	7.01E-11	4.68E-11	3.28E-11	2.74E-11	3.18E-11	
Pt-199	S		2.00E-02	2.40E-10	1.57E-10	7.38E-11	4.95E-11	3.50E-11	2.91E-11	3.38E-11	
Pt-200	F		2.00E-02	2.55E-09	1.66E-09	8.22E-10	5.04E-10	2.57E-10	2.16E-10	2.73E-10	
Pt-200	M		2.00E-02	4.93E-09	3.32E-09	1.58E-09	1.04E-09	6.85E-10	5.61E-10	6.65E-10	
Pt-200	S		2.00E-02	5.19E-09	3.51E-09	1.68E-09	1.10E-09	7.38E-10	6.04E-10	7.14E-10	
Pt-202	F		2.00E-02	1.07E-08	7.01E-09	3.00E-09	1.82E-09	9.14E-10	7.63E-10	9.87E-10	
Pt-202	M		2.00E-02	1.90E-08	1.28E-08	6.01E-09	3.86E-09	2.44E-09	2.04E-09	2.44E-09	
Pt-202	S		2.00E-02	1.99E-08	1.35E-08	6.36E-09	4.10E-09	2.62E-09	2.19E-09	2.61E-09	
Pt-202+D	S			1.99E-08	1.35E-08	6.36E-09	4.10E-09	2.62E-09	2.19E-09	2.61E-09	
Pt-202+E	S			1.99E-08	1.35E-08	6.36E-09	4.10E-09	2.62E-09	2.19E-09	2.61E-09	
Pu-232	F		5.00E-03	4.15E-08	2.90E-08	1.39E-08	9.80E-09	7.09E-09	6.22E-09	7.03E-09	
Pu-232	M		5.00E-03	1.07E-07	7.73E-08	4.28E-08	3.14E-08	2.72E-08	2.22E-08	2.44E-08	
Pu-232	S		1.00E-04	1.14E-07	8.25E-08	4.59E-08	3.37E-08	2.42E-08	2.38E-08	2.59E-08	
Pu-234	F		5.00E-03	2.93E-08	2.02E-08	9.78E-09	5.70E-09	3.56E-09	3.02E-09	3.64E-09	
Pu-234	M		5.00E-03	7.79E-08	5.86E-08	3.75E-08	2.75E-08	2.57E-08	2.06E-08	2.24E-08	
Pu-234	S		1.00E-04	8.69E-08	6.58E-08	4.25E-08	3.14E-08	2.96E-08	2.37E-08	2.57E-08	
Pu-235	F		5.00E-03	1.06E-11	8.30E-12	4.03E-12	2.31E-12	1.38E-12	1.08E-12	1.35E-12	
Pu-235	M		5.00E-03	1.40E-11	1.07E-11	5.23E-12	3.09E-12	1.96E-12	1.54E-12	1.88E-12	
Pu-235	S		1.00E-04	1.44E-11	1.09E-11	5.37E-12	3.18E-12	2.03E-12	1.59E-12	1.95E-12	
Pu-236	F		5.00E-03	1.05E-04	9.56E-05	6.21E-05	4.55E-05	3.82E-05	4.08E-05	4.21E-05	
Pu-236	M		5.00E-03	4.80E-05	4.29E-05	2.95E-05	2.12E-05	1.95E-05	1.99E-05	2.05E-05	
Pu-236	S		1.00E-04	3.62E-05	3.10E-05	2.01E-05	1.36E-05	1.18E-05	1.06E-05	1.14E-05	
Pu-237	F		5.00E-03	2.35E-09	1.67E-09	8.38E-10	5.08E-10	3.11E-10	2.77E-10	3.28E-10	
Pu-237	M		5.00E-03	1.98E-09	1.47E-09	8.32E-10	5.47E-10	4.27E-10	3.53E-10	3.99E-10	
Pu-237	S		1.00E-04	2.03E-09	1.53E-09	8.86E-10	5.92E-10	4.76E-10	3.88E-10	4.36E-10	
Pu-238	F		5.00E-03	1.99E-04	1.91E-04	1.38E-04	1.12E-04	1.01E-04	1.08E-04	1.10E-04	
Pu-238	M		5.00E-03	7.77E-05	7.42E-05	5.64E-05	4.41E-05	4.32E-05	4.62E-05	4.65E-05	
Pu-238	S		1.00E-04	4.45E-05	3.99E-05	2.72E-05	1.88E-05	1.69E-05	1.61E-05	1.69E-05	
Pu-239	F		5.00E-03	2.10E-04	2.04E-04	1.52E-04	1.25E-04	1.12E-04	1.19E-04	1.21E-04	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult			
			(Sv Bq ⁻¹)								
Pu-239	M		5.00E-03	8.00E-05	7.73E-05	6.04E-05	4.81E-05	4.72E-05	5.02E-05	5.04E-05	
Pu-239	S		1.00E-04	4.27E-05	3.85E-05	2.66E-05	1.86E-05	1.68E-05	1.60E-05	1.68E-05	
Pu-239+D	F			2.10E-04	2.04E-04	1.52E-04	1.25E-04	1.12E-04	1.19E-04	1.21E-04	
Pu-239+E	F			2.10E-04	2.04E-04	1.52E-04	1.25E-04	1.12E-04	1.19E-04	1.21E-04	
Pu-240	F		5.00E-03	2.10E-04	2.04E-04	1.52E-04	1.25E-04	1.12E-04	1.19E-04	1.21E-04	
Pu-240	M		5.00E-03	8.01E-05	7.74E-05	6.04E-05	4.81E-05	4.72E-05	5.02E-05	5.04E-05	
Pu-240	S		1.00E-04	4.28E-05	3.86E-05	2.66E-05	1.86E-05	1.68E-05	1.61E-05	1.68E-05	
Pu-241	F		5.00E-03	2.84E-06	2.93E-06	2.58E-06	2.38E-06	2.22E-06	2.28E-06	2.30E-06	
Pu-241	M		5.00E-03	9.18E-07	9.82E-07	9.24E-07	8.33E-07	8.58E-07	8.99E-07	8.94E-07	
Pu-241	S		1.00E-04	2.22E-07	2.36E-07	2.03E-07	1.69E-07	1.72E-07	1.75E-07	1.75E-07	
Pu-242	F		5.00E-03	1.99E-04	1.93E-04	1.44E-04	1.19E-04	1.07E-04	1.13E-04	1.15E-04	
Pu-242	M		5.00E-03	7.59E-05	7.33E-05	5.73E-05	4.56E-05	4.47E-05	4.76E-05	4.79E-05	
Pu-242	S		1.00E-04	4.02E-05	3.62E-05	2.50E-05	1.74E-05	1.57E-05	1.50E-05	1.58E-05	
Pu-243	F		5.00E-03	2.87E-10	1.94E-10	8.83E-11	5.77E-11	3.50E-11	3.20E-11	3.76E-11	
Pu-243	M		5.00E-03	5.72E-10	3.92E-10	1.96E-10	1.34E-10	8.74E-11	8.30E-11	9.38E-11	
Pu-243	S		1.00E-04	6.03E-10	4.13E-10	2.06E-10	1.41E-10	9.24E-11	8.66E-11	9.82E-11	
Pu-244	F		5.00E-03	1.97E-04	1.91E-04	1.42E-04	1.17E-04	1.05E-04	1.12E-04	1.13E-04	
Pu-244	M		5.00E-03	7.43E-05	7.19E-05	5.62E-05	4.47E-05	4.39E-05	4.67E-05	4.70E-05	
Pu-244	S		1.00E-04	3.88E-05	3.51E-05	2.42E-05	1.69E-05	1.51E-05	1.46E-05	1.53E-05	
Pu-244+D	F			1.97E-04	1.91E-04	1.42E-04	1.17E-04	1.05E-04	1.12E-04	1.14E-04	
Pu-244+E	F			1.97E-04	1.91E-04	1.42E-04	1.17E-04	1.05E-04	1.12E-04	1.14E-04	
Pu-245	F		5.00E-03	1.78E-09	1.21E-09	5.35E-10	3.33E-10	1.80E-10	1.57E-10	1.94E-10	
Pu-245	M		5.00E-03	3.44E-09	2.38E-09	1.17E-09	7.79E-10	4.90E-10	3.95E-10	4.74E-10	
Pu-245	S		1.00E-04	3.63E-09	2.51E-09	1.23E-09	8.26E-10	5.26E-10	4.23E-10	5.06E-10	
Pu-246	F		5.00E-03	1.75E-08	1.19E-08	5.87E-09	3.77E-09	2.45E-09	2.27E-09	2.60E-09	
Pu-246	M		5.00E-03	2.35E-08	1.72E-08	9.53E-09	6.59E-09	5.29E-09	4.40E-09	4.91E-09	
Pu-246	S		1.00E-04	2.46E-08	1.81E-08	1.01E-08	7.00E-09	5.67E-09	4.64E-09	5.19E-09	
Ra-219			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-219+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-219+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-220			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-221			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-221+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-221+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Ra-222			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-223	F		6.00E-01	2.93E-06	1.03E-06	4.95E-07	4.00E-07	3.29E-07	1.24E-07	1.83E-07	1.83E-07
Ra-223	M		2.00E-01	2.77E-05	2.06E-05	1.33E-05	9.86E-06	9.35E-06	7.43E-06	8.05E-06	8.05E-06
Ra-223	S		2.00E-02	3.16E-05	2.39E-05	1.54E-05	1.15E-05	1.09E-05	8.66E-06	9.39E-06	9.39E-06
Ra-223+D	S			3.16E-05	2.39E-05	1.54E-05	1.15E-05	1.09E-05	8.66E-06	9.39E-06	9.39E-06
Ra-223+E	S			3.16E-05	2.39E-05	1.54E-05	1.15E-05	1.09E-05	8.66E-06	9.39E-06	9.39E-06
Ra-224	F		6.00E-01	1.52E-06	6.00E-07	2.93E-07	2.24E-07	1.70E-07	7.59E-08	1.07E-07	1.07E-07
Ra-224	M		2.00E-01	1.11E-05	8.21E-06	5.30E-06	3.94E-06	3.74E-06	2.97E-06	3.22E-06	3.22E-06
Ra-224	S		2.00E-02	1.22E-05	9.20E-06	5.96E-06	4.43E-06	4.21E-06	3.36E-06	3.64E-06	3.64E-06
Ra-224+D	S			1.22E-05	9.20E-06	5.96E-06	4.43E-06	4.21E-06	3.36E-06	3.64E-06	3.64E-06
Ra-224+E	S			1.22E-05	9.20E-06	5.96E-06	4.43E-06	4.21E-06	3.36E-06	3.64E-06	3.64E-06
Ra-225	F		6.00E-01	3.92E-06	1.20E-06	5.60E-07	4.57E-07	3.82E-07	1.29E-07	2.00E-07	2.00E-07
Ra-225	M		2.00E-01	2.38E-05	1.78E-05	1.14E-05	8.42E-06	7.95E-06	6.28E-06	6.83E-06	6.83E-06
Ra-225	S		2.00E-02	2.82E-05	2.18E-05	1.39E-05	1.03E-05	9.76E-06	7.76E-06	8.41E-06	8.41E-06
Ra-226	F		6.00E-01	2.58E-06	9.27E-07	5.46E-07	7.20E-07	1.32E-06	3.59E-07	4.66E-07	4.66E-07
Ra-226	M		2.00E-01	1.50E-05	1.12E-05	7.01E-06	4.88E-06	4.47E-06	3.46E-06	3.82E-06	3.82E-06
Ra-226	S		2.00E-02	3.35E-05	2.92E-05	1.89E-05	1.23E-05	1.04E-05	9.51E-06	1.03E-05	1.03E-05
Ra-226+D	S			3.37E-05	2.93E-05	1.90E-05	1.23E-05	1.04E-05	9.54E-06	1.03E-05	1.03E-05
Ra-226+E	S			3.37E-05	2.93E-05	1.90E-05	1.23E-05	1.04E-05	9.54E-06	1.03E-05	1.03E-05
Ra-227	F		6.00E-01	1.53E-09	1.23E-09	7.84E-10	6.11E-10	5.28E-10	4.60E-10	4.93E-10	4.93E-10
Ra-227	M		2.00E-01	7.99E-10	6.71E-10	4.43E-10	3.21E-10	2.90E-10	2.73E-10	2.87E-10	2.87E-10
Ra-227	S		2.00E-02	1.01E-09	8.46E-10	4.38E-10	2.88E-10	2.43E-10	2.23E-10	2.42E-10	2.42E-10
Ra-228	F		6.00E-01	1.64E-05	5.68E-06	3.11E-06	3.55E-06	4.46E-06	9.06E-07	1.47E-06	1.47E-06
Ra-228	M		2.00E-01	1.46E-05	1.01E-05	6.32E-06	4.64E-06	4.33E-06	2.64E-06	3.08E-06	3.08E-06
Ra-228	S		2.00E-02	4.83E-05	4.73E-05	3.17E-05	1.97E-05	1.64E-05	1.61E-05	1.71E-05	1.71E-05
Ra-228+D	S			4.84E-05	4.74E-05	3.17E-05	1.97E-05	1.64E-05	1.61E-05	1.72E-05	1.72E-05
Ra-228+E	S			4.84E-05	4.74E-05	3.17E-05	1.97E-05	1.64E-05	1.61E-05	1.72E-05	1.72E-05
Ra-230	F		6.00E-01	5.56E-10	4.23E-10	1.92E-10	1.10E-10	5.82E-11	6.09E-11	7.21E-11	7.21E-11
Ra-230	M		2.00E-01	9.46E-10	6.32E-10	2.97E-10	1.93E-10	1.31E-10	1.10E-10	1.29E-10	1.29E-10
Ra-230	S		2.00E-02	9.95E-10	6.55E-10	3.09E-10	2.02E-10	1.39E-10	1.15E-10	1.35E-10	1.35E-10
Rb-77			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-78	F		1.00E+00	1.96E-10	1.38E-10	6.50E-11	4.00E-11	2.39E-11	1.97E-11	2.41E-11	2.41E-11
Rb-78	M		1.00E+00	2.74E-10	1.89E-10	8.89E-11	5.54E-11	3.43E-11	2.84E-11	3.43E-11	3.43E-11
Rb-78	S		1.00E+00	2.83E-10	1.95E-10	9.15E-11	5.71E-11	3.55E-11	2.94E-11	3.55E-11	3.55E-11

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Rb-78m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-79	F		1.00E+00	1.69E-10	1.17E-10	5.36E-11	3.34E-11	2.03E-11	1.70E-11	2.06E-11	
Rb-79	M		1.00E+00	2.54E-10	1.72E-10	8.00E-11	5.11E-11	3.31E-11	2.76E-11	3.29E-11	
Rb-79	S		1.00E+00	2.63E-10	1.79E-10	8.29E-11	5.31E-11	3.45E-11	2.88E-11	3.42E-11	
Rb-80			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-81	F		1.00E+00	3.10E-10	2.39E-10	1.16E-10	6.89E-11	4.03E-11	3.28E-11	4.05E-11	
Rb-81	M		1.00E+00	4.76E-10	3.59E-10	1.84E-10	1.19E-10	8.46E-11	6.78E-11	7.92E-11	
Rb-81	S		1.00E+00	4.95E-10	3.72E-10	1.91E-10	1.24E-10	8.95E-11	7.17E-11	8.35E-11	
Rb-81m	F		1.00E+00	6.27E-11	4.61E-11	2.20E-11	1.36E-11	8.54E-12	7.02E-12	8.46E-12	
Rb-81m	M		1.00E+00	1.05E-10	7.59E-11	3.89E-11	2.59E-11	1.95E-11	1.58E-11	1.81E-11	
Rb-81m	S		1.00E+00	1.09E-10	7.92E-11	4.08E-11	2.73E-11	2.07E-11	1.67E-11	1.92E-11	
Rb-82			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-82m	F		1.00E+00	9.13E-10	7.78E-10	4.09E-10	2.42E-10	1.44E-10	1.14E-10	1.41E-10	
Rb-82m	M		1.00E+00	1.06E-09	8.90E-10	4.74E-10	2.88E-10	1.83E-10	1.44E-10	1.75E-10	
Rb-82m	S		1.00E+00	1.08E-09	9.03E-10	4.82E-10	2.93E-10	1.87E-10	1.48E-10	1.78E-10	
Rb-83	F		1.00E+00	4.63E-09	3.62E-09	1.87E-09	1.21E-09	7.52E-10	6.59E-10	7.71E-10	
Rb-83	M		1.00E+00	6.72E-09	5.39E-09	2.97E-09	1.95E-09	1.27E-09	1.08E-09	1.25E-09	
Rb-83	S		1.00E+00	7.88E-09	6.44E-09	3.36E-09	2.24E-09	1.63E-09	1.37E-09	1.56E-09	
Rb-84	F		1.00E+00	8.79E-09	6.50E-09	3.19E-09	2.01E-09	1.21E-09	1.04E-09	1.25E-09	
Rb-84	M		1.00E+00	1.38E-08	1.05E-08	5.76E-09	3.89E-09	2.92E-09	2.45E-09	2.77E-09	
Rb-84	S		1.00E+00	1.55E-08	1.19E-08	6.62E-09	4.49E-09	3.43E-09	2.88E-09	3.24E-09	
Rb-84m	F		1.00E+00	4.19E-11	3.02E-11	1.40E-11	9.01E-12	5.57E-12	4.74E-12	5.66E-12	
Rb-84m	M		1.00E+00	6.36E-11	4.56E-11	2.17E-11	1.44E-11	9.67E-12	8.13E-12	9.50E-12	
Rb-84m	S		1.00E+00	6.65E-11	4.77E-11	2.28E-11	1.51E-11	1.03E-11	8.62E-12	1.01E-11	
Rb-86	F		1.00E+00	1.15E-08	7.73E-09	3.41E-09	2.03E-09	1.11E-09	9.33E-10	1.18E-09	
Rb-86	M		1.00E+00	2.35E-08	1.73E-08	9.26E-09	6.21E-09	4.78E-09	4.03E-09	4.54E-09	
Rb-86	S		1.00E+00	2.61E-08	1.94E-08	1.06E-08	7.13E-09	5.56E-09	4.70E-09	5.27E-09	
Rb-86m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-87	F		1.00E+00	6.20E-09	4.23E-09	1.88E-09	1.12E-09	6.14E-10	5.15E-10	6.47E-10	
Rb-87	M		1.00E+00	2.20E-08	1.73E-08	1.01E-08	7.04E-09	6.01E-09	4.86E-09	5.38E-09	
Rb-87	S		1.00E+00	4.98E-08	4.45E-08	2.88E-08	1.96E-08	1.71E-08	1.57E-08	1.68E-08	
Rb-88	F		1.00E+00	1.95E-10	1.20E-10	5.20E-11	3.20E-11	1.90E-11	1.62E-11	1.99E-11	
Rb-88	M		1.00E+00	2.94E-10	1.81E-10	7.98E-11	4.98E-11	3.10E-11	2.65E-11	3.20E-11	
Rb-88	S		1.00E+00	3.05E-10	1.88E-10	8.29E-11	5.18E-11	3.24E-11	2.77E-11	3.33E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Rb-89	F		1.00E+00	1.35E-10	9.35E-11	4.35E-11	2.69E-11	1.63E-11	1.36E-11	1.65E-11	
Rb-89	M		1.00E+00	1.94E-10	1.33E-10	6.23E-11	3.94E-11	2.52E-11	2.11E-11	2.52E-11	
Rb-89	S		1.00E+00	2.02E-10	1.38E-10	6.50E-11	4.12E-11	2.65E-11	2.22E-11	2.64E-11	
Rb-90			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-90m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-178	F		1.00E+00	1.10E-10	7.71E-11	3.58E-11	2.19E-11	1.37E-11	1.13E-11	1.37E-11	
Re-178	M		1.00E+00	1.38E-10	9.46E-11	4.45E-11	2.86E-11	1.86E-11	1.56E-11	1.85E-11	
Re-178	S		1.00E+00	1.41E-10	9.66E-11	4.55E-11	2.94E-11	1.92E-11	1.61E-11	1.90E-11	
Re-179	F		1.00E+00	6.71E-11	5.02E-11	2.43E-11	1.47E-11	9.16E-12	7.41E-12	9.01E-12	
Re-179	M		1.00E+00	8.68E-11	6.30E-11	3.10E-11	1.99E-11	1.32E-11	1.08E-11	1.28E-11	
Re-179	S		1.00E+00	8.90E-11	6.45E-11	3.17E-11	2.05E-11	1.36E-11	1.12E-11	1.32E-11	
Re-180			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-181	F		1.00E+00	2.00E-09	1.47E-09	6.85E-10	3.89E-10	2.37E-10	1.87E-10	2.33E-10	
Re-181	M		1.00E+00	2.10E-09	1.53E-09	7.58E-10	4.73E-10	3.22E-10	2.56E-10	3.05E-10	
Re-181	S		1.00E+00	2.11E-09	1.54E-09	7.67E-10	4.83E-10	3.32E-10	2.64E-10	3.14E-10	
Re-182	F		1.00E+00	6.46E-09	4.65E-09	2.20E-09	1.29E-09	7.89E-10	6.34E-10	7.82E-10	
Re-182	M		1.00E+00	8.54E-09	6.22E-09	3.30E-09	2.20E-09	1.48E-09	1.18E-09	1.39E-09	
Re-182	S		1.00E+00	8.80E-09	6.42E-09	3.44E-09	2.31E-09	1.60E-09	1.27E-09	1.48E-09	
Re-182m	F		1.00E+00	1.38E-09	1.06E-09	5.19E-10	3.00E-10	1.83E-10	1.45E-10	1.80E-10	
Re-182m	M		1.00E+00	1.53E-09	1.17E-09	6.06E-10	3.83E-10	2.65E-10	2.10E-10	2.48E-10	
Re-182m	S		1.00E+00	1.55E-09	1.19E-09	6.16E-10	3.92E-10	2.74E-10	2.18E-10	2.56E-10	
Re-183	F		1.00E+00	4.52E-09	2.86E-09	1.23E-09	7.07E-10	4.33E-10	3.47E-10	4.35E-10	
Re-183	M		1.00E+00	1.39E-08	1.01E-08	5.83E-09	4.04E-09	3.47E-09	2.80E-09	3.11E-09	
Re-183	S		1.00E+00	1.69E-08	1.25E-08	7.35E-09	5.10E-09	4.40E-09	3.56E-09	3.94E-09	
Re-184	F		1.00E+00	4.17E-09	2.98E-09	1.44E-09	8.74E-10	5.43E-10	4.44E-10	5.39E-10	
Re-184	M		1.00E+00	9.09E-09	6.82E-09	3.99E-09	2.80E-09	2.38E-09	1.90E-09	2.11E-09	
Re-184	S		1.00E+00	1.06E-08	8.08E-09	4.81E-09	3.39E-09	2.90E-09	2.32E-09	2.57E-09	
Re-184m	F		1.00E+00	6.59E-09	4.61E-09	2.04E-09	1.19E-09	7.33E-10	5.95E-10	7.36E-10	
Re-184m	M		1.00E+00	2.92E-08	2.23E-08	1.34E-08	9.32E-09	8.10E-09	6.54E-09	7.22E-09	
Re-184m	S		1.00E+00	4.26E-08	3.42E-08	2.10E-08	1.45E-08	1.24E-08	1.02E-08	1.12E-08	
Re-186	F		1.00E+00	7.04E-09	4.54E-09	1.94E-09	1.06E-09	6.40E-10	5.00E-10	6.41E-10	
Re-186	M		1.00E+00	8.32E-09	5.52E-09	2.71E-09	1.76E-09	1.34E-09	1.06E-09	1.23E-09	
Re-186	S		1.00E+00	8.49E-09	5.65E-09	2.81E-09	1.85E-09	1.44E-09	1.14E-09	1.31E-09	
Re-186m	F		1.00E+00	1.15E-08	6.97E-09	2.93E-09	1.67E-09	1.03E-09	8.31E-10	1.04E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Re-186m	M		1.00E+00	5.81E-08	4.51E-08	2.63E-08	1.74E-08	1.41E-08	1.20E-08	1.33E-08	
Re-186m	S		1.00E+00	1.76E-07	1.62E-07	1.08E-07	7.26E-08	6.30E-08	6.09E-08	6.43E-08	
Re-186m+D	S			1.84E-07	1.68E-07	1.11E-07	7.44E-08	6.44E-08	6.20E-08	6.56E-08	
Re-186m+E	S			1.84E-07	1.68E-07	1.11E-07	7.44E-08	6.44E-08	6.20E-08	6.56E-08	
Re-187	F		1.00E+00	2.43E-11	1.51E-11	6.36E-12	3.57E-12	2.17E-12	1.73E-12	2.19E-12	
Re-187	M		1.00E+00	5.28E-11	3.78E-11	1.89E-11	1.09E-11	6.99E-12	5.89E-12	7.06E-12	
Re-187	S		1.00E+00	1.55E-10	1.37E-10	8.47E-11	5.20E-11	4.09E-11	3.93E-11	4.26E-11	
Re-188	F		1.00E+00	6.55E-09	4.43E-09	1.91E-09	1.00E-09	6.08E-10	4.61E-10	5.99E-10	
Re-188	M		1.00E+00	6.04E-09	3.98E-09	1.78E-09	1.04E-09	6.79E-10	5.38E-10	6.61E-10	
Re-188	S		1.00E+00	5.98E-09	3.93E-09	1.76E-09	1.05E-09	6.87E-10	5.47E-10	6.68E-10	
Re-188m	F		1.00E+00	1.36E-10	9.17E-11	4.01E-11	2.15E-11	1.35E-11	1.03E-11	1.31E-11	
Re-188m	M		1.00E+00	1.48E-10	9.82E-11	4.50E-11	2.74E-11	1.67E-11	1.48E-11	1.77E-11	
Re-188m	S		1.00E+00	1.48E-10	9.79E-11	4.51E-11	2.77E-11	1.70E-11	1.36E-11	1.68E-11	
Re-189	F		1.00E+00	3.55E-09	2.39E-09	1.03E-09	5.47E-10	3.32E-10	2.54E-10	3.28E-10	
Re-189	M		1.00E+00	3.67E-09	2.46E-09	1.16E-09	7.23E-10	5.24E-10	4.12E-10	4.88E-10	
Re-189	S		1.00E+00	3.69E-09	2.46E-09	1.17E-09	7.44E-10	5.47E-10	4.30E-10	5.06E-10	
Re-190			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-190m	F		1.00E+00	1.62E-09	1.12E-09	4.97E-10	3.32E-10	2.03E-10	1.56E-10	1.92E-10	
Re-190m	M		1.00E+00	1.92E-09	1.30E-09	6.12E-10	3.73E-10	2.49E-10	1.98E-10	2.39E-10	
Re-190m	S		1.00E+00	1.92E-09	1.29E-09	6.11E-10	3.77E-10	2.54E-10	2.03E-10	2.44E-10	
Rh-100	F		1.00E-01	2.09E-09	1.74E-09	9.02E-10	5.56E-10	3.23E-10	2.61E-10	3.20E-10	
Rh-100	M		1.00E-01	2.59E-09	2.13E-09	1.10E-09	6.97E-10	4.17E-10	3.32E-10	4.05E-10	
Rh-100	S		1.00E-01	2.65E-09	2.17E-09	1.13E-09	7.13E-10	4.27E-10	3.41E-10	4.15E-10	
Rh-100m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-101	F		1.00E-01	7.36E-09	6.12E-09	3.49E-09	2.29E-09	1.56E-09	1.41E-09	1.60E-09	
Rh-101	M		1.00E-01	8.92E-09	7.30E-09	4.51E-09	3.10E-09	2.57E-09	2.15E-09	2.37E-09	
Rh-101	S		1.00E-01	1.72E-08	1.55E-08	1.03E-08	7.01E-09	5.85E-09	5.12E-09	5.56E-09	
Rh-101m	F		1.00E-01	8.16E-10	6.39E-10	3.18E-10	1.97E-10	1.14E-10	9.34E-11	1.14E-10	
Rh-101m	M		1.00E-01	1.23E-09	9.60E-10	5.12E-10	3.40E-10	2.43E-10	1.91E-10	2.23E-10	
Rh-101m	S		1.00E-01	1.29E-09	1.00E-09	5.40E-10	3.60E-10	2.61E-10	2.05E-10	2.38E-10	
Rh-102	F		1.00E-01	1.16E-08	8.80E-09	4.44E-09	2.76E-09	1.69E-09	1.48E-09	1.75E-09	
Rh-102	M		1.00E-01	2.01E-08	1.60E-08	9.32E-09	6.25E-09	4.95E-09	4.21E-09	4.69E-09	
Rh-102	S		1.00E-01	3.06E-08	2.57E-08	1.56E-08	1.04E-08	8.35E-09	7.27E-09	8.01E-09	
Rh-102m	F		1.00E-01	3.62E-08	3.10E-08	1.86E-08	1.23E-08	8.76E-09	8.18E-09	9.05E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult			
Rh-102m	M		1.00E-01	3.14E-08	2.66E-08	1.60E-08	1.07E-08	8.53E-09	7.52E-09	8.27E-09	
Rh-102m	S		1.00E-01	5.98E-08	5.56E-08	3.88E-08	2.66E-08	2.21E-08	1.98E-08	2.13E-08	
Rh-103m	F		1.00E-01	8.55E-12	5.84E-12	2.70E-12	1.63E-12	1.02E-12	8.49E-13	1.03E-12	
Rh-103m	M		1.00E-01	1.89E-11	1.18E-11	6.23E-12	3.97E-12	2.95E-12	2.53E-12	2.88E-12	
Rh-103m	S		1.00E-01	2.00E-11	1.26E-11	6.66E-12	4.25E-12	3.18E-12	2.72E-12	3.10E-12	
Rh-104			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-104m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-105	F		1.00E-01	1.01E-09	6.85E-10	2.97E-10	1.84E-10	9.55E-11	8.16E-11	1.03E-10	
Rh-105	M		1.00E-01	2.23E-09	1.58E-09	7.40E-10	5.16E-10	4.05E-10	3.21E-10	3.68E-10	
Rh-105	S		1.00E-01	2.37E-09	1.69E-09	7.99E-10	5.59E-10	4.44E-10	3.52E-10	4.02E-10	
Rh-106			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-106m	F		1.00E-01	5.77E-10	4.49E-10	2.24E-10	1.37E-10	7.99E-11	6.48E-11	7.97E-11	
Rh-106m	M		1.00E-01	8.38E-10	6.35E-10	3.21E-10	2.05E-10	1.32E-10	1.06E-10	1.27E-10	
Rh-106m	S		1.00E-01	8.67E-10	6.55E-10	3.31E-10	2.12E-10	1.38E-10	1.11E-10	1.32E-10	
Rh-107	F		1.00E-01	8.98E-11	5.91E-11	2.61E-11	1.69E-11	1.05E-11	9.02E-12	1.08E-11	
Rh-107	M		1.00E-01	1.41E-10	9.33E-11	4.23E-11	2.80E-11	1.87E-11	1.59E-11	1.86E-11	
Rh-107	S		1.00E-01	1.47E-10	9.71E-11	4.41E-11	2.93E-11	1.96E-11	1.66E-11	1.95E-11	
Rh-108			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-109			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-94			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-95			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-95m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-96			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-96m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-97	F		1.00E-01	1.43E-10	1.02E-10	4.82E-11	2.95E-11	1.76E-11	1.44E-11	1.77E-11	
Rh-97	M		1.00E-01	2.10E-10	1.46E-10	6.95E-11	4.37E-11	2.76E-11	2.27E-11	2.73E-11	
Rh-97	S		1.00E-01	2.18E-10	1.51E-10	7.19E-11	4.53E-11	2.88E-11	2.36E-11	2.84E-11	
Rh-97m	F		1.00E-01	1.65E-10	1.29E-10	6.48E-11	3.93E-11	2.31E-11	1.86E-11	2.29E-11	
Rh-97m	M		1.00E-01	2.24E-10	1.70E-10	8.54E-11	5.30E-11	3.28E-11	2.64E-11	3.20E-11	
Rh-97m	S		1.00E-01	2.30E-10	1.75E-10	8.77E-11	5.46E-11	3.39E-11	2.72E-11	3.30E-11	
Rh-98			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-99	F		1.00E-01	2.83E-09	2.13E-09	1.06E-09	6.61E-10	3.94E-10	3.30E-10	3.99E-10	
Rh-99	M		1.00E-01	5.28E-09	4.55E-09	2.32E-09	1.65E-09	1.38E-09	1.11E-09	1.24E-09	
Rh-99	S		1.00E-01	5.88E-09	4.43E-09	2.63E-09	1.87E-09	1.59E-09	1.27E-09	1.41E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Rh-99m	F		1.00E-01	2.38E-10	1.96E-10	9.95E-11	5.99E-11	3.46E-11	2.76E-11	3.42E-11	
Rh-99m	M		1.00E-01	3.15E-10	2.52E-10	1.29E-10	8.04E-11	4.94E-11	3.91E-11	4.76E-11	
Rh-99m	S		1.00E-01	3.23E-10	2.58E-10	1.32E-10	8.27E-11	5.11E-11	4.04E-11	4.91E-11	
Rn-207			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-209			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-210			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-211			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-212			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-215			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-216			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-217			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-218			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-220			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-222			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-08	
Rn-222+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-08	
Rn-222+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-08	
Rn-223			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ru-103	F		1.00E-01	4.08E-09	2.99E-09	1.47E-09	9.25E-10	5.56E-10	4.78E-10	5.72E-10	
Ru-103	M		1.00E-01	1.07E-08	8.08E-09	4.84E-09	3.40E-09	2.91E-09	2.36E-09	2.61E-09	
Ru-103	S		2.00E-02	1.25E-08	9.56E-09	5.80E-09	4.08E-09	3.53E-09	2.86E-09	3.15E-09	
Ru-103	V		1.00E-01	8.68E-09	5.99E-09	3.26E-09	2.06E-09	1.30E-09	1.08E-09	1.29E-09	
Ru-105	F		1.00E-01	7.73E-10	5.45E-10	2.48E-10	1.53E-10	8.42E-11	7.04E-11	8.77E-11	
Ru-105	M		1.00E-01	1.43E-09	1.01E-09	4.99E-10	3.31E-10	2.29E-10	1.86E-10	2.18E-10	
Ru-105	S		2.00E-02	1.54E-09	1.08E-09	5.31E-10	3.54E-10	2.47E-10	2.00E-10	2.34E-10	
Ru-105	V		1.00E-01	1.69E-09	1.10E-09	5.61E-10	3.87E-10	2.38E-10	1.94E-10	2.32E-10	
Ru-106	F		1.00E-01	7.18E-08	5.38E-08	2.63E-08	1.57E-08	9.23E-09	8.00E-09	9.68E-09	
Ru-106	M		1.00E-01	1.38E-07	1.11E-07	6.35E-08	4.11E-08	3.07E-08	2.79E-08	3.10E-08	
Ru-106	S		2.00E-02	2.54E-07	2.25E-07	1.39E-07	9.06E-08	7.07E-08	6.65E-08	7.23E-08	
Ru-106	V		1.00E-01	1.62E-07	1.15E-07	6.17E-08	3.69E-08	2.24E-08	1.87E-08	2.26E-08	
Ru-106+D	S			2.54E-07	2.25E-07	1.39E-07	9.06E-08	7.07E-08	6.65E-08	7.23E-08	
Ru-106+E	S			2.54E-07	2.25E-07	1.39E-07	9.06E-08	7.07E-08	6.65E-08	7.23E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Ru-107			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-108			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-92			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-94	F		1.00E-01	2.57E-10	1.92E-10	9.30E-11	5.60E-11	3.18E-11	2.56E-11	3.20E-11	3.20E-11
Ru-94	M		1.00E-01	3.91E-10	2.82E-10	1.38E-10	8.56E-11	5.30E-11	4.29E-11	5.21E-11	5.21E-11
Ru-94	S		2.00E-02	4.07E-10	2.93E-10	1.43E-10	8.91E-11	5.54E-11	4.49E-11	5.44E-11	5.44E-11
Ru-94	V		1.00E-01	5.51E-10	3.50E-10	1.83E-10	1.12E-10	7.14E-11	5.74E-11	6.93E-11	6.93E-11
Ru-95	F		1.00E-01	2.19E-10	1.80E-10	9.23E-11	5.56E-11	3.25E-11	2.60E-11	3.21E-11	3.21E-11
Ru-95	M		1.00E-01	2.86E-10	2.28E-10	1.17E-10	7.25E-11	4.43E-11	3.52E-11	4.29E-11	4.29E-11
Ru-95	S		2.00E-02	2.96E-10	2.35E-10	1.20E-10	7.47E-11	4.58E-11	3.63E-11	4.42E-11	4.42E-11
Ru-95	V		1.00E-01	3.21E-10	2.26E-10	1.28E-10	8.24E-11	5.57E-11	4.51E-11	5.29E-11	5.29E-11
Ru-97	F		1.00E-01	5.54E-10	4.45E-10	2.22E-10	1.35E-10	7.80E-11	6.28E-11	7.77E-11	7.77E-11
Ru-97	M		1.00E-01	7.73E-10	6.12E-10	3.17E-10	2.02E-10	1.32E-10	1.04E-10	1.24E-10	1.24E-10
Ru-97	S		2.00E-02	8.14E-10	6.37E-10	3.31E-10	2.12E-10	1.40E-10	1.09E-10	1.31E-10	1.31E-10
Ru-97	V		1.00E-01	8.69E-10	6.18E-10	3.45E-10	2.25E-10	1.45E-10	1.16E-10	1.38E-10	1.38E-10
S-35	F		1.00E+00	5.42E-10	3.94E-10	1.76E-10	1.09E-10	6.01E-11	5.14E-11	6.35E-11	6.35E-11
S-35	M		2.00E-01	5.85E-09	4.48E-09	2.74E-09	1.97E-09	1.78E-09	1.43E-09	1.56E-09	1.56E-09
S-35	S		2.00E-02	7.62E-09	5.88E-09	3.60E-09	2.57E-09	2.31E-09	1.86E-09	2.04E-09	2.04E-09
S-35	V	Dioxide	1.00E+00	9.38E-10	6.60E-10	3.42E-10	2.09E-10	1.28E-10	1.09E-10	1.30E-10	1.30E-10
S-35	V	Carbon Disulfide	1.00E+00	6.89E-09	4.77E-09	2.41E-09	1.44E-09	8.54E-10	6.99E-10	8.58E-10	8.58E-10
S-37			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
S-38	F		1.00E+00	1.13E-09	9.05E-10	4.40E-10	2.79E-10	1.66E-10	1.35E-10	1.65E-10	1.65E-10
S-38	M		2.00E-01	2.57E-09	1.80E-09	8.50E-10	5.40E-10	3.33E-10	2.76E-10	3.33E-10	3.33E-10
S-38	S		2.00E-02	2.79E-09	1.91E-09	8.99E-10	5.72E-10	3.53E-10	2.92E-10	3.53E-10	3.53E-10
S-38	V	Dioxide	1.00E+00	1.35E-09	9.94E-10	5.80E-10	3.38E-10	2.37E-10	1.89E-10	2.23E-10	2.23E-10
S-38	V	Carbon Disulfide	1.00E+00	1.40E-09	1.02E-09	5.47E-10	3.36E-10	2.19E-10	1.80E-10	2.13E-10	2.13E-10
Sb-111			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-113			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-114			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-115	F		2.00E-01	8.06E-11	5.90E-11	2.82E-11	1.74E-11	1.04E-11	8.49E-12	1.04E-11	1.04E-11
Sb-115	M		2.00E-02	1.17E-10	8.33E-11	4.00E-11	2.52E-11	1.60E-11	1.31E-11	1.57E-11	1.57E-11
Sb-115	S		2.00E-02	1.21E-10	8.60E-11	4.13E-11	2.61E-11	1.67E-11	1.36E-11	1.63E-11	1.63E-11
Sb-116	F		2.00E-01	9.46E-11	6.93E-11	3.35E-11	2.05E-11	1.24E-11	1.01E-11	1.24E-11	1.24E-11
Sb-116	M		2.00E-02	1.28E-10	9.22E-11	4.44E-11	2.76E-11	1.72E-11	1.41E-11	1.70E-11	1.70E-11

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Sb-116	S		2.00E-02	1.32E-10	9.47E-11	4.56E-11	2.84E-11	1.77E-11	1.46E-11	1.76E-11	
Sb-116m	F		2.00E-01	2.57E-10	2.09E-10	1.08E-10	6.55E-11	3.92E-11	3.14E-11	3.84E-11	
Sb-116m	M		2.00E-02	3.47E-10	2.74E-10	1.42E-10	8.93E-11	5.72E-11	4.56E-11	5.47E-11	
Sb-116m	S		2.00E-02	3.57E-10	2.81E-10	1.46E-10	9.19E-11	5.92E-11	4.71E-11	5.65E-11	
Sb-117	F		2.00E-01	8.03E-11	6.24E-11	3.04E-11	1.86E-11	1.08E-11	8.82E-12	1.09E-11	
Sb-117	M		2.00E-02	1.26E-10	9.45E-11	4.77E-11	3.10E-11	2.11E-11	1.69E-11	1.99E-11	
Sb-117	S		2.00E-02	1.31E-10	9.81E-11	4.96E-11	3.24E-11	2.22E-11	1.78E-11	2.09E-11	
Sb-118			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-118m	F		2.00E-01	7.45E-10	6.35E-10	3.34E-10	2.02E-10	1.19E-10	9.46E-11	1.16E-10	
Sb-118m	M		2.00E-02	9.46E-10	7.79E-10	4.08E-10	2.53E-10	1.52E-10	1.20E-10	1.47E-10	
Sb-118m	S		2.00E-02	9.66E-10	7.94E-10	4.16E-10	2.59E-10	1.55E-10	1.23E-10	1.50E-10	
Sb-119	F		2.00E-01	2.80E-10	2.11E-10	9.90E-11	5.77E-11	3.08E-11	2.45E-11	3.15E-11	
Sb-119	M		2.00E-02	4.16E-10	2.98E-10	1.39E-10	8.30E-11	4.56E-11	3.62E-11	4.61E-11	
Sb-119	S		2.00E-02	4.30E-10	3.07E-10	1.43E-10	8.58E-11	4.73E-11	3.75E-11	4.77E-11	
Sb-120	F		2.00E-01	4.58E-11	3.13E-11	1.43E-11	8.97E-12	5.47E-12	4.60E-12	5.56E-12	
Sb-120	M		2.00E-02	6.61E-11	4.47E-11	2.05E-11	1.31E-11	8.37E-12	7.03E-12	8.39E-12	
Sb-120	S		2.00E-02	6.83E-11	4.61E-11	2.12E-11	1.36E-11	8.69E-12	7.30E-12	8.70E-12	
Sb-120m	F		2.00E-01	4.15E-09	3.38E-09	1.78E-09	1.12E-09	6.78E-10	5.58E-10	6.71E-10	
Sb-120m	M		2.00E-02	6.36E-09	5.07E-09	2.79E-09	1.84E-09	1.29E-09	1.03E-09	1.20E-09	
Sb-120m	S		2.00E-02	6.65E-09	5.31E-09	2.94E-09	1.94E-09	1.38E-09	1.10E-09	1.27E-09	
Sb-122	F		2.00E-01	4.15E-09	2.79E-09	1.39E-09	8.42E-10	4.44E-10	3.66E-10	4.63E-10	
Sb-122	M		2.00E-02	8.31E-09	5.74E-09	2.81E-09	1.85E-09	1.27E-09	1.04E-09	1.22E-09	
Sb-122	S		2.00E-02	8.78E-09	6.08E-09	3.00E-09	1.99E-09	1.38E-09	1.13E-09	1.32E-09	
Sb-122m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-124	F		2.00E-01	1.23E-08	8.81E-09	4.30E-09	2.65E-09	1.57E-09	1.32E-09	1.60E-09	
Sb-124	M		2.00E-02	3.09E-08	2.42E-08	1.39E-08	9.55E-09	7.71E-09	6.43E-09	7.15E-09	
Sb-124	S		2.00E-02	3.90E-08	3.12E-08	1.83E-08	1.25E-08	1.02E-08	8.57E-09	9.49E-09	
Sb-124m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-124n	F		2.00E-01	3.30E-11	2.34E-11	1.10E-11	6.87E-12	4.17E-12	3.45E-12	4.19E-12	
Sb-124n	M		2.00E-02	5.20E-11	3.67E-11	1.78E-11	1.15E-11	7.67E-12	6.34E-12	7.48E-12	
Sb-124n	S		2.00E-02	5.52E-11	3.91E-11	1.91E-11	1.24E-11	8.38E-12	6.94E-12	8.14E-12	
Sb-125	F		2.00E-01	8.75E-09	6.89E-09	3.78E-09	2.35E-09	1.57E-09	1.43E-09	1.63E-09	
Sb-125	M		2.00E-02	2.02E-08	1.66E-08	1.01E-08	6.92E-09	5.83E-09	4.84E-09	5.33E-09	
Sb-125	S		2.00E-02	4.27E-08	3.81E-08	2.46E-08	1.64E-08	1.36E-08	1.20E-08	1.30E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Sb-126	F		2.00E-01	9.54E-09	7.11E-09	3.52E-09	2.20E-09	1.29E-09	1.07E-09	1.30E-09	
Sb-126	M		2.00E-02	1.91E-08	1.46E-08	8.05E-09	4.88E-09	3.81E-09	3.09E-09	3.54E-09	
Sb-126	S		2.00E-02	2.07E-08	1.59E-08	7.86E-09	5.46E-09	4.32E-09	3.50E-09	3.97E-09	
Sb-126m	F		2.00E-01	1.21E-10	8.45E-11	3.95E-11	2.46E-11	1.50E-11	1.24E-11	1.51E-11	
Sb-126m	M		2.00E-02	1.76E-10	1.21E-10	5.69E-11	3.62E-11	2.32E-11	1.93E-11	2.30E-11	
Sb-126m	S		2.00E-02	1.82E-10	1.25E-10	5.88E-11	3.76E-11	2.41E-11	2.01E-11	2.39E-11	
Sb-127	F		2.00E-01	5.08E-09	3.55E-09	1.60E-09	9.74E-10	5.28E-10	4.36E-10	5.49E-10	
Sb-127	M		2.00E-02	1.03E-08	7.38E-09	3.90E-09	2.71E-09	2.11E-09	1.69E-09	1.92E-09	
Sb-127	S		2.00E-02	1.11E-08	7.99E-09	4.26E-09	2.98E-09	2.35E-09	1.88E-09	2.13E-09	
Sb-128	F		2.00E-01	2.25E-09	1.76E-09	8.62E-10	5.28E-10	2.99E-10	2.43E-10	3.01E-10	
Sb-128	M		2.00E-02	3.54E-09	2.64E-09	1.31E-09	8.35E-10	5.17E-10	4.18E-10	5.04E-10	
Sb-128	S		2.00E-02	3.67E-09	2.73E-09	1.35E-09	8.68E-10	5.41E-10	4.37E-10	5.27E-10	
Sb-128m	F		2.00E-01	9.87E-11	6.87E-11	3.19E-11	2.00E-11	1.22E-11	1.02E-11	1.24E-11	
Sb-128m	M		2.00E-02	1.34E-10	9.21E-11	4.29E-11	2.72E-11	1.71E-11	1.43E-11	1.72E-11	
Sb-128m	S		2.00E-02	1.38E-10	9.47E-11	4.41E-11	2.80E-11	1.76E-11	1.48E-11	1.77E-11	
Sb-129	F		2.00E-01	1.15E-09	8.32E-10	3.85E-10	2.35E-10	1.29E-10	1.07E-10	1.34E-10	
Sb-129	M		2.00E-02	2.04E-09	1.43E-09	6.92E-10	4.48E-10	2.90E-10	2.37E-10	2.83E-10	
Sb-129	S		2.00E-02	2.14E-09	1.50E-09	7.28E-10	4.73E-10	3.09E-10	2.53E-10	3.00E-10	
Sb-130	F		2.00E-01	3.09E-10	2.26E-10	1.09E-10	6.71E-11	4.01E-11	3.29E-11	4.02E-11	
Sb-130	M		2.00E-02	4.54E-10	3.23E-10	1.57E-10	9.91E-11	6.33E-11	5.18E-11	6.20E-11	
Sb-130	S		2.00E-02	4.69E-10	3.34E-10	1.62E-10	1.03E-10	6.58E-11	5.38E-11	6.44E-11	
Sb-130m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-131	F		2.00E-01	3.61E-10	2.88E-10	1.04E-10	7.92E-11	4.77E-11	3.61E-11	4.46E-11	
Sb-131	M		2.00E-02	4.05E-10	2.76E-10	1.32E-10	8.35E-11	5.54E-11	4.51E-11	5.38E-11	
Sb-131	S		2.00E-02	3.95E-10	2.68E-10	1.28E-10	8.24E-11	5.53E-11	4.55E-11	5.38E-11	
Sb-133			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sc-42m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sc-43	F		1.00E-03	6.22E-10	4.44E-10	2.06E-10	1.27E-10	7.07E-11	5.81E-11	7.25E-11	
Sc-43	M		1.00E-03	1.02E-09	7.19E-10	3.48E-10	2.24E-10	1.45E-10	1.18E-10	1.41E-10	
Sc-43	S		1.00E-03	1.06E-09	7.49E-10	3.63E-10	2.35E-10	1.53E-10	1.25E-10	1.49E-10	
Sc-44	F		1.00E-03	1.01E-09	7.46E-10	3.56E-10	2.17E-10	1.22E-10	9.92E-11	1.24E-10	
Sc-44	M		1.00E-03	1.56E-09	1.13E-09	5.49E-10	3.49E-10	2.17E-10	1.77E-10	2.13E-10	
Sc-44	S		1.00E-03	1.62E-09	1.17E-09	5.70E-10	3.63E-10	2.28E-10	1.85E-10	2.23E-10	
Sc-44m	F		1.00E-03	7.68E-09	5.38E-09	2.52E-09	1.55E-09	8.71E-10	7.11E-10	8.88E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Sc-44m	M		1.00E-03	1.12E-08	8.10E-09	4.06E-09	2.65E-09	1.76E-09	1.43E-09	1.69E-09	
Sc-44m	S		1.00E-03	1.05E-08	8.44E-09	4.25E-09	2.79E-09	1.68E-09	1.37E-09	1.65E-09	
Sc-46	F		1.00E-03	4.22E-08	3.35E-08	1.78E-08	1.17E-08	7.77E-09	6.52E-09	7.60E-09	
Sc-46	M		1.00E-03	2.61E-08	2.12E-08	1.27E-08	8.82E-09	7.31E-09	5.96E-09	6.62E-09	
Sc-46	S		1.00E-03	2.75E-08	2.25E-08	1.39E-08	9.76E-09	8.36E-09	6.75E-09	7.46E-09	
Sc-47	F		1.00E-03	2.02E-09	1.31E-09	5.82E-10	3.54E-10	1.96E-10	1.54E-10	1.97E-10	
Sc-47	M		1.00E-03	3.67E-09	2.61E-09	1.42E-09	1.01E-09	8.29E-10	6.54E-10	7.36E-10	
Sc-47	S		1.00E-03	3.93E-09	2.81E-09	1.54E-09	1.10E-09	9.18E-10	7.24E-10	8.12E-10	
Sc-48	F		1.00E-03	5.23E-09	4.05E-09	2.03E-09	1.27E-09	7.38E-10	6.03E-10	7.38E-10	
Sc-48	M		1.00E-03	7.45E-09	5.70E-09	2.98E-09	1.96E-09	1.32E-09	1.05E-09	1.24E-09	
Sc-48	S		1.00E-03	7.71E-09	5.90E-09	3.09E-09	2.04E-09	1.39E-09	1.11E-09	1.30E-09	
Sc-49	F		1.00E-03	2.13E-10	1.30E-10	5.47E-11	3.40E-11	1.97E-11	1.68E-11	2.08E-11	
Sc-49	M		1.00E-03	3.71E-10	2.32E-10	1.04E-10	6.69E-11	4.41E-11	3.72E-11	4.41E-11	
Sc-49	S		1.00E-03	3.88E-10	2.43E-10	1.09E-10	7.05E-11	4.68E-11	3.94E-11	4.67E-11	
Sc-50			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-70	F		1.00E+00	3.45E-10	2.72E-10	1.34E-10	8.11E-11	4.64E-11	3.75E-11	4.65E-11	
Se-70	M		2.00E-01	5.67E-10	4.13E-10	2.03E-10	1.27E-10	7.96E-11	6.45E-11	7.79E-11	
Se-70	S		2.00E-02	5.92E-10	4.29E-10	2.10E-10	1.32E-10	8.32E-11	6.75E-11	8.13E-11	
Se-71			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-72	F		1.00E+00	2.65E-08	1.96E-08	1.09E-08	8.35E-09	2.54E-09	1.92E-09	2.84E-09	
Se-72	M		2.00E-01	2.24E-08	1.61E-08	8.80E-09	6.03E-09	3.95E-09	3.35E-09	3.88E-09	
Se-72	S		2.00E-02	2.17E-08	1.60E-08	8.67E-09	5.78E-09	4.30E-09	3.68E-09	4.16E-09	
Se-73	F		1.00E+00	7.85E-10	6.60E-10	3.33E-10	2.16E-10	1.02E-10	8.16E-11	1.06E-10	
Se-73	M		2.00E-01	1.65E-09	1.22E-09	5.95E-10	3.81E-10	2.40E-10	1.95E-10	2.34E-10	
Se-73	S		2.00E-02	1.82E-09	1.30E-09	6.35E-10	4.07E-10	2.58E-10	2.10E-10	2.52E-10	
Se-73m	F		1.00E+00	9.45E-11	7.41E-11	3.62E-11	2.31E-11	1.16E-11	9.42E-12	1.20E-11	
Se-73m	M		2.00E-01	1.80E-10	1.29E-10	6.21E-11	3.96E-11	2.51E-11	2.05E-11	2.46E-11	
Se-73m	S		2.00E-02	1.95E-10	1.37E-10	6.58E-11	4.20E-11	2.68E-11	2.19E-11	2.63E-11	
Se-75	F		1.00E+00	7.65E-09	5.94E-09	3.37E-09	2.45E-09	1.18E-09	1.01E-09	1.24E-09	
Se-75	M		2.00E-01	5.43E-09	4.56E-09	2.50E-09	1.75E-09	1.27E-09	1.04E-09	1.18E-09	
Se-75	S		2.00E-02	5.55E-09	4.66E-09	2.88E-09	1.97E-09	1.61E-09	1.31E-09	1.46E-09	
Se-77m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-79	F		1.00E+00	1.50E-08	1.21E-08	7.30E-09	5.29E-09	1.44E-09	1.08E-09	1.68E-09	
Se-79	M		2.00E-01	1.33E-08	1.02E-08	6.45E-09	4.54E-09	3.08E-09	2.46E-09	2.85E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Se-79	S		2.00E-02	2.10E-08	1.85E-08	1.20E-08	8.08E-09	6.99E-09	6.31E-09	6.78E-09	
Se-79m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-81	F		1.00E+00	8.54E-11	5.39E-11	2.32E-11	1.50E-11	9.22E-12	8.02E-12	9.61E-12	
Se-81	M		2.00E-01	1.34E-10	8.51E-11	3.76E-11	2.48E-11	1.63E-11	1.40E-11	1.65E-11	
Se-81	S		2.00E-02	1.39E-10	8.85E-11	3.92E-11	2.59E-11	1.71E-11	1.47E-11	1.72E-11	
Se-81m	F		1.00E+00	1.86E-10	1.24E-10	5.44E-11	3.48E-11	1.95E-11	1.65E-11	2.03E-11	
Se-81m	M		2.00E-01	3.88E-10	2.54E-10	1.21E-10	8.06E-11	5.82E-11	4.79E-11	5.55E-11	
Se-81m	S		2.00E-02	4.10E-10	2.69E-10	1.28E-10	8.57E-11	6.25E-11	5.13E-11	5.94E-11	
Se-83	F		1.00E+00	1.67E-10	1.24E-10	5.92E-11	3.71E-11	2.19E-11	1.81E-11	2.21E-11	
Se-83	M		2.00E-01	2.69E-10	1.91E-10	9.24E-11	5.95E-11	3.92E-11	3.22E-11	3.81E-11	
Se-83	S		2.00E-02	2.81E-10	1.99E-10	9.62E-11	6.20E-11	4.11E-11	3.37E-11	3.99E-11	
Se-83m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-84			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Si-31	F		2.00E-02	3.63E-10	2.28E-10	9.55E-11	5.91E-11	3.20E-11	2.74E-11	3.44E-11	
Si-31	M		2.00E-02	6.87E-10	4.45E-10	2.04E-10	1.33E-10	8.85E-11	7.36E-11	8.72E-11	
Si-31	S		2.00E-02	7.22E-10	4.69E-10	2.16E-10	1.41E-10	9.47E-11	7.88E-11	9.30E-11	
Si-32	F		2.00E-02	3.01E-08	2.29E-08	1.09E-08	6.46E-09	3.76E-09	3.20E-09	3.91E-09	
Si-32	M		2.00E-02	7.09E-08	6.03E-08	3.60E-08	2.37E-08	1.88E-08	1.67E-08	1.84E-08	
Si-32	S		2.00E-02	2.78E-07	2.69E-07	1.86E-07	1.27E-07	1.12E-07	1.11E-07	1.16E-07	
Si-32+D	S			3.01E-07	2.86E-07	1.95E-07	1.33E-07	1.17E-07	1.15E-07	1.21E-07	
Si-32+E	S			3.01E-07	2.86E-07	1.95E-07	1.33E-07	1.17E-07	1.15E-07	1.21E-07	
Sm-139			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-140	F		5.00E-03	2.25E-10	1.46E-10	6.52E-11	4.01E-11	2.38E-11	2.00E-11	2.45E-11	
Sm-140	M		5.00E-03	3.24E-10	2.09E-10	9.49E-11	5.94E-11	3.71E-11	3.14E-11	3.77E-11	
Sm-140	S		5.00E-03	3.35E-10	2.16E-10	9.83E-11	6.15E-11	3.86E-11	3.26E-11	3.92E-11	
Sm-141	F		5.00E-03	1.04E-10	7.06E-11	3.26E-11	2.00E-11	1.20E-11	9.96E-12	1.22E-11	
Sm-141	M		5.00E-03	1.50E-10	1.00E-10	4.66E-11	2.91E-11	1.83E-11	1.52E-11	1.83E-11	
Sm-141	S		5.00E-03	1.55E-10	1.04E-10	4.81E-11	3.01E-11	1.89E-11	1.58E-11	1.90E-11	
Sm-141m	F		5.00E-03	1.93E-10	1.36E-10	6.42E-11	3.93E-11	2.33E-11	1.91E-11	2.35E-11	
Sm-141m	M		5.00E-03	2.90E-10	2.00E-10	9.50E-11	5.96E-11	3.77E-11	3.10E-11	3.73E-11	
Sm-141m	S		5.00E-03	3.01E-10	2.07E-10	9.84E-11	6.19E-11	3.93E-11	3.23E-11	3.89E-11	
Sm-142	F		5.00E-03	4.54E-10	2.95E-10	1.31E-10	7.93E-11	4.49E-11	3.71E-11	4.64E-11	
Sm-142	M		5.00E-03	7.35E-10	4.74E-10	2.16E-10	1.35E-10	8.36E-11	6.99E-11	8.45E-11	
Sm-142	S		5.00E-03	7.66E-10	4.94E-10	2.26E-10	1.41E-10	8.78E-11	7.35E-11	8.87E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Sm-143			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-143m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-145	F		5.00E-03	1.75E-08	1.47E-08	8.11E-09	4.95E-09	3.22E-09	2.85E-09	3.30E-09	3.30E-09
Sm-145	M		5.00E-03	8.00E-09	6.71E-09	4.00E-09	2.49E-09	1.85E-09	1.63E-09	1.83E-09	1.83E-09
Sm-145	S		5.00E-03	7.11E-09	5.95E-09	3.64E-09	2.35E-09	1.81E-09	1.56E-09	1.74E-09	1.74E-09
Sm-146	F		5.00E-03	7.64E-05	7.02E-05	4.42E-05	3.12E-05	2.56E-05	2.53E-05	2.67E-05	2.67E-05
Sm-146	M		5.00E-03	2.70E-05	2.53E-05	1.71E-05	1.18E-05	1.06E-05	1.06E-05	1.10E-05	1.10E-05
Sm-146	S		5.00E-03	1.52E-05	1.36E-05	8.95E-06	5.81E-06	4.92E-06	4.80E-06	5.09E-06	5.09E-06
Sm-147	F		5.00E-03	6.98E-05	6.42E-05	4.04E-05	2.85E-05	2.34E-05	2.31E-05	2.44E-05	2.44E-05
Sm-147	M		5.00E-03	2.44E-05	2.29E-05	1.55E-05	1.06E-05	9.56E-06	9.62E-06	1.00E-05	1.00E-05
Sm-147	S		5.00E-03	1.34E-05	1.21E-05	7.97E-06	5.16E-06	4.37E-06	4.27E-06	4.53E-06	4.53E-06
Sm-148	F		5.00E-03	6.00E-05	5.52E-05	3.47E-05	2.45E-05	2.01E-05	1.98E-05	2.10E-05	2.10E-05
Sm-148	M		5.00E-03	2.06E-05	1.94E-05	1.31E-05	9.02E-06	8.11E-06	8.17E-06	8.49E-06	8.49E-06
Sm-148	S		5.00E-03	1.10E-05	1.00E-05	6.60E-06	4.27E-06	3.61E-06	3.54E-06	3.76E-06	3.76E-06
Sm-151	F		5.00E-03	2.93E-08	2.68E-08	1.67E-08	1.16E-08	9.40E-09	9.27E-09	9.84E-09	9.84E-09
Sm-151	M		5.00E-03	1.09E-08	1.01E-08	6.68E-09	4.54E-09	4.03E-09	4.01E-09	4.20E-09	4.20E-09
Sm-151	S		5.00E-03	6.60E-09	5.79E-09	3.76E-09	2.45E-09	2.06E-09	1.98E-09	2.11E-09	2.11E-09
Sm-153	F		5.00E-03	2.28E-09	1.50E-09	6.57E-10	3.98E-10	2.10E-10	1.76E-10	2.24E-10	2.24E-10
Sm-153	M		5.00E-03	4.15E-09	2.88E-09	1.50E-09	1.03E-09	7.92E-10	6.35E-10	7.25E-10	7.25E-10
Sm-153	S		5.00E-03	4.40E-09	3.07E-09	1.61E-09	1.11E-09	8.66E-10	6.94E-10	7.90E-10	7.90E-10
Sm-155	F		5.00E-03	9.83E-11	6.28E-11	2.73E-11	1.76E-11	1.10E-11	9.48E-12	1.13E-11	1.13E-11
Sm-155	M		5.00E-03	1.57E-10	1.01E-10	4.54E-11	3.00E-11	2.01E-11	1.71E-11	2.01E-11	2.01E-11
Sm-155	S		5.00E-03	1.63E-10	1.05E-10	4.74E-11	3.14E-11	2.11E-11	1.80E-11	2.10E-11	2.10E-11
Sm-156	F		5.00E-03	1.01E-09	6.87E-10	3.11E-10	1.92E-10	1.08E-10	9.04E-11	1.12E-10	1.12E-10
Sm-156	M		5.00E-03	1.64E-09	1.16E-09	5.91E-10	3.59E-10	2.73E-10	2.21E-10	2.56E-10	2.56E-10
Sm-156	S		5.00E-03	1.73E-09	1.22E-09	5.65E-10	3.88E-10	3.00E-10	2.43E-10	2.78E-10	2.78E-10
Sm-157			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-106			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-108	F		4.00E-02	7.20E-11	5.34E-11	2.59E-11	1.58E-11	9.29E-12	7.50E-12	9.26E-12	9.26E-12
Sn-108	M		4.00E-02	1.03E-10	7.37E-11	3.58E-11	2.22E-11	1.38E-11	1.12E-11	1.36E-11	1.36E-11
Sn-108	S		4.00E-02	1.06E-10	7.60E-11	3.68E-11	2.29E-11	1.43E-11	1.16E-11	1.40E-11	1.40E-11
Sn-109	F		4.00E-02	7.40E-11	6.13E-11	3.18E-11	1.91E-11	1.14E-11	9.01E-12	1.11E-11	1.11E-11
Sn-109	M		4.00E-02	9.20E-11	7.49E-11	3.88E-11	2.37E-11	1.45E-11	1.15E-11	1.40E-11	1.40E-11
Sn-109	S		4.00E-02	9.42E-11	7.66E-11	3.97E-11	2.43E-11	1.49E-11	1.18E-11	1.44E-11	1.44E-11

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Sn-110	F		4.00E-02	1.08E-09	7.92E-10	3.77E-10	2.30E-10	1.27E-10	1.03E-10	1.29E-10	
Sn-110	M		4.00E-02	1.51E-09	1.10E-09	5.26E-10	3.31E-10	1.97E-10	1.61E-10	1.97E-10	
Sn-110	S		4.00E-02	1.56E-09	1.13E-09	5.43E-10	3.42E-10	2.05E-10	1.67E-10	2.04E-10	
Sn-111	F		4.00E-02	7.14E-11	5.11E-11	2.42E-11	1.49E-11	8.88E-12	7.30E-12	8.94E-12	
Sn-111	M		4.00E-02	1.06E-10	7.48E-11	3.60E-11	2.30E-11	1.50E-11	1.23E-11	1.46E-11	
Sn-111	S		4.00E-02	1.10E-10	7.74E-11	3.73E-11	2.39E-11	1.57E-11	1.28E-11	1.53E-11	
Sn-113	F		4.00E-02	5.14E-09	3.72E-09	1.79E-09	1.09E-09	6.50E-10	5.48E-10	6.65E-10	
Sn-113	M		4.00E-02	1.30E-08	1.03E-08	5.92E-09	4.03E-09	3.28E-09	2.71E-09	3.02E-09	
Sn-113	S		4.00E-02	1.80E-08	1.47E-08	8.65E-09	5.87E-09	4.78E-09	4.01E-09	4.44E-09	
Sn-113m	F		4.00E-02	1.59E-11	1.09E-11	5.29E-12	3.43E-12	2.38E-12	1.98E-12	2.31E-12	
Sn-113m	M		4.00E-02	2.72E-11	1.88E-11	9.79E-12	6.61E-12	5.12E-12	4.22E-12	4.79E-12	
Sn-113m	S		4.00E-02	2.89E-11	2.01E-11	1.06E-11	7.14E-12	5.56E-12	4.59E-12	5.19E-12	
Sn-117m	F		4.00E-02	3.36E-09	2.25E-09	1.06E-09	6.17E-10	3.40E-10	2.87E-10	3.60E-10	
Sn-117m	M		4.00E-02	1.03E-08	7.75E-09	4.60E-09	3.43E-09	3.13E-09	2.44E-09	2.68E-09	
Sn-117m	S		4.00E-02	1.15E-08	8.75E-09	5.24E-09	3.93E-09	3.64E-09	2.83E-09	3.10E-09	
Sn-119m	F		4.00E-02	3.12E-09	2.28E-09	1.08E-09	6.19E-10	3.53E-10	2.93E-10	3.65E-10	
Sn-119m	M		4.00E-02	1.05E-08	7.99E-09	4.76E-09	3.21E-09	2.67E-09	2.20E-09	2.45E-09	
Sn-119m	S		4.00E-02	1.56E-08	1.25E-08	7.55E-09	4.99E-09	4.08E-09	3.41E-09	3.79E-09	
Sn-121	F		4.00E-02	7.72E-10	5.09E-10	2.21E-10	1.35E-10	7.05E-11	6.07E-11	7.66E-11	
Sn-121	M		4.00E-02	1.55E-09	1.08E-09	5.13E-10	3.59E-10	2.89E-10	2.29E-10	2.61E-10	
Sn-121	S		4.00E-02	1.64E-09	1.15E-09	5.51E-10	3.88E-10	3.16E-10	2.50E-10	2.84E-10	
Sn-121m	F		4.00E-02	6.93E-09	5.45E-09	2.76E-09	1.57E-09	9.42E-10	8.09E-10	9.79E-10	
Sn-121m	M		4.00E-02	1.89E-08	1.52E-08	9.17E-09	6.34E-09	5.48E-09	4.47E-09	4.93E-09	
Sn-121m	S		4.00E-02	4.63E-08	4.20E-08	2.76E-08	1.86E-08	1.62E-08	1.50E-08	1.59E-08	
Sn-121m+D	S			4.76E-08	4.29E-08	2.80E-08	1.89E-08	1.64E-08	1.52E-08	1.62E-08	
Sn-121m+E	S			4.76E-08	4.29E-08	2.80E-08	1.89E-08	1.64E-08	1.52E-08	1.62E-08	
Sn-123	F		4.00E-02	1.41E-08	9.89E-09	4.52E-09	2.60E-09	1.44E-09	1.18E-09	1.50E-09	
Sn-123	M		4.00E-02	3.98E-08	3.14E-08	1.79E-08	1.20E-08	9.49E-09	8.16E-09	9.06E-09	
Sn-123	S		4.00E-02	5.74E-08	4.72E-08	2.76E-08	1.85E-08	1.47E-08	1.29E-08	1.42E-08	
Sn-123m	F		4.00E-02	1.40E-10	8.99E-11	3.91E-11	2.52E-11	1.54E-11	1.32E-11	1.59E-11	
Sn-123m	M		4.00E-02	2.36E-10	1.53E-10	7.01E-11	4.68E-11	3.21E-11	2.70E-11	3.15E-11	
Sn-123m	S		4.00E-02	2.46E-10	1.60E-10	7.35E-11	4.91E-11	3.40E-11	2.85E-11	3.33E-11	
Sn-125	F		4.00E-02	1.22E-08	7.92E-09	3.48E-09	2.04E-09	1.09E-09	8.86E-10	1.14E-09	
Sn-125	M		4.00E-02	2.05E-08	1.47E-08	7.58E-09	5.01E-09	3.63E-09	3.07E-09	3.51E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Sn-125	S		4.00E-02	2.21E-08	1.60E-08	8.39E-09	5.59E-09	4.12E-09	3.50E-09	3.97E-09	
Sn-125m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-126	F		4.00E-02	7.32E-08	5.94E-08	3.21E-08	1.99E-08	1.30E-08	1.15E-08	1.33E-08	
Sn-126	M		4.00E-02	1.24E-07	1.03E-07	6.22E-08	4.11E-08	3.26E-08	2.85E-08	3.15E-08	
Sn-126	S		4.00E-02	3.99E-07	3.81E-07	2.65E-07	1.83E-07	1.62E-07	1.59E-07	1.66E-07	
Sn-126+D	S			4.02E-07	3.83E-07	2.66E-07	1.84E-07	1.63E-07	1.60E-07	1.67E-07	
Sn-126+E	S			4.02E-07	3.83E-07	2.66E-07	1.84E-07	1.63E-07	1.60E-07	1.67E-07	
Sn-127	F		4.00E-02	6.61E-10	4.76E-10	2.26E-10	1.39E-10	7.94E-11	6.50E-11	8.05E-11	
Sn-127	M		4.00E-02	1.03E-09	7.42E-10	3.70E-10	2.42E-10	1.64E-10	1.33E-10	1.57E-10	
Sn-127	S		4.00E-02	1.08E-09	7.74E-10	3.88E-10	2.54E-10	1.75E-10	1.42E-10	1.66E-10	
Sn-127m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-128	F		4.00E-02	5.04E-10	3.55E-10	1.67E-10	1.02E-10	6.01E-11	4.94E-11	6.08E-11	
Sn-128	M		4.00E-02	7.95E-10	5.49E-10	2.64E-10	1.69E-10	1.11E-10	9.11E-11	1.08E-10	
Sn-128	S		4.00E-02	8.27E-10	5.71E-10	2.75E-10	1.77E-10	1.17E-10	9.57E-11	1.14E-10	
Sn-129			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-130			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-130m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-79			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-80	F		6.00E-01	8.88E-10	6.20E-10	2.81E-10	1.68E-10	9.27E-11	8.32E-11	1.02E-10	
Sr-80	M		2.00E-01	1.55E-09	1.03E-09	4.72E-10	2.93E-10	1.78E-10	1.49E-10	1.81E-10	
Sr-80	S		2.00E-02	1.65E-09	1.08E-09	4.96E-10	3.08E-10	1.88E-10	1.57E-10	1.91E-10	
Sr-81	F		6.00E-01	1.89E-10	1.32E-10	6.08E-11	3.74E-11	2.21E-11	1.89E-11	2.29E-11	
Sr-81	M		2.00E-01	2.91E-10	1.98E-10	9.23E-11	5.85E-11	3.74E-11	3.11E-11	3.72E-11	
Sr-81	S		2.00E-02	3.04E-10	2.05E-10	9.60E-11	6.10E-11	3.92E-11	3.25E-11	3.88E-11	
Sr-82	F		6.00E-01	2.83E-08	1.50E-08	6.71E-09	4.71E-09	3.23E-09	2.12E-09	2.68E-09	
Sr-82	M		2.00E-01	5.49E-08	3.99E-08	2.14E-08	1.42E-08	1.04E-08	9.00E-09	1.02E-08	
Sr-82	S		2.00E-02	6.18E-08	4.66E-08	2.54E-08	1.67E-08	1.23E-08	1.08E-08	1.22E-08	
Sr-82+D	S			6.18E-08	4.66E-08	2.54E-08	1.67E-08	1.23E-08	1.08E-08	1.21E-08	
Sr-82+E	S			6.18E-08	4.66E-08	2.54E-08	1.67E-08	1.23E-08	1.08E-08	1.21E-08	
Sr-83	F		6.00E-01	1.45E-09	1.18E-09	5.76E-10	3.52E-10	2.05E-10	1.69E-10	2.07E-10	
Sr-83	M		2.00E-01	2.61E-09	2.00E-09	9.99E-10	6.37E-10	4.08E-10	3.28E-10	3.93E-10	
Sr-83	S		2.00E-02	2.91E-09	2.16E-09	1.08E-09	6.89E-10	4.42E-10	3.56E-10	4.27E-10	
Sr-85	F		6.00E-01	4.26E-09	2.23E-09	1.10E-09	9.41E-10	8.16E-10	3.73E-10	4.88E-10	
Sr-85	M		2.00E-01	4.24E-09	3.07E-09	1.75E-09	1.21E-09	8.67E-10	6.28E-10	7.45E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Sr-85	S		2.00E-02	4.34E-09	3.64E-09	2.15E-09	1.27E-09	1.00E-09	8.07E-10	9.22E-10	
Sr-85m	F		6.00E-01	2.43E-11	1.92E-11	9.71E-12	6.04E-12	3.74E-12	2.89E-12	3.54E-12	
Sr-85m	M		2.00E-01	3.22E-11	2.52E-11	1.29E-11	8.10E-12	5.21E-12	4.13E-12	4.96E-12	
Sr-85m	S		2.00E-02	3.32E-11	2.62E-11	1.34E-11	8.45E-12	5.46E-12	4.36E-12	5.22E-12	
Sr-87m	F		6.00E-01	9.80E-11	7.82E-11	3.82E-11	2.32E-11	1.33E-11	1.15E-11	1.39E-11	
Sr-87m	M		2.00E-01	1.61E-10	1.20E-10	5.96E-11	3.83E-11	2.49E-11	2.01E-11	2.40E-11	
Sr-87m	S		2.00E-02	1.71E-10	1.26E-10	6.24E-11	4.02E-11	2.63E-11	2.12E-11	2.53E-11	
Sr-89	F		6.00E-01	1.53E-08	7.30E-09	3.21E-09	2.33E-09	1.67E-09	1.01E-09	1.30E-09	
Sr-89	M		2.00E-01	3.28E-08	2.41E-08	1.34E-08	9.15E-09	7.30E-09	6.12E-09	6.83E-09	
Sr-89	S		2.00E-02	3.89E-08	3.03E-08	1.72E-08	1.16E-08	9.28E-09	7.96E-09	8.83E-09	
Sr-90	F		6.00E-01	1.23E-07	5.16E-08	3.07E-08	4.08E-08	5.23E-08	2.38E-08	2.76E-08	
Sr-90	M		2.00E-01	1.48E-07	1.06E-07	6.47E-08	5.10E-08	4.93E-08	3.55E-08	3.92E-08	
Sr-90	S		2.00E-02	4.13E-07	3.93E-07	2.68E-07	1.82E-07	1.59E-07	1.56E-07	1.64E-07	
Sr-90+D	S			4.26E-07	4.02E-07	2.72E-07	1.85E-07	1.61E-07	1.58E-07	1.66E-07	
Sr-90+E	S			4.26E-07	4.02E-07	2.72E-07	1.85E-07	1.61E-07	1.58E-07	1.66E-07	
Sr-91	F		6.00E-01	1.47E-09	1.14E-09	5.26E-10	3.20E-10	1.75E-10	1.59E-10	1.93E-10	
Sr-91	M		2.00E-01	3.15E-09	2.29E-09	1.10E-09	7.06E-10	4.49E-10	3.73E-10	4.44E-10	
Sr-91	S		2.00E-02	3.58E-09	2.52E-09	1.21E-09	7.81E-10	4.99E-10	4.14E-10	4.93E-10	
Sr-92	F		6.00E-01	8.90E-10	7.04E-10	3.24E-10	1.94E-10	1.03E-10	9.70E-11	1.18E-10	
Sr-92	M		2.00E-01	1.92E-09	1.37E-09	6.41E-10	4.08E-10	2.48E-10	2.08E-10	2.50E-10	
Sr-92	S		2.00E-02	2.15E-09	1.48E-09	6.89E-10	4.40E-10	2.68E-10	2.23E-10	2.70E-10	
Sr-93			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-94			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ta-170			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ta-172	F		1.00E-02	1.90E-10	1.35E-10	6.40E-11	3.96E-11	2.40E-11	1.98E-11	2.41E-11	
Ta-172	M		1.00E-02	2.91E-10	2.03E-10	9.82E-11	6.30E-11	4.17E-11	3.43E-11	4.07E-11	
Ta-172	S		1.00E-02	3.04E-10	2.12E-10	1.03E-10	6.63E-11	4.42E-11	3.64E-11	4.30E-11	
Ta-173	F		1.00E-02	3.17E-10	2.34E-10	1.12E-10	6.93E-11	3.96E-11	3.25E-11	4.02E-11	
Ta-173	M		1.00E-02	5.50E-10	3.98E-10	2.04E-10	1.34E-10	9.25E-11	7.51E-11	8.79E-11	
Ta-173	S		1.00E-02	5.77E-10	4.18E-10	2.15E-10	1.42E-10	9.89E-11	8.03E-11	9.37E-11	
Ta-174	F		1.00E-02	2.29E-10	1.59E-10	7.40E-11	4.59E-11	2.72E-11	2.27E-11	2.77E-11	
Ta-174	M		1.00E-02	3.80E-10	2.61E-10	1.27E-10	8.24E-11	5.61E-11	4.61E-11	5.42E-11	
Ta-174	S		1.00E-02	3.96E-10	2.72E-10	1.33E-10	8.64E-11	5.93E-11	4.87E-11	5.71E-11	
Ta-175	F		1.00E-02	7.11E-10	5.66E-10	2.87E-10	1.77E-10	1.02E-10	8.30E-11	1.02E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Ta-175	M		1.00E-02	1.05E-09	8.12E-10	4.23E-10	2.73E-10	1.77E-10	1.42E-10	1.69E-10	
Ta-175	S		1.00E-02	1.09E-09	8.44E-10	4.41E-10	2.86E-10	1.87E-10	1.51E-10	1.79E-10	
Ta-176	F		1.00E-02	9.86E-10	8.00E-10	4.10E-10	2.52E-10	1.46E-10	1.18E-10	1.45E-10	
Ta-176	M		1.00E-02	1.41E-09	1.11E-09	5.83E-10	3.76E-10	2.42E-10	1.94E-10	2.31E-10	
Ta-176	S		1.00E-02	1.46E-09	1.15E-09	6.02E-10	3.90E-10	2.53E-10	2.03E-10	2.41E-10	
Ta-177	F		1.00E-02	3.37E-10	2.40E-10	1.12E-10	6.90E-11	3.81E-11	3.19E-11	3.96E-11	
Ta-177	M		1.00E-02	6.59E-10	4.77E-10	2.54E-10	1.55E-10	1.21E-10	9.71E-11	1.12E-10	
Ta-177	S		1.00E-02	6.98E-10	5.06E-10	2.72E-10	1.68E-10	1.33E-10	1.06E-10	1.22E-10	
Ta-178			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ta-178m	F		1.00E-02	3.09E-10	2.35E-10	1.15E-10	7.17E-11	4.24E-11	3.49E-11	4.26E-11	
Ta-178m	M		1.00E-02	5.07E-10	3.77E-10	1.94E-10	1.29E-10	9.03E-11	7.29E-11	8.50E-11	
Ta-178m	S		1.00E-02	5.28E-10	3.92E-10	2.03E-10	1.35E-10	9.56E-11	7.71E-11	8.96E-11	
Ta-179	F		1.00E-02	8.08E-10	6.15E-10	3.05E-10	1.92E-10	1.20E-10	1.00E-10	1.20E-10	
Ta-179	M		1.00E-02	1.08E-09	8.62E-10	4.87E-10	3.09E-10	2.24E-10	1.89E-10	2.16E-10	
Ta-179	S		1.00E-02	2.15E-09	1.88E-09	1.17E-09	7.40E-10	5.57E-10	4.90E-10	5.46E-10	
Ta-180	F		1.00E-02	1.58E-10	1.08E-10	4.77E-11	2.96E-11	1.60E-11	1.36E-11	1.70E-11	
Ta-180	M		1.00E-02	3.21E-10	2.23E-10	1.12E-10	7.64E-11	4.90E-11	4.53E-11	5.18E-11	
Ta-180	S		1.00E-02	3.39E-10	2.36E-10	1.20E-10	8.16E-11	5.33E-11	4.26E-11	5.05E-11	
Ta-182	F		1.00E-02	1.50E-08	1.13E-08	5.72E-09	3.64E-09	2.32E-09	2.00E-09	2.35E-09	
Ta-182	M		1.00E-02	3.22E-08	2.54E-08	1.54E-08	1.09E-08	9.45E-09	7.62E-09	8.39E-09	
Ta-182	S		1.00E-02	4.19E-08	3.39E-08	2.08E-08	1.47E-08	1.27E-08	1.03E-08	1.14E-08	
Ta-182m	F		1.00E-02	1.05E-10	7.17E-11	3.21E-11	2.16E-11	1.40E-11	1.22E-11	1.43E-11	
Ta-182m	M		1.00E-02	1.65E-10	1.13E-10	5.22E-11	3.60E-11	2.50E-11	2.14E-11	2.47E-11	
Ta-182m	S		1.00E-02	1.72E-10	1.18E-10	5.48E-11	3.78E-11	2.65E-11	2.26E-11	2.60E-11	
Ta-183	F		1.00E-02	4.54E-09	3.02E-09	1.37E-09	8.15E-10	4.38E-10	3.69E-10	4.65E-10	
Ta-183	M		1.00E-02	1.07E-08	7.65E-09	4.27E-09	3.02E-09	2.52E-09	2.01E-09	2.25E-09	
Ta-183	S		1.00E-02	1.15E-08	8.30E-09	4.67E-09	3.33E-09	2.81E-09	2.24E-09	2.50E-09	
Ta-184	F		1.00E-02	1.82E-09	1.31E-09	6.09E-10	3.74E-10	2.06E-10	1.71E-10	2.13E-10	
Ta-184	M		1.00E-02	3.20E-09	2.29E-09	1.14E-09	7.46E-10	5.01E-10	4.07E-10	4.80E-10	
Ta-184	S		1.00E-02	3.36E-09	2.40E-09	1.19E-09	7.88E-10	5.35E-10	4.34E-10	5.10E-10	
Ta-185	F		1.00E-02	2.22E-10	1.41E-10	6.11E-11	3.88E-11	2.35E-11	2.02E-11	2.44E-11	
Ta-185	M		1.00E-02	3.96E-10	2.57E-10	1.20E-10	7.97E-11	5.60E-11	4.68E-11	5.45E-11	
Ta-185	S		1.00E-02	4.17E-10	2.71E-10	1.27E-10	8.46E-11	5.99E-11	5.00E-11	5.80E-11	
Ta-186	F		1.00E-02	1.15E-10	7.78E-11	3.54E-11	2.26E-11	1.40E-11	1.20E-11	1.43E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Ta-186	M		1.00E-02	1.60E-10	1.08E-10	4.92E-11	3.19E-11	2.05E-11	1.75E-11	2.07E-11	
Ta-186	S		1.00E-02	1.65E-10	1.11E-10	5.08E-11	3.29E-11	2.12E-11	1.81E-11	2.14E-11	
Tb-146			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-147	F		5.00E-03	4.16E-10	3.24E-10	1.63E-10	1.00E-10	5.86E-11	4.74E-11	5.82E-11	
Tb-147	M		5.00E-03	5.69E-10	4.32E-10	2.20E-10	1.39E-10	8.79E-11	7.07E-11	8.50E-11	
Tb-147	S		5.00E-03	5.87E-10	4.45E-10	2.27E-10	1.44E-10	9.15E-11	7.35E-11	8.82E-11	
Tb-147m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-148	F		5.00E-03	4.76E-10	3.65E-10	1.36E-10	8.93E-11	6.31E-11	5.88E-11	6.71E-11	
Tb-148	M		5.00E-03	5.61E-10	4.00E-10	1.99E-10	1.25E-10	8.23E-11	7.07E-11	8.28E-11	
Tb-148	S		5.00E-03	5.65E-10	3.97E-10	1.94E-10	1.21E-10	7.76E-11	6.52E-11	7.76E-11	
Tb-148m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-149	F		5.00E-03	3.67E-09	2.46E-09	1.27E-09	7.80E-10	5.31E-10	4.49E-10	5.26E-10	
Tb-149	M		5.00E-03	1.72E-08	1.22E-08	8.00E-09	5.46E-09	4.77E-09	4.08E-09	4.44E-09	
Tb-149	S		5.00E-03	1.87E-08	1.33E-08	8.75E-09	5.98E-09	5.24E-09	4.49E-09	4.87E-09	
Tb-149m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-150	F		5.00E-03	6.65E-10	5.19E-10	2.59E-10	1.58E-10	9.05E-11	7.28E-11	9.03E-11	
Tb-150	M		5.00E-03	9.01E-10	6.84E-10	3.40E-10	2.13E-10	1.27E-10	1.03E-10	1.25E-10	
Tb-150	S		5.00E-03	9.27E-10	7.02E-10	3.49E-10	2.19E-10	1.31E-10	1.06E-10	1.29E-10	
Tb-150m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-151	F		5.00E-03	1.13E-09	8.83E-10	4.42E-10	2.74E-10	1.58E-10	1.29E-10	1.58E-10	
Tb-151	M		5.00E-03	1.68E-09	1.29E-09	6.73E-10	4.41E-10	2.97E-10	2.39E-10	2.81E-10	
Tb-151	S		5.00E-03	1.75E-09	1.33E-09	7.01E-10	4.62E-10	3.14E-10	2.52E-10	2.96E-10	
Tb-151m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-152	F		5.00E-03	1.92E-09	1.43E-09	6.91E-10	4.26E-10	2.38E-10	1.93E-10	2.41E-10	
Tb-152	M		5.00E-03	2.72E-09	2.00E-09	9.77E-10	6.20E-10	3.71E-10	3.02E-10	3.68E-10	
Tb-152	S		5.00E-03	2.81E-09	2.06E-09	1.01E-09	6.42E-10	3.86E-10	3.14E-10	3.82E-10	
Tb-152m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-153	F		5.00E-03	1.07E-09	8.06E-10	4.03E-10	2.48E-10	1.44E-10	9.21E-11	1.23E-10	
Tb-153	M		5.00E-03	1.56E-09	1.16E-09	6.19E-10	4.08E-10	2.87E-10	2.34E-10	2.72E-10	
Tb-153	S		5.00E-03	1.63E-09	1.21E-09	6.53E-10	4.33E-10	2.71E-10	2.22E-10	2.64E-10	
Tb-154	F		5.00E-03	1.92E-09	1.54E-09	7.94E-10	4.97E-10	2.89E-10	2.35E-10	2.87E-10	
Tb-154	M		5.00E-03	2.56E-09	2.02E-09	1.06E-09	6.84E-10	4.33E-10	3.47E-10	4.16E-10	
Tb-154	S		5.00E-03	2.64E-09	2.08E-09	1.09E-09	7.06E-10	4.50E-10	3.60E-10	4.30E-10	
Tb-155	F		5.00E-03	9.30E-10	6.42E-10	3.08E-10	1.91E-10	1.09E-10	9.18E-11	1.13E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Tb-155	M		5.00E-03	1.80E-09	1.32E-09	7.24E-10	4.45E-10	3.50E-10	2.82E-10	3.23E-10	
Tb-155	S		5.00E-03	1.90E-09	1.40E-09	6.88E-10	4.81E-10	3.85E-10	3.09E-10	3.50E-10	
Tb-156	F		5.00E-03	4.77E-09	3.71E-09	1.91E-09	1.22E-09	7.40E-10	6.14E-10	7.37E-10	
Tb-156	M		5.00E-03	6.80E-09	5.28E-09	2.93E-09	1.98E-09	1.47E-09	1.17E-09	1.35E-09	
Tb-156	S		5.00E-03	7.10E-09	5.50E-09	3.08E-09	2.09E-09	1.58E-09	1.26E-09	1.44E-09	
Tb-156m	F		5.00E-03	7.65E-10	5.77E-10	2.95E-10	1.90E-10	1.17E-10	9.79E-11	1.17E-10	
Tb-156m	M		5.00E-03	1.13E-09	8.58E-10	4.84E-10	2.97E-10	2.36E-10	1.90E-10	2.17E-10	
Tb-156m	S		5.00E-03	1.19E-09	9.02E-10	4.54E-10	3.18E-10	2.57E-10	2.06E-10	2.33E-10	
Tb-156n	F		5.00E-03	3.50E-10	2.50E-10	1.20E-10	7.65E-11	4.54E-11	3.86E-11	4.65E-11	
Tb-156n	M		5.00E-03	6.61E-10	4.79E-10	2.60E-10	1.81E-10	1.28E-10	1.02E-10	1.18E-10	
Tb-156n	S		5.00E-03	6.99E-10	5.06E-10	2.77E-10	1.94E-10	1.40E-10	1.11E-10	1.28E-10	
Tb-157	F		5.00E-03	1.02E-08	9.36E-09	5.82E-09	4.02E-09	3.26E-09	3.22E-09	3.42E-09	
Tb-157	M		5.00E-03	3.59E-09	3.36E-09	2.22E-09	1.50E-09	1.33E-09	1.33E-09	1.39E-09	
Tb-157	S		5.00E-03	2.23E-09	2.04E-09	1.34E-09	8.79E-10	7.38E-10	7.17E-10	7.62E-10	
Tb-158	F		5.00E-03	2.76E-07	2.57E-07	1.70E-07	1.27E-07	1.06E-07	1.05E-07	1.10E-07	
Tb-158	M		5.00E-03	1.06E-07	9.97E-08	7.01E-08	5.10E-08	4.69E-08	4.65E-08	4.81E-08	
Tb-158	S		5.00E-03	8.08E-08	7.54E-08	5.33E-08	3.77E-08	3.39E-08	3.24E-08	3.39E-08	
Tb-160	F		5.00E-03	3.33E-08	2.52E-08	1.28E-08	7.87E-09	4.93E-09	4.19E-09	4.98E-09	
Tb-160	M		5.00E-03	3.23E-08	2.53E-08	1.49E-08	1.03E-08	8.65E-09	7.03E-09	7.80E-09	
Tb-160	S		5.00E-03	3.53E-08	2.80E-08	1.69E-08	1.19E-08	1.03E-08	8.32E-09	9.17E-09	
Tb-161	F		5.00E-03	3.50E-09	2.33E-09	1.08E-09	6.24E-10	3.40E-10	2.85E-10	3.60E-10	
Tb-161	M		5.00E-03	6.75E-09	4.85E-09	2.71E-09	1.91E-09	1.60E-09	1.28E-09	1.43E-09	
Tb-161	S		5.00E-03	7.25E-09	5.23E-09	2.96E-09	2.11E-09	1.79E-09	1.43E-09	1.59E-09	
Tb-162			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-163	F		5.00E-03	9.22E-11	6.38E-11	2.93E-11	1.89E-11	1.18E-11	1.00E-11	1.19E-11	
Tb-163	M		5.00E-03	1.40E-10	9.60E-11	4.47E-11	2.96E-11	1.97E-11	1.66E-11	1.95E-11	
Tb-163	S		5.00E-03	1.45E-10	9.96E-11	4.64E-11	3.07E-11	2.06E-11	1.73E-11	2.03E-11	
Tb-164			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-165			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-101	F		1.00E+00	8.45E-11	5.64E-11	2.50E-11	1.56E-11	9.76E-12	8.25E-12	9.93E-12	
Tc-101	M		2.00E-01	1.08E-10	7.14E-11	3.21E-11	2.12E-11	1.39E-11	1.19E-11	1.40E-11	
Tc-101	S		2.00E-02	1.10E-10	7.30E-11	3.29E-11	2.18E-11	1.44E-11	1.23E-11	1.44E-11	
Tc-102			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-102m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Tc-104	F		1.00E+00	2.73E-10	1.83E-10	8.29E-11	4.79E-11	2.91E-11	2.35E-11	2.92E-11	
Tc-104	M		2.00E-01	2.97E-10	1.95E-10	8.92E-11	5.54E-11	3.45E-11	2.89E-11	3.49E-11	
Tc-104	S		2.00E-02	3.00E-10	1.96E-10	9.00E-11	5.62E-11	3.51E-11	2.95E-11	3.55E-11	
Tc-105			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-91			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-91m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-92			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-93	F		1.00E+00	3.38E-10	2.81E-10	1.45E-10	8.42E-11	5.10E-11	4.01E-11	4.96E-11	
Tc-93	M		2.00E-01	3.61E-10	2.94E-10	1.53E-10	9.40E-11	5.72E-11	4.52E-11	5.53E-11	
Tc-93	S		2.00E-02	3.65E-10	2.96E-10	1.54E-10	9.52E-11	5.79E-11	4.58E-11	5.59E-11	
Tc-93m	F		1.00E+00	1.57E-10	1.24E-10	6.16E-11	3.59E-11	2.18E-11	1.72E-11	2.13E-11	
Tc-93m	M		2.00E-01	1.68E-10	1.30E-10	6.57E-11	4.11E-11	2.55E-11	2.05E-11	2.48E-11	
Tc-93m	S		2.00E-02	1.70E-10	1.31E-10	6.62E-11	4.17E-11	2.60E-11	2.08E-11	2.52E-11	
Tc-94	F		1.00E+00	8.91E-10	7.57E-10	3.94E-10	2.32E-10	1.42E-10	1.12E-10	1.37E-10	
Tc-94	M		2.00E-01	9.84E-10	8.15E-10	4.25E-10	2.63E-10	1.59E-10	1.26E-10	1.53E-10	
Tc-94	S		2.00E-02	1.00E-09	8.24E-10	4.30E-10	2.68E-10	1.61E-10	1.27E-10	1.56E-10	
Tc-94m	F		1.00E+00	4.88E-10	3.42E-10	1.58E-10	8.77E-11	5.35E-11	4.16E-11	5.26E-11	
Tc-94m	M		2.00E-01	4.44E-10	3.06E-10	1.45E-10	8.98E-11	5.64E-11	4.60E-11	5.58E-11	
Tc-94m	S		2.00E-02	4.39E-10	3.02E-10	1.44E-10	9.01E-11	5.67E-11	4.65E-11	5.61E-11	
Tc-95	F		1.00E+00	7.65E-10	6.46E-10	3.37E-10	2.01E-10	1.23E-10	9.74E-11	1.19E-10	
Tc-95	M		2.00E-01	8.50E-10	7.06E-10	3.67E-10	2.27E-10	1.36E-10	1.07E-10	1.31E-10	
Tc-95	S		2.00E-02	8.72E-10	7.16E-10	3.72E-10	2.31E-10	1.38E-10	1.08E-10	1.33E-10	
Tc-95m	F		1.00E+00	2.49E-09	1.89E-09	9.55E-10	5.90E-10	3.68E-10	3.00E-10	3.62E-10	
Tc-95m	M		2.00E-01	5.00E-09	4.08E-09	2.38E-09	1.58E-09	1.11E-09	8.99E-10	1.04E-09	
Tc-95m	S		2.00E-02	6.10E-09	5.11E-09	2.73E-09	1.86E-09	1.49E-09	1.21E-09	1.36E-09	
Tc-96	F		1.00E+00	4.22E-09	3.46E-09	1.83E-09	1.13E-09	7.07E-10	5.73E-10	6.89E-10	
Tc-96	M		2.00E-01	4.80E-09	3.94E-09	2.13E-09	1.36E-09	8.75E-10	6.94E-10	8.29E-10	
Tc-96	S		2.00E-02	4.89E-09	4.01E-09	2.17E-09	1.39E-09	8.99E-10	7.11E-10	8.49E-10	
Tc-96m	F		1.00E+00	5.31E-11	4.16E-11	2.11E-11	1.26E-11	7.78E-12	6.20E-12	7.58E-12	
Tc-96m	M		2.00E-01	5.64E-11	4.43E-11	2.33E-11	1.45E-11	9.30E-12	7.39E-12	8.89E-12	
Tc-96m	S		2.00E-02	5.70E-11	4.47E-11	2.36E-11	1.48E-11	9.52E-12	7.56E-12	9.07E-12	
Tc-97	F		1.00E+00	5.26E-10	3.73E-10	1.70E-10	9.55E-11	5.65E-11	4.39E-11	5.59E-11	
Tc-97	M		2.00E-01	1.26E-09	1.02E-09	5.76E-10	3.66E-10	2.78E-10	2.19E-10	2.52E-10	
Tc-97	S		2.00E-02	5.05E-09	4.83E-09	3.31E-09	2.26E-09	1.92E-09	1.78E-09	1.90E-09	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Tc-97m	F		1.00E+00	3.34E-09	2.30E-09	9.82E-10	5.57E-10	3.03E-10	2.70E-10	3.37E-10	
Tc-97m	M		2.00E-01	1.31E-08	9.98E-09	6.09E-09	4.46E-09	4.11E-09	3.24E-09	3.55E-09	
Tc-97m	S		2.00E-02	1.63E-08	1.27E-08	7.85E-09	5.73E-09	5.26E-09	4.17E-09	4.56E-09	
Tc-98	F		1.00E+00	9.31E-09	6.42E-09	3.02E-09	1.82E-09	1.13E-09	9.24E-10	1.13E-09	
Tc-98	M		2.00E-01	3.26E-08	2.68E-08	1.64E-08	1.14E-08	9.62E-09	7.89E-09	8.70E-09	
Tc-98	S		2.00E-02	1.07E-07	1.02E-07	7.20E-08	5.07E-08	4.51E-08	4.25E-08	4.47E-08	
Tc-99	F		1.00E+00	3.99E-09	2.48E-09	1.05E-09	5.88E-10	3.59E-10	2.86E-10	3.62E-10	
Tc-99	M		2.00E-01	1.68E-08	1.32E-08	7.94E-09	5.63E-09	5.00E-09	4.03E-09	4.42E-09	
Tc-99	S		2.00E-02	4.05E-08	3.65E-08	2.41E-08	1.64E-08	1.45E-08	1.33E-08	1.42E-08	
Tc-99m	F		1.00E+00	1.15E-10	8.70E-11	4.13E-11	2.38E-11	1.46E-11	1.16E-11	1.43E-11	
Tc-99m	M		2.00E-01	1.33E-10	9.90E-11	5.10E-11	3.39E-11	2.40E-11	1.92E-11	2.24E-11	
Tc-99m	S		2.00E-02	1.34E-10	1.00E-10	5.20E-11	3.51E-11	2.50E-11	2.01E-11	2.33E-11	
Te-113			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-114	F		6.00E-01	1.86E-10	1.30E-10	6.19E-11	3.76E-11	2.25E-11	1.84E-11	2.26E-11	
Te-114	M		2.00E-01	2.67E-10	1.84E-10	8.71E-11	5.39E-11	3.35E-11	2.76E-11	3.34E-11	
Te-114	S		2.00E-02	2.76E-10	1.90E-10	8.99E-11	5.57E-11	3.48E-11	2.86E-11	3.46E-11	
Te-114	V		6.00E-01	2.20E-10	1.54E-10	8.78E-11	5.63E-11	3.97E-11	3.32E-11	3.82E-11	
Te-115			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-115m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-116	F		6.00E-01	5.99E-10	4.76E-10	2.33E-10	1.41E-10	8.09E-11	6.55E-11	8.12E-11	
Te-116	M		2.00E-01	9.87E-10	7.30E-10	3.63E-10	2.30E-10	1.47E-10	1.19E-10	1.43E-10	
Te-116	S		2.00E-02	1.05E-09	7.64E-10	3.80E-10	2.42E-10	1.55E-10	1.26E-10	1.50E-10	
Te-116	V		6.00E-01	6.79E-10	5.03E-10	2.88E-10	1.80E-10	1.23E-10	9.95E-11	1.17E-10	
Te-117	F		6.00E-01	1.80E-10	1.42E-10	7.07E-11	4.28E-11	2.51E-11	2.02E-11	2.49E-11	
Te-117	M		2.00E-01	2.61E-10	1.96E-10	9.81E-11	6.15E-11	3.88E-11	3.12E-11	3.76E-11	
Te-117	S		2.00E-02	2.71E-10	2.03E-10	1.01E-10	6.37E-11	4.04E-11	3.25E-11	3.91E-11	
Te-117	V		6.00E-01	1.86E-10	1.39E-10	8.11E-11	5.10E-11	3.58E-11	2.89E-11	3.37E-11	
Te-118	F		6.00E-01	9.87E-09	7.75E-09	3.50E-09	2.00E-09	1.10E-09	8.72E-10	1.12E-09	
Te-118	M		2.00E-01	1.73E-08	1.24E-08	6.19E-09	4.01E-09	2.71E-09	2.30E-09	2.68E-09	
Te-118	S		2.00E-02	1.89E-08	1.33E-08	6.71E-09	4.38E-09	2.99E-09	2.55E-09	2.95E-09	
Te-118	V		6.00E-01	2.13E-08	1.48E-08	7.53E-09	4.19E-09	2.57E-09	1.94E-09	2.45E-09	
Te-118+D	V			2.13E-08	1.48E-08	7.53E-09	4.38E-09	2.99E-09	2.55E-09	3.00E-09	
Te-118+E	V			2.13E-08	1.48E-08	7.53E-09	4.38E-09	2.99E-09	2.55E-09	3.00E-09	
Te-119	F		6.00E-01	5.93E-10	5.23E-10	2.70E-10	1.63E-10	9.49E-11	7.56E-11	9.33E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Te-119	M		2.00E-01	8.25E-10	6.80E-10	3.49E-10	2.18E-10	1.30E-10	1.03E-10	1.26E-10	
Te-119	S		2.00E-02	8.93E-10	7.12E-10	3.65E-10	2.29E-10	1.37E-10	1.08E-10	1.32E-10	
Te-119	V		6.00E-01	6.55E-10	5.21E-10	3.11E-10	1.93E-10	1.33E-10	1.05E-10	1.23E-10	
Te-119m	F		6.00E-01	2.53E-09	2.09E-09	1.10E-09	6.80E-10	4.11E-10	3.36E-10	4.06E-10	
Te-119m	M		2.00E-01	3.48E-09	2.81E-09	1.51E-09	9.77E-10	6.49E-10	5.18E-10	6.12E-10	
Te-119m	S		2.00E-02	3.68E-09	2.93E-09	1.58E-09	1.03E-09	6.86E-10	5.46E-10	6.45E-10	
Te-119m	V		6.00E-01	3.87E-09	2.94E-09	1.76E-09	1.12E-09	7.77E-10	6.30E-10	7.32E-10	
Te-121	F		6.00E-01	1.86E-09	1.46E-09	7.71E-10	4.96E-10	3.12E-10	2.61E-10	3.09E-10	
Te-121	M		2.00E-01	2.47E-09	1.98E-09	1.11E-09	7.26E-10	5.12E-10	4.12E-10	4.78E-10	
Te-121	S		2.00E-02	2.58E-09	2.10E-09	1.19E-09	7.78E-10	5.58E-10	4.46E-10	5.16E-10	
Te-121	V		6.00E-01	3.29E-09	2.42E-09	1.45E-09	9.72E-10	7.34E-10	5.67E-10	6.53E-10	
Te-121m	F		6.00E-01	1.41E-08	1.01E-08	5.44E-09	3.33E-09	2.12E-09	1.85E-09	2.17E-09	
Te-121m	M		2.00E-01	1.94E-08	1.48E-08	8.98E-09	6.19E-09	5.22E-09	4.28E-09	4.73E-09	
Te-121m	S		2.00E-02	2.30E-08	1.89E-08	1.18E-08	8.21E-09	7.06E-09	5.78E-09	6.35E-09	
Te-121m	V		6.00E-01	3.59E-08	2.73E-08	1.63E-08	9.97E-09	6.65E-09	5.63E-09	6.55E-09	
Te-123	F		6.00E-01	3.54E-09	2.92E-09	1.95E-09	1.50E-09	1.26E-09	1.22E-09	1.28E-09	
Te-123	M		2.00E-01	1.63E-09	1.25E-09	8.59E-10	6.41E-10	5.69E-10	5.60E-10	5.83E-10	
Te-123	S		2.00E-02	8.61E-10	7.70E-10	5.00E-10	3.25E-10	2.68E-10	2.60E-10	2.78E-10	
Te-123	V		6.00E-01	9.08E-09	8.02E-09	5.93E-09	4.56E-09	3.99E-09	3.75E-09	3.93E-09	
Te-123m	F		6.00E-01	9.72E-09	6.76E-09	3.44E-09	1.91E-09	1.12E-09	9.57E-10	1.17E-09	
Te-123m	M		2.00E-01	1.76E-08	1.32E-08	7.99E-09	5.64E-09	4.98E-09	3.99E-09	4.39E-09	
Te-123m	S		2.00E-02	2.02E-08	1.59E-08	9.83E-09	7.04E-09	6.31E-09	5.07E-09	5.55E-09	
Te-123m	V		6.00E-01	2.45E-08	1.80E-08	1.02E-08	5.66E-09	3.49E-09	2.88E-09	3.50E-09	
Te-125m	F		6.00E-01	6.17E-09	4.17E-09	2.02E-09	1.09E-09	6.11E-10	5.08E-10	6.43E-10	
Te-125m	M		2.00E-01	1.44E-08	1.08E-08	6.52E-09	4.71E-09	4.26E-09	3.36E-09	3.70E-09	
Te-125m	S		2.00E-02	1.64E-08	1.27E-08	7.76E-09	5.69E-09	5.23E-09	4.12E-09	4.51E-09	
Te-125m	V		6.00E-01	1.53E-08	1.08E-08	5.87E-09	3.15E-09	1.87E-09	1.51E-09	1.88E-09	
Te-127	F		6.00E-01	4.32E-10	3.24E-10	1.38E-10	8.58E-11	4.59E-11	3.93E-11	4.91E-11	
Te-127	M		2.00E-01	1.05E-09	7.35E-10	3.58E-10	2.43E-10	1.59E-10	1.27E-10	1.51E-10	
Te-127	S		2.00E-02	1.18E-09	7.99E-10	3.90E-10	2.65E-10	1.75E-10	1.40E-10	1.66E-10	
Te-127	V		6.00E-01	6.19E-10	4.44E-10	2.33E-10	1.45E-10	9.29E-11	7.72E-11	9.18E-11	
Te-127m	F		6.00E-01	2.09E-08	1.40E-08	6.57E-09	3.48E-09	1.96E-09	1.55E-09	2.01E-09	
Te-127m	M		2.00E-01	3.52E-08	2.63E-08	1.54E-08	1.07E-08	9.21E-09	7.43E-09	8.23E-09	
Te-127m	S		2.00E-02	4.09E-08	3.25E-08	1.96E-08	1.38E-08	1.20E-08	9.82E-09	1.08E-08	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Te-127m	V		6.00E-01	5.27E-08	3.71E-08	1.94E-08	1.02E-08	6.08E-09	4.62E-09	5.92E-09	
Te-129	F		6.00E-01	1.85E-10	1.19E-10	5.08E-11	3.20E-11	1.88E-11	1.61E-11	1.96E-11	
Te-129	M		2.00E-01	3.36E-10	2.16E-10	9.90E-11	6.50E-11	4.43E-11	3.70E-11	4.35E-11	
Te-129	S		2.00E-02	3.54E-10	2.27E-10	1.05E-10	6.88E-11	4.72E-11	3.93E-11	4.62E-11	
Te-129	V		6.00E-01	2.55E-10	1.73E-10	9.42E-11	6.19E-11	4.27E-11	3.72E-11	4.25E-11	
Te-129m	F		6.00E-01	1.96E-08	1.29E-08	5.80E-09	3.10E-09	1.73E-09	1.33E-09	1.75E-09	
Te-129m	M		2.00E-01	3.44E-08	2.54E-08	1.42E-08	9.68E-09	7.90E-09	6.50E-09	7.26E-09	
Te-129m	S		2.00E-02	3.78E-08	2.88E-08	1.65E-08	1.14E-08	9.50E-09	7.88E-09	8.73E-09	
Te-129m	V		6.00E-01	4.75E-08	3.22E-08	1.62E-08	8.53E-09	5.10E-09	3.76E-09	4.88E-09	
Te-131	F		6.00E-01	2.32E-10	1.99E-10	9.88E-11	5.27E-11	3.26E-11	2.28E-11	2.97E-11	
Te-131	M		2.00E-01	2.64E-10	1.74E-10	8.13E-11	5.18E-11	3.47E-11	2.85E-11	3.38E-11	
Te-131	S		2.00E-02	2.44E-10	1.60E-10	7.39E-11	4.87E-11	3.32E-11	2.78E-11	3.26E-11	
Te-131	V		6.00E-01	5.08E-10	4.51E-10	2.61E-10	1.42E-10	9.55E-11	6.79E-11	8.45E-11	
Te-131m	F		6.00E-01	8.67E-09	7.61E-09	3.87E-09	2.04E-09	1.24E-09	8.56E-10	1.12E-09	
Te-131m	M		2.00E-01	7.86E-09	5.81E-09	3.02E-09	1.92E-09	1.35E-09	1.06E-09	1.25E-09	
Te-131m	S		2.00E-02	6.92E-09	5.05E-09	2.63E-09	1.77E-09	1.13E-09	9.08E-10	1.08E-09	
Te-131m	V		6.00E-01	2.07E-08	1.88E-08	1.08E-08	5.62E-09	3.66E-09	2.42E-09	3.14E-09	
Te-132	F		6.00E-01	2.19E-08	1.76E-08	8.42E-09	4.12E-09	2.52E-09	1.77E-09	2.35E-09	
Te-132	M		2.00E-01	1.60E-08	1.27E-08	6.46E-09	4.07E-09	2.60E-09	2.06E-09	2.48E-09	
Te-132	S		2.00E-02	1.53E-08	1.12E-08	5.81E-09	3.88E-09	2.54E-09	2.06E-09	2.43E-09	
Te-132	V		6.00E-01	5.32E-08	4.46E-08	2.38E-08	1.14E-08	7.50E-09	5.02E-09	6.61E-09	
Te-133	F		6.00E-01	2.39E-10	2.06E-10	9.60E-11	4.58E-11	2.80E-11	1.91E-11	2.58E-11	
Te-133	M		2.00E-01	1.94E-10	1.31E-10	6.10E-11	3.74E-11	2.38E-11	1.94E-11	2.35E-11	
Te-133	S		2.00E-02	1.70E-10	1.15E-10	5.35E-11	3.46E-11	2.23E-11	1.86E-11	2.22E-11	
Te-133	V		6.00E-01	5.46E-10	4.72E-10	2.54E-10	1.23E-10	8.15E-11	5.59E-11	7.26E-11	
Te-133m	F		6.00E-01	9.81E-10	8.54E-10	3.99E-10	1.89E-10	1.14E-10	7.71E-11	1.05E-10	
Te-133m	M		2.00E-01	7.33E-10	5.10E-10	2.46E-10	1.50E-10	9.73E-11	7.73E-11	9.37E-11	
Te-133m	S		2.00E-02	6.23E-10	4.38E-10	2.14E-10	1.38E-10	9.10E-11	7.41E-11	8.80E-11	
Te-133m	V		6.00E-01	2.23E-09	1.95E-09	1.04E-09	4.90E-10	3.20E-10	2.12E-10	2.81E-10	
Te-134	F		6.00E-01	4.44E-10	3.53E-10	1.70E-10	9.49E-11	5.75E-11	4.45E-11	5.59E-11	
Te-134	M		2.00E-01	5.17E-10	3.73E-10	1.84E-10	1.18E-10	7.85E-11	6.37E-11	7.56E-11	
Te-134	S		2.00E-02	5.25E-10	3.76E-10	1.86E-10	1.21E-10	8.09E-11	6.59E-11	7.78E-11	
Te-134	V		6.00E-01	6.37E-10	5.15E-10	2.83E-10	1.54E-10	1.05E-10	7.94E-11	9.70E-11	
Th-223			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Th-224			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th-226	F		5.00E-03	1.43E-07	9.95E-08	4.83E-08	3.39E-08	2.50E-08	2.14E-08	2.14E-08	2.42E-08
Th-226	M		5.00E-03	2.94E-07	2.10E-07	1.14E-07	8.25E-08	6.93E-08	5.70E-08	5.70E-08	6.31E-08
Th-226	S		5.00E-03	3.11E-07	2.23E-07	1.21E-07	8.79E-08	7.41E-08	6.09E-08	6.09E-08	6.74E-08
Th-227	F		5.00E-03	8.33E-06	5.16E-06	2.58E-06	1.56E-06	1.02E-06	6.68E-07	6.68E-07	8.65E-07
Th-227	M		5.00E-03	3.20E-05	2.43E-05	1.55E-05	1.13E-05	1.05E-05	8.41E-06	8.41E-06	9.14E-06
Th-227	S		5.00E-03	3.85E-05	2.95E-05	1.89E-05	1.38E-05	1.29E-05	1.04E-05	1.04E-05	1.12E-05
Th-228	F		5.00E-03	1.77E-04	1.47E-04	8.31E-05	5.17E-05	3.53E-05	2.95E-05	2.95E-05	3.43E-05
Th-228	M		5.00E-03	1.32E-04	1.08E-04	6.77E-05	4.56E-05	3.86E-05	3.20E-05	3.20E-05	3.53E-05
Th-228	S		5.00E-03	1.57E-04	1.31E-04	8.22E-05	5.52E-05	4.71E-05	3.97E-05	3.97E-05	4.35E-05
Th-229	F		5.00E-03	5.44E-04	5.16E-04	3.66E-04	2.91E-04	2.48E-04	2.39E-04	2.39E-04	2.49E-04
Th-229	M		5.00E-03	2.28E-04	2.16E-04	1.59E-04	1.21E-04	1.12E-04	1.08E-04	1.08E-04	1.12E-04
Th-229	S		5.00E-03	2.11E-04	1.92E-04	1.29E-04	8.69E-05	7.59E-05	7.11E-05	7.11E-05	7.55E-05
Th-229+D	F			5.72E-04	5.38E-04	3.80E-04	3.01E-04	2.58E-04	2.47E-04	2.47E-04	2.58E-04
Th-229+E	F			5.72E-04	5.38E-04	3.80E-04	3.01E-04	2.58E-04	2.47E-04	2.47E-04	2.58E-04
Th-230	F		5.00E-03	2.07E-04	1.99E-04	1.41E-04	1.13E-04	1.00E-04	1.02E-04	1.02E-04	1.04E-04
Th-230	M		5.00E-03	7.71E-05	7.41E-05	5.57E-05	4.33E-05	4.18E-05	4.28E-05	4.28E-05	4.35E-05
Th-230	S		5.00E-03	3.96E-05	3.47E-05	2.38E-05	1.65E-05	1.47E-05	1.40E-05	1.40E-05	1.47E-05
Th-231	F		5.00E-03	1.09E-09	7.49E-10	2.62E-10	1.62E-10	9.19E-11	7.82E-11	7.82E-11	9.85E-11
Th-231	M		5.00E-03	2.23E-09	1.56E-09	8.10E-10	4.90E-10	3.79E-10	3.08E-10	3.08E-10	3.55E-10
Th-231	S		5.00E-03	2.36E-09	1.65E-09	7.64E-10	5.23E-10	4.09E-10	3.30E-10	3.30E-10	3.78E-10
Th-232	F		5.00E-03	2.32E-04	2.25E-04	1.65E-04	1.34E-04	1.16E-04	1.10E-04	1.10E-04	1.15E-04
Th-232	M		5.00E-03	8.28E-05	8.10E-05	6.30E-05	4.98E-05	4.71E-05	4.54E-05	4.54E-05	4.67E-05
Th-232	S		5.00E-03	5.36E-05	5.04E-05	3.67E-05	2.65E-05	2.50E-05	2.48E-05	2.48E-05	2.56E-05
Th-232+D	F			2.80E-04	2.72E-04	1.97E-04	1.54E-04	1.32E-04	1.26E-04	1.26E-04	1.32E-04
Th-232+E	F			2.80E-04	2.72E-04	1.97E-04	1.54E-04	1.32E-04	1.26E-04	1.26E-04	1.32E-04
Th-233	F		5.00E-03	9.03E-11	5.83E-11	2.56E-11	1.65E-11	1.02E-11	8.83E-12	8.83E-12	1.06E-11
Th-233	M		5.00E-03	1.44E-10	9.44E-11	4.35E-11	2.92E-11	2.04E-11	1.72E-11	1.72E-11	2.00E-11
Th-233	S		5.00E-03	1.50E-10	9.88E-11	4.57E-11	3.09E-11	2.17E-11	1.83E-11	1.83E-11	2.12E-11
Th-234	F		5.00E-03	3.95E-08	2.45E-08	1.09E-08	6.08E-09	3.53E-09	2.49E-09	2.49E-09	3.33E-09
Th-234	M		5.00E-03	3.92E-08	2.85E-08	1.54E-08	1.03E-08	7.95E-09	6.65E-09	6.65E-09	7.50E-09
Th-234	S		5.00E-03	4.08E-08	3.05E-08	1.69E-08	1.15E-08	9.09E-09	7.71E-09	7.71E-09	8.60E-09
Th-234+D	S			4.08E-08	3.05E-08	1.69E-08	1.15E-08	9.09E-09	7.71E-09	7.71E-09	8.60E-09
Th-234+E	S			4.08E-08	3.05E-08	1.69E-08	1.15E-08	9.09E-09	7.71E-09	7.71E-09	8.60E-09

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Th-235			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th-236	F		5.00E-03	2.80E-10	1.82E-10	8.05E-11	5.02E-11	2.99E-11	2.53E-11	3.08E-11	3.08E-11
Th-236	M		5.00E-03	4.86E-10	3.17E-10	1.47E-10	9.58E-11	6.48E-11	5.39E-11	6.35E-11	6.35E-11
Th-236	S		5.00E-03	5.09E-10	3.32E-10	1.54E-10	1.01E-10	6.87E-11	5.70E-11	6.71E-11	6.71E-11
Ti-44	F		2.00E-02	3.07E-07	2.65E-07	1.52E-07	9.57E-08	6.64E-08	6.15E-08	6.90E-08	6.90E-08
Ti-44	M		2.00E-02	1.71E-07	1.50E-07	9.24E-08	5.93E-08	4.64E-08	4.27E-08	4.67E-08	4.67E-08
Ti-44	S		2.00E-02	3.24E-07	3.08E-07	2.14E-07	1.48E-07	1.29E-07	1.27E-07	1.33E-07	1.33E-07
Ti-44+D	S			3.26E-07	3.09E-07	2.15E-07	1.48E-07	1.29E-07	1.27E-07	1.33E-07	1.33E-07
Ti-44+E	S			3.26E-07	3.09E-07	2.15E-07	1.48E-07	1.29E-07	1.27E-07	1.33E-07	1.33E-07
Ti-45	F		2.00E-02	4.42E-10	3.17E-10	1.48E-10	9.08E-11	5.12E-11	4.23E-11	5.25E-11	5.25E-11
Ti-45	M		2.00E-02	7.42E-10	5.24E-10	2.54E-10	1.65E-10	1.08E-10	8.83E-11	1.05E-10	1.05E-10
Ti-45	S		2.00E-02	7.76E-10	5.47E-10	2.66E-10	1.73E-10	1.15E-10	9.34E-11	1.11E-10	1.11E-10
Ti-51			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ti-52			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-190			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-190m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-194	F		1.00E+00	1.22E-10	8.26E-11	3.80E-11	2.31E-11	1.36E-11	1.12E-11	1.39E-11	1.39E-11
Tl-194	M		1.00E+00	1.85E-10	1.22E-10	5.67E-11	3.51E-11	2.21E-11	1.83E-11	2.21E-11	2.21E-11
Tl-194	S		1.00E+00	1.92E-10	1.27E-10	5.88E-11	3.65E-11	2.30E-11	1.91E-11	2.30E-11	2.30E-11
Tl-194m	F		1.00E+00	1.63E-10	1.26E-10	6.23E-11	3.81E-11	2.32E-11	1.88E-11	2.29E-11	2.29E-11
Tl-194m	M		1.00E+00	2.30E-10	1.72E-10	8.59E-11	5.42E-11	3.55E-11	2.87E-11	3.42E-11	3.42E-11
Tl-194m	S		1.00E+00	2.37E-10	1.77E-10	8.85E-11	5.60E-11	3.68E-11	2.98E-11	3.54E-11	3.54E-11
Tl-195	F		1.00E+00	1.26E-10	1.02E-10	5.17E-11	3.07E-11	1.81E-11	1.45E-11	1.79E-11	1.79E-11
Tl-195	M		1.00E+00	1.76E-10	1.38E-10	7.23E-11	4.48E-11	2.98E-11	2.39E-11	2.84E-11	2.84E-11
Tl-195	S		1.00E+00	1.82E-10	1.42E-10	7.49E-11	4.66E-11	3.13E-11	2.51E-11	2.98E-11	2.98E-11
Tl-196	F		1.00E+00	2.38E-10	1.92E-10	9.85E-11	5.87E-11	3.47E-11	2.78E-11	3.43E-11	3.43E-11
Tl-196	M		1.00E+00	3.06E-10	2.39E-10	1.23E-10	7.52E-11	4.72E-11	3.78E-11	4.58E-11	4.58E-11
Tl-196	S		1.00E+00	3.14E-10	2.44E-10	1.26E-10	7.70E-11	4.86E-11	3.89E-11	4.70E-11	4.70E-11
Tl-197	F		1.00E+00	1.32E-10	1.04E-10	5.12E-11	3.07E-11	1.81E-11	1.46E-11	1.80E-11	1.80E-11
Tl-197	M		1.00E+00	2.25E-10	1.71E-10	9.27E-11	6.09E-11	4.56E-11	3.66E-11	4.21E-11	4.21E-11
Tl-197	S		1.00E+00	2.37E-10	1.80E-10	9.77E-11	6.45E-11	4.89E-11	3.93E-11	4.50E-11	4.50E-11
Tl-198	F		1.00E+00	4.85E-10	4.15E-10	2.20E-10	1.31E-10	7.76E-11	6.19E-11	7.60E-11	7.60E-11
Tl-198	M		1.00E+00	5.50E-10	4.64E-10	2.48E-10	1.50E-10	9.35E-11	7.40E-11	8.98E-11	8.98E-11
Tl-198	S		1.00E+00	5.57E-10	4.69E-10	2.51E-10	1.52E-10	9.53E-11	7.53E-11	9.13E-11	9.13E-11

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Tl-198m	F		1.00E+00	3.27E-10	2.57E-10	1.28E-10	7.76E-11	4.63E-11	3.78E-11	4.62E-11	
Tl-198m	M		1.00E+00	4.75E-10	3.61E-10	1.86E-10	1.19E-10	8.17E-11	6.58E-11	7.74E-11	
Tl-198m	S		1.00E+00	4.91E-10	3.73E-10	1.92E-10	1.24E-10	8.56E-11	6.90E-11	8.09E-11	
Tl-199	F		1.00E+00	1.81E-10	1.39E-10	6.75E-11	4.08E-11	2.39E-11	1.96E-11	2.41E-11	
Tl-199	M		1.00E+00	2.98E-10	2.25E-10	1.19E-10	7.90E-11	5.93E-11	4.76E-11	5.46E-11	
Tl-199	S		1.00E+00	3.11E-10	2.34E-10	1.25E-10	8.33E-11	6.33E-11	5.07E-11	5.81E-11	
Tl-200	F		1.00E+00	1.05E-09	8.77E-10	4.61E-10	2.79E-10	1.67E-10	1.35E-10	1.65E-10	
Tl-200	M		1.00E+00	1.22E-09	1.01E-09	5.42E-10	3.37E-10	2.19E-10	1.75E-10	2.09E-10	
Tl-200	S		1.00E+00	1.24E-09	1.02E-09	5.51E-10	3.44E-10	2.25E-10	1.80E-10	2.14E-10	
Tl-201	F		1.00E+00	4.73E-10	3.46E-10	1.62E-10	9.83E-11	5.59E-11	4.61E-11	5.72E-11	
Tl-201	M		1.00E+00	1.02E-09	7.56E-10	4.24E-10	2.58E-10	2.22E-10	1.77E-10	2.00E-10	
Tl-201	S		1.00E+00	1.09E-09	8.09E-10	4.58E-10	2.83E-10	2.46E-10	1.96E-10	2.20E-10	
Tl-202	F		1.00E+00	1.50E-09	1.17E-09	5.99E-10	3.80E-10	2.29E-10	1.93E-10	2.31E-10	
Tl-202	M		1.00E+00	2.21E-09	1.74E-09	9.54E-10	6.31E-10	4.50E-10	3.67E-10	4.23E-10	
Tl-202	S		1.00E+00	2.34E-09	1.84E-09	1.02E-09	6.78E-10	4.91E-10	3.99E-10	4.59E-10	
Tl-204	F		1.00E+00	4.94E-09	3.31E-09	1.46E-09	8.77E-10	4.71E-10	3.95E-10	4.99E-10	
Tl-204	M		1.00E+00	2.82E-08	2.27E-08	1.33E-08	9.15E-09	7.62E-09	6.37E-09	7.04E-09	
Tl-204	S		1.00E+00	6.68E-08	5.98E-08	3.81E-08	2.51E-08	2.07E-08	1.90E-08	2.05E-08	
Tl-206			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-206m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-207			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-208			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-209			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-210			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tm-161	F		5.00E-03	1.35E-10	1.03E-10	5.09E-11	3.14E-11	1.88E-11	1.54E-11	1.87E-11	
Tm-161	M		5.00E-03	1.96E-10	1.45E-10	7.29E-11	4.65E-11	3.04E-11	2.47E-11	2.94E-11	
Tm-161	S		5.00E-03	2.03E-10	1.50E-10	7.54E-11	4.82E-11	3.17E-11	2.57E-11	3.06E-11	
Tm-162	F		5.00E-03	1.21E-10	8.61E-11	4.10E-11	2.53E-11	1.54E-11	1.27E-11	1.54E-11	
Tm-162	M		5.00E-03	1.74E-10	1.21E-10	5.80E-11	3.66E-11	2.34E-11	1.93E-11	2.31E-11	
Tm-162	S		5.00E-03	1.80E-10	1.25E-10	5.99E-11	3.79E-11	2.43E-11	2.01E-11	2.40E-11	
Tm-163	F		5.00E-03	1.94E-10	1.56E-10	8.03E-11	4.90E-11	2.89E-11	2.33E-11	2.86E-11	
Tm-163	M		5.00E-03	2.72E-10	2.12E-10	1.11E-10	7.03E-11	4.54E-11	3.66E-11	4.36E-11	
Tm-163	S		5.00E-03	2.80E-10	2.18E-10	1.14E-10	7.27E-11	4.73E-11	3.80E-11	4.53E-11	
Tm-164			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Tm-165	F		5.00E-03	1.05E-09	7.89E-10	3.90E-10	2.41E-10	1.38E-10	1.13E-10	1.39E-10	
Tm-165	M		5.00E-03	1.61E-09	1.20E-09	6.22E-10	4.08E-10	2.73E-10	2.21E-10	2.60E-10	
Tm-165	S		5.00E-03	1.67E-09	1.25E-09	6.49E-10	4.27E-10	2.89E-10	2.34E-10	2.74E-10	
Tm-166	F		5.00E-03	9.05E-10	7.30E-10	3.74E-10	2.31E-10	1.34E-10	1.08E-10	1.33E-10	
Tm-166	M		5.00E-03	1.28E-09	1.01E-09	5.27E-10	3.40E-10	2.19E-10	1.76E-10	2.10E-10	
Tm-166	S		5.00E-03	1.32E-09	1.04E-09	5.44E-10	3.52E-10	2.29E-10	1.84E-10	2.18E-10	
Tm-167	F		5.00E-03	3.16E-09	2.11E-09	1.00E-09	5.76E-10	3.21E-10	2.71E-10	3.39E-10	
Tm-167	M		5.00E-03	5.78E-09	4.23E-09	2.42E-09	1.73E-09	1.49E-09	1.18E-09	1.31E-09	
Tm-167	S		5.00E-03	6.22E-09	4.59E-09	2.65E-09	1.93E-09	1.69E-09	1.33E-09	1.47E-09	
Tm-168	F		5.00E-03	2.31E-08	1.83E-08	9.97E-09	6.46E-09	4.30E-09	3.78E-09	4.34E-09	
Tm-168	M		5.00E-03	1.94E-08	1.56E-08	9.43E-09	6.50E-09	5.37E-09	4.43E-09	4.90E-09	
Tm-168	S		5.00E-03	2.10E-08	1.70E-08	1.05E-08	7.34E-09	6.24E-09	5.07E-09	5.60E-09	
Tm-170	F		5.00E-03	4.27E-08	3.11E-08	1.45E-08	7.88E-09	4.55E-09	3.56E-09	4.56E-09	
Tm-170	M		5.00E-03	3.53E-08	2.77E-08	1.56E-08	1.03E-08	8.31E-09	6.85E-09	7.68E-09	
Tm-170	S		5.00E-03	3.99E-08	3.23E-08	1.91E-08	1.30E-08	1.08E-08	9.14E-09	1.01E-08	
Tm-171	F		5.00E-03	1.39E-08	1.18E-08	6.55E-09	3.62E-09	2.31E-09	2.12E-09	2.48E-09	
Tm-171	M		5.00E-03	6.75E-09	5.65E-09	3.40E-09	2.01E-09	1.53E-09	1.37E-09	1.53E-09	
Tm-171	S		5.00E-03	5.80E-09	4.73E-09	2.88E-09	1.83E-09	1.44E-09	1.25E-09	1.39E-09	
Tm-172	F		5.00E-03	5.03E-09	3.24E-09	1.59E-09	9.43E-10	4.99E-10	4.10E-10	5.21E-10	
Tm-172	M		5.00E-03	8.45E-09	5.84E-09	2.92E-09	1.95E-09	1.38E-09	1.13E-09	1.31E-09	
Tm-172	S		5.00E-03	8.87E-09	6.15E-09	3.10E-09	2.09E-09	1.50E-09	1.23E-09	1.42E-09	
Tm-173	F		5.00E-03	8.53E-10	5.81E-10	2.60E-10	1.60E-10	8.62E-11	7.19E-11	9.04E-11	
Tm-173	M		5.00E-03	1.47E-09	1.02E-09	4.92E-10	3.26E-10	2.20E-10	1.79E-10	2.11E-10	
Tm-173	S		5.00E-03	1.54E-09	1.06E-09	5.18E-10	3.44E-10	2.35E-10	1.91E-10	2.25E-10	
Tm-174			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tm-175	F		5.00E-03	1.05E-10	7.20E-11	3.30E-11	2.11E-11	1.30E-11	1.11E-11	1.33E-11	
Tm-175	M		5.00E-03	1.55E-10	1.06E-10	4.98E-11	3.28E-11	2.19E-11	1.84E-11	2.16E-11	
Tm-175	S		5.00E-03	1.60E-10	1.10E-10	5.17E-11	3.41E-11	2.29E-11	1.92E-11	2.26E-11	
Tm-176			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
U-227			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
U-228			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
U-230	F		4.00E-02	3.26E-06	1.50E-06	7.34E-07	5.47E-07	4.15E-07	3.86E-07	4.26E-07	
U-230	M		4.00E-02	4.95E-05	3.76E-05	2.42E-05	1.80E-05	1.70E-05	1.35E-05	1.47E-05	
U-230	S		2.00E-02	5.90E-05	4.50E-05	2.89E-05	2.15E-05	2.03E-05	1.62E-05	1.76E-05	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
U-231	F		4.00E-02	1.15E-09	7.84E-10	3.71E-10	1.70E-10	1.14E-10	7.18E-11	9.87E-11	
U-231	M		4.00E-02	2.98E-09	2.17E-09	1.04E-09	7.14E-10	5.71E-10	4.68E-10	5.30E-10	
U-231	S		2.00E-02	2.90E-09	2.37E-09	1.15E-09	7.84E-10	6.27E-10	5.14E-10	5.80E-10	
U-232	F		4.00E-02	1.60E-05	1.04E-05	6.88E-06	6.78E-06	7.50E-06	4.02E-06	4.61E-06	
U-232	M		4.00E-02	3.00E-05	2.42E-05	1.56E-05	1.12E-05	1.02E-05	7.81E-06	8.62E-06	
U-232	S		2.00E-02	1.02E-04	9.67E-05	6.57E-05	4.31E-05	3.78E-05	3.69E-05	3.89E-05	
U-233	F		4.00E-02	2.19E-06	1.45E-06	9.41E-07	8.40E-07	8.66E-07	5.80E-07	6.39E-07	
U-233	M		4.00E-02	1.48E-05	1.13E-05	7.16E-06	4.92E-06	4.28E-06	3.55E-06	3.89E-06	
U-233	S		2.00E-02	3.37E-05	2.93E-05	1.90E-05	1.24E-05	1.05E-05	9.59E-06	1.03E-05	
U-234	F		4.00E-02	2.12E-06	1.39E-06	9.02E-07	7.98E-07	8.25E-07	5.60E-07	6.15E-07	
U-234	M		4.00E-02	1.45E-05	1.12E-05	7.03E-06	4.81E-06	4.18E-06	3.48E-06	3.81E-06	
U-234	S		2.00E-02	3.31E-05	2.88E-05	1.87E-05	1.22E-05	1.03E-05	9.41E-06	1.01E-05	
U-235	F		4.00E-02	1.98E-06	1.31E-06	8.48E-07	7.51E-07	7.69E-07	5.21E-07	5.73E-07	
U-235	M		4.00E-02	1.31E-05	1.00E-05	6.30E-06	4.28E-06	3.69E-06	3.08E-06	3.38E-06	
U-235	S		2.00E-02	3.01E-05	2.62E-05	1.70E-05	1.10E-05	9.19E-06	8.47E-06	9.13E-06	
U-235+D	S			3.01E-05	2.62E-05	1.70E-05	1.10E-05	9.19E-06	8.47E-06	9.14E-06	
U-235+E	S			3.01E-05	2.62E-05	1.70E-05	1.10E-05	9.19E-06	8.47E-06	9.14E-06	
U-235m	F		4.00E-02	7.93E-15	4.70E-15	1.97E-15	1.21E-15	7.00E-16	6.17E-16	7.55E-16	
U-235m	M		4.00E-02	1.14E-14	6.45E-15	2.63E-15	1.54E-15	8.51E-16	7.02E-16	9.01E-16	
U-235m	S		2.00E-02	1.18E-14	6.64E-15	2.71E-15	1.57E-15	8.68E-16	7.11E-16	9.17E-16	
U-236	F		4.00E-02	1.99E-06	1.31E-06	8.49E-07	7.51E-07	7.76E-07	5.27E-07	5.79E-07	
U-236	M		4.00E-02	1.34E-05	1.03E-05	6.48E-06	4.41E-06	3.81E-06	3.18E-06	3.49E-06	
U-236	S		2.00E-02	3.08E-05	2.68E-05	1.74E-05	1.12E-05	9.43E-06	8.68E-06	9.36E-06	
U-237	F		4.00E-02	1.86E-09	1.49E-09	6.70E-10	4.33E-10	1.90E-10	1.82E-10	2.28E-10	
U-237	M		4.00E-02	7.88E-09	5.75E-09	3.33E-09	2.41E-09	2.11E-09	1.66E-09	1.84E-09	
U-237	S		2.00E-02	8.79E-09	6.44E-09	3.76E-09	2.72E-09	2.40E-09	1.90E-09	2.10E-09	
U-238	F		4.00E-02	1.92E-06	1.26E-06	8.17E-07	7.25E-07	7.42E-07	5.03E-07	5.53E-07	
U-238	M		4.00E-02	1.22E-05	9.37E-06	5.90E-06	3.99E-06	3.41E-06	2.86E-06	3.14E-06	
U-238	S		2.00E-02	2.85E-05	2.49E-05	1.61E-05	1.04E-05	8.70E-06	8.05E-06	8.68E-06	
U-238+D	S			2.85E-05	2.49E-05	1.61E-05	1.04E-05	8.70E-06	8.05E-06	8.68E-06	
U-238+E	S			2.85E-05	2.49E-05	1.61E-05	1.04E-05	8.70E-06	8.05E-06	8.68E-06	
U-239	F		4.00E-02	1.04E-10	6.84E-11	3.02E-11	1.96E-11	1.21E-11	1.06E-11	1.26E-11	
U-239	M		4.00E-02	1.79E-10	1.19E-10	5.63E-11	3.81E-11	2.72E-11	2.27E-11	2.62E-11	
U-239	S		2.00E-02	1.87E-10	1.25E-10	5.92E-11	4.02E-11	2.89E-11	2.41E-11	2.78E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
U-240	F		4.00E-02	2.38E-09	1.58E-09	7.02E-10	4.44E-10	2.40E-10	1.99E-10	2.50E-10	
U-240	M		4.00E-02	4.50E-09	3.05E-09	1.46E-09	9.55E-10	6.35E-10	5.22E-10	6.17E-10	
U-240	S		2.00E-02	4.82E-09	3.27E-09	1.56E-09	1.02E-09	6.82E-10	5.59E-10	6.61E-10	
U-242	F		4.00E-02	1.68E-10	1.08E-10	4.69E-11	3.04E-11	1.89E-11	1.66E-11	1.98E-11	
U-242	M		4.00E-02	2.61E-10	1.67E-10	7.42E-11	4.86E-11	3.18E-11	2.72E-11	3.21E-11	
U-242	S		2.00E-02	2.71E-10	1.73E-10	7.72E-11	5.06E-11	3.33E-11	2.84E-11	3.35E-11	
V-47	F		2.00E-02	1.85E-10	1.23E-10	5.60E-11	3.48E-11	2.09E-11	1.74E-11	2.13E-11	
V-47	M		2.00E-02	2.82E-10	1.86E-10	8.58E-11	5.47E-11	3.52E-11	2.94E-11	3.51E-11	
V-47	S		2.00E-02	2.93E-10	1.93E-10	8.90E-11	5.68E-11	3.68E-11	3.07E-11	3.66E-11	
V-48	F		2.00E-02	7.64E-09	5.93E-09	3.02E-09	1.92E-09	1.16E-09	9.59E-10	1.15E-09	
V-48	M		2.00E-02	1.42E-08	1.12E-08	6.29E-09	4.25E-09	2.91E-09	2.35E-09	2.73E-09	
V-48	S		2.00E-02	1.55E-08	1.22E-08	6.96E-09	4.73E-09	3.33E-09	2.68E-09	3.09E-09	
V-49	F		2.00E-02	2.02E-10	1.55E-10	7.63E-11	4.27E-11	2.48E-11	2.09E-11	2.58E-11	
V-49	M		2.00E-02	2.75E-10	2.09E-10	1.08E-10	6.23E-11	3.92E-11	3.34E-11	4.00E-11	
V-49	S		2.00E-02	4.56E-10	3.72E-10	2.04E-10	1.19E-10	7.82E-11	6.82E-11	7.97E-11	
V-50	F		2.00E-02	1.22E-07	1.18E-07	8.89E-08	7.53E-08	6.67E-08	6.49E-08	6.69E-08	
V-50	M		2.00E-02	5.12E-08	4.93E-08	3.84E-08	3.10E-08	2.95E-08	2.89E-08	2.96E-08	
V-50	S		2.00E-02	5.90E-08	5.70E-08	4.23E-08	3.11E-08	2.82E-08	2.69E-08	2.81E-08	
V-52			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
V-53			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-177	F		6.00E-01	2.02E-10	1.62E-10	8.16E-11	5.04E-11	2.99E-11	2.43E-11	2.96E-11	
W-177	M		6.00E-01	2.93E-10	2.29E-10	1.20E-10	7.74E-11	5.27E-11	4.24E-11	4.99E-11	
W-177	S		6.00E-01	3.03E-10	2.37E-10	1.24E-10	8.05E-11	5.52E-11	4.45E-11	5.22E-11	
W-178	F		6.00E-01	8.22E-10	6.18E-10	2.90E-10	1.79E-10	9.88E-11	8.20E-11	1.02E-10	
W-178	M		6.00E-01	3.12E-09	2.42E-09	1.42E-09	1.02E-09	8.89E-10	7.07E-10	7.82E-10	
W-178	S		6.00E-01	3.63E-09	2.82E-09	1.68E-09	1.21E-09	1.06E-09	8.42E-10	9.29E-10	
W-178+D	S			3.63E-09	2.82E-09	1.68E-09	1.21E-09	1.06E-09	8.42E-10	9.29E-10	
W-178+E	S			3.63E-09	2.82E-09	1.68E-09	1.21E-09	1.06E-09	8.42E-10	9.29E-10	
W-179	F		6.00E-01	9.37E-12	6.57E-12	3.11E-12	1.87E-12	1.10E-12	8.86E-13	1.10E-12	
W-179	M		6.00E-01	1.31E-11	8.89E-12	4.22E-12	2.56E-12	1.57E-12	1.27E-12	1.56E-12	
W-179	S		6.00E-01	1.36E-11	9.19E-12	4.37E-12	2.65E-12	1.63E-12	1.32E-12	1.62E-12	
W-179m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-181	F		6.00E-01	2.86E-10	2.15E-10	1.03E-10	6.36E-11	3.56E-11	2.94E-11	3.64E-11	
W-181	M		6.00E-01	1.05E-09	8.24E-10	4.59E-10	2.96E-10	2.16E-10	1.80E-10	2.06E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
W-181	S		6.00E-01	1.54E-09	1.25E-09	7.19E-10	4.61E-10	3.40E-10	2.86E-10	3.25E-10	
W-185	F		6.00E-01	1.43E-09	1.01E-09	4.44E-10	2.67E-10	1.40E-10	1.16E-10	1.48E-10	
W-185	M		6.00E-01	1.19E-08	9.39E-09	5.64E-09	4.11E-09	3.72E-09	2.96E-09	3.24E-09	
W-185	S		6.00E-01	1.54E-08	1.23E-08	7.44E-09	5.38E-09	4.84E-09	3.87E-09	4.24E-09	
W-185m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-187	F		6.00E-01	1.92E-09	1.43E-09	6.54E-10	4.03E-10	2.20E-10	1.82E-10	2.28E-10	
W-187	M		6.00E-01	2.87E-09	2.22E-09	1.11E-09	7.44E-10	4.71E-10	3.79E-10	4.53E-10	
W-187	S		6.00E-01	2.98E-09	2.31E-09	1.16E-09	7.83E-10	5.06E-10	4.07E-10	4.83E-10	
W-188	F		6.00E-01	7.09E-09	4.97E-09	2.19E-09	1.31E-09	6.83E-10	5.67E-10	7.25E-10	
W-188	M		6.00E-01	4.96E-08	3.99E-08	2.31E-08	1.59E-08	1.31E-08	1.11E-08	1.22E-08	
W-188	S		6.00E-01	6.74E-08	5.51E-08	3.24E-08	2.21E-08	1.82E-08	1.56E-08	1.72E-08	
W-190	F		6.00E-01	3.47E-10	2.34E-10	1.06E-10	6.80E-11	4.24E-11	3.60E-11	4.31E-11	
W-190	M		6.00E-01	5.72E-10	3.85E-10	1.81E-10	1.20E-10	8.35E-11	6.96E-11	8.12E-11	
W-190	S		6.00E-01	5.97E-10	4.02E-10	1.89E-10	1.26E-10	8.80E-11	7.33E-11	8.54E-11	
Xe-120			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-121			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-122			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-123			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-125			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-127			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-127m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-129m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-131m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-133			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-133m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-135			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-135m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-137			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-138			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-81			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-83			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-83m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-84m	F		1.00E-03	3.94E-10	2.83E-10	1.36E-10	8.22E-11	4.85E-11	3.95E-11	4.87E-11	
Y-84m	M		1.00E-03	5.67E-10	3.96E-10	1.90E-10	1.18E-10	7.30E-11	5.97E-11	7.24E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Y-84m	S		1.00E-03	5.86E-10	4.09E-10	1.96E-10	1.22E-10	7.57E-11	6.20E-11	7.50E-11	
Y-85	F		1.00E-03	5.52E-10	3.99E-10	1.89E-10	1.15E-10	6.56E-11	5.35E-11	6.65E-11	
Y-85	M		1.00E-03	8.27E-10	5.87E-10	2.83E-10	1.79E-10	1.13E-10	9.20E-11	1.11E-10	
Y-85	S		1.00E-03	8.58E-10	6.08E-10	2.94E-10	1.87E-10	1.18E-10	9.64E-11	1.16E-10	
Y-85m	F		1.00E-03	1.03E-09	7.37E-10	3.45E-10	2.10E-10	1.16E-10	9.48E-11	1.19E-10	
Y-85m	M		1.00E-03	1.54E-09	1.08E-09	5.14E-10	3.24E-10	1.95E-10	1.60E-10	1.95E-10	
Y-85m	S		1.00E-03	1.59E-09	1.12E-09	5.34E-10	3.37E-10	2.04E-10	1.68E-10	2.04E-10	
Y-86	F		1.00E-03	2.85E-09	2.27E-09	1.15E-09	7.06E-10	4.07E-10	3.28E-10	4.04E-10	
Y-86	M		1.00E-03	3.76E-09	2.93E-09	1.49E-09	9.39E-10	5.66E-10	4.54E-10	5.52E-10	
Y-86	S		1.00E-03	3.87E-09	3.00E-09	1.52E-09	9.65E-10	5.84E-10	4.68E-10	5.69E-10	
Y-86m	F		1.00E-03	1.69E-10	1.34E-10	6.75E-11	4.16E-11	2.40E-11	1.94E-11	2.39E-11	
Y-86m	M		1.00E-03	2.26E-10	1.75E-10	8.83E-11	5.60E-11	3.40E-11	2.73E-11	3.32E-11	
Y-86m	S		1.00E-03	2.32E-10	1.79E-10	9.07E-11	5.76E-11	3.51E-11	2.82E-11	3.42E-11	
Y-87	F		1.00E-03	2.00E-09	1.53E-09	7.53E-10	4.66E-10	2.71E-10	2.20E-10	2.70E-10	
Y-87	M		1.00E-03	2.72E-09	2.08E-09	1.08E-09	6.99E-10	4.69E-10	3.72E-10	4.41E-10	
Y-87	S		1.00E-03	2.81E-09	2.15E-09	1.12E-09	7.30E-10	4.95E-10	3.92E-10	4.64E-10	
Y-87m	F		1.00E-03	7.04E-10	5.19E-10	2.49E-10	1.54E-10	8.76E-11	7.15E-11	8.86E-11	
Y-87m	M		1.00E-03	1.03E-09	7.60E-10	3.82E-10	2.49E-10	1.65E-10	1.33E-10	1.57E-10	
Y-87m	S		1.00E-03	1.07E-09	7.89E-10	3.98E-10	2.61E-10	1.75E-10	1.40E-10	1.66E-10	
Y-88	F		1.00E-03	2.93E-08	2.60E-08	1.41E-08	9.89E-09	6.95E-09	6.13E-09	6.89E-09	
Y-88	M		1.00E-03	1.93E-08	1.67E-08	1.01E-08	6.80E-09	4.92E-09	4.17E-09	4.71E-09	
Y-88	S		1.00E-03	2.02E-08	1.78E-08	1.00E-08	6.76E-09	5.44E-09	4.50E-09	5.02E-09	
Y-89m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-90	F		1.00E-03	8.02E-09	5.12E-09	2.19E-09	1.29E-09	6.60E-10	5.35E-10	7.00E-10	
Y-90	M		1.00E-03	1.25E-08	8.43E-09	4.00E-09	2.57E-09	1.65E-09	1.39E-09	1.65E-09	
Y-90	S		1.00E-03	1.30E-08	8.83E-09	4.22E-09	2.73E-09	1.78E-09	1.50E-09	1.77E-09	
Y-90m	F		1.00E-03	5.55E-10	3.83E-10	1.74E-10	1.04E-10	5.61E-11	4.54E-11	5.79E-11	
Y-90m	M		1.00E-03	8.21E-10	5.81E-10	2.82E-10	1.81E-10	1.15E-10	9.55E-11	1.14E-10	
Y-90m	S		1.00E-03	7.56E-10	6.05E-10	2.95E-10	1.90E-10	1.22E-10	1.02E-10	1.20E-10	
Y-91	F		1.00E-03	3.97E-08	2.75E-08	1.24E-08	6.97E-09	4.00E-09	3.12E-09	4.01E-09	
Y-91	M		1.00E-03	3.90E-08	2.98E-08	1.64E-08	1.08E-08	8.37E-09	7.10E-09	7.98E-09	
Y-91	S		1.00E-03	4.32E-08	3.40E-08	1.93E-08	1.30E-08	1.04E-08	8.94E-09	9.91E-09	
Y-91m	F		1.00E-03	6.09E-11	4.69E-11	2.30E-11	1.36E-11	8.01E-12	6.34E-12	7.90E-12	
Y-91m	M		1.00E-03	7.14E-11	5.62E-11	2.94E-11	1.86E-11	1.24E-11	1.02E-11	1.20E-11	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	f								Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult	(Sv Bq ⁻¹)		
Y-91m	S		1.00E-03	7.51E-11	5.95E-11	3.16E-11	2.02E-11	1.38E-11	1.14E-11	1.33E-11	
Y-92	F		1.00E-03	1.11E-09	6.93E-10	3.28E-10	1.99E-10	1.05E-10	8.73E-11	1.11E-10	
Y-92	M		1.00E-03	1.84E-09	1.18E-09	5.29E-10	3.32E-10	1.99E-10	1.67E-10	2.03E-10	
Y-92	S		1.00E-03	1.92E-09	1.23E-09	5.55E-10	3.49E-10	2.11E-10	1.77E-10	2.15E-10	
Y-93	F		1.00E-03	2.71E-09	1.73E-09	7.32E-10	4.39E-10	2.21E-10	1.82E-10	2.38E-10	
Y-93	M		1.00E-03	4.43E-09	2.90E-09	1.30E-09	8.18E-10	4.77E-10	4.01E-10	4.91E-10	
Y-93	S		1.00E-03	4.62E-09	3.03E-09	1.36E-09	8.60E-10	5.06E-10	4.25E-10	5.20E-10	
Y-94	F		1.00E-03	1.91E-10	1.19E-10	5.22E-11	3.21E-11	1.91E-11	1.62E-11	1.99E-11	
Y-94	M		1.00E-03	2.85E-10	1.78E-10	7.90E-11	4.94E-11	3.08E-11	2.62E-11	3.16E-11	
Y-94	S		1.00E-03	2.96E-10	1.85E-10	8.20E-11	5.13E-11	3.21E-11	2.73E-11	3.29E-11	
Y-95	F		1.00E-03	1.05E-10	6.87E-11	3.08E-11	1.94E-11	1.18E-11	1.01E-11	1.22E-11	
Y-95	M		1.00E-03	1.44E-10	9.37E-11	4.23E-11	2.70E-11	1.71E-11	1.46E-11	1.74E-11	
Y-95	S		1.00E-03	1.49E-10	9.67E-11	4.38E-11	2.79E-11	1.78E-11	1.52E-11	1.81E-11	
Yb-162	F		5.00E-03	9.57E-11	6.83E-11	3.28E-11	2.00E-11	1.19E-11	9.72E-12	1.19E-11	
Yb-162	M		5.00E-03	1.48E-10	1.03E-10	5.00E-11	3.16E-11	2.05E-11	1.68E-11	2.00E-11	
Yb-162	S		5.00E-03	1.54E-10	1.07E-10	5.19E-11	3.28E-11	2.15E-11	1.75E-11	2.09E-11	
Yb-163	F		5.00E-03	5.04E-11	3.76E-11	1.84E-11	1.14E-11	6.85E-12	5.62E-12	6.84E-12	
Yb-163	M		5.00E-03	6.90E-11	5.03E-11	2.49E-11	1.57E-11	1.01E-11	8.24E-12	9.85E-12	
Yb-163	S		5.00E-03	7.10E-11	5.17E-11	2.56E-11	1.62E-11	1.04E-11	8.53E-12	1.02E-11	
Yb-164	F		5.00E-03	2.56E-10	1.73E-10	7.95E-11	4.85E-11	2.80E-11	2.30E-11	2.86E-11	
Yb-164	M		5.00E-03	4.04E-10	2.69E-10	1.27E-10	8.00E-11	5.11E-11	4.22E-11	5.06E-11	
Yb-164	S		5.00E-03	4.20E-10	2.80E-10	1.32E-10	8.34E-11	5.36E-11	4.44E-11	5.31E-11	
Yb-165			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Yb-166	F		5.00E-03	3.03E-09	2.30E-09	1.16E-09	7.27E-10	4.25E-10	3.50E-10	4.27E-10	
Yb-166	M		5.00E-03	4.66E-09	3.53E-09	1.90E-09	1.27E-09	8.99E-10	7.23E-10	8.38E-10	
Yb-166	S		5.00E-03	4.87E-09	3.68E-09	1.99E-09	1.34E-09	9.59E-10	7.70E-10	8.90E-10	
Yb-167	F		5.00E-03	2.83E-11	1.98E-11	9.52E-12	6.07E-12	3.93E-12	3.30E-12	3.91E-12	
Yb-167	M		5.00E-03	4.52E-11	3.18E-11	1.62E-11	1.09E-11	8.06E-12	6.64E-12	7.61E-12	
Yb-167	S		5.00E-03	4.73E-11	3.33E-11	1.71E-11	1.15E-11	8.60E-12	7.08E-12	8.09E-12	
Yb-169	F		5.00E-03	7.86E-09	5.56E-09	2.77E-09	1.60E-09	9.41E-10	8.03E-10	9.81E-10	
Yb-169	M		5.00E-03	1.34E-08	1.00E-08	5.95E-09	4.19E-09	3.60E-09	2.91E-09	3.21E-09	
Yb-169	S		5.00E-03	1.49E-08	1.13E-08	6.79E-09	4.84E-09	4.24E-09	3.41E-09	3.76E-09	
Yb-175	F		5.00E-03	1.62E-09	1.06E-09	4.86E-10	2.82E-10	1.49E-10	1.26E-10	1.60E-10	
Yb-175	M		5.00E-03	3.47E-09	2.49E-09	1.38E-09	9.83E-10	8.30E-10	6.55E-10	7.33E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)								Per Capita
			f	Newborn	1 y	5 y	10 y	15 y	Adult		
Yb-175	S		5.00E-03	3.72E-09	2.68E-09	1.50E-09	1.08E-09	9.23E-10	7.28E-10	8.11E-10	
Yb-177	F		5.00E-03	2.96E-10	1.93E-10	8.54E-11	5.30E-11	3.04E-11	2.57E-11	3.17E-11	
Yb-177	M		5.00E-03	5.26E-10	3.53E-10	1.71E-10	1.15E-10	8.31E-11	6.81E-11	7.88E-11	
Yb-177	S		5.00E-03	5.53E-10	3.72E-10	1.81E-10	1.22E-10	8.94E-11	7.32E-11	8.45E-11	
Yb-178	F		5.00E-03	3.24E-10	2.06E-10	8.90E-11	5.56E-11	3.18E-11	2.70E-11	3.33E-11	
Yb-178	M		5.00E-03	5.87E-10	3.83E-10	1.80E-10	1.20E-10	8.40E-11	6.95E-11	8.10E-11	
Yb-178	S		5.00E-03	6.16E-10	4.03E-10	1.90E-10	1.27E-10	8.98E-11	7.41E-11	8.63E-11	
Yb-179			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-60			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-61			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-62	F		1.00E+00	1.66E-09	1.70E-09	7.68E-10	4.63E-10	2.47E-10	2.03E-10	2.56E-10	
Zn-62	M		2.00E-01	4.43E-09	3.51E-09	1.62E-09	1.02E-09	6.00E-10	4.99E-10	6.08E-10	
Zn-62	S		2.00E-02	5.10E-09	3.40E-09	1.76E-09	1.11E-09	6.51E-10	5.42E-10	6.58E-10	
Zn-63	F		1.00E+00	2.13E-10	1.45E-10	6.58E-11	4.05E-11	2.39E-11	1.99E-11	2.45E-11	
Zn-63	M		2.00E-01	3.47E-10	2.28E-10	1.05E-10	6.64E-11	4.24E-11	3.53E-11	4.23E-11	
Zn-63	S		2.00E-02	3.61E-10	2.37E-10	1.09E-10	6.93E-11	4.44E-11	3.70E-11	4.43E-11	
Zn-65	F		1.00E+00	1.46E-08	1.02E-08	5.72E-09	3.76E-09	2.49E-09	2.24E-09	2.56E-09	
Zn-65	M		2.00E-01	8.49E-09	6.44E-09	3.68E-09	2.45E-09	1.87E-09	1.61E-09	1.80E-09	
Zn-65	S		2.00E-02	7.61E-09	6.73E-09	4.37E-09	2.94E-09	2.37E-09	2.00E-09	2.21E-09	
Zn-69	F		1.00E+00	1.13E-10	7.41E-11	3.17E-11	2.05E-11	1.24E-11	1.08E-11	1.30E-11	
Zn-69	M		2.00E-01	2.16E-10	1.41E-10	6.50E-11	4.40E-11	3.13E-11	2.61E-11	3.03E-11	
Zn-69	S		2.00E-02	2.27E-10	1.48E-10	6.87E-11	4.66E-11	3.34E-11	2.78E-11	3.22E-11	
Zn-69m	F		1.00E+00	6.63E-10	6.73E-10	3.03E-10	1.85E-10	9.87E-11	8.25E-11	1.03E-10	
Zn-69m	M		2.00E-01	2.13E-09	1.55E-09	7.53E-10	4.96E-10	2.99E-10	2.42E-10	2.93E-10	
Zn-69m	S		2.00E-02	2.18E-09	1.69E-09	8.22E-10	5.43E-10	3.31E-10	2.67E-10	3.23E-10	
Zn-71			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-71m	F		1.00E+00	6.20E-10	5.55E-10	2.64E-10	1.61E-10	9.14E-11	7.50E-11	9.26E-11	
Zn-71m	M		2.00E-01	1.31E-09	9.53E-10	4.63E-10	2.97E-10	1.89E-10	1.54E-10	1.84E-10	
Zn-71m	S		2.00E-02	1.41E-09	1.01E-09	4.90E-10	3.15E-10	2.01E-10	1.64E-10	1.96E-10	
Zn-72	F		1.00E+00	4.32E-09	3.52E-09	1.69E-09	1.04E-09	5.95E-10	5.00E-10	6.11E-10	
Zn-72	M		2.00E-01	8.82E-09	6.61E-09	3.41E-09	2.28E-09	1.47E-09	1.20E-09	1.42E-09	
Zn-72	S		2.00E-02	9.77E-09	7.12E-09	3.68E-09	2.47E-09	1.62E-09	1.31E-09	1.55E-09	
Zr-85			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zr-86	F		2.00E-02	2.47E-09	1.93E-09	9.66E-10	5.94E-10	3.42E-10	2.77E-10	3.42E-10	

Continued on next page

Table 1.3: Dose coefficients for inhalation

Nuclide	Type	Special	(Sv Bq ⁻¹)							
			f	Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Zr-86	M		2.00E-02	3.43E-09	2.65E-09	1.34E-09	8.50E-10	5.22E-10	4.18E-10	5.07E-10
Zr-86	S		2.00E-02	3.54E-09	2.73E-09	1.38E-09	8.80E-10	5.43E-10	4.34E-10	5.26E-10
Zr-87	F		2.00E-02	4.93E-10	3.37E-10	1.54E-10	9.38E-11	5.29E-11	4.36E-11	5.44E-11
Zr-87	M		2.00E-02	7.99E-10	5.44E-10	2.57E-10	1.63E-10	1.04E-10	8.53E-11	1.02E-10
Zr-87	S		2.00E-02	8.33E-10	5.67E-10	2.68E-10	1.71E-10	1.09E-10	9.00E-11	1.08E-10
Zr-88	F		2.00E-02	6.94E-09	8.25E-09	5.65E-09	4.65E-09	3.58E-09	3.48E-09	3.67E-09
Zr-88	M		2.00E-02	8.44E-09	7.80E-09	5.11E-09	3.65E-09	3.00E-09	2.64E-09	2.86E-09
Zr-88	S		2.00E-02	1.33E-08	1.20E-08	7.80E-09	5.27E-09	4.32E-09	3.62E-09	3.99E-09
Zr-89	F		2.00E-02	2.62E-09	2.00E-09	9.97E-10	6.17E-10	3.62E-10	2.96E-10	3.62E-10
Zr-89	M		2.00E-02	3.75E-09	2.87E-09	1.49E-09	9.69E-10	6.50E-10	5.20E-10	6.15E-10
Zr-89	S		2.00E-02	3.89E-09	2.98E-09	1.55E-09	1.01E-09	6.88E-10	5.49E-10	6.47E-10
Zr-89m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-93	F		2.00E-02	3.43E-09	4.68E-09	5.18E-09	9.59E-09	1.77E-08	2.41E-08	2.20E-08
Zr-93	M		2.00E-02	3.20E-09	3.01E-09	2.77E-09	4.03E-09	7.48E-09	9.82E-09	9.02E-09
Zr-93	S		2.00E-02	6.72E-09	6.13E-09	4.29E-09	3.19E-09	3.17E-09	3.21E-09	3.28E-09
Zr-95	F		2.00E-02	1.21E-08	1.13E-08	6.47E-09	4.27E-09	2.82E-09	2.56E-09	2.90E-09
Zr-95	M		2.00E-02	1.97E-08	1.60E-08	9.74E-09	6.88E-09	5.90E-09	4.80E-09	5.29E-09
Zr-95	S		2.00E-02	2.40E-08	1.93E-08	1.18E-08	8.38E-09	7.30E-09	5.89E-09	6.48E-09
Zr-97	F		2.00E-02	5.00E-09	3.41E-09	1.52E-09	9.18E-10	4.79E-10	3.95E-10	5.05E-10
Zr-97	M		2.00E-02	7.79E-09	5.28E-09	2.81E-09	1.81E-09	1.12E-09	9.22E-10	1.10E-09
Zr-97	S		2.00E-02	8.18E-09	5.56E-09	2.95E-09	1.90E-09	1.19E-09	9.82E-10	1.17E-09

1.4 Morbidity risk coefficients for external exposure

Explanation of Entries:

Table 1.4 contains the morbidity risk coefficients, also known as slope factors, for external exposure to a radionuclide. Risk coefficients are provided for seven exposure scenarios: exposure from contamination on the ground surface, exposure from an infinitely contaminated soil volume, exposure from soil contamination of thicknesses 1, 5, and 15, immersion in contaminated water, and submersion in contaminated air. Risk coefficients are expressed as the probability of radiogenic cancer morbidity per unit activity concentration in water, air, on the ground surface, or in the soil.

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)			(L per Bq s)	(m ³ per Bq s)
Ac-223	1.28E-18	5.24E-17	1.28E-017	3.472E-017	4.96E-17	1.26E-19	5.74E-17
Ac-223+D	1.56E-18	6.53E-17	1.568E-017	4.272E-017	6.16E-17	1.54E-19	7.04E-17
Ac-223+E	1.56E-18	6.53E-17	1.568E-017	4.272E-017	6.16E-17	1.54E-19	7.04E-17
Ac-224	1.63E-17	6.06E-16	1.632E-016	4.336E-016	5.92E-16	1.61E-18	7.30E-16
Ac-225	1.03E-18	3.53E-17	9.888E-018	2.56E-017	3.44E-17	9.77E-20	4.41E-17
Ac-225+D	3.21E-18	1.26E-16	3.2E-017	8.656E-017	1.22E-16	3.17E-19	1.44E-16
Ac-225+E	3.21E-18	1.26E-16	3.2E-017	8.656E-017	1.22E-16	3.17E-19	1.44E-16
Ac-226	9.76E-18	3.90E-16	9.728E-017	2.656E-016	3.77E-16	9.61E-19	4.38E-16
Ac-227	1.41E-20	1.70E-19	5.888E-020	1.309E-019	1.67E-19	6.08E-22	2.70E-19
Ac-228	6.55E-17	3.46E-15	6.704E-016	1.904E-015	3.00E-15	6.98E-18	3.22E-15
Ac-230	4.12E-17	2.31E-15	4.176E-016	1.202E-015	1.93E-15	4.57E-18	2.12E-15
Ac-231	3.18E-17	1.35E-15	3.184E-016	8.816E-016	1.28E-15	3.13E-18	1.43E-15
Ac-232	8.51E-17	5.01E-15	8.768E-016	2.544E-015	4.12E-15	9.82E-18	4.54E-15
Ac-233	3.97E-17	1.88E-15	3.968E-016	1.115E-015	1.71E-15	3.90E-18	1.80E-15
Ag-100m	2.16E-16	1.15E-14	2.208E-015	6.304E-015	9.92E-15	2.30E-17	1.06E-14
Ag-101	1.20E-16	6.05E-15	1.226E-015	3.472E-015	5.37E-15	1.25E-17	5.74E-15
Ag-102	2.56E-16	1.39E-14	2.624E-015	7.52E-015	1.19E-14	2.79E-17	1.29E-14
Ag-102m	1.44E-16	8.60E-15	1.499E-015	4.336E-015	7.04E-15	1.70E-17	7.87E-15
Ag-103	6.33E-17	3.16E-15	6.448E-016	1.824E-015	2.80E-15	6.59E-18	3.03E-15
Ag-104	2.05E-16	1.08E-14	2.096E-015	5.984E-015	9.41E-15	2.18E-17	1.00E-14
Ag-104m	1.36E-16	7.28E-15	1.389E-015	3.968E-015	6.25E-15	1.47E-17	6.79E-15
Ag-105	3.83E-17	1.80E-15	3.872E-016	1.088E-015	1.65E-15	3.84E-18	1.77E-15
Ag-105m	7.68E-20	3.58E-18	7.728E-019	2.176E-018	3.29E-18	7.68E-21	3.53E-18
Ag-106	5.44E-17	2.60E-15	5.488E-016	1.542E-015	2.36E-15	5.40E-18	2.49E-15
Ag-106m	2.12E-16	1.12E-14	2.176E-015	6.192E-015	9.73E-15	2.25E-17	1.04E-14
Ag-108	2.28E-18	7.56E-17	1.648E-017	4.496E-017	6.84E-17	1.57E-19	7.50E-17
Ag-108m	1.24E-16	6.13E-15	1.264E-015	3.568E-015	5.50E-15	1.26E-17	5.80E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Ag-108m+D	1.24E-16	6.14E-15	1.266E-015	3.568E-015	5.51E-15	1.26E-17	5.81E-15
Ag-108m+E	1.24E-16	6.14E-15	1.266E-015	3.568E-015	5.51E-15	1.26E-17	5.81E-15
Ag-109m	4.75E-19	6.52E-18	2.576E-018	5.472E-018	6.53E-18	2.59E-20	1.15E-17
Ag-110	4.22E-18	1.46E-16	3.232E-017	8.608E-017	1.31E-16	2.91E-19	1.41E-16
Ag-110m	2.10E-16	1.12E-14	2.16E-015	6.144E-015	9.68E-15	2.23E-17	1.03E-14
Ag-110m+D	2.10E-16	1.12E-14	2.16E-015	6.144E-015	9.68E-15	2.23E-17	1.03E-14
Ag-110m+E	2.10E-16	1.12E-14	2.16E-015	6.144E-015	9.68E-15	2.23E-17	1.03E-14
Ag-111	2.34E-18	9.41E-17	2.128E-017	5.936E-017	8.82E-17	2.08E-19	9.66E-17
Ag-111m	3.98E-19	1.17E-17	2.864E-018	7.424E-018	1.09E-17	2.86E-20	1.30E-17
Ag-112	5.35E-17	2.91E-15	5.424E-016	1.55E-015	2.47E-15	5.78E-18	2.68E-15
Ag-113	6.60E-18	2.74E-16	5.952E-017	1.664E-016	2.50E-16	5.82E-19	2.71E-16
Ag-113m	1.65E-17	7.66E-16	1.664E-016	4.672E-016	7.05E-16	1.64E-18	7.54E-16
Ag-114	2.29E-17	1.16E-15	2.24E-016	6.288E-016	9.91E-16	2.29E-18	1.07E-15
Ag-115	3.70E-17	2.03E-15	3.744E-016	1.072E-015	1.71E-15	4.08E-18	1.89E-15
Ag-116	1.58E-16	9.38E-15	1.632E-015	4.72E-015	7.66E-15	1.85E-17	8.57E-15
Ag-117	9.49E-17	5.70E-15	9.808E-016	2.848E-015	4.63E-15	1.13E-17	5.22E-15
Ag-99	1.75E-16	9.23E-15	1.792E-015	5.104E-015	8.01E-15	1.87E-17	8.65E-15
Al-26	1.97E-16	1.14E-14	2.032E-015	5.888E-015	9.48E-15	2.25E-17	1.04E-14
Al-28	1.30E-16	7.98E-15	1.344E-015	3.92E-015	6.45E-15	1.55E-17	7.17E-15
Al-29	1.03E-16	5.95E-15	1.062E-015	3.056E-015	4.95E-15	1.17E-17	5.40E-15
Am-237	2.70E-17	1.16E-15	2.72E-016	7.488E-016	1.09E-15	2.70E-18	1.23E-15
Am-238	6.72E-17	3.48E-15	6.88E-016	1.936E-015	3.03E-15	7.14E-18	3.29E-15
Am-239	1.65E-17	5.99E-16	1.632E-016	4.304E-016	5.85E-16	1.61E-18	7.30E-16
Am-240	7.74E-17	4.03E-15	7.936E-016	2.24E-015	3.50E-15	8.19E-18	3.78E-15
Am-241	1.60E-18	2.37E-17	1.178E-017	2.208E-017	2.37E-17	1.13E-19	4.97E-17
Am-242	1.06E-18	2.98E-17	9.328E-018	2.336E-017	2.97E-17	9.30E-20	4.21E-17
Am-242m	1.15E-19	6.49E-19	2.88E-019	5.312E-019	6.44E-19	3.15E-21	1.38E-18
Am-242m+D	1.37E-18	4.10E-17	1.162E-017	2.96E-017	3.94E-17	1.17E-19	5.31E-17
Am-242m+E	1.37E-18	4.10E-17	1.162E-017	2.96E-017	3.94E-17	1.17E-19	5.31E-17
Am-243	3.83E-18	8.38E-17	3.36E-017	7.312E-017	8.38E-17	3.28E-19	1.46E-16
Am-243+D	1.66E-17	5.71E-16	1.616E-016	4.144E-016	5.56E-16	1.59E-18	7.18E-16
Am-243+E	1.66E-17	5.71E-16	1.616E-016	4.144E-016	5.56E-16	1.59E-18	7.18E-16
Am-244	6.04E-17	3.06E-15	6.16E-016	1.728E-015	2.70E-15	6.24E-18	2.88E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
Am-244m	1.80E-18	6.22E-17	1.277E-017	3.488E-017	5.41E-17	1.28E-19	6.11E-17
Am-245	2.42E-18	8.90E-17	2.304E-017	6.192E-017	8.63E-17	2.28E-19	1.04E-16
Am-246	5.59E-17	2.69E-15	5.648E-016	1.582E-015	2.42E-15	5.65E-18	2.60E-15
Am-246m	7.44E-17	3.99E-15	7.616E-016	2.16E-015	3.43E-15	7.95E-18	3.67E-15
Am-247	1.02E-17	3.88E-16	9.776E-017	2.656E-016	3.73E-16	9.63E-19	4.40E-16
Ar-37	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Ar-39	4.40E-20	5.10E-19	1.744E-019	3.968E-019	5.03E-19	2.26E-21	1.66E-18
Ar-41	9.60E-17	5.47E-15	9.904E-016	2.848E-015	4.59E-15	1.07E-17	4.96E-15
Ar-42	6.20E-20	5.97E-19	2.016E-019	4.608E-019	5.87E-19	2.54E-21	1.85E-18
Ar-42+D	2.28E-17	1.26E-15	2.24E-016	6.432E-016	1.04E-15	2.45E-18	1.14E-15
Ar-42+E	2.28E-17	1.26E-15	2.24E-016	6.432E-016	1.04E-15	2.45E-18	1.14E-15
Ar-43	1.14E-16	6.66E-15	1.179E-015	3.392E-015	5.50E-15	1.31E-17	6.06E-15
Ar-44	1.41E-16	8.41E-15	1.462E-015	4.24E-015	6.90E-15	1.66E-17	7.65E-15
As-68	2.81E-16	1.53E-14	2.88E-015	8.24E-015	1.31E-14	3.06E-17	1.41E-14
As-69	8.94E-17	4.35E-15	9.024E-016	2.544E-015	3.91E-15	9.01E-18	4.15E-15
As-70	3.20E-16	1.75E-14	3.296E-015	9.424E-015	1.49E-14	3.49E-17	1.61E-14
As-71	4.35E-17	2.06E-15	4.448E-016	1.246E-015	1.88E-15	4.43E-18	2.04E-15
As-72	1.38E-16	6.98E-15	1.403E-015	3.968E-015	6.17E-15	1.42E-17	6.56E-15
As-73	3.80E-19	4.91E-18	2.736E-018	4.72E-018	4.91E-18	2.60E-20	1.13E-17
As-74	5.86E-17	2.87E-15	5.968E-016	1.68E-015	2.59E-15	5.91E-18	2.72E-15
As-76	3.34E-17	1.66E-15	3.328E-016	9.392E-016	1.46E-15	3.37E-18	1.56E-15
As-77	7.03E-19	2.90E-17	6.64E-018	1.84E-017	2.72E-17	6.59E-20	3.08E-17
As-78	9.95E-17	5.45E-15	1.019E-015	2.912E-015	4.64E-15	1.08E-17	5.01E-15
As-79	3.93E-18	1.42E-16	3.104E-017	8.448E-017	1.28E-16	2.93E-19	1.39E-16
At-204	1.79E-16	8.73E-15	1.824E-015	5.12E-015	7.86E-15	1.81E-17	8.34E-15
At-205	8.62E-17	4.41E-15	8.8E-016	2.48E-015	3.86E-15	9.08E-18	4.18E-15
At-206	1.89E-16	9.52E-15	1.936E-015	5.456E-015	8.44E-15	1.96E-17	9.02E-15
At-207	1.50E-16	8.07E-15	1.542E-015	4.384E-015	6.91E-15	1.63E-17	7.53E-15
At-208	2.29E-16	1.20E-14	2.352E-015	6.656E-015	1.04E-14	2.44E-17	1.13E-14
At-209	1.73E-16	8.73E-15	1.776E-015	4.976E-015	7.71E-15	1.80E-17	8.28E-15
At-210	2.19E-16	1.23E-14	2.256E-015	6.48E-015	1.03E-14	2.45E-17	1.13E-14
At-211	2.40E-18	6.33E-17	2.224E-017	5.168E-017	6.26E-17	2.19E-19	9.75E-17
At-211+D	2.76E-18	8.20E-17	2.592E-017	6.224E-017	7.91E-17	2.57E-19	1.15E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
At-211+E	2.76E-18	8.20E-17	2.592E-017	6.224E-017	7.91E-17	2.57E-19	1.15E-16
At-215	1.31E-20	6.06E-19	1.334E-019	3.744E-019	5.61E-19	1.31E-21	6.01E-19
At-216	1.73E-19	5.54E-18	1.664E-018	4.144E-018	5.41E-18	1.64E-20	7.36E-18
At-217	1.82E-20	8.02E-19	1.856E-019	5.12E-019	7.52E-19	1.83E-21	8.36E-19
At-218	1.71E-21	2.35E-20	7.184E-021	1.579E-020	2.19E-20	4.39E-23	2.64E-20
At-219	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
At-220	3.58E-17	1.59E-15	3.568E-016	9.968E-016	1.48E-15	3.49E-18	1.60E-15
Au-186	1.15E-16	5.70E-15	1.166E-015	3.28E-015	5.06E-15	1.19E-17	5.47E-15
Au-187	7.83E-17	4.27E-15	8.032E-016	2.288E-015	3.61E-15	8.66E-18	4.00E-15
Au-190	1.70E-16	1.01E-14	1.776E-015	5.104E-015	8.27E-15	2.03E-17	9.36E-15
Au-191	4.45E-17	2.00E-15	4.48E-016	1.229E-015	1.83E-15	4.43E-18	2.03E-15
Au-192	1.40E-16	8.13E-15	1.453E-015	4.176E-015	6.73E-15	1.63E-17	7.52E-15
Au-193	1.18E-17	4.00E-16	1.125E-016	2.832E-016	3.84E-16	1.10E-18	4.98E-16
Au-193m	1.45E-17	6.17E-16	1.467E-016	4.064E-016	5.90E-16	1.45E-18	6.61E-16
Au-194	7.63E-17	4.10E-15	7.84E-016	2.224E-015	3.51E-15	8.42E-18	3.88E-15
Au-195	5.38E-18	1.17E-16	4.72E-017	1.019E-016	1.17E-16	4.61E-19	2.04E-16
Au-195m	1.47E-17	6.29E-16	1.496E-016	4.144E-016	6.00E-16	1.47E-18	6.73E-16
Au-196	3.55E-17	1.55E-15	3.584E-016	9.872E-016	1.45E-15	3.51E-18	1.61E-15
Au-196m	1.72E-17	6.10E-16	1.68E-016	4.384E-016	5.95E-16	1.66E-18	7.52E-16
Au-198	3.12E-17	1.45E-15	3.152E-016	8.896E-016	1.34E-15	3.10E-18	1.43E-15
Au-198m	3.85E-17	1.50E-15	3.872E-016	1.037E-015	1.45E-15	3.81E-18	1.73E-15
Au-199	6.87E-18	2.58E-16	6.896E-017	1.84E-016	2.52E-16	6.81E-19	3.09E-16
Au-200	2.16E-17	1.12E-15	2.16E-016	6.128E-016	9.66E-16	2.25E-18	1.04E-15
Au-200m	1.52E-16	7.29E-15	1.549E-015	4.352E-015	6.63E-15	1.54E-17	7.08E-15
Au-201	3.09E-18	1.27E-16	2.752E-017	7.632E-017	1.16E-16	2.70E-19	1.26E-16
Au-202	1.47E-17	7.12E-16	1.41E-016	3.968E-016	6.20E-16	1.43E-18	6.66E-16
Ba-124	4.31E-17	2.08E-15	4.32E-016	1.213E-015	1.86E-15	4.36E-18	2.01E-15
Ba-126	4.33E-17	2.15E-15	4.368E-016	1.229E-015	1.90E-15	4.46E-18	2.05E-15
Ba-127	5.59E-17	2.71E-15	5.616E-016	1.579E-015	2.43E-15	5.65E-18	2.60E-15
Ba-128	4.40E-18	1.47E-16	3.696E-017	9.632E-017	1.40E-16	3.62E-19	1.64E-16
Ba-129	2.48E-17	1.19E-15	2.464E-016	6.896E-016	1.06E-15	2.50E-18	1.15E-15
Ba-129m	1.19E-16	6.16E-15	1.211E-015	3.44E-015	5.37E-15	1.26E-17	5.79E-15
Ba-131	3.55E-17	1.58E-15	3.52E-016	9.744E-016	1.46E-15	3.47E-18	1.59E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Ba-131m	5.15E-18	1.43E-16	4.608E-017	1.123E-016	1.43E-16	4.55E-19	2.03E-16
Ba-133	2.95E-17	1.23E-15	2.864E-016	7.856E-016	1.15E-15	2.81E-18	1.28E-15
Ba-133m	4.67E-18	1.71E-16	4.176E-017	1.117E-016	1.62E-16	4.12E-19	1.88E-16
Ba-135m	4.11E-18	1.45E-16	3.6E-017	9.536E-017	1.38E-16	3.55E-19	1.62E-16
Ba-137m	4.59E-17	2.30E-15	4.688E-016	1.322E-015	2.05E-15	4.68E-18	2.16E-15
Ba-139	4.68E-18	1.49E-16	3.808E-017	1.011E-016	1.43E-16	3.63E-19	1.70E-16
Ba-140	1.40E-17	6.50E-16	1.395E-016	3.92E-016	5.94E-16	1.38E-18	6.34E-16
Ba-141	7.09E-17	3.60E-15	7.2E-016	2.048E-015	3.16E-15	7.44E-18	3.43E-15
Ba-142	7.92E-17	4.15E-15	8.112E-016	2.304E-015	3.61E-15	8.41E-18	3.88E-15
Be-10	5.74E-20	6.42E-19	2.176E-019	4.96E-019	6.32E-19	2.78E-21	2.03E-18
Be-7	3.84E-18	1.84E-16	3.92E-017	1.104E-016	1.68E-16	3.86E-19	1.77E-16
Bi-197	1.28E-16	6.78E-15	1.309E-015	3.712E-015	5.84E-15	1.37E-17	6.32E-15
Bi-200	1.85E-16	9.22E-15	1.888E-015	5.328E-015	8.21E-15	1.91E-17	8.81E-15
Bi-201	1.28E-16	7.08E-15	1.32E-015	3.76E-015	5.99E-15	1.42E-17	6.55E-15
Bi-202	2.08E-16	1.08E-14	2.144E-015	6.048E-015	9.44E-15	2.20E-17	1.02E-14
Bi-203	1.76E-16	9.92E-15	1.808E-015	5.2E-015	8.33E-15	1.98E-17	9.12E-15
Bi-204	2.19E-16	1.16E-14	2.256E-015	6.384E-015	1.01E-14	2.35E-17	1.08E-14
Bi-205	1.24E-16	7.02E-15	1.285E-015	3.68E-015	5.89E-15	1.40E-17	6.46E-15
Bi-206	2.47E-16	1.30E-14	2.528E-015	7.184E-015	1.13E-14	2.64E-17	1.22E-14
Bi-207	1.16E-16	6.05E-15	1.189E-015	3.36E-015	5.25E-15	1.23E-17	5.66E-15
Bi-208	1.80E-16	1.22E-14	1.904E-015	5.6E-015	9.42E-15	2.39E-17	1.10E-14
Bi-210	4.13E-19	2.37E-18	8.176E-019	1.76E-018	2.30E-18	6.70E-21	4.53E-18
Bi-210m	1.96E-17	8.78E-16	2E-016	5.6E-016	8.27E-16	1.98E-18	9.05E-16
Bi-210m+D	2.03E-17	8.83E-16	2.016E-016	5.632E-016	8.32E-16	1.99E-18	9.13E-16
Bi-210m+E	2.03E-17	8.83E-16	2.016E-016	5.632E-016	8.32E-16	1.99E-18	9.13E-16
Bi-211	3.59E-18	1.63E-16	3.648E-017	1.022E-016	1.52E-16	3.58E-19	1.64E-16
Bi-212	8.49E-18	4.25E-16	8.208E-017	2.32E-016	3.66E-16	8.49E-19	3.95E-16
Bi-212+D	8.49E-18	4.25E-16	8.208E-017	2.32E-016	3.66E-16	8.49E-19	3.95E-16
Bi-212+E	8.49E-18	4.25E-16	8.208E-017	2.32E-016	3.66E-16	8.49E-19	3.95E-16
Bi-212n	7.17E-19	4.90E-18	1.68E-018	3.552E-018	4.72E-18	1.18E-20	7.65E-18
Bi-213	1.03E-17	4.65E-16	1.008E-016	2.816E-016	4.26E-16	9.90E-19	4.56E-16
Bi-213+D	1.03E-17	4.65E-16	1.008E-016	2.816E-016	4.26E-16	9.90E-19	4.56E-16
Bi-213+E	1.03E-17	4.65E-16	1.008E-016	2.816E-016	4.26E-16	9.90E-19	4.56E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Bi-214	1.10E-16	6.29E-15	1.136E-015	3.264E-015	5.26E-15	1.24E-17	5.73E-15
Bi-214+D	1.10E-16	6.29E-15	1.136E-015	3.264E-015	5.26E-15	1.24E-17	5.73E-15
Bi-214+E	1.10E-16	6.29E-15	1.136E-015	3.264E-015	5.26E-15	1.24E-17	5.73E-15
Bi-215	1.99E-17	9.28E-16	1.968E-016	5.52E-016	8.37E-16	1.98E-18	9.14E-16
Bi-215+D	1.99E-17	9.29E-16	1.968E-016	5.52E-016	8.38E-16	1.98E-18	9.15E-16
Bi-215+E	1.99E-17	9.29E-16	1.968E-016	5.52E-016	8.38E-16	1.98E-18	9.15E-16
Bi-216	5.89E-17	2.78E-15	5.904E-016	1.664E-015	2.53E-15	5.79E-18	2.67E-15
Bk-245	1.63E-17	6.07E-16	1.616E-016	4.32E-016	5.91E-16	1.60E-18	7.26E-16
Bk-246	6.39E-17	3.25E-15	6.528E-016	1.84E-015	2.85E-15	6.67E-18	3.07E-15
Bk-247	1.05E-17	3.98E-16	1.048E-016	2.784E-016	3.85E-16	1.03E-18	4.68E-16
Bk-248m	3.98E-18	1.59E-16	3.84E-017	1.037E-016	1.49E-16	3.81E-19	1.74E-16
Bk-249	3.63E-22	4.01E-21	1.728E-021	3.184E-021	3.89E-21	1.63E-23	9.69E-21
Bk-250	6.80E-17	3.66E-15	6.992E-016	1.984E-015	3.15E-15	7.28E-18	3.36E-15
Bk-251	6.22E-18	2.06E-16	5.92E-017	1.544E-016	2.04E-16	5.87E-19	2.66E-16
Br-72	2.28E-16	1.21E-14	2.336E-015	6.656E-015	1.05E-14	2.43E-17	1.12E-14
Br-73	1.12E-16	5.38E-15	1.131E-015	3.168E-015	4.86E-15	1.12E-17	5.16E-15
Br-74	3.26E-16	2.03E-14	3.408E-015	9.872E-015	1.62E-14	4.04E-17	1.86E-14
Br-74m	3.04E-16	1.75E-14	3.152E-015	9.056E-015	1.46E-14	3.50E-17	1.61E-14
Br-75	9.25E-17	4.40E-15	9.392E-016	2.656E-015	4.02E-15	9.28E-18	4.27E-15
Br-76	2.05E-16	1.18E-14	2.128E-015	6.112E-015	9.81E-15	2.35E-17	1.08E-14
Br-76m	2.35E-18	4.51E-17	1.696E-017	3.36E-017	4.24E-17	1.63E-19	7.20E-17
Br-77	2.41E-17	1.15E-15	2.464E-016	6.928E-016	1.05E-15	2.44E-18	1.12E-15
Br-77m	1.06E-18	3.31E-17	1.026E-017	2.592E-017	3.31E-17	1.02E-19	4.57E-17
Br-78	8.13E-17	3.89E-15	8.192E-016	2.304E-015	3.53E-15	8.06E-18	3.72E-15
Br-80	6.92E-18	2.99E-16	6.288E-017	1.76E-016	2.69E-16	6.14E-19	2.86E-16
Br-80m	9.08E-19	5.11E-18	3.968E-018	5.104E-018	5.11E-18	3.79E-20	1.63E-17
Br-82	2.01E-16	1.06E-14	2.064E-015	5.856E-015	9.22E-15	2.13E-17	9.80E-15
Br-82m	2.94E-19	1.18E-17	2.416E-018	6.656E-018	1.03E-17	2.40E-20	1.12E-17
Br-83	7.95E-19	2.73E-17	5.92E-018	1.632E-017	2.48E-17	5.82E-20	2.79E-17
Br-84	1.26E-16	7.88E-15	1.314E-015	3.808E-015	6.28E-15	1.55E-17	7.17E-15
Br-84m	2.09E-16	1.14E-14	2.144E-015	6.144E-015	9.77E-15	2.28E-17	1.05E-14
Br-85	6.61E-18	2.90E-16	5.776E-017	1.6E-016	2.51E-16	5.77E-19	2.72E-16
C-10	1.35E-16	6.66E-15	1.378E-015	3.888E-015	5.98E-15	1.37E-17	6.30E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
C-11	7.90E-17	3.81E-15	8.032E-016	2.272E-015	3.46E-15	7.91E-18	3.65E-15
C-14	8.27E-22	6.73E-21	3.872E-021	6.288E-021	6.73E-21	4.97E-23	3.67E-20
Ca-41	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Ca-45	2.59E-21	3.39E-20	1.558E-020	2.96E-020	3.39E-20	2.52E-22	1.96E-19
Ca-47	7.87E-17	4.45E-15	8.128E-016	2.336E-015	3.75E-15	8.77E-18	4.05E-15
Ca-49	2.11E-16	1.50E-14	2.24E-015	6.624E-015	1.13E-14	2.95E-17	1.36E-14
Cd-101	1.86E-16	1.02E-14	1.904E-015	5.456E-015	8.65E-15	2.04E-17	9.42E-15
Cd-102	6.33E-17	3.14E-15	6.432E-016	1.824E-015	2.80E-15	6.49E-18	2.99E-15
Cd-103	1.52E-16	8.86E-15	1.578E-015	4.544E-015	7.35E-15	1.75E-17	8.10E-15
Cd-104	1.80E-17	8.03E-16	1.76E-016	4.816E-016	7.23E-16	1.76E-18	8.06E-16
Cd-105	9.58E-17	5.40E-15	9.856E-016	2.832E-015	4.54E-15	1.07E-17	4.96E-15
Cd-107	1.46E-18	2.79E-17	8E-018	1.888E-017	2.60E-17	8.15E-20	3.66E-17
Cd-109	9.77E-19	7.44E-18	3.472E-018	6.384E-018	7.44E-18	3.61E-20	1.58E-17
Cd-111m	2.08E-17	8.86E-16	2.112E-016	5.872E-016	8.49E-16	2.08E-18	9.50E-16
Cd-113	4.01E-21	6.19E-20	2.608E-020	5.248E-020	6.17E-20	4.16E-22	3.24E-19
Cd-113m	3.65E-20	5.82E-19	1.792E-019	4.272E-019	5.66E-19	2.21E-21	1.50E-18
Cd-115	1.51E-17	7.16E-16	1.512E-016	4.256E-016	6.51E-16	1.49E-18	6.88E-16
Cd-115m	3.34E-18	1.42E-16	2.784E-017	7.76E-017	1.22E-16	2.83E-19	1.33E-16
Cd-117	8.08E-17	4.45E-15	8.32E-016	2.384E-015	3.79E-15	8.91E-18	4.11E-15
Cd-117m	1.49E-16	8.82E-15	1.552E-015	4.496E-015	7.28E-15	1.73E-17	8.02E-15
Cd-118	1.67E-20	2.70E-19	9.616E-020	2.144E-019	2.67E-19	1.35E-21	1.01E-18
Cd-119	1.21E-16	7.02E-15	1.245E-015	3.6E-015	5.81E-15	1.39E-17	6.42E-15
Cd-119m	1.69E-16	9.90E-15	1.76E-015	5.072E-015	8.20E-15	1.95E-17	9.00E-15
Ce-130	3.69E-17	1.71E-15	3.664E-016	1.018E-015	1.54E-15	3.71E-18	1.70E-15
Ce-131	1.23E-16	6.30E-15	1.254E-015	3.552E-015	5.53E-15	1.29E-17	5.95E-15
Ce-132	1.97E-17	7.77E-16	1.92E-016	5.2E-016	7.45E-16	1.89E-18	8.59E-16
Ce-133	4.10E-17	1.79E-15	3.984E-016	1.093E-015	1.64E-15	3.92E-18	1.80E-15
Ce-133m	1.29E-16	6.86E-15	1.318E-015	3.744E-015	5.90E-15	1.39E-17	6.41E-15
Ce-134	1.54E-18	1.17E-17	6.976E-018	1.022E-017	1.16E-17	6.69E-20	2.89E-17
Ce-135	6.22E-17	2.98E-15	6.272E-016	1.76E-015	2.69E-15	6.27E-18	2.88E-15
Ce-137	2.30E-18	4.77E-17	1.451E-017	3.136E-017	4.41E-17	1.41E-19	6.33E-17
Ce-137m	3.78E-18	1.27E-16	3.216E-017	8.272E-017	1.20E-16	3.17E-19	1.44E-16
Ce-139	1.11E-17	3.88E-16	1.042E-016	2.752E-016	3.80E-16	1.03E-18	4.65E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Ce-141	5.47E-18	1.95E-16	5.36E-017	1.414E-016	1.92E-16	5.31E-19	2.40E-16
Ce-143	2.12E-17	9.22E-16	2.048E-016	5.648E-016	8.48E-16	2.03E-18	9.31E-16
Ce-144	1.34E-18	4.21E-17	1.248E-017	3.152E-017	4.16E-17	1.23E-19	5.56E-17
Ce-144+D	5.35E-18	1.95E-16	4.288E-017	1.136E-016	1.71E-16	4.21E-19	2.00E-16
Ce-144+E	5.35E-18	1.95E-16	4.288E-017	1.136E-016	1.71E-16	4.21E-19	2.00E-16
Ce-145	6.24E-17	3.05E-15	6.224E-016	1.744E-015	2.70E-15	6.28E-18	2.89E-15
Cf-244	4.04E-20	5.19E-20	5.136E-020	5.184E-020	5.19E-20	6.34E-22	2.70E-19
Cf-246	3.10E-20	1.78E-19	6.672E-020	1.2E-019	1.61E-19	7.70E-22	3.38E-19
Cf-247	6.53E-18	2.15E-16	6.224E-017	1.616E-016	2.13E-16	6.17E-19	2.78E-16
Cf-248	5.83E-20	1.45E-18	2.992E-019	7.744E-019	1.21E-18	3.40E-21	1.55E-18
Cf-249	2.48E-17	1.14E-15	2.528E-016	7.104E-016	1.06E-15	2.48E-18	1.14E-15
Cf-250	7.45E-19	4.19E-17	7.472E-018	2.144E-017	3.46E-17	8.42E-20	3.88E-17
Cf-251	8.46E-18	3.10E-16	8.368E-017	2.224E-016	3.03E-16	8.29E-19	3.76E-16
Cf-252	3.34E-17	1.95E-15	3.456E-016	9.936E-016	1.60E-15	3.89E-18	1.79E-15
Cf-253	1.19E-19	3.36E-19	2.64E-019	3.296E-019	3.36E-19	2.93E-21	1.33E-18
Cf-254	1.23E-15	7.20E-14	1.275E-014	3.68E-014	5.93E-14	1.44E-16	6.63E-14
Cf-255	7.81E-20	5.97E-19	2.032E-019	4.576E-019	5.86E-19	2.41E-21	1.74E-18
Cl-34	8.22E-17	3.89E-15	8.256E-016	2.32E-015	3.54E-15	8.07E-18	3.73E-15
Cl-34m	1.52E-16	9.10E-15	1.579E-015	4.576E-015	7.42E-15	1.81E-17	8.36E-15
Cl-36	1.51E-19	1.45E-18	4.208E-019	1.014E-018	1.38E-18	4.55E-21	2.96E-18
Cl-38	1.05E-16	6.59E-15	1.09E-015	3.184E-015	5.26E-15	1.28E-17	5.92E-15
Cl-39	1.09E-16	6.13E-15	1.118E-015	3.216E-015	5.16E-15	1.21E-17	5.61E-15
Cl-40	2.84E-16	1.87E-14	2.976E-015	8.72E-015	1.46E-14	3.68E-17	1.70E-14
Cm-238	5.46E-18	1.74E-16	5.312E-017	1.349E-016	1.73E-16	5.26E-19	2.36E-16
Cm-239	1.82E-17	6.85E-16	1.824E-016	4.896E-016	6.71E-16	1.81E-18	8.21E-16
Cm-240	3.98E-20	8.41E-20	5.68E-020	7.504E-020	8.33E-20	6.86E-22	2.96E-19
Cm-241	3.71E-17	1.66E-15	3.744E-016	1.035E-015	1.53E-15	3.68E-18	1.69E-15
Cm-242	3.53E-20	6.73E-20	4.784E-020	5.984E-020	6.60E-20	5.86E-22	2.52E-19
Cm-243	9.33E-18	3.60E-16	9.296E-017	2.496E-016	3.49E-16	9.19E-19	4.17E-16
Cm-244	3.12E-20	1.20E-19	5.12E-020	8.144E-020	1.07E-19	6.19E-22	2.70E-19
Cm-245	7.14E-18	2.35E-16	6.96E-017	1.792E-016	2.33E-16	6.89E-19	3.10E-16
Cm-246	2.88E-19	1.54E-17	2.768E-018	7.904E-018	1.27E-17	3.12E-20	1.44E-17
Cm-247	2.40E-17	1.12E-15	2.448E-016	6.896E-016	1.04E-15	2.41E-18	1.10E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
Cm-247+D	2.57E-17	1.17E-15	2.608E-016	7.264E-016	1.09E-15	2.56E-18	1.17E-15
Cm-247+E	2.57E-17	1.17E-15	2.608E-016	7.264E-016	1.09E-15	2.56E-18	1.17E-15
Cm-248	9.60E-17	5.60E-15	9.936E-016	2.864E-015	4.62E-15	1.12E-17	5.16E-15
Cm-249	1.65E-18	7.28E-17	1.536E-017	4.304E-017	6.57E-17	1.53E-19	7.11E-17
Cm-250	9.77E-16	5.70E-14	1.01E-014	2.912E-014	4.69E-14	1.14E-16	5.24E-14
Cm-250+D	9.98E-16	5.81E-14	1.03E-014	2.976E-014	4.78E-14	1.16E-16	5.34E-14
Cm-250+E	9.98E-16	5.81E-14	1.03E-014	2.976E-014	4.78E-14	1.16E-16	5.34E-14
Cm-251	8.93E-18	4.07E-16	8.704E-017	2.432E-016	3.70E-16	8.61E-19	3.97E-16
Co-54m	2.99E-16	1.60E-14	3.072E-015	8.768E-015	1.38E-14	3.21E-17	1.48E-14
Co-55	1.52E-16	7.91E-15	1.562E-015	4.432E-015	6.93E-15	1.60E-17	7.37E-15
Co-56	2.65E-16	1.57E-14	2.752E-015	7.952E-015	1.29E-14	3.10E-17	1.43E-14
Co-57	8.63E-18	3.04E-16	8.704E-017	2.272E-016	3.01E-16	8.62E-19	3.89E-16
Co-58	7.46E-17	3.84E-15	7.664E-016	2.16E-015	3.39E-15	7.74E-18	3.57E-15
Co-58m	3.83E-22	8.59E-22	8.448E-022	8.608E-022	8.59E-22	8.93E-24	3.80E-21
Co-60	1.87E-16	1.06E-14	1.936E-015	5.552E-015	8.92E-15	2.09E-17	9.63E-15
Co-60m	3.27E-19	1.53E-17	3.168E-018	8.464E-018	1.30E-17	3.36E-20	1.54E-17
Co-61	7.50E-18	2.40E-16	6.576E-017	1.597E-016	2.19E-16	6.54E-19	2.97E-16
Co-62	1.20E-16	6.99E-15	1.237E-015	3.552E-015	5.77E-15	1.37E-17	6.35E-15
Co-62m	2.00E-16	1.16E-14	2.08E-015	5.952E-015	9.62E-15	2.27E-17	1.05E-14
Cr-48	3.25E-17	1.39E-15	3.312E-016	9.136E-016	1.32E-15	3.26E-18	1.49E-15
Cr-49	8.14E-17	3.79E-15	8.208E-016	2.288E-015	3.46E-15	8.09E-18	3.72E-15
Cr-51	2.41E-18	1.11E-16	2.48E-017	6.976E-017	1.04E-16	2.43E-19	1.11E-16
Cr-55	1.78E-18	2.52E-17	7.424E-018	1.648E-017	2.33E-17	4.80E-20	2.81E-17
Cr-56	6.83E-18	1.49E-16	5.472E-017	1.246E-016	1.49E-16	5.33E-19	2.40E-16
Cs-121	9.26E-17	4.42E-15	9.344E-016	2.624E-015	4.01E-15	9.21E-18	4.25E-15
Cs-121m	9.23E-17	4.39E-15	9.312E-016	2.624E-015	3.99E-15	9.21E-18	4.25E-15
Cs-123	8.43E-17	4.04E-15	8.48E-016	2.384E-015	3.64E-15	8.41E-18	3.88E-15
Cs-124	9.22E-17	4.47E-15	9.312E-016	2.624E-015	4.02E-15	9.23E-18	4.26E-15
Cs-125	5.78E-17	2.82E-15	5.824E-016	1.648E-015	2.53E-15	5.85E-18	2.69E-15
Cs-126	9.05E-17	4.37E-15	9.136E-016	2.576E-015	3.95E-15	9.07E-18	4.18E-15
Cs-127	3.25E-17	1.49E-15	3.232E-016	9.04E-016	1.37E-15	3.20E-18	1.47E-15
Cs-128	6.97E-17	3.34E-15	7.024E-016	1.968E-015	3.02E-15	6.93E-18	3.20E-15
Cs-129	2.05E-17	8.92E-16	1.984E-016	5.504E-016	8.25E-16	1.95E-18	8.94E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Cs-130	3.89E-17	1.85E-15	3.888E-016	1.093E-015	1.67E-15	3.85E-18	1.77E-15
Cs-130m	4.60E-18	9.58E-17	3.472E-017	7.632E-017	9.43E-17	3.39E-19	1.51E-16
Cs-131	1.14E-18	4.21E-18	3.792E-018	4.208E-018	4.21E-18	3.67E-20	1.56E-17
Cs-132	5.44E-17	2.69E-15	5.488E-016	1.546E-015	2.40E-15	5.50E-18	2.53E-15
Cs-134	1.19E-16	6.08E-15	1.224E-015	3.456E-015	5.39E-15	1.23E-17	5.68E-15
Cs-134m	1.67E-18	4.33E-17	1.35E-017	3.28E-017	4.29E-17	1.33E-19	5.99E-17
Cs-135	3.50E-21	5.00E-20	2.208E-020	4.304E-020	4.98E-20	3.58E-22	2.79E-19
Cs-135m	1.22E-16	6.36E-15	1.256E-015	3.552E-015	5.57E-15	1.28E-17	5.89E-15
Cs-136	1.61E-16	8.50E-15	1.664E-015	4.704E-015	7.40E-15	1.71E-17	7.89E-15
Cs-137	4.74E-20	4.73E-19	1.648E-019	3.632E-019	4.64E-19	1.92E-21	1.39E-18
Cs-137+D	4.34E-17	2.17E-15	4.432E-016	1.248E-015	1.94E-15	4.42E-18	2.04E-15
Cs-137+E	4.34E-17	2.17E-15	4.432E-016	1.248E-015	1.94E-15	4.42E-18	2.04E-15
Cs-138	1.75E-16	1.02E-14	1.808E-015	5.2E-015	8.42E-15	2.00E-17	9.27E-15
Cs-138m	3.09E-17	1.64E-15	3.12E-016	8.896E-016	1.40E-15	3.32E-18	1.53E-15
Cs-139	2.45E-17	1.39E-15	2.432E-016	6.992E-016	1.14E-15	2.71E-18	1.26E-15
Cs-140	1.31E-16	7.83E-15	1.35E-015	3.904E-015	6.37E-15	1.54E-17	7.12E-15
Cu-57	9.50E-17	4.60E-15	9.6E-016	2.688E-015	4.13E-15	9.38E-18	4.35E-15
Cu-59	1.13E-16	5.60E-15	1.146E-015	3.232E-015	5.00E-15	1.15E-17	5.30E-15
Cu-60	2.89E-16	1.66E-14	2.992E-015	8.608E-015	1.38E-14	3.28E-17	1.52E-14
Cu-61	6.36E-17	3.09E-15	6.464E-016	1.824E-015	2.80E-15	6.42E-18	2.96E-15
Cu-62	7.96E-17	3.79E-15	8.016E-016	2.256E-015	3.45E-15	7.86E-18	3.63E-15
Cu-64	1.42E-17	6.91E-16	1.451E-016	4.096E-016	6.27E-16	1.44E-18	6.61E-16
Cu-66	9.06E-18	4.24E-16	8.304E-017	2.32E-016	3.65E-16	8.38E-19	3.93E-16
Cu-67	8.40E-18	3.28E-16	8.496E-017	2.304E-016	3.19E-16	8.41E-19	3.82E-16
Cu-69	4.14E-17	2.17E-15	4.176E-016	1.184E-015	1.87E-15	4.32E-18	2.00E-15
Dy-148	5.46E-17	2.65E-15	5.504E-016	1.538E-015	2.37E-15	5.49E-18	2.52E-15
Dy-149	1.20E-16	6.54E-15	1.229E-015	3.488E-015	5.55E-15	1.32E-17	6.07E-15
Dy-150	2.10E-17	9.30E-16	2.08E-016	5.76E-016	8.62E-16	2.04E-18	9.37E-16
Dy-151	1.03E-16	5.42E-15	1.048E-015	2.96E-015	4.68E-15	1.10E-17	5.06E-15
Dy-152	2.10E-17	8.58E-16	2.08E-016	5.648E-016	8.19E-16	2.04E-18	9.28E-16
Dy-153	6.45E-17	3.15E-15	6.432E-016	1.792E-015	2.75E-15	6.67E-18	3.06E-15
Dy-154	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Dy-155	4.96E-17	2.44E-15	4.992E-016	1.395E-015	2.15E-15	5.16E-18	2.37E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Dy-157	2.58E-17	1.09E-15	2.544E-016	6.976E-016	1.03E-15	2.50E-18	1.14E-15
Dy-159	2.83E-18	2.76E-17	1.76E-017	2.704E-017	2.75E-17	1.66E-19	7.19E-17
Dy-165	2.49E-18	8.39E-17	2E-017	5.232E-017	7.67E-17	1.96E-19	9.10E-17
Dy-165m	1.31E-18	4.81E-17	1.224E-017	3.152E-017	4.49E-17	1.20E-19	5.45E-17
Dy-166	2.84E-18	5.55E-17	2.224E-017	4.544E-017	5.43E-17	2.15E-19	9.52E-17
Dy-167	4.14E-17	1.92E-15	4.144E-016	1.158E-015	1.75E-15	4.10E-18	1.88E-15
Dy-168	3.02E-17	1.36E-15	3.008E-016	8.336E-016	1.25E-15	2.97E-18	1.36E-15
Er-154	4.97E-18	1.33E-16	3.92E-017	8.944E-017	1.23E-16	3.81E-19	1.71E-16
Er-156	4.18E-18	7.64E-17	3.008E-017	6E-017	7.41E-17	2.89E-19	1.27E-16
Er-159	7.22E-17	3.71E-15	7.328E-016	2.064E-015	3.23E-15	7.61E-18	3.50E-15
Er-161	7.45E-17	3.81E-15	7.568E-016	2.128E-015	3.32E-15	7.80E-18	3.59E-15
Er-163	2.55E-18	3.12E-17	1.728E-017	2.88E-017	3.08E-17	1.64E-19	7.14E-17
Er-165	2.38E-18	2.62E-17	1.589E-017	2.56E-017	2.62E-17	1.50E-19	6.52E-17
Er-167m	7.02E-18	2.80E-16	7.008E-017	1.904E-016	2.71E-16	6.91E-19	3.14E-16
Er-169	4.93E-21	8.18E-20	3.328E-020	6.848E-020	8.14E-20	5.15E-22	3.93E-19
Er-171	2.82E-17	1.19E-15	2.8E-016	7.712E-016	1.13E-15	2.76E-18	1.26E-15
Er-172	3.93E-17	1.82E-15	3.936E-016	1.091E-015	1.65E-15	3.89E-18	1.78E-15
Er-173	6.32E-17	2.99E-15	6.352E-016	1.76E-015	2.67E-15	6.43E-18	2.95E-15
Es-249	3.04E-17	1.38E-15	3.072E-016	8.528E-016	1.27E-15	3.07E-18	1.41E-15
Es-250	8.97E-17	4.27E-15	9.072E-016	2.528E-015	3.83E-15	9.13E-18	4.19E-15
Es-250m	4.08E-17	2.10E-15	4.176E-016	1.173E-015	1.82E-15	4.35E-18	2.00E-15
Es-251	6.46E-18	2.13E-16	6.224E-017	1.616E-016	2.11E-16	6.18E-19	2.78E-16
Es-253	3.48E-20	1.07E-18	2.576E-019	6.816E-019	9.96E-19	2.56E-21	1.17E-18
Es-254	5.43E-19	7.00E-18	2.4E-018	5.152E-018	6.73E-18	2.44E-20	1.08E-17
Es-254+D	6.85E-17	3.67E-15	7.024E-016	1.984E-015	3.16E-15	7.30E-18	3.37E-15
Es-254+E	6.85E-17	3.67E-15	7.024E-016	1.984E-015	3.16E-15	7.30E-18	3.37E-15
Es-254m	3.63E-17	1.81E-15	3.696E-016	1.042E-015	1.62E-15	3.70E-18	1.70E-15
Es-255	5.24E-20	2.95E-18	5.312E-019	1.514E-018	2.43E-18	6.07E-21	2.89E-18
Es-256	8.62E-19	5.92E-18	2.096E-018	4.288E-018	5.68E-18	1.49E-20	9.25E-18
Eu-142	9.66E-17	4.77E-15	9.776E-016	2.752E-015	4.25E-15	9.72E-18	4.51E-15
Eu-142m	2.65E-16	1.35E-14	2.704E-015	7.664E-015	1.19E-14	2.74E-17	1.27E-14
Eu-143	8.73E-17	4.43E-15	8.832E-016	2.496E-015	3.89E-15	9.03E-18	4.17E-15
Eu-144	8.68E-17	4.30E-15	8.768E-016	2.48E-015	3.82E-15	8.79E-18	4.06E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Eu-145	9.50E-17	5.22E-15	9.728E-016	2.768E-015	4.42E-15	1.04E-17	4.81E-15
Eu-146	1.81E-16	9.62E-15	1.856E-015	5.264E-015	8.31E-15	1.93E-17	8.92E-15
Eu-147	3.50E-17	1.65E-15	3.472E-016	9.568E-016	1.47E-15	3.53E-18	1.62E-15
Eu-148	1.69E-16	8.64E-15	1.728E-015	4.896E-015	7.62E-15	1.76E-17	8.10E-15
Eu-149	4.41E-18	1.28E-16	3.568E-017	8.56E-017	1.20E-16	3.47E-19	1.56E-16
Eu-150	1.18E-16	5.79E-15	1.203E-015	3.392E-015	5.20E-15	1.21E-17	5.55E-15
Eu-150m	3.98E-18	1.76E-16	3.744E-017	1.04E-016	1.59E-16	3.77E-19	1.74E-16
Eu-152	8.78E-17	4.63E-15	8.976E-016	2.544E-015	3.99E-15	9.40E-18	4.33E-15
Eu-152m	2.30E-17	1.15E-15	2.288E-016	6.4E-016	1.00E-15	2.34E-18	1.08E-15
Eu-152n	5.05E-18	1.29E-16	4.592E-017	1.067E-016	1.29E-16	4.51E-19	2.01E-16
Eu-154	9.40E-17	5.01E-15	9.648E-016	2.736E-015	4.31E-15	1.01E-17	4.66E-15
Eu-154m	4.54E-18	9.59E-17	3.76E-017	8.128E-017	9.58E-17	3.66E-19	1.62E-16
Eu-155	4.18E-18	1.07E-16	3.776E-017	8.8E-017	1.07E-16	3.71E-19	1.65E-16
Eu-156	9.13E-17	5.25E-15	9.408E-016	2.704E-015	4.37E-15	1.04E-17	4.79E-15
Eu-157	2.22E-17	9.44E-16	2.144E-016	5.808E-016	8.67E-16	2.10E-18	9.66E-16
Eu-158	9.83E-17	5.35E-15	1.005E-015	2.864E-015	4.55E-15	1.07E-17	4.92E-15
Eu-159	2.35E-17	9.93E-16	2.192E-016	5.84E-016	8.80E-16	2.20E-18	1.01E-15
F-17	7.98E-17	3.82E-15	8.064E-016	2.272E-015	3.47E-15	7.93E-18	3.66E-15
F-18	7.63E-17	3.69E-15	7.792E-016	2.192E-015	3.36E-15	7.67E-18	3.53E-15
Fe-52	5.65E-17	2.63E-15	5.76E-016	1.616E-015	2.42E-15	5.69E-18	2.61E-15
Fe-53	9.23E-17	4.42E-15	9.328E-016	2.624E-015	4.01E-15	9.20E-18	4.24E-15
Fe-53m	2.28E-16	1.28E-14	2.368E-015	6.768E-015	1.08E-14	2.52E-17	1.17E-14
Fe-55	1.16E-26	4.10E-25	1.17E-025	3.072E-025	4.07E-25	1.16E-27	5.23E-25
Fe-59	8.90E-17	4.98E-15	9.2E-016	2.64E-015	4.22E-15	9.84E-18	4.54E-15
Fe-60	1.52E-21	1.51E-20	7.936E-021	1.374E-020	1.51E-20	1.19E-22	9.12E-20
Fe-60+D	1.87E-16	1.06E-14	1.936E-015	5.552E-015	8.91E-15	2.09E-17	9.62E-15
Fe-60+E	1.87E-16	1.06E-14	1.936E-015	5.552E-015	8.91E-15	2.09E-17	9.62E-15
Fe-61	1.05E-16	5.84E-15	1.08E-015	3.088E-015	4.94E-15	1.16E-17	5.35E-15
Fe-62	4.03E-17	1.90E-15	4.016E-016	1.131E-015	1.73E-15	3.95E-18	1.82E-15
Fm-251	1.11E-17	4.51E-16	1.102E-016	2.976E-016	4.23E-16	1.10E-18	5.02E-16
Fm-252	5.46E-20	1.14E-18	2.544E-019	6.288E-019	9.62E-19	2.87E-21	1.30E-18
Fm-253	4.30E-18	1.43E-16	4.032E-017	1.051E-016	1.40E-16	3.99E-19	1.80E-16
Fm-254	5.49E-19	3.00E-17	5.376E-018	1.534E-017	2.47E-17	6.04E-20	2.79E-17

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Fm-255	4.20E-19	3.37E-18	1.475E-018	2.832E-018	3.34E-18	1.54E-20	6.75E-18
Fm-256	9.08E-16	5.30E-14	9.408E-015	2.704E-014	4.37E-14	1.06E-16	4.89E-14
Fm-257	1.03E-17	4.20E-16	1.019E-016	2.752E-016	3.91E-16	1.04E-18	4.73E-16
Fr-212	8.48E-17	4.50E-15	8.72E-016	2.464E-015	3.88E-15	9.19E-18	4.23E-15
Fr-219	2.72E-19	1.24E-17	2.768E-018	7.744E-018	1.16E-17	2.72E-20	1.25E-17
Fr-220	6.52E-19	1.95E-17	6.128E-018	1.507E-017	1.92E-17	6.04E-20	2.71E-17
Fr-220+D	8.24E-19	2.50E-17	7.792E-018	1.92E-017	2.46E-17	7.67E-20	3.44E-17
Fr-220+E	8.24E-19	2.50E-17	7.792E-018	1.92E-017	2.46E-17	7.67E-20	3.44E-17
Fr-221	2.16E-18	8.98E-17	2.192E-017	6.048E-017	8.65E-17	2.17E-19	9.87E-17
Fr-221+D	2.18E-18	9.06E-17	2.208E-017	6.096E-017	8.73E-17	2.19E-19	9.95E-17
Fr-221+E	2.18E-18	9.06E-17	2.208E-017	6.096E-017	8.73E-17	2.19E-19	9.95E-17
Fr-222	1.39E-17	5.82E-16	1.352E-016	3.728E-016	5.44E-16	1.35E-18	6.20E-16
Fr-223	4.14E-18	1.16E-16	3.424E-017	8.224E-017	1.11E-16	3.36E-19	1.52E-16
Fr-224	4.21E-17	2.19E-15	4.256E-016	1.21E-015	1.89E-15	4.49E-18	2.07E-15
Fr-227	3.46E-17	1.54E-15	3.408E-016	9.376E-016	1.40E-15	3.40E-18	1.56E-15
Ga-64	2.48E-16	1.44E-14	2.56E-015	7.376E-015	1.19E-14	2.87E-17	1.32E-14
Ga-65	9.01E-17	4.29E-15	9.104E-016	2.544E-015	3.88E-15	9.04E-18	4.16E-15
Ga-66	1.78E-16	1.09E-14	1.856E-015	5.36E-015	8.79E-15	2.18E-17	1.00E-14
Ga-67	1.14E-17	4.63E-16	1.155E-016	3.136E-016	4.43E-16	1.14E-18	5.18E-16
Ga-68	7.42E-17	3.57E-15	7.488E-016	2.112E-015	3.23E-15	7.40E-18	3.41E-15
Ga-70	1.48E-18	3.64E-17	8.048E-018	2.112E-017	3.21E-17	7.49E-20	3.74E-17
Ga-72	1.98E-16	1.16E-14	2.064E-015	5.936E-015	9.61E-15	2.30E-17	1.06E-14
Ga-73	2.68E-17	1.22E-15	2.688E-016	7.568E-016	1.13E-15	2.66E-18	1.22E-15
Ga-74	2.29E-16	1.38E-14	2.368E-015	6.88E-015	1.12E-14	2.71E-17	1.25E-14
Gd-142	8.00E-17	4.02E-15	8.112E-016	2.288E-015	3.55E-15	8.26E-18	3.81E-15
Gd-143m	1.62E-16	8.25E-15	1.648E-015	4.656E-015	7.25E-15	1.69E-17	7.80E-15
Gd-144	6.82E-17	3.63E-15	6.928E-016	1.968E-015	3.11E-15	7.37E-18	3.40E-15
Gd-145	1.75E-16	1.05E-14	1.808E-015	5.248E-015	8.57E-15	2.07E-17	9.56E-15
Gd-145m	5.25E-17	2.63E-15	5.344E-016	1.507E-015	2.34E-15	5.35E-18	2.47E-15
Gd-146	1.72E-17	4.83E-16	1.523E-016	3.68E-016	4.78E-16	1.50E-18	6.70E-16
Gd-147	1.06E-16	5.29E-15	1.077E-015	3.04E-015	4.69E-15	1.10E-17	5.04E-15
Gd-148	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Gd-149	3.94E-17	1.75E-15	3.904E-016	1.075E-015	1.60E-15	3.88E-18	1.78E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Gd-150	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Gd-151	4.65E-18	1.21E-16	3.76E-017	8.752E-017	1.18E-16	3.66E-19	1.64E-16
Gd-152	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Gd-153	6.91E-18	1.38E-16	5.424E-017	1.152E-016	1.38E-16	5.27E-19	2.33E-16
Gd-159	4.21E-18	1.63E-16	3.872E-017	1.038E-016	1.52E-16	3.78E-19	1.74E-16
Gd-162	3.22E-17	1.50E-15	3.264E-016	9.184E-016	1.39E-15	3.20E-18	1.47E-15
Ge-66	5.12E-17	2.42E-15	5.184E-016	1.454E-015	2.20E-15	5.16E-18	2.37E-15
Ge-67	1.10E-16	5.41E-15	1.117E-015	3.152E-015	4.84E-15	1.13E-17	5.19E-15
Ge-68	1.26E-21	3.47E-22	3.472E-022	3.472E-022	3.47E-22	9.86E-24	4.27E-21
Ge-68+D	7.42E-17	3.57E-15	7.488E-016	2.112E-015	3.23E-15	7.40E-18	3.41E-15
Ge-68+E	7.42E-17	3.57E-15	7.488E-016	2.112E-015	3.23E-15	7.40E-18	3.41E-15
Ge-69	7.20E-17	3.80E-15	7.392E-016	2.096E-015	3.31E-15	7.65E-18	3.53E-15
Ge-71	1.28E-21	3.52E-22	3.52E-022	3.52E-022	3.52E-22	1.00E-23	4.33E-21
Ge-75	3.12E-18	1.21E-16	2.816E-017	7.856E-017	1.15E-16	2.76E-19	1.28E-16
Ge-77	8.23E-17	4.11E-15	8.4E-016	2.384E-015	3.66E-15	8.57E-18	3.95E-15
Ge-78	2.10E-17	9.45E-16	2.16E-016	6.08E-016	8.96E-16	2.12E-18	9.71E-16
H-3	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Hf-167	4.77E-17	2.17E-15	4.784E-016	1.33E-015	2.00E-15	4.69E-18	2.16E-15
Hf-169	4.90E-17	2.24E-15	4.912E-016	1.358E-015	2.05E-15	4.82E-18	2.21E-15
Hf-170	3.26E-17	1.39E-15	3.216E-016	8.656E-016	1.28E-15	3.17E-18	1.45E-15
Hf-172	6.74E-18	1.29E-16	5.424E-017	1.114E-016	1.29E-16	5.25E-19	2.32E-16
Hf-172+D	6.74E-18	1.29E-16	5.424E-017	1.114E-016	1.29E-16	5.25E-19	2.32E-16
Hf-172+E	6.74E-18	1.29E-16	5.424E-017	1.114E-016	1.29E-16	5.25E-19	2.32E-16
Hf-173	2.88E-17	1.11E-15	2.832E-016	7.488E-016	1.06E-15	2.80E-18	1.27E-15
Hf-174	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Hf-175	2.63E-17	1.10E-15	2.608E-016	7.056E-016	1.03E-15	2.54E-18	1.16E-15
Hf-177m	1.71E-16	7.47E-15	1.728E-015	4.8E-015	7.03E-15	1.70E-17	7.79E-15
Hf-178m	1.70E-16	7.78E-15	1.728E-015	4.816E-015	7.20E-15	1.70E-17	7.79E-15
Hf-179m	6.89E-17	2.99E-15	6.928E-016	1.904E-015	2.80E-15	6.81E-18	3.11E-15
Hf-180m	7.46E-17	3.33E-15	7.552E-016	2.096E-015	3.10E-15	7.41E-18	3.39E-15
Hf-181	4.04E-17	1.83E-15	4.096E-016	1.134E-015	1.69E-15	4.02E-18	1.84E-15
Hf-182	1.79E-17	7.79E-16	1.824E-016	5.088E-016	7.41E-16	1.80E-18	8.22E-16
Hf-182+D	1.14E-16	5.94E-15	1.17E-015	3.296E-015	5.14E-15	1.22E-17	5.64E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)			(L per Bq s)	(m ³ per Bq s)
Hf-182+E	1.14E-16	5.94E-15	1.17E-015	3.296E-015	5.14E-15	1.22E-17	5.64E-15
Hf-182m	6.88E-17	3.18E-15	6.944E-016	1.92E-015	2.90E-15	6.92E-18	3.18E-15
Hf-183	5.94E-17	2.92E-15	6E-016	1.68E-015	2.59E-15	6.06E-18	2.79E-15
Hf-184	1.74E-17	6.92E-16	1.712E-016	4.624E-016	6.60E-16	1.68E-18	7.67E-16
Hg-190	1.40E-17	4.54E-16	1.354E-016	3.408E-016	4.46E-16	1.33E-18	6.00E-16
Hg-191m	1.11E-16	5.62E-15	1.139E-015	3.216E-015	4.95E-15	1.18E-17	5.40E-15
Hg-192	1.97E-17	7.48E-16	1.936E-016	5.12E-016	7.17E-16	1.91E-18	8.65E-16
Hg-193	6.18E-17	3.21E-15	6.304E-016	1.776E-015	2.77E-15	6.66E-18	3.06E-15
Hg-193+D	6.23E-17	3.23E-15	6.352E-016	1.792E-015	2.79E-15	6.71E-18	3.08E-15
Hg-193+E	6.23E-17	3.23E-15	6.352E-016	1.792E-015	2.79E-15	6.71E-18	3.08E-15
Hg-193m	7.65E-17	3.97E-15	7.824E-016	2.208E-015	3.45E-15	8.15E-18	3.75E-15
Hg-194	7.36E-21	3.09E-21	3.088E-021	3.088E-021	3.09E-21	6.27E-23	2.70E-20
Hg-194+D	7.63E-17	4.10E-15	7.84E-016	2.224E-015	3.51E-15	8.42E-18	3.88E-15
Hg-194+E	7.63E-17	4.10E-15	7.84E-016	2.224E-015	3.51E-15	8.42E-18	3.88E-15
Hg-195	1.44E-17	6.16E-16	1.418E-016	3.744E-016	5.52E-16	1.43E-18	6.52E-16
Hg-195m	1.47E-17	6.24E-16	1.466E-016	3.968E-016	5.80E-16	1.45E-18	6.62E-16
Hg-197	4.74E-18	1.04E-16	4.192E-017	9.04E-017	1.04E-16	4.09E-19	1.81E-16
Hg-197m	6.64E-18	2.23E-16	6.48E-017	1.648E-016	2.18E-16	6.38E-19	2.88E-16
Hg-199m	1.31E-17	4.87E-16	1.294E-016	3.408E-016	4.69E-16	1.28E-18	5.79E-16
Hg-203	1.78E-17	7.88E-16	1.824E-016	5.104E-016	7.48E-16	1.80E-18	8.21E-16
Hg-205	1.11E-18	2.11E-17	5.664E-018	1.443E-017	2.02E-17	5.12E-20	2.56E-17
Hg-206	9.57E-18	4.14E-16	9.408E-017	2.624E-016	3.87E-16	9.25E-19	4.25E-16
Hg-207	1.96E-16	1.13E-14	2.032E-015	5.856E-015	9.41E-15	2.24E-17	1.03E-14
Ho-150	1.48E-16	7.34E-15	1.506E-015	4.24E-015	6.55E-15	1.50E-17	6.92E-15
Ho-153	7.88E-17	3.80E-15	7.968E-016	2.24E-015	3.42E-15	7.98E-18	3.67E-15
Ho-153m	8.17E-17	3.83E-15	8.224E-016	2.288E-015	3.48E-15	8.14E-18	3.74E-15
Ho-154	1.45E-16	7.26E-15	1.47E-015	4.16E-015	6.44E-15	1.49E-17	6.88E-15
Ho-154m	1.87E-16	9.10E-15	1.904E-015	5.36E-015	8.21E-15	1.90E-17	8.74E-15
Ho-155	4.59E-17	2.20E-15	4.592E-016	1.28E-015	1.96E-15	4.70E-18	2.16E-15
Ho-156	1.58E-16	8.33E-15	1.616E-015	4.576E-015	7.18E-15	1.70E-17	7.85E-15
Ho-157	4.32E-17	1.93E-15	4.256E-016	1.162E-015	1.75E-15	4.27E-18	1.95E-15
Ho-159	2.78E-17	1.07E-15	2.656E-016	6.976E-016	9.97E-16	2.64E-18	1.20E-15
Ho-160	1.29E-16	6.55E-15	1.309E-015	3.68E-015	5.74E-15	1.33E-17	6.15E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Ho-161	3.50E-18	4.63E-17	2.32E-017	4.128E-017	4.60E-17	2.23E-19	9.72E-17
Ho-162	1.17E-17	5.02E-16	1.099E-016	2.896E-016	4.38E-16	1.13E-18	5.17E-16
Ho-162m	4.14E-17	2.06E-15	4.144E-016	1.155E-015	1.79E-15	4.32E-18	1.99E-15
Ho-163	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Ho-164	1.97E-18	2.37E-17	1.296E-017	2.224E-017	2.37E-17	1.23E-19	5.42E-17
Ho-164m	2.82E-18	3.09E-17	1.856E-017	3.008E-017	3.09E-17	1.76E-19	7.65E-17
Ho-166	3.07E-18	1.03E-16	2.288E-017	5.904E-017	8.85E-17	2.33E-19	1.09E-16
Ho-166m	1.24E-16	6.12E-15	1.264E-015	3.552E-015	5.47E-15	1.27E-17	5.85E-15
Ho-167	2.78E-17	1.24E-15	2.816E-016	7.84E-016	1.16E-15	2.76E-18	1.26E-15
Ho-168	6.78E-17	3.45E-15	6.864E-016	1.936E-015	3.03E-15	7.00E-18	3.23E-15
Ho-168m	3.97E-19	4.38E-18	2.64E-018	4.272E-018	4.38E-18	2.50E-20	1.09E-17
Ho-170	1.30E-16	6.66E-15	1.322E-015	3.728E-015	5.82E-15	1.36E-17	6.27E-15
I-118	1.57E-16	7.92E-15	1.598E-015	4.528E-015	7.02E-15	1.61E-17	7.45E-15
I-118m	2.88E-16	1.47E-14	2.944E-015	8.336E-015	1.30E-14	2.98E-17	1.38E-14
I-119	7.00E-17	3.31E-15	7.072E-016	1.984E-015	3.02E-15	7.00E-18	3.22E-15
I-120	1.97E-16	1.11E-14	2.032E-015	5.824E-015	9.33E-15	2.23E-17	1.03E-14
I-120m	2.67E-16	1.41E-14	2.736E-015	7.792E-015	1.22E-14	2.84E-17	1.31E-14
I-121	2.96E-17	1.33E-15	2.96E-016	8.256E-016	1.23E-15	2.94E-18	1.35E-15
I-122	7.56E-17	3.64E-15	7.616E-016	2.144E-015	3.29E-15	7.53E-18	3.47E-15
I-123	1.20E-17	4.40E-16	1.141E-016	3.056E-016	4.27E-16	1.13E-18	5.12E-16
I-124	8.37E-17	4.42E-15	8.528E-016	2.432E-015	3.83E-15	8.92E-18	4.12E-15
I-125	1.96E-18	6.23E-18	5.776E-018	6.224E-018	6.23E-18	5.70E-20	2.43E-17
I-126	3.32E-17	1.61E-15	3.36E-016	9.44E-016	1.45E-15	3.33E-18	1.53E-15
I-128	6.28E-18	2.54E-16	5.568E-017	1.541E-016	2.33E-16	5.36E-19	2.50E-16
I-129	1.27E-18	5.29E-18	4.56E-018	5.264E-018	5.29E-18	4.39E-20	1.88E-17
I-130	1.64E-16	8.27E-15	1.68E-015	4.752E-015	7.37E-15	1.69E-17	7.78E-15
I-130m	8.45E-18	4.05E-16	8.32E-017	2.336E-016	3.61E-16	8.34E-19	3.85E-16
I-131	2.93E-17	1.37E-15	2.992E-016	8.4E-016	1.27E-15	2.94E-18	1.35E-15
I-132	1.73E-16	9.02E-15	1.776E-015	5.04E-015	7.89E-15	1.82E-17	8.38E-15
I-132m	2.58E-17	1.27E-15	2.608E-016	7.328E-016	1.13E-15	2.61E-18	1.20E-15
I-133	4.74E-17	2.34E-15	4.816E-016	1.36E-015	2.10E-15	4.81E-18	2.22E-15
I-134	1.97E-16	1.05E-14	2.032E-015	5.76E-015	9.10E-15	2.10E-17	9.69E-15
I-134m	2.11E-17	9.12E-16	2.08E-016	5.76E-016	8.54E-16	2.05E-18	9.40E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
I-135	1.18E-16	6.73E-15	1.214E-015	3.504E-015	5.63E-15	1.32E-17	6.12E-15
In-103	2.07E-16	1.12E-14	2.128E-015	6.064E-015	9.59E-15	2.27E-17	1.05E-14
In-105	1.46E-16	7.62E-15	1.496E-015	4.256E-015	6.64E-15	1.56E-17	7.18E-15
In-106	2.73E-16	1.40E-14	2.8E-015	7.904E-015	1.23E-14	2.83E-17	1.31E-14
In-106m	2.11E-16	1.17E-14	2.176E-015	6.224E-015	9.91E-15	2.35E-17	1.08E-14
In-107	1.13E-16	6.21E-15	1.165E-015	3.328E-015	5.29E-15	1.26E-17	5.78E-15
In-108	2.95E-16	1.58E-14	3.04E-015	8.656E-015	1.37E-14	3.17E-17	1.46E-14
In-108m	1.99E-16	1.19E-14	2.064E-015	5.984E-015	9.69E-15	2.37E-17	1.09E-14
In-109	4.76E-17	2.39E-15	4.848E-016	1.373E-015	2.11E-15	5.00E-18	2.30E-15
In-109m	4.69E-17	2.35E-15	4.784E-016	1.355E-015	2.10E-15	4.78E-18	2.20E-15
In-110	2.36E-16	1.23E-14	2.416E-015	6.848E-015	1.07E-14	2.47E-17	1.14E-14
In-110m	1.20E-16	6.21E-15	1.227E-015	3.488E-015	5.44E-15	1.26E-17	5.82E-15
In-111	2.94E-17	1.22E-15	2.96E-016	8.192E-016	1.18E-15	2.92E-18	1.33E-15
In-111m	3.63E-17	1.76E-15	3.696E-016	1.04E-015	1.60E-15	3.65E-18	1.68E-15
In-112	2.06E-17	9.85E-16	2.064E-016	5.824E-016	8.92E-16	2.04E-18	9.42E-16
In-112m	2.02E-18	5.92E-17	1.648E-017	4.24E-017	5.81E-17	1.63E-19	7.38E-17
In-113m	1.97E-17	9.13E-16	2E-016	5.616E-016	8.46E-16	1.96E-18	9.00E-16
In-114	1.34E-18	2.01E-17	5.28E-018	1.251E-017	1.81E-17	4.10E-20	2.26E-17
In-114m	5.73E-18	2.52E-16	5.584E-017	1.555E-016	2.32E-16	5.57E-19	2.56E-16
In-114m+D	7.03E-18	2.71E-16	6.096E-017	1.68E-016	2.50E-16	5.97E-19	2.78E-16
In-114m+E	7.03E-18	2.71E-16	6.096E-017	1.68E-016	2.50E-16	5.97E-19	2.78E-16
In-115	1.35E-20	2.35E-19	8.48E-020	1.872E-019	2.33E-19	1.21E-21	9.10E-19
In-115m	1.21E-17	5.42E-16	1.211E-016	3.392E-016	5.07E-16	1.19E-18	5.46E-16
In-116m	1.83E-16	1.05E-14	1.904E-015	5.456E-015	8.77E-15	2.06E-17	9.51E-15
In-117	5.29E-17	2.49E-15	5.392E-016	1.51E-015	2.28E-15	5.33E-18	2.45E-15
In-117m	7.14E-18	2.87E-16	6.768E-017	1.872E-016	2.73E-16	6.63E-19	3.05E-16
In-118	8.93E-18	4.00E-16	7.968E-017	2.176E-016	3.42E-16	7.69E-19	3.68E-16
In-118m	2.10E-16	1.15E-14	2.16E-015	6.16E-015	9.82E-15	2.28E-17	1.05E-14
In-119	5.98E-17	3.03E-15	6.064E-016	1.712E-015	2.67E-15	6.11E-18	2.82E-15
In-119m	6.45E-18	2.83E-16	5.616E-017	1.557E-016	2.44E-16	5.63E-19	2.65E-16
In-121	7.21E-17	3.75E-15	7.328E-016	2.064E-015	3.26E-15	7.50E-18	3.47E-15
In-121m	6.70E-18	2.36E-16	5.232E-017	1.339E-016	2.03E-16	5.01E-19	2.39E-16
Ir-180	1.23E-16	5.96E-15	1.251E-015	3.504E-015	5.37E-15	1.25E-17	5.74E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
Ir-182	1.08E-16	5.27E-15	1.099E-015	3.088E-015	4.72E-15	1.11E-17	5.10E-15
Ir-183	8.73E-17	4.66E-15	8.928E-016	2.528E-015	3.97E-15	9.59E-18	4.41E-15
Ir-184	1.47E-16	7.64E-15	1.502E-015	4.256E-015	6.63E-15	1.57E-17	7.24E-15
Ir-185	6.19E-17	3.36E-15	6.32E-016	1.792E-015	2.82E-15	6.92E-18	3.18E-15
Ir-186	1.24E-16	6.44E-15	1.267E-015	3.584E-015	5.58E-15	1.33E-17	6.13E-15
Ir-186m	9.29E-17	5.00E-15	9.536E-016	2.704E-015	4.27E-15	1.01E-17	4.68E-15
Ir-187	2.45E-17	1.10E-15	2.432E-016	6.56E-016	9.85E-16	2.44E-18	1.12E-15
Ir-188	1.51E-16	8.94E-15	1.565E-015	4.512E-015	7.32E-15	1.78E-17	8.20E-15
Ir-189	5.25E-18	1.37E-16	4.688E-017	1.07E-016	1.34E-16	4.56E-19	2.04E-16
Ir-190	1.12E-16	5.32E-15	1.142E-015	3.2E-015	4.84E-15	1.13E-17	5.20E-15
Ir-190m	1.80E-21	6.07E-22	6.08E-022	6.08E-022	6.07E-22	1.46E-23	6.28E-21
Ir-190n	3.75E-18	7.79E-17	3.2E-017	6.72E-017	7.75E-17	3.10E-19	1.37E-16
Ir-191m	5.01E-18	1.37E-16	4.64E-017	1.096E-016	1.36E-16	4.56E-19	2.04E-16
Ir-192	6.23E-17	2.90E-15	6.368E-016	1.792E-015	2.69E-15	6.26E-18	2.88E-15
Ir-192m	1.06E-20	1.53E-19	4.192E-020	1.037E-019	1.45E-19	4.38E-22	1.98E-19
Ir-192n	5.43E-20	1.00E-18	3.696E-019	8.256E-019	9.95E-19	4.15E-21	2.08E-18
Ir-193m	2.27E-20	3.96E-19	1.76E-019	3.584E-019	3.97E-19	1.71E-21	7.57E-19
Ir-194	8.11E-18	3.53E-16	7.472E-017	2.096E-016	3.18E-16	7.41E-19	3.45E-16
Ir-194m	1.79E-16	8.65E-15	1.824E-015	5.152E-015	7.87E-15	1.81E-17	8.34E-15
Ir-195	4.16E-18	9.63E-17	3.536E-017	7.968E-017	9.56E-17	3.45E-19	1.55E-16
Ir-195m	2.84E-17	1.27E-15	2.864E-016	7.904E-016	1.18E-15	2.82E-18	1.29E-15
Ir-196	1.95E-17	9.16E-16	1.888E-016	5.312E-016	8.18E-16	1.88E-18	8.75E-16
Ir-196m	1.89E-16	9.13E-15	1.936E-015	5.44E-015	8.30E-15	1.91E-17	8.80E-15
K-38	2.32E-16	1.38E-14	2.4E-015	6.976E-015	1.13E-14	2.72E-17	1.26E-14
K-40	1.22E-17	6.84E-16	1.213E-016	3.504E-016	5.67E-16	1.34E-18	6.21E-16
K-42	2.27E-17	1.26E-15	2.24E-016	6.432E-016	1.04E-15	2.45E-18	1.14E-15
K-43	7.43E-17	3.60E-15	7.584E-016	2.144E-015	3.27E-15	7.51E-18	3.46E-15
K-44	1.73E-16	1.06E-14	1.792E-015	5.216E-015	8.56E-15	2.08E-17	9.62E-15
K-45	1.33E-16	7.99E-15	1.384E-015	4.016E-015	6.53E-15	1.58E-17	7.30E-15
K-46	2.05E-16	1.31E-14	2.144E-015	6.224E-015	1.03E-14	2.57E-17	1.19E-14
Kr-74	8.14E-17	3.79E-15	8.224E-016	2.304E-015	3.47E-15	8.11E-18	3.73E-15
Kr-75	9.99E-17	4.73E-15	1.01E-015	2.832E-015	4.29E-15	1.00E-17	4.61E-15
Kr-76	3.18E-17	1.45E-15	3.232E-016	9.056E-016	1.35E-15	3.19E-18	1.46E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Kr-76+D	3.18E-17	1.45E-15	3.232E-016	9.056E-016	1.35E-15	3.19E-18	1.46E-15
Kr-76+E	3.18E-17	1.45E-15	3.232E-016	9.056E-016	1.35E-15	3.19E-18	1.46E-15
Kr-77	8.01E-17	3.70E-15	8.096E-016	2.256E-015	3.40E-15	7.99E-18	3.67E-15
Kr-79	1.90E-17	9.15E-16	1.952E-016	5.488E-016	8.35E-16	1.93E-18	8.89E-16
Kr-81	9.91E-20	2.79E-18	6.496E-019	1.808E-018	2.65E-18	6.56E-21	3.00E-18
Kr-81m	9.49E-18	3.93E-16	9.712E-017	2.688E-016	3.82E-16	9.61E-19	4.38E-16
Kr-83m	1.60E-20	1.07E-20	1.021E-020	1.066E-020	1.07E-20	1.62E-22	6.98E-20
Kr-85	2.81E-19	9.11E-18	2.016E-018	5.536E-018	8.33E-18	2.03E-20	1.01E-17
Kr-85m	1.17E-17	4.67E-16	1.179E-016	3.216E-016	4.53E-16	1.17E-18	5.31E-16
Kr-87	5.91E-17	3.43E-15	6.048E-016	1.744E-015	2.82E-15	6.83E-18	3.16E-15
Kr-88	1.39E-16	8.71E-15	1.451E-015	4.24E-015	6.98E-15	1.71E-17	7.89E-15
Kr-89	1.41E-16	8.40E-15	1.461E-015	4.224E-015	6.85E-15	1.66E-17	7.69E-15
La-128	2.17E-16	1.11E-14	2.208E-015	6.272E-015	9.76E-15	2.26E-17	1.04E-14
La-129	7.10E-17	3.36E-15	7.152E-016	2E-015	3.05E-15	7.08E-18	3.26E-15
La-130	1.70E-16	8.77E-15	1.744E-015	4.944E-015	7.70E-15	1.79E-17	8.25E-15
La-131	5.02E-17	2.33E-15	5.024E-016	1.403E-015	2.12E-15	4.99E-18	2.29E-15
La-132	1.49E-16	8.07E-15	1.528E-015	4.368E-015	6.91E-15	1.63E-17	7.52E-15
La-132m	5.07E-17	2.43E-15	5.12E-016	1.43E-015	2.19E-15	5.13E-18	2.36E-15
La-133	1.17E-17	5.15E-16	1.112E-016	3.056E-016	4.66E-16	1.10E-18	5.07E-16
La-134	5.63E-17	2.69E-15	5.648E-016	1.589E-015	2.43E-15	5.59E-18	2.58E-15
La-135	2.14E-18	4.42E-17	1.317E-017	2.864E-017	4.06E-17	1.29E-19	5.76E-17
La-136	3.14E-17	1.47E-15	3.12E-016	8.72E-016	1.33E-15	3.08E-18	1.42E-15
La-137	1.31E-18	5.88E-18	4.992E-018	5.872E-018	5.88E-18	4.78E-20	2.04E-17
La-138	9.11E-17	5.18E-15	9.408E-016	2.704E-015	4.35E-15	1.02E-17	4.71E-15
La-140	1.71E-16	9.81E-15	1.76E-015	5.088E-015	8.20E-15	1.94E-17	8.95E-15
La-141	3.50E-18	1.34E-16	2.624E-017	7.168E-017	1.13E-16	2.62E-19	1.26E-16
La-142	1.69E-16	1.06E-14	1.76E-015	5.152E-015	8.48E-15	2.08E-17	9.59E-15
La-143	2.13E-17	1.16E-15	2.096E-016	6E-016	9.67E-16	2.29E-18	1.06E-15
Lu-165	8.29E-17	4.17E-15	8.384E-016	2.352E-015	3.64E-15	8.72E-18	4.01E-15
Lu-167	1.23E-16	6.93E-15	1.269E-015	3.632E-015	5.80E-15	1.39E-17	6.42E-15
Lu-169	9.74E-17	5.24E-15	9.936E-016	2.816E-015	4.45E-15	1.06E-17	4.90E-15
Lu-169m	3.30E-22	1.32E-22	1.291E-022	1.322E-022	1.32E-22	2.88E-24	1.24E-21
Lu-170	1.83E-16	1.11E-14	1.904E-015	5.504E-015	9.01E-15	2.20E-17	1.01E-14

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Lu-171	4.87E-17	2.30E-15	4.848E-016	1.33E-015	2.04E-15	4.87E-18	2.24E-15
Lu-171m	2.17E-20	3.71E-19	1.728E-019	3.392E-019	3.71E-19	1.67E-21	7.35E-19
Lu-172	1.47E-16	7.72E-15	1.501E-015	4.24E-015	6.67E-15	1.57E-17	7.22E-15
Lu-172m	2.13E-22	7.98E-22	5.712E-022	7.936E-022	7.98E-22	5.97E-24	2.58E-21
Lu-173	1.28E-17	3.83E-16	1.141E-016	2.736E-016	3.67E-16	1.11E-18	4.99E-16
Lu-174	8.12E-18	3.21E-16	7.456E-017	1.872E-016	2.78E-16	7.72E-19	3.51E-16
Lu-174m	3.95E-18	7.87E-17	3.12E-017	6.272E-017	7.51E-17	3.02E-19	1.34E-16
Lu-176	3.57E-17	1.53E-15	3.632E-016	1.005E-015	1.46E-15	3.57E-18	1.63E-15
Lu-176m	1.46E-18	2.41E-17	9.296E-018	2.016E-017	2.40E-17	8.85E-20	4.11E-17
Lu-177	2.55E-18	9.75E-17	2.544E-017	6.8E-017	9.47E-17	2.51E-19	1.14E-16
Lu-177m	7.42E-17	3.11E-15	7.456E-016	2.048E-015	2.95E-15	7.33E-18	3.35E-15
Lu-178	1.03E-17	5.19E-16	9.792E-017	2.752E-016	4.38E-16	1.05E-18	4.86E-16
Lu-178m	7.91E-17	3.45E-15	7.984E-016	2.208E-015	3.24E-15	7.84E-18	3.58E-15
Lu-179	2.82E-18	9.90E-17	2.384E-017	6.544E-017	9.45E-17	2.33E-19	1.09E-16
Lu-180	1.14E-16	6.13E-15	1.17E-015	3.328E-015	5.26E-15	1.24E-17	5.70E-15
Lu-181	4.45E-17	2.08E-15	4.432E-016	1.234E-015	1.88E-15	4.42E-18	2.03E-15
Mg-27	6.90E-17	3.60E-15	7.024E-016	1.984E-015	3.13E-15	7.20E-18	3.33E-15
Mg-28	1.02E-16	5.61E-15	1.048E-015	2.992E-015	4.77E-15	1.12E-17	5.15E-15
Mn-50m	3.52E-16	1.90E-14	3.616E-015	1.032E-014	1.63E-14	3.79E-17	1.75E-14
Mn-51	7.84E-17	3.74E-15	7.904E-016	2.224E-015	3.40E-15	7.77E-18	3.58E-15
Mn-52	2.60E-16	1.43E-14	2.688E-015	7.68E-015	1.22E-14	2.83E-17	1.31E-14
Mn-52m	1.82E-16	9.86E-15	1.872E-015	5.344E-015	8.47E-15	1.97E-17	9.10E-15
Mn-53	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Mn-54	6.39E-17	3.33E-15	6.56E-016	1.856E-015	2.92E-15	6.69E-18	3.08E-15
Mn-56	1.26E-16	7.23E-15	1.299E-015	3.744E-015	6.03E-15	1.43E-17	6.58E-15
Mn-57	8.95E-18	3.76E-16	8.096E-017	2.224E-016	3.37E-16	7.99E-19	3.73E-16
Mn-58m	1.81E-16	1.01E-14	1.856E-015	5.312E-015	8.50E-15	1.99E-17	9.18E-15
Mo-101	1.10E-16	6.09E-15	1.133E-015	3.248E-015	5.17E-15	1.22E-17	5.61E-15
Mo-102	1.68E-18	5.83E-17	1.456E-017	3.984E-017	5.64E-17	1.43E-19	6.65E-17
Mo-89	9.65E-17	4.73E-15	9.744E-016	2.752E-015	4.24E-15	9.70E-18	4.48E-15
Mo-90	6.21E-17	2.95E-15	6.32E-016	1.776E-015	2.68E-15	6.37E-18	2.92E-15
Mo-91	7.75E-17	3.70E-15	7.808E-016	2.192E-015	3.36E-15	7.67E-18	3.54E-15
Mo-91m	1.05E-16	5.58E-15	1.082E-015	3.072E-015	4.85E-15	1.12E-17	5.18E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Mo-93	1.99E-19	1.82E-19	1.824E-019	1.824E-019	1.82E-19	2.51E-21	1.07E-18
Mo-93m	1.73E-16	9.60E-15	1.776E-015	5.12E-015	8.16E-15	1.91E-17	8.82E-15
Mo-99	1.17E-17	5.63E-16	1.163E-016	3.264E-016	5.03E-16	1.17E-18	5.39E-16
N-13	7.92E-17	3.81E-15	8.048E-016	2.272E-015	3.47E-15	7.92E-18	3.65E-15
N-16	2.69E-16	2.23E-14	2.944E-015	8.592E-015	1.52E-14	4.58E-17	2.10E-14
Na-22	1.66E-16	8.84E-15	1.712E-015	4.864E-015	7.66E-15	1.78E-17	8.19E-15
Na-24	2.88E-16	1.88E-14	3.024E-015	8.88E-015	1.48E-14	3.67E-17	1.70E-14
Nb-87	9.55E-17	4.43E-15	9.632E-016	2.688E-015	4.06E-15	9.44E-18	4.35E-15
Nb-88	3.23E-16	1.67E-14	3.312E-015	9.36E-015	1.46E-14	3.38E-17	1.56E-14
Nb-88m	3.13E-16	1.65E-14	3.2E-015	9.12E-015	1.43E-14	3.32E-17	1.53E-14
Nb-89	1.03E-16	5.58E-15	1.053E-015	3.008E-015	4.76E-15	1.13E-17	5.20E-15
Nb-89m	1.02E-16	4.90E-15	1.03E-015	2.912E-015	4.44E-15	1.02E-17	4.68E-15
Nb-90	3.04E-16	1.82E-14	3.168E-015	9.168E-015	1.49E-14	3.60E-17	1.66E-14
Nb-91	2.90E-19	6.12E-18	1.398E-018	3.696E-018	5.58E-18	1.44E-20	6.56E-18
Nb-91m	2.03E-18	1.04E-16	1.936E-017	5.52E-017	8.81E-17	2.08E-19	9.61E-17
Nb-92	1.15E-16	5.91E-15	1.176E-015	3.328E-015	5.20E-15	1.19E-17	5.50E-15
Nb-92m	7.31E-17	3.90E-15	7.52E-016	2.128E-015	3.37E-15	7.76E-18	3.58E-15
Nb-93m	3.56E-20	3.26E-20	3.28E-020	3.248E-020	3.26E-20	4.50E-22	1.91E-19
Nb-94	1.19E-16	6.18E-15	1.227E-015	3.472E-015	5.43E-15	1.24E-17	5.74E-15
Nb-94m	4.74E-19	1.78E-17	3.584E-018	9.904E-018	1.55E-17	3.70E-20	1.70E-17
Nb-95	5.87E-17	3.02E-15	6.016E-016	1.696E-015	2.66E-15	6.09E-18	2.81E-15
Nb-95m	4.82E-18	2.04E-16	4.816E-017	1.347E-016	1.96E-16	4.77E-19	2.18E-16
Nb-96	1.88E-16	9.82E-15	1.936E-015	5.472E-015	8.58E-15	1.98E-17	9.11E-15
Nb-97	5.18E-17	2.58E-15	5.248E-016	1.483E-015	2.30E-15	5.25E-18	2.42E-15
Nb-98m	2.13E-16	1.16E-14	2.192E-015	6.256E-015	9.92E-15	2.30E-17	1.06E-14
Nb-99	1.44E-17	4.64E-16	1.325E-016	3.424E-016	4.56E-16	1.27E-18	5.82E-16
Nb-99m	5.60E-17	3.36E-15	5.744E-016	1.664E-015	2.71E-15	6.63E-18	3.07E-15
Nd-134	4.07E-17	1.81E-15	4.048E-016	1.122E-015	1.67E-15	4.02E-18	1.84E-15
Nd-135	9.73E-17	4.58E-15	9.776E-016	2.736E-015	4.16E-15	9.69E-18	4.46E-15
Nd-136	2.02E-17	8.37E-16	1.92E-016	5.12E-016	7.62E-16	1.91E-18	8.70E-16
Nd-137	8.87E-17	4.52E-15	8.976E-016	2.528E-015	3.96E-15	9.27E-18	4.27E-15
Nd-138	2.75E-18	5.86E-17	1.872E-017	4.096E-017	5.59E-17	1.82E-19	8.11E-17
Nd-139	3.38E-17	1.62E-15	3.36E-016	9.424E-016	1.45E-15	3.37E-18	1.55E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Nd-139m	1.19E-16	6.18E-15	1.214E-015	3.424E-015	5.37E-15	1.25E-17	5.78E-15
Nd-140	1.62E-18	9.60E-18	7.456E-018	9.568E-018	9.60E-18	7.06E-20	3.03E-17
Nd-141	5.26E-18	1.98E-16	4.48E-017	1.157E-016	1.75E-16	4.53E-19	2.06E-16
Nd-141m	5.34E-17	2.73E-15	5.472E-016	1.544E-015	2.41E-15	5.51E-18	2.54E-15
Nd-144	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Nd-147	1.04E-17	4.18E-16	9.888E-017	2.64E-016	3.86E-16	9.73E-19	4.45E-16
Nd-149	2.83E-17	1.24E-15	2.816E-016	7.776E-016	1.15E-15	2.78E-18	1.27E-15
Nd-151	6.46E-17	3.29E-15	6.56E-016	1.856E-015	2.87E-15	6.79E-18	3.13E-15
Nd-152	1.26E-17	5.50E-16	1.256E-016	3.52E-016	5.19E-16	1.24E-18	5.67E-16
Ne-19	8.02E-17	3.83E-15	8.096E-016	2.272E-015	3.48E-15	7.96E-18	3.66E-15
Ne-24	4.29E-17	2.03E-15	4.304E-016	1.21E-015	1.85E-15	4.23E-18	1.95E-15
Ni-56	1.30E-16	6.63E-15	1.339E-015	3.776E-015	5.86E-15	1.37E-17	6.29E-15
Ni-57	1.44E-16	8.11E-15	1.488E-015	4.272E-015	6.84E-15	1.61E-17	7.43E-15
Ni-59	1.20E-21	5.80E-20	1.222E-020	3.44E-020	5.27E-20	1.20E-22	5.55E-20
Ni-63	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Ni-65	4.22E-17	2.39E-15	4.32E-016	1.242E-015	2.00E-15	4.70E-18	2.17E-15
Ni-66	2.35E-21	3.02E-20	1.398E-020	2.64E-020	3.01E-20	2.25E-22	1.76E-19
Np-232	8.98E-17	4.47E-15	9.2E-016	2.576E-015	3.97E-15	9.32E-18	4.29E-15
Np-233	6.07E-18	1.95E-16	5.888E-017	1.491E-016	1.93E-16	5.83E-19	2.62E-16
Np-234	8.08E-17	4.60E-15	8.352E-016	2.4E-015	3.84E-15	9.16E-18	4.23E-15
Np-235	1.25E-19	1.21E-18	4.448E-019	9.792E-019	1.21E-18	4.71E-21	2.08E-18
Np-235+D	1.25E-19	1.21E-18	4.448E-019	9.792E-019	1.21E-18	4.71E-21	2.08E-18
Np-235+E	1.25E-19	1.21E-18	4.448E-019	9.792E-019	1.21E-18	4.71E-21	2.08E-18
Np-236	1.00E-17	3.34E-16	9.664E-017	2.496E-016	3.30E-16	9.57E-19	4.32E-16
Np-236m	3.36E-18	1.13E-16	3.248E-017	8.304E-017	1.10E-16	3.23E-19	1.46E-16
Np-237	1.80E-18	4.43E-17	1.486E-017	3.536E-017	4.41E-17	1.47E-19	6.57E-17
Np-237+D	1.79E-17	7.32E-16	1.776E-016	4.832E-016	6.95E-16	1.75E-18	7.97E-16
Np-237+E	1.79E-17	7.32E-16	1.776E-016	4.832E-016	6.95E-16	1.75E-18	7.97E-16
Np-238	4.44E-17	2.38E-15	4.544E-016	1.293E-015	2.05E-15	4.73E-18	2.18E-15
Np-239	1.28E-17	4.87E-16	1.278E-016	3.408E-016	4.72E-16	1.26E-18	5.72E-16
Np-240	7.94E-17	4.00E-15	8.096E-016	2.288E-015	3.54E-15	8.23E-18	3.79E-15
Np-240m	2.52E-17	1.25E-15	2.512E-016	7.088E-016	1.10E-15	2.54E-18	1.17E-15
Np-241	3.13E-18	9.81E-17	2.72E-017	7.072E-017	9.53E-17	2.68E-19	1.23E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Np-242	2.10E-17	1.13E-15	2.08E-016	5.952E-016	9.54E-16	2.24E-18	1.04E-15
Np-242m	6.97E-17	3.53E-15	7.072E-016	2E-015	3.11E-15	7.20E-18	3.32E-15
O-14	2.39E-16	1.44E-14	2.496E-015	7.232E-015	1.18E-14	2.85E-17	1.32E-14
O-15	7.98E-17	3.82E-15	8.064E-016	2.272E-015	3.47E-15	7.93E-18	3.66E-15
O-19	7.23E-17	3.87E-15	7.36E-016	2.096E-015	3.31E-15	7.84E-18	3.62E-15
Os-180	8.78E-18	3.12E-16	8.192E-017	2.064E-016	2.89E-16	8.07E-19	3.65E-16
Os-181	1.03E-16	5.34E-15	1.05E-015	2.96E-015	4.62E-15	1.10E-17	5.08E-15
Os-182	3.22E-17	1.39E-15	3.2E-016	8.752E-016	1.29E-15	3.16E-18	1.44E-15
Os-183	4.67E-17	2.04E-15	4.656E-016	1.262E-015	1.87E-15	4.62E-18	2.11E-15
Os-183m	7.53E-17	4.01E-15	7.712E-016	2.176E-015	3.44E-15	8.09E-18	3.73E-15
Os-185	5.26E-17	2.55E-15	5.328E-016	1.482E-015	2.28E-15	5.33E-18	2.45E-15
Os-186	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Os-189m	1.56E-21	5.07E-22	5.056E-022	5.072E-022	5.07E-22	1.26E-23	5.42E-21
Os-190m	1.21E-16	5.79E-15	1.24E-015	3.488E-015	5.29E-15	1.23E-17	5.63E-15
Os-191	5.57E-18	1.52E-16	5.168E-017	1.218E-016	1.51E-16	5.07E-19	2.26E-16
Os-191m	3.86E-19	7.07E-18	3.2E-018	6.432E-018	7.07E-18	3.10E-20	1.37E-17
Os-193	5.30E-18	2.11E-16	5.008E-017	1.354E-016	1.97E-16	4.92E-19	2.26E-16
Os-194	1.54E-19	1.32E-18	8.816E-019	1.306E-018	1.32E-18	8.34E-21	3.61E-18
Os-194+D	8.26E-18	3.54E-16	7.568E-017	2.112E-016	3.19E-16	7.49E-19	3.49E-16
Os-194+E	8.26E-18	3.54E-16	7.568E-017	2.112E-016	3.19E-16	7.49E-19	3.49E-16
Os-196	6.35E-18	2.58E-16	6.064E-017	1.648E-016	2.41E-16	5.96E-19	2.74E-16
P-30	8.11E-17	3.85E-15	8.16E-016	2.288E-015	3.50E-15	8.00E-18	3.69E-15
P-32	1.03E-18	8.07E-18	2.72E-018	5.76E-018	7.71E-18	1.79E-20	1.14E-17
P-33	2.48E-21	3.18E-20	1.475E-020	2.784E-020	3.17E-20	2.39E-22	1.86E-19
Pa-227	1.38E-18	3.59E-17	1.253E-017	2.944E-017	3.59E-17	1.23E-19	5.50E-17
Pa-228	1.02E-16	5.29E-15	1.045E-015	2.944E-015	4.60E-15	1.09E-17	5.00E-15
Pa-229	4.27E-18	1.24E-16	4.064E-017	9.952E-017	1.24E-16	4.02E-19	1.80E-16
Pa-230	5.01E-17	2.52E-15	5.12E-016	1.434E-015	2.21E-15	5.22E-18	2.40E-15
Pa-231	2.69E-18	1.09E-16	2.544E-017	7.024E-017	1.03E-16	2.51E-19	1.15E-16
Pa-232	7.10E-17	3.67E-15	7.28E-016	2.064E-015	3.22E-15	7.43E-18	3.43E-15
Pa-233	1.61E-17	6.88E-16	1.632E-016	4.48E-016	6.51E-16	1.60E-18	7.31E-16
Pa-234	1.10E-16	5.67E-15	1.131E-015	3.2E-015	4.97E-15	1.16E-17	5.36E-15
Pa-234m	2.45E-18	7.76E-17	1.648E-017	4.416E-017	6.79E-17	1.56E-19	7.61E-17

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Pa-235	5.97E-19	3.80E-18	1.309E-018	2.768E-018	3.67E-18	9.60E-21	6.32E-18
Pa-236	6.87E-17	3.79E-15	7.024E-016	2.016E-015	3.21E-15	7.56E-18	3.49E-15
Pa-237	4.74E-17	2.40E-15	4.8E-016	1.358E-015	2.12E-15	4.86E-18	2.24E-15
Pb-194	8.03E-17	4.17E-15	8.208E-016	2.32E-015	3.60E-15	8.62E-18	3.97E-15
Pb-195m	1.26E-16	6.17E-15	1.282E-015	3.6E-015	5.52E-15	1.29E-17	5.93E-15
Pb-196	3.67E-17	1.60E-15	3.696E-016	1.008E-015	1.48E-15	3.65E-18	1.67E-15
Pb-197	1.13E-16	6.17E-15	1.166E-015	3.312E-015	5.25E-15	1.25E-17	5.76E-15
Pb-197m	8.83E-17	4.29E-15	9.008E-016	2.528E-015	3.85E-15	9.08E-18	4.18E-15
Pb-198	3.24E-17	1.39E-15	3.264E-016	8.88E-016	1.30E-15	3.22E-18	1.47E-15
Pb-199	7.69E-17	4.09E-15	7.904E-016	2.24E-015	3.51E-15	8.37E-18	3.86E-15
Pb-200	1.46E-17	5.10E-16	1.429E-016	3.664E-016	4.94E-16	1.41E-18	6.35E-16
Pb-201	5.68E-17	2.71E-15	5.776E-016	1.6E-015	2.44E-15	5.82E-18	2.67E-15
Pb-201m	2.82E-17	1.35E-15	2.832E-016	7.92E-016	1.21E-15	2.82E-18	1.30E-15
Pb-202	7.43E-21	2.56E-21	2.56E-021	2.56E-021	2.56E-21	6.04E-23	2.60E-20
Pb-202+D	3.48E-17	1.55E-15	3.504E-016	9.616E-016	1.44E-15	3.44E-18	1.57E-15
Pb-202+E	3.48E-17	1.55E-15	3.504E-016	9.616E-016	1.44E-15	3.44E-18	1.57E-15
Pb-202m	1.52E-16	7.77E-15	1.562E-015	4.416E-015	6.86E-15	1.58E-17	7.29E-15
Pb-203	2.30E-17	9.38E-16	2.304E-016	6.24E-016	8.92E-16	2.26E-18	1.03E-15
Pb-204m	1.57E-16	8.16E-15	1.616E-015	4.576E-015	7.16E-15	1.65E-17	7.61E-15
Pb-205	7.53E-21	2.59E-21	2.592E-021	2.592E-021	2.59E-21	6.13E-23	2.64E-20
Pb-209	4.84E-20	4.60E-19	1.578E-019	3.568E-019	4.53E-19	1.99E-21	1.46E-18
Pb-210	1.47E-19	1.27E-18	8.16E-019	1.256E-018	1.27E-18	7.78E-21	3.37E-18
Pb-211	5.48E-18	2.49E-16	5.168E-017	1.446E-016	2.23E-16	5.15E-19	2.39E-16
Pb-212	1.06E-17	4.25E-16	1.064E-016	2.88E-016	4.09E-16	1.05E-18	4.77E-16
Pb-214	1.91E-17	8.51E-16	1.936E-016	5.392E-016	7.97E-16	1.91E-18	8.73E-16
Pd-100	7.47E-18	1.73E-16	6.304E-017	1.443E-016	1.73E-16	6.21E-19	2.77E-16
Pd-101	2.55E-17	1.24E-15	2.544E-016	7.2E-016	1.11E-15	2.58E-18	1.19E-15
Pd-103	4.12E-19	9.71E-19	6.704E-019	8.256E-019	9.46E-19	7.85E-21	3.37E-18
Pd-107	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Pd-109	8.71E-19	1.09E-17	3.744E-018	8.352E-018	1.06E-17	3.68E-20	1.78E-17
Pd-109m	7.94E-18	3.22E-16	7.984E-017	2.208E-016	3.13E-16	7.92E-19	3.60E-16
Pd-111	4.88E-18	2.03E-16	4.112E-017	1.141E-016	1.78E-16	4.11E-19	1.93E-16
Pd-112	1.17E-19	1.62E-19	1.434E-019	1.573E-019	1.62E-19	1.90E-21	9.01E-19

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Pd-114	2.62E-18	8.51E-17	2.112E-017	5.728E-017	8.16E-17	2.04E-19	9.52E-17
Pd-96	1.09E-16	5.51E-15	1.117E-015	3.152E-015	4.88E-15	1.13E-17	5.22E-15
Pd-97	1.78E-16	9.72E-15	1.824E-015	5.232E-015	8.29E-15	1.96E-17	9.03E-15
Pd-98	3.04E-17	1.41E-15	3.056E-016	8.448E-016	1.27E-15	3.07E-18	1.41E-15
Pd-99	9.64E-17	4.96E-15	9.856E-016	2.784E-015	4.34E-15	1.02E-17	4.72E-15
Pm-136	2.12E-16	1.05E-14	2.16E-015	6.096E-015	9.38E-15	2.15E-17	9.92E-15
Pm-137m	1.37E-16	6.57E-15	1.386E-015	3.888E-015	5.92E-15	1.38E-17	6.37E-15
Pm-139	7.33E-17	3.55E-15	7.392E-016	2.08E-015	3.20E-15	7.36E-18	3.40E-15
Pm-140	8.42E-17	4.06E-15	8.48E-016	2.384E-015	3.66E-15	8.34E-18	3.86E-15
Pm-140m	2.33E-16	1.19E-14	2.384E-015	6.72E-015	1.05E-14	2.41E-17	1.11E-14
Pm-141	5.66E-17	2.82E-15	5.696E-016	1.616E-015	2.49E-15	5.78E-18	2.66E-15
Pm-142	6.77E-17	3.26E-15	6.8E-016	1.92E-015	2.94E-15	6.73E-18	3.11E-15
Pm-143	2.37E-17	1.14E-15	2.336E-016	6.48E-016	1.00E-15	2.35E-18	1.08E-15
Pm-144	1.20E-16	5.91E-15	1.216E-015	3.424E-015	5.29E-15	1.21E-17	5.58E-15
Pm-145	1.83E-18	1.35E-17	9.344E-018	1.322E-017	1.35E-17	8.87E-20	3.83E-17
Pm-146	5.74E-17	2.80E-15	5.808E-016	1.632E-015	2.51E-15	5.79E-18	2.67E-15
Pm-147	1.93E-21	2.76E-20	1.187E-020	2.352E-020	2.75E-20	1.70E-22	1.23E-19
Pm-148	4.40E-17	2.40E-15	4.48E-016	1.282E-015	2.04E-15	4.76E-18	2.20E-15
Pm-148m	1.53E-16	7.66E-15	1.566E-015	4.416E-015	6.84E-15	1.57E-17	7.22E-15
Pm-149	1.25E-18	4.37E-17	9.888E-018	2.736E-017	4.07E-17	9.70E-20	4.58E-17
Pm-150	1.11E-16	6.05E-15	1.139E-015	3.264E-015	5.17E-15	1.21E-17	5.59E-15
Pm-151	2.49E-17	1.12E-15	2.496E-016	6.928E-016	1.04E-15	2.47E-18	1.13E-15
Pm-152	2.34E-17	1.17E-15	2.288E-016	6.432E-016	1.01E-15	2.38E-18	1.10E-15
Pm-152m	1.14E-16	5.99E-15	1.17E-015	3.312E-015	5.19E-15	1.23E-17	5.65E-15
Pm-153	6.31E-18	1.89E-16	5.296E-017	1.352E-016	1.84E-16	5.14E-19	2.35E-16
Pm-154	1.31E-16	7.74E-15	1.357E-015	3.92E-015	6.36E-15	1.52E-17	7.05E-15
Pm-154m	1.34E-16	7.35E-15	1.376E-015	3.936E-015	6.25E-15	1.48E-17	6.82E-15
Po-203	1.22E-16	6.50E-15	1.256E-015	3.552E-015	5.59E-15	1.32E-17	6.08E-15
Po-204	8.69E-17	4.24E-15	8.848E-016	2.464E-015	3.76E-15	8.99E-18	4.13E-15
Po-205	1.19E-16	6.31E-15	1.218E-015	3.456E-015	5.43E-15	1.28E-17	5.89E-15
Po-206	8.97E-17	4.46E-15	9.152E-016	2.56E-015	3.95E-15	9.30E-18	4.28E-15
Po-207	9.67E-17	5.02E-15	9.92E-016	2.784E-015	4.36E-15	1.02E-17	4.72E-15
Po-208	1.61E-21	7.63E-20	1.632E-020	4.544E-020	6.89E-20	1.63E-22	7.48E-20

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
Po-209	4.64E-19	2.27E-17	4.736E-018	1.323E-017	2.02E-17	4.80E-20	2.21E-17
Po-210	7.45E-22	3.86E-20	7.664E-021	2.176E-020	3.39E-20	7.77E-23	3.58E-20
Po-211	6.26E-19	3.22E-17	6.416E-018	1.808E-017	2.84E-17	6.50E-20	3.00E-17
Po-212	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Po-212m	5.51E-18	3.60E-16	5.792E-017	1.696E-016	2.83E-16	7.05E-19	3.25E-16
Po-213	2.88E-21	1.48E-19	2.96E-020	8.336E-020	1.30E-19	2.99E-22	1.38E-19
Po-214	6.36E-21	3.30E-19	6.528E-020	1.84E-019	2.89E-19	6.63E-22	3.06E-19
Po-215	1.36E-20	6.41E-19	1.386E-019	3.888E-019	5.90E-19	1.36E-21	6.24E-19
Po-216	1.17E-21	6.08E-20	1.205E-020	3.408E-020	5.34E-20	1.22E-22	5.64E-20
Po-218	4.54E-25	5.86E-24	2.704E-024	5.12E-024	5.84E-24	4.33E-26	3.38E-23
Pr-134	2.41E-16	1.22E-14	2.464E-015	6.96E-015	1.08E-14	2.50E-17	1.15E-14
Pr-134m	1.76E-16	9.27E-15	1.792E-015	5.12E-015	8.04E-15	1.88E-17	8.66E-15
Pr-135	6.69E-17	3.20E-15	6.704E-016	1.872E-015	2.88E-15	6.72E-18	3.09E-15
Pr-136	1.62E-16	8.55E-15	1.664E-015	4.72E-015	7.42E-15	1.73E-17	7.98E-15
Pr-137	2.81E-17	1.34E-15	2.784E-016	7.792E-016	1.20E-15	2.80E-18	1.29E-15
Pr-138	6.45E-17	3.07E-15	6.48E-016	1.824E-015	2.78E-15	6.36E-18	2.94E-15
Pr-138m	1.88E-16	9.72E-15	1.92E-015	5.456E-015	8.52E-15	1.97E-17	9.09E-15
Pr-139	9.41E-18	4.07E-16	8.768E-017	2.384E-016	3.64E-16	8.80E-19	4.03E-16
Pr-140	4.27E-17	2.01E-15	4.256E-016	1.194E-015	1.82E-15	4.19E-18	1.93E-15
Pr-142	5.45E-18	2.68E-16	4.816E-017	1.371E-016	2.21E-16	5.23E-19	2.46E-16
Pr-142m	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Pr-143	2.49E-19	1.40E-18	4.8E-019	1.054E-018	1.37E-18	4.56E-21	3.18E-18
Pr-144	4.00E-18	1.53E-16	3.04E-017	8.208E-017	1.29E-16	2.98E-19	1.44E-16
Pr-144m	7.60E-19	1.06E-17	4.208E-018	7.424E-018	9.58E-18	4.14E-20	1.82E-17
Pr-145	2.40E-18	8.11E-17	1.712E-017	4.64E-017	7.14E-17	1.65E-19	7.92E-17
Pr-146	7.69E-17	4.26E-15	7.856E-016	2.256E-015	3.59E-15	8.47E-18	3.92E-15
Pr-147	3.74E-17	1.75E-15	3.632E-016	1.006E-015	1.55E-15	3.71E-18	1.71E-15
Pr-148	7.62E-17	4.11E-15	7.76E-016	2.224E-015	3.51E-15	8.25E-18	3.82E-15
Pr-148m	7.38E-17	3.56E-15	7.44E-016	2.096E-015	3.21E-15	7.41E-18	3.42E-15
Pt-184	5.34E-17	2.24E-15	5.312E-016	1.426E-015	2.08E-15	5.24E-18	2.39E-15
Pt-186	5.17E-17	2.44E-15	5.216E-016	1.44E-015	2.19E-15	5.20E-18	2.39E-15
Pt-187	4.59E-17	2.08E-15	4.592E-016	1.253E-015	1.88E-15	4.62E-18	2.12E-15
Pt-188	1.46E-17	5.27E-16	1.413E-016	3.648E-016	5.04E-16	1.39E-18	6.28E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Pt-189	3.59E-17	1.60E-15	3.568E-016	9.664E-016	1.44E-15	3.58E-18	1.64E-15
Pt-190	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Pt-191	2.14E-17	8.29E-16	2.08E-016	5.424E-016	7.73E-16	2.04E-18	9.29E-16
Pt-193	4.51E-21	1.64E-21	1.648E-021	1.648E-021	1.64E-21	3.69E-23	1.60E-20
Pt-193m	6.99E-19	1.42E-17	6.016E-018	1.258E-017	1.41E-17	5.87E-20	2.61E-17
Pt-195m	4.81E-18	1.09E-16	4.256E-017	9.328E-017	1.09E-16	4.16E-19	1.85E-16
Pt-197	1.70E-18	4.91E-17	1.576E-017	3.808E-017	4.84E-17	1.55E-19	7.01E-17
Pt-197m	5.74E-18	2.04E-16	5.504E-017	1.405E-016	1.94E-16	5.39E-19	2.45E-16
Pt-199	1.59E-17	7.34E-16	1.571E-016	4.4E-016	6.68E-16	1.55E-18	7.16E-16
Pt-200	4.16E-18	1.35E-16	3.952E-017	9.904E-017	1.31E-16	3.89E-19	1.76E-16
Pt-202	9.47E-19	7.60E-18	2.56E-018	5.408E-018	7.26E-18	1.68E-20	1.07E-17
Pt-202+D	1.56E-17	7.20E-16	1.435E-016	4.016E-016	6.27E-16	1.45E-18	6.77E-16
Pt-202+E	1.56E-17	7.20E-16	1.435E-016	4.016E-016	6.27E-16	1.45E-18	6.77E-16
Pu-232	4.16E-18	1.28E-16	4.032E-017	1.01E-016	1.28E-16	3.98E-19	1.79E-16
Pu-234	4.51E-18	1.39E-16	4.352E-017	1.091E-016	1.38E-16	4.31E-19	1.93E-16
Pu-235	6.24E-18	2.04E-16	6.016E-017	1.525E-016	1.99E-16	5.97E-19	2.69E-16
Pu-236	3.57E-20	9.78E-20	5.68E-020	8.48E-020	9.65E-20	6.70E-22	2.90E-19
Pu-237	3.30E-18	9.78E-17	3.12E-017	7.728E-017	9.77E-17	3.08E-19	1.38E-16
Pu-238	3.15E-20	5.92E-20	4.112E-020	5.392E-020	5.88E-20	5.10E-22	2.19E-19
Pu-239	1.76E-20	1.79E-19	5.888E-020	1.294E-019	1.72E-19	6.21E-22	2.76E-19
Pu-239+D	1.76E-20	1.79E-19	5.888E-020	1.294E-019	1.72E-19	6.21E-22	2.76E-19
Pu-239+E	1.76E-20	1.79E-19	5.888E-020	1.294E-019	1.72E-19	6.21E-22	2.76E-19
Pu-240	3.00E-20	6.10E-20	4.096E-020	5.504E-020	6.03E-20	5.02E-22	2.16E-19
Pu-241	1.11E-22	3.48E-21	1.069E-021	2.704E-021	3.46E-21	1.06E-23	4.76E-21
Pu-242	3.11E-20	3.73E-19	9.072E-020	2.08E-019	3.15E-19	1.06E-21	4.76E-19
Pu-243	1.71E-18	4.73E-17	1.57E-017	3.744E-017	4.66E-17	1.55E-19	6.96E-17
Pu-244	1.47E-18	8.45E-17	1.498E-017	4.32E-017	6.96E-17	1.69E-19	7.79E-17
Pu-244+D	2.71E-17	1.35E-15	2.704E-016	7.616E-016	1.18E-15	2.75E-18	1.26E-15
Pu-244+E	2.71E-17	1.35E-15	2.704E-016	7.616E-016	1.18E-15	2.75E-18	1.26E-15
Pu-245	3.06E-17	1.48E-15	3.12E-016	8.736E-016	1.33E-15	3.12E-18	1.44E-15
Pu-246	9.81E-18	3.50E-16	9.472E-017	2.496E-016	3.42E-16	9.35E-19	4.23E-16
Ra-219	1.27E-17	5.65E-16	1.296E-016	3.6E-016	5.30E-16	1.28E-18	5.84E-16
Ra-219+D	1.27E-17	5.65E-16	1.296E-016	3.6E-016	5.30E-16	1.28E-18	5.84E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Ra-219+E	1.27E-17	5.65E-16	1.296E-016	3.6E-016	5.30E-16	1.28E-18	5.84E-16
Ra-220	3.60E-19	1.71E-17	3.664E-018	1.034E-017	1.57E-17	3.61E-20	1.66E-17
Ra-221	2.58E-18	9.07E-17	2.544E-017	6.656E-017	8.91E-17	2.52E-19	1.14E-16
Ra-221+D	2.58E-18	9.08E-17	2.544E-017	6.672E-017	8.92E-17	2.52E-19	1.14E-16
Ra-221+E	2.58E-18	9.08E-17	2.544E-017	6.672E-017	8.92E-17	2.52E-19	1.14E-16
Ra-222	6.97E-19	3.18E-17	7.136E-018	2.016E-017	2.99E-17	7.01E-20	3.21E-17
Ra-223	1.01E-17	3.90E-16	1.006E-016	2.672E-016	3.74E-16	9.91E-19	4.50E-16
Ra-223+D	1.45E-17	5.92E-16	1.461E-016	3.952E-016	5.64E-16	1.44E-18	6.55E-16
Ra-223+E	1.45E-17	5.92E-16	1.461E-016	3.952E-016	5.64E-16	1.44E-18	6.55E-16
Ra-224	7.72E-19	3.35E-17	7.904E-018	2.208E-017	3.20E-17	7.81E-20	3.57E-17
Ra-224+D	8.22E-19	3.59E-17	8.416E-018	2.352E-017	3.42E-17	8.31E-20	3.80E-17
Ra-224+E	8.22E-19	3.59E-17	8.416E-018	2.352E-017	3.42E-17	8.31E-20	3.80E-17
Ra-225	7.57E-19	5.23E-18	3.808E-018	5.2E-018	5.22E-18	3.63E-20	1.58E-17
Ra-226	5.35E-19	2.14E-17	5.424E-018	1.483E-017	2.08E-17	5.37E-20	2.44E-17
Ra-226+D	1.30E-16	7.17E-15	1.336E-015	3.824E-015	6.08E-15	1.44E-17	6.63E-15
Ra-226+E	1.30E-16	7.17E-15	1.336E-015	3.824E-015	6.08E-15	1.44E-17	6.63E-15
Ra-227	1.12E-17	4.80E-16	1.083E-016	3.008E-016	4.46E-16	1.07E-18	4.90E-16
Ra-228	3.80E-20	2.94E-20	2.96E-020	2.944E-020	2.94E-20	4.30E-22	1.84E-19
Ra-228+D	6.55E-17	3.46E-15	6.704E-016	1.904E-015	3.00E-15	6.98E-18	3.22E-15
Ra-228+E	6.55E-17	3.46E-15	6.704E-016	1.904E-015	3.00E-15	6.98E-18	3.22E-15
Ra-230	5.79E-18	2.32E-16	5.712E-017	1.534E-016	2.19E-16	5.63E-19	2.57E-16
Rb-77	1.20E-16	5.84E-15	1.216E-015	3.408E-015	5.23E-15	1.22E-17	5.61E-15
Rb-78	2.90E-16	1.79E-14	3.024E-015	8.768E-015	1.43E-14	3.58E-17	1.65E-14
Rb-78m	2.42E-16	1.31E-14	2.496E-015	7.104E-015	1.12E-14	2.64E-17	1.22E-14
Rb-79	1.12E-16	5.38E-15	1.134E-015	3.184E-015	4.87E-15	1.13E-17	5.19E-15
Rb-80	9.52E-17	4.55E-15	9.6E-016	2.688E-015	4.12E-15	9.40E-18	4.34E-15
Rb-81	3.88E-17	1.88E-15	3.952E-016	1.115E-015	1.71E-15	3.92E-18	1.80E-15
Rb-81m	1.88E-18	8.42E-17	1.824E-017	5.008E-017	7.54E-17	1.85E-19	8.49E-17
Rb-82	8.76E-17	4.21E-15	8.832E-016	2.48E-015	3.81E-15	8.71E-18	4.02E-15
Rb-82m	2.22E-16	1.17E-14	2.288E-015	6.48E-015	1.02E-14	2.35E-17	1.08E-14
Rb-83	3.74E-17	1.82E-15	3.808E-016	1.075E-015	1.65E-15	3.76E-18	1.73E-15
Rb-84	6.93E-17	3.56E-15	7.088E-016	2E-015	3.13E-15	7.20E-18	3.32E-15
Rb-84m	2.88E-17	1.31E-15	2.96E-016	8.304E-016	1.23E-15	2.91E-18	1.33E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Rb-86	7.99E-18	3.93E-16	7.536E-017	2.128E-016	3.37E-16	7.80E-19	3.63E-16
Rb-86m	4.21E-17	2.07E-15	4.304E-016	1.214E-015	1.87E-15	4.26E-18	1.96E-15
Rb-87	5.53E-21	8.67E-20	3.648E-020	7.36E-020	8.64E-20	5.93E-22	4.62E-19
Rb-88	4.94E-17	2.92E-15	5.04E-016	1.453E-015	2.37E-15	5.67E-18	2.64E-15
Rb-89	1.65E-16	9.71E-15	1.712E-015	4.928E-015	8.00E-15	1.91E-17	8.82E-15
Rb-90	1.39E-16	9.50E-15	1.469E-015	4.272E-015	7.21E-15	1.88E-17	8.69E-15
Rb-90m	2.31E-16	1.44E-14	2.416E-015	6.992E-015	1.15E-14	2.85E-17	1.32E-14
Re-178	1.24E-16	7.02E-15	1.278E-015	3.648E-015	5.83E-15	1.43E-17	6.58E-15
Re-179	8.05E-17	4.08E-15	8.208E-016	2.304E-015	3.58E-15	8.55E-18	3.93E-15
Re-180	9.09E-17	4.63E-15	9.248E-016	2.592E-015	4.04E-15	9.48E-18	4.37E-15
Re-181	6.03E-17	2.84E-15	6.08E-016	1.68E-015	2.56E-15	6.11E-18	2.80E-15
Re-182	1.33E-16	6.71E-15	1.354E-015	3.776E-015	5.84E-15	1.41E-17	6.50E-15
Re-182m	9.01E-17	4.78E-15	9.2E-016	2.576E-015	4.07E-15	9.77E-18	4.50E-15
Re-183	1.07E-17	3.04E-16	9.712E-017	2.304E-016	2.97E-16	9.49E-19	4.25E-16
Re-184	6.73E-17	3.37E-15	6.848E-016	1.904E-015	2.96E-15	6.96E-18	3.20E-15
Re-184m	2.82E-17	1.27E-15	2.816E-016	7.68E-016	1.15E-15	2.84E-18	1.30E-15
Re-186	1.73E-18	4.69E-17	1.435E-017	3.552E-017	4.63E-17	1.41E-19	6.45E-17
Re-186m	9.78E-19	1.55E-17	7.488E-018	1.418E-017	1.55E-17	7.19E-20	3.16E-17
Re-186m+D	2.71E-18	6.24E-17	2.176E-017	4.976E-017	6.18E-17	2.13E-19	9.61E-17
Re-186m+E	2.71E-18	6.24E-17	2.176E-017	4.976E-017	6.18E-17	2.13E-19	9.61E-17
Re-187	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Re-188	5.67E-18	2.16E-16	4.96E-017	1.342E-016	1.98E-16	4.87E-19	2.26E-16
Re-188m	4.59E-18	9.80E-17	3.968E-017	8.48E-017	9.79E-17	3.86E-19	1.71E-16
Re-189	4.34E-18	1.75E-16	4.192E-017	1.152E-016	1.66E-16	4.13E-19	1.90E-16
Re-190	1.03E-16	5.00E-15	1.046E-015	2.944E-015	4.50E-15	1.05E-17	4.81E-15
Re-190m	7.08E-17	3.37E-15	7.168E-016	2E-015	3.05E-15	7.14E-18	3.28E-15
Rh-100	2.00E-16	1.17E-14	2.064E-015	5.984E-015	9.67E-15	2.31E-17	1.07E-14
Rh-100m	3.84E-18	1.60E-16	3.36E-017	9.12E-017	1.40E-16	3.51E-19	1.61E-16
Rh-101	2.04E-17	8.14E-16	2.048E-016	5.6E-016	7.89E-16	2.03E-18	9.22E-16
Rh-101m	2.11E-17	9.53E-16	2.144E-016	6.016E-016	8.95E-16	2.10E-18	9.65E-16
Rh-102	3.86E-17	1.88E-15	3.92E-016	1.104E-015	1.69E-15	3.89E-18	1.79E-15
Rh-102m	1.64E-16	8.37E-15	1.68E-015	4.752E-015	7.40E-15	1.70E-17	7.84E-15
Rh-103m	4.46E-20	7.41E-20	7.088E-020	7.408E-020	7.41E-20	8.25E-22	3.52E-19

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Rh-104	2.48E-18	6.50E-17	1.539E-017	3.968E-017	5.92E-17	1.32E-19	6.58E-17
Rh-104m	2.42E-18	3.28E-17	1.587E-017	2.912E-017	3.25E-17	1.53E-19	6.71E-17
Rh-105	5.88E-18	2.68E-16	6.016E-017	1.696E-016	2.52E-16	5.92E-19	2.72E-16
Rh-106	1.81E-17	8.32E-16	1.728E-016	4.832E-016	7.44E-16	1.69E-18	7.88E-16
Rh-106m	2.16E-16	1.14E-14	2.224E-015	6.336E-015	9.95E-15	2.30E-17	1.06E-14
Rh-107	2.43E-17	1.10E-15	2.448E-016	6.896E-016	1.03E-15	2.41E-18	1.10E-15
Rh-108	2.74E-17	1.25E-15	2.672E-016	7.456E-016	1.14E-15	2.58E-18	1.20E-15
Rh-109	2.40E-17	1.04E-15	2.352E-016	6.576E-016	9.75E-16	2.30E-18	1.06E-15
Rh-94	2.86E-16	1.57E-14	2.944E-015	8.416E-015	1.34E-14	3.12E-17	1.44E-14
Rh-95	1.92E-16	1.05E-14	1.968E-015	5.648E-015	8.97E-15	2.11E-17	9.72E-15
Rh-95m	6.55E-17	3.71E-15	6.768E-016	1.936E-015	3.10E-15	7.51E-18	3.46E-15
Rh-96	2.99E-16	1.57E-14	3.072E-015	8.704E-015	1.37E-14	3.16E-17	1.46E-14
Rh-96m	9.65E-17	5.24E-15	9.904E-016	2.832E-015	4.48E-15	1.05E-17	4.84E-15
Rh-97	1.10E-16	5.60E-15	1.125E-015	3.184E-015	4.95E-15	1.15E-17	5.29E-15
Rh-97m	1.59E-16	9.41E-15	1.648E-015	4.768E-015	7.73E-15	1.87E-17	8.62E-15
Rh-98	1.40E-16	7.06E-15	1.427E-015	4.032E-015	6.26E-15	1.44E-17	6.65E-15
Rh-99	4.19E-17	1.98E-15	4.224E-016	1.186E-015	1.80E-15	4.22E-18	1.94E-15
Rh-99m	4.89E-17	2.43E-15	4.992E-016	1.411E-015	2.17E-15	5.04E-18	2.32E-15
Rn-207	7.50E-17	3.66E-15	7.648E-016	2.144E-015	3.28E-15	7.67E-18	3.53E-15
Rn-209	8.93E-17	4.63E-15	9.152E-016	2.592E-015	4.03E-15	9.55E-18	4.39E-15
Rn-210	4.60E-18	2.24E-16	4.688E-017	1.309E-016	2.00E-16	4.71E-19	2.17E-16
Rn-211	1.41E-16	7.46E-15	1.448E-015	4.112E-015	6.46E-15	1.51E-17	6.95E-15
Rn-212	2.60E-20	1.32E-18	2.672E-019	7.536E-019	1.17E-18	2.67E-21	1.23E-18
Rn-215	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Rn-216	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Rn-217	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Rn-218	5.83E-20	2.90E-18	5.968E-019	1.68E-018	2.60E-18	5.93E-21	2.73E-18
Rn-219	4.43E-18	2.01E-16	4.528E-017	1.272E-016	1.89E-16	4.45E-19	2.04E-16
Rn-219+D	4.44E-18	2.02E-16	4.544E-017	1.275E-016	1.90E-16	4.46E-19	2.05E-16
Rn-219+E	4.44E-18	2.02E-16	4.544E-017	1.275E-016	1.90E-16	4.46E-19	2.05E-16
Rn-220	4.84E-20	2.37E-18	4.944E-019	1.395E-018	2.14E-18	4.89E-21	2.25E-18
Rn-222	3.00E-20	1.45E-18	3.056E-019	8.624E-019	1.32E-18	3.01E-21	1.39E-18
Rn-222+D	3.00E-20	1.45E-18	3.056E-019	8.624E-019	1.32E-18	3.01E-21	1.39E-18

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Rn-222+E	3.00E-20	1.45E-18	3.056E-019	8.624E-019	1.32E-18	3.01E-21	1.39E-18
Rn-223	2.65E-17	1.27E-15	2.64E-016	7.376E-016	1.13E-15	2.66E-18	1.23E-15
Ru-103	3.82E-17	1.84E-15	3.904E-016	1.099E-015	1.68E-15	3.85E-18	1.77E-15
Ru-105	5.77E-17	2.86E-15	5.872E-016	1.648E-015	2.55E-15	5.87E-18	2.71E-15
Ru-106	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Ru-106+D	1.81E-17	8.32E-16	1.728E-016	4.832E-016	7.44E-16	1.69E-18	7.88E-16
Ru-106+E	1.81E-17	8.32E-16	1.728E-016	4.832E-016	7.44E-16	1.69E-18	7.88E-16
Ru-107	2.77E-17	1.39E-15	2.752E-016	7.76E-016	1.21E-15	2.82E-18	1.31E-15
Ru-108	5.06E-18	1.76E-16	4.64E-017	1.25E-016	1.72E-16	4.57E-19	2.09E-16
Ru-92	1.56E-16	7.81E-15	1.586E-015	4.48E-015	6.91E-15	1.64E-17	7.55E-15
Ru-94	3.90E-17	1.91E-15	3.984E-016	1.123E-015	1.72E-15	3.98E-18	1.83E-15
Ru-95	9.31E-17	4.89E-15	9.568E-016	2.72E-015	4.26E-15	9.92E-18	4.57E-15
Ru-97	1.73E-17	7.41E-16	1.744E-016	4.88E-016	7.09E-16	1.73E-18	7.89E-16
S-35	8.65E-22	7.47E-21	4.176E-021	6.928E-021	7.47E-21	5.64E-23	4.23E-20
S-37	1.96E-16	1.39E-14	2.08E-015	6.144E-015	1.05E-14	2.72E-17	1.25E-14
S-38	1.21E-16	7.67E-15	1.262E-015	3.696E-015	6.13E-15	1.49E-17	6.89E-15
Sb-111	1.16E-16	5.56E-15	1.17E-015	3.28E-015	5.02E-15	1.16E-17	5.35E-15
Sb-113	9.81E-17	4.76E-15	9.952E-016	2.8E-015	4.30E-15	9.87E-18	4.55E-15
Sb-114	2.04E-16	1.10E-14	2.096E-015	5.968E-015	9.46E-15	2.20E-17	1.02E-14
Sb-115	6.83E-17	3.29E-15	6.912E-016	1.952E-015	2.98E-15	6.84E-18	3.15E-15
Sb-116	1.70E-16	9.47E-15	1.744E-015	5.024E-015	8.01E-15	1.88E-17	8.69E-15
Sb-116m	2.33E-16	1.25E-14	2.4E-015	6.8E-015	1.07E-14	2.51E-17	1.15E-14
Sb-117	1.30E-17	5.00E-16	1.258E-016	3.408E-016	4.81E-16	1.25E-18	5.68E-16
Sb-118	6.30E-17	3.02E-15	6.336E-016	1.792E-015	2.74E-15	6.26E-18	2.89E-15
Sb-118m	1.95E-16	1.05E-14	2E-015	5.696E-015	9.02E-15	2.11E-17	9.73E-15
Sb-119	9.11E-19	2.20E-18	2.144E-018	2.208E-018	2.20E-18	2.22E-20	9.46E-18
Sb-120	3.49E-17	1.66E-15	3.488E-016	9.808E-016	1.50E-15	3.45E-18	1.59E-15
Sb-120m	1.84E-16	9.81E-15	1.888E-015	5.36E-015	8.44E-15	1.98E-17	9.14E-15
Sb-122	3.50E-17	1.70E-15	3.52E-016	9.936E-016	1.53E-15	3.50E-18	1.61E-15
Sb-122m	4.28E-18	6.56E-17	3.072E-017	5.968E-017	6.56E-17	2.98E-19	1.31E-16
Sb-124	1.38E-16	7.76E-15	1.426E-015	4.096E-015	6.56E-15	1.54E-17	7.11E-15
Sb-124m	3.40E-17	1.68E-15	3.472E-016	9.792E-016	1.51E-15	3.44E-18	1.59E-15
Sb-124n	3.34E-23	8.25E-23	8.08E-023	8.272E-023	8.25E-23	8.30E-25	3.53E-22

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Sb-125	3.31E-17	1.57E-15	3.328E-016	9.36E-016	1.43E-15	3.30E-18	1.52E-15
Sb-126	2.12E-16	1.07E-14	2.176E-015	6.128E-015	9.50E-15	2.17E-17	1.00E-14
Sb-126m	1.20E-16	5.94E-15	1.221E-015	3.44E-015	5.32E-15	1.22E-17	5.61E-15
Sb-127	5.35E-17	2.65E-15	5.456E-016	1.536E-015	2.37E-15	5.44E-18	2.51E-15
Sb-128	2.37E-16	1.21E-14	2.432E-015	6.88E-015	1.07E-14	2.45E-17	1.13E-14
Sb-128m	1.48E-16	7.41E-15	1.504E-015	4.24E-015	6.59E-15	1.51E-17	6.98E-15
Sb-129	1.10E-16	5.97E-15	1.136E-015	3.232E-015	5.13E-15	1.19E-17	5.50E-15
Sb-130	2.49E-16	1.29E-14	2.56E-015	7.248E-015	1.13E-14	2.62E-17	1.21E-14
Sb-130m	2.07E-16	1.09E-14	2.128E-015	6.016E-015	9.46E-15	2.19E-17	1.01E-14
Sb-131	1.55E-16	8.67E-15	1.6E-015	4.592E-015	7.33E-15	1.72E-17	7.94E-15
Sb-133	2.02E-16	1.18E-14	2.08E-015	6.032E-015	9.77E-15	2.33E-17	1.08E-14
Sc-42m	3.17E-16	1.73E-14	3.264E-015	9.328E-015	1.48E-14	3.45E-17	1.59E-14
Sc-43	7.63E-17	3.66E-15	7.76E-016	2.192E-015	3.33E-15	7.63E-18	3.51E-15
Sc-44	1.63E-16	8.52E-15	1.664E-015	4.752E-015	7.44E-15	1.72E-17	7.93E-15
Sc-44m	2.07E-17	9.57E-16	2.128E-016	6E-016	8.93E-16	2.11E-18	9.69E-16
Sc-46	1.52E-16	8.25E-15	1.57E-015	4.464E-015	7.09E-15	1.64E-17	7.56E-15
Sc-47	7.96E-18	3.11E-16	8.112E-017	2.208E-016	3.05E-16	8.04E-19	3.65E-16
Sc-48	2.52E-16	1.40E-14	2.608E-015	7.44E-015	1.19E-14	2.76E-17	1.27E-14
Sc-49	1.33E-18	1.63E-17	4.624E-018	1.046E-017	1.48E-17	3.33E-20	1.93E-17
Sc-50	2.40E-16	1.36E-14	2.48E-015	7.12E-015	1.14E-14	2.67E-17	1.24E-14
Se-70	5.47E-17	2.56E-15	5.52E-016	1.546E-015	2.34E-15	5.45E-18	2.50E-15
Se-71	1.25E-16	6.19E-15	1.266E-015	3.568E-015	5.51E-15	1.27E-17	5.88E-15
Se-72	1.73E-18	1.65E-17	1.069E-017	1.632E-017	1.65E-17	1.01E-19	4.37E-17
Se-73	8.39E-17	3.90E-15	8.464E-016	2.368E-015	3.57E-15	8.34E-18	3.83E-15
Se-73m	2.03E-17	9.73E-16	2.064E-016	5.792E-016	8.83E-16	2.03E-18	9.37E-16
Se-75	2.86E-17	1.22E-15	2.928E-016	8.08E-016	1.17E-15	2.88E-18	1.31E-15
Se-77m	6.30E-18	2.48E-16	6.432E-017	1.744E-016	2.43E-16	6.36E-19	2.89E-16
Se-79	9.42E-22	7.78E-21	4.464E-021	7.264E-021	7.78E-21	5.77E-23	4.28E-20
Se-79m	6.58E-19	1.89E-17	6.208E-018	1.522E-017	1.89E-17	6.14E-20	2.75E-17
Se-81	1.48E-18	3.58E-17	8.4E-018	2.224E-017	3.29E-17	7.68E-20	3.80E-17
Se-81m	9.88E-19	3.06E-17	9.552E-018	2.4E-017	3.05E-17	9.46E-20	4.25E-17
Se-83	1.96E-16	1.08E-14	2.016E-015	5.792E-015	9.18E-15	2.16E-17	9.96E-15
Se-83m	7.53E-17	4.14E-15	7.68E-016	2.192E-015	3.51E-15	8.22E-18	3.80E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
Se-84	3.30E-17	1.52E-15	3.312E-016	9.312E-016	1.41E-15	3.24E-18	1.49E-15
Si-31	9.02E-19	9.46E-18	2.64E-018	6.08E-018	8.64E-18	2.09E-20	1.22E-17
Si-32	1.94E-21	2.26E-20	1.098E-020	2.016E-020	2.26E-20	1.74E-22	1.35E-19
Si-32+D	1.03E-18	8.09E-18	2.736E-018	5.776E-018	7.73E-18	1.81E-20	1.15E-17
Si-32+E	1.03E-18	8.09E-18	2.736E-018	5.776E-018	7.73E-18	1.81E-20	1.15E-17
Sm-139	1.12E-16	5.53E-15	1.138E-015	3.216E-015	4.94E-15	1.15E-17	5.28E-15
Sm-140	4.26E-17	2.11E-15	4.272E-016	1.2E-015	1.86E-15	4.39E-18	2.02E-15
Sm-141	1.07E-16	5.48E-15	1.094E-015	3.104E-015	4.83E-15	1.12E-17	5.17E-15
Sm-141m	1.47E-16	7.60E-15	1.502E-015	4.256E-015	6.64E-15	1.55E-17	7.16E-15
Sm-142	8.00E-18	3.18E-16	7.264E-017	1.92E-016	2.88E-16	7.17E-19	3.27E-16
Sm-143	4.11E-17	1.95E-15	4.096E-016	1.147E-015	1.76E-15	4.06E-18	1.87E-15
Sm-143m	5.26E-17	2.69E-15	5.376E-016	1.522E-015	2.37E-15	5.43E-18	2.50E-15
Sm-145	3.83E-18	3.19E-17	2.112E-017	3.12E-017	3.19E-17	2.01E-19	8.68E-17
Sm-146	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Sm-147	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Sm-148	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
Sm-151	2.06E-22	3.30E-22	3.28E-022	3.296E-022	3.30E-22	3.82E-24	1.63E-21
Sm-153	4.34E-18	9.51E-17	3.504E-017	7.744E-017	9.46E-17	3.43E-19	1.53E-16
Sm-155	8.01E-18	2.40E-16	7.184E-017	1.808E-016	2.36E-16	7.06E-19	3.20E-16
Sm-156	8.29E-18	3.10E-16	8.144E-017	2.176E-016	3.01E-16	8.05E-19	3.65E-16
Sm-157	3.21E-17	1.48E-15	3.184E-016	8.864E-016	1.34E-15	3.23E-18	1.48E-15
Sn-106	9.13E-17	4.54E-15	9.312E-016	2.624E-015	4.05E-15	9.41E-18	4.34E-15
Sn-108	5.13E-17	2.39E-15	5.184E-016	1.453E-015	2.19E-15	5.15E-18	2.36E-15
Sn-109	1.61E-16	9.35E-15	1.664E-015	4.816E-015	7.78E-15	1.85E-17	8.52E-15
Sn-110	2.13E-17	9.32E-16	2.128E-016	5.984E-016	8.83E-16	2.10E-18	9.62E-16
Sn-111	3.69E-17	1.89E-15	3.728E-016	1.058E-015	1.65E-15	3.84E-18	1.77E-15
Sn-113	1.09E-18	1.95E-17	5.664E-018	1.325E-017	1.87E-17	5.70E-20	2.56E-17
Sn-113m	5.51E-19	1.92E-18	1.496E-018	1.84E-018	1.92E-18	1.54E-20	6.57E-18
Sn-117m	1.09E-17	4.02E-16	1.061E-016	2.848E-016	3.94E-16	1.05E-18	4.77E-16
Sn-119m	5.68E-19	1.34E-18	1.299E-018	1.339E-018	1.34E-18	1.36E-20	5.78E-18
Sn-121	6.43E-21	1.14E-19	4.48E-020	9.424E-020	1.14E-19	6.88E-22	5.28E-19
Sn-121m	2.23E-19	7.63E-19	6.736E-019	7.568E-019	7.63E-19	6.73E-21	2.93E-18
Sn-121m+D	2.28E-19	8.51E-19	7.088E-019	8.304E-019	8.51E-19	7.26E-21	3.34E-18

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
Sn-121m+E	2.28E-19	8.51E-19	7.088E-019	8.304E-019	8.51E-19	7.26E-21	3.34E-18
Sn-123	1.22E-18	3.33E-17	6.976E-018	1.872E-017	2.89E-17	6.78E-20	3.35E-17
Sn-123m	1.07E-17	3.99E-16	1.04E-016	2.816E-016	3.90E-16	1.03E-18	4.68E-16
Sn-125	2.63E-17	1.40E-15	2.64E-016	7.504E-016	1.19E-15	2.78E-18	1.29E-15
Sn-125m	2.75E-17	1.24E-15	2.736E-016	7.696E-016	1.15E-15	2.69E-18	1.24E-15
Sn-126	3.65E-18	8.52E-17	3.136E-017	7.152E-017	8.54E-17	3.09E-19	1.37E-16
Sn-126+D	1.53E-16	7.52E-15	1.557E-015	4.368E-015	6.74E-15	1.55E-17	7.15E-15
Sn-126+E	1.53E-16	7.52E-15	1.557E-015	4.368E-015	6.74E-15	1.55E-17	7.15E-15
Sn-127	1.43E-16	7.91E-15	1.472E-015	4.208E-015	6.71E-15	1.58E-17	7.28E-15
Sn-127m	4.51E-17	2.21E-15	4.512E-016	1.274E-015	1.97E-15	4.54E-18	2.10E-15
Sn-128	4.49E-17	2.04E-15	4.432E-016	1.227E-015	1.86E-15	4.37E-18	2.01E-15
Sn-129	7.85E-17	4.07E-15	7.968E-016	2.256E-015	3.55E-15	8.17E-18	3.78E-15
Sn-130	7.12E-17	3.41E-15	7.184E-016	2.016E-015	3.07E-15	7.21E-18	3.31E-15
Sn-130m	6.83E-17	3.55E-15	6.88E-016	1.952E-015	3.06E-15	7.17E-18	3.32E-15
Sr-79	9.34E-17	4.35E-15	9.36E-016	2.624E-015	3.97E-15	9.15E-18	4.22E-15
Sr-80	3.31E-17	1.60E-15	3.376E-016	9.52E-016	1.45E-15	3.34E-18	1.54E-15
Sr-81	1.08E-16	5.13E-15	1.09E-015	3.056E-015	4.66E-15	1.08E-17	4.97E-15
Sr-82	7.61E-20	4.10E-20	4.096E-020	4.096E-020	4.10E-20	7.05E-22	3.02E-19
Sr-82+D	8.77E-17	4.21E-15	8.832E-016	2.48E-015	3.81E-15	8.71E-18	4.02E-15
Sr-82+E	8.77E-17	4.21E-15	8.832E-016	2.48E-015	3.81E-15	8.71E-18	4.02E-15
Sr-83	6.21E-17	3.16E-15	6.352E-016	1.792E-015	2.79E-15	6.44E-18	2.97E-15
Sr-85	3.80E-17	1.84E-15	3.872E-016	1.093E-015	1.67E-15	3.82E-18	1.76E-15
Sr-85m	1.61E-17	6.96E-16	1.648E-016	4.624E-016	6.68E-16	1.63E-18	7.46E-16
Sr-87m	2.44E-17	1.14E-15	2.496E-016	7.04E-016	1.06E-15	2.45E-18	1.12E-15
Sr-89	8.28E-19	6.20E-18	2.064E-018	4.4E-018	5.92E-18	1.43E-20	9.09E-18
Sr-90	3.20E-20	4.14E-19	1.429E-019	3.232E-019	4.08E-19	1.90E-21	1.40E-18
Sr-90+D	1.46E-18	1.67E-17	5.36E-018	1.155E-017	1.58E-17	3.40E-20	2.10E-17
Sr-90+E	1.46E-18	1.67E-17	5.36E-018	1.155E-017	1.58E-17	3.40E-20	2.10E-17
Sr-91	5.47E-17	2.86E-15	5.568E-016	1.579E-015	2.49E-15	5.73E-18	2.65E-15
Sr-92	9.89E-17	5.73E-15	1.027E-015	2.96E-015	4.78E-15	1.12E-17	5.19E-15
Sr-93	1.70E-16	9.33E-15	1.744E-015	4.992E-015	7.95E-15	1.86E-17	8.61E-15
Sr-94	1.06E-16	6.16E-15	1.098E-015	3.168E-015	5.12E-15	1.21E-17	5.58E-15
Ta-170	8.35E-17	3.98E-15	8.4E-016	2.352E-015	3.58E-15	8.31E-18	3.83E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Ta-172	1.27E-16	6.66E-15	1.302E-015	3.68E-015	5.77E-15	1.36E-17	6.27E-15
Ta-173	4.28E-17	2.08E-15	4.272E-016	1.178E-015	1.81E-15	4.46E-18	2.05E-15
Ta-174	7.28E-17	3.70E-15	7.392E-016	2.08E-015	3.22E-15	7.75E-18	3.57E-15
Ta-175	8.17E-17	4.31E-15	8.304E-016	2.336E-015	3.68E-15	8.90E-18	4.10E-15
Ta-176	1.62E-16	9.46E-15	1.68E-015	4.816E-015	7.80E-15	1.87E-17	8.66E-15
Ta-177	4.53E-18	1.04E-16	3.808E-017	8.144E-017	1.00E-16	3.70E-19	1.64E-16
Ta-178	8.53E-18	3.32E-16	7.936E-017	2E-016	2.91E-16	8.16E-19	3.71E-16
Ta-178m	8.64E-17	3.71E-15	8.688E-016	2.384E-015	3.48E-15	8.52E-18	3.89E-15
Ta-179	1.60E-18	2.40E-17	1.23E-017	2.256E-017	2.40E-17	1.18E-19	5.16E-17
Ta-180	3.14E-18	5.20E-17	2.48E-017	4.752E-017	5.21E-17	2.38E-19	1.05E-16
Ta-182	9.61E-17	5.16E-15	9.872E-016	2.784E-015	4.40E-15	1.04E-17	4.82E-15
Ta-182m	1.88E-17	6.64E-16	1.824E-016	4.736E-016	6.47E-16	1.80E-18	8.13E-16
Ta-183	2.13E-17	8.08E-16	2.096E-016	5.504E-016	7.74E-16	2.05E-18	9.30E-16
Ta-184	1.20E-16	5.86E-15	1.221E-015	3.44E-015	5.26E-15	1.23E-17	5.65E-15
Ta-185	1.20E-17	4.23E-16	1.11E-016	2.912E-016	4.06E-16	1.09E-18	4.96E-16
Ta-186	1.09E-16	5.25E-15	1.11E-015	3.12E-015	4.74E-15	1.11E-17	5.10E-15
Tb-146	2.69E-16	1.54E-14	2.784E-015	8E-015	1.28E-14	3.04E-17	1.41E-14
Tb-147	1.64E-16	8.84E-15	1.68E-015	4.768E-015	7.56E-15	1.78E-17	8.19E-15
Tb-147m	1.41E-16	8.06E-15	1.453E-015	4.176E-015	6.72E-15	1.60E-17	7.37E-15
Tb-148	1.77E-16	9.63E-15	1.824E-015	5.184E-015	8.22E-15	1.94E-17	8.92E-15
Tb-148m	2.40E-16	1.22E-14	2.464E-015	6.928E-015	1.08E-14	2.48E-17	1.14E-14
Tb-149	1.01E-16	5.39E-15	1.035E-015	2.944E-015	4.63E-15	1.10E-17	5.06E-15
Tb-149m	1.05E-16	5.29E-15	1.069E-015	3.008E-015	4.68E-15	1.08E-17	4.97E-15
Tb-150	1.77E-16	1.03E-14	1.84E-015	5.28E-015	8.51E-15	2.06E-17	9.50E-15
Tb-150m	1.93E-16	9.49E-15	1.968E-015	5.536E-015	8.53E-15	1.96E-17	9.02E-15
Tb-151	7.47E-17	3.54E-15	7.52E-016	2.096E-015	3.19E-15	7.56E-18	3.47E-15
Tb-151m	5.79E-18	2.51E-16	5.584E-017	1.504E-016	2.27E-16	5.54E-19	2.54E-16
Tb-152	1.10E-16	6.02E-15	1.133E-015	3.232E-015	5.12E-15	1.22E-17	5.62E-15
Tb-152m	5.72E-17	2.61E-15	5.728E-016	1.592E-015	2.39E-15	5.70E-18	2.61E-15
Tb-153	2.42E-17	1.02E-15	2.352E-016	6.32E-016	9.33E-16	2.34E-18	1.07E-15
Tb-154	1.64E-16	9.82E-15	1.696E-015	4.896E-015	7.99E-15	1.94E-17	8.97E-15
Tb-155	1.23E-17	3.69E-16	1.104E-016	2.704E-016	3.59E-16	1.08E-18	4.86E-16
Tb-156	1.44E-16	7.63E-15	1.477E-015	4.192E-015	6.58E-15	1.55E-17	7.15E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Tb-156m	2.40E-18	2.72E-17	1.632E-017	2.656E-017	2.72E-17	1.54E-19	6.70E-17
Tb-156n	2.37E-19	3.57E-18	1.712E-018	3.2E-018	3.57E-18	1.64E-20	7.22E-18
Tb-157	2.89E-19	2.57E-18	1.712E-018	2.544E-018	2.57E-18	1.62E-20	6.99E-18
Tb-158	6.05E-17	3.08E-15	6.112E-016	1.712E-015	2.68E-15	6.29E-18	2.90E-15
Tb-160	8.51E-17	4.49E-15	8.736E-016	2.48E-015	3.89E-15	9.07E-18	4.18E-15
Tb-161	2.17E-18	3.00E-17	1.483E-017	2.704E-017	2.98E-17	1.43E-19	6.30E-17
Tb-162	8.46E-17	4.23E-15	8.624E-016	2.432E-015	3.76E-15	8.75E-18	4.03E-15
Tb-163	6.07E-17	2.86E-15	6.176E-016	1.728E-015	2.63E-15	6.07E-18	2.79E-15
Tb-164	1.84E-16	9.81E-15	1.888E-015	5.376E-015	8.46E-15	1.98E-17	9.14E-15
Tb-165	6.34E-17	3.53E-15	6.48E-016	1.856E-015	2.97E-15	6.98E-18	3.23E-15
Tc-101	2.61E-17	1.18E-15	2.64E-016	7.408E-016	1.10E-15	2.59E-18	1.19E-15
Tc-102	9.34E-18	3.98E-16	8.336E-017	2.272E-016	3.50E-16	7.81E-19	3.75E-16
Tc-102m	1.84E-16	1.04E-14	1.904E-015	5.456E-015	8.74E-15	2.07E-17	9.55E-15
Tc-104	1.66E-16	9.58E-15	1.712E-015	4.928E-015	7.95E-15	1.91E-17	8.81E-15
Tc-105	6.12E-17	3.11E-15	6.192E-016	1.744E-015	2.71E-15	6.45E-18	2.97E-15
Tc-91	1.85E-16	1.05E-14	1.904E-015	5.472E-015	8.77E-15	2.09E-17	9.67E-15
Tc-91m	1.12E-16	5.48E-15	1.136E-015	3.2E-015	4.92E-15	1.13E-17	5.20E-15
Tc-92	2.89E-16	1.54E-14	2.976E-015	8.464E-015	1.33E-14	3.12E-17	1.44E-14
Tc-93	1.15E-16	6.67E-15	1.195E-015	3.44E-015	5.56E-15	1.31E-17	6.05E-15
Tc-93m	6.73E-17	4.12E-15	7.024E-016	2.048E-015	3.33E-15	8.20E-18	3.78E-15
Tc-94	2.03E-16	1.05E-14	2.08E-015	5.904E-015	9.24E-15	2.12E-17	9.78E-15
Tc-94m	1.49E-16	7.86E-15	1.522E-015	4.32E-015	6.81E-15	1.59E-17	7.31E-15
Tc-95	6.04E-17	3.11E-15	6.176E-016	1.744E-015	2.74E-15	6.26E-18	2.89E-15
Tc-95m	5.18E-17	2.56E-15	5.296E-016	1.494E-015	2.29E-15	5.33E-18	2.45E-15
Tc-96	1.91E-16	9.95E-15	1.952E-015	5.552E-015	8.70E-15	2.00E-17	9.21E-15
Tc-96m	3.29E-18	1.69E-16	3.264E-017	9.232E-017	1.46E-16	3.39E-19	1.56E-16
Tc-97	2.38E-19	2.45E-19	2.464E-019	2.448E-019	2.45E-19	3.27E-21	1.39E-18
Tc-97m	2.37E-19	8.85E-19	4.576E-019	7.6E-019	8.85E-19	5.28E-21	2.30E-18
Tc-98	1.09E-16	5.52E-15	1.114E-015	3.152E-015	4.89E-15	1.12E-17	5.15E-15
Tc-99	4.57E-21	7.09E-20	2.992E-020	6.016E-020	7.06E-20	4.81E-22	3.73E-19
Tc-99m	9.08E-18	3.38E-16	9.2E-017	2.464E-016	3.33E-16	9.13E-19	4.13E-16
Te-113	1.69E-16	9.06E-15	1.728E-015	4.944E-015	7.80E-15	1.82E-17	8.40E-15
Te-114	9.45E-17	5.15E-15	9.664E-016	2.768E-015	4.39E-15	1.04E-17	4.78E-15

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
Te-115	1.70E-16	9.06E-15	1.744E-015	4.96E-015	7.83E-15	1.82E-17	8.40E-15
Te-115m	1.95E-16	1.07E-14	2.016E-015	5.744E-015	9.13E-15	2.14E-17	9.86E-15
Te-116	7.30E-18	2.53E-16	6.304E-017	1.632E-016	2.33E-16	6.30E-19	2.86E-16
Te-117	1.15E-16	6.35E-15	1.184E-015	3.392E-015	5.40E-15	1.27E-17	5.85E-15
Te-118	8.49E-19	2.33E-18	2.24E-018	2.336E-018	2.33E-18	2.25E-20	9.59E-18
Te-118+D	6.38E-17	3.02E-15	6.352E-016	1.792E-015	2.74E-15	6.28E-18	2.90E-15
Te-118+E	6.38E-17	3.02E-15	6.352E-016	1.792E-015	2.74E-15	6.28E-18	2.90E-15
Te-119	5.80E-17	2.95E-15	5.888E-016	1.664E-015	2.60E-15	5.98E-18	2.76E-15
Te-119m	1.12E-16	6.05E-15	1.147E-015	3.264E-015	5.17E-15	1.22E-17	5.62E-15
Te-121	4.38E-17	2.11E-15	4.416E-016	1.24E-015	1.90E-15	4.37E-18	2.01E-15
Te-121m	1.57E-17	6.73E-16	1.568E-016	4.352E-016	6.35E-16	1.56E-18	7.14E-16
Te-123	1.48E-21	4.04E-21	3.888E-021	4.048E-021	4.04E-21	3.91E-23	1.67E-20
Te-123m	1.04E-17	3.83E-16	1.013E-016	2.72E-016	3.76E-16	1.00E-18	4.54E-16
Te-125m	1.65E-18	5.92E-18	5.056E-018	5.776E-018	5.92E-18	4.99E-20	2.14E-17
Te-127	4.53E-19	1.80E-17	4E-018	1.115E-017	1.67E-17	3.98E-20	1.89E-17
Te-127m	5.16E-19	2.29E-18	1.664E-018	2.096E-018	2.25E-18	1.65E-20	7.10E-18
Te-129	5.31E-18	2.20E-16	4.72E-017	1.314E-016	2.00E-16	4.65E-19	2.16E-16
Te-129m	2.92E-18	1.19E-16	2.512E-017	6.848E-017	1.06E-16	2.49E-19	1.15E-16
Te-131	3.25E-17	1.52E-15	3.248E-016	9.072E-016	1.37E-15	3.27E-18	1.51E-15
Te-131m	1.10E-16	5.78E-15	1.128E-015	3.2E-015	5.03E-15	1.17E-17	5.39E-15
Te-132	1.68E-17	6.70E-16	1.632E-016	4.48E-016	6.44E-16	1.61E-18	7.34E-16
Te-133	9.03E-17	4.88E-15	9.28E-016	2.656E-015	4.19E-15	9.84E-18	4.55E-15
Te-133m	1.40E-16	7.50E-15	1.443E-015	4.096E-015	6.48E-15	1.51E-17	6.95E-15
Te-134	6.62E-17	3.19E-15	6.736E-016	1.888E-015	2.88E-15	6.73E-18	3.09E-15
Th-223	5.00E-18	1.58E-16	4.848E-017	1.211E-016	1.56E-16	4.78E-19	2.15E-16
Th-224	1.68E-18	6.87E-17	1.696E-017	4.672E-017	6.62E-17	1.69E-19	7.67E-17
Th-226	5.67E-19	2.02E-17	5.568E-018	1.466E-017	1.98E-17	5.51E-20	2.49E-17
Th-227	9.19E-18	3.81E-16	9.184E-017	2.512E-016	3.63E-16	9.04E-19	4.12E-16
Th-228	1.62E-19	4.83E-18	1.429E-018	3.616E-018	4.75E-18	1.42E-20	6.38E-18
Th-229	6.06E-18	1.92E-16	5.792E-017	1.461E-016	1.90E-16	5.72E-19	2.57E-16
Th-229+D	6.82E-18	1.97E-16	6.176E-017	1.512E-016	1.95E-16	6.08E-19	2.73E-16
Th-229+E	6.82E-18	1.97E-16	6.176E-017	1.512E-016	1.95E-16	6.08E-19	2.73E-16
Th-230	4.21E-20	7.24E-19	2.576E-019	5.808E-019	7.15E-19	2.58E-21	1.15E-18

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Th-231	1.06E-18	2.13E-17	7.648E-018	1.744E-017	2.13E-17	7.61E-20	3.40E-17
Th-232	2.79E-20	3.07E-19	1.306E-019	2.656E-019	3.06E-19	1.32E-21	5.83E-19
Th-232+D	6.56E-17	3.46E-15	6.704E-016	1.904E-015	3.00E-15	6.98E-18	3.22E-15
Th-232+E	6.56E-17	3.46E-15	6.704E-016	1.904E-015	3.00E-15	6.98E-18	3.22E-15
Th-233	3.10E-18	1.23E-16	2.752E-017	7.52E-017	1.12E-16	2.72E-19	1.26E-16
Th-234	6.28E-19	1.52E-17	5.568E-018	1.272E-017	1.52E-17	5.47E-20	2.44E-17
Th-234+D	3.08E-18	9.28E-17	2.208E-017	5.696E-017	8.31E-17	2.11E-19	1.00E-16
Th-234+E	3.08E-18	9.28E-17	2.208E-017	5.696E-017	8.31E-17	2.11E-19	1.00E-16
Th-235	5.07E-18	2.12E-16	4.48E-017	1.24E-016	1.90E-16	4.38E-19	2.05E-16
Th-236	2.85E-18	1.13E-16	2.608E-017	7.136E-017	1.05E-16	2.58E-19	1.19E-16
Ti-44	9.60E-18	2.12E-16	8.56E-017	1.856E-016	2.12E-16	8.35E-19	3.70E-16
Ti-44+D	1.73E-16	8.73E-15	1.744E-015	4.944E-015	7.65E-15	1.80E-17	8.30E-15
Ti-44+E	1.73E-16	8.73E-15	1.744E-015	4.944E-015	7.65E-15	1.80E-17	8.30E-15
Ti-45	6.75E-17	3.25E-15	6.864E-016	1.936E-015	2.96E-15	6.76E-18	3.11E-15
Ti-51	2.94E-17	1.34E-15	2.928E-016	8.224E-016	1.24E-15	2.88E-18	1.33E-15
Ti-52	1.01E-17	3.24E-16	9.328E-017	2.432E-016	3.21E-16	9.13E-19	4.16E-16
Tl-190	1.02E-16	4.89E-15	1.027E-015	2.88E-015	4.42E-15	1.02E-17	4.69E-15
Tl-190m	1.89E-16	9.34E-15	1.92E-015	5.424E-015	8.36E-15	1.93E-17	8.89E-15
Tl-194	7.08E-17	3.35E-15	7.152E-016	2E-015	3.04E-15	7.07E-18	3.25E-15
Tl-194m	1.93E-16	9.48E-15	1.968E-015	5.52E-015	8.49E-15	1.97E-17	9.06E-15
Tl-195	8.93E-17	4.99E-15	9.216E-016	2.624E-015	4.19E-15	1.01E-17	4.64E-15
Tl-196	1.38E-16	7.64E-15	1.426E-015	4.08E-015	6.47E-15	1.54E-17	7.10E-15
Tl-197	3.38E-17	1.62E-15	3.408E-016	9.408E-016	1.43E-15	3.51E-18	1.61E-15
Tl-198	1.48E-16	8.30E-15	1.525E-015	4.368E-015	6.97E-15	1.67E-17	7.68E-15
Tl-198m	9.26E-17	4.40E-15	9.408E-016	2.64E-015	4.00E-15	9.33E-18	4.29E-15
Tl-199	1.83E-17	7.40E-16	1.808E-016	4.816E-016	6.90E-16	1.79E-18	8.16E-16
Tl-200	9.81E-17	5.08E-15	1.006E-015	2.848E-015	4.43E-15	1.04E-17	4.81E-15
Tl-201	6.21E-18	1.61E-16	5.696E-017	1.314E-016	1.60E-16	5.58E-19	2.49E-16
Tl-202	3.51E-17	1.57E-15	3.536E-016	9.712E-016	1.45E-15	3.47E-18	1.59E-15
Tl-204	2.05E-19	2.56E-18	9.904E-019	2.16E-018	2.54E-18	9.96E-21	5.19E-18
Tl-206	7.34E-19	5.23E-18	1.776E-018	3.776E-018	5.02E-18	1.26E-20	8.05E-18
Tl-206m	1.84E-16	9.14E-15	1.888E-015	5.328E-015	8.18E-15	1.90E-17	8.75E-15
Tl-207	8.16E-19	1.36E-17	3.264E-018	8.224E-018	1.22E-17	2.92E-20	1.55E-17

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Tl-208	2.37E-16	1.50E-14	2.48E-015	7.232E-015	1.19E-14	2.96E-17	1.36E-14
Tl-209	1.59E-16	8.84E-15	1.632E-015	4.688E-015	7.46E-15	1.78E-17	8.20E-15
Tl-210	2.06E-16	1.15E-14	2.128E-015	6.096E-015	9.73E-15	2.30E-17	1.06E-14
Tm-161	9.46E-17	4.96E-15	9.52E-016	2.672E-015	4.20E-15	1.03E-17	4.73E-15
Tm-162	1.41E-16	7.97E-15	1.446E-015	4.144E-015	6.64E-15	1.60E-17	7.36E-15
Tm-163	9.71E-17	5.17E-15	9.872E-016	2.784E-015	4.40E-15	1.05E-17	4.86E-15
Tm-164	5.90E-17	3.00E-15	5.968E-016	1.68E-015	2.62E-15	6.16E-18	2.84E-15
Tm-165	4.18E-17	1.89E-15	4.16E-016	1.139E-015	1.71E-15	4.16E-18	1.90E-15
Tm-166	1.45E-16	8.15E-15	1.494E-015	4.272E-015	6.83E-15	1.63E-17	7.52E-15
Tm-167	1.04E-17	3.45E-16	9.568E-017	2.416E-016	3.32E-16	9.36E-19	4.23E-16
Tm-168	9.40E-17	4.58E-15	9.536E-016	2.656E-015	4.09E-15	9.61E-18	4.42E-15
Tm-170	5.21E-19	6.84E-18	2.736E-018	5.792E-018	6.81E-18	2.64E-20	1.29E-17
Tm-171	3.99E-20	5.70E-19	2.992E-019	5.392E-019	5.70E-19	2.86E-21	1.25E-18
Tm-172	3.55E-17	2.00E-15	3.632E-016	1.038E-015	1.67E-15	3.96E-18	1.83E-15
Tm-173	2.99E-17	1.39E-15	3.024E-016	8.512E-016	1.28E-15	2.97E-18	1.37E-15
Tm-174	1.35E-16	6.68E-15	1.379E-015	3.888E-015	5.96E-15	1.40E-17	6.43E-15
Tm-175	8.31E-17	4.23E-15	8.48E-016	2.4E-015	3.73E-15	8.62E-18	3.97E-15
Tm-176	1.45E-16	8.11E-15	1.498E-015	4.272E-015	6.82E-15	1.64E-17	7.54E-15
U-227	8.45E-18	3.33E-16	8.464E-017	2.288E-016	3.21E-16	8.36E-19	3.80E-16
U-228	2.99E-19	9.79E-18	2.768E-018	7.168E-018	9.59E-18	2.74E-20	1.24E-17
U-230	1.06E-19	2.63E-18	7.824E-019	1.952E-018	2.57E-18	7.80E-21	3.51E-18
U-231	5.09E-18	1.42E-16	4.624E-017	1.131E-016	1.41E-16	4.58E-19	2.05E-16
U-232	4.32E-20	4.66E-19	1.728E-019	3.712E-019	4.60E-19	1.79E-21	7.92E-19
U-233	3.06E-20	6.09E-19	1.776E-019	4.336E-019	5.89E-19	1.79E-21	8.03E-19
U-234	3.27E-20	2.17E-19	9.344E-020	1.808E-019	2.16E-19	9.99E-22	4.39E-19
U-235	1.19E-17	4.72E-16	1.203E-016	3.28E-016	4.59E-16	1.19E-18	5.41E-16
U-235+D	1.30E-17	4.93E-16	1.28E-016	3.456E-016	4.80E-16	1.27E-18	5.75E-16
U-235+E	1.30E-17	4.93E-16	1.28E-016	3.456E-016	4.80E-16	1.27E-18	5.75E-16
U-235m	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
U-236	2.62E-20	1.06E-19	5.344E-020	9.184E-020	1.05E-19	6.00E-22	2.62E-19
U-237	9.63E-18	3.19E-16	9.184E-017	2.336E-016	3.13E-16	9.06E-19	4.08E-16
U-238	2.12E-20	1.06E-19	4.496E-020	8.064E-020	9.96E-20	5.12E-22	2.24E-19
U-238+D	3.28E-18	1.02E-16	2.384E-017	6.208E-017	9.12E-17	2.30E-19	1.09E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
U-238+E	3.28E-18	1.02E-16	2.384E-017	6.208E-017	9.12E-17	2.30E-19	1.09E-16
U-239	3.94E-18	1.02E-16	3.28E-017	7.648E-017	9.73E-17	3.22E-19	1.46E-16
U-240	3.98E-19	9.89E-18	3.104E-018	7.6E-018	9.80E-18	3.10E-20	1.41E-17
U-242	3.45E-18	1.30E-16	3.088E-017	8.192E-017	1.20E-16	3.02E-19	1.39E-16
V-47	7.79E-17	3.73E-15	7.872E-016	2.208E-015	3.39E-15	7.76E-18	3.57E-15
V-48	2.19E-16	1.20E-14	2.256E-015	6.464E-015	1.03E-14	2.38E-17	1.10E-14
V-49	0.00E+00	0.00E+00	0	0	0.00E+00	0.00E+00	0.00E+00
V-50	1.04E-16	6.18E-15	1.085E-015	3.136E-015	5.10E-15	1.21E-17	5.58E-15
V-52	1.08E-16	6.28E-15	1.112E-015	3.216E-015	5.20E-15	1.22E-17	5.67E-15
V-53	8.01E-17	4.29E-15	8.16E-016	2.32E-015	3.68E-15	8.52E-18	3.93E-15
W-177	6.82E-17	3.17E-15	6.848E-016	1.872E-015	2.83E-15	6.94E-18	3.18E-15
W-178	9.72E-19	1.54E-17	7.648E-018	1.435E-017	1.54E-17	7.34E-20	3.21E-17
W-178+D	9.50E-18	3.47E-16	8.704E-017	2.144E-016	3.06E-16	8.89E-19	4.03E-16
W-178+E	9.50E-18	3.47E-16	8.704E-017	2.144E-016	3.06E-16	8.89E-19	4.03E-16
W-179	3.40E-18	5.05E-17	2.544E-017	4.72E-017	5.05E-17	2.45E-19	1.07E-16
W-179m	3.80E-18	1.04E-16	3.408E-017	7.92E-017	1.02E-16	3.32E-19	1.49E-16
W-181	2.58E-18	4.10E-17	2.032E-017	3.824E-017	4.10E-17	1.95E-19	8.56E-17
W-185	1.15E-20	2.41E-19	8.864E-020	1.952E-019	2.40E-19	1.16E-21	7.83E-19
W-185m	1.69E-18	5.18E-17	1.597E-017	3.92E-017	5.10E-17	1.57E-19	7.06E-17
W-187	3.44E-17	1.64E-15	3.472E-016	9.68E-016	1.48E-15	3.45E-18	1.59E-15
W-188	1.45E-19	6.01E-18	1.445E-018	3.952E-018	5.72E-18	1.44E-20	6.73E-18
W-190	1.07E-17	3.09E-16	9.76E-017	2.368E-016	3.04E-16	9.56E-19	4.30E-16
Xe-120	2.93E-17	1.34E-15	2.864E-016	7.92E-016	1.21E-15	2.87E-18	1.32E-15
Xe-121	1.09E-16	5.99E-15	1.114E-015	3.184E-015	5.06E-15	1.21E-17	5.59E-15
Xe-122	4.51E-18	1.57E-16	3.824E-017	1.008E-016	1.48E-16	3.75E-19	1.71E-16
Xe-123	4.76E-17	2.36E-15	4.8E-016	1.352E-015	2.09E-15	4.96E-18	2.28E-15
Xe-125	1.95E-17	8.02E-16	1.888E-016	5.168E-016	7.54E-16	1.87E-18	8.54E-16
Xe-127	2.02E-17	8.15E-16	1.984E-016	5.424E-016	7.81E-16	1.95E-18	8.88E-16
Xe-127m	1.18E-17	4.13E-16	1.141E-016	3.008E-016	4.07E-16	1.13E-18	5.11E-16
Xe-129m	2.80E-18	3.64E-17	1.424E-017	2.736E-017	3.55E-17	1.40E-19	6.19E-17
Xe-131m	1.08E-18	1.24E-17	5.216E-018	9.648E-018	1.22E-17	5.14E-20	2.28E-17
Xe-133	3.00E-18	5.77E-17	2.32E-017	4.944E-017	5.78E-17	2.27E-19	1.00E-16
Xe-133m	2.61E-18	7.93E-17	2.08E-017	5.328E-017	7.61E-17	2.05E-19	9.34E-17

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane (m ² per Bq s)	Soil Volume	1cm	5cm	15cm	Immersion (L per Bq s)	Submersion (m ³ per Bq s)
			(kg per Bq s)				
Xe-135	1.88E-17	8.30E-16	1.92E-016	5.36E-016	7.88E-16	1.89E-18	8.64E-16
Xe-135m	3.27E-17	1.58E-15	3.328E-016	9.344E-016	1.43E-15	3.28E-18	1.51E-15
Xe-137	1.72E-17	7.90E-16	1.648E-016	4.576E-016	7.04E-16	1.61E-18	7.54E-16
Xe-138	8.20E-17	4.80E-15	8.48E-016	2.448E-015	3.97E-15	9.54E-18	4.41E-15
Y-81	9.25E-17	4.28E-15	9.28E-016	2.592E-015	3.91E-15	9.08E-18	4.19E-15
Y-83	1.04E-16	5.16E-15	1.056E-015	2.976E-015	4.60E-15	1.06E-17	4.89E-15
Y-83m	6.53E-17	3.07E-15	6.592E-016	1.856E-015	2.81E-15	6.48E-18	2.98E-15
Y-84m	3.04E-16	1.60E-14	3.12E-015	8.848E-015	1.39E-14	3.20E-17	1.48E-14
Y-85	8.36E-17	4.05E-15	8.496E-016	2.4E-015	3.67E-15	8.39E-18	3.87E-15
Y-85m	9.97E-17	5.32E-15	1.022E-015	2.912E-015	4.59E-15	1.08E-17	4.96E-15
Y-86	2.67E-16	1.48E-14	2.752E-015	7.888E-015	1.26E-14	2.94E-17	1.36E-14
Y-86m	1.63E-17	7.14E-16	1.68E-016	4.688E-016	6.79E-16	1.66E-18	7.60E-16
Y-87	3.38E-17	1.62E-15	3.44E-016	9.696E-016	1.48E-15	3.38E-18	1.56E-15
Y-87m	2.34E-17	1.09E-15	2.384E-016	6.736E-016	1.01E-15	2.35E-18	1.08E-15
Y-88	1.96E-16	1.17E-14	2.048E-015	5.92E-015	9.61E-15	2.29E-17	1.06E-14
Y-89m	6.87E-17	3.64E-15	7.072E-016	2E-015	3.16E-15	7.27E-18	3.36E-15
Y-90	1.43E-18	1.63E-17	5.216E-018	1.123E-017	1.54E-17	3.21E-20	1.96E-17
Y-90m	4.83E-17	2.23E-15	4.928E-016	1.386E-015	2.07E-15	4.86E-18	2.23E-15
Y-91	1.09E-18	1.95E-17	4.576E-018	1.147E-017	1.72E-17	4.04E-20	2.12E-17
Y-91m	4.07E-17	2.00E-15	4.16E-016	1.173E-015	1.80E-15	4.11E-18	1.90E-15
Y-92	2.13E-17	1.08E-15	2.08E-016	5.872E-016	9.27E-16	2.13E-18	9.93E-16
Y-93	8.90E-18	4.24E-16	8.16E-017	2.288E-016	3.61E-16	8.48E-19	3.98E-16
Y-94	6.11E-17	3.26E-15	6.192E-016	1.76E-015	2.79E-15	6.46E-18	2.99E-15
Y-95	7.98E-17	5.06E-15	8.304E-016	2.416E-015	4.00E-15	9.91E-18	4.58E-15
Yb-162	1.82E-17	6.91E-16	1.76E-016	4.592E-016	6.51E-16	1.74E-18	7.87E-16
Yb-163	5.47E-17	2.77E-15	5.52E-016	1.549E-015	2.41E-15	5.72E-18	2.63E-15
Yb-164	3.61E-18	7.73E-17	2.848E-017	5.84E-017	7.32E-17	2.74E-19	1.21E-16
Yb-165	2.44E-17	1.03E-15	2.336E-016	6.16E-016	9.17E-16	2.38E-18	1.09E-15
Yb-166	5.61E-18	8.15E-17	4.176E-017	7.584E-017	8.15E-17	3.99E-19	1.75E-16
Yb-167	1.85E-17	5.34E-16	1.664E-016	3.968E-016	5.17E-16	1.64E-18	7.35E-16
Yb-169	2.30E-17	6.89E-16	2.08E-016	5.056E-016	6.71E-16	2.04E-18	9.14E-16
Yb-175	2.95E-18	1.30E-16	2.976E-017	8.224E-017	1.21E-16	2.92E-19	1.34E-16
Yb-177	1.50E-17	7.35E-16	1.49E-016	4.144E-016	6.41E-16	1.55E-18	7.14E-16

Continued on next page

Table 1.4: Risk coefficients for external exposure

Nuclide	Ground Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(m ² per Bq s)		(kg per Bq s)				
Yb-178	2.95E-18	1.34E-16	2.976E-017	8.336E-017	1.25E-16	2.92E-19	1.35E-16
Yb-179	7.58E-17	3.67E-15	7.664E-016	2.16E-015	3.31E-15	7.60E-18	3.50E-15
Zn-60	1.19E-16	5.73E-15	1.206E-015	3.392E-015	5.19E-15	1.19E-17	5.49E-15
Zn-61	1.19E-16	6.10E-15	1.208E-015	3.424E-015	5.35E-15	1.24E-17	5.74E-15
Zn-62	3.37E-17	1.62E-15	3.408E-016	9.584E-016	1.47E-15	3.37E-18	1.55E-15
Zn-63	8.57E-17	4.16E-15	8.672E-016	2.448E-015	3.75E-15	8.60E-18	3.96E-15
Zn-65	4.36E-17	2.40E-15	4.512E-016	1.285E-015	2.05E-15	4.75E-18	2.19E-15
Zn-69	2.51E-19	1.44E-18	4.88E-019	1.075E-018	1.40E-18	4.69E-21	3.25E-18
Zn-69m	3.20E-17	1.51E-15	3.264E-016	9.2E-016	1.39E-15	3.21E-18	1.47E-15
Zn-71	2.57E-17	1.24E-15	2.528E-016	7.12E-016	1.10E-15	2.53E-18	1.17E-15
Zn-71m	1.20E-16	5.89E-15	1.227E-015	3.456E-015	5.31E-15	1.22E-17	5.63E-15
Zn-72	1.06E-17	4.00E-16	1.078E-016	2.896E-016	3.94E-16	1.07E-18	4.83E-16
Zr-85	1.15E-16	5.62E-15	1.163E-015	3.28E-015	5.05E-15	1.16E-17	5.35E-15
Zr-86	2.10E-17	9.16E-16	2.112E-016	5.904E-016	8.67E-16	2.08E-18	9.51E-16
Zr-87	7.24E-17	3.51E-15	7.312E-016	2.064E-015	3.17E-15	7.27E-18	3.35E-15
Zr-88	2.94E-17	1.37E-15	2.992E-016	8.432E-016	1.27E-15	2.94E-18	1.35E-15
Zr-89	8.79E-17	4.59E-15	9.04E-016	2.56E-015	4.01E-15	9.22E-18	4.25E-15
Zr-89m	4.85E-17	2.46E-15	4.976E-016	1.41E-015	2.19E-15	5.02E-18	2.31E-15
Zr-93	0.00E+00	0.00E+00	0	0	0.00E+00	6.73E-27	6.44E-24
Zr-95	5.63E-17	2.88E-15	5.776E-016	1.632E-015	2.55E-15	5.82E-18	2.68E-15
Zr-97	6.83E-17	3.49E-15	6.928E-016	1.968E-015	3.07E-15	7.04E-18	3.25E-15

1.5 Morbidity risk coefficients for ingestion

Explanation of Entries:

Table 1.5 contains the morbidity risk coefficients, also known as slope factors, for internal exposure due to ingestion of a radionuclide. Four ingestion scenarios are provided: tap water, diet, soil for population, soil for worker.

Tap water risk coefficients includes drinking water, water added to beverages, and water added to foods during preparation but does not consider water intrinsic in food.

Soil population refers to the morbidity coefficient for ingestion of soil, averaged over all ages in a population. Examples of soil ingestion include: a child consuming soil, touching a soil covered surface then ingesting food without washing hands, and dust ingestion.

Soil worker refers to the morbidity coefficient for ingestion of soil specific to an adult. This scenario uses a different ingestion rate than that of the average population due to the receptor solely being an adult. Therefore, soil worker slope factors should not be applied to minors.

Type: Separate dose rate coefficients are given for ^3H as tritiated water and organically bound tritium, and for inorganic and organic forms of radioisotopes of sulfur, mercury, and polonium.

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population		Soil Worker
				(Bq ⁻¹)		
Ac-223		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-224		1.44E-10	2.07E-10	3.69E-10	7.14E-11	7.14E-11
Ac-225		5.11E-09	7.34E-09	1.32E-08	2.44E-09	2.44E-09
Ac-225+D		5.11E-09	7.34E-09	1.32E-08	2.44E-09	2.44E-09
Ac-225+E		5.11E-09	7.34E-09	1.32E-08	2.44E-09	2.44E-09
Ac-226		1.88E-09	2.77E-09	5.11E-09	7.76E-10	7.76E-10
Ac-227		5.43E-09	6.63E-09	7.84E-09	5.44E-09	5.44E-09
Ac-228		5.09E-11	7.39E-11	1.33E-10	2.32E-11	2.32E-11
Ac-230		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-231		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-232		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-233		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-100m		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-101		1.61E-12	2.23E-12	3.40E-12	1.22E-12	1.22E-12
Ag-102		2.01E-12	2.75E-12	4.09E-12	1.60E-12	1.60E-12
Ag-102m		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-103		2.83E-12	3.98E-12	6.57E-12	1.74E-12	1.74E-12
Ag-104		4.50E-12	6.23E-12	9.84E-12	2.98E-12	2.98E-12
Ag-104m		3.70E-12	5.15E-12	8.08E-12	2.62E-12	2.62E-12
Ag-105		4.73E-11	6.65E-11	1.12E-10	2.61E-11	2.61E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Ag-105m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-106		1.57E-12	2.18E-12	3.35E-12	1.18E-12
Ag-106m		1.29E-10	1.80E-10	2.94E-10	7.56E-11
Ag-108		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-108m		2.19E-10	3.01E-10	4.87E-10	1.36E-10
Ag-108m+D		2.19E-10	3.01E-10	4.87E-10	1.36E-10
Ag-108m+E		2.19E-10	3.01E-10	4.87E-10	1.36E-10
Ag-109m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-110		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-110m		2.71E-10	3.76E-10	6.16E-10	1.63E-10
Ag-110m+D		2.71E-10	3.76E-10	6.16E-10	1.63E-10
Ag-110m+E		2.71E-10	3.76E-10	6.16E-10	1.63E-10
Ag-111		2.22E-10	3.25E-10	6.03E-10	9.08E-11
Ag-111m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-112		5.31E-11	7.72E-11	1.40E-10	2.43E-11
Ag-113		5.95E-11	8.71E-11	1.60E-10	2.54E-11
Ag-113m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-114		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-115		3.85E-12	5.45E-12	9.00E-12	2.45E-12
Ag-116		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-117		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-99		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Al-26		4.67E-10	6.71E-10	1.19E-09	2.21E-10
Al-28		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Al-29		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Am-237		1.42E-12	2.00E-12	3.30E-12	8.68E-13
Am-238		2.58E-12	3.61E-12	5.85E-12	1.61E-12
Am-239		3.84E-11	5.61E-11	1.02E-10	1.67E-11
Am-240		7.14E-11	1.02E-10	1.79E-10	3.50E-11
Am-241		2.80E-09	3.61E-09	4.98E-09	2.46E-09
Am-242		4.88E-11	7.14E-11	1.31E-10	2.05E-11
Am-242m		1.91E-09	2.36E-09	2.81E-09	1.98E-09
Am-242m+D		1.96E-09	2.43E-09	2.94E-09	2.00E-09

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Am-242m+E		1.96E-09	2.43E-09	2.94E-09	2.00E-09
Am-243		2.80E-09	3.62E-09	5.01E-09	2.44E-09
Am-243+D		2.94E-09	3.83E-09	5.39E-09	2.50E-09
Am-243+E		2.94E-09	3.83E-09	5.39E-09	2.50E-09
Am-244		6.67E-11	9.70E-11	1.76E-10	2.98E-11
Am-244m		1.41E-12	1.97E-12	3.06E-12	1.05E-12
Am-245		6.01E-12	8.71E-12	1.55E-11	2.96E-12
Am-246		3.67E-12	5.15E-12	8.24E-12	2.52E-12
Am-246m		1.78E-12	2.46E-12	3.77E-12	1.33E-12
Am-247		1.43E-12	1.98E-12	3.05E-12	1.09E-12
Ar-37		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-39		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-41		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-42		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-42+D		3.41E-11	4.70E-11	7.79E-11	2.27E-11
Ar-42+E		3.41E-11	4.70E-11	7.79E-11	2.27E-11
Ar-43		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-44		0.00E+00	0.00E+00	0.00E+00	0.00E+00
As-68		0.00E+00	0.00E+00	0.00E+00	0.00E+00
As-69		2.68E-12	3.72E-12	5.77E-12	2.00E-12
As-70		8.89E-12	1.24E-11	2.01E-11	6.00E-12
As-71		6.08E-11	8.78E-11	1.59E-10	2.92E-11
As-72		2.78E-10	4.06E-10	7.57E-10	1.24E-10
As-73		4.24E-11	6.18E-11	1.15E-10	1.86E-11
As-74		1.80E-10	2.60E-10	4.73E-10	8.53E-11
As-76		2.59E-10	3.79E-10	7.16E-10	1.11E-10
As-77		6.68E-11	9.81E-11	1.86E-10	2.82E-11
As-78		1.59E-11	2.28E-11	3.98E-11	9.07E-12
As-79		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-204		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-205		3.88E-12	5.29E-12	8.37E-12	2.84E-12
At-206		4.46E-12	6.09E-12	9.56E-12	3.27E-12
At-207		1.76E-11	2.41E-11	3.93E-11	1.22E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
At-208		6.44E-12	8.74E-12	1.35E-11	4.82E-12
At-209		3.05E-11	4.17E-11	6.80E-11	2.10E-11
At-210		7.30E-11	9.98E-11	1.65E-10	4.94E-11
At-211		9.10E-10	1.25E-09	2.09E-09	6.02E-10
At-211+D		9.10E-10	1.25E-09	2.09E-09	6.02E-10
At-211+E		9.10E-10	1.25E-09	2.09E-09	6.02E-10
At-215		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-216		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-217		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-218		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-219		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-220		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Au-186		2.56E-12	3.57E-12	5.64E-12	1.78E-12
Au-187		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Au-190		2.75E-12	3.81E-12	5.93E-12	1.92E-12
Au-191		8.12E-12	1.16E-11	2.04E-11	4.10E-12
Au-192		1.70E-11	2.41E-11	4.07E-11	9.34E-12
Au-193		1.85E-11	2.69E-11	4.88E-11	8.26E-12
Au-193m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Au-194		4.35E-11	6.17E-11	1.06E-10	2.27E-11
Au-195		4.19E-11	6.11E-11	1.12E-10	1.80E-11
Au-195m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Au-196		4.15E-11	5.94E-11	1.04E-10	2.05E-11
Au-196m		6.07E-11	8.87E-11	1.63E-10	2.60E-11
Au-198		1.70E-10	2.48E-10	4.57E-10	7.18E-11
Au-198m		1.92E-10	2.81E-10	5.15E-10	8.25E-11
Au-199		7.63E-11	1.12E-10	2.06E-10	3.18E-11
Au-200		4.15E-12	5.87E-12	9.68E-12	2.65E-12
Au-200m		1.37E-10	1.97E-10	3.54E-10	6.30E-11
Au-201		1.15E-12	1.61E-12	2.51E-12	8.50E-13
Au-202		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ba-124		3.02E-12	4.15E-12	6.17E-12	2.44E-12
Ba-126		2.30E-11	3.30E-11	5.75E-11	1.27E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Ba-127		1.24E-12	1.71E-12	2.63E-12	9.40E-13
Ba-128		4.24E-10	6.21E-10	1.16E-09	1.92E-10
Ba-129		4.83E-12	6.92E-12	1.21E-11	2.60E-12
Ba-129m		6.02E-12	8.43E-12	1.39E-11	3.73E-12
Ba-131		5.48E-11	7.85E-11	1.38E-10	2.80E-11
Ba-131m		2.54E-13	3.53E-13	5.48E-13	1.89E-13
Ba-133		1.86E-10	2.56E-10	3.54E-10	1.19E-10
Ba-133m		8.82E-11	1.29E-10	2.44E-10	3.93E-11
Ba-135m		6.91E-11	1.01E-10	1.91E-10	3.09E-11
Ba-137m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ba-139		1.01E-11	1.45E-11	2.53E-11	5.63E-12
Ba-140		4.06E-10	5.92E-10	1.09E-09	1.85E-10
Ba-141		6.07E-12	8.71E-12	1.52E-11	3.48E-12
Ba-142		2.44E-12	3.45E-12	5.73E-12	1.53E-12
Be-10		1.90E-10	2.78E-10	5.12E-10	7.99E-11
Be-7		2.36E-12	3.28E-12	5.32E-12	1.38E-12
Bi-197		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-200		4.36E-12	6.13E-12	1.00E-11	2.70E-12
Bi-201		1.13E-11	1.60E-11	2.71E-11	6.17E-12
Bi-202		8.16E-12	1.14E-11	1.86E-11	5.01E-12
Bi-203		5.23E-11	7.42E-11	1.27E-10	2.73E-11
Bi-204		5.72E-11	8.08E-11	1.36E-10	3.09E-11
Bi-205		9.08E-11	1.28E-10	2.16E-10	4.90E-11
Bi-206		2.11E-10	3.00E-10	5.15E-10	1.08E-10
Bi-207		1.55E-10	2.23E-10	3.91E-10	7.56E-11
Bi-208		1.05E-10	1.46E-10	2.40E-10	5.99E-11
Bi-210		2.41E-10	3.52E-10	6.49E-10	1.01E-10
Bi-210m		1.50E-09	2.10E-09	3.66E-09	7.90E-10
Bi-210m+D		1.50E-09	2.10E-09	3.66E-09	7.90E-10
Bi-210m+E		1.50E-09	2.10E-09	3.66E-09	7.90E-10
Bi-211		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-212		1.94E-11	2.73E-11	4.54E-11	1.20E-11
Bi-212+D		1.94E-11	2.73E-11	4.54E-11	1.20E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Bi-212+E		1.94E-11	2.73E-11	4.54E-11	1.20E-11
Bi-212n		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-213		1.37E-11	1.94E-11	3.22E-11	8.57E-12
Bi-213+D		1.37E-11	1.94E-11	3.22E-11	8.57E-12
Bi-213+E		1.37E-11	1.94E-11	3.22E-11	8.57E-12
Bi-214		5.19E-12	7.17E-12	1.09E-11	3.98E-12
Bi-214+D		5.19E-12	7.17E-12	1.09E-11	3.98E-12
Bi-214+E		5.19E-12	7.17E-12	1.09E-11	3.98E-12
Bi-215		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-215+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-215+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-216		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bk-245		9.37E-11	1.37E-10	2.51E-10	3.95E-11
Bk-246		5.30E-11	7.59E-11	1.33E-10	2.58E-11
Bk-247		3.37E-09	4.34E-09	5.76E-09	3.04E-09
Bk-248m		6.68E-11	9.78E-11	1.80E-10	2.76E-11
Bk-249		2.98E-11	4.22E-11	7.27E-11	1.62E-11
Bk-250		1.54E-11	2.22E-11	3.93E-11	7.53E-12
Bk-251		2.52E-12	3.59E-12	6.02E-12	1.53E-12
Br-72		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-73		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-74		3.96E-12	5.41E-12	7.97E-12	3.22E-12
Br-74m		6.69E-12	9.13E-12	1.36E-11	5.37E-12
Br-75		4.19E-12	5.72E-12	8.68E-12	3.27E-12
Br-76		3.88E-11	5.28E-11	8.47E-11	2.69E-11
Br-76m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-77		8.29E-12	1.11E-11	1.72E-11	6.06E-12
Br-77m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-78		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-80		1.29E-12	1.77E-12	2.64E-12	1.05E-12
Br-80m		7.64E-12	1.05E-11	1.71E-11	5.32E-12
Br-82		4.66E-11	6.26E-11	9.75E-11	3.38E-11
Br-82m		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Br-83		2.31E-12	3.18E-12	4.98E-12	1.73E-12
Br-84		4.00E-12	5.48E-12	8.18E-12	3.22E-12
Br-84m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-85		0.00E+00	0.00E+00	0.00E+00	0.00E+00
C-10		0.00E+00	0.00E+00	0.00E+00	0.00E+00
C-11		1.10E-12	1.51E-12	2.22E-12	8.99E-13
C-14		4.20E-11	5.40E-11	7.48E-11	3.72E-11
Ca-41		1.12E-11	1.38E-11	1.74E-11	1.03E-11
Ca-45		6.67E-11	9.09E-11	1.55E-10	4.10E-11
Ca-47		2.06E-10	2.96E-10	5.35E-10	1.05E-10
Ca-49		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-101		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-102		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-103		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-104		8.30E-12	1.19E-11	2.04E-11	4.49E-12
Cd-105		2.93E-12	4.10E-12	6.62E-12	1.89E-12
Cd-107		9.53E-12	1.39E-11	2.56E-11	4.05E-12
Cd-109		1.35E-10	1.81E-10	2.90E-10	9.07E-11
Cd-111m		8.83E-13	1.24E-12	2.00E-12	5.81E-13
Cd-113		6.13E-10	7.79E-10	9.88E-10	5.86E-10
Cd-113m		7.84E-10	9.92E-10	1.32E-09	7.18E-10
Cd-115		2.40E-10	3.52E-10	6.50E-10	1.00E-10
Cd-115m		4.59E-10	6.63E-10	1.20E-09	2.08E-10
Cd-117		3.69E-11	5.35E-11	9.68E-11	1.68E-11
Cd-117m		3.30E-11	4.75E-11	8.35E-11	1.63E-11
Cd-118		1.16E-11	1.64E-11	2.73E-11	7.22E-12
Cd-119		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-119m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce-130		3.89E-12	5.40E-12	8.42E-12	2.79E-12
Ce-131		1.45E-12	2.01E-12	3.10E-12	1.08E-12
Ce-132		4.87E-11	7.08E-11	1.28E-10	2.15E-11
Ce-133		8.59E-12	1.23E-11	2.16E-11	4.44E-12
Ce-133m		2.26E-11	3.22E-11	5.54E-11	1.17E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Ce-134		4.53E-10	6.63E-10	1.22E-09	1.88E-10
Ce-135		2.77E-11	3.94E-11	6.74E-11	1.43E-11
Ce-137		3.64E-12	5.29E-12	9.54E-12	1.62E-12
Ce-137m		9.55E-11	1.40E-10	2.59E-10	3.92E-11
Ce-139		3.67E-11	5.32E-11	9.55E-11	1.65E-11
Ce-141		1.26E-10	1.84E-10	3.40E-10	5.14E-11
Ce-143		1.94E-10	2.83E-10	5.23E-10	7.99E-11
Ce-144		9.52E-10	1.40E-09	2.59E-09	3.85E-10
Ce-144+D		9.54E-10	1.40E-09	2.59E-09	3.87E-10
Ce-144+E		9.54E-10	1.40E-09	2.59E-09	3.87E-10
Ce-145		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf-244		3.37E-12	4.71E-12	7.42E-12	2.44E-12
Cf-246		5.69E-10	8.34E-10	1.55E-09	2.32E-10
Cf-247		2.52E-12	3.65E-12	6.51E-12	1.20E-12
Cf-248		1.20E-09	1.69E-09	2.90E-09	6.54E-10
Cf-249		3.43E-09	4.41E-09	5.85E-09	3.09E-09
Cf-250		2.41E-09	3.12E-09	4.46E-09	1.98E-09
Cf-251		3.54E-09	4.56E-09	6.12E-09	3.15E-09
Cf-252		3.60E-09	4.93E-09	8.13E-09	2.16E-09
Cf-253		1.24E-10	1.78E-10	3.21E-10	5.69E-11
Cf-254		5.76E-08	8.27E-08	1.46E-07	2.73E-08
Cf-255		3.65E-12	5.27E-12	9.36E-12	1.82E-12
Cl-34		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cl-34m		4.79E-12	6.55E-12	9.75E-12	3.86E-12
Cl-36		8.91E-11	1.20E-10	1.96E-10	6.18E-11
Cl-38		5.25E-12	7.20E-12	1.08E-11	4.21E-12
Cl-39		4.12E-12	5.63E-12	8.46E-12	3.27E-12
Cl-40		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cm-238		6.79E-12	9.71E-12	1.68E-11	3.51E-12
Cm-239		1.23E-11	1.79E-11	3.23E-11	5.46E-12
Cm-240		9.44E-10	1.37E-09	2.50E-09	4.16E-10
Cm-241		1.34E-10	1.94E-10	3.51E-10	5.93E-11
Cm-242		1.04E-09	1.48E-09	2.63E-09	5.06E-10

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Cm-243		2.57E-09	3.34E-09	4.78E-09	2.13E-09
Cm-244		2.26E-09	2.93E-09	4.22E-09	1.86E-09
Cm-245		2.83E-09	3.66E-09	5.06E-09	2.48E-09
Cm-246		2.79E-09	3.59E-09	4.93E-09	2.46E-09
Cm-247		2.69E-09	3.49E-09	4.86E-09	2.32E-09
Cm-247+D		2.70E-09	3.51E-09	4.89E-09	2.33E-09
Cm-247+E		2.70E-09	3.51E-09	4.89E-09	2.33E-09
Cm-248		1.23E-08	1.61E-08	2.29E-08	1.02E-08
Cm-249		2.28E-12	3.25E-12	5.52E-12	1.33E-12
Cm-250		8.90E-08	1.17E-07	1.69E-07	7.20E-08
Cm-250+D		8.91E-08	1.17E-07	1.69E-07	7.20E-08
Cm-250+E		8.91E-08	1.17E-07	1.69E-07	7.20E-08
Cm-251		1.65E-12	2.32E-12	3.75E-12	1.11E-12
Co-54m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-55		1.26E-10	1.81E-10	3.25E-10	6.45E-11
Co-56		2.72E-10	3.85E-10	6.56E-10	1.43E-10
Co-57		2.81E-11	4.03E-11	7.13E-11	1.32E-11
Co-58		7.95E-11	1.12E-10	1.92E-10	4.22E-11
Co-58m		3.37E-12	4.90E-12	9.00E-12	1.60E-12
Co-60		4.26E-10	6.03E-10	1.03E-09	1.98E-10
Co-60m		7.02E-14	9.68E-14	1.45E-13	5.61E-14
Co-61		6.62E-12	9.51E-12	1.67E-11	3.60E-12
Co-62		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-62m		2.30E-12	3.16E-12	4.71E-12	1.82E-12
Cr-48		1.96E-11	2.76E-11	4.65E-11	1.07E-11
Cr-49		3.67E-12	5.14E-12	8.25E-12	2.47E-12
Cr-51		5.00E-12	7.18E-12	1.27E-11	2.40E-12
Cr-55		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cr-56		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-121		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-121m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-123		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-124		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Cs-125		1.68E-12	2.29E-12	3.42E-12	1.34E-12
Cs-126		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-127		1.80E-12	2.42E-12	3.67E-12	1.38E-12
Cs-128		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-129		4.98E-12	6.66E-12	1.03E-11	3.72E-12
Cs-130		1.22E-12	1.66E-12	2.48E-12	9.83E-13
Cs-130m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-131		5.03E-12	6.74E-12	1.05E-11	3.70E-12
Cs-132		4.01E-11	5.25E-11	7.67E-11	3.24E-11
Cs-134		1.14E-09	1.40E-09	1.55E-09	1.21E-09
Cs-134m		1.12E-12	1.51E-12	2.28E-12	8.93E-13
Cs-135		1.70E-10	2.11E-10	2.51E-10	1.70E-10
Cs-135m		1.22E-12	1.65E-12	2.39E-12	9.92E-13
Cs-136		2.33E-10	3.03E-10	4.30E-10	1.94E-10
Cs-137		8.24E-10	1.01E-09	1.15E-09	8.59E-10
Cs-137+D		8.24E-10	1.01E-09	1.15E-09	8.59E-10
Cs-137+E		8.24E-10	1.01E-09	1.15E-09	8.59E-10
Cs-138		4.48E-12	6.13E-12	9.13E-12	3.61E-12
Cs-138m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-139		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-140		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-57		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-59		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-60		3.79E-12	5.22E-12	7.99E-12	2.87E-12
Cu-61		1.21E-11	1.75E-11	3.15E-11	6.28E-12
Cu-62		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-64		1.75E-11	2.55E-11	4.77E-11	7.98E-12
Cu-66		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-67		5.09E-11	7.42E-11	1.39E-10	2.33E-11
Cu-69		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-148		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-149		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-150		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Dy-151		1.46E-12	2.04E-12	3.29E-12	9.30E-13
Dy-152		1.45E-11	2.09E-11	3.74E-11	6.70E-12
Dy-153		2.08E-11	2.98E-11	5.22E-11	1.03E-11
Dy-154		8.64E-10	1.14E-09	1.72E-09	6.48E-10
Dy-155		1.55E-11	2.20E-11	3.78E-11	7.99E-12
Dy-157		6.12E-12	8.67E-12	1.47E-11	3.27E-12
Dy-159		1.47E-11	2.14E-11	3.84E-11	6.56E-12
Dy-165		1.12E-11	1.62E-11	2.92E-11	5.26E-12
Dy-165m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-166		3.05E-10	4.48E-10	8.32E-10	1.23E-10
Dy-167		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-168		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Er-154		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Er-156		2.64E-12	3.74E-12	6.27E-12	1.56E-12
Er-159		1.57E-12	2.17E-12	3.43E-12	1.06E-12
Er-161		8.80E-12	1.25E-11	2.15E-11	4.62E-12
Er-163		2.00E-13	2.82E-13	4.65E-13	1.21E-13
Er-165		2.45E-12	3.53E-12	6.27E-12	1.14E-12
Er-167m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Er-169		6.83E-11	1.00E-10	1.86E-10	2.75E-11
Er-171		5.44E-11	7.95E-11	1.46E-10	2.34E-11
Er-172		1.67E-10	2.44E-10	4.47E-10	7.11E-11
Er-173		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Es-249		1.79E-12	2.53E-12	4.21E-12	1.04E-12
Es-250		6.22E-11	9.01E-11	1.62E-10	2.82E-11
Es-250m		2.47E-12	3.47E-12	5.76E-12	1.44E-12
Es-251		2.86E-11	4.18E-11	7.67E-11	1.21E-11
Es-253		9.40E-10	1.38E-09	2.54E-09	3.87E-10
Es-254		1.50E-09	2.12E-09	3.71E-09	7.65E-10
Es-254+D		1.52E-09	2.14E-09	3.75E-09	7.73E-10
Es-254+E		1.52E-09	2.14E-09	3.75E-09	7.73E-10
Es-254m		7.63E-10	1.12E-09	2.07E-09	3.12E-10
Es-255		7.69E-10	1.12E-09	2.06E-09	3.25E-10

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Es-256		4.39E-10	6.28E-10	1.09E-09	2.24E-10
Eu-142		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-142m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-143		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-144		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-145		6.52E-11	9.21E-11	1.55E-10	3.49E-11
Eu-146		1.17E-10	1.65E-10	2.77E-10	6.29E-11
Eu-147		5.43E-11	7.80E-11	1.38E-10	2.59E-11
Eu-148		1.19E-10	1.66E-10	2.76E-10	6.58E-11
Eu-149		2.38E-11	3.46E-11	6.28E-11	1.04E-11
Eu-150		1.09E-10	1.52E-10	2.48E-10	6.31E-11
Eu-150m		6.53E-11	9.57E-11	1.77E-10	2.68E-11
Eu-152		1.58E-10	2.25E-10	3.94E-10	7.75E-11
Eu-152m		8.02E-11	1.17E-10	2.16E-10	3.37E-11
Eu-152n		1.16E-12	1.67E-12	2.89E-12	6.25E-13
Eu-154		2.66E-10	3.83E-10	6.86E-10	1.22E-10
Eu-154m		4.91E-13	6.92E-13	1.13E-12	3.19E-13
Eu-155		5.24E-11	7.64E-11	1.40E-10	2.24E-11
Eu-156		3.62E-10	5.28E-10	9.64E-10	1.54E-10
Eu-157		1.01E-10	1.48E-10	2.72E-10	4.22E-11
Eu-158		5.62E-12	7.90E-12	1.28E-11	3.68E-12
Eu-159		3.25E-12	4.62E-12	7.74E-12	1.99E-12
F-17		0.00E+00	0.00E+00	0.00E+00	0.00E+00
F-18		2.54E-12	3.38E-12	4.98E-12	2.06E-12
Fe-52		1.91E-10	2.78E-10	5.10E-10	8.89E-11
Fe-53		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-53m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-55		2.32E-11	3.13E-11	5.12E-11	1.39E-11
Fe-59		2.13E-10	3.01E-10	5.16E-10	1.10E-10
Fe-60		5.06E-09	6.74E-09	9.40E-09	3.61E-09
Fe-60+D		5.49E-09	7.34E-09	1.04E-08	3.81E-09
Fe-60+E		5.49E-09	7.34E-09	1.04E-08	3.81E-09
Fe-61		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Fe-62		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fm-251		1.05E-11	1.53E-11	2.77E-11	4.63E-12
Fm-252		4.92E-10	7.22E-10	1.34E-09	2.00E-10
Fm-253		1.87E-10	2.73E-10	5.05E-10	7.70E-11
Fm-254		6.02E-11	8.77E-11	1.59E-10	2.69E-11
Fm-255		4.46E-10	6.55E-10	1.21E-09	1.82E-10
Fm-256		2.58E-09	3.68E-09	6.29E-09	1.38E-09
Fm-257		1.31E-09	1.88E-09	3.36E-09	6.15E-10
Fr-212		4.80E-11	6.53E-11	1.06E-10	3.39E-11
Fr-219		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-220		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-220+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-220+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-221		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-221+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-221+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-222		3.93E-11	5.37E-11	8.61E-11	2.85E-11
Fr-223		1.99E-10	2.73E-10	4.57E-10	1.32E-10
Fr-224		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-227		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ga-64		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ga-65		1.68E-12	2.32E-12	3.48E-12	1.32E-12
Ga-66		1.74E-10	2.53E-10	4.60E-10	7.63E-11
Ga-67		2.86E-11	4.15E-11	7.50E-11	1.26E-11
Ga-68		7.58E-12	1.08E-11	1.82E-11	4.46E-12
Ga-70		1.40E-12	1.95E-12	3.00E-12	1.07E-12
Ga-72		1.53E-10	2.21E-10	3.97E-10	6.95E-11
Ga-73		3.77E-11	5.50E-11	1.00E-10	1.66E-11
Ga-74		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-142		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-143m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-144		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-145		1.96E-12	2.70E-12	4.13E-12	1.44E-12

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Gd-145m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-146		1.34E-10	1.94E-10	3.48E-10	5.99E-11
Gd-147		6.91E-11	9.83E-11	1.69E-10	3.53E-11
Gd-148		1.13E-09	1.47E-09	2.12E-09	9.00E-10
Gd-149		7.11E-11	1.03E-10	1.83E-10	3.30E-11
Gd-150		1.02E-09	1.32E-09	1.88E-09	8.26E-10
Gd-151		3.55E-11	5.17E-11	9.44E-11	1.51E-11
Gd-152		8.02E-10	1.04E-09	1.48E-09	6.48E-10
Gd-153		4.14E-11	6.01E-11	1.09E-10	1.80E-11
Gd-159		8.77E-11	1.29E-10	2.38E-10	3.59E-11
Gd-162		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ge-66		9.86E-12	1.31E-11	2.04E-11	6.88E-12
Ge-67		2.65E-12	3.63E-12	5.37E-12	2.15E-12
Ge-68		1.88E-10	2.66E-10	4.70E-10	9.38E-11
Ge-68+D		1.96E-10	2.77E-10	4.88E-10	9.83E-11
Ge-68+E		1.96E-10	2.77E-10	4.88E-10	9.83E-11
Ge-69		2.16E-11	2.95E-11	4.80E-11	1.36E-11
Ge-71		1.76E-12	2.50E-12	4.43E-12	8.68E-13
Ge-75		2.35E-12	3.15E-12	4.70E-12	1.88E-12
Ge-77		3.30E-11	4.45E-11	7.18E-11	2.14E-11
Ge-78		7.93E-12	1.03E-11	1.52E-11	6.26E-12
H-3	Tritiated Water	1.37E-12	1.76E-12	2.43E-12	1.22E-12
H-3	Organically Bound	3.03E-12	3.89E-12		
Hf-167		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-169		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-170		4.79E-11	6.85E-11	1.20E-10	2.35E-11
Hf-172		1.39E-10	1.99E-10	3.54E-10	6.54E-11
Hf-172+D		1.39E-10	1.99E-10	3.54E-10	6.54E-11
Hf-172+E		1.39E-10	1.99E-10	3.54E-10	6.54E-11
Hf-173		2.82E-11	4.06E-11	7.18E-11	1.33E-11
Hf-174		1.72E-09	2.16E-09	2.77E-09	1.63E-09
Hf-175		5.20E-11	7.49E-11	1.33E-10	2.43E-11
Hf-177m		5.52E-12	7.72E-12	1.24E-11	3.65E-12

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population		Soil Worker
				(Bq ⁻¹)		
Hf-178m		3.31E-10	4.64E-10	7.73E-10		1.88E-10
Hf-179m		1.80E-10	2.61E-10	4.70E-10		8.07E-11
Hf-180m		1.96E-11	2.82E-11	4.94E-11		9.70E-12
Hf-181		1.73E-10	2.52E-10	4.59E-10		7.45E-11
Hf-182		1.28E-10	1.72E-10	2.58E-10		9.25E-11
Hf-182+D		3.39E-10	4.77E-10	8.05E-10		1.88E-10
Hf-182+E		3.39E-10	4.77E-10	8.05E-10		1.88E-10
Hf-182m		3.29E-12	4.64E-12	7.62E-12		2.04E-12
Hf-183		6.53E-12	9.35E-12	1.61E-11		3.56E-12
Hf-184		7.82E-11	1.14E-10	2.08E-10		3.39E-11
Hg-190	Inorganic	1.52E-12	2.12E-12	3.39E-12		9.98E-13
Hg-190	Methyl	9.20E-13	1.25E-12			
Hg-190	Organic	1.45E-12	2.02E-12			
Hg-191m	Inorganic	4.74E-12	6.70E-12	1.12E-11		2.72E-12
Hg-191m	Methyl	2.07E-12	2.80E-12			
Hg-191m	Organic	4.08E-12	5.75E-12			
Hg-192	Inorganic	2.60E-11	3.71E-11	6.45E-11		1.29E-11
Hg-192	Methyl	2.60E-11	3.71E-11			
Hg-192	Organic	5.39E-12	7.21E-12			
Hg-193	Inorganic	1.24E-11	1.78E-11	3.13E-11		6.15E-12
Hg-193	Methyl	2.94E-12	3.96E-12			
Hg-193	Organic	9.47E-12	1.36E-11			
Hg-193+D	Inorganic	1.24E-11	1.78E-11	3.13E-11		6.15E-12
Hg-193+E	Inorganic	1.24E-11	1.78E-11	3.13E-11		6.15E-12
Hg-193m	Inorganic	5.48E-11	7.89E-11	1.40E-10		2.59E-11
Hg-193m	Methyl	1.07E-11	1.43E-11			
Hg-193m	Organic	3.92E-11	5.64E-11			
Hg-194	Inorganic	7.87E-11	1.08E-10	1.69E-10		5.41E-11
Hg-194	Methyl	2.15E-09	2.83E-09			
Hg-194	Organic	8.97E-10	1.18E-09			
Hg-194+D	Inorganic	1.22E-10	1.70E-10	2.75E-10		7.68E-11
Hg-194+E	Inorganic	1.22E-10	1.70E-10	2.75E-10		7.68E-11
Hg-195	Inorganic	1.45E-11	2.11E-11	3.81E-11		6.48E-12

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population		Soil Worker
				(Bq ⁻¹)		
Hg-195	Methyl	2.62E-12	3.53E-12			
Hg-195	Organic	1.05E-11	1.53E-11			
Hg-195m	Inorganic	8.97E-11	1.31E-10	2.40E-10		3.79E-11
Hg-195m	Methyl	1.73E-11	2.33E-11			
Hg-195m	Organic	6.23E-11	9.08E-11			
Hg-197	Inorganic	4.13E-11	6.03E-11	1.11E-10		1.73E-11
Hg-197	Methyl	8.53E-12	1.15E-11			
Hg-197	Organic	2.89E-11	4.21E-11			
Hg-197m	Inorganic	8.24E-11	1.21E-10	2.23E-10		3.40E-11
Hg-197m	Methyl	1.15E-11	1.55E-11			
Hg-197m	Organic	5.63E-11	8.26E-11			
Hg-199m	Inorganic	1.79E-12	2.53E-12	4.11E-12		1.19E-12
Hg-199m	Methyl	1.27E-12	1.73E-12			
Hg-199m	Organic	1.74E-12	2.45E-12			
Hg-203	Inorganic	8.34E-11	1.21E-10	2.20E-10		3.65E-11
Hg-203	Methyl	1.54E-10	2.06E-10			
Hg-203	Organic	1.12E-10	1.56E-10			
Hg-205	Inorganic	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Hg-206	Inorganic	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Hg-207	Inorganic	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ho-150		0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ho-153		0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ho-153m		0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ho-154		1.84E-12	2.53E-12	3.77E-12		1.47E-12
Ho-154m		0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ho-155		3.06E-12	4.32E-12	7.16E-12		1.82E-12
Ho-156		6.63E-12	9.32E-12	1.52E-11		4.22E-12
Ho-157		4.54E-13	6.30E-13	9.80E-13		3.18E-13
Ho-159		5.15E-13	7.12E-13	1.10E-12		3.70E-13
Ho-160		1.06E-12	1.45E-12	2.18E-12		7.95E-13
Ho-161		1.33E-12	1.92E-12	3.38E-12		6.59E-13
Ho-162		1.57E-13	2.16E-13	3.24E-13		1.23E-13
Ho-162m		1.93E-12	2.71E-12	4.45E-12		1.18E-12

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Ho-163		4.89E-13	7.11E-13	1.28E-12	2.15E-13
Ho-164		4.72E-13	6.58E-13	1.04E-12	3.39E-13
Ho-164m		1.13E-12	1.61E-12	2.71E-12	6.83E-13
Ho-166		2.49E-10	3.66E-10	6.79E-10	1.01E-10
Ho-166m		2.24E-10	3.19E-10	5.40E-10	1.18E-10
Ho-167		1.04E-11	1.50E-11	2.68E-11	4.92E-12
Ho-168		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-168m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-170		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-118		1.36E-11	1.92E-11	3.49E-11	8.06E-12
I-118m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-119		2.48E-12	3.44E-12	5.75E-12	1.72E-12
I-120		2.07E-11	2.87E-11	5.07E-11	1.31E-11
I-120m		9.75E-12	1.34E-11	2.22E-11	6.84E-12
I-121		5.53E-12	7.59E-12	1.30E-11	3.55E-12
I-122		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-123		1.91E-11	2.71E-11	5.17E-11	1.04E-11
I-124		1.12E-09	1.59E-09	3.04E-09	5.91E-10
I-125		6.91E-10	9.34E-10	1.50E-09	4.61E-10
I-126		2.38E-09	3.35E-09	6.17E-09	1.32E-09
I-128		2.19E-12	3.01E-12	4.78E-12	1.65E-12
I-129		4.08E-09	5.32E-09	7.50E-09	3.16E-09
I-130		1.63E-10	2.31E-10	4.43E-10	8.76E-11
I-130m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-131		1.23E-09	1.75E-09	3.31E-09	6.55E-10
I-132		2.26E-11	3.14E-11	5.70E-11	1.36E-11
I-132m		5.16E-12	7.06E-12	1.18E-11	3.55E-12
I-133		3.93E-10	5.62E-10	1.11E-09	1.98E-10
I-134		6.38E-12	8.76E-12	1.44E-11	4.50E-12
I-134m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-135		7.77E-11	1.10E-10	2.11E-10	4.18E-11
In-103		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-105		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
In-106		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-106m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-107		2.88E-12	4.05E-12	6.66E-12	1.81E-12
In-108		5.51E-12	7.63E-12	1.20E-11	3.73E-12
In-108m		4.86E-12	6.78E-12	1.07E-11	3.36E-12
In-109		5.72E-12	8.11E-12	1.37E-11	3.12E-12
In-109m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-110		2.08E-11	2.89E-11	4.69E-11	1.24E-11
In-110m		7.64E-12	1.08E-11	1.81E-11	4.57E-12
In-111		3.51E-11	5.03E-11	8.83E-11	1.70E-11
In-111m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-112		4.75E-13	6.54E-13	9.85E-13	3.74E-13
In-112m		8.84E-13	1.23E-12	1.94E-12	6.31E-13
In-113m		2.59E-12	3.71E-12	6.41E-12	1.40E-12
In-114		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-114m		6.78E-10	9.85E-10	1.81E-09	2.93E-10
In-114m+D		6.78E-10	9.85E-10	1.81E-09	2.93E-10
In-114m+E		6.78E-10	9.85E-10	1.81E-09	2.93E-10
In-115		9.17E-10	1.17E-09	1.51E-09	8.66E-10
In-115m		1.21E-11	1.76E-11	3.19E-11	5.38E-12
In-116m		4.41E-12	6.14E-12	9.81E-12	2.92E-12
In-117		1.87E-12	2.62E-12	4.19E-12	1.26E-12
In-117m		1.20E-11	1.73E-11	3.09E-11	5.85E-12
In-118		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-118m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-119		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-119m		2.02E-12	2.79E-12	4.26E-12	1.56E-12
In-121		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-121m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-180		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-182		2.92E-12	4.07E-12	6.42E-12	2.04E-12
Ir-183		4.58E-12	6.47E-12	1.08E-11	2.64E-12
Ir-184		1.97E-11	2.82E-11	4.88E-11	1.02E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Ir-185		4.26E-11	6.14E-11	1.09E-10	1.98E-11
Ir-186		6.72E-11	9.64E-11	1.69E-10	3.27E-11
Ir-186m		6.92E-12	9.81E-12	1.66E-11	3.83E-12
Ir-187		1.49E-11	2.14E-11	3.82E-11	6.94E-12
Ir-188		7.72E-11	1.09E-10	1.85E-10	4.11E-11
Ir-189		3.87E-11	5.65E-11	1.04E-10	1.65E-11
Ir-190		1.17E-10	1.67E-10	2.89E-10	5.93E-11
Ir-190m		6.73E-13	9.60E-13	1.66E-12	3.53E-13
Ir-190n		1.18E-11	1.67E-11	2.85E-11	6.30E-12
Ir-191m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-192		1.99E-10	2.89E-10	5.22E-10	8.93E-11
Ir-192m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-192n		1.42E-10	2.06E-10	3.72E-10	6.46E-11
Ir-193m		5.28E-11	7.75E-11	1.44E-10	2.13E-11
Ir-194		2.33E-10	3.42E-10	6.34E-10	9.53E-11
Ir-194m		2.29E-10	3.25E-10	5.60E-10	1.19E-10
Ir-195		1.07E-11	1.56E-11	2.81E-11	5.01E-12
Ir-195m		1.83E-11	2.65E-11	4.80E-11	8.24E-12
Ir-196		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-196m		8.81E-12	1.24E-11	2.05E-11	5.30E-12
K-38		0.00E+00	0.00E+00	0.00E+00	0.00E+00
K-40		6.67E-10	9.24E-10	1.58E-09	4.07E-10
K-42		3.41E-11	4.70E-11	7.79E-11	2.27E-11
K-43		2.10E-11	2.85E-11	4.57E-11	1.46E-11
K-44		3.73E-12	5.11E-12	7.58E-12	3.03E-12
K-45		2.18E-12	2.98E-12	4.41E-12	1.78E-12
K-46		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-74		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-75		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-77		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Kr-79		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-81		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-81m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-83m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-87		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-88		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-89		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-128		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-129		1.47E-12	2.05E-12	3.22E-12	1.04E-12
La-130		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-131		2.43E-12	3.43E-12	5.65E-12	1.50E-12
La-132		5.14E-11	7.43E-11	1.33E-10	2.41E-11
La-132m		4.06E-12	5.84E-12	1.03E-11	2.03E-12
La-133		3.77E-12	5.45E-12	9.67E-12	1.81E-12
La-134		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-135		3.94E-12	5.70E-12	1.01E-11	1.81E-12
La-136		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-137		9.52E-12	1.37E-11	2.40E-11	4.56E-12
La-138		9.58E-11	1.34E-10	2.20E-10	5.48E-11
La-140		2.95E-10	4.29E-10	7.75E-10	1.30E-10
La-141		5.26E-11	7.68E-11	1.41E-10	2.29E-11
La-142		1.50E-11	2.14E-11	3.66E-11	8.36E-12
La-143		3.42E-12	4.84E-12	7.98E-12	2.17E-12
Lu-165		1.20E-12	1.67E-12	2.60E-12	8.67E-13
Lu-167		3.63E-12	5.09E-12	8.28E-12	2.29E-12
Lu-169		5.72E-11	8.13E-11	1.39E-10	2.94E-11
Lu-169m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-170		9.72E-11	1.38E-10	2.33E-10	5.17E-11
Lu-171		9.25E-11	1.34E-10	2.39E-10	4.24E-11
Lu-171m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-172		1.52E-10	2.17E-10	3.79E-10	7.51E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Lu-172m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-173		5.22E-11	7.57E-11	1.37E-10	2.32E-11
Lu-174		4.23E-11	6.14E-11	1.12E-10	1.85E-11
Lu-174m		9.39E-11	1.38E-10	2.54E-10	3.87E-11
Lu-176		2.55E-10	3.70E-10	6.72E-10	1.13E-10
Lu-176m		2.27E-11	3.32E-11	6.07E-11	9.98E-12
Lu-177		9.53E-11	1.40E-10	2.59E-10	3.88E-11
Lu-177m		2.51E-10	3.65E-10	6.60E-10	1.11E-10
Lu-178		2.27E-12	3.17E-12	4.99E-12	1.65E-12
Lu-178m		1.69E-12	2.34E-12	3.57E-12	1.27E-12
Lu-179		3.19E-11	4.66E-11	8.55E-11	1.37E-11
Lu-180		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-181		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mg-27		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mg-28		3.06E-10	4.45E-10	8.29E-10	1.40E-10
Mn-50m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn-51		5.66E-12	7.96E-12	1.30E-11	3.70E-12
Mn-52		1.75E-10	2.45E-10	4.10E-10	9.72E-11
Mn-52m		3.42E-12	4.73E-12	7.20E-12	2.61E-12
Mn-53		4.17E-12	6.01E-12	1.10E-11	1.87E-12
Mn-54		6.15E-11	8.39E-11	1.33E-10	3.99E-11
Mn-56		2.78E-11	4.01E-11	7.10E-11	1.38E-11
Mn-57		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn-58m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mo-101		1.82E-12	2.50E-12	3.69E-12	1.48E-12
Mo-102		2.81E-12	3.86E-12	5.74E-12	2.30E-12
Mo-89		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mo-90		1.75E-11	2.33E-11	3.54E-11	1.34E-11
Mo-91		2.55E-12	3.50E-12	5.20E-12	2.08E-12
Mo-91m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mo-93		8.44E-11	1.05E-10	1.31E-10	8.44E-11
Mo-93m		9.01E-12	1.20E-11	1.79E-11	7.04E-12
Mo-99		4.32E-11	5.70E-11	8.96E-11	3.19E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
N-13		0.00E+00	0.00E+00	0.00E+00	0.00E+00
N-16		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Na-22		2.60E-10	3.41E-10	5.14E-10	2.02E-10
Na-24		3.32E-11	4.44E-11	6.82E-11	2.51E-11
Nb-87		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-88		3.46E-12	4.75E-12	7.09E-12	2.72E-12
Nb-88m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-89		2.75E-11	3.97E-11	7.00E-11	1.38E-11
Nb-89m		1.06E-11	1.50E-11	2.52E-11	6.23E-12
Nb-90		1.54E-10	2.21E-10	3.90E-10	7.41E-11
Nb-91		7.23E-12	1.06E-11	1.95E-11	2.99E-12
Nb-91m		7.26E-11	1.06E-10	1.97E-10	2.97E-11
Nb-92		8.97E-11	1.24E-10	2.02E-10	5.38E-11
Nb-92m		4.57E-11	6.41E-11	1.06E-10	2.55E-11
Nb-93m		2.25E-11	3.29E-11	6.08E-11	9.31E-12
Nb-94		2.10E-10	3.00E-10	5.24E-10	1.05E-10
Nb-94m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-95		6.63E-11	9.46E-11	1.64E-10	3.32E-11
Nb-95m		1.06E-10	1.56E-10	2.88E-10	4.36E-11
Nb-96		1.36E-10	1.96E-10	3.46E-10	6.50E-11
Nb-97		5.30E-12	7.55E-12	1.28E-11	3.08E-12
Nb-98m		7.17E-12	1.01E-11	1.62E-11	4.68E-12
Nb-99		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-99m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-134		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-135		3.00E-12	4.16E-12	6.44E-12	2.19E-12
Nd-136		7.32E-12	1.03E-11	1.72E-11	4.45E-12
Nd-137		4.05E-12	5.73E-12	9.55E-12	2.43E-12
Nd-138		9.26E-11	1.35E-10	2.47E-10	4.03E-11
Nd-139		1.40E-12	1.98E-12	3.25E-12	8.83E-13
Nd-139m		2.72E-11	3.89E-11	6.77E-11	1.36E-11
Nd-140		3.36E-10	4.91E-10	9.04E-10	1.39E-10
Nd-141		8.49E-13	1.22E-12	2.10E-12	4.43E-13

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Nd-141m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-144		8.29E-10	1.06E-09	1.45E-09	7.05E-10
Nd-147		1.89E-10	2.76E-10	5.11E-10	7.73E-11
Nd-149		1.47E-11	2.13E-11	3.82E-11	6.91E-12
Nd-151		1.93E-12	2.73E-12	4.53E-12	1.20E-12
Nd-152		2.07E-12	2.85E-12	4.29E-12	1.64E-12
Ne-19		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ne-24		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-56		7.66E-11	1.07E-10	1.75E-10	4.44E-11
Ni-57		1.10E-10	1.58E-10	2.79E-10	5.36E-11
Ni-59		7.34E-12	1.04E-11	1.83E-11	3.86E-12
Ni-63		1.84E-11	2.62E-11	4.61E-11	9.62E-12
Ni-65		1.87E-11	2.71E-11	4.84E-11	8.99E-12
Ni-66		5.44E-10	7.98E-10	1.48E-09	2.22E-10
Np-232		5.36E-13	7.33E-13	1.08E-12	4.25E-13
Np-233		1.40E-13	1.95E-13	3.02E-13	9.96E-14
Np-234		7.45E-11	1.06E-10	1.84E-10	3.74E-11
Np-235		1.01E-11	1.48E-11	2.73E-11	4.14E-12
Np-235+D		1.01E-11	1.48E-11	2.73E-11	4.14E-12
Np-235+E		1.01E-11	1.48E-11	2.73E-11	4.14E-12
Np-236		3.60E-10	4.93E-10	7.60E-10	2.60E-10
Np-236m		3.05E-11	4.47E-11	8.20E-11	1.29E-11
Np-237		1.68E-09	2.24E-09	3.37E-09	1.27E-09
Np-237+D		1.85E-09	2.48E-09	3.81E-09	1.34E-09
Np-237+E		1.85E-09	2.48E-09	3.81E-09	1.34E-09
Np-238		1.41E-10	2.06E-10	3.76E-10	6.14E-11
Np-239		1.41E-10	2.06E-10	3.80E-10	5.91E-11
Np-240		5.21E-12	7.36E-12	1.22E-11	3.22E-12
Np-240m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Np-241		6.63E-13	9.15E-13	1.37E-12	5.31E-13
Np-242		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Np-242m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
O-14		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
O-15		0.00E+00	0.00E+00	0.00E+00	0.00E+00
O-19		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Os-180		1.03E-12	1.42E-12	2.15E-12	7.75E-13
Os-181		9.69E-12	1.38E-11	2.38E-11	5.06E-12
Os-182		7.24E-11	1.04E-10	1.84E-10	3.43E-11
Os-183		2.81E-11	4.04E-11	7.14E-11	1.34E-11
Os-183m		2.23E-11	3.17E-11	5.44E-11	1.15E-11
Os-185		5.02E-11	7.08E-11	1.19E-10	2.72E-11
Os-186		2.12E-09	2.83E-09	4.46E-09	1.47E-09
Os-189m		2.67E-12	3.91E-12	7.20E-12	1.13E-12
Os-190m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Os-191		1.00E-10	1.47E-10	2.71E-10	4.15E-11
Os-191m		1.70E-11	2.49E-11	4.60E-11	6.96E-12
Os-193		1.46E-10	2.14E-10	3.96E-10	5.94E-11
Os-194		4.22E-10	6.15E-10	1.13E-09	1.80E-10
Os-194+D		6.55E-10	9.57E-10	1.76E-09	2.75E-10
Os-194+E		6.55E-10	9.57E-10	1.76E-09	2.75E-10
Os-196		5.86E-12	8.22E-12	1.32E-11	4.03E-12
P-30		0.00E+00	0.00E+00	0.00E+00	0.00E+00
P-32		2.42E-10	3.32E-10	5.79E-10	1.44E-10
P-33		2.64E-11	3.67E-11	6.47E-11	1.52E-11
Pa-227		2.62E-11	3.69E-11	6.00E-11	1.75E-11
Pa-228		9.58E-11	1.38E-10	2.44E-10	4.56E-11
Pa-229		1.24E-11	1.80E-11	3.26E-11	5.48E-12
Pa-230		1.00E-10	1.44E-10	2.55E-10	4.79E-11
Pa-231		4.66E-09	6.10E-09	8.05E-09	4.17E-09
Pa-232		9.38E-11	1.36E-10	2.43E-10	4.30E-11
Pa-233		1.66E-10	2.42E-10	4.45E-10	6.98E-11
Pa-234		5.60E-11	8.11E-11	1.45E-10	2.61E-11
Pa-234m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pa-235		1.24E-12	1.73E-12	2.67E-12	9.32E-13
Pa-236		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pa-237		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Pb-194		1.07E-12	1.47E-12	2.20E-12	8.40E-13
Pb-195m		1.43E-12	1.96E-12	2.96E-12	1.09E-12
Pb-196		1.90E-12	2.63E-12	4.13E-12	1.34E-12
Pb-197		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb-197m		2.99E-12	4.15E-12	6.57E-12	2.06E-12
Pb-198		7.04E-12	9.81E-12	1.61E-11	4.39E-12
Pb-199		3.22E-12	4.50E-12	7.32E-12	2.05E-12
Pb-200		4.29E-11	6.10E-11	1.06E-10	2.37E-11
Pb-201		1.62E-11	2.29E-11	3.92E-11	9.31E-12
Pb-201m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb-202		9.12E-10	1.22E-09	1.66E-09	6.66E-10
Pb-202+D		9.52E-10	1.27E-09	1.74E-09	6.94E-10
Pb-202+E		9.52E-10	1.27E-09	1.74E-09	6.94E-10
Pb-202m		1.29E-11	1.81E-11	3.01E-11	7.88E-12
Pb-203		2.81E-11	4.01E-11	7.03E-11	1.53E-11
Pb-204m		3.44E-12	4.76E-12	7.44E-12	2.38E-12
Pb-205		1.67E-11	2.17E-11	3.16E-11	1.30E-11
Pb-209		6.51E-12	9.42E-12	1.69E-11	3.30E-12
Pb-210		2.39E-08	3.18E-08	4.64E-08	1.62E-08
Pb-211		1.11E-11	1.57E-11	2.58E-11	7.10E-12
Pb-212		6.80E-10	9.64E-10	1.71E-09	3.55E-10
Pb-214		9.31E-12	1.31E-11	2.14E-11	5.96E-12
Pd-100		1.03E-10	1.47E-10	2.55E-10	5.12E-11
Pd-101		1.11E-11	1.59E-11	2.79E-11	5.37E-12
Pd-103		3.37E-11	4.94E-11	9.15E-11	1.37E-11
Pd-107		7.00E-12	1.03E-11	1.91E-11	2.84E-12
Pd-109		9.64E-11	1.41E-10	2.62E-10	3.94E-11
Pd-109m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-111		2.68E-12	3.76E-12	6.05E-12	1.83E-12
Pd-112		4.65E-10	6.82E-10	1.26E-09	1.89E-10
Pd-114		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-96		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-97		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Pd-98		3.16E-12	4.38E-12	6.77E-12	2.34E-12
Pd-99		2.04E-12	2.84E-12	4.46E-12	1.43E-12
Pm-136		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-137m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-139		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-140		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-140m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-141		1.74E-12	2.42E-12	3.73E-12	1.29E-12
Pm-142		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-143		2.37E-11	3.35E-11	5.68E-11	1.24E-11
Pm-144		9.04E-11	1.27E-10	2.10E-10	5.04E-11
Pm-145		1.42E-11	2.05E-11	3.67E-11	6.50E-12
Pm-146		1.11E-10	1.59E-10	2.79E-10	5.32E-11
Pm-147		4.57E-11	6.70E-11	1.24E-10	1.87E-11
Pm-148		4.67E-10	6.84E-10	1.26E-09	1.92E-10
Pm-148m		2.16E-10	3.10E-10	5.45E-10	1.03E-10
Pm-149		1.79E-10	2.63E-10	4.88E-10	7.26E-11
Pm-150		2.94E-11	4.25E-11	7.54E-11	1.43E-11
Pm-151		1.21E-10	1.77E-10	3.26E-10	5.08E-11
Pm-152		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-152m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-153		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-154		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-154m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-203	Organic	3.67E-12	5.11E-12	8.35E-12	2.37E-12
Po-203	Inorganic	4.43E-12	6.22E-12	0.00E+00	0.00E+00
Po-204	Organic	2.37E-11	3.34E-11	5.74E-11	1.35E-11
Po-204	Inorganic	3.10E-11	4.42E-11	0.00E+00	0.00E+00
Po-205	Organic	4.38E-12	6.06E-12	9.73E-12	2.91E-12
Po-205	Inorganic	4.56E-12	6.37E-12	0.00E+00	0.00E+00
Po-206	Organic	8.70E-10	1.14E-09	1.73E-09	6.52E-10
Po-206	Inorganic	3.54E-10	4.88E-10	0.00E+00	0.00E+00
Po-207	Organic	1.03E-11	1.44E-11	2.44E-11	6.09E-12

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Po-207	Inorganic	1.35E-11	1.90E-11	0.00E+00	0.00E+00
Po-208	Organic	5.99E-08	7.60E-08	1.10E-07	4.86E-08
Po-208	Inorganic	1.26E-08	1.61E-08	0.00E+00	0.00E+00
Po-209	Organic	5.95E-08	7.54E-08	1.09E-07	4.83E-08
Po-209	Inorganic	1.25E-08	1.59E-08	0.00E+00	0.00E+00
Po-210	Organic	4.80E-08	6.09E-08	8.85E-08	3.88E-08
Po-210	Inorganic	1.02E-08	1.31E-08	0.00E+00	0.00E+00
Po-211		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-212		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-212m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-213		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-214		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-215		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-216		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-218		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-134		3.10E-12	4.35E-12	7.02E-12	2.05E-12
Pr-134m		5.17E-12	7.27E-12	1.18E-11	3.40E-12
Pr-135		2.50E-12	3.49E-12	5.52E-12	1.72E-12
Pr-136		1.61E-12	2.22E-12	3.30E-12	1.28E-12
Pr-137		3.16E-12	4.52E-12	7.75E-12	1.74E-12
Pr-138		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-138m		1.14E-11	1.61E-11	2.68E-11	6.54E-12
Pr-139		4.05E-12	5.86E-12	1.05E-11	1.89E-12
Pr-140		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-142		2.33E-10	3.41E-10	6.32E-10	9.48E-11
Pr-142m		2.99E-12	4.38E-12	8.13E-12	1.21E-12
Pr-143		2.14E-10	3.15E-10	5.84E-10	8.65E-11
Pr-144		2.19E-12	3.03E-12	4.61E-12	1.71E-12
Pr-144m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-145		6.19E-11	9.07E-11	1.67E-10	2.61E-11
Pr-146		3.73E-12	5.18E-12	8.01E-12	2.78E-12
Pr-147		1.58E-12	2.19E-12	3.38E-12	1.20E-12
Pr-148		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Pr-148m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt-184		2.55E-12	3.62E-12	6.11E-12	1.45E-12
Pt-186		1.17E-11	1.67E-11	2.89E-11	6.05E-12
Pt-187		9.48E-12	1.36E-11	2.39E-11	4.73E-12
Pt-188		1.09E-10	1.57E-10	2.79E-10	5.10E-11
Pt-189		2.63E-11	3.80E-11	6.80E-11	1.21E-11
Pt-190		8.14E-10	1.14E-09	1.94E-09	4.60E-10
Pt-191		5.30E-11	7.70E-11	1.39E-10	2.36E-11
Pt-193		6.54E-12	9.59E-12	1.78E-11	2.64E-12
Pt-193m		8.26E-11	1.21E-10	2.25E-10	3.35E-11
Pt-195m		1.13E-10	1.66E-10	3.06E-10	4.63E-11
Pt-197		7.56E-11	1.11E-10	2.05E-10	3.09E-11
Pt-197m		1.08E-11	1.57E-11	2.85E-11	4.91E-12
Pt-199		2.43E-12	3.43E-12	5.64E-12	1.55E-12
Pt-200		2.04E-10	3.00E-10	5.54E-10	8.36E-11
Pt-202		7.89E-10	1.16E-09	2.15E-09	3.20E-10
Pt-202+D		7.89E-10	1.16E-09	2.15E-09	3.20E-10
Pt-202+E		7.89E-10	1.16E-09	2.15E-09	3.20E-10
Pu-232		8.00E-12	1.13E-11	1.83E-11	5.33E-12
Pu-234		2.23E-11	3.25E-11	5.88E-11	9.89E-12
Pu-235		1.25E-13	1.73E-13	2.64E-13	9.28E-14
Pu-236		2.04E-09	2.71E-09	4.01E-09	1.53E-09
Pu-237		1.74E-11	2.53E-11	4.60E-11	7.56E-12
Pu-238		3.55E-09	4.58E-09	6.07E-09	3.15E-09
Pu-239		3.65E-09	4.71E-09	6.16E-09	3.27E-09
Pu-239+D		3.65E-09	4.71E-09	6.16E-09	3.27E-09
Pu-239+E		3.65E-09	4.71E-09	6.16E-09	3.27E-09
Pu-240		3.65E-09	4.71E-09	6.17E-09	3.27E-09
Pu-241		4.77E-11	6.17E-11	7.35E-11	4.68E-11
Pu-242		3.47E-09	4.48E-09	5.86E-09	3.11E-09
Pu-243		1.28E-11	1.87E-11	3.43E-11	5.59E-12
Pu-244		3.88E-09	5.08E-09	6.98E-09	3.27E-09
Pu-244+D		4.07E-09	5.35E-09	7.48E-09	3.35E-09

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Pu-244+E		4.07E-09	5.35E-09	7.48E-09	3.35E-09
Pu-245		1.15E-10	1.69E-10	3.10E-10	4.87E-11
Pu-246		4.66E-10	6.80E-10	1.24E-09	1.99E-10
Ra-219		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-219+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-219+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-220		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-222		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-223		6.44E-09	9.15E-09	1.62E-08	3.33E-09
Ra-223+D		6.44E-09	9.15E-09	1.62E-08	3.33E-09
Ra-223+E		6.44E-09	9.15E-09	1.62E-08	3.33E-09
Ra-224		4.51E-09	6.44E-09	1.15E-08	2.29E-09
Ra-224+D		4.51E-09	6.44E-09	1.15E-08	2.29E-09
Ra-224+E		4.51E-09	6.44E-09	1.15E-08	2.29E-09
Ra-225		3.09E-09	4.15E-09	6.55E-09	2.01E-09
Ra-226		1.04E-08	1.39E-08	1.83E-08	7.96E-09
Ra-226+D		1.04E-08	1.39E-08	1.83E-08	7.97E-09
Ra-226+E		1.04E-08	1.39E-08	1.83E-08	7.97E-09
Ra-227		2.89E-12	4.01E-12	6.33E-12	2.04E-12
Ra-228		2.80E-08	3.85E-08	5.35E-08	1.81E-08
Ra-228+D		2.81E-08	3.86E-08	5.36E-08	1.81E-08
Ra-228+E		2.81E-08	3.86E-08	5.36E-08	1.81E-08
Ra-230		1.61E-11	2.31E-11	4.07E-11	8.76E-12
Rb-77		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-78		3.27E-12	4.47E-12	6.59E-12	2.67E-12
Rb-78m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-79		2.26E-12	3.10E-12	4.59E-12	1.84E-12
Rb-80		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-81		3.16E-12	4.28E-12	6.60E-12	2.39E-12
Rb-81m		5.26E-13	7.16E-13	1.10E-12	4.03E-13

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Rb-82		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-82m		9.83E-12	1.31E-11	1.96E-11	7.69E-12
Rb-83		1.45E-10	1.91E-10	2.90E-10	1.12E-10
Rb-84		2.41E-10	3.21E-10	5.03E-10	1.78E-10
Rb-84m		3.95E-13	5.36E-13	7.98E-13	3.15E-13
Rb-86		2.67E-10	3.63E-10	6.06E-10	1.77E-10
Rb-86m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-87		1.45E-10	1.98E-10	3.31E-10	9.60E-11
Rb-88		3.79E-12	5.20E-12	7.75E-12	3.08E-12
Rb-89		2.08E-12	2.84E-12	4.20E-12	1.69E-12
Rb-90		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-90m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-178		1.32E-12	1.81E-12	2.72E-12	1.05E-12
Re-179		7.51E-13	1.03E-12	1.58E-12	5.67E-13
Re-180		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-181		3.84E-11	5.44E-11	9.56E-11	2.17E-11
Re-182		1.29E-10	1.82E-10	3.14E-10	7.44E-11
Re-182m		2.46E-11	3.45E-11	5.91E-11	1.47E-11
Re-183		9.01E-11	1.28E-10	2.26E-10	4.90E-11
Re-184		8.57E-11	1.19E-10	1.99E-10	5.26E-11
Re-184m		1.33E-10	1.89E-10	3.27E-10	7.53E-11
Re-186		1.46E-10	2.10E-10	3.81E-10	7.44E-11
Re-186m		1.99E-10	2.84E-10	4.98E-10	1.09E-10
Re-186m+D		3.45E-10	4.94E-10	8.79E-10	1.83E-10
Re-186m+E		3.45E-10	4.94E-10	8.79E-10	1.83E-10
Re-187		4.51E-13	6.47E-13	1.15E-12	2.40E-13
Re-188		1.33E-10	1.91E-10	3.51E-10	6.82E-11
Re-188m		2.67E-12	3.83E-12	6.95E-12	1.42E-12
Re-189		7.34E-11	1.06E-10	1.93E-10	3.77E-11
Re-190		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-190m		2.92E-11	4.15E-11	7.37E-11	1.69E-11
Rh-100		6.55E-11	9.23E-11	1.55E-10	3.59E-11
Rh-100m		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Rh-101		5.54E-11	7.73E-11	1.29E-10	3.22E-11
Rh-101m		2.47E-11	3.54E-11	6.20E-11	1.21E-11
Rh-102		1.67E-10	2.41E-10	4.31E-10	7.84E-11
Rh-102m		2.20E-10	2.98E-10	4.63E-10	1.51E-10
Rh-103m		2.52E-13	3.58E-13	6.04E-13	1.51E-13
Rh-104		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-104m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-105		6.32E-11	9.26E-11	1.71E-10	2.61E-11
Rh-106		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-106m		1.53E-11	2.16E-11	3.66E-11	8.57E-12
Rh-107		1.12E-12	1.56E-12	2.39E-12	8.54E-13
Rh-108		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-109		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-94		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-95		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-95m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-96		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-96m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-97		2.66E-12	3.69E-12	5.78E-12	1.89E-12
Rh-97m		3.23E-12	4.50E-12	7.15E-12	2.15E-12
Rh-98		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-99		7.12E-11	1.02E-10	1.81E-10	3.40E-11
Rh-99m		6.65E-12	9.43E-12	1.60E-11	3.58E-12
Rn-207		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-209		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-210		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-211		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-212		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-215		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-216		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-217		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-218		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-219		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Rn-219+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-219+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-220		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-222		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-222+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-222+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-223		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-103		9.85E-11	1.42E-10	2.55E-10	4.56E-11
Ru-105		3.87E-11	5.63E-11	1.02E-10	1.73E-11
Ru-106		1.14E-09	1.65E-09	3.02E-09	4.98E-10
Ru-106+D		1.14E-09	1.65E-09	3.02E-09	4.98E-10
Ru-106+E		1.14E-09	1.65E-09	3.02E-09	4.98E-10
Ru-107		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-108		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-92		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-94		8.34E-12	1.19E-11	2.07E-11	4.41E-12
Ru-95		5.18E-12	7.27E-12	1.20E-11	3.07E-12
Ru-97		1.72E-11	2.45E-11	4.27E-11	8.52E-12
S-35	Inorganic	1.39E-11	1.89E-11	3.18E-11	8.82E-12
S-35	Organic	7.35E-11	9.99E-11		
S-37		0.00E+00	0.00E+00	0.00E+00	0.00E+00
S-38	Inorganic	2.62E-11	3.40E-11	5.01E-11	2.02E-11
S-38	Organic	1.67E-11	2.28E-11		
Sb-111		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-113		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-114		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-115		1.38E-12	1.91E-12	2.97E-12	9.89E-13
Sb-116		1.53E-12	2.10E-12	3.13E-12	1.19E-12
Sb-116m		4.63E-12	6.42E-12	1.01E-11	3.11E-12
Sb-117		1.81E-12	2.59E-12	4.46E-12	9.60E-13
Sb-118		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-118m		1.89E-11	2.65E-11	4.35E-11	1.11E-11
Sb-119		1.31E-11	1.91E-11	3.51E-11	5.50E-12

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Sb-120		6.70E-13	9.23E-13	1.39E-12	5.24E-13
Sb-120m		1.19E-10	1.68E-10	2.81E-10	6.62E-11
Sb-122		2.87E-10	4.19E-10	7.74E-10	1.20E-10
Sb-122m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-124		3.47E-10	5.00E-10	8.96E-10	1.63E-10
Sb-124m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-124n		5.33E-13	7.39E-13	1.15E-12	3.88E-13
Sb-125		1.20E-10	1.68E-10	2.90E-10	6.51E-11
Sb-126		3.42E-10	4.91E-10	8.71E-10	1.63E-10
Sb-126m		1.90E-12	2.63E-12	3.99E-12	1.45E-12
Sb-127		2.73E-10	3.98E-10	7.32E-10	1.16E-10
Sb-128		1.02E-10	1.47E-10	2.60E-10	4.86E-11
Sb-128m		1.57E-12	2.16E-12	3.23E-12	1.24E-12
Sb-129		5.99E-11	8.72E-11	1.58E-10	2.68E-11
Sb-130		5.68E-12	7.89E-12	1.24E-11	3.94E-12
Sb-130m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-131		7.19E-12	1.01E-11	1.74E-11	4.48E-12
Sb-133		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sc-42m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sc-43		2.70E-11	3.91E-11	6.99E-11	1.27E-11
Sc-44		4.27E-11	6.17E-11	1.09E-10	2.05E-11
Sc-44m		3.74E-10	5.44E-10	9.87E-10	1.63E-10
Sc-46		1.68E-10	2.39E-10	4.17E-10	8.30E-11
Sc-47		9.43E-11	1.38E-10	2.55E-10	3.89E-11
Sc-48		1.94E-10	2.78E-10	4.86E-10	9.55E-11
Sc-49		5.48E-12	7.80E-12	1.32E-11	3.28E-12
Sc-50		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-70		6.96E-12	9.74E-12	1.61E-11	4.53E-12
Se-71		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-72		4.47E-10	6.06E-10	9.86E-10	3.00E-10
Se-73		2.16E-11	3.07E-11	5.39E-11	1.22E-11
Se-73m		2.25E-12	3.17E-12	5.41E-12	1.37E-12
Se-75		2.17E-10	2.87E-10	4.28E-10	1.67E-10

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Se-77m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-79		1.87E-10	2.48E-10	3.89E-10	1.36E-10
Se-79m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-81		1.15E-12	1.59E-12	2.43E-12	9.03E-13
Se-81m		3.53E-12	5.01E-12	8.56E-12	2.19E-12
Se-83		2.71E-12	3.76E-12	5.96E-12	1.93E-12
Se-83m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-84		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Si-31		1.75E-11	2.54E-11	4.60E-11	8.03E-12
Si-32		9.61E-11	1.40E-10	2.56E-10	4.18E-11
Si-32+D		3.38E-10	4.72E-10	8.35E-10	1.86E-10
Si-32+E		3.38E-10	4.72E-10	8.35E-10	1.86E-10
Sm-139		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-140		5.03E-12	7.02E-12	1.11E-11	3.58E-12
Sm-141		1.90E-12	2.63E-12	4.01E-12	1.44E-12
Sm-141m		3.63E-12	5.06E-12	7.99E-12	2.54E-12
Sm-142		1.42E-11	2.02E-11	3.46E-11	8.03E-12
Sm-143		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-143m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-145		3.09E-11	4.49E-11	8.13E-11	1.35E-11
Sm-146		1.10E-09	1.41E-09	1.93E-09	9.36E-10
Sm-147		1.01E-09	1.29E-09	1.76E-09	8.56E-10
Sm-148		8.65E-10	1.11E-09	1.51E-09	7.36E-10
Sm-151		1.51E-11	2.20E-11	4.05E-11	6.41E-12
Sm-153		1.29E-10	1.90E-10	3.51E-10	5.28E-11
Sm-155		1.36E-12	1.88E-12	2.90E-12	1.03E-12
Sm-156		4.11E-11	6.01E-11	1.10E-10	1.73E-11
Sm-157		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-106		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-108		1.44E-12	2.01E-12	3.22E-12	9.62E-13
Sn-109		1.33E-12	1.84E-12	2.85E-12	9.26E-13
Sn-110		5.24E-11	7.61E-11	1.38E-10	2.34E-11
Sn-111		1.37E-12	1.92E-12	3.11E-12	8.92E-13

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Sn-113		1.19E-10	1.74E-10	3.17E-10	5.11E-11
Sn-113m		1.61E-13	2.24E-13	3.52E-13	1.16E-13
Sn-117m		1.19E-10	1.74E-10	3.20E-10	4.97E-11
Sn-119m		6.09E-11	8.91E-11	1.65E-10	2.52E-11
Sn-121		4.09E-11	6.01E-11	1.11E-10	1.67E-11
Sn-121m		6.38E-11	9.30E-11	1.71E-10	2.72E-11
Sn-121m+D		9.55E-11	1.40E-10	2.57E-10	4.02E-11
Sn-121m+E		9.55E-11	1.40E-10	2.57E-10	4.02E-11
Sn-123		3.80E-10	5.56E-10	1.03E-09	1.54E-10
Sn-123m		2.17E-12	3.05E-12	4.94E-12	1.45E-12
Sn-125		5.39E-10	7.90E-10	1.46E-09	2.21E-10
Sn-125m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-126		6.97E-10	1.01E-09	1.81E-09	3.18E-10
Sn-126+D		7.47E-10	1.08E-09	1.94E-09	3.42E-10
Sn-126+E		7.47E-10	1.08E-09	1.94E-09	3.42E-10
Sn-127		2.21E-11	3.17E-11	5.59E-11	1.10E-11
Sn-127m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-128		1.21E-11	1.71E-11	2.88E-11	7.07E-12
Sn-129		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-130		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-130m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-79		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-80		3.37E-11	4.82E-11	8.36E-11	1.88E-11
Sr-81		3.86E-12	5.38E-12	8.54E-12	2.71E-12
Sr-82		8.50E-10	1.22E-09	2.21E-09	4.26E-10
Sr-82+D		8.50E-10	1.22E-09	2.21E-09	4.26E-10
Sr-82+E		8.50E-10	1.22E-09	2.21E-09	4.26E-10
Sr-83		6.32E-11	9.07E-11	1.62E-10	3.25E-11
Sr-85		6.00E-11	8.24E-11	1.24E-10	3.77E-11
Sr-85m		4.41E-13	6.10E-13	9.51E-13	3.02E-13
Sr-87m		2.90E-12	4.12E-12	7.05E-12	1.65E-12
Sr-89		3.47E-10	4.97E-10	9.00E-10	1.76E-10
Sr-90		1.51E-09	1.86E-09	2.33E-09	1.39E-09

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Sr-90+D		2.00E-09	2.57E-09	3.66E-09	1.59E-09
Sr-90+E		2.00E-09	2.57E-09	3.66E-09	1.59E-09
Sr-91		8.84E-11	1.28E-10	2.33E-10	4.30E-11
Sr-92		5.97E-11	8.67E-11	1.58E-10	2.84E-11
Sr-93		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-94		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-170		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-172		3.36E-12	4.68E-12	7.37E-12	2.35E-12
Ta-173		1.28E-11	1.84E-11	3.26E-11	6.21E-12
Ta-174		5.37E-12	7.61E-12	1.28E-11	3.20E-12
Ta-175		2.62E-11	3.73E-11	6.44E-11	1.33E-11
Ta-176		3.23E-11	4.57E-11	7.76E-11	1.72E-11
Ta-177		1.62E-11	2.35E-11	4.27E-11	7.08E-12
Ta-178		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-178m		7.96E-12	1.13E-11	1.92E-11	4.39E-12
Ta-179		8.77E-12	1.27E-11	2.31E-11	3.85E-12
Ta-180		8.44E-12	1.23E-11	2.25E-11	3.63E-12
Ta-182		2.11E-10	3.05E-10	5.47E-10	9.52E-11
Ta-182m		5.72E-13	7.90E-13	1.20E-12	4.42E-13
Ta-183		2.31E-10	3.38E-10	6.23E-10	9.55E-11
Ta-184		9.44E-11	1.37E-10	2.48E-10	4.23E-11
Ta-185		4.33E-12	6.14E-12	1.02E-11	2.72E-12
Ta-186		1.55E-12	2.13E-12	3.16E-12	1.25E-12
Tb-146		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-147		1.13E-11	1.60E-11	2.69E-11	6.39E-12
Tb-147m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-148		8.72E-12	1.23E-11	2.03E-11	5.43E-12
Tb-148m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-149		2.09E-11	2.99E-11	5.24E-11	1.04E-11
Tb-149m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-150		2.28E-11	3.26E-11	5.64E-11	1.19E-11
Tb-150m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-151		4.22E-11	6.04E-11	1.05E-10	2.07E-11

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Tb-151m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-152		9.41E-11	1.36E-10	2.43E-10	4.31E-11
Tb-152m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-153		3.79E-11	5.47E-11	9.75E-11	1.75E-11
Tb-154		6.46E-11	9.16E-11	1.56E-10	3.40E-11
Tb-155		3.73E-11	5.41E-11	9.74E-11	1.67E-11
Tb-156		1.26E-10	1.80E-10	3.10E-10	6.42E-11
Tb-156m		2.00E-11	2.87E-11	5.05E-11	9.53E-12
Tb-156n		1.16E-11	1.68E-11	3.01E-11	5.26E-12
Tb-157		5.63E-12	8.19E-12	1.49E-11	2.45E-12
Tb-158		1.30E-10	1.86E-10	3.26E-10	6.33E-11
Tb-160		2.37E-10	3.44E-10	6.23E-10	1.05E-10
Tb-161		1.33E-10	1.95E-10	3.61E-10	5.41E-11
Tb-162		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-163		1.05E-12	1.44E-12	2.19E-12	8.05E-13
Tb-164		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-165		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-101		8.20E-13	1.13E-12	1.70E-12	6.48E-13
Tc-102		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-102m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-104		3.81E-12	5.26E-12	8.01E-12	2.95E-12
Tc-105		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-91		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-91m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-92		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-93		5.73E-12	7.99E-12	1.31E-11	3.59E-12
Tc-93m		2.36E-12	3.29E-12	5.37E-12	1.53E-12
Tc-94		1.70E-11	2.38E-11	3.93E-11	1.06E-11
Tc-94m		6.47E-12	9.09E-12	1.49E-11	4.24E-12
Tc-95		1.56E-11	2.17E-11	3.60E-11	9.48E-12
Tc-95m		4.93E-11	6.87E-11	1.13E-10	3.00E-11
Tc-96		9.23E-11	1.27E-10	2.06E-10	5.81E-11
Tc-96m		9.64E-13	1.34E-12	2.18E-12	6.08E-13

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Tc-97		7.33E-12	1.06E-11	1.90E-11	3.64E-12
Tc-97m		6.43E-11	9.33E-11	1.70E-10	3.08E-11
Tc-98		1.79E-10	2.54E-10	4.38E-10	9.98E-11
Tc-99		7.44E-11	1.08E-10	1.96E-10	3.58E-11
Tc-99m		2.15E-12	3.06E-12	5.37E-12	1.18E-12
Te-113		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te-114		3.26E-12	4.48E-12	6.75E-12	2.53E-12
Te-115		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te-115m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te-116		2.11E-11	3.03E-11	5.34E-11	1.08E-11
Te-117		3.98E-12	5.58E-12	9.17E-12	2.49E-12
Te-118		4.77E-10	6.95E-10	1.30E-09	2.09E-10
Te-118+D		4.77E-10	6.95E-10	1.30E-09	2.09E-10
Te-118+E		4.77E-10	6.95E-10	1.30E-09	2.09E-10
Te-119		1.83E-11	2.59E-11	4.46E-11	9.84E-12
Te-119m		6.81E-11	9.51E-11	1.59E-10	3.94E-11
Te-121		4.08E-11	5.61E-11	9.13E-11	2.56E-11
Te-121m		1.75E-10	2.32E-10	3.67E-10	1.23E-10
Te-123		2.93E-11	3.56E-11	4.29E-11	3.05E-11
Te-123m		1.11E-10	1.52E-10	2.61E-10	6.63E-11
Te-125m		9.00E-11	1.27E-10	2.30E-10	4.60E-11
Te-127		2.73E-11	4.02E-11	7.58E-11	1.15E-11
Te-127m		2.34E-10	3.24E-10	5.77E-10	1.29E-10
Te-129		4.62E-12	6.60E-12	1.13E-11	2.67E-12
Te-129m		4.14E-10	5.94E-10	1.10E-09	1.94E-10
Te-131		5.85E-12	8.23E-12	1.46E-11	3.54E-12
Te-131m		2.19E-10	3.14E-10	5.79E-10	1.06E-10
Te-132		4.58E-10	6.57E-10	1.22E-09	2.21E-10
Te-133		5.14E-12	7.28E-12	1.35E-11	2.94E-12
Te-133m		2.15E-11	3.06E-11	5.76E-11	1.15E-11
Te-134		7.46E-12	1.04E-11	1.77E-11	4.69E-12
Th-223		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th-224		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Th-226		1.78E-11	2.50E-11	3.94E-11	1.28E-11
Th-227		1.30E-09	1.90E-09	3.48E-09	5.57E-10
Th-228		2.91E-09	4.00E-09	6.57E-09	1.73E-09
Th-229		6.04E-09	7.85E-09	1.04E-08	5.32E-09
Th-229+D		9.13E-09	1.20E-08	1.69E-08	7.33E-09
Th-229+E		9.13E-09	1.20E-08	1.69E-08	7.33E-09
Th-230		2.47E-09	3.22E-09	4.49E-09	2.09E-09
Th-231		5.93E-11	8.69E-11	1.61E-10	2.45E-11
Th-232		2.73E-09	3.60E-09	4.97E-09	2.29E-09
Th-232+D		3.08E-08	4.22E-08	5.86E-08	2.04E-08
Th-232+E		3.08E-08	4.22E-08	5.86E-08	2.04E-08
Th-233		1.07E-12	1.50E-12	2.34E-12	7.85E-13
Th-234		6.24E-10	9.17E-10	1.69E-09	2.57E-10
Th-234+D		6.24E-10	9.17E-10	1.69E-09	2.57E-10
Th-234+E		6.24E-10	9.17E-10	1.69E-09	2.57E-10
Th-235		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th-236		5.28E-12	7.44E-12	1.21E-11	3.50E-12
Ti-44		6.91E-10	9.81E-10	1.71E-09	3.63E-10
Ti-44+D		7.34E-10	1.04E-09	1.82E-09	3.83E-10
Ti-44+E		7.34E-10	1.04E-09	1.82E-09	3.83E-10
Ti-45		1.74E-11	2.52E-11	4.47E-11	8.44E-12
Ti-51		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ti-52		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-190		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-190m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-194		2.12E-12	2.90E-12	4.32E-12	1.71E-12
Tl-194m		2.10E-12	2.85E-12	4.17E-12	1.71E-12
Tl-195		1.60E-12	2.16E-12	3.24E-12	1.25E-12
Tl-196		3.16E-12	4.27E-12	6.36E-12	2.50E-12
Tl-197		1.74E-12	2.38E-12	3.73E-12	1.25E-12
Tl-198		5.59E-12	7.47E-12	1.11E-11	4.35E-12
Tl-198m		3.53E-12	4.76E-12	7.15E-12	2.75E-12
Tl-199		2.07E-12	2.81E-12	4.40E-12	1.49E-12

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Tl-200		1.67E-11	2.23E-11	3.42E-11	1.24E-11
Tl-201		1.00E-11	1.38E-11	2.32E-11	6.16E-12
Tl-202		4.03E-11	5.44E-11	8.55E-11	2.84E-11
Tl-204		1.57E-10	2.22E-10	3.90E-10	8.52E-11
Tl-206		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-206m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-207		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-208		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-209		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-210		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-161		2.94E-12	4.13E-12	6.76E-12	1.82E-12
Tm-162		2.02E-12	2.79E-12	4.24E-12	1.53E-12
Tm-163		4.56E-12	6.41E-12	1.05E-11	2.72E-12
Tm-164		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-165		4.51E-11	6.50E-11	1.15E-10	2.12E-11
Tm-166		2.95E-11	4.19E-11	7.14E-11	1.56E-11
Tm-167		9.71E-11	1.42E-10	2.61E-10	4.05E-11
Tm-168		1.21E-10	1.74E-10	3.04E-10	5.94E-11
Tm-170		2.39E-10	3.50E-10	6.50E-10	9.65E-11
Tm-171		1.88E-11	2.76E-11	5.11E-11	7.68E-12
Tm-172		2.92E-10	4.28E-10	7.89E-10	1.21E-10
Tm-173		4.55E-11	6.64E-11	1.21E-10	1.96E-11
Tm-174		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-175		1.36E-12	1.89E-12	2.94E-12	9.96E-13
Tm-176		0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-227		0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-228		0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-230		5.65E-09	8.05E-09	1.43E-08	2.80E-09
U-231		5.74E-11	8.40E-11	1.54E-10	2.42E-11
U-232		7.85E-09	1.04E-08	1.45E-08	6.57E-09
U-233		1.94E-09	2.62E-09	4.06E-09	1.41E-09
U-234		1.91E-09	2.58E-09	4.01E-09	1.38E-09
U-235		1.88E-09	2.55E-09	3.99E-09	1.33E-09

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
U-235+D		1.94E-09	2.64E-09	4.15E-09	1.35E-09
U-235+E		1.94E-09	2.64E-09	4.15E-09	1.35E-09
U-235m		2.06E-16	2.87E-16	4.46E-16	1.53E-16
U-236		1.80E-09	2.43E-09	3.77E-09	1.30E-09
U-237		1.35E-10	1.97E-10	3.62E-10	5.66E-11
U-238		1.73E-09	2.34E-09	3.63E-09	1.26E-09
U-238+D		2.35E-09	3.26E-09	5.32E-09	1.52E-09
U-238+E		2.35E-09	3.26E-09	5.32E-09	1.52E-09
U-239		2.01E-12	2.86E-12	4.84E-12	1.19E-12
U-240		1.87E-10	2.74E-10	5.04E-10	7.85E-11
U-242		2.34E-12	3.23E-12	4.91E-12	1.83E-12
V-47		3.38E-12	4.71E-12	7.43E-12	2.40E-12
V-48		2.24E-10	3.19E-10	5.54E-10	1.12E-10
V-49		3.27E-12	4.79E-12	8.88E-12	1.34E-12
V-50		1.60E-10	2.15E-10	3.19E-10	1.23E-10
V-52		0.00E+00	0.00E+00	0.00E+00	0.00E+00
V-53		0.00E+00	0.00E+00	0.00E+00	0.00E+00
W-177		5.21E-12	7.37E-12	1.25E-11	2.95E-12
W-178		3.71E-11	5.39E-11	9.83E-11	1.65E-11
W-178+D		3.71E-11	5.39E-11	9.83E-11	1.65E-11
W-178+E		3.71E-11	5.39E-11	9.83E-11	1.65E-11
W-179		2.05E-13	2.87E-13	4.55E-13	1.42E-13
W-179m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
W-181		1.22E-11	1.76E-11	3.19E-11	5.59E-12
W-185		7.92E-11	1.16E-10	2.16E-10	3.28E-11
W-185m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
W-187		9.42E-11	1.37E-10	2.53E-10	4.07E-11
W-188		3.77E-10	5.52E-10	1.03E-09	1.56E-10
W-190		4.44E-12	6.19E-12	9.72E-12	3.18E-12
Xe-120		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-121		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-122		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-123		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Xe-125		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-127		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-127m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-129m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-131m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-133		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-133m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-135		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-135m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-137		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-138		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-81		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-83		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-83m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-84m		8.19E-12	1.14E-11	1.81E-11	5.65E-12
Y-85		2.01E-11	2.89E-11	5.10E-11	9.95E-12
Y-85m		4.88E-11	7.08E-11	1.28E-10	2.24E-11
Y-86		1.07E-10	1.53E-10	2.66E-10	5.40E-11
Y-86m		6.22E-12	8.88E-12	1.54E-11	3.15E-12
Y-87		6.94E-11	9.99E-11	1.77E-10	3.26E-11
Y-87m		3.00E-11	4.34E-11	7.78E-11	1.36E-11
Y-88		1.14E-10	1.59E-10	2.60E-10	6.49E-11
Y-89m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-90		4.87E-10	7.15E-10	1.33E-09	1.97E-10
Y-90m		2.82E-11	4.11E-11	7.53E-11	1.20E-11
Y-91		4.34E-10	6.37E-10	1.18E-09	1.75E-10
Y-91m		9.52E-13	1.34E-12	2.20E-12	5.83E-13
Y-92		6.71E-11	9.79E-11	1.78E-10	2.97E-11
Y-93		1.96E-10	2.87E-10	5.30E-10	8.07E-11
Y-94		3.79E-12	5.24E-12	7.99E-12	2.93E-12
Y-95		1.82E-12	2.51E-12	3.74E-12	1.46E-12
Yb-162		1.88E-12	2.62E-12	4.14E-12	1.29E-12
Yb-163		9.66E-13	1.34E-12	2.11E-12	6.69E-13

Continued on next page

Table 1.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(Bq ⁻¹)			
Yb-164		7.40E-12	1.06E-11	1.80E-11	4.18E-12
Yb-165		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Yb-166		1.15E-10	1.65E-10	2.89E-10	5.54E-11
Yb-167		4.34E-13	6.08E-13	9.75E-13	2.91E-13
Yb-169		1.27E-10	1.84E-10	3.36E-10	5.45E-11
Yb-175		7.81E-11	1.15E-10	2.12E-10	3.18E-11
Yb-177		9.59E-12	1.39E-11	2.47E-11	4.67E-12
Yb-178		1.03E-11	1.49E-11	2.64E-11	5.09E-12
Yb-179		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-60		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-61		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-62		1.33E-10	1.95E-10	3.66E-10	6.03E-11
Zn-63		4.41E-12	6.18E-12	9.94E-12	3.08E-12
Zn-65		3.14E-10	4.14E-10	6.15E-10	2.41E-10
Zn-69		1.93E-12	2.75E-12	4.67E-12	1.21E-12
Zn-69m		5.05E-11	7.39E-11	1.39E-10	2.25E-11
Zn-71		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-71m		2.63E-11	3.79E-11	6.86E-11	1.34E-11
Zn-72		1.80E-10	2.58E-10	4.67E-10	9.11E-11
Zr-85		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-86		1.03E-10	1.48E-10	2.59E-10	4.97E-11
Zr-87		1.82E-11	2.62E-11	4.59E-11	9.28E-12
Zr-88		4.19E-11	5.81E-11	9.53E-11	2.49E-11
Zr-89		9.73E-11	1.40E-10	2.47E-10	4.64E-11
Zr-89m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-93		2.93E-11	3.80E-11	5.36E-11	2.56E-11
Zr-95		1.25E-10	1.80E-10	3.19E-10	5.90E-11
Zr-97		3.38E-10	4.94E-10	9.08E-10	1.42E-10

1.6 Morbidity risk coefficients for inhalation

Explanation of Entries:

Table 1.6 contains the morbidity risk coefficients used for internal exposure due to inhalation of a radionuclide.

Type (F, M, S, V, G): Type F, Type M, and Type S are particulate aerosols that represent, respectively, fast, medium, and slow absorption to the blood. There are a few specific elements that have a vapor (Type V) or gaseous (Type G) form- see Special.

Special: Cases where Type V and Type G are present include: tritium as a vapor (HTO) or gas (HT), carbon in gaseous form as carbon monoxide (CO) or carbon dioxide (CO₂), sulfur as a vapor (SO₂ or CS₂), nickel as a vapor, ruthenium as a vapor (RuO₄), iodine as a vapor or a gas (methyl iodide or CH₃I), tellurium as a vapor, and mercury as a vapor. Designations of elemental, inorganic or organic are included for certain vapor or gaseous forms.

Special note on Radon- Radon dose rate coefficients are based on epidemiological data and encompass dose from both radon and its progeny products. These are per capita values and should not be applied to specific age groups.

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ac-223			0.00E+00
Ac-223+D			0.00E+00
Ac-223+E			0.00E+00
Ac-224	F		2.71E-10
Ac-224	M		9.24E-09
Ac-224	S		1.04E-08
Ac-225	F		2.28E-08
Ac-225	M		6.66E-07
Ac-225	S		7.72E-07
Ac-225+D	S		7.72E-07
Ac-225+E	S		7.72E-07
Ac-226	F		3.07E-09
Ac-226	M		1.07E-07
Ac-226	S		1.19E-07

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ac-227	F		2.72E-06
Ac-227	M		2.16E-06
Ac-227	S		4.04E-06
Ac-228	F		3.05E-10
Ac-228	M		8.23E-10
Ac-228	S		1.33E-09
Ac-230			0.00E+00
Ac-231			0.00E+00
Ac-232			0.00E+00
Ac-233			0.00E+00
Ag-100m			0.00E+00
Ag-101	F		3.91E-13
Ag-101	M		6.10E-13
Ag-101	S		6.36E-13
Ag-102	F		4.79E-13
Ag-102	M		7.09E-13
Ag-102	S		7.35E-13
Ag-102m			0.00E+00
Ag-103	F		6.59E-13
Ag-103	M		1.48E-12
Ag-103	S		1.58E-12
Ag-104	F		1.05E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ag-104	M		1.70E-12
Ag-104	S		1.78E-12
Ag-104m	F		8.35E-13
Ag-104m	M		1.53E-12
Ag-104m	S		1.60E-12
Ag-105	F		5.47E-11
Ag-105	M		7.60E-11
Ag-105	S		8.50E-11
Ag-105m			0.00E+00
Ag-106	F		3.88E-13
Ag-106	M		7.21E-13
Ag-106	S		7.58E-13
Ag-106m	F		8.64E-11
Ag-106m	M		9.45E-11
Ag-106m	S		9.54E-11
Ag-108			0.00E+00
Ag-108m	F		5.66E-10
Ag-108m	M		7.17E-10
Ag-108m	S		2.84E-09
Ag-108m+D	S		2.84E-09
Ag-108m+E	S		2.84E-09
Ag-109m			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ag-110			0.00E+00
Ag-110m	F		5.51E-10
Ag-110m	M		7.73E-10
Ag-110m	S		1.23E-09
Ag-110m+D	S		1.23E-09
Ag-110m+E	S		1.23E-09
Ag-111	F		5.62E-11
Ag-111	M		1.80E-10
Ag-111	S		2.00E-10
Ag-111m			0.00E+00
Ag-112	F		8.88E-12
Ag-112	M		1.94E-11
Ag-112	S		2.08E-11
Ag-113	F		9.54E-12
Ag-113	M		2.25E-11
Ag-113	S		2.43E-11
Ag-113m			0.00E+00
Ag-114			0.00E+00
Ag-115	F		8.73E-13
Ag-115	M		1.86E-12
Ag-115	S		1.99E-12
Ag-116			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ag-117			0.00E+00
Ag-99			0.00E+00
Al-26	F		1.08E-09
Al-26	M		1.87E-09
Al-26	S		7.85E-09
Al-28			0.00E+00
Al-29			0.00E+00
Am-237	F		4.82E-13
Am-237	M		1.60E-12
Am-237	S		1.72E-12
Am-238	F		2.59E-12
Am-238	M		2.57E-12
Am-238	S		3.07E-12
Am-239	F		6.68E-12
Am-239	M		2.33E-11
Am-239	S		2.52E-11
Am-240	F		1.83E-11
Am-240	M		3.88E-11
Am-240	S		4.15E-11
Am-241	F		1.02E-06
Am-241	M		7.60E-07
Am-241	S		9.58E-07

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Am-242	F		2.37E-10
Am-242	M		1.36E-09
Am-242	S		1.81E-09
Am-242m	F		9.26E-07
Am-242m	M		4.20E-07
Am-242m	S		5.07E-07
Am-242m+D	F		9.28E-07
Am-242m+E	F		9.28E-07
Am-243	F		1.00E-06
Am-243	M		7.31E-07
Am-243	S		9.11E-07
Am-243+D	F		1.00E-06
Am-243+E	F		1.00E-06
Am-244	F		5.70E-11
Am-244	M		8.22E-11
Am-244	S		1.03E-10
Am-244m	F		2.37E-12
Am-244m	M		2.77E-12
Am-244m	S		3.58E-12
Am-245	F		1.31E-12
Am-245	M		4.21E-12
Am-245	S		4.54E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Am-246	F		1.41E-12
Am-246	M		3.90E-12
Am-246	S		4.18E-12
Am-246m	F		5.45E-13
Am-246m	M		1.07E-12
Am-246m	S		1.13E-12
Am-247	F		5.56E-13
Am-247	M		1.24E-12
Am-247	S		1.32E-12
Ar-37			0.00E+00
Ar-39			0.00E+00
Ar-41			0.00E+00
Ar-42			0.00E+00
Ar-42+D	G		3.36E-11
Ar-42+E	G		3.36E-11
Ar-43			0.00E+00
Ar-44			0.00E+00
As-68			0.00E+00
As-69	F		6.80E-13
As-69	M		1.09E-12
As-69	S		1.14E-12
As-70	F		2.21E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
As-70	M		3.78E-12
As-70	S		3.95E-12
As-71	F		1.89E-11
As-71	M		4.04E-11
As-71	S		4.31E-11
As-72	F		7.61E-11
As-72	M		1.18E-10
As-72	S		1.22E-10
As-73	F		1.54E-11
As-73	M		1.05E-10
As-73	S		1.35E-10
As-74	F		6.45E-11
As-74	M		2.27E-10
As-74	S		2.60E-10
As-76	F		6.96E-11
As-76	M		1.10E-10
As-76	S		1.15E-10
As-77	F		1.88E-11
As-77	M		4.72E-11
As-77	S		5.05E-11
As-78	F		3.77E-12
As-78	M		6.88E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
As-78	S		7.23E-12
As-79			0.00E+00
At-204			0.00E+00
At-205	F		1.99E-11
At-205	M		6.02E-11
At-205	S		6.46E-11
At-206	F		3.15E-12
At-206	M		1.92E-11
At-206	S		2.16E-11
At-207	F		2.65E-11
At-207	M		1.82E-10
At-207	S		1.99E-10
At-208	F		3.56E-12
At-208	M		3.40E-11
At-208	S		5.34E-11
At-209	F		2.20E-11
At-209	M		2.26E-10
At-209	S		2.51E-10
At-210	F		3.05E-11
At-210	M		7.21E-10
At-210	S		9.80E-10
At-211	F		7.27E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
At-211	M		9.66E-09
At-211	S		1.07E-08
At-211+D	S		1.07E-08
At-211+E	S		1.07E-08
At-215			0.00E+00
At-216			0.00E+00
At-217			0.00E+00
At-218			0.00E+00
At-219			0.00E+00
At-220			0.00E+00
Au-186	F		6.02E-13
Au-186	M		1.05E-12
Au-186	S		1.10E-12
Au-187			0.00E+00
Au-190	F		6.67E-13
Au-190	M		1.10E-12
Au-190	S		1.15E-12
Au-191	F		1.65E-12
Au-191	M		5.00E-12
Au-191	S		5.39E-12
Au-192	F		3.54E-12
Au-192	M		6.40E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Au-192	S		6.72E-12
Au-193	F		3.25E-12
Au-193	M		1.01E-11
Au-193	S		1.09E-11
Au-193m			0.00E+00
Au-194	F		9.27E-12
Au-194	M		1.94E-11
Au-194	S		2.05E-11
Au-195	F		8.18E-12
Au-195	M		1.13E-10
Au-195	S		1.79E-10
Au-195m			0.00E+00
Au-196	F		9.22E-12
Au-196	M		3.15E-11
Au-196	S		3.47E-11
Au-196m	F		1.07E-11
Au-196m	M		4.45E-11
Au-196m	S		4.83E-11
Au-198	F		2.93E-11
Au-198	M		9.90E-11
Au-198	S		1.08E-10
Au-198m	F		3.50E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Au-198m	M		1.81E-10
Au-198m	S		2.00E-10
Au-199	F		1.32E-11
Au-199	M		7.83E-11
Au-199	S		8.66E-11
Au-200	F		9.81E-13
Au-200	M		2.16E-12
Au-200	S		2.29E-12
Au-200m	F		2.46E-11
Au-200m	M		6.54E-11
Au-200m	S		7.00E-11
Au-201	F		3.77E-13
Au-201	M		8.25E-13
Au-201	S		8.74E-13
Au-202			0.00E+00
Ba-124	F		8.52E-13
Ba-124	M		1.07E-12
Ba-124	S		1.09E-12
Ba-126	F		7.32E-12
Ba-126	M		9.41E-12
Ba-126	S		9.68E-12
Ba-127	F		3.86E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ba-127	M		5.35E-13
Ba-127	S		5.53E-13
Ba-128	F		1.28E-10
Ba-128	M		2.00E-10
Ba-128	S		2.13E-10
Ba-129	F		1.49E-12
Ba-129	M		2.28E-12
Ba-129	S		2.39E-12
Ba-129m	F		1.80E-12
Ba-129m	M		2.64E-12
Ba-129m	S		2.76E-12
Ba-131	F		2.19E-11
Ba-131	M		7.81E-11
Ba-131	S		8.81E-11
Ba-131m	F		2.20E-13
Ba-131m	M		4.63E-13
Ba-131m	S		4.93E-13
Ba-133	F		1.70E-10
Ba-133	M		3.20E-10
Ba-133	S		8.89E-10
Ba-133m	F		2.57E-11
Ba-133m	M		5.64E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ba-133m	S		6.14E-11
Ba-135m	F		1.97E-11
Ba-135m	M		4.34E-11
Ba-135m	S		4.71E-11
Ba-137m			0.00E+00
Ba-139	F		3.43E-12
Ba-139	M		4.88E-12
Ba-139	S		5.05E-12
Ba-140	F		1.71E-10
Ba-140	M		5.50E-10
Ba-140	S		6.23E-10
Ba-141	F		1.85E-12
Ba-141	M		2.71E-12
Ba-141	S		2.85E-12
Ba-142	F		8.49E-13
Ba-142	M		1.20E-12
Ba-142	S		1.24E-12
Be-10	F		3.59E-10
Be-10	M		8.06E-10
Be-10	S		2.54E-09
Be-7	F		3.14E-12
Be-7	M		4.76E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Be-7	S		5.82E-12
Bi-197			0.00E+00
Bi-200	F		1.40E-12
Bi-200	M		2.16E-12
Bi-200	S		2.24E-12
Bi-201	F		3.44E-12
Bi-201	M		5.20E-12
Bi-201	S		5.40E-12
Bi-202	F		2.62E-12
Bi-202	M		3.40E-12
Bi-202	S		3.49E-12
Bi-203	F		1.50E-11
Bi-203	M		2.24E-11
Bi-203	S		2.33E-11
Bi-204	F		1.64E-11
Bi-204	M		2.30E-11
Bi-204	S		2.37E-11
Bi-205	F		3.36E-11
Bi-205	M		8.88E-11
Bi-205	S		1.00E-10
Bi-206	F		7.05E-11
Bi-206	M		1.60E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Bi-206	S		1.73E-10
Bi-207	F		5.68E-11
Bi-207	M		5.73E-10
Bi-207	S		2.97E-09
Bi-208	F		4.40E-11
Bi-208	M		4.57E-10
Bi-208	S		2.69E-09
Bi-210	F		9.93E-11
Bi-210	M		8.58E-09
Bi-210	S		1.23E-08
Bi-210m	F		2.43E-09
Bi-210m	M		3.16E-07
Bi-210m	S		7.89E-07
Bi-210m+D	S		7.89E-07
Bi-210m+E	S		7.89E-07
Bi-211			0.00E+00
Bi-212	F		4.06E-10
Bi-212	M		2.10E-09
Bi-212	S		2.28E-09
Bi-212+D	S		2.28E-09
Bi-212+E	S		2.28E-09
Bi-212n			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Bi-213	F		4.28E-10
Bi-213	M		1.85E-09
Bi-213	S		2.00E-09
Bi-213+D	S		2.00E-09
Bi-213+E	S		2.00E-09
Bi-214	F		3.05E-10
Bi-214	M		7.84E-10
Bi-214	S		8.38E-10
Bi-214+D	S		8.38E-10
Bi-214+E	S		8.38E-10
Bi-215			0.00E+00
Bi-215+D			0.00E+00
Bi-215+E			0.00E+00
Bi-216			0.00E+00
Bk-245	F		2.62E-11
Bk-245	M		1.95E-10
Bk-245	S		2.19E-10
Bk-246	F		1.40E-11
Bk-246	M		2.43E-11
Bk-246	S		2.57E-11
Bk-247	F		1.30E-06
Bk-247	M		8.81E-07

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Bk-247	S		1.00E-06
Bk-248m	F		3.04E-10
Bk-248m	M		9.97E-10
Bk-248m	S		1.42E-09
Bk-249	F		3.21E-09
Bk-249	M		1.42E-09
Bk-249	S		1.38E-09
Bk-250	F		2.41E-11
Bk-250	M		2.81E-11
Bk-250	S		3.65E-11
Bk-251	F		8.88E-13
Bk-251	M		2.32E-12
Bk-251	S		2.50E-12
Br-72			0.00E+00
Br-73			0.00E+00
Br-74	F		1.01E-12
Br-74	M		1.71E-12
Br-74	S		1.79E-12
Br-74m	F		1.74E-12
Br-74m	M		3.23E-12
Br-74m	S		3.40E-12
Br-75	F		1.24E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Br-75	M		3.02E-12
Br-75	S		3.24E-12
Br-76	F		1.50E-11
Br-76	M		2.91E-11
Br-76	S		3.08E-11
Br-76m			0.00E+00
Br-77	F		3.42E-12
Br-77	M		5.68E-12
Br-77	S		5.97E-12
Br-77m			0.00E+00
Br-78			0.00E+00
Br-80	F		3.60E-13
Br-80	M		6.69E-13
Br-80	S		7.03E-13
Br-80m	F		2.44E-12
Br-80m	M		8.72E-12
Br-80m	S		9.42E-12
Br-82	F		1.92E-11
Br-82	M		4.51E-11
Br-82	S		4.82E-11
Br-82m			0.00E+00
Br-83	F		7.79E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Br-83	M		3.30E-12
Br-83	S		3.58E-12
Br-84	F		1.01E-12
Br-84	M		1.94E-12
Br-84	S		2.04E-12
Br-84m			0.00E+00
Br-85			0.00E+00
C-10			0.00E+00
C-11	F		3.74E-13
C-11	M		7.52E-13
C-11	S		7.93E-13
C-11	G	Monoxide	1.22E-13
C-11	G	Dioxide	2.23E-13
C-14	F		1.68E-11
C-14	M		1.91E-10
C-14	S		4.58E-10
C-14	G	Monoxide	9.09E-14
C-14	G	Dioxide	5.39E-13
Ca-41	F		8.70E-12
Ca-41	M		6.62E-12
Ca-41	S		1.60E-11
Ca-45	F		3.22E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ca-45	M		2.54E-10
Ca-45	S		3.47E-10
Ca-47	F		5.42E-11
Ca-47	M		2.15E-10
Ca-47	S		2.42E-10
Ca-49			0.00E+00
Cd-101			0.00E+00
Cd-102			0.00E+00
Cd-103			0.00E+00
Cd-104	F		1.67E-12
Cd-104	M		3.57E-12
Cd-104	S		3.79E-12
Cd-105	F		7.40E-13
Cd-105	M		1.29E-12
Cd-105	S		1.35E-12
Cd-107	F		1.72E-12
Cd-107	M		7.78E-12
Cd-107	S		8.46E-12
Cd-109	F		3.98E-10
Cd-109	M		4.79E-10
Cd-109	S		5.92E-10
Cd-111m	F		3.43E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cd-111m	M		1.10E-12
Cd-111m	S		1.19E-12
Cd-113	F		3.01E-09
Cd-113	M		1.59E-09
Cd-113	S		1.24E-09
Cd-113m	F		3.56E-09
Cd-113m	M		1.99E-09
Cd-113m	S		1.96E-09
Cd-115	F		4.56E-11
Cd-115	M		1.32E-10
Cd-115	S		1.42E-10
Cd-115m	F		3.10E-10
Cd-115m	M		6.62E-10
Cd-115m	S		7.88E-10
Cd-117	F		6.47E-12
Cd-117	M		1.65E-11
Cd-117	S		1.76E-11
Cd-117m	F		6.42E-12
Cd-117m	M		1.66E-11
Cd-117m	S		1.77E-11
Cd-118	F		2.44E-12
Cd-118	M		5.46E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cd-118	S		5.80E-12
Cd-119			0.00E+00
Cd-119m			0.00E+00
Ce-130	F		9.38E-13
Ce-130	M		1.83E-12
Ce-130	S		1.93E-12
Ce-131	F		3.68E-13
Ce-131	M		6.46E-13
Ce-131	S		6.79E-13
Ce-132	F		8.18E-12
Ce-132	M		1.66E-11
Ce-132	S		1.76E-11
Ce-133	F		1.71E-12
Ce-133	M		4.15E-12
Ce-133	S		4.42E-12
Ce-133m	F		4.60E-12
Ce-133m	M		8.78E-12
Ce-133m	S		9.25E-12
Ce-134	F		8.50E-11
Ce-134	M		2.00E-10
Ce-134	S		2.14E-10
Ce-135	F		6.07E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ce-135	M		1.11E-11
Ce-135	S		1.16E-11
Ce-137	F		6.03E-13
Ce-137	M		1.14E-12
Ce-137	S		1.20E-12
Ce-137m	F		1.58E-11
Ce-137m	M		5.34E-11
Ce-137m	S		5.78E-11
Ce-139	F		1.14E-10
Ce-139	M		1.54E-10
Ce-139	S		1.87E-10
Ce-141	F		6.43E-11
Ce-141	M		3.08E-10
Ce-141	S		3.66E-10
Ce-143	F		3.44E-11
Ce-143	M		1.01E-10
Ce-143	S		1.10E-10
Ce-144	F		2.26E-09
Ce-144	M		2.96E-09
Ce-144	S		4.87E-09
Ce-144+D	F		4.87E-09
Ce-144+E	F		4.87E-09

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ce-145			0.00E+00
Cf-244	F		2.72E-10
Cf-244	M		8.01E-10
Cf-244	S		8.74E-10
Cf-246	F		1.60E-09
Cf-246	M		3.96E-08
Cf-246	S		4.50E-08
Cf-247	F		9.32E-13
Cf-247	M		2.61E-12
Cf-247	S		2.84E-12
Cf-248	F		1.42E-07
Cf-248	M		4.88E-07
Cf-248	S		6.92E-07
Cf-249	F		1.31E-06
Cf-249	M		9.18E-07
Cf-249	S		1.06E-06
Cf-250	F		7.52E-07
Cf-250	M		7.31E-07
Cf-250	S		1.01E-06
Cf-251	F		1.33E-06
Cf-251	M		9.19E-07
Cf-251	S		1.06E-06

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cf-252	F		5.09E-07
Cf-252	M		7.71E-07
Cf-252	S		1.20E-06
Cf-253	F		6.50E-09
Cf-253	M		1.14E-07
Cf-253	S		1.46E-07
Cf-254	F		6.71E-07
Cf-254	M		3.24E-06
Cf-254	S		4.12E-06
Cf-255	F		2.31E-11
Cf-255	M		4.94E-10
Cf-255	S		6.11E-10
Cl-34			0.00E+00
Cl-34m	F		1.20E-12
Cl-34m	M		2.25E-12
Cl-34m	S		2.36E-12
Cl-36	F		3.57E-11
Cl-36	M		6.76E-10
Cl-36	S		2.73E-09
Cl-38	F		1.29E-12
Cl-38	M		2.56E-12
Cl-38	S		2.70E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cl-39	F		1.14E-12
Cl-39	M		2.53E-12
Cl-39	S		2.69E-12
Cl-40			0.00E+00
Cm-238	F		1.85E-11
Cm-238	M		1.55E-10
Cm-238	S		1.72E-10
Cm-239	F		2.12E-12
Cm-239	M		6.69E-12
Cm-239	S		7.21E-12
Cm-240	F		2.38E-08
Cm-240	M		2.58E-07
Cm-240	S		3.14E-07
Cm-241	F		4.45E-10
Cm-241	M		2.73E-09
Cm-241	S		3.31E-09
Cm-242	F		6.80E-08
Cm-242	M		4.07E-07
Cm-242	S		5.42E-07
Cm-243	F		8.23E-07
Cm-243	M		7.29E-07
Cm-243	S		9.94E-07

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cm-244	F		7.12E-07
Cm-244	M		6.84E-07
Cm-244	S		9.61E-07
Cm-245	F		1.03E-06
Cm-245	M		7.49E-07
Cm-245	S		9.32E-07
Cm-246	F		1.03E-06
Cm-246	M		7.53E-07
Cm-246	S		9.40E-07
Cm-247	F		9.43E-07
Cm-247	M		6.75E-07
Cm-247	S		8.33E-07
Cm-247+D	F		9.43E-07
Cm-247+E	F		9.43E-07
Cm-248	F		3.89E-06
Cm-248	M		2.21E-06
Cm-248	S		2.60E-06
Cm-249	F		9.50E-13
Cm-249	M		1.96E-12
Cm-249	S		2.11E-12
Cm-250	F		2.67E-05
Cm-250	M		1.40E-05

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cm-250	S		1.62E-05
Cm-250+D	F		2.67E-05
Cm-250+E	F		2.67E-05
Cm-251	F		5.26E-13
Cm-251	M		1.29E-12
Cm-251	S		1.39E-12
Co-54m			0.00E+00
Co-55	F		2.48E-11
Co-55	M		5.61E-11
Co-55	S		6.21E-11
Co-56	F		1.66E-10
Co-56	M		4.95E-10
Co-56	S		6.80E-10
Co-57	F		1.88E-11
Co-57	M		5.66E-11
Co-57	S		1.01E-10
Co-58	F		4.69E-11
Co-58	M		1.61E-10
Co-58	S		2.14E-10
Co-58m	F		7.66E-13
Co-58m	M		1.84E-12
Co-58m	S		2.23E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Co-60	F		4.62E-10
Co-60	M		9.69E-10
Co-60	S		2.72E-09
Co-60m	F		5.73E-14
Co-60m	M		1.04E-13
Co-60m	S		1.16E-13
Co-61	F		1.45E-12
Co-61	M		3.87E-12
Co-61	S		4.17E-12
Co-62			0.00E+00
Co-62m	F		5.67E-13
Co-62m	M		8.75E-13
Co-62m	S		9.09E-13
Cr-48	F		7.73E-12
Cr-48	M		1.75E-11
Cr-48	S		1.94E-11
Cr-49	F		9.10E-13
Cr-49	M		1.90E-12
Cr-49	S		2.00E-12
Cr-51	F		2.22E-12
Cr-51	M		3.99E-12
Cr-51	S		4.52E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cr-55			0.00E+00
Cr-56			0.00E+00
Cs-121			0.00E+00
Cs-121m			0.00E+00
Cs-123			0.00E+00
Cs-124			0.00E+00
Cs-125	F		4.62E-13
Cs-125	M		1.13E-12
Cs-125	S		1.20E-12
Cs-126			0.00E+00
Cs-127	F		6.84E-13
Cs-127	M		2.76E-12
Cs-127	S		3.01E-12
Cs-128			0.00E+00
Cs-129	F		2.00E-12
Cs-129	M		6.40E-12
Cs-129	S		7.02E-12
Cs-130	F		3.22E-13
Cs-130	M		6.83E-13
Cs-130	S		7.20E-13
Cs-130m			0.00E+00
Cs-131	F		2.03E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cs-131	M		4.59E-12
Cs-131	S		5.04E-12
Cs-132	F		1.63E-11
Cs-132	M		2.62E-11
Cs-132	S		2.77E-11
Cs-134	F		4.45E-10
Cs-134	M		8.37E-10
Cs-134	S		1.89E-09
Cs-134m	F		5.41E-13
Cs-134m	M		4.24E-12
Cs-134m	S		4.81E-12
Cs-135	F		6.67E-11
Cs-135	M		3.59E-10
Cs-135	S		9.09E-10
Cs-135m	F		3.58E-13
Cs-135m	M		6.59E-13
Cs-135m	S		6.87E-13
Cs-136	F		9.39E-11
Cs-136	M		2.49E-10
Cs-136	S		2.78E-10
Cs-137	F		3.22E-10
Cs-137	M		8.94E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cs-137	S		3.04E-09
Cs-137+D	S		3.04E-09
Cs-137+E	S		3.04E-09
Cs-138	F		1.14E-12
Cs-138	M		2.39E-12
Cs-138	S		2.52E-12
Cs-138m			0.00E+00
Cs-139			0.00E+00
Cs-140			0.00E+00
Cu-57			0.00E+00
Cu-59			0.00E+00
Cu-60	F		9.17E-13
Cu-60	M		1.54E-12
Cu-60	S		1.61E-12
Cu-61	F		2.47E-12
Cu-61	M		5.94E-12
Cu-61	S		6.32E-12
Cu-62			0.00E+00
Cu-64	F		3.42E-12
Cu-64	M		1.11E-11
Cu-64	S		1.19E-11
Cu-66			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Cu-67	F		1.22E-11
Cu-67	M		5.67E-11
Cu-67	S		6.23E-11
Cu-69			0.00E+00
Dy-148			0.00E+00
Dy-149			0.00E+00
Dy-150			0.00E+00
Dy-151	F		4.93E-12
Dy-151	M		1.18E-11
Dy-151	S		1.26E-11
Dy-152	F		3.15E-12
Dy-152	M		6.37E-12
Dy-152	S		6.73E-12
Dy-153	F		4.74E-12
Dy-153	M		1.08E-11
Dy-153	S		1.16E-11
Dy-154	F		2.24E-07
Dy-154	M		1.88E-07
Dy-154	S		3.53E-07
Dy-155	F		3.64E-12
Dy-155	M		7.36E-12
Dy-155	S		7.83E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Dy-157	F		1.36E-12
Dy-157	M		2.27E-12
Dy-157	S		2.37E-12
Dy-159	F		2.75E-11
Dy-159	M		3.57E-11
Dy-159	S		4.69E-11
Dy-165	F		2.34E-12
Dy-165	M		5.68E-12
Dy-165	S		6.05E-12
Dy-165m			0.00E+00
Dy-166	F		7.00E-11
Dy-166	M		2.30E-10
Dy-166	S		2.52E-10
Dy-167			0.00E+00
Dy-168			0.00E+00
Er-154			0.00E+00
Er-156	F		6.38E-13
Er-156	M		1.37E-12
Er-156	S		1.45E-12
Er-159	F		4.12E-13
Er-159	M		8.73E-13
Er-159	S		9.25E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Er-161	F		1.91E-12
Er-161	M		3.78E-12
Er-161	S		3.98E-12
Er-163	F		4.37E-14
Er-163	M		7.70E-14
Er-163	S		8.07E-14
Er-165	F		4.84E-13
Er-165	M		8.59E-13
Er-165	S		9.00E-13
Er-167m			0.00E+00
Er-169	F		1.77E-11
Er-169	M		1.04E-10
Er-169	S		1.18E-10
Er-171	F		1.05E-11
Er-171	M		2.53E-11
Er-171	S		2.70E-11
Er-172	F		4.04E-11
Er-172	M		1.30E-10
Er-172	S		1.42E-10
Er-173			0.00E+00
Es-249	F		3.18E-12
Es-249	M		1.70E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Es-249	S		1.86E-11
Es-250	F		6.71E-11
Es-250	M		8.53E-11
Es-250	S		1.08E-10
Es-250m	F		1.51E-11
Es-250m	M		1.50E-11
Es-250m	S		2.05E-11
Es-251	F		1.53E-11
Es-251	M		1.74E-10
Es-251	S		1.93E-10
Es-253	F		8.07E-09
Es-253	M		2.39E-07
Es-253	S		2.85E-07
Es-254	F		1.31E-07
Es-254	M		5.00E-07
Es-254	S		7.00E-07
Es-254+D	F		7.00E-07
Es-254+E	F		7.00E-07
Es-254m	F		1.14E-09
Es-254m	M		4.17E-08
Es-254m	S		4.68E-08
Es-255	F		1.52E-08

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Es-255	M		3.33E-07
Es-255	S		4.12E-07
Es-256	F		4.94E-10
Es-256	M		3.54E-09
Es-256	S		3.88E-09
Eu-142			0.00E+00
Eu-142m			0.00E+00
Eu-143			0.00E+00
Eu-144			0.00E+00
Eu-145	F		3.42E-11
Eu-145	M		4.42E-11
Eu-145	S		4.65E-11
Eu-146	F		5.06E-11
Eu-146	M		6.65E-11
Eu-146	S		6.88E-11
Eu-147	F		4.70E-11
Eu-147	M		1.05E-10
Eu-147	S		1.18E-10
Eu-148	F		3.46E-10
Eu-148	M		2.74E-10
Eu-148	S		2.89E-10
Eu-149	F		3.59E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Eu-149	M		3.91E-11
Eu-149	S		4.67E-11
Eu-150	F		7.34E-09
Eu-150	M		3.07E-09
Eu-150	S		2.34E-09
Eu-150m	F		1.13E-11
Eu-150m	M		2.81E-11
Eu-150m	S		3.00E-11
Eu-152	F		5.17E-09
Eu-152	M		2.48E-09
Eu-152	S		2.51E-09
Eu-152m	F		1.40E-11
Eu-152m	M		3.03E-11
Eu-152m	S		3.21E-11
Eu-152n	F		3.30E-13
Eu-152n	M		7.51E-13
Eu-152n	S		8.02E-13
Eu-154	F		5.57E-09
Eu-154	M		3.03E-09
Eu-154	S		3.64E-09
Eu-154m	F		1.72E-13
Eu-154m	M		2.80E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Eu-154m	S		3.01E-13
Eu-155	F		5.13E-10
Eu-155	M		4.07E-10
Eu-155	S		5.18E-10
Eu-156	F		1.42E-10
Eu-156	M		3.81E-10
Eu-156	S		4.27E-10
Eu-157	F		1.79E-11
Eu-157	M		4.28E-11
Eu-157	S		4.56E-11
Eu-158	F		1.36E-12
Eu-158	M		2.90E-12
Eu-158	S		3.07E-12
Eu-159	F		7.48E-13
Eu-159	M		1.56E-12
Eu-159	S		1.66E-12
F-17			0.00E+00
F-18	F		8.81E-13
F-18	M		2.94E-12
F-18	S		3.17E-12
Fe-52	F		3.72E-11
Fe-52	M		7.36E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Fe-52	S		8.08E-11
Fe-53			0.00E+00
Fe-53m			0.00E+00
Fe-55	F		4.00E-11
Fe-55	M		2.16E-11
Fe-55	S		1.75E-11
Fe-59	F		2.15E-10
Fe-59	M		3.60E-10
Fe-59	S		3.97E-10
Fe-60	F		1.04E-08
Fe-60	M		5.23E-09
Fe-60	S		2.83E-09
Fe-60+D	F		1.31E-08
Fe-60+E	F		1.31E-08
Fe-61			0.00E+00
Fe-62			0.00E+00
Fm-251	F		1.18E-11
Fm-251	M		1.61E-10
Fm-251	S		1.78E-10
Fm-252	F		1.40E-09
Fm-252	M		3.06E-08
Fm-252	S		3.46E-08

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Fm-253	F		1.19E-09
Fm-253	M		3.46E-08
Fm-253	S		4.14E-08
Fm-254	F		4.95E-10
Fm-254	M		5.36E-09
Fm-254	S		5.90E-09
Fm-255	F		8.60E-10
Fm-255	M		2.38E-08
Fm-255	S		2.65E-08
Fm-256	F		4.08E-09
Fm-256	M		2.22E-08
Fm-256	S		2.42E-08
Fm-257	F		7.29E-08
Fm-257	M		5.59E-07
Fm-257	S		7.62E-07
Fr-212	F		1.39E-10
Fr-212	M		5.24E-10
Fr-212	S		5.69E-10
Fr-219			0.00E+00
Fr-220			0.00E+00
Fr-220+D			0.00E+00
Fr-220+E			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Fr-221			0.00E+00
Fr-221+D			0.00E+00
Fr-221+E			0.00E+00
Fr-222	F		6.51E-10
Fr-222	M		1.48E-09
Fr-222	S		1.57E-09
Fr-223	F		8.32E-11
Fr-223	M		9.53E-10
Fr-223	S		1.10E-09
Fr-224			0.00E+00
Fr-227			0.00E+00
Ga-64			0.00E+00
Ga-65	F		4.51E-13
Ga-65	M		7.63E-13
Ga-65	S		8.01E-13
Ga-66	F		3.05E-11
Ga-66	M		5.91E-11
Ga-66	S		6.23E-11
Ga-67	F		6.95E-12
Ga-67	M		2.64E-11
Ga-67	S		2.89E-11
Ga-68	F		1.57E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ga-68	M		3.43E-12
Ga-68	S		3.63E-12
Ga-70	F		3.93E-13
Ga-70	M		7.87E-13
Ga-70	S		8.31E-13
Ga-72	F		2.90E-11
Ga-72	M		5.93E-11
Ga-72	S		6.27E-11
Ga-73	F		6.50E-12
Ga-73	M		1.66E-11
Ga-73	S		1.77E-11
Ga-74			0.00E+00
Gd-142			0.00E+00
Gd-143m			0.00E+00
Gd-144			0.00E+00
Gd-145	F		5.18E-13
Gd-145	M		7.91E-13
Gd-145	S		8.24E-13
Gd-145m			0.00E+00
Gd-146	F		3.60E-10
Gd-146	M		5.95E-10
Gd-146	S		6.94E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Gd-147	F		2.00E-11
Gd-147	M		3.74E-11
Gd-147	S		3.99E-11
Gd-148	F		3.36E-07
Gd-148	M		2.59E-07
Gd-148	S		4.11E-07
Gd-149	F		3.11E-11
Gd-149	M		8.72E-11
Gd-149	S		9.72E-11
Gd-150	F		3.13E-07
Gd-150	M		2.09E-07
Gd-150	S		3.31E-07
Gd-151	F		5.50E-11
Gd-151	M		9.28E-11
Gd-151	S		1.18E-10
Gd-152	F		2.46E-07
Gd-152	M		1.44E-07
Gd-152	S		2.32E-07
Gd-153	F		1.25E-10
Gd-153	M		1.77E-10
Gd-153	S		2.32E-10
Gd-159	F		1.61E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Gd-159	M		3.99E-11
Gd-159	S		4.26E-11
Gd-162			0.00E+00
Ge-66	F		3.76E-12
Ge-66	M		6.68E-12
Ge-66	S		7.01E-12
Ge-67	F		6.68E-13
Ge-67	M		1.18E-12
Ge-67	S		1.24E-12
Ge-68	F		7.78E-11
Ge-68	M		1.30E-09
Ge-68	S		2.80E-09
Ge-68+D	S		2.80E-09
Ge-68+E	S		2.80E-09
Ge-69	F		8.76E-12
Ge-69	M		1.85E-11
Ge-69	S		1.97E-11
Ge-71	F		7.17E-13
Ge-71	M		1.37E-12
Ge-71	S		1.49E-12
Ge-75	F		7.73E-13
Ge-75	M		2.28E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ge-75	S		2.44E-12
Ge-77	F		1.25E-11
Ge-77	M		3.12E-11
Ge-77	S		3.34E-11
Ge-78	F		2.75E-12
Ge-78	M		6.52E-12
Ge-78	S		6.94E-12
H-3	F		5.28E-13
H-3	M		5.38E-12
H-3	S		2.29E-11
H-3	V		1.52E-12
H-3	G	Elemental	1.52E-16
H-3	G	Organic	3.47E-12
Hf-167			0.00E+00
Hf-169			0.00E+00
Hf-170	F		1.20E-11
Hf-170	M		2.66E-11
Hf-170	S		2.84E-11
Hf-172	F		1.91E-09
Hf-172	M		1.53E-09
Hf-172	S		2.31E-09
Hf-172+D	F		2.31E-09

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Hf-172+E	F		2.31E-09
Hf-173	F		5.97E-12
Hf-173	M		1.60E-11
Hf-173	S		1.74E-11
Hf-174	F		1.76E-07
Hf-174	M		1.35E-07
Hf-174	S		2.73E-07
Hf-175	F		5.69E-11
Hf-175	M		1.14E-10
Hf-175	S		1.42E-10
Hf-177m	F		1.74E-12
Hf-177m	M		4.94E-12
Hf-177m	S		5.30E-12
Hf-178m	F		8.76E-09
Hf-178m	M		4.39E-09
Hf-178m	S		4.90E-09
Hf-179m	F		9.41E-11
Hf-179m	M		3.76E-10
Hf-179m	S		4.39E-10
Hf-180m	F		3.81E-12
Hf-180m	M		1.14E-11
Hf-180m	S		1.22E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Hf-181	F		1.06E-10
Hf-181	M		4.77E-10
Hf-181	S		5.75E-10
Hf-182	F		8.88E-09
Hf-182	M		3.88E-09
Hf-182	S		3.87E-09
Hf-182+D	F		9.88E-09
Hf-182+E	F		9.88E-09
Hf-182m	F		1.01E-12
Hf-182m	M		3.10E-12
Hf-182m	S		3.37E-12
Hf-183	F		1.51E-12
Hf-183	M		4.52E-12
Hf-183	S		4.89E-12
Hf-184	F		1.33E-11
Hf-184	M		3.69E-11
Hf-184	S		3.96E-11
Hg-190	F	Inorganic	3.77E-13
Hg-190	M	Inorganic	7.16E-13
Hg-190	S	Inorganic	7.53E-13
Hg-190	F	Organic	3.67E-13
Hg-190	M	Organic	7.01E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Hg-190	S	Organic	7.38E-13
Hg-190	V		6.99E-12
Hg-191m	F	Inorganic	1.07E-12
Hg-191m	M	Inorganic	2.61E-12
Hg-191m	S	Inorganic	2.79E-12
Hg-191m	F	Organic	9.72E-13
Hg-191m	M	Organic	2.45E-12
Hg-191m	S	Organic	2.62E-12
Hg-191m	V		2.90E-11
Hg-192	F	Inorganic	5.06E-12
Hg-192	M	Inorganic	1.04E-11
Hg-192	S	Inorganic	1.10E-11
Hg-192	F	Organic	4.04E-12
Hg-192	M	Organic	8.63E-12
Hg-192	S	Organic	9.14E-12
Hg-192	V		9.06E-11
Hg-193	F	Inorganic	2.41E-12
Hg-193	M	Inorganic	6.11E-12
Hg-193	S	Inorganic	6.52E-12
Hg-193	F	Organic	1.98E-12
Hg-193	M	Organic	5.35E-12
Hg-193	S	Organic	5.73E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Hg-193	V		7.87E-11
Hg-193+D	V		7.87E-11
Hg-193+E	V		7.87E-11
Hg-193m	F	Inorganic	1.04E-11
Hg-193m	M	Inorganic	2.52E-11
Hg-193m	S	Inorganic	2.69E-11
Hg-193m	F	Organic	8.06E-12
Hg-193m	M	Organic	2.11E-11
Hg-193m	S	Organic	2.26E-11
Hg-193m	V		2.72E-10
Hg-194	F	Inorganic	6.01E-10
Hg-194	M	Inorganic	5.20E-10
Hg-194	S	Inorganic	1.70E-09
Hg-194	F	Organic	7.19E-10
Hg-194	M	Organic	7.67E-10
Hg-194	S	Organic	2.01E-09
Hg-194	V		1.95E-09
Hg-194+D	V		2.03E-09
Hg-194+E	V		2.03E-09
Hg-195	F	Inorganic	2.65E-12
Hg-195	M	Inorganic	8.07E-12
Hg-195	S	Inorganic	8.79E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Hg-195	F	Organic	2.10E-12
Hg-195	M	Organic	7.04E-12
Hg-195	S	Organic	7.71E-12
Hg-195	V		1.35E-10
Hg-195m	F	Inorganic	1.74E-11
Hg-195m	M	Inorganic	6.21E-11
Hg-195m	S	Inorganic	6.78E-11
Hg-195m	F	Organic	1.31E-11
Hg-195m	M	Organic	5.46E-11
Hg-195m	S	Organic	6.00E-11
Hg-195m	V		7.33E-10
Hg-197	F	Inorganic	8.32E-12
Hg-197	M	Inorganic	3.62E-11
Hg-197	S	Inorganic	3.96E-11
Hg-197	F	Organic	6.22E-12
Hg-197	M	Organic	3.27E-11
Hg-197	S	Organic	3.61E-11
Hg-197	V		4.21E-10
Hg-197m	F	Inorganic	1.47E-11
Hg-197m	M	Inorganic	6.25E-11
Hg-197m	S	Inorganic	6.82E-11
Hg-197m	F	Organic	1.07E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Hg-197m	M	Organic	5.55E-11
Hg-197m	S	Organic	6.09E-11
Hg-197m	V		5.30E-10
Hg-199m	F	Inorganic	5.88E-13
Hg-199m	M	Inorganic	1.69E-12
Hg-199m	S	Inorganic	1.82E-12
Hg-199m	F	Organic	5.79E-13
Hg-199m	M	Organic	1.68E-12
Hg-199m	S	Organic	1.81E-12
Hg-199m	V		1.59E-11
Hg-203	F	Inorganic	5.24E-11
Hg-203	M	Inorganic	2.34E-10
Hg-203	S	Inorganic	2.84E-10
Hg-203	F	Organic	5.81E-11
Hg-203	M	Organic	2.42E-10
Hg-203	S	Organic	2.92E-10
Hg-203	V		6.62E-10
Hg-205			0.00E+00
Hg-206			0.00E+00
Hg-207			0.00E+00
Ho-150			0.00E+00
Ho-153			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ho-153m			0.00E+00
Ho-154	F		4.46E-13
Ho-154	M		6.60E-13
Ho-154	S		6.83E-13
Ho-154m			0.00E+00
Ho-155	F		8.53E-13
Ho-155	M		1.57E-12
Ho-155	S		1.66E-12
Ho-156	F		1.65E-12
Ho-156	M		3.19E-12
Ho-156	S		3.36E-12
Ho-157	F		1.39E-13
Ho-157	M		2.20E-13
Ho-157	S		2.29E-13
Ho-159	F		1.76E-13
Ho-159	M		3.44E-13
Ho-159	S		3.62E-13
Ho-160	F		3.24E-13
Ho-160	M		5.81E-13
Ho-160	S		6.09E-13
Ho-161	F		2.97E-13
Ho-161	M		6.04E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ho-161	S		6.38E-13
Ho-162	F		7.66E-14
Ho-162	M		1.47E-13
Ho-162	S		1.55E-13
Ho-162m	F		5.23E-13
Ho-162m	M		1.32E-12
Ho-162m	S		1.41E-12
Ho-163	F		3.23E-11
Ho-163	M		1.22E-11
Ho-163	S		3.94E-12
Ho-164	F		1.83E-13
Ho-164	M		4.45E-13
Ho-164	S		4.74E-13
Ho-164m	F		3.17E-13
Ho-164m	M		9.53E-13
Ho-164m	S		1.02E-12
Ho-166	F		6.08E-11
Ho-166	M		1.04E-10
Ho-166	S		1.09E-10
Ho-166m	F		2.07E-08
Ho-166m	M		8.37E-09
Ho-166m	S		4.20E-09

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ho-167	F		2.42E-12
Ho-167	M		6.36E-12
Ho-167	S		6.79E-12
Ho-168			0.00E+00
Ho-168m			0.00E+00
Ho-170			0.00E+00
I-118	F		5.29E-12
I-118	M		2.27E-12
I-118	S		1.78E-12
I-118	V	Vapor	1.57E-11
I-118	V	Methyl Iodide	1.02E-11
I-118m			0.00E+00
I-119	F		9.23E-13
I-119	M		8.20E-13
I-119	S		8.02E-13
I-119	V	Vapor	4.38E-12
I-119	V	Methyl Iodide	1.64E-12
I-120	F		8.91E-12
I-120	M		7.01E-12
I-120	S		6.82E-12
I-120	V	Vapor	2.55E-11
I-120	V	Methyl Iodide	1.90E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
I-120m	F		3.87E-12
I-120m	M		3.79E-12
I-120m	S		3.79E-12
I-120m	V	Vapor	1.26E-11
I-120m	V	Methyl Iodide	7.86E-12
I-121	F		2.38E-12
I-121	M		1.66E-12
I-121	S		1.53E-12
I-121	V	Vapor	7.25E-12
I-121	V	Methyl Iodide	4.84E-12
I-122			0.00E+00
I-123	F		8.30E-12
I-123	M		5.92E-12
I-123	S		5.59E-12
I-123	V	Vapor	2.25E-11
I-123	V	Methyl Iodide	1.67E-11
I-124	F		4.79E-10
I-124	M		1.40E-10
I-124	S		8.82E-11
I-124	V	Vapor	1.23E-09
I-124	V	Methyl Iodide	9.60E-10
I-125	F		2.89E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
I-125	M		8.76E-11
I-125	S		4.07E-11
I-125	V	Vapor	7.52E-10
I-125	V	Methyl Iodide	5.87E-10
I-126	F		1.01E-09
I-126	M		2.84E-10
I-126	S		1.56E-10
I-126	V	Vapor	2.61E-09
I-126	V	Methyl Iodide	2.04E-09
I-128	F		8.16E-13
I-128	M		1.03E-12
I-128	S		1.05E-12
I-128	V	Vapor	5.63E-12
I-128	V	Methyl Iodide	1.44E-12
I-129	F		1.68E-09
I-129	M		7.84E-10
I-129	S		7.11E-10
I-129	V	Vapor	4.42E-09
I-129	V	Methyl Iodide	3.44E-09
I-130	F		7.09E-11
I-130	M		4.33E-11
I-130	S		3.97E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
I-130	V	Vapor	1.87E-10
I-130	V	Methyl Iodide	1.43E-10
I-130m			0.00E+00
I-131	F		5.26E-10
I-131	M		2.20E-10
I-131	S		1.69E-10
I-131	V	Vapor	1.36E-09
I-131	V	Methyl Iodide	1.05E-09
I-132	F		1.00E-11
I-132	M		8.65E-12
I-132	S		8.52E-12
I-132	V	Vapor	3.10E-11
I-132	V	Methyl Iodide	2.07E-11
I-132m	F		2.28E-12
I-132m	M		4.83E-12
I-132m	S		5.11E-12
I-132m	V	Vapor	1.09E-11
I-132m	V	Methyl Iodide	4.10E-12
I-133	F		1.70E-10
I-133	M		7.54E-11
I-133	S		6.25E-11
I-133	V	Vapor	4.42E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
I-133	V	Methyl Iodide	3.43E-10
I-134	F		2.61E-12
I-134	M		3.01E-12
I-134	S		3.06E-12
I-134	V	Vapor	1.15E-11
I-134	V	Methyl Iodide	5.07E-12
I-134m			0.00E+00
I-135	F		3.42E-11
I-135	M		2.28E-11
I-135	S		2.14E-11
I-135	V	Vapor	9.32E-11
I-135	V	Methyl Iodide	6.99E-11
In-103			0.00E+00
In-105			0.00E+00
In-106			0.00E+00
In-106m			0.00E+00
In-107	F		6.26E-13
In-107	M		1.51E-12
In-107	S		1.61E-12
In-108	F		1.30E-12
In-108	M		2.10E-12
In-108	S		2.19E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
In-108m	F		1.09E-12
In-108m	M		1.94E-12
In-108m	S		2.03E-12
In-109	F		1.40E-12
In-109	M		2.50E-12
In-109	S		2.65E-12
In-109m			0.00E+00
In-110	F		4.80E-12
In-110	M		7.25E-12
In-110	S		7.52E-12
In-110m	F		1.60E-12
In-110m	M		3.18E-12
In-110m	S		3.35E-12
In-111	F		9.97E-12
In-111	M		2.18E-11
In-111	S		2.33E-11
In-111m			0.00E+00
In-112	F		1.69E-13
In-112	M		3.12E-13
In-112	S		3.27E-13
In-112m	F		3.74E-13
In-112m	M		9.72E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
In-112m	S		1.04E-12
In-113m	F		5.54E-13
In-113m	M		1.42E-12
In-113m	S		1.52E-12
In-114			0.00E+00
In-114m	F		6.74E-10
In-114m	M		1.16E-09
In-114m	S		1.36E-09
In-114m+D	F		1.36E-09
In-114m+E	F		1.36E-09
In-115	F		1.10E-08
In-115	M		4.76E-09
In-115	S		2.24E-09
In-115m	F		2.15E-12
In-115m	M		5.88E-12
In-115m	S		6.29E-12
In-116m	F		1.12E-12
In-116m	M		2.38E-12
In-116m	S		2.52E-12
In-117	F		5.75E-13
In-117	M		1.49E-12
In-117	S		1.59E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
In-117m	F		2.29E-12
In-117m	M		6.28E-12
In-117m	S		6.72E-12
In-118			0.00E+00
In-118m			0.00E+00
In-119			0.00E+00
In-119m	F		5.03E-13
In-119m	M		9.06E-13
In-119m	S		9.50E-13
In-121			0.00E+00
In-121m			0.00E+00
Ir-180			0.00E+00
Ir-182	F		7.55E-13
Ir-182	M		1.37E-12
Ir-182	S		1.44E-12
Ir-183	F		1.14E-12
Ir-183	M		2.55E-12
Ir-183	S		2.73E-12
Ir-184	F		4.25E-12
Ir-184	M		9.29E-12
Ir-184	S		9.85E-12
Ir-185	F		9.50E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ir-185	M		2.18E-11
Ir-185	S		2.34E-11
Ir-186	F		1.47E-11
Ir-186	M		3.13E-11
Ir-186	S		3.32E-11
Ir-186m	F		1.60E-12
Ir-186m	M		3.32E-12
Ir-186m	S		3.51E-12
Ir-187	F		3.04E-12
Ir-187	M		7.14E-12
Ir-187	S		7.60E-12
Ir-188	F		2.17E-11
Ir-188	M		3.88E-11
Ir-188	S		4.08E-11
Ir-189	F		1.34E-11
Ir-189	M		5.18E-11
Ir-189	S		5.86E-11
Ir-190	F		6.39E-11
Ir-190	M		1.29E-10
Ir-190	S		1.41E-10
Ir-190m	F		2.93E-13
Ir-190m	M		5.72E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ir-190m	S		6.22E-13
Ir-190n	F		2.64E-12
Ir-190n	M		5.81E-12
Ir-190n	S		6.17E-12
Ir-191m			0.00E+00
Ir-192	F		1.93E-10
Ir-192	M		5.18E-10
Ir-192	S		6.51E-10
Ir-192m			0.00E+00
Ir-192n	F		5.76E-10
Ir-192n	M		1.14E-09
Ir-192n	S		4.25E-09
Ir-193m	F		1.42E-11
Ir-193m	M		1.06E-10
Ir-193m	S		1.21E-10
Ir-194	F		4.29E-11
Ir-194	M		8.72E-11
Ir-194	S		9.22E-11
Ir-194m	F		5.53E-10
Ir-194m	M		8.49E-10
Ir-194m	S		1.18E-09
Ir-195	F		2.21E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ir-195	M		6.04E-12
Ir-195	S		6.46E-12
Ir-195m	F		3.73E-12
Ir-195m	M		1.12E-11
Ir-195m	S		1.21E-11
Ir-196			0.00E+00
Ir-196m	F		2.23E-12
Ir-196m	M		5.34E-12
Ir-196m	S		5.68E-12
K-38			0.00E+00
K-40	F		2.78E-10
K-40	M		1.35E-09
K-40	S		6.00E-09
K-42	F		1.17E-11
K-42	M		3.14E-11
K-42	S		3.36E-11
K-43	F		8.22E-12
K-43	M		2.70E-11
K-43	S		2.92E-11
K-44	F		9.13E-13
K-44	M		1.58E-12
K-44	S		1.66E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
K-45	F		5.66E-13
K-45	M		9.68E-13
K-45	S		1.02E-12
K-46			0.00E+00
Kr-74			0.00E+00
Kr-75			0.00E+00
Kr-76			0.00E+00
Kr-76+D			0.00E+00
Kr-76+E			0.00E+00
Kr-77			0.00E+00
Kr-79			0.00E+00
Kr-81			0.00E+00
Kr-81m			0.00E+00
Kr-83m			0.00E+00
Kr-85			0.00E+00
Kr-85m			0.00E+00
Kr-87			0.00E+00
Kr-88			0.00E+00
Kr-89			0.00E+00
La-128			0.00E+00
La-129	F		3.55E-13
La-129	M		6.09E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
La-129	S		6.37E-13
La-130			0.00E+00
La-131	F		6.44E-13
La-131	M		1.46E-12
La-131	S		1.56E-12
La-132	F		9.01E-12
La-132	M		1.80E-11
La-132	S		1.90E-11
La-132m	F		8.10E-13
La-132m	M		1.65E-12
La-132m	S		1.74E-12
La-133	F		7.79E-13
La-133	M		1.48E-12
La-133	S		1.55E-12
La-134			0.00E+00
La-135	F		7.25E-13
La-135	M		1.36E-12
La-135	S		1.43E-12
La-136			0.00E+00
La-137	F		3.84E-10
La-137	M		1.65E-10
La-137	S		1.44E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
La-138	F		8.22E-09
La-138	M		3.39E-09
La-138	S		2.10E-09
La-140	F		5.81E-11
La-140	M		1.28E-10
La-140	S		1.36E-10
La-141	F		8.58E-12
La-141	M		2.07E-11
La-141	S		2.22E-11
La-142	F		2.99E-12
La-142	M		6.33E-12
La-142	S		6.70E-12
La-143	F		7.30E-13
La-143	M		1.53E-12
La-143	S		1.63E-12
Lu-165	F		3.81E-13
Lu-165	M		7.13E-13
Lu-165	S		7.50E-13
Lu-167	F		9.52E-13
Lu-167	M		2.36E-12
Lu-167	S		2.54E-12
Lu-169	F		1.61E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Lu-169	M		3.65E-11
Lu-169	S		4.00E-11
Lu-169m			0.00E+00
Lu-170	F		2.67E-11
Lu-170	M		5.21E-11
Lu-170	S		5.52E-11
Lu-171	F		3.04E-11
Lu-171	M		9.53E-11
Lu-171	S		1.05E-10
Lu-171m			0.00E+00
Lu-172	F		5.33E-11
Lu-172	M		1.49E-10
Lu-172	S		1.63E-10
Lu-172m			0.00E+00
Lu-173	F		2.40E-10
Lu-173	M		2.37E-10
Lu-173	S		3.40E-10
Lu-174	F		3.20E-10
Lu-174	M		2.90E-10
Lu-174	S		4.06E-10
Lu-174m	F		1.45E-10
Lu-174m	M		3.26E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Lu-174m	S		4.24E-10
Lu-176	F		4.78E-09
Lu-176	M		2.87E-09
Lu-176	S		3.85E-09
Lu-176m	F		4.79E-12
Lu-176m	M		1.14E-11
Lu-176m	S		1.21E-11
Lu-177	F		2.37E-11
Lu-177	M		1.12E-10
Lu-177	S		1.25E-10
Lu-177m	F		5.01E-10
Lu-177m	M		1.16E-09
Lu-177m	S		1.53E-09
Lu-178	F		6.47E-13
Lu-178	M		1.33E-12
Lu-178	S		1.40E-12
Lu-178m	F		6.59E-13
Lu-178m	M		1.41E-12
Lu-178m	S		1.50E-12
Lu-179	F		6.50E-12
Lu-179	M		1.36E-11
Lu-179	S		1.44E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Lu-180			0.00E+00
Lu-181			0.00E+00
Mg-27			0.00E+00
Mg-28	F		6.94E-11
Mg-28	M		1.39E-10
Mg-28	S		1.46E-10
Mn-50m			0.00E+00
Mn-51	F		1.24E-12
Mn-51	M		2.58E-12
Mn-51	S		2.73E-12
Mn-52	F		7.23E-11
Mn-52	M		1.19E-10
Mn-52	S		1.26E-10
Mn-52m	F		8.06E-13
Mn-52m	M		1.37E-12
Mn-52m	S		1.44E-12
Mn-53	F		2.31E-12
Mn-53	M		5.81E-12
Mn-53	S		2.60E-11
Mn-54	F		7.55E-11
Mn-54	M		1.59E-10
Mn-54	S		3.26E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Mn-56	F		5.09E-12
Mn-56	M		1.12E-11
Mn-56	S		1.19E-11
Mn-57			0.00E+00
Mn-58m			0.00E+00
Mo-101	F		5.72E-13
Mo-101	M		1.16E-12
Mo-101	S		1.22E-12
Mo-102	F		7.25E-13
Mo-102	M		1.16E-12
Mo-102	S		1.21E-12
Mo-89			0.00E+00
Mo-90	F		8.90E-12
Mo-90	M		3.32E-11
Mo-90	S		3.67E-11
Mo-91	F		6.11E-13
Mo-91	M		1.00E-12
Mo-91	S		1.05E-12
Mo-91m			0.00E+00
Mo-93	F		3.07E-11
Mo-93	M		3.34E-11
Mo-93	S		1.50E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Mo-93m	F		4.26E-12
Mo-93m	M		1.23E-11
Mo-93m	S		1.34E-11
Mo-99	F		2.14E-11
Mo-99	M		1.16E-10
Mo-99	S		1.30E-10
N-13			0.00E+00
N-16			0.00E+00
Na-22	F		1.05E-10
Na-22	M		9.46E-10
Na-22	S		2.63E-09
Na-24	F		1.28E-11
Na-24	M		3.04E-11
Na-24	S		3.25E-11
Nb-87			0.00E+00
Nb-88	F		8.59E-13
Nb-88	M		1.33E-12
Nb-88	S		1.40E-12
Nb-88m			0.00E+00
Nb-89	F		5.15E-12
Nb-89	M		1.07E-11
Nb-89	S		1.14E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Nb-89m	F		2.27E-12
Nb-89m	M		4.64E-12
Nb-89m	S		4.90E-12
Nb-90	F		2.97E-11
Nb-90	M		6.11E-11
Nb-90	S		6.46E-11
Nb-91	F		9.38E-12
Nb-91	M		2.65E-11
Nb-91	S		1.35E-10
Nb-91m	F		2.83E-11
Nb-91m	M		3.15E-10
Nb-91m	S		3.94E-10
Nb-92	F		4.20E-10
Nb-92	M		4.80E-10
Nb-92	S		2.01E-09
Nb-92m	F		2.60E-11
Nb-92m	M		3.64E-11
Nb-92m	S		3.85E-11
Nb-93m	F		1.99E-11
Nb-93m	M		5.42E-11
Nb-93m	S		1.63E-10
Nb-94	F		5.37E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Nb-94	M		1.02E-09
Nb-94	S		3.62E-09
Nb-94m			0.00E+00
Nb-95	F		5.11E-11
Nb-95	M		1.47E-10
Nb-95	S		1.73E-10
Nb-95m	F		2.43E-11
Nb-95m	M		9.10E-11
Nb-95m	S		1.01E-10
Nb-96	F		2.73E-11
Nb-96	M		6.16E-11
Nb-96	S		6.55E-11
Nb-97	F		1.16E-12
Nb-97	M		2.89E-12
Nb-97	S		3.08E-12
Nb-98m	F		1.62E-12
Nb-98m	M		3.21E-12
Nb-98m	S		3.38E-12
Nb-99			0.00E+00
Nb-99m			0.00E+00
Nd-134			0.00E+00
Nd-135	F		7.60E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Nd-135	M		1.35E-12
Nd-135	S		1.42E-12
Nd-136	F		1.63E-12
Nd-136	M		3.39E-12
Nd-136	S		3.58E-12
Nd-137	F		8.79E-13
Nd-137	M		1.75E-12
Nd-137	S		1.85E-12
Nd-138	F		1.58E-11
Nd-138	M		3.19E-11
Nd-138	S		3.37E-11
Nd-139	F		3.27E-13
Nd-139	M		6.30E-13
Nd-139	S		6.68E-13
Nd-139m	F		5.70E-12
Nd-139m	M		1.19E-11
Nd-139m	S		1.27E-11
Nd-140	F		6.67E-11
Nd-140	M		1.53E-10
Nd-140	S		1.63E-10
Nd-141	F		1.70E-13
Nd-141	M		3.49E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Nd-141	S		3.68E-13
Nd-141m			0.00E+00
Nd-144	F		2.81E-07
Nd-144	M		1.43E-07
Nd-144	S		1.94E-07
Nd-147	F		5.24E-11
Nd-147	M		2.24E-10
Nd-147	S		2.54E-10
Nd-149	F		2.88E-12
Nd-149	M		7.99E-12
Nd-149	S		8.57E-12
Nd-151	F		4.85E-13
Nd-151	M		9.80E-13
Nd-151	S		1.04E-12
Nd-152	F		5.99E-13
Nd-152	M		1.07E-12
Nd-152	S		1.12E-12
Ne-19			0.00E+00
Ne-24			0.00E+00
Ni-56	F		3.63E-11
Ni-56	M		7.78E-11
Ni-56	S		9.52E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ni-56	V		1.14E-10
Ni-57	F		2.11E-11
Ni-57	M		5.04E-11
Ni-57	S		5.50E-11
Ni-57	V		4.11E-11
Ni-59	F		1.53E-11
Ni-59	M		1.25E-11
Ni-59	S		3.39E-11
Ni-59	V		6.45E-11
Ni-63	F		3.79E-11
Ni-63	M		4.56E-11
Ni-63	S		1.03E-10
Ni-63	V		1.59E-10
Ni-65	F		3.83E-12
Ni-65	M		8.15E-12
Ni-65	S		8.70E-12
Ni-65	V		1.91E-11
Ni-66	F		9.08E-11
Ni-66	M		2.45E-10
Ni-66	S		2.69E-10
Ni-66	V		1.25E-10
Np-232	F		1.25E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Np-232	M		8.85E-13
Np-232	S		1.38E-12
Np-233	F		3.88E-14
Np-233	M		7.95E-14
Np-233	S		8.40E-14
Np-234	F		2.12E-11
Np-234	M		4.11E-11
Np-234	S		4.37E-11
Np-235	F		2.73E-11
Np-235	M		3.34E-11
Np-235	S		5.53E-11
Np-235+D	F		5.53E-11
Np-235+E	F		5.53E-11
Np-236	F		9.08E-08
Np-236	M		3.80E-08
Np-236	S		4.73E-08
Np-236m	F		1.05E-10
Np-236m	M		2.18E-10
Np-236m	S		3.50E-10
Np-237	F		4.72E-07
Np-237	M		4.79E-07
Np-237	S		7.75E-07

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Np-237+D	F		7.75E-07
Np-237+E	F		7.75E-07
Np-238	F		5.78E-11
Np-238	M		1.11E-10
Np-238	S		1.41E-10
Np-239	F		2.49E-11
Np-239	M		1.10E-10
Np-239	S		1.21E-10
Np-240	F		1.48E-12
Np-240	M		4.28E-12
Np-240	S		4.59E-12
Np-240m			0.00E+00
Np-241	F		2.73E-13
Np-241	M		4.89E-13
Np-241	S		5.15E-13
Np-242			0.00E+00
Np-242m			0.00E+00
O-14			0.00E+00
O-15			0.00E+00
O-19			0.00E+00
Os-180	F		3.31E-13
Os-180	M		6.84E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Os-180	S		7.23E-13
Os-181	F		2.20E-12
Os-181	M		4.78E-12
Os-181	S		5.08E-12
Os-182	F		1.69E-11
Os-182	M		3.82E-11
Os-182	S		4.07E-11
Os-183	F		6.34E-12
Os-183	M		1.64E-11
Os-183	S		1.78E-11
Os-183m	F		5.30E-12
Os-183m	M		1.14E-11
Os-183m	S		1.23E-11
Os-185	F		1.09E-10
Os-185	M		1.27E-10
Os-185	S		1.60E-10
Os-186	F		4.75E-08
Os-186	M		1.11E-07
Os-186	S		3.24E-07
Os-189m	F		4.78E-13
Os-189m	M		8.52E-13
Os-189m	S		8.93E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Os-190m			0.00E+00
Os-191	F		3.28E-11
Os-191	M		1.75E-10
Os-191	S		2.01E-10
Os-191m	F		3.72E-12
Os-191m	M		1.61E-11
Os-191m	S		1.79E-11
Os-193	F		2.77E-11
Os-193	M		7.05E-11
Os-193	S		7.54E-11
Os-194	F		8.90E-10
Os-194	M		2.03E-09
Os-194	S		6.92E-09
Os-194+D	S		7.01E-09
Os-194+E	S		7.01E-09
Os-196	F		1.49E-12
Os-196	M		3.19E-12
Os-196	S		3.38E-12
P-30			0.00E+00
P-32	F		7.99E-11
P-32	M		3.28E-10
P-32	S		3.76E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
P-33	F		8.88E-12
P-33	M		1.37E-10
P-33	S		1.65E-10
Pa-227	F		1.10E-09
Pa-227	M		5.21E-09
Pa-227	S		5.69E-09
Pa-228	F		8.03E-10
Pa-228	M		4.43E-09
Pa-228	S		6.45E-09
Pa-229	F		2.09E-11
Pa-229	M		5.63E-10
Pa-229	S		6.55E-10
Pa-230	F		1.57E-09
Pa-230	M		4.78E-08
Pa-230	S		6.17E-08
Pa-231	F		2.06E-06
Pa-231	M		1.10E-06
Pa-231	S		1.23E-06
Pa-232	F		3.66E-11
Pa-232	M		8.32E-11
Pa-232	S		1.89E-10
Pa-233	F		8.00E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pa-233	M		3.53E-10
Pa-233	S		4.13E-10
Pa-234	F		1.01E-11
Pa-234	M		3.02E-11
Pa-234	S		3.24E-11
Pa-234m			0.00E+00
Pa-235	F		3.74E-13
Pa-235	M		8.15E-13
Pa-235	S		8.63E-13
Pa-236			0.00E+00
Pa-237			0.00E+00
Pb-194	F		3.10E-13
Pb-194	M		5.77E-13
Pb-194	S		6.06E-13
Pb-195m	F		5.25E-13
Pb-195m	M		1.03E-12
Pb-195m	S		1.09E-12
Pb-196	F		5.89E-13
Pb-196	M		1.21E-12
Pb-196	S		1.28E-12
Pb-197			0.00E+00
Pb-197m	F		9.18E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pb-197m	M		2.47E-12
Pb-197m	S		2.65E-12
Pb-198	F		1.84E-12
Pb-198	M		3.88E-12
Pb-198	S		4.15E-12
Pb-199	F		7.73E-13
Pb-199	M		1.79E-12
Pb-199	S		1.92E-12
Pb-200	F		1.07E-11
Pb-200	M		3.17E-11
Pb-200	S		3.49E-11
Pb-201	F		3.58E-12
Pb-201	M		9.63E-12
Pb-201	S		1.06E-11
Pb-201m			0.00E+00
Pb-202	F		9.50E-10
Pb-202	M		1.28E-09
Pb-202	S		3.73E-09
Pb-202+D	S		3.77E-09
Pb-202+E	S		3.77E-09
Pb-202m	F		2.95E-12
Pb-202m	M		6.67E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pb-202m	S		7.20E-12
Pb-203	F		6.76E-12
Pb-203	M		2.07E-11
Pb-203	S		2.29E-11
Pb-204m	F		8.31E-13
Pb-204m	M		1.38E-12
Pb-204m	S		1.45E-12
Pb-205	F		1.49E-11
Pb-205	M		1.69E-11
Pb-205	S		6.16E-11
Pb-209	F		1.31E-12
Pb-209	M		5.13E-12
Pb-209	S		5.62E-12
Pb-210	F		2.47E-08
Pb-210	M		7.49E-08
Pb-210	S		4.29E-07
Pb-211	F		2.24E-10
Pb-211	M		1.00E-09
Pb-211	S		1.09E-09
Pb-212	F		5.42E-10
Pb-212	M		1.56E-08
Pb-212	S		1.73E-08

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pb-214	F		1.24E-10
Pb-214	M		9.81E-10
Pb-214	S		1.08E-09
Pd-100	F		4.54E-11
Pd-100	M		7.42E-11
Pd-100	S		7.81E-11
Pd-101	F		2.72E-12
Pd-101	M		4.82E-12
Pd-101	S		5.08E-12
Pd-103	F		1.04E-11
Pd-103	M		4.18E-11
Pd-103	S		4.77E-11
Pd-107	F		2.73E-12
Pd-107	M		1.06E-11
Pd-107	S		4.74E-11
Pd-109	F		1.91E-11
Pd-109	M		4.79E-11
Pd-109	S		5.11E-11
Pd-109m			0.00E+00
Pd-111	F		7.51E-13
Pd-111	M		1.64E-12
Pd-111	S		1.75E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pd-112	F		9.39E-11
Pd-112	M		1.75E-10
Pd-112	S		1.84E-10
Pd-114			0.00E+00
Pd-96			0.00E+00
Pd-97			0.00E+00
Pd-98	F		7.89E-13
Pd-98	M		1.44E-12
Pd-98	S		1.51E-12
Pd-99	F		5.25E-13
Pd-99	M		9.03E-13
Pd-99	S		9.44E-13
Pm-136			0.00E+00
Pm-137m			0.00E+00
Pm-139			0.00E+00
Pm-140			0.00E+00
Pm-140m			0.00E+00
Pm-141	F		4.07E-13
Pm-141	M		7.13E-13
Pm-141	S		7.47E-13
Pm-142			0.00E+00
Pm-143	F		2.45E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pm-143	M		1.35E-10
Pm-143	S		1.45E-10
Pm-144	F		1.49E-09
Pm-144	M		7.46E-10
Pm-144	S		7.48E-10
Pm-145	F		3.36E-10
Pm-145	M		1.63E-10
Pm-145	S		1.70E-10
Pm-146	F		2.77E-09
Pm-146	M		1.37E-09
Pm-146	S		1.44E-09
Pm-147	F		2.46E-10
Pm-147	M		3.12E-10
Pm-147	S		4.34E-10
Pm-148	F		9.97E-11
Pm-148	M		2.63E-10
Pm-148	S		2.85E-10
Pm-148m	F		3.24E-10
Pm-148m	M		4.99E-10
Pm-148m	S		5.68E-10
Pm-149	F		3.15E-11
Pm-149	M		9.15E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pm-149	S		9.87E-11
Pm-150	F		5.53E-12
Pm-150	M		1.17E-11
Pm-150	S		1.24E-11
Pm-151	F		2.16E-11
Pm-151	M		5.94E-11
Pm-151	S		6.38E-11
Pm-152			0.00E+00
Pm-152m			0.00E+00
Pm-153			0.00E+00
Pm-154			0.00E+00
Pm-154m			0.00E+00
Po-203	F		1.30E-12
Po-203	M		2.85E-12
Po-203	S		3.06E-12
Po-204	F		8.79E-12
Po-204	M		3.58E-11
Po-204	S		3.92E-11
Po-205	F		1.43E-12
Po-205	M		2.77E-12
Po-205	S		2.93E-12
Po-206	F		4.69E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Po-206	M		5.20E-09
Po-206	S		5.93E-09
Po-207	F		3.03E-12
Po-207	M		6.12E-12
Po-207	S		6.67E-12
Po-208	F		3.36E-08
Po-208	M		3.36E-07
Po-208	S		6.10E-07
Po-209	F		3.33E-08
Po-209	M		3.24E-07
Po-209	S		7.62E-07
Po-210	F		2.69E-08
Po-210	M		2.94E-07
Po-210	S		3.92E-07
Po-211			0.00E+00
Po-212			0.00E+00
Po-212m			0.00E+00
Po-213			0.00E+00
Po-214			0.00E+00
Po-215			0.00E+00
Po-216			0.00E+00
Po-218			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pr-134	F		6.90E-13
Pr-134	M		1.16E-12
Pr-134	S		1.22E-12
Pr-134m	F		1.12E-12
Pr-134m	M		2.00E-12
Pr-134m	S		2.10E-12
Pr-135	F		6.16E-13
Pr-135	M		1.11E-12
Pr-135	S		1.17E-12
Pr-136	F		3.80E-13
Pr-136	M		5.69E-13
Pr-136	S		5.90E-13
Pr-137	F		6.51E-13
Pr-137	M		1.34E-12
Pr-137	S		1.41E-12
Pr-138			0.00E+00
Pr-138m	F		2.51E-12
Pr-138m	M		4.56E-12
Pr-138m	S		4.79E-12
Pr-139	F		8.87E-13
Pr-139	M		1.78E-12
Pr-139	S		1.92E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pr-140			0.00E+00
Pr-142	F		3.88E-11
Pr-142	M		8.61E-11
Pr-142	S		9.14E-11
Pr-142m	F		4.96E-13
Pr-142m	M		1.10E-12
Pr-142m	S		1.17E-12
Pr-143	F		5.49E-11
Pr-143	M		2.32E-10
Pr-143	S		2.64E-10
Pr-144	F		5.30E-13
Pr-144	M		9.25E-13
Pr-144	S		9.68E-13
Pr-144m			0.00E+00
Pr-145	F		1.04E-11
Pr-145	M		2.35E-11
Pr-145	S		2.50E-11
Pr-146	F		8.69E-13
Pr-146	M		1.57E-12
Pr-146	S		1.64E-12
Pr-147	F		4.64E-13
Pr-147	M		9.04E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pr-147	S		9.61E-13
Pr-148			0.00E+00
Pr-148m			0.00E+00
Pt-184	F		7.39E-13
Pt-184	M		1.58E-12
Pt-184	S		1.67E-12
Pt-186	F		2.62E-12
Pt-186	M		5.37E-12
Pt-186	S		5.68E-12
Pt-187	F		2.12E-12
Pt-187	M		5.46E-12
Pt-187	S		5.83E-12
Pt-188	F		5.72E-11
Pt-188	M		1.86E-10
Pt-188	S		2.09E-10
Pt-189	F		5.74E-12
Pt-189	M		1.60E-11
Pt-189	S		1.72E-11
Pt-190	F		9.98E-09
Pt-190	M		1.36E-07
Pt-190	S		4.06E-07
Pt-191	F		1.37E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pt-191	M		3.82E-11
Pt-191	S		4.13E-11
Pt-193	F		3.39E-12
Pt-193	M		1.14E-11
Pt-193	S		5.33E-11
Pt-193m	F		2.11E-11
Pt-193m	M		9.36E-11
Pt-193m	S		1.03E-10
Pt-195m	F		2.88E-11
Pt-195m	M		1.14E-10
Pt-195m	S		1.25E-10
Pt-197	F		1.52E-11
Pt-197	M		4.40E-11
Pt-197	S		4.73E-11
Pt-197m	F		2.36E-12
Pt-197m	M		6.93E-12
Pt-197m	S		7.44E-12
Pt-199	F		6.78E-13
Pt-199	M		1.74E-12
Pt-199	S		1.86E-12
Pt-200	F		3.93E-11
Pt-200	M		8.52E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pt-200	S		9.04E-11
Pt-202	F		1.71E-10
Pt-202	M		3.26E-10
Pt-202	S		3.44E-10
Pt-202+D	S		3.44E-10
Pt-202+E	S		3.44E-10
Pu-232	F		2.81E-10
Pu-232	M		1.57E-09
Pu-232	S		1.71E-09
Pu-234	F		9.87E-11
Pu-234	M		1.85E-09
Pu-234	S		2.16E-09
Pu-235	F		3.72E-14
Pu-235	M		6.97E-14
Pu-235	S		7.41E-14
Pu-236	F		6.02E-07
Pu-236	M		6.21E-07
Pu-236	S		8.01E-07
Pu-237	F		1.70E-11
Pu-237	M		3.45E-11
Pu-237	S		4.04E-11
Pu-238	F		1.41E-06

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pu-238	M		9.07E-07
Pu-238	S		9.60E-07
Pu-239	F		1.50E-06
Pu-239	M		9.00E-07
Pu-239	S		8.96E-07
Pu-239+D	F		1.50E-06
Pu-239+E	F		1.50E-06
Pu-240	F		1.50E-06
Pu-240	M		9.01E-07
Pu-240	S		8.98E-07
Pu-241	F		2.34E-08
Pu-241	M		9.01E-09
Pu-241	S		3.81E-09
Pu-242	F		1.42E-06
Pu-242	M		8.46E-07
Pu-242	S		8.36E-07
Pu-243	F		2.34E-12
Pu-243	M		7.96E-12
Pu-243	S		8.59E-12
Pu-244	F		1.41E-06
Pu-244	M		8.21E-07
Pu-244	S		8.01E-07

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Pu-244+D	F		1.41E-06
Pu-244+E	F		1.41E-06
Pu-245	F		1.88E-11
Pu-245	M		5.41E-11
Pu-245	S		5.80E-11
Pu-246	F		1.56E-10
Pu-246	M		4.58E-10
Pu-246	S		5.09E-10
Ra-219			0.00E+00
Ra-219+D			0.00E+00
Ra-219+E			0.00E+00
Ra-220			0.00E+00
Ra-221			0.00E+00
Ra-221+D			0.00E+00
Ra-221+E			0.00E+00
Ra-222			0.00E+00
Ra-223	F		5.40E-09
Ra-223	M		6.75E-07
Ra-223	S		7.89E-07
Ra-223+D	S		7.89E-07
Ra-223+E	S		7.89E-07
Ra-224	F		3.61E-09

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ra-224	M		2.70E-07
Ra-224	S		3.06E-07
Ra-224+D	S		3.06E-07
Ra-224+E	S		3.06E-07
Ra-225	F		3.33E-09
Ra-225	M		5.69E-07
Ra-225	S		7.07E-07
Ra-226	F		1.14E-08
Ra-226	M		3.10E-07
Ra-226	S		7.61E-07
Ra-226+D	S		7.63E-07
Ra-226+E	S		7.63E-07
Ra-227	F		6.94E-12
Ra-227	M		8.51E-12
Ra-227	S		1.65E-11
Ra-228	F		3.27E-08
Ra-228	M		1.40E-07
Ra-228	S		1.18E-06
Ra-228+D	S		1.18E-06
Ra-228+E	S		1.18E-06
Ra-230	F		5.58E-12
Ra-230	M		9.07E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ra-230	S		9.48E-12
Rb-77			0.00E+00
Rb-78	F		7.96E-13
Rb-78	M		1.26E-12
Rb-78	S		1.31E-12
Rb-78m			0.00E+00
Rb-79	F		6.51E-13
Rb-79	M		1.24E-12
Rb-79	S		1.31E-12
Rb-80			0.00E+00
Rb-81	F		1.14E-12
Rb-81	M		3.99E-12
Rb-81	S		4.31E-12
Rb-81m	F		2.90E-13
Rb-81m	M		9.77E-13
Rb-81m	S		1.05E-12
Rb-82			0.00E+00
Rb-82m	F		3.79E-12
Rb-82m	M		6.46E-12
Rb-82m	S		6.76E-12
Rb-83	F		5.88E-11
Rb-83	M		1.09E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Rb-83	S		1.40E-10
Rb-84	F		9.81E-11
Rb-84	M		2.41E-10
Rb-84	S		2.81E-10
Rb-84m	F		1.69E-13
Rb-84m	M		3.64E-13
Rb-84m	S		3.97E-13
Rb-86	F		1.08E-10
Rb-86	M		3.89E-10
Rb-86	S		4.50E-10
Rb-86m			0.00E+00
Rb-87	F		5.99E-11
Rb-87	M		4.55E-10
Rb-87	S		1.21E-09
Rb-88	F		8.60E-13
Rb-88	M		1.46E-12
Rb-88	S		1.52E-12
Rb-89	F		5.55E-13
Rb-89	M		9.77E-13
Rb-89	S		1.05E-12
Rb-90			0.00E+00
Rb-90m			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Re-178	F		4.84E-13
Re-178	M		6.84E-13
Re-178	S		7.08E-13
Re-179	F		3.05E-13
Re-179	M		4.84E-13
Re-179	S		5.04E-13
Re-180			0.00E+00
Re-181	F		1.47E-11
Re-181	M		2.17E-11
Re-181	S		2.25E-11
Re-182	F		5.16E-11
Re-182	M		1.17E-10
Re-182	S		1.25E-10
Re-182m	F		9.34E-12
Re-182m	M		1.57E-11
Re-182m	S		1.64E-11
Re-183	F		3.80E-11
Re-183	M		2.64E-10
Re-183	S		3.36E-10
Re-184	F		3.62E-11
Re-184	M		1.83E-10
Re-184	S		2.24E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Re-184m	F		5.68E-11
Re-184m	M		6.16E-10
Re-184m	S		9.62E-10
Re-186	F		5.84E-11
Re-186	M		1.11E-10
Re-186	S		1.18E-10
Re-186m	F		8.75E-11
Re-186m	M		1.12E-09
Re-186m	S		4.42E-09
Re-186m+D	S		4.54E-09
Re-186m+E	S		4.54E-09
Re-187	F		1.90E-13
Re-187	M		6.35E-13
Re-187	S		2.98E-12
Re-188	F		4.99E-11
Re-188	M		6.02E-11
Re-188	S		6.14E-11
Re-188m	F		1.07E-12
Re-188m	M		1.40E-12
Re-188m	S		1.43E-12
Re-189	F		2.81E-11
Re-189	M		4.38E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Re-189	S		4.57E-11
Re-190			0.00E+00
Re-190m	F		1.16E-11
Re-190m	M		1.55E-11
Re-190m	S		1.60E-11
Rh-100	F		1.58E-11
Rh-100	M		2.48E-11
Rh-100	S		2.58E-11
Rh-100m			0.00E+00
Rh-101	F		1.25E-10
Rh-101	M		2.04E-10
Rh-101	S		4.64E-10
Rh-101m	F		7.51E-12
Rh-101m	M		1.76E-11
Rh-101m	S		1.90E-11
Rh-102	F		1.60E-10
Rh-102	M		4.23E-10
Rh-102	S		7.02E-10
Rh-102m	F		6.78E-10
Rh-102m	M		6.98E-10
Rh-102m	S		1.80E-09
Rh-103m	F		7.31E-14

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Rh-103m	M		2.29E-13
Rh-103m	S		2.46E-13
Rh-104			0.00E+00
Rh-104m			0.00E+00
Rh-105	F		1.24E-11
Rh-105	M		3.98E-11
Rh-105	S		4.30E-11
Rh-106			0.00E+00
Rh-106m	F		3.37E-12
Rh-106m	M		7.05E-12
Rh-106m	S		7.46E-12
Rh-107	F		3.60E-13
Rh-107	M		7.35E-13
Rh-107	S		7.77E-13
Rh-108			0.00E+00
Rh-109			0.00E+00
Rh-94			0.00E+00
Rh-95			0.00E+00
Rh-95m			0.00E+00
Rh-96			0.00E+00
Rh-96m			0.00E+00
Rh-97	F		6.45E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Rh-97	M		1.17E-12
Rh-97	S		1.23E-12
Rh-97m	F		7.72E-13
Rh-97m	M		1.34E-12
Rh-97m	S		1.40E-12
Rh-98			0.00E+00
Rh-99	F		3.19E-11
Rh-99	M		1.13E-10
Rh-99	S		1.28E-10
Rh-99m	F		1.42E-12
Rh-99m	M		2.65E-12
Rh-99m	S		2.78E-12
Rn-207			0.00E+00
Rn-209			0.00E+00
Rn-210			0.00E+00
Rn-211			0.00E+00
Rn-212			0.00E+00
Rn-215			0.00E+00
Rn-216			0.00E+00
Rn-217			0.00E+00
Rn-218			0.00E+00
Rn-219			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Rn-219+D			0.00E+00
Rn-219+E			0.00E+00
Rn-220			0.00E+00
Rn-222			8.62E-10
Rn-222+D			8.62E-10
Rn-222+E			8.62E-10
Rn-223			0.00E+00
Ru-103	F		5.02E-11
Ru-103	M		2.34E-10
Ru-103	S		2.81E-10
Ru-103	V		1.37E-10
Ru-105	F		7.04E-12
Ru-105	M		1.92E-11
Ru-105	S		2.09E-11
Ru-105	V		2.67E-11
Ru-106	F		9.46E-10
Ru-106	M		2.77E-09
Ru-106	S		6.06E-09
Ru-106	V		2.34E-09
Ru-106+D	S		6.06E-09
Ru-106+E	S		6.06E-09
Ru-107			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ru-108			0.00E+00
Ru-92			0.00E+00
Ru-94	F		1.66E-12
Ru-94	M		3.35E-12
Ru-94	S		3.55E-12
Ru-94	V		6.01E-12
Ru-95	F		1.18E-12
Ru-95	M		2.04E-12
Ru-95	S		2.16E-12
Ru-95	V		3.89E-12
Ru-97	F		4.39E-12
Ru-97	M		9.08E-12
Ru-97	S		9.78E-12
Ru-97	V		1.47E-11
S-35	F		6.27E-12
S-35	M		1.36E-10
S-35	S		1.76E-10
S-35	V	Dioxide	1.33E-11
S-35	V	Carbon Disulfide	7.84E-11
S-37			0.00E+00
S-38	F		1.17E-11
S-38	M		3.08E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
S-38	S		3.32E-11
S-38	V	Dioxide	2.23E-11
S-38	V	Carbon Disulfide	1.61E-11
Sb-111			0.00E+00
Sb-113			0.00E+00
Sb-114			0.00E+00
Sb-115	F		3.42E-13
Sb-115	M		6.28E-13
Sb-115	S		6.59E-13
Sb-116	F		3.76E-13
Sb-116	M		5.77E-13
Sb-116	S		6.00E-13
Sb-116m	F		1.18E-12
Sb-116m	M		2.27E-12
Sb-116m	S		2.39E-12
Sb-117	F		4.00E-13
Sb-117	M		1.12E-12
Sb-117	S		1.19E-12
Sb-118			0.00E+00
Sb-118m	F		4.26E-12
Sb-118m	M		7.13E-12
Sb-118m	S		7.44E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sb-119	F		2.44E-12
Sb-119	M		4.75E-12
Sb-119	S		4.99E-12
Sb-120	F		1.80E-13
Sb-120	M		3.04E-13
Sb-120	S		3.18E-13
Sb-120m	F		3.82E-11
Sb-120m	M		8.89E-11
Sb-120m	S		9.61E-11
Sb-122	F		5.64E-11
Sb-122	M		1.48E-10
Sb-122	S		1.59E-10
Sb-122m			0.00E+00
Sb-124	F		1.31E-10
Sb-124	M		6.58E-10
Sb-124	S		8.64E-10
Sb-124m			0.00E+00
Sb-124n	F		1.51E-13
Sb-124n	M		3.50E-13
Sb-124n	S		3.98E-13
Sb-125	F		1.05E-10
Sb-125	M		4.54E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sb-125	S		1.09E-09
Sb-126	F		1.01E-10
Sb-126	M		3.40E-10
Sb-126	S		3.81E-10
Sb-126m	F		5.03E-13
Sb-126m	M		8.88E-13
Sb-126m	S		9.33E-13
Sb-127	F		5.85E-11
Sb-127	M		2.04E-10
Sb-127	S		2.23E-10
Sb-128	F		1.96E-11
Sb-128	M		4.16E-11
Sb-128	S		4.39E-11
Sb-128m	F		3.96E-13
Sb-128m	M		5.95E-13
Sb-128m	S		6.17E-13
Sb-129	F		1.09E-11
Sb-129	M		2.63E-11
Sb-129	S		2.81E-11
Sb-130	F		1.40E-12
Sb-130	M		2.64E-12
Sb-130	S		2.78E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sb-130m			0.00E+00
Sb-131	F		2.49E-12
Sb-131	M		2.72E-12
Sb-131	S		2.69E-12
Sb-133			0.00E+00
Sc-42m			0.00E+00
Sc-43	F		4.78E-12
Sc-43	M		1.14E-11
Sc-43	S		1.21E-11
Sc-44	F		7.69E-12
Sc-44	M		1.66E-11
Sc-44	S		1.76E-11
Sc-44m	F		7.95E-11
Sc-44m	M		1.77E-10
Sc-44m	S		1.88E-10
Sc-46	F		5.12E-10
Sc-46	M		5.82E-10
Sc-46	S		6.67E-10
Sc-47	F		1.79E-11
Sc-47	M		7.51E-11
Sc-47	S		8.25E-11
Sc-48	F		4.78E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sc-48	M		9.94E-11
Sc-48	S		1.06E-10
Sc-49	F		1.14E-12
Sc-49	M		2.70E-12
Sc-49	S		2.87E-12
Sc-50			0.00E+00
Se-70	F		1.75E-12
Se-70	M		4.29E-12
Se-70	S		4.57E-12
Se-71			0.00E+00
Se-72	F		1.86E-10
Se-72	M		3.84E-10
Se-72	S		4.20E-10
Se-73	F		5.39E-12
Se-73	M		2.09E-11
Se-73	S		2.31E-11
Se-73m	F		5.59E-13
Se-73m	M		1.90E-12
Se-73m	S		2.08E-12
Se-75	F		1.00E-10
Se-75	M		1.07E-10
Se-75	S		1.33E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Se-77m			0.00E+00
Se-79	F		8.52E-11
Se-79	M		2.34E-10
Se-79	S		5.03E-10
Se-79m			0.00E+00
Se-81	F		3.43E-13
Se-81	M		6.67E-13
Se-81	S		7.03E-13
Se-81m	F		9.61E-13
Se-81m	M		3.60E-12
Se-81m	S		3.89E-12
Se-83	F		7.24E-13
Se-83	M		1.81E-12
Se-83	S		1.93E-12
Se-83m			0.00E+00
Se-84			0.00E+00
Si-31	F		3.03E-12
Si-31	M		7.71E-12
Si-31	S		8.22E-12
Si-32	F		3.85E-10
Si-32	M		1.57E-09
Si-32	S		7.84E-09

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Si-32+D	S		8.22E-09
Si-32+E	S		8.22E-09
Sm-139			0.00E+00
Sm-140	F		1.11E-12
Sm-140	M		1.90E-12
Sm-140	S		1.99E-12
Sm-141	F		4.43E-13
Sm-141	M		7.45E-13
Sm-141	S		7.78E-13
Sm-141m	F		8.61E-13
Sm-141m	M		1.64E-12
Sm-141m	S		1.72E-12
Sm-142	F		2.81E-12
Sm-142	M		5.64E-12
Sm-142	S		5.96E-12
Sm-143			0.00E+00
Sm-143m			0.00E+00
Sm-145	F		1.57E-10
Sm-145	M		1.19E-10
Sm-145	S		1.51E-10
Sm-146	F		3.74E-07
Sm-146	M		2.11E-07

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sm-146	S		2.86E-07
Sm-147	F		3.41E-07
Sm-147	M		1.86E-07
Sm-147	S		2.51E-07
Sm-148	F		2.93E-07
Sm-148	M		1.51E-07
Sm-148	S		2.05E-07
Sm-151	F		2.50E-10
Sm-151	M		1.34E-10
Sm-151	S		1.33E-10
Sm-153	F		2.31E-11
Sm-153	M		7.94E-11
Sm-153	S		8.61E-11
Sm-155	F		4.18E-13
Sm-155	M		8.59E-13
Sm-155	S		9.09E-13
Sm-156	F		9.22E-12
Sm-156	M		2.65E-11
Sm-156	S		2.90E-11
Sm-157			0.00E+00
Sn-106			0.00E+00
Sn-108	F		3.63E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sn-108	M		6.08E-13
Sn-108	S		6.35E-13
Sn-109	F		3.24E-13
Sn-109	M		4.82E-13
Sn-109	S		5.04E-13
Sn-110	F		1.16E-11
Sn-110	M		1.88E-11
Sn-110	S		1.96E-11
Sn-111	F		3.65E-13
Sn-111	M		7.11E-13
Sn-111	S		7.51E-13
Sn-113	F		6.45E-11
Sn-113	M		2.75E-10
Sn-113	S		3.98E-10
Sn-113m	F		1.14E-13
Sn-113m	M		2.89E-13
Sn-113m	S		3.19E-13
Sn-117m	F		3.68E-11
Sn-117m	M		2.41E-10
Sn-117m	S		2.77E-10
Sn-119m	F		3.37E-11
Sn-119m	M		2.15E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sn-119m	S		3.31E-10
Sn-121	F		9.37E-12
Sn-121	M		2.77E-11
Sn-121	S		2.99E-11
Sn-121m	F		7.34E-11
Sn-121m	M		4.18E-10
Sn-121m	S		1.17E-09
Sn-121m+D	S		1.19E-09
Sn-121m+E	S		1.19E-09
Sn-123	F		1.59E-10
Sn-123	M		8.23E-10
Sn-123	S		1.26E-09
Sn-123m	F		6.63E-13
Sn-123m	M		1.53E-12
Sn-123m	S		1.62E-12
Sn-125	F		1.50E-10
Sn-125	M		3.79E-10
Sn-125	S		4.22E-10
Sn-125m			0.00E+00
Sn-126	F		1.03E-09
Sn-126	M		2.70E-09
Sn-126	S		1.14E-08

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sn-126+D	S		1.15E-08
Sn-126+E	S		1.15E-08
Sn-127	F		5.41E-12
Sn-127	M		1.17E-11
Sn-127	S		1.25E-11
Sn-127m			0.00E+00
Sn-128	F		3.08E-12
Sn-128	M		6.26E-12
Sn-128	S		6.61E-12
Sn-129			0.00E+00
Sn-130			0.00E+00
Sn-130m			0.00E+00
Sr-79			0.00E+00
Sr-80	F		6.90E-12
Sr-80	M		1.40E-11
Sr-80	S		1.50E-11
Sr-81	F		9.20E-13
Sr-81	M		1.81E-12
Sr-81	S		1.93E-12
Sr-82	F		2.55E-10
Sr-82	M		1.01E-09
Sr-82	S		1.21E-09

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sr-82+D	S		1.21E-09
Sr-82+E	S		1.21E-09
Sr-83	F		1.39E-11
Sr-83	M		3.59E-11
Sr-83	S		4.02E-11
Sr-85	F		3.88E-11
Sr-85	M		6.80E-11
Sr-85	S		8.56E-11
Sr-85m	F		1.25E-13
Sr-85m	M		2.25E-13
Sr-85m	S		2.46E-13
Sr-87m	F		6.36E-13
Sr-87m	M		1.53E-12
Sr-87m	S		1.65E-12
Sr-89	F		1.08E-10
Sr-89	M		6.34E-10
Sr-89	S		8.18E-10
Sr-90	F		1.16E-09
Sr-90	M		2.84E-09
Sr-90	S		1.15E-08
Sr-90+D	S		1.17E-08
Sr-90+E	S		1.17E-08

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Sr-91	F		1.67E-11
Sr-91	M		4.65E-11
Sr-91	S		5.26E-11
Sr-92	F		1.09E-11
Sr-92	M		2.75E-11
Sr-92	S		3.02E-11
Sr-93			0.00E+00
Sr-94			0.00E+00
Ta-170			0.00E+00
Ta-172	F		8.87E-13
Ta-172	M		1.88E-12
Ta-172	S		2.04E-12
Ta-173	F		2.52E-12
Ta-173	M		6.88E-12
Ta-173	S		7.40E-12
Ta-174	F		1.24E-12
Ta-174	M		3.11E-12
Ta-174	S		3.32E-12
Ta-175	F		5.54E-12
Ta-175	M		1.21E-11
Ta-175	S		1.30E-11
Ta-176	F		6.77E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ta-176	M		1.48E-11
Ta-176	S		1.57E-11
Ta-177	F		3.48E-12
Ta-177	M		1.13E-11
Ta-177	S		1.22E-11
Ta-178			0.00E+00
Ta-178m	F		1.78E-12
Ta-178m	M		5.13E-12
Ta-178m	S		5.50E-12
Ta-179	F		1.01E-11
Ta-179	M		2.04E-11
Ta-179	S		4.82E-11
Ta-180	F		1.45E-12
Ta-180	M		4.78E-12
Ta-180	S		5.15E-12
Ta-182	F		2.03E-10
Ta-182	M		7.44E-10
Ta-182	S		1.00E-09
Ta-182m	F		4.11E-13
Ta-182m	M		8.98E-13
Ta-182m	S		9.70E-13
Ta-183	F		5.50E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Ta-183	M		2.22E-10
Ta-183	S		2.45E-10
Ta-184	F		1.66E-11
Ta-184	M		4.33E-11
Ta-184	S		4.63E-11
Ta-185	F		1.12E-12
Ta-185	M		3.08E-12
Ta-185	S		3.32E-12
Ta-186	F		4.54E-13
Ta-186	M		7.11E-13
Ta-186	S		7.39E-13
Tb-146			0.00E+00
Tb-147	F		2.73E-12
Tb-147	M		4.97E-12
Tb-147	S		5.25E-12
Tb-147m			0.00E+00
Tb-148	F		2.39E-12
Tb-148	M		3.80E-12
Tb-148	S		4.21E-12
Tb-148m			0.00E+00
Tb-149	F		3.46E-11
Tb-149	M		3.69E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tb-149	S		4.06E-10
Tb-149m			0.00E+00
Tb-150	F		4.78E-12
Tb-150	M		8.18E-12
Tb-150	S		8.55E-12
Tb-150m			0.00E+00
Tb-151	F		9.59E-12
Tb-151	M		2.17E-11
Tb-151	S		2.32E-11
Tb-151m			0.00E+00
Tb-152	F		1.91E-11
Tb-152	M		3.44E-11
Tb-152	S		3.61E-11
Tb-152m			0.00E+00
Tb-153	F		1.02E-11
Tb-153	M		2.37E-11
Tb-153	S		2.59E-11
Tb-154	F		1.57E-11
Tb-154	M		2.85E-11
Tb-154	S		3.00E-11
Tb-155	F		1.04E-11
Tb-155	M		3.12E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tb-155	S		3.41E-11
Tb-156	F		4.86E-11
Tb-156	M		1.08E-10
Tb-156	S		1.16E-10
Tb-156m	F		8.76E-12
Tb-156m	M		2.02E-11
Tb-156m	S		2.19E-11
Tb-156n	F		3.35E-12
Tb-156n	M		1.08E-11
Tb-156n	S		1.17E-11
Tb-157	F		1.00E-10
Tb-157	M		4.61E-11
Tb-157	S		4.79E-11
Tb-158	F		4.65E-09
Tb-158	M		2.24E-09
Tb-158	S		2.24E-09
Tb-160	F		3.08E-10
Tb-160	M		6.67E-10
Tb-160	S		8.16E-10
Tb-161	F		3.14E-11
Tb-161	M		1.39E-10
Tb-161	S		1.55E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tb-162			0.00E+00
Tb-163	F		3.67E-13
Tb-163	M		7.18E-13
Tb-163	S		7.57E-13
Tb-164			0.00E+00
Tb-165			0.00E+00
Tc-101	F		3.47E-13
Tc-101	M		4.97E-13
Tc-101	S		5.13E-13
Tc-102			0.00E+00
Tc-102m			0.00E+00
Tc-104	F		1.28E-12
Tc-104	M		1.47E-12
Tc-104	S		1.49E-12
Tc-105			0.00E+00
Tc-91			0.00E+00
Tc-91m			0.00E+00
Tc-92			0.00E+00
Tc-93	F		1.79E-12
Tc-93	M		2.52E-12
Tc-93	S		2.61E-12
Tc-93m	F		7.98E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tc-93m	M		1.10E-12
Tc-93m	S		1.14E-12
Tc-94	F		5.12E-12
Tc-94	M		7.50E-12
Tc-94	S		7.83E-12
Tc-94m	F		2.53E-12
Tc-94m	M		2.81E-12
Tc-94m	S		2.84E-12
Tc-95	F		5.01E-12
Tc-95	M		7.11E-12
Tc-95	S		7.44E-12
Tc-95m	F		2.19E-11
Tc-95m	M		9.31E-11
Tc-95m	S		1.25E-10
Tc-96	F		3.58E-11
Tc-96	M		5.41E-11
Tc-96	S		5.68E-11
Tc-96m	F		3.82E-13
Tc-96m	M		5.52E-13
Tc-96m	S		5.76E-13
Tc-97	F		3.17E-12
Tc-97	M		2.30E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tc-97	S		1.30E-10
Tc-97m	F		2.68E-11
Tc-97m	M		3.05E-10
Tc-97m	S		3.92E-10
Tc-98	F		7.89E-11
Tc-98	M		7.69E-10
Tc-98	S		3.19E-09
Tc-99	F		3.14E-11
Tc-99	M		3.81E-10
Tc-99	S		1.03E-09
Tc-99m	F		6.89E-13
Tc-99m	M		1.54E-12
Tc-99m	S		1.64E-12
Te-113			0.00E+00
Te-114	F		7.90E-13
Te-114	M		1.29E-12
Te-114	S		1.35E-12
Te-114	V		2.33E-12
Te-115			0.00E+00
Te-115m			0.00E+00
Te-116	F		4.41E-12
Te-116	M		1.00E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Te-116	S		1.08E-11
Te-116	V		8.59E-12
Te-117	F		9.07E-13
Te-117	M		1.82E-12
Te-117	S		1.94E-12
Te-117	V		2.02E-12
Te-118	F		1.21E-10
Te-118	M		3.05E-10
Te-118	S		3.40E-10
Te-118	V		2.48E-10
Te-118+D	V		3.40E-10
Te-118+E	V		3.40E-10
Te-119	F		4.36E-12
Te-119	M		7.97E-12
Te-119	S		8.70E-12
Te-119	V		8.37E-12
Te-119m	F		2.31E-11
Te-119m	M		4.43E-11
Te-119m	S		4.79E-11
Te-119m	V		5.42E-11
Te-121	F		1.99E-11
Te-121	M		3.78E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Te-121	S		4.20E-11
Te-121	V		5.31E-11
Te-121m	F		1.32E-10
Te-121m	M		3.95E-10
Te-121m	S		5.57E-10
Te-121m	V		3.89E-10
Te-123	F		2.74E-11
Te-123	M		1.45E-11
Te-123	S		1.63E-11
Te-123	V		8.32E-11
Te-123m	F		6.22E-11
Te-123m	M		3.67E-10
Te-123m	S		4.79E-10
Te-123m	V		1.74E-10
Te-125m	F		3.87E-11
Te-125m	M		3.16E-10
Te-125m	S		3.91E-10
Te-125m	V		1.01E-10
Te-127	F		5.11E-12
Te-127	M		1.65E-11
Te-127	S		1.83E-11
Te-127	V		9.30E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Te-127m	F		1.21E-10
Te-127m	M		7.00E-10
Te-127m	S		9.37E-10
Te-127m	V		3.30E-10
Te-129	F		1.06E-12
Te-129	M		2.69E-12
Te-129	S		2.88E-12
Te-129	V		3.07E-12
Te-129m	F		1.49E-10
Te-129m	M		6.68E-10
Te-129m	S		8.07E-10
Te-129m	V		3.66E-10
Te-131	F		2.25E-12
Te-131	M		1.72E-12
Te-131	S		1.60E-12
Te-131	V		6.62E-12
Te-131m	F		9.88E-11
Te-131m	M		1.12E-10
Te-131m	S		1.11E-10
Te-131m	V		2.58E-10
Te-132	F		2.16E-10
Te-132	M		2.53E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Te-132	S		2.56E-10
Te-132	V		5.68E-10
Te-133	F		2.05E-12
Te-133	M		1.31E-12
Te-133	S		1.20E-12
Te-133	V		5.84E-12
Te-133m	F		8.65E-12
Te-133m	M		6.32E-12
Te-133m	S		5.94E-12
Te-133m	V		2.29E-11
Te-134	F		2.74E-12
Te-134	M		4.09E-12
Te-134	S		4.25E-12
Te-134	V		7.96E-12
Th-223			0.00E+00
Th-224			0.00E+00
Th-226	F		1.10E-09
Th-226	M		3.86E-09
Th-226	S		4.16E-09
Th-227	F		1.63E-08
Th-227	M		7.60E-07
Th-227	S		9.46E-07

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Th-228	F		5.85E-07
Th-228	M		2.18E-06
Th-228	S		3.58E-06
Th-229	F		2.70E-06
Th-229	M		2.39E-06
Th-229	S		4.72E-06
Th-229+D	F		5.43E-06
Th-229+E	F		5.43E-06
Th-230	F		9.21E-07
Th-230	M		6.37E-07
Th-230	S		7.70E-07
Th-231	F		9.90E-12
Th-231	M		3.74E-11
Th-231	S		4.06E-11
Th-232	F		1.12E-06
Th-232	M		6.46E-07
Th-232	S		1.17E-06
Th-232+D	F		2.35E-06
Th-232+E	F		2.35E-06
Th-233	F		3.81E-13
Th-233	M		9.34E-13
Th-233	S		1.01E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Th-234	F		2.25E-10
Th-234	M		7.17E-10
Th-234	S		8.32E-10
Th-234+D	S		8.32E-10
Th-234+E	S		8.32E-10
Th-235			0.00E+00
Th-236	F		1.32E-12
Th-236	M		3.32E-12
Th-236	S		3.54E-12
Ti-44	F		5.46E-09
Ti-44	M		3.80E-09
Ti-44	S		9.30E-09
Ti-44+D	S		9.32E-09
Ti-44+E	S		9.32E-09
Ti-45	F		3.19E-12
Ti-45	M		7.83E-12
Ti-45	S		8.34E-12
Ti-51			0.00E+00
Ti-52			0.00E+00
Tl-190			0.00E+00
Tl-190m			0.00E+00
Tl-194	F		5.24E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tl-194	M		9.57E-13
Tl-194	S		1.01E-12
Tl-194m	F		6.58E-13
Tl-194m	M		1.27E-12
Tl-194m	S		1.34E-12
Tl-195	F		5.26E-13
Tl-195	M		1.27E-12
Tl-195	S		1.37E-12
Tl-196	F		1.01E-12
Tl-196	M		1.75E-12
Tl-196	S		1.83E-12
Tl-197	F		6.68E-13
Tl-197	M		2.52E-12
Tl-197	S		2.75E-12
Tl-198	F		2.15E-12
Tl-198	M		3.20E-12
Tl-198	S		3.32E-12
Tl-198m	F		1.33E-12
Tl-198m	M		3.44E-12
Tl-198m	S		3.67E-12
Tl-199	F		8.13E-13
Tl-199	M		3.15E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tl-199	S		3.41E-12
Tl-200	F		6.83E-12
Tl-200	M		1.06E-11
Tl-200	S		1.11E-11
Tl-201	F		4.12E-12
Tl-201	M		1.71E-11
Tl-201	S		1.88E-11
Tl-202	F		1.66E-11
Tl-202	M		3.36E-11
Tl-202	S		3.68E-11
Tl-204	F		6.60E-11
Tl-204	M		6.11E-10
Tl-204	S		1.63E-09
Tl-206			0.00E+00
Tl-206m			0.00E+00
Tl-207			0.00E+00
Tl-208			0.00E+00
Tl-209			0.00E+00
Tl-210			0.00E+00
Tm-161	F		7.38E-13
Tm-161	M		1.49E-12
Tm-161	S		1.57E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tm-162	F		5.33E-13
Tm-162	M		9.25E-13
Tm-162	S		9.68E-13
Tm-163	F		1.09E-12
Tm-163	M		2.27E-12
Tm-163	S		2.40E-12
Tm-164			0.00E+00
Tm-165	F		9.77E-12
Tm-165	M		2.24E-11
Tm-165	S		2.39E-11
Tm-166	F		6.48E-12
Tm-166	M		1.37E-11
Tm-166	S		1.45E-11
Tm-167	F		2.70E-11
Tm-167	M		1.23E-10
Tm-167	S		1.38E-10
Tm-168	F		2.91E-10
Tm-168	M		4.15E-10
Tm-168	S		5.00E-10
Tm-170	F		2.50E-10
Tm-170	M		6.45E-10
Tm-170	S		8.85E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Tm-171	F		8.50E-11
Tm-171	M		8.94E-11
Tm-171	S		1.17E-10
Tm-172	F		5.89E-11
Tm-172	M		1.53E-10
Tm-172	S		1.64E-10
Tm-173	F		8.54E-12
Tm-173	M		2.06E-11
Tm-173	S		2.19E-11
Tm-174			0.00E+00
Tm-175	F		4.28E-13
Tm-175	M		8.64E-13
Tm-175	S		9.15E-13
Tm-176			0.00E+00
U-227			0.00E+00
U-228			0.00E+00
U-230	F		1.46E-08
U-230	M		1.23E-06
U-230	S		1.48E-06
U-231	F		1.01E-11
U-231	M		5.08E-11
U-231	S		5.73E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
U-232	F		9.92E-08
U-232	M		5.26E-07
U-232	S		2.50E-06
U-233	F		1.74E-08
U-233	M		3.13E-07
U-233	S		7.65E-07
U-234	F		1.70E-08
U-234	M		3.08E-07
U-234	S		7.52E-07
U-235	F		1.59E-08
U-235	M		2.72E-07
U-235	S		6.76E-07
U-235+D	S		6.76E-07
U-235+E	S		6.76E-07
U-235m	F		5.04E-17
U-235m	M		5.05E-17
U-235m	S		5.05E-17
U-236	F		1.60E-08
U-236	M		2.81E-07
U-236	S		6.94E-07
U-237	F		2.38E-11
U-237	M		1.76E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
U-237	S		1.99E-10
U-238	F		1.54E-08
U-238	M		2.52E-07
U-238	S		6.39E-07
U-238+D	S		6.40E-07
U-238+E	S		6.40E-07
U-239	F		5.92E-13
U-239	M		1.54E-12
U-239	S		1.65E-12
U-240	F		3.02E-11
U-240	M		7.74E-11
U-240	S		8.35E-11
U-242	F		8.14E-13
U-242	M		1.33E-12
U-242	S		1.39E-12
V-47	F		9.10E-13
V-47	M		1.61E-12
V-47	S		1.69E-12
V-48	F		8.54E-11
V-48	M		2.50E-10
V-48	S		2.83E-10
V-49	F		1.96E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
V-49	M		3.93E-12
V-49	S		7.58E-12
V-50	F		2.57E-09
V-50	M		1.28E-09
V-50	S		1.83E-09
V-52			0.00E+00
V-53			0.00E+00
W-177	F		1.55E-12
W-177	M		3.07E-12
W-177	S		3.24E-12
W-178	F		1.19E-11
W-178	M		7.14E-11
W-178	S		8.37E-11
W-178+D	S		8.37E-11
W-178+E	S		8.37E-11
W-179	F		5.20E-14
W-179	M		7.65E-14
W-179	S		8.03E-14
W-179m			0.00E+00
W-181	F		4.14E-12
W-181	M		2.00E-11
W-181	S		3.06E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
W-185	F		2.54E-11
W-185	M		2.85E-10
W-185	S		3.69E-10
W-185m			0.00E+00
W-187	F		2.84E-11
W-187	M		5.00E-11
W-187	S		5.25E-11
W-188	F		1.25E-10
W-188	M		1.10E-09
W-188	S		1.51E-09
W-190	F		1.66E-12
W-190	M		3.66E-12
W-190	S		3.88E-12
Xe-120			0.00E+00
Xe-121			0.00E+00
Xe-122			0.00E+00
Xe-123			0.00E+00
Xe-125			0.00E+00
Xe-127			0.00E+00
Xe-127m			0.00E+00
Xe-129m			0.00E+00
Xe-131m			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Xe-133			0.00E+00
Xe-133m			0.00E+00
Xe-135			0.00E+00
Xe-135m			0.00E+00
Xe-137			0.00E+00
Xe-138			0.00E+00
Y-81			0.00E+00
Y-83			0.00E+00
Y-83m			0.00E+00
Y-84m	F		1.90E-12
Y-84m	M		3.26E-12
Y-84m	S		3.41E-12
Y-85	F		4.23E-12
Y-85	M		8.16E-12
Y-85	S		8.62E-12
Y-85m	F		9.75E-12
Y-85m	M		1.79E-11
Y-85m	S		1.88E-11
Y-86	F		2.37E-11
Y-86	M		4.00E-11
Y-86	S		4.18E-11
Y-86m	F		1.38E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Y-86m	M		2.36E-12
Y-86m	S		2.47E-12
Y-87	F		1.88E-11
Y-87	M		3.76E-11
Y-87	S		4.00E-11
Y-87m	F		6.91E-12
Y-87m	M		1.43E-11
Y-87m	S		1.52E-11
Y-88	F		5.51E-10
Y-88	M		4.06E-10
Y-88	S		4.61E-10
Y-89m			0.00E+00
Y-90	F		9.64E-11
Y-90	M		2.13E-10
Y-90	S		2.27E-10
Y-90m	F		5.71E-12
Y-90m	M		1.23E-11
Y-90m	S		1.30E-11
Y-91	F		2.45E-10
Y-91	M		7.16E-10
Y-91	S		9.08E-10
Y-91m	F		3.13E-13

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Y-91m	M		6.92E-13
Y-91m	S		8.17E-13
Y-92	F		1.26E-11
Y-92	M		2.40E-11
Y-92	S		2.52E-11
Y-93	F		3.59E-11
Y-93	M		6.83E-11
Y-93	S		7.18E-11
Y-94	F		8.70E-13
Y-94	M		1.44E-12
Y-94	S		1.51E-12
Y-95	F		4.68E-13
Y-95	M		7.02E-13
Y-95	S		7.37E-13
Yb-162	F		4.96E-13
Yb-162	M		9.82E-13
Yb-162	S		1.04E-12
Yb-163	F		2.46E-13
Yb-163	M		4.28E-13
Yb-163	S		4.48E-13
Yb-164	F		1.74E-12
Yb-164	M		3.28E-12

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Yb-164	S		3.45E-12
Yb-165			0.00E+00
Yb-166	F		3.17E-11
Yb-166	M		7.19E-11
Yb-166	S		7.69E-11
Yb-167	F		1.74E-13
Yb-167	M		4.38E-13
Yb-167	S		4.73E-13
Yb-169	F		6.22E-11
Yb-169	M		2.83E-10
Yb-169	S		3.36E-10
Yb-175	F		1.86E-11
Yb-175	M		7.28E-11
Yb-175	S		8.01E-11
Yb-177	F		2.30E-12
Yb-177	M		6.01E-12
Yb-177	S		6.46E-12
Yb-178	F		2.46E-12
Yb-178	M		5.96E-12
Yb-178	S		6.34E-12
Yb-179			0.00E+00
Zn-60			0.00E+00

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Zn-61			0.00E+00
Zn-62	F		2.40E-11
Zn-62	M		7.09E-11
Zn-62	S		7.88E-11
Zn-63	F		1.01E-12
Zn-63	M		2.07E-12
Zn-63	S		2.19E-12
Zn-65	F		2.04E-10
Zn-65	M		1.56E-10
Zn-65	S		2.01E-10
Zn-69	F		5.31E-13
Zn-69	M		1.63E-12
Zn-69	S		1.76E-12
Zn-69m	F		9.27E-12
Zn-69m	M		3.46E-11
Zn-69m	S		3.86E-11
Zn-71			0.00E+00
Zn-71m	F		5.21E-12
Zn-71m	M		1.45E-11
Zn-71m	S		1.58E-11
Zn-72	F		4.88E-11
Zn-72	M		1.50E-10

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Zn-72	S		1.66E-10
Zr-85			0.00E+00
Zr-86	F		2.18E-11
Zr-86	M		4.16E-11
Zr-86	S		4.38E-11
Zr-87	F		3.47E-12
Zr-87	M		7.67E-12
Zr-87	S		8.14E-12
Zr-88	F		2.62E-10
Zr-88	M		2.41E-10
Zr-88	S		3.63E-10
Zr-89	F		2.43E-11
Zr-89	M		5.18E-11
Zr-89	S		5.53E-11
Zr-89m			0.00E+00
Zr-93	F		3.95E-10
Zr-93	M		1.90E-10
Zr-93	S		1.59E-10
Zr-95	F		1.78E-10
Zr-95	M		4.51E-10
Zr-95	S		5.74E-10
Zr-97	F		5.56E-11

Continued on next page

Table 1.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	Risk (Bq ⁻¹)
Zr-97	M		1.30E-10
Zr-97	S		1.38E-10

2 Dose Coefficients and Slope Factors (Traditional units)

Dose rate coefficients and slope factors are presented in Traditional units. Brief descriptions are located before each table. Slopes and dose values for all nuclides found in ICRP 107 are listed as well as values for specific radionuclide chains. These are indicated by having the suffix +D or +E after the nuclide symbol.

2.1 Dose rate coefficients for external exposure

Explanation of Entries:

Table 2.1 contains the dose rate coefficients used for external exposure. This includes submersion in air, immersion in water, and ground exposure to various thicknesses of soil contamination. The relevant densities used are: 1000 kg m⁻³ for water, 1.2 kg m⁻³ for air, and 1.6 x 10³ kg m⁻³ for soil.

Air submersion is shown in column two and is given in mrem per pCi yr cm⁻³. To derive coefficients for an air density other than 1.2 kg m⁻³, multiply coefficients by (1.2/ρ), where ρ is the air density in kg m⁻³.

Water immersion is shown in column three and is given in mrem per pCi yr g⁻¹. To derive coefficients for a water density other than 1 x 10³ kg m⁻³, multiply coefficients by (1x10³/ρ), where ρ is the water density in kg m⁻³.

External exposure to a contamination ground plane is shown in column four and is given in mrem per pCi yr cm⁻². Note that this is per area instead of per volume as the contamination is restricted to the surface of the soil. The ground plane dose rate coefficients are valid for any soil density.

External exposure to soil contamination of thicknesses one, five, and fifteen centimeters is shown in columns five, six and seven respectively and is given in mrem per pCi yr g⁻¹. Radionuclide dose coefficients for soil contaminated to a finite depth cannot be scaled to account for a different soil density.

External exposure to soil contaminated to an infinite depth is shown in column eight and is given in mrem per pCi yr g⁻¹. To derive coefficients for a soil density other than 1.6 x 10³ kg m⁻³, multiply coefficients by (1.6x10³/ρ), where ρ is the soil density in kg m⁻³.

*Note that skin is not included in the effective dose summation.

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Ac-223	1.36E+02	2.99E-01	1.89E-02	1.87E-02	5.12E-02	7.36E-02	7.77E-02
Ac-223+D	1.66E+02	3.64E-01	2.30E-02	2.28E-02	6.30E-02	9.13E-02	9.68E-02
Ac-223+E	1.66E+02	3.64E-01	2.30E-02	2.28E-02	6.30E-02	9.13E-02	9.68E-02
Ac-224	1.74E+03	3.85E+00	2.40E-01	2.39E-01	6.43E-01	8.82E-01	9.04E-01
Ac-225	1.06E+02	2.35E-01	1.54E-02	1.46E-02	3.81E-02	5.14E-02	5.29E-02
Ac-225+D	3.42E+02	7.53E-01	4.71E-02	4.69E-02	1.28E-01	1.81E-01	1.87E-01
Ac-225+E	3.42E+02	7.53E-01	4.71E-02	4.69E-02	1.28E-01	1.81E-01	1.87E-01
Ac-226	1.06E+03	2.30E+00	1.60E-01	1.43E-01	3.94E-01	5.59E-01	5.79E-01
Ac-227	6.82E-01	1.54E-03	2.77E-04	9.41E-05	2.04E-04	2.58E-04	2.62E-04
Ac-228	7.49E+03	1.62E+01	9.81E-01	9.62E-01	2.76E+00	4.35E+00	5.04E+00
Ac-230	4.97E+03	1.06E+01	6.91E-01	6.13E-01	1.74E+00	2.82E+00	3.38E+00
Ac-231	3.44E+03	7.43E+00	5.24E-01	4.69E-01	1.30E+00	1.91E+00	2.00E+00
Ac-232	1.06E+04	2.28E+01	1.33E+00	1.27E+00	3.66E+00	5.96E+00	7.29E+00
Ac-233	4.28E+03	9.19E+00	6.71E-01	5.85E-01	1.64E+00	2.52E+00	2.78E+00
Ag-100m	2.48E+04	5.36E+01	3.28E+00	3.21E+00	9.15E+00	1.45E+01	1.68E+01
Ag-101	1.34E+04	2.91E+01	1.84E+00	1.78E+00	5.06E+00	7.86E+00	8.89E+00
Ag-102	2.99E+04	6.48E+01	3.79E+00	3.79E+00	1.09E+01	1.74E+01	2.04E+01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Ag-102m	1.82E+04	3.92E+01	2.12E+00	2.15E+00	6.24E+00	1.02E+01	1.25E+01
Ag-103	7.08E+03	1.54E+01	9.41E-01	9.30E-01	2.65E+00	4.09E+00	4.63E+00
Ag-104	2.32E+04	5.04E+01	2.97E+00	3.01E+00	8.65E+00	1.37E+01	1.58E+01
Ag-104m	1.58E+04	3.42E+01	2.03E+00	2.02E+00	5.75E+00	9.13E+00	1.06E+01
Ag-105	4.13E+03	8.99E+00	5.59E-01	5.60E-01	1.59E+00	2.41E+00	2.65E+00
Ag-105m	8.26E+00	1.80E-02	1.12E-03	1.12E-03	3.18E-03	4.84E-03	5.27E-03
Ag-106	5.85E+03	1.26E+01	8.51E-01	7.98E-01	2.26E+00	3.47E+00	3.83E+00
Ag-106m	2.41E+04	5.21E+01	3.07E+00	3.12E+00	8.97E+00	1.42E+01	1.63E+01
Ag-108	2.37E+02	4.33E-01	1.05E-01	3.04E-02	7.23E-02	1.07E-01	1.18E-01
Ag-108m	1.35E+04	2.93E+01	1.80E+00	1.82E+00	5.19E+00	8.05E+00	8.99E+00
Ag-108m+D	1.35E+04	2.93E+01	1.81E+00	1.82E+00	5.19E+00	8.05E+00	9.00E+00
Ag-108m+E	1.35E+04	2.93E+01	1.81E+00	1.82E+00	5.19E+00	8.05E+00	9.00E+00
Ag-109m	2.95E+01	6.65E-02	8.66E-03	4.13E-03	8.56E-03	1.02E-02	1.02E-02
Ag-110	4.60E+02	8.18E-01	1.91E-01	7.01E-02	1.49E-01	2.15E-01	2.37E-01
Ag-110m	2.39E+04	5.17E+01	3.03E+00	3.08E+00	8.87E+00	1.41E+01	1.63E+01
Ag-110m+D	2.39E+04	5.17E+01	3.03E+00	3.08E+00	8.87E+00	1.41E+01	1.63E+01
Ag-110m+E	2.39E+04	5.17E+01	3.03E+00	3.08E+00	8.87E+00	1.41E+01	1.63E+01
Ag-111	2.60E+02	5.23E-01	6.18E-02	3.21E-02	8.84E-02	1.32E-01	1.40E-01
Ag-111m	3.14E+01	6.93E-02	6.77E-03	4.32E-03	1.11E-02	1.62E-02	1.74E-02
Ag-112	6.33E+03	1.35E+01	9.02E-01	8.07E-01	2.26E+00	3.61E+00	4.26E+00
Ag-113	7.15E+02	1.45E+00	1.86E-01	9.64E-02	2.52E-01	3.77E-01	4.13E-01
Ag-113m	1.78E+03	3.87E+00	2.61E-01	2.43E-01	6.86E-01	1.04E+00	1.13E+00
Ag-114	2.73E+03	5.55E+00	5.04E-01	3.74E-01	9.62E-01	1.49E+00	1.74E+00
Ag-115	4.48E+03	9.56E+00	6.48E-01	5.57E-01	1.57E+00	2.50E+00	2.99E+00
Ag-116	2.00E+04	4.28E+01	2.42E+00	2.37E+00	6.82E+00	1.11E+01	1.37E+01
Ag-117	1.21E+04	2.62E+01	1.50E+00	1.43E+00	4.11E+00	6.71E+00	8.29E+00
Ag-99	2.02E+04	4.35E+01	2.67E+00	2.60E+00	7.43E+00	1.17E+01	1.35E+01
Al-26	2.39E+04	5.19E+01	2.89E+00	2.91E+00	8.46E+00	1.37E+01	1.65E+01
Al-28	1.66E+04	3.57E+01	2.00E+00	1.94E+00	5.62E+00	9.30E+00	1.16E+01
Al-29	1.25E+04	2.69E+01	1.60E+00	1.53E+00	4.41E+00	7.15E+00	8.65E+00
Am-237	2.90E+03	6.37E+00	3.95E-01	3.96E-01	1.10E+00	1.61E+00	1.71E+00
Am-238	7.64E+03	1.66E+01	9.75E-01	9.86E-01	2.82E+00	4.41E+00	5.08E+00
Am-239	1.75E+03	3.87E+00	2.44E-01	2.41E-01	6.41E-01	8.72E-01	8.93E-01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Am-240	8.76E+03	1.91E+01	1.12E+00	1.13E+00	3.23E+00	5.10E+00	5.87E+00
Am-241	1.26E+02	2.88E-01	2.55E-02	1.83E-02	3.46E-02	3.72E-02	3.72E-02
Am-242	1.14E+02	2.37E-01	1.88E-02	1.40E-02	3.51E-02	4.48E-02	4.50E-02
Am-242m	3.70E+00	8.46E-03	2.42E-03	5.14E-04	8.82E-04	1.05E-03	1.06E-03
Am-242m+D	1.40E+02	2.93E-01	2.41E-02	1.73E-02	4.43E-02	5.90E-02	6.15E-02
Am-242m+E	1.40E+02	2.93E-01	2.41E-02	1.73E-02	4.43E-02	5.90E-02	6.15E-02
Am-243	3.59E+02	8.11E-01	5.80E-02	5.08E-02	1.12E-01	1.29E-01	1.29E-01
Am-243+D	1.73E+03	3.83E+00	2.48E-01	2.37E-01	6.18E-01	8.31E-01	8.54E-01
Am-243+E	1.73E+03	3.83E+00	2.48E-01	2.37E-01	6.18E-01	8.31E-01	8.54E-01
Am-244	6.69E+03	1.45E+01	8.83E-01	8.82E-01	2.52E+00	3.94E+00	4.48E+00
Am-244m	1.94E+02	3.53E-01	8.19E-02	2.26E-02	5.49E-02	8.31E-02	9.49E-02
Am-245	2.71E+02	5.66E-01	4.79E-02	3.42E-02	9.21E-02	1.29E-01	1.33E-01
Am-246	6.11E+03	1.32E+01	8.51E-01	8.14E-01	2.30E+00	3.55E+00	3.94E+00
Am-246m	8.54E+03	1.84E+01	1.12E+00	1.09E+00	3.14E+00	4.99E+00	5.79E+00
Am-247	1.09E+03	2.34E+00	1.98E-01	1.46E-01	3.94E-01	5.57E-01	5.79E-01
Ar-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-39	2.15E+01	2.39E-02	2.95E-03	2.95E-04	6.31E-04	7.94E-04	8.05E-04
Ar-41	1.15E+04	2.48E+01	1.43E+00	1.41E+00	4.09E+00	6.63E+00	7.94E+00
Ar-42	2.35E+01	2.63E-02	4.77E-03	3.70E-04	7.60E-04	9.53E-04	9.68E-04
Ar-42+D	2.80E+03	5.83E+00	4.72E-01	3.51E-01	9.53E-01	1.54E+00	1.86E+00
Ar-42+E	2.80E+03	5.83E+00	4.72E-01	3.51E-01	9.53E-01	1.54E+00	1.86E+00
Ar-43	1.41E+04	3.03E+01	1.78E+00	1.71E+00	4.91E+00	7.98E+00	9.69E+00
Ar-44	1.77E+04	3.81E+01	2.08E+00	2.09E+00	6.09E+00	9.96E+00	1.22E+01
As-68	3.29E+04	7.10E+01	4.22E+00	4.18E+00	1.20E+01	1.91E+01	2.24E+01
As-69	9.81E+03	2.11E+01	1.43E+00	1.33E+00	3.74E+00	5.75E+00	6.41E+00
As-70	3.74E+04	8.07E+01	4.72E+00	4.73E+00	1.36E+01	2.17E+01	2.54E+01
As-71	4.76E+03	1.04E+01	6.36E-01	6.43E-01	1.82E+00	2.76E+00	3.03E+00
As-72	1.53E+04	3.31E+01	2.10E+00	2.04E+00	5.77E+00	9.04E+00	1.02E+01
As-73	2.88E+01	6.63E-02	6.01E-03	4.30E-03	7.49E-03	7.81E-03	7.81E-03
As-74	6.35E+03	1.38E+01	8.72E-01	8.59E-01	2.45E+00	3.79E+00	4.22E+00
As-76	3.74E+03	7.94E+00	6.00E-01	4.99E-01	1.38E+00	2.17E+00	2.45E+00
As-77	9.08E+01	1.74E-01	1.55E-02	9.73E-03	2.73E-02	4.02E-02	4.30E-02
As-78	1.17E+04	2.52E+01	1.55E+00	1.48E+00	4.22E+00	6.76E+00	7.96E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
As-79	4.20E+02	7.85E-01	1.61E-01	5.87E-02	1.37E-01	2.02E-01	2.22E-01
At-204	1.94E+04	4.22E+01	2.63E+00	2.63E+00	7.47E+00	1.15E+01	1.28E+01
At-205	9.75E+03	2.11E+01	1.27E+00	1.27E+00	3.61E+00	5.62E+00	6.46E+00
At-206	2.09E+04	4.56E+01	2.76E+00	2.78E+00	7.92E+00	1.23E+01	1.39E+01
At-207	1.74E+04	3.79E+01	2.16E+00	2.20E+00	6.33E+00	1.00E+01	1.18E+01
At-208	2.62E+04	5.66E+01	3.31E+00	3.36E+00	9.64E+00	1.52E+01	1.75E+01
At-209	1.92E+04	4.18E+01	2.51E+00	2.54E+00	7.23E+00	1.13E+01	1.28E+01
At-210	2.62E+04	5.66E+01	3.16E+00	3.23E+00	9.32E+00	1.50E+01	1.78E+01
At-211	2.37E+02	5.34E-01	3.58E-02	3.33E-02	7.81E-02	9.49E-02	9.60E-02
At-211+D	2.78E+02	6.22E-01	4.10E-02	3.87E-02	9.34E-02	1.19E-01	1.23E-01
At-211+E	2.78E+02	6.22E-01	4.10E-02	3.87E-02	9.34E-02	1.19E-01	1.23E-01
At-215	1.41E+00	3.06E-03	1.91E-04	1.92E-04	5.47E-04	8.26E-04	8.95E-04
At-216	1.78E+01	3.96E-02	2.56E-03	2.47E-03	6.20E-03	8.11E-03	8.31E-03
At-217	1.98E+00	4.32E-03	2.65E-04	2.69E-04	7.51E-04	1.11E-03	1.19E-03
At-218	1.83E-01	2.34E-04	1.46E-04	3.16E-05	4.43E-05	5.34E-05	5.57E-05
At-219	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-220	3.90E+03	8.33E+00	6.41E-01	5.40E-01	1.48E+00	2.20E+00	2.37E+00
Au-186	1.28E+04	2.78E+01	1.75E+00	1.70E+00	4.80E+00	7.42E+00	8.37E+00
Au-187	9.27E+03	2.02E+01	1.14E+00	1.15E+00	3.29E+00	5.25E+00	6.22E+00
Au-190	2.17E+04	4.69E+01	2.47E+00	2.54E+00	7.36E+00	1.20E+01	1.47E+01
Au-191	4.76E+03	1.04E+01	6.48E-01	6.48E-01	1.80E+00	2.69E+00	2.95E+00
Au-192	1.74E+04	3.77E+01	2.02E+00	2.07E+00	6.01E+00	9.73E+00	1.18E+01
Au-193	1.20E+03	2.65E+00	1.74E-01	1.66E-01	4.22E-01	5.73E-01	5.98E-01
Au-193m	1.56E+03	3.42E+00	2.10E-01	2.15E-01	6.00E-01	8.72E-01	9.13E-01
Au-194	8.99E+03	1.96E+01	1.10E+00	1.13E+00	3.21E+00	5.10E+00	5.98E+00
Au-195	5.04E+02	1.14E+00	8.10E-02	7.15E-02	1.56E-01	1.79E-01	1.79E-01
Au-195m	1.59E+03	3.49E+00	2.15E-01	2.19E-01	6.09E-01	8.87E-01	9.32E-01
Au-196	3.77E+03	8.26E+00	5.18E-01	5.21E-01	1.45E+00	2.15E+00	2.30E+00
Au-196m	1.81E+03	4.00E+00	2.53E-01	2.48E-01	6.52E-01	8.87E-01	9.10E-01
Au-198	3.36E+03	7.29E+00	4.73E-01	4.58E-01	1.30E+00	1.98E+00	2.15E+00
Au-198m	4.13E+03	9.10E+00	5.63E-01	5.66E-01	1.54E+00	2.15E+00	2.22E+00
Au-199	7.42E+02	1.63E+00	1.01E-01	1.01E-01	2.73E-01	3.75E-01	3.83E-01
Au-200	2.48E+03	5.31E+00	3.94E-01	3.19E-01	8.95E-01	1.41E+00	1.64E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Au-200m	1.65E+04	3.59E+01	2.20E+00	2.22E+00	6.35E+00	9.73E+00	1.07E+01
Au-201	3.34E+02	6.76E-01	8.55E-02	4.22E-02	1.14E-01	1.72E-01	1.89E-01
Au-202	1.66E+03	3.46E+00	3.28E-01	2.22E-01	5.94E-01	9.23E-01	1.06E+00
Ba-124	4.69E+03	1.02E+01	6.46E-01	6.24E-01	1.77E+00	2.73E+00	3.06E+00
Ba-126	4.78E+03	1.04E+01	6.31E-01	6.28E-01	1.79E+00	2.78E+00	3.14E+00
Ba-127	6.13E+03	1.32E+01	8.81E-01	8.20E-01	2.32E+00	3.57E+00	4.00E+00
Ba-128	3.96E+02	8.72E-01	6.85E-02	5.53E-02	1.43E-01	2.07E-01	2.19E-01
Ba-129	2.69E+03	5.85E+00	3.78E-01	3.57E-01	1.01E+00	1.55E+00	1.74E+00
Ba-129m	1.34E+04	2.91E+01	1.72E+00	1.74E+00	4.97E+00	7.83E+00	9.00E+00
Ba-131	3.74E+03	8.14E+00	5.20E-01	5.10E-01	1.43E+00	2.15E+00	2.34E+00
Ba-131m	4.95E+02	1.11E+00	7.87E-02	6.91E-02	1.69E-01	2.17E-01	2.17E-01
Ba-133	3.03E+03	6.65E+00	4.36E-01	4.18E-01	1.15E+00	1.71E+00	1.82E+00
Ba-133m	4.65E+02	1.00E+00	7.11E-02	6.18E-02	1.65E-01	2.41E-01	2.54E-01
Ba-135m	4.03E+02	8.69E-01	6.29E-02	5.36E-02	1.42E-01	2.05E-01	2.17E-01
Ba-137m	5.02E+03	1.09E+01	6.75E-01	6.72E-01	1.92E+00	3.01E+00	3.38E+00
Ba-139	4.99E+02	9.66E-01	1.74E-01	7.01E-02	1.64E-01	2.26E-01	2.35E-01
Ba-140	1.51E+03	3.25E+00	2.23E-01	2.04E-01	5.72E-01	8.74E-01	9.58E-01
Ba-141	8.07E+03	1.74E+01	1.13E+00	1.05E+00	2.97E+00	4.63E+00	5.27E+00
Ba-142	9.04E+03	1.96E+01	1.18E+00	1.16E+00	3.33E+00	5.25E+00	6.05E+00
Be-10	2.60E+01	2.90E-02	4.02E-03	3.70E-04	7.94E-04	9.99E-04	1.01E-03
Be-7	4.13E+02	8.99E-01	5.56E-02	5.66E-02	1.61E-01	2.47E-01	2.71E-01
Bi-197	1.47E+04	3.18E+01	1.87E+00	1.89E+00	5.36E+00	8.50E+00	9.88E+00
Bi-200	2.05E+04	4.46E+01	2.70E+00	2.73E+00	7.73E+00	1.20E+01	1.35E+01
Bi-201	1.51E+04	3.29E+01	1.85E+00	1.89E+00	5.42E+00	8.69E+00	1.03E+01
Bi-202	2.35E+04	5.12E+01	3.02E+00	3.06E+00	8.76E+00	1.38E+01	1.58E+01
Bi-203	2.11E+04	4.56E+01	2.54E+00	2.60E+00	7.49E+00	1.20E+01	1.44E+01
Bi-204	2.52E+04	5.45E+01	3.17E+00	3.23E+00	9.25E+00	1.46E+01	1.70E+01
Bi-205	1.49E+04	3.23E+01	1.79E+00	1.84E+00	5.29E+00	8.52E+00	1.02E+01
Bi-206	2.82E+04	6.13E+01	3.57E+00	3.62E+00	1.04E+01	1.64E+01	1.91E+01
Bi-207	1.31E+04	2.86E+01	1.70E+00	1.70E+00	4.86E+00	7.66E+00	8.82E+00
Bi-208	2.52E+04	5.47E+01	2.58E+00	2.73E+00	8.01E+00	1.36E+01	1.77E+01
Bi-210	4.82E+01	5.57E-02	4.10E-02	3.14E-03	4.54E-03	5.36E-03	5.47E-03
Bi-210m	2.13E+03	4.65E+00	2.85E-01	2.91E-01	8.22E-01	1.22E+00	1.30E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Bi-210m+D	2.20E+03	4.74E+00	3.57E-01	2.99E-01	8.33E-01	1.23E+00	1.31E+00
Bi-210m+E	2.20E+03	4.74E+00	3.57E-01	2.99E-01	8.33E-01	1.23E+00	1.31E+00
Bi-211	3.87E+02	8.42E-01	5.20E-02	5.31E-02	1.50E-01	2.24E-01	2.41E-01
Bi-212	9.66E+02	2.02E+00	1.80E-01	1.25E-01	3.44E-01	5.40E-01	6.26E-01
Bi-212+D	9.66E+02	2.02E+00	1.80E-01	1.25E-01	3.44E-01	5.40E-01	6.26E-01
Bi-212+E	9.66E+02	2.02E+00	1.80E-01	1.25E-01	3.44E-01	5.40E-01	6.26E-01
Bi-212n	7.27E+01	8.61E-02	7.05E-02	7.36E-03	1.01E-02	1.19E-02	1.22E-02
Bi-213	1.11E+03	2.35E+00	1.92E-01	1.49E-01	4.15E-01	6.30E-01	6.87E-01
Bi-213+D	1.11E+03	2.35E+00	1.92E-01	1.49E-01	4.15E-01	6.30E-01	6.87E-01
Bi-213+E	1.11E+03	2.35E+00	1.92E-01	1.49E-01	4.15E-01	6.30E-01	6.87E-01
Bi-214	1.33E+04	2.88E+01	1.66E+00	1.63E+00	4.71E+00	7.62E+00	9.13E+00
Bi-214+D	1.33E+04	2.88E+01	1.66E+00	1.63E+00	4.71E+00	7.62E+00	9.13E+00
Bi-214+E	1.33E+04	2.88E+01	1.66E+00	1.63E+00	4.71E+00	7.62E+00	9.13E+00
Bi-215	2.20E+03	4.71E+00	3.59E-01	2.91E-01	8.11E-01	1.23E+00	1.37E+00
Bi-215+D	2.20E+03	4.71E+00	3.59E-01	2.91E-01	8.11E-01	1.23E+00	1.37E+00
Bi-215+E	2.20E+03	4.71E+00	3.59E-01	2.91E-01	8.11E-01	1.23E+00	1.37E+00
Bi-216	6.37E+03	1.37E+01	9.89E-01	8.80E-01	2.45E+00	3.74E+00	4.13E+00
Bk-245	1.74E+03	3.83E+00	2.41E-01	2.37E-01	6.41E-01	8.80E-01	9.04E-01
Bk-246	7.14E+03	1.55E+01	9.27E-01	9.34E-01	2.65E+00	4.15E+00	4.74E+00
Bk-247	1.12E+03	2.47E+00	1.54E-01	1.54E-01	4.13E-01	5.72E-01	5.92E-01
Bk-248m	4.26E+02	9.17E-01	6.72E-02	5.64E-02	1.53E-01	2.20E-01	2.35E-01
Bk-249	8.16E-02	1.01E-04	6.63E-06	2.84E-06	5.10E-06	6.16E-06	6.35E-06
Bk-250	7.81E+03	1.69E+01	9.96E-01	9.98E-01	2.88E+00	4.58E+00	5.32E+00
Bk-251	6.65E+02	1.44E+00	1.10E-01	8.80E-02	2.30E-01	3.06E-01	3.10E-01
Br-72	2.63E+04	5.66E+01	3.50E+00	3.42E+00	9.69E+00	1.53E+01	1.77E+01
Br-73	1.22E+04	2.63E+01	1.77E+00	1.66E+00	4.65E+00	7.15E+00	7.94E+00
Br-74	4.30E+04	9.30E+01	4.79E+00	4.89E+00	1.42E+01	2.35E+01	2.95E+01
Br-74m	3.74E+04	8.09E+01	4.50E+00	4.54E+00	1.31E+01	2.11E+01	2.54E+01
Br-75	1.00E+04	2.17E+01	1.40E+00	1.36E+00	3.87E+00	5.92E+00	6.48E+00
Br-76	2.50E+04	5.44E+01	3.02E+00	3.04E+00	8.82E+00	1.43E+01	1.71E+01
Br-76m	1.80E+02	4.09E-01	3.78E-02	2.63E-02	5.21E-02	6.52E-02	6.93E-02
Br-77	2.62E+03	5.70E+00	3.50E-01	3.55E-01	1.01E+00	1.54E+00	1.69E+00
Br-77m	1.11E+02	2.47E-01	1.60E-02	1.52E-02	3.89E-02	4.97E-02	4.99E-02

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Br-78	8.76E+03	1.89E+01	1.30E+00	1.20E+00	3.38E+00	5.19E+00	5.73E+00
Br-80	7.43E+02	1.51E+00	1.87E-01	1.01E-01	2.65E-01	4.05E-01	4.48E-01
Br-80m	4.45E+01	1.04E-01	1.61E-02	6.91E-03	8.91E-03	8.95E-03	8.95E-03
Br-82	2.28E+04	4.93E+01	2.90E+00	2.95E+00	8.48E+00	1.34E+01	1.54E+01
Br-82m	2.97E+01	5.96E-02	7.80E-03	4.15E-03	1.03E-02	1.57E-02	1.79E-02
Br-83	9.53E+01	1.68E-01	3.37E-02	9.45E-03	2.48E-02	3.74E-02	4.11E-02
Br-84	1.66E+04	3.59E+01	1.93E+00	1.91E+00	5.51E+00	9.12E+00	1.15E+01
Br-84m	2.45E+04	5.29E+01	3.11E+00	3.08E+00	8.87E+00	1.42E+01	1.67E+01
Br-85	7.43E+02	1.46E+00	2.14E-01	1.02E-01	2.50E-01	3.85E-01	4.43E-01
C-10	1.48E+04	3.19E+01	2.06E+00	2.00E+00	5.66E+00	8.78E+00	9.79E+00
C-11	8.52E+03	1.85E+01	1.17E+00	1.16E+00	3.31E+00	5.08E+00	5.60E+00
C-14	4.86E-01	5.40E-04	1.50E-05	6.48E-06	1.03E-05	1.11E-05	1.11E-05
Ca-41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ca-45	2.84E+00	3.10E-03	4.42E-05	2.48E-05	4.69E-05	5.34E-05	5.34E-05
Ca-47	9.38E+03	2.02E+01	1.16E+00	1.16E+00	3.36E+00	5.42E+00	6.46E+00
Ca-49	3.12E+04	6.74E+01	3.12E+00	3.21E+00	9.49E+00	1.63E+01	2.17E+01
Cd-101	2.19E+04	4.73E+01	2.79E+00	2.75E+00	7.90E+00	1.26E+01	1.48E+01
Cd-102	6.97E+03	1.51E+01	9.25E-01	9.27E-01	2.63E+00	4.11E+00	4.61E+00
Cd-103	1.87E+04	4.05E+01	2.23E+00	2.26E+00	6.56E+00	1.06E+01	1.29E+01
Cd-104	1.89E+03	4.13E+00	2.68E-01	2.56E-01	7.04E-01	1.06E+00	1.18E+00
Cd-105	1.15E+04	2.48E+01	1.40E+00	1.41E+00	4.09E+00	6.59E+00	7.85E+00
Cd-107	9.15E+01	2.04E-01	2.67E-02	1.27E-02	2.88E-02	3.96E-02	4.24E-02
Cd-109	4.24E+01	9.71E-02	1.93E-02	6.07E-03	1.05E-02	1.22E-02	1.22E-02
Cd-111m	2.24E+03	4.93E+00	3.04E-01	3.06E-01	8.65E-01	1.26E+00	1.31E+00
Cd-113	4.65E+00	5.08E-03	6.71E-05	4.11E-05	8.18E-05	9.60E-05	9.64E-05
Cd-113m	1.73E+01	1.98E-02	2.08E-03	2.91E-04	6.65E-04	8.74E-04	8.99E-04
Cd-115	1.63E+03	3.51E+00	2.42E-01	2.20E-01	6.22E-01	9.56E-01	1.05E+00
Cd-115m	3.72E+02	7.23E-01	1.19E-01	4.61E-02	1.19E-01	1.84E-01	2.13E-01
Cd-117	9.55E+03	2.05E+01	1.20E+00	1.19E+00	3.44E+00	5.49E+00	6.48E+00
Cd-117m	1.85E+04	4.00E+01	2.15E+00	2.22E+00	6.44E+00	1.05E+01	1.28E+01
Cd-118	1.35E+01	1.50E-02	6.78E-04	1.52E-04	3.31E-04	4.11E-04	4.17E-04
Cd-119	1.49E+04	3.21E+01	1.82E+00	1.79E+00	5.17E+00	8.42E+00	1.02E+01
Cd-119m	2.07E+04	4.50E+01	2.51E+00	2.50E+00	7.29E+00	1.19E+01	1.44E+01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Ce-130	4.00E+03	8.70E+00	5.44E-01	5.31E-01	1.49E+00	2.26E+00	2.52E+00
Ce-131	1.39E+04	3.01E+01	1.85E+00	1.81E+00	5.17E+00	8.09E+00	9.23E+00
Ce-132	2.04E+03	4.48E+00	2.91E-01	2.80E-01	7.68E-01	1.11E+00	1.15E+00
Ce-133	4.26E+03	9.27E+00	6.42E-01	5.85E-01	1.61E+00	2.41E+00	2.65E+00
Ce-133m	1.49E+04	3.23E+01	1.88E+00	1.89E+00	5.42E+00	8.59E+00	9.99E+00
Ce-134	7.85E+01	1.82E-01	2.69E-02	1.21E-02	1.73E-02	1.94E-02	1.96E-02
Ce-135	6.74E+03	1.47E+01	9.06E-01	9.06E-01	2.56E+00	3.94E+00	4.37E+00
Ce-137	1.58E+02	3.55E-01	3.80E-02	2.30E-02	4.82E-02	6.72E-02	7.25E-02
Ce-137m	3.62E+02	7.81E-01	5.81E-02	4.80E-02	1.23E-01	1.78E-01	1.89E-01
Ce-139	1.12E+03	2.47E+00	1.67E-01	1.54E-01	4.09E-01	5.66E-01	5.79E-01
Ce-141	5.85E+02	1.28E+00	8.15E-02	7.90E-02	2.11E-01	2.88E-01	2.91E-01
Ce-143	2.22E+03	4.82E+00	3.50E-01	3.01E-01	8.31E-01	1.25E+00	1.36E+00
Ce-144	1.37E+02	3.01E-01	2.02E-02	1.86E-02	4.73E-02	6.26E-02	6.31E-02
Ce-144+D	6.07E+02	1.13E+00	2.08E-01	8.69E-02	1.91E-01	2.75E-01	3.10E-01
Ce-144+E	6.07E+02	1.13E+00	2.08E-01	8.69E-02	1.91E-01	2.75E-01	3.10E-01
Ce-145	6.80E+03	1.47E+01	9.82E-01	9.00E-01	2.54E+00	3.94E+00	4.46E+00
Cf-244	8.07E-01	1.89E-03	8.91E-04	1.13E-04	1.14E-04	1.14E-04	1.14E-04
Cf-246	9.15E-01	2.09E-03	6.60E-04	1.23E-04	2.02E-04	2.62E-04	2.88E-04
Cf-247	6.69E+02	1.49E+00	9.88E-02	9.21E-02	2.41E-01	3.19E-01	3.23E-01
Cf-248	3.74E+00	8.22E-03	1.11E-03	4.65E-04	1.15E-03	1.79E-03	2.15E-03
Cf-249	2.67E+03	5.81E+00	3.60E-01	3.66E-01	1.04E+00	1.57E+00	1.69E+00
Cf-250	9.00E+01	1.94E-01	1.14E-02	1.08E-02	3.10E-02	5.02E-02	6.11E-02
Cf-251	9.04E+02	2.00E+00	1.25E-01	1.23E-01	3.31E-01	4.52E-01	4.61E-01
Cf-252	4.17E+03	8.99E+00	5.05E-01	4.99E-01	1.44E+00	2.34E+00	2.84E+00
Cf-253	5.88E+00	1.05E-02	2.48E-03	5.10E-04	6.18E-04	6.28E-04	6.28E-04
Cf-254	1.54E+05	3.33E+02	1.87E+01	1.85E+01	5.31E+01	8.61E+01	1.05E+02
Cf-255	2.17E+01	2.43E-02	6.76E-03	4.41E-04	8.26E-04	1.02E-03	1.03E-03
Cl-34	8.91E+03	1.91E+01	1.37E+00	1.24E+00	3.44E+00	5.25E+00	5.79E+00
Cl-34m	1.92E+04	4.18E+01	2.23E+00	2.26E+00	6.59E+00	1.08E+01	1.32E+01
Cl-36	3.10E+01	3.62E-02	1.30E-02	8.95E-04	1.78E-03	2.34E-03	2.43E-03
Cl-38	1.37E+04	2.95E+01	1.64E+00	1.59E+00	4.58E+00	7.60E+00	9.56E+00
Cl-39	1.30E+04	2.80E+01	1.66E+00	1.61E+00	4.63E+00	7.47E+00	8.91E+00
Cl-40	3.90E+04	8.46E+01	4.21E+00	4.30E+00	1.25E+01	2.11E+01	2.71E+01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Cm-238	5.70E+02	1.27E+00	8.16E-02	7.86E-02	2.02E-01	2.60E-01	2.62E-01
Cm-239	1.96E+03	4.33E+00	2.69E-01	2.69E-01	7.27E-01	9.99E-01	1.02E+00
Cm-240	8.48E-01	1.98E-03	8.76E-04	1.16E-04	1.44E-04	1.56E-04	1.57E-04
Cm-241	3.96E+03	8.65E+00	5.42E-01	5.42E-01	1.52E+00	2.26E+00	2.45E+00
Cm-242	7.29E-01	1.70E-03	7.81E-04	9.94E-05	1.17E-04	1.27E-04	1.29E-04
Cm-243	9.96E+02	2.19E+00	1.38E-01	1.36E-01	3.70E-01	5.19E-01	5.36E-01
Cm-244	7.47E-01	1.72E-03	6.84E-04	9.96E-05	1.44E-04	1.81E-04	2.00E-04
Cm-245	7.47E+02	1.66E+00	1.06E-01	1.03E-01	2.67E-01	3.49E-01	3.53E-01
Cm-246	3.34E+01	7.23E-02	4.52E-03	4.02E-03	1.15E-02	1.85E-02	2.26E-02
Cm-247	2.58E+03	5.62E+00	3.48E-01	3.55E-01	1.01E+00	1.53E+00	1.65E+00
Cm-247+D	2.76E+03	6.01E+00	3.75E-01	3.79E-01	1.07E+00	1.60E+00	1.72E+00
Cm-247+E	2.76E+03	6.01E+00	3.75E-01	3.79E-01	1.07E+00	1.60E+00	1.72E+00
Cm-248	1.20E+04	2.60E+01	1.46E+00	1.44E+00	4.13E+00	6.71E+00	8.16E+00
Cm-249	1.91E+02	3.81E-01	3.86E-02	2.26E-02	6.31E-02	9.69E-02	1.08E-01
Cm-250	1.22E+05	2.63E+02	1.48E+01	1.46E+01	4.20E+01	6.82E+01	8.29E+01
Cm-250+D	1.24E+05	2.69E+02	1.52E+01	1.49E+01	4.30E+01	6.95E+01	8.44E+01
Cm-250+E	1.24E+05	2.69E+02	1.52E+01	1.49E+01	4.30E+01	6.95E+01	8.44E+01
Cm-251	9.71E+02	2.05E+00	1.72E-01	1.28E-01	3.59E-01	5.45E-01	6.01E-01
Co-54m	3.46E+04	7.45E+01	4.50E+00	4.45E+00	1.27E+01	2.02E+01	2.34E+01
Co-55	1.71E+04	3.72E+01	2.24E+00	2.24E+00	6.43E+00	1.01E+01	1.15E+01
Co-56	3.29E+04	7.14E+01	3.82E+00	3.94E+00	1.14E+01	1.87E+01	2.28E+01
Co-57	9.30E+02	2.07E+00	1.27E-01	1.28E-01	3.40E-01	4.50E-01	4.56E-01
Co-58	8.29E+03	1.80E+01	1.08E+00	1.09E+00	3.14E+00	4.93E+00	5.60E+00
Co-58m	1.14E-02	2.67E-05	7.81E-06	1.75E-06	1.79E-06	1.79E-06	1.79E-06
Co-60	2.22E+04	4.82E+01	2.69E+00	2.75E+00	7.98E+00	1.29E+01	1.54E+01
Co-60m	3.62E+01	7.90E-02	4.96E-03	4.61E-03	1.23E-02	1.89E-02	2.24E-02
Co-61	7.58E+02	1.62E+00	1.59E-01	1.00E-01	2.41E-01	3.29E-01	3.59E-01
Co-62	1.48E+04	3.18E+01	1.88E+00	1.80E+00	5.16E+00	8.39E+00	1.02E+01
Co-62m	2.43E+04	5.25E+01	3.00E+00	2.97E+00	8.57E+00	1.39E+01	1.68E+01
Cr-48	3.51E+03	7.70E+00	4.73E-01	4.82E-01	1.34E+00	1.96E+00	2.05E+00
Cr-49	8.74E+03	1.91E+01	1.25E+00	1.19E+00	3.36E+00	5.10E+00	5.59E+00
Cr-51	2.62E+02	5.70E-01	3.50E-02	3.59E-02	1.02E-01	1.53E-01	1.63E-01
Cr-55	1.87E+02	2.43E-01	1.51E-01	3.16E-02	4.50E-02	5.51E-02	5.79E-02

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Cr-56	6.48E+02	1.37E+00	1.73E-01	8.84E-02	1.94E-01	2.32E-01	2.32E-01
Cs-121	1.01E+04	2.17E+01	1.50E+00	1.39E+00	3.87E+00	5.92E+00	6.54E+00
Cs-121m	1.00E+04	2.17E+01	1.46E+00	1.38E+00	3.85E+00	5.88E+00	6.48E+00
Cs-123	9.13E+03	1.98E+01	1.32E+00	1.24E+00	3.49E+00	5.36E+00	5.96E+00
Cs-124	1.01E+04	2.17E+01	1.50E+00	1.39E+00	3.87E+00	5.94E+00	6.61E+00
Cs-125	6.30E+03	1.37E+01	8.81E-01	8.44E-01	2.39E+00	3.70E+00	4.15E+00
Cs-126	9.88E+03	2.13E+01	1.44E+00	1.35E+00	3.79E+00	5.83E+00	6.46E+00
Cs-127	3.44E+03	7.49E+00	4.77E-01	4.69E-01	1.32E+00	2.02E+00	2.20E+00
Cs-128	7.55E+03	1.63E+01	1.11E+00	1.03E+00	2.90E+00	4.45E+00	4.93E+00
Cs-129	2.09E+03	4.60E+00	3.04E-01	2.90E-01	8.07E-01	1.22E+00	1.32E+00
Cs-130	4.17E+03	9.02E+00	6.14E-01	5.68E-01	1.60E+00	2.47E+00	2.73E+00
Cs-130m	3.75E+02	8.46E-01	7.32E-02	5.34E-02	1.17E-01	1.44E-01	1.47E-01
Cs-131	4.48E+01	1.05E-01	2.10E-02	7.08E-03	7.88E-03	7.88E-03	7.88E-03
Cs-132	5.88E+03	1.28E+01	7.91E-01	7.90E-01	2.24E+00	3.51E+00	3.94E+00
Cs-134	1.32E+04	2.86E+01	1.73E+00	1.75E+00	5.02E+00	7.86E+00	8.89E+00
Cs-134m	1.49E+02	3.31E-01	2.63E-02	2.05E-02	4.95E-02	6.48E-02	6.54E-02
Cs-135	4.05E+00	4.43E-03	5.92E-05	3.49E-05	6.76E-05	7.81E-05	7.83E-05
Cs-135m	1.37E+04	2.97E+01	1.78E+00	1.80E+00	5.16E+00	8.11E+00	9.28E+00
Cs-136	1.83E+04	3.98E+01	2.33E+00	2.37E+00	6.82E+00	1.08E+01	1.24E+01
Cs-137	1.76E+01	1.96E-02	3.66E-03	4.02E-04	7.01E-04	8.54E-04	8.69E-04
Cs-137+D	4.76E+03	1.03E+01	6.41E-01	6.35E-01	1.82E+00	2.84E+00	3.19E+00
Cs-137+E	4.76E+03	1.03E+01	6.41E-01	6.35E-01	1.82E+00	2.84E+00	3.19E+00
Cs-138	2.15E+04	4.63E+01	2.64E+00	2.60E+00	7.51E+00	1.22E+01	1.48E+01
Cs-138m	3.59E+03	7.73E+00	4.76E-01	4.54E-01	1.29E+00	2.04E+00	2.39E+00
Cs-139	3.10E+03	6.44E+00	5.06E-01	3.87E-01	1.04E+00	1.68E+00	2.05E+00
Cs-140	1.66E+04	3.57E+01	2.03E+00	1.98E+00	5.66E+00	9.25E+00	1.14E+01
Cu-57	1.06E+04	2.22E+01	1.59E+00	1.47E+00	4.02E+00	6.15E+00	6.86E+00
Cu-59	1.25E+04	2.69E+01	1.78E+00	1.68E+00	4.73E+00	7.34E+00	8.26E+00
Cu-60	3.51E+04	7.58E+01	4.27E+00	4.30E+00	1.24E+01	2.00E+01	2.41E+01
Cu-61	6.91E+03	1.50E+01	9.53E-01	9.34E-01	2.65E+00	4.11E+00	4.54E+00
Cu-62	8.59E+03	1.85E+01	1.30E+00	1.18E+00	3.31E+00	5.08E+00	5.60E+00
Cu-64	1.55E+03	3.36E+00	2.08E-01	2.09E-01	5.96E-01	9.19E-01	1.02E+00
Cu-66	1.03E+03	2.07E+00	2.51E-01	1.38E-01	3.55E-01	5.49E-01	6.37E-01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Cu-67	9.17E+02	2.02E+00	1.23E-01	1.24E-01	3.40E-01	4.74E-01	4.88E-01
Cu-69	4.73E+03	1.01E+01	6.98E-01	6.11E-01	1.73E+00	2.73E+00	3.18E+00
Dy-148	5.88E+03	1.28E+01	7.96E-01	7.94E-01	2.24E+00	3.47E+00	3.89E+00
Dy-149	1.40E+04	3.04E+01	1.74E+00	1.76E+00	5.02E+00	8.05E+00	9.53E+00
Dy-150	2.20E+03	4.80E+00	3.07E-01	3.04E-01	8.46E-01	1.27E+00	1.37E+00
Dy-151	1.17E+04	2.54E+01	1.48E+00	1.50E+00	4.30E+00	6.80E+00	7.90E+00
Dy-152	2.20E+03	4.84E+00	3.09E-01	3.03E-01	8.33E-01	1.21E+00	1.27E+00
Dy-153	7.14E+03	1.56E+01	9.41E-01	9.28E-01	2.60E+00	4.02E+00	4.60E+00
Dy-154	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-155	5.53E+03	1.20E+01	7.22E-01	7.21E-01	2.04E+00	3.14E+00	3.57E+00
Dy-157	2.69E+03	5.88E+00	3.79E-01	3.72E-01	1.03E+00	1.52E+00	1.62E+00
Dy-159	1.87E+02	4.33E-01	4.57E-02	2.86E-02	4.43E-02	4.52E-02	4.52E-02
Dy-165	2.60E+02	5.10E-01	8.11E-02	3.21E-02	8.00E-02	1.16E-01	1.27E-01
Dy-165m	1.32E+02	2.90E-01	2.00E-02	1.81E-02	4.67E-02	6.67E-02	7.15E-02
Dy-166	2.45E+02	5.44E-01	4.40E-02	3.44E-02	7.01E-02	8.37E-02	8.54E-02
Dy-167	4.48E+03	9.66E+00	6.79E-01	6.05E-01	1.70E+00	2.58E+00	2.84E+00
Dy-168	3.23E+03	6.99E+00	4.69E-01	4.37E-01	1.22E+00	1.84E+00	2.00E+00
Er-154	4.18E+02	9.34E-01	7.86E-02	5.98E-02	1.35E-01	1.85E-01	2.00E-01
Er-156	3.21E+02	7.27E-01	6.63E-02	4.71E-02	9.30E-02	1.14E-01	1.18E-01
Er-159	8.14E+03	1.77E+01	1.05E+00	1.05E+00	2.99E+00	4.71E+00	5.42E+00
Er-161	8.33E+03	1.81E+01	1.08E+00	1.09E+00	3.08E+00	4.84E+00	5.57E+00
Er-163	1.83E+02	4.22E-01	4.06E-02	2.76E-02	4.61E-02	4.91E-02	4.99E-02
Er-165	1.68E+02	3.89E-01	3.80E-02	2.54E-02	4.13E-02	4.24E-02	4.24E-02
Er-167m	7.53E+02	1.65E+00	1.03E-01	1.03E-01	2.80E-01	4.02E-01	4.15E-01
Er-169	5.51E+00	6.05E-03	8.16E-05	5.21E-05	1.06E-04	1.26E-04	1.27E-04
Er-171	3.01E+03	6.54E+00	4.41E-01	4.09E-01	1.14E+00	1.67E+00	1.77E+00
Er-172	4.18E+03	9.12E+00	5.73E-01	5.70E-01	1.60E+00	2.43E+00	2.67E+00
Er-173	6.97E+03	1.51E+01	9.90E-01	9.23E-01	2.58E+00	3.92E+00	4.39E+00
Es-249	3.31E+03	7.21E+00	4.44E-01	4.46E-01	1.25E+00	1.86E+00	2.04E+00
Es-250	9.81E+03	2.13E+01	1.31E+00	1.31E+00	3.68E+00	5.62E+00	6.26E+00
Es-250m	4.65E+03	1.01E+01	5.94E-01	5.98E-01	1.70E+00	2.65E+00	3.06E+00
Es-251	6.69E+02	1.49E+00	9.71E-02	9.21E-02	2.41E-01	3.18E-01	3.19E-01
Es-253	2.80E+00	6.16E-03	5.85E-04	3.85E-04	1.01E-03	1.48E-03	1.59E-03

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Es-254	2.75E+01	6.22E-02	1.03E-02	3.89E-03	8.03E-03	1.04E-02	1.08E-02
Es-254+D	7.83E+03	1.69E+01	1.01E+00	1.00E+00	2.88E+00	4.60E+00	5.34E+00
Es-254+E	7.83E+03	1.69E+01	1.01E+00	1.00E+00	2.88E+00	4.60E+00	5.34E+00
Es-254m	3.98E+03	8.61E+00	5.37E-01	5.31E-01	1.51E+00	2.37E+00	2.65E+00
Es-255	9.25E+00	1.67E-02	7.98E-04	7.71E-04	2.20E-03	3.53E-03	4.30E-03
Es-256	8.09E+01	9.88E-02	7.79E-02	9.02E-03	1.23E-02	1.44E-02	1.47E-02
Eu-142	1.08E+04	2.30E+01	1.59E+00	1.48E+00	4.07E+00	6.30E+00	7.08E+00
Eu-142m	2.95E+04	6.39E+01	3.97E+00	3.92E+00	1.12E+01	1.75E+01	1.98E+01
Eu-143	9.83E+03	2.11E+01	1.38E+00	1.30E+00	3.66E+00	5.72E+00	6.52E+00
Eu-144	9.68E+03	2.07E+01	1.41E+00	1.32E+00	3.64E+00	5.64E+00	6.35E+00
Eu-145	1.11E+04	2.41E+01	1.38E+00	1.39E+00	4.00E+00	6.41E+00	7.58E+00
Eu-146	2.07E+04	4.48E+01	2.62E+00	2.65E+00	7.62E+00	1.21E+01	1.40E+01
Eu-147	3.79E+03	8.26E+00	5.12E-01	5.01E-01	1.39E+00	2.15E+00	2.41E+00
Eu-148	1.89E+04	4.09E+01	2.45E+00	2.48E+00	7.10E+00	1.11E+01	1.26E+01
Eu-149	3.79E+02	8.46E-01	6.84E-02	5.40E-02	1.29E-01	1.81E-01	1.92E-01
Eu-150	1.29E+04	2.82E+01	1.72E+00	1.73E+00	4.93E+00	7.62E+00	8.50E+00
Eu-150m	4.35E+02	9.12E-01	8.19E-02	5.53E-02	1.53E-01	2.34E-01	2.60E-01
Eu-152	1.00E+04	2.19E+01	1.27E+00	1.29E+00	3.68E+00	5.81E+00	6.74E+00
Eu-152m	2.56E+03	5.49E+00	3.93E-01	3.34E-01	9.34E-01	1.46E+00	1.68E+00
Eu-152n	4.91E+02	1.11E+00	7.60E-02	6.91E-02	1.62E-01	1.96E-01	1.96E-01
Eu-154	1.08E+04	2.34E+01	1.37E+00	1.38E+00	3.96E+00	6.28E+00	7.29E+00
Eu-154m	4.02E+02	9.10E-01	6.99E-02	5.73E-02	1.25E-01	1.47E-01	1.47E-01
Eu-155	4.05E+02	9.10E-01	6.30E-02	5.70E-02	1.33E-01	1.63E-01	1.63E-01
Eu-156	1.11E+04	2.39E+01	1.36E+00	1.35E+00	3.90E+00	6.33E+00	7.64E+00
Eu-157	2.30E+03	4.99E+00	3.57E-01	3.14E-01	8.56E-01	1.28E+00	1.40E+00
Eu-158	1.15E+04	2.47E+01	1.52E+00	1.45E+00	4.15E+00	6.61E+00	7.79E+00
Eu-159	2.47E+03	5.29E+00	4.44E-01	3.31E-01	8.67E-01	1.30E+00	1.47E+00
F-17	8.59E+03	1.86E+01	1.25E+00	1.17E+00	3.33E+00	5.10E+00	5.62E+00
F-18	8.24E+03	1.79E+01	1.11E+00	1.12E+00	3.19E+00	4.93E+00	5.44E+00
Fe-52	6.13E+03	1.33E+01	8.30E-01	8.33E-01	2.35E+00	3.57E+00	3.89E+00
Fe-53	9.99E+03	2.15E+01	1.46E+00	1.37E+00	3.85E+00	5.90E+00	6.52E+00
Fe-53m	2.69E+04	5.83E+01	3.28E+00	3.36E+00	9.73E+00	1.57E+01	1.85E+01
Fe-55	1.25E-06	2.78E-09	1.70E-10	1.72E-10	4.58E-10	6.09E-10	6.15E-10

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Fe-59	1.05E+04	2.28E+01	1.29E+00	1.31E+00	3.79E+00	6.11E+00	7.23E+00
Fe-60	1.29E+00	1.42E-03	2.68E-05	1.30E-05	2.22E-05	2.43E-05	2.43E-05
Fe-60+D	2.22E+04	4.82E+01	2.69E+00	2.75E+00	7.98E+00	1.29E+01	1.54E+01
Fe-60+E	2.22E+04	4.82E+01	2.69E+00	2.75E+00	7.98E+00	1.29E+01	1.54E+01
Fe-61	1.25E+04	2.69E+01	1.64E+00	1.56E+00	4.46E+00	7.17E+00	8.50E+00
Fe-62	4.33E+03	9.30E+00	6.84E-01	5.92E-01	1.66E+00	2.54E+00	2.80E+00
Fm-251	1.19E+03	2.62E+00	1.64E-01	1.61E-01	4.37E-01	6.26E-01	6.67E-01
Fm-252	3.19E+00	7.06E-03	1.05E-03	4.05E-04	9.49E-04	1.44E-03	1.70E-03
Fm-253	4.33E+02	9.62E-01	6.56E-02	5.96E-02	1.57E-01	2.09E-01	2.13E-01
Fm-254	6.48E+01	1.40E-01	8.48E-03	7.77E-03	2.22E-02	3.59E-02	4.37E-02
Fm-255	1.77E+01	4.03E-02	8.37E-03	2.50E-03	4.56E-03	5.34E-03	5.38E-03
Fm-256	1.13E+05	2.45E+02	1.37E+01	1.36E+01	3.92E+01	6.35E+01	7.71E+01
Fm-257	1.12E+03	2.47E+00	1.54E-01	1.49E-01	4.07E-01	5.81E-01	6.22E-01
Fr-212	9.83E+03	2.13E+01	1.23E+00	1.25E+00	3.57E+00	5.64E+00	6.56E+00
Fr-219	2.93E+01	6.37E-02	3.94E-03	4.02E-03	1.13E-02	1.70E-02	1.84E-02
Fr-220	6.58E+01	1.47E-01	9.88E-03	9.13E-03	2.26E-02	2.90E-02	2.93E-02
Fr-220+D	8.35E+01	1.86E-01	1.24E-02	1.16E-02	2.88E-02	3.70E-02	3.75E-02
Fr-220+E	8.35E+01	1.86E-01	1.24E-02	1.16E-02	2.88E-02	3.70E-02	3.75E-02
Fr-221	2.34E+02	5.14E-01	3.14E-02	3.19E-02	8.93E-02	1.28E-01	1.33E-01
Fr-221+D	2.35E+02	5.17E-01	3.17E-02	3.21E-02	9.00E-02	1.29E-01	1.34E-01
Fr-221+E	2.35E+02	5.17E-01	3.17E-02	3.21E-02	9.00E-02	1.29E-01	1.34E-01
Fr-222	1.53E+03	3.25E+00	2.76E-01	2.04E-01	5.55E-01	8.09E-01	8.67E-01
Fr-223	4.02E+02	8.50E-01	9.04E-02	5.27E-02	1.25E-01	1.67E-01	1.76E-01
Fr-224	4.89E+03	1.05E+01	7.01E-01	6.24E-01	1.76E+00	2.76E+00	3.21E+00
Fr-227	3.74E+03	8.07E+00	5.88E-01	5.04E-01	1.38E+00	2.07E+00	2.28E+00
Ga-64	3.06E+04	6.63E+01	3.72E+00	3.72E+00	1.07E+01	1.73E+01	2.09E+01
Ga-65	9.77E+03	2.11E+01	1.40E+00	1.33E+00	3.74E+00	5.72E+00	6.31E+00
Ga-66	2.32E+04	5.02E+01	2.64E+00	2.67E+00	7.75E+00	1.28E+01	1.59E+01
Ga-67	1.23E+03	2.71E+00	1.67E-01	1.69E-01	4.61E-01	6.58E-01	6.87E-01
Ga-68	8.01E+03	1.73E+01	1.17E+00	1.09E+00	3.08E+00	4.76E+00	5.25E+00
Ga-70	1.54E+02	2.47E-01	9.88E-02	1.89E-02	3.79E-02	5.42E-02	6.05E-02
Ga-72	2.45E+04	5.29E+01	2.90E+00	2.95E+00	8.54E+00	1.39E+01	1.69E+01
Ga-73	2.91E+03	6.30E+00	4.34E-01	3.92E-01	1.11E+00	1.67E+00	1.80E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Ga-74	2.90E+04	6.26E+01	3.39E+00	3.42E+00	9.90E+00	1.63E+01	2.00E+01
Gd-142	8.93E+03	1.92E+01	1.24E+00	1.18E+00	3.34E+00	5.21E+00	5.90E+00
Gd-143m	1.83E+04	3.94E+01	2.45E+00	2.39E+00	6.78E+00	1.06E+01	1.21E+01
Gd-144	7.94E+03	1.72E+01	1.05E+00	1.01E+00	2.86E+00	4.54E+00	5.31E+00
Gd-145	2.20E+04	4.76E+01	2.56E+00	2.60E+00	7.55E+00	1.24E+01	1.53E+01
Gd-145m	5.75E+03	1.25E+01	7.80E-01	7.68E-01	2.19E+00	3.42E+00	3.85E+00
Gd-146	1.63E+03	3.64E+00	2.62E-01	2.30E-01	5.55E-01	7.23E-01	7.30E-01
Gd-147	1.17E+04	2.56E+01	1.53E+00	1.55E+00	4.41E+00	6.84E+00	7.73E+00
Gd-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-149	4.18E+03	9.13E+00	5.77E-01	5.68E-01	1.57E+00	2.35E+00	2.58E+00
Gd-150	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-151	4.02E+02	8.99E-01	7.21E-02	5.72E-02	1.32E-01	1.78E-01	1.83E-01
Gd-152	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-153	5.81E+02	1.32E+00	1.08E-01	8.37E-02	1.77E-01	2.13E-01	2.13E-01
Gd-159	4.39E+02	9.25E-01	8.15E-02	5.75E-02	1.54E-01	2.26E-01	2.43E-01
Gd-162	3.47E+03	7.51E+00	4.89E-01	4.73E-01	1.34E+00	2.04E+00	2.22E+00
Ge-66	5.55E+03	1.21E+01	7.49E-01	7.51E-01	2.13E+00	3.23E+00	3.55E+00
Ge-67	1.22E+04	2.63E+01	1.72E+00	1.63E+00	4.61E+00	7.10E+00	7.96E+00
Ge-68	1.66E-02	3.83E-05	4.22E-05	1.13E-06	1.13E-06	1.13E-06	1.13E-06
Ge-68+D	8.01E+03	1.73E+01	1.17E+00	1.09E+00	3.08E+00	4.76E+00	5.25E+00
Ge-68+E	8.01E+03	1.73E+01	1.17E+00	1.09E+00	3.08E+00	4.76E+00	5.25E+00
Ge-69	8.18E+03	1.77E+01	1.05E+00	1.06E+00	3.04E+00	4.82E+00	5.55E+00
Ge-71	1.68E-02	3.89E-05	4.28E-05	1.15E-06	1.15E-06	1.15E-06	1.15E-06
Ge-75	3.42E+02	6.93E-01	8.53E-02	4.32E-02	1.17E-01	1.72E-01	1.82E-01
Ge-77	9.25E+03	2.00E+01	1.26E+00	1.22E+00	3.46E+00	5.36E+00	6.01E+00
Ge-78	2.30E+03	5.01E+00	3.11E-01	3.12E-01	8.91E-01	1.32E+00	1.40E+00
H-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-167	5.10E+03	1.10E+01	7.47E-01	7.02E-01	1.96E+00	2.95E+00	3.21E+00
Hf-169	5.19E+03	1.13E+01	7.27E-01	7.12E-01	1.98E+00	3.03E+00	3.31E+00
Hf-170	3.42E+03	7.49E+00	4.78E-01	4.69E-01	1.27E+00	1.89E+00	2.05E+00
Hf-172	5.77E+02	1.31E+00	1.04E-01	8.35E-02	1.72E-01	2.00E-01	2.00E-01
Hf-172+D	5.77E+02	1.31E+00	1.04E-01	8.35E-02	1.72E-01	2.00E-01	2.00E-01
Hf-172+E	5.77E+02	1.31E+00	1.04E-01	8.35E-02	1.72E-01	2.00E-01	2.00E-01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Hf-173	3.03E+03	6.67E+00	4.24E-01	4.17E-01	1.11E+00	1.57E+00	1.65E+00
Hf-174	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-175	2.75E+03	6.01E+00	3.85E-01	3.79E-01	1.04E+00	1.53E+00	1.63E+00
Hf-177m	1.84E+04	4.02E+01	2.49E+00	2.52E+00	7.04E+00	1.04E+01	1.10E+01
Hf-178m	1.83E+04	3.98E+01	2.47E+00	2.50E+00	7.04E+00	1.06E+01	1.15E+01
Hf-179m	7.32E+03	1.60E+01	1.01E+00	1.01E+00	2.80E+00	4.13E+00	4.43E+00
Hf-180m	7.98E+03	1.74E+01	1.09E+00	1.09E+00	3.06E+00	4.58E+00	4.91E+00
Hf-181	4.33E+03	9.43E+00	5.87E-01	5.92E-01	1.66E+00	2.50E+00	2.71E+00
Hf-182	1.94E+03	4.24E+00	2.61E-01	2.65E-01	7.47E-01	1.10E+00	1.15E+00
Hf-182+D	1.31E+04	2.86E+01	1.65E+00	1.68E+00	4.76E+00	7.49E+00	8.65E+00
Hf-182+E	1.31E+04	2.86E+01	1.65E+00	1.68E+00	4.76E+00	7.49E+00	8.65E+00
Hf-182m	7.45E+03	1.62E+01	1.00E+00	1.00E+00	2.82E+00	4.26E+00	4.69E+00
Hf-183	6.54E+03	1.42E+01	9.04E-01	8.65E-01	2.45E+00	3.79E+00	4.28E+00
Hf-184	1.85E+03	4.02E+00	2.76E-01	2.50E-01	6.84E-01	9.79E-01	1.03E+00
Hg-190	1.45E+03	3.21E+00	2.07E-01	2.00E-01	5.10E-01	6.69E-01	6.82E-01
Hg-191m	1.26E+04	2.73E+01	1.61E+00	1.64E+00	4.65E+00	7.23E+00	8.22E+00
Hg-192	2.05E+03	4.56E+00	2.89E-01	2.84E-01	7.60E-01	1.07E+00	1.11E+00
Hg-193	7.12E+03	1.55E+01	8.94E-01	9.06E-01	2.56E+00	4.03E+00	4.69E+00
Hg-193+D	7.17E+03	1.56E+01	9.01E-01	9.13E-01	2.58E+00	4.07E+00	4.73E+00
Hg-193+E	7.17E+03	1.56E+01	9.01E-01	9.13E-01	2.58E+00	4.07E+00	4.73E+00
Hg-193m	8.72E+03	1.89E+01	1.11E+00	1.12E+00	3.19E+00	5.02E+00	5.79E+00
Hg-194	8.39E-02	1.94E-04	1.89E-04	7.68E-06	7.68E-06	7.68E-06	7.68E-06
Hg-194+D	8.99E+03	1.96E+01	1.10E+00	1.13E+00	3.21E+00	5.10E+00	5.98E+00
Hg-194+E	8.99E+03	1.96E+01	1.10E+00	1.13E+00	3.21E+00	5.10E+00	5.98E+00
Hg-195	1.54E+03	3.38E+00	2.12E-01	2.05E-01	5.51E-01	8.11E-01	9.06E-01
Hg-195m	1.56E+03	3.42E+00	2.14E-01	2.13E-01	5.85E-01	8.56E-01	9.21E-01
Hg-197	4.46E+02	1.01E+00	7.12E-02	6.33E-02	1.38E-01	1.59E-01	1.59E-01
Hg-197m	7.01E+02	1.55E+00	9.80E-02	9.56E-02	2.47E-01	3.27E-01	3.34E-01
Hg-199m	1.41E+03	3.08E+00	1.92E-01	1.91E-01	5.04E-01	6.99E-01	7.25E-01
Hg-203	1.94E+03	4.24E+00	2.60E-01	2.65E-01	7.49E-01	1.10E+00	1.17E+00
Hg-205	1.16E+02	1.80E-01	7.67E-02	1.32E-02	2.62E-02	3.49E-02	3.62E-02
Hg-206	1.04E+03	2.22E+00	1.74E-01	1.39E-01	3.87E-01	5.73E-01	6.13E-01
Hg-207	2.39E+04	5.17E+01	2.91E+00	2.91E+00	8.41E+00	1.36E+01	1.64E+01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Ho-150	1.63E+04	3.51E+01	2.30E+00	2.20E+00	6.22E+00	9.64E+00	1.08E+01
Ho-153	8.61E+03	1.87E+01	1.20E+00	1.16E+00	3.27E+00	5.02E+00	5.59E+00
Ho-153m	8.82E+03	1.91E+01	1.25E+00	1.20E+00	3.36E+00	5.12E+00	5.64E+00
Ho-154	1.61E+04	3.49E+01	2.20E+00	2.15E+00	6.07E+00	9.43E+00	1.06E+01
Ho-154m	2.04E+04	4.43E+01	2.77E+00	2.75E+00	7.83E+00	1.20E+01	1.34E+01
Ho-155	5.06E+03	1.10E+01	6.89E-01	6.67E-01	1.86E+00	2.88E+00	3.23E+00
Ho-156	1.83E+04	3.96E+01	2.34E+00	2.34E+00	6.63E+00	1.05E+01	1.22E+01
Ho-157	4.60E+03	1.00E+01	6.37E-01	6.18E-01	1.70E+00	2.58E+00	2.84E+00
Ho-159	2.84E+03	6.28E+00	4.11E-01	3.90E-01	1.03E+00	1.48E+00	1.58E+00
Ho-160	1.43E+04	3.10E+01	1.86E+00	1.87E+00	5.34E+00	8.37E+00	9.56E+00
Ho-161	2.48E+02	5.72E-01	5.66E-02	3.70E-02	6.58E-02	7.29E-02	7.32E-02
Ho-162	1.22E+03	2.67E+00	1.77E-01	1.61E-01	4.24E-01	6.43E-01	7.38E-01
Ho-162m	4.63E+03	1.01E+01	6.02E-01	5.98E-01	1.67E+00	2.62E+00	3.01E+00
Ho-163	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-164	1.50E+02	3.29E-01	3.93E-02	2.09E-02	3.59E-02	3.81E-02	3.81E-02
Ho-164m	1.98E+02	4.56E-01	4.51E-02	2.99E-02	4.86E-02	5.01E-02	5.01E-02
Ho-166	3.27E+02	6.24E-01	1.24E-01	4.18E-02	9.47E-02	1.38E-01	1.59E-01
Ho-166m	1.36E+04	2.97E+01	1.79E+00	1.82E+00	5.17E+00	8.00E+00	8.97E+00
Ho-167	2.99E+03	6.50E+00	4.11E-01	4.07E-01	1.15E+00	1.72E+00	1.84E+00
Ho-168	7.58E+03	1.63E+01	1.07E+00	9.94E-01	2.82E+00	4.43E+00	5.06E+00
Ho-168m	2.80E+01	6.46E-02	6.34E-03	4.24E-03	6.89E-03	7.08E-03	7.08E-03
Ho-170	1.46E+04	3.16E+01	1.96E+00	1.91E+00	5.42E+00	8.48E+00	9.71E+00
I-118	1.75E+04	3.77E+01	2.43E+00	2.35E+00	6.61E+00	1.03E+01	1.17E+01
I-118m	3.19E+04	6.93E+01	4.29E+00	4.26E+00	1.21E+01	1.91E+01	2.15E+01
I-119	7.58E+03	1.64E+01	1.08E+00	1.03E+00	2.91E+00	4.45E+00	4.88E+00
I-120	2.39E+04	5.16E+01	2.95E+00	2.93E+00	8.44E+00	1.36E+01	1.63E+01
I-120m	3.04E+04	6.59E+01	3.96E+00	3.94E+00	1.13E+01	1.79E+01	2.05E+01
I-121	3.16E+03	6.91E+00	4.38E-01	4.30E-01	1.21E+00	1.81E+00	1.96E+00
I-122	8.20E+03	1.77E+01	1.22E+00	1.12E+00	3.14E+00	4.84E+00	5.36E+00
I-123	1.22E+03	2.71E+00	1.80E-01	1.68E-01	4.54E-01	6.35E-01	6.56E-01
I-124	9.55E+03	2.07E+01	1.23E+00	1.23E+00	3.51E+00	5.59E+00	6.46E+00
I-125	7.06E+01	1.66E-01	3.73E-02	1.11E-02	1.20E-02	1.20E-02	1.20E-02
I-126	3.59E+03	7.79E+00	4.94E-01	4.84E-01	1.37E+00	2.13E+00	2.35E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
I-128	6.63E+02	1.34E+00	1.80E-01	9.15E-02	2.35E-01	3.53E-01	3.87E-01
I-129	5.34E+01	1.25E-01	2.33E-02	8.35E-03	9.69E-03	9.69E-03	9.69E-03
I-130	1.81E+04	3.92E+01	2.40E+00	2.41E+00	6.91E+00	1.08E+01	1.21E+01
I-130m	9.12E+02	1.96E+00	1.40E-01	1.23E-01	3.44E-01	5.31E-01	5.96E-01
I-131	3.18E+03	6.89E+00	4.27E-01	4.32E-01	1.23E+00	1.86E+00	2.02E+00
I-132	1.94E+04	4.22E+01	2.55E+00	2.54E+00	7.30E+00	1.15E+01	1.32E+01
I-132m	2.80E+03	6.09E+00	3.82E-01	3.75E-01	1.07E+00	1.66E+00	1.85E+00
I-133	5.19E+03	1.12E+01	7.27E-01	6.95E-01	1.98E+00	3.08E+00	3.44E+00
I-134	2.26E+04	4.88E+01	2.91E+00	2.90E+00	8.33E+00	1.32E+01	1.53E+01
I-134m	2.22E+03	4.86E+00	3.14E-01	3.03E-01	8.46E-01	1.26E+00	1.35E+00
I-135	1.41E+04	3.06E+01	1.72E+00	1.73E+00	5.02E+00	8.14E+00	9.77E+00
In-103	2.43E+04	5.27E+01	3.12E+00	3.08E+00	8.80E+00	1.40E+01	1.64E+01
In-105	1.68E+04	3.62E+01	2.22E+00	2.17E+00	6.18E+00	9.69E+00	1.12E+01
In-106	3.04E+04	6.59E+01	4.06E+00	4.03E+00	1.15E+01	1.80E+01	2.05E+01
In-106m	2.52E+04	5.45E+01	3.19E+00	3.16E+00	9.02E+00	1.45E+01	1.71E+01
In-107	1.34E+04	2.91E+01	1.67E+00	1.67E+00	4.82E+00	7.70E+00	9.06E+00
In-108	3.38E+04	7.34E+01	4.28E+00	4.35E+00	1.25E+01	1.98E+01	2.30E+01
In-108m	2.52E+04	5.45E+01	2.95E+00	2.97E+00	8.63E+00	1.41E+01	1.73E+01
In-109	5.34E+03	1.16E+01	6.94E-01	6.99E-01	2.00E+00	3.08E+00	3.49E+00
In-109m	5.12E+03	1.11E+01	6.85E-01	6.87E-01	1.96E+00	3.06E+00	3.44E+00
In-110	2.63E+04	5.72E+01	3.41E+00	3.46E+00	9.92E+00	1.57E+01	1.79E+01
In-110m	1.36E+04	2.93E+01	1.81E+00	1.77E+00	5.06E+00	7.96E+00	9.10E+00
In-111	3.16E+03	6.91E+00	4.31E-01	4.32E-01	1.21E+00	1.74E+00	1.81E+00
In-111m	3.92E+03	8.50E+00	5.33E-01	5.32E-01	1.52E+00	2.34E+00	2.60E+00
In-112	2.22E+03	4.78E+00	3.20E-01	3.01E-01	8.50E-01	1.31E+00	1.45E+00
In-112m	1.84E+02	4.02E-01	3.27E-02	2.47E-02	6.35E-02	8.72E-02	8.89E-02
In-113m	2.11E+03	4.60E+00	2.88E-01	2.90E-01	8.22E-01	1.25E+00	1.35E+00
In-114	1.36E+02	1.84E-01	1.13E-01	1.87E-02	2.93E-02	3.75E-02	4.05E-02
In-114m	6.09E+02	1.32E+00	8.51E-02	8.13E-02	2.28E-01	3.42E-01	3.72E-01
In-114m+D	7.40E+02	1.50E+00	1.94E-01	9.94E-02	2.56E-01	3.77E-01	4.11E-01
In-114m+E	7.40E+02	1.50E+00	1.94E-01	9.94E-02	2.56E-01	3.77E-01	4.11E-01
In-115	1.23E+01	1.36E-02	4.37E-04	1.32E-04	2.88E-04	3.57E-04	3.61E-04
In-115m	1.30E+03	2.80E+00	1.78E-01	1.76E-01	4.99E-01	7.49E-01	8.00E-01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
In-116m	2.20E+04	4.76E+01	2.65E+00	2.71E+00	7.85E+00	1.27E+01	1.52E+01
In-117	5.75E+03	1.25E+01	7.77E-01	7.79E-01	2.20E+00	3.34E+00	3.66E+00
In-117m	7.62E+02	1.61E+00	1.46E-01	1.03E-01	2.80E-01	4.07E-01	4.30E-01
In-118	1.07E+03	2.02E+00	2.95E-01	1.60E-01	3.61E-01	5.44E-01	6.28E-01
In-118m	2.45E+04	5.29E+01	3.10E+00	3.08E+00	8.89E+00	1.42E+01	1.68E+01
In-119	6.61E+03	1.43E+01	9.34E-01	8.72E-01	2.48E+00	3.90E+00	4.43E+00
In-119m	7.27E+02	1.43E+00	2.07E-01	9.92E-02	2.45E-01	3.74E-01	4.30E-01
In-121	8.14E+03	1.75E+01	1.16E+00	1.06E+00	3.01E+00	4.76E+00	5.47E+00
In-121m	7.32E+02	1.36E+00	2.48E-01	1.11E-01	2.30E-01	3.31E-01	3.79E-01
Ir-180	1.35E+04	2.91E+01	1.89E+00	1.83E+00	5.14E+00	7.88E+00	8.78E+00
Ir-182	1.20E+04	2.60E+01	1.66E+00	1.61E+00	4.52E+00	6.93E+00	7.75E+00
Ir-183	1.02E+04	2.22E+01	1.27E+00	1.29E+00	3.66E+00	5.77E+00	6.80E+00
Ir-184	1.68E+04	3.66E+01	2.15E+00	2.17E+00	6.16E+00	9.68E+00	1.12E+01
Ir-185	7.38E+03	1.60E+01	8.97E-01	9.08E-01	2.58E+00	4.09E+00	4.89E+00
Ir-186	1.43E+04	3.10E+01	1.79E+00	1.82E+00	5.19E+00	8.13E+00	9.40E+00
Ir-186m	1.09E+04	2.35E+01	1.34E+00	1.37E+00	3.90E+00	6.20E+00	7.29E+00
Ir-187	2.62E+03	5.73E+00	3.58E-01	3.51E-01	9.60E-01	1.44E+00	1.62E+00
Ir-188	1.89E+04	4.09E+01	2.17E+00	2.24E+00	6.48E+00	1.06E+01	1.30E+01
Ir-189	4.99E+02	1.12E+00	7.88E-02	7.04E-02	1.62E-01	2.04E-01	2.07E-01
Ir-190	1.22E+04	2.65E+01	1.64E+00	1.65E+00	4.67E+00	7.12E+00	7.83E+00
Ir-190m	2.13E-02	4.95E-05	5.18E-05	1.69E-06	1.69E-06	1.69E-06	1.69E-06
Ir-190n	3.40E+02	7.70E-01	5.69E-02	4.86E-02	1.03E-01	1.19E-01	1.20E-01
Ir-191m	4.97E+02	1.11E+00	7.48E-02	6.95E-02	1.66E-01	2.05E-01	2.07E-01
Ir-192	6.74E+03	1.47E+01	9.06E-01	9.21E-01	2.62E+00	3.96E+00	4.28E+00
Ir-192m	5.01E-01	1.11E-03	2.49E-04	6.50E-05	1.57E-04	2.19E-04	2.32E-04
Ir-192n	1.24E+01	1.79E-02	9.92E-04	5.64E-04	1.26E-03	1.52E-03	1.53E-03
Ir-193m	1.94E+00	4.33E-03	3.72E-04	2.67E-04	5.53E-04	6.15E-04	6.15E-04
Ir-194	8.91E+02	1.82E+00	2.12E-01	1.20E-01	3.16E-01	4.78E-01	5.29E-01
Ir-194m	1.94E+04	4.22E+01	2.60E+00	2.63E+00	7.53E+00	1.15E+01	1.27E+01
Ir-195	4.11E+02	8.82E-01	8.63E-02	5.44E-02	1.22E-01	1.47E-01	1.48E-01
Ir-195m	3.04E+03	6.65E+00	4.21E-01	4.15E-01	1.16E+00	1.73E+00	1.87E+00
Ir-196	2.17E+03	4.52E+00	4.07E-01	2.95E-01	7.96E-01	1.22E+00	1.36E+00
Ir-196m	2.05E+04	4.46E+01	2.76E+00	2.78E+00	7.94E+00	1.22E+01	1.34E+01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
K-38	2.91E+04	6.28E+01	3.47E+00	3.47E+00	1.00E+01	1.64E+01	2.00E+01
K-40	1.48E+03	3.14E+00	2.38E-01	1.78E-01	5.06E-01	8.22E-01	9.98E-01
K-42	2.78E+03	5.81E+00	4.68E-01	3.51E-01	9.53E-01	1.53E+00	1.86E+00
K-43	8.09E+03	1.75E+01	1.09E+00	1.09E+00	3.12E+00	4.80E+00	5.29E+00
K-44	2.22E+04	4.80E+01	2.61E+00	2.60E+00	7.51E+00	1.24E+01	1.54E+01
K-45	1.69E+04	3.64E+01	2.03E+00	2.00E+00	5.77E+00	9.43E+00	1.16E+01
K-46	2.75E+04	5.92E+01	3.11E+00	3.10E+00	8.99E+00	1.50E+01	1.91E+01
Kr-74	8.78E+03	1.91E+01	1.25E+00	1.20E+00	3.36E+00	5.12E+00	5.59E+00
Kr-75	1.09E+04	2.35E+01	1.60E+00	1.49E+00	4.17E+00	6.33E+00	7.01E+00
Kr-76	3.42E+03	7.47E+00	4.63E-01	4.69E-01	1.33E+00	2.00E+00	2.15E+00
Kr-76+D	3.42E+03	7.47E+00	4.63E-01	4.69E-01	1.33E+00	2.00E+00	2.15E+00
Kr-76+E	3.42E+03	7.47E+00	4.63E-01	4.69E-01	1.33E+00	2.00E+00	2.15E+00
Kr-77	8.65E+03	1.87E+01	1.24E+00	1.18E+00	3.33E+00	5.01E+00	5.47E+00
Kr-79	2.07E+03	4.52E+00	2.77E-01	2.80E-01	8.01E-01	1.23E+00	1.35E+00
Kr-81	7.14E+00	1.57E-02	1.84E-03	9.58E-04	2.67E-03	3.92E-03	4.15E-03
Kr-81m	1.04E+03	2.28E+00	1.38E-01	1.42E-01	3.96E-01	5.66E-01	5.85E-01
Kr-83m	2.05E-01	4.80E-04	3.81E-04	2.24E-05	2.34E-05	2.34E-05	2.34E-05
Kr-85	4.50E+01	7.01E-02	1.23E-02	3.12E-03	8.29E-03	1.25E-02	1.36E-02
Kr-85m	1.28E+03	2.78E+00	1.82E-01	1.73E-01	4.76E-01	6.72E-01	6.93E-01
Kr-87	7.42E+03	1.59E+01	9.80E-01	8.95E-01	2.54E+00	4.11E+00	5.01E+00
Kr-88	1.81E+04	3.92E+01	2.01E+00	2.07E+00	6.07E+00	1.01E+01	1.26E+01
Kr-89	1.79E+04	3.85E+01	2.15E+00	2.11E+00	6.09E+00	9.96E+00	1.22E+01
La-128	2.43E+04	5.27E+01	3.26E+00	3.21E+00	9.13E+00	1.43E+01	1.62E+01
La-129	7.68E+03	1.66E+01	1.10E+00	1.04E+00	2.93E+00	4.50E+00	4.95E+00
La-130	1.92E+04	4.17E+01	2.57E+00	2.52E+00	7.19E+00	1.13E+01	1.29E+01
La-131	5.38E+03	1.17E+01	7.53E-01	7.29E-01	2.05E+00	3.12E+00	3.44E+00
La-132	1.74E+04	3.77E+01	2.21E+00	2.20E+00	6.33E+00	1.01E+01	1.18E+01
La-132m	5.51E+03	1.20E+01	7.43E-01	7.40E-01	2.09E+00	3.19E+00	3.57E+00
La-133	1.19E+03	2.60E+00	1.77E-01	1.62E-01	4.48E-01	6.86E-01	7.58E-01
La-134	6.09E+03	1.31E+01	9.04E-01	8.29E-01	2.34E+00	3.59E+00	3.98E+00
La-135	1.44E+02	3.23E-01	3.57E-02	2.09E-02	4.39E-02	6.16E-02	6.71E-02
La-136	3.34E+03	7.21E+00	4.93E-01	4.54E-01	1.28E+00	1.96E+00	2.17E+00
La-137	5.73E+01	1.34E-01	2.35E-02	9.04E-03	1.07E-02	1.07E-02	1.07E-02

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
La-138	1.09E+04	2.35E+01	1.31E+00	1.34E+00	3.89E+00	6.28E+00	7.53E+00
La-140	2.07E+04	4.46E+01	2.51E+00	2.52E+00	7.32E+00	1.19E+01	1.43E+01
La-141	4.00E+02	7.21E-01	1.64E-01	5.51E-02	1.21E-01	1.81E-01	2.13E-01
La-142	2.22E+04	4.78E+01	2.53E+00	2.54E+00	7.40E+00	1.23E+01	1.54E+01
La-143	2.60E+03	5.44E+00	4.40E-01	3.29E-01	8.91E-01	1.43E+00	1.72E+00
Lu-165	9.38E+03	2.04E+01	1.24E+00	1.21E+00	3.42E+00	5.31E+00	6.11E+00
Lu-167	1.48E+04	3.21E+01	1.79E+00	1.82E+00	5.23E+00	8.41E+00	1.01E+01
Lu-169	1.13E+04	2.47E+01	1.40E+00	1.42E+00	4.05E+00	6.46E+00	7.62E+00
Lu-169m	4.71E-03	1.09E-05	1.10E-05	3.64E-07	3.72E-07	3.72E-07	3.72E-07
Lu-170	2.34E+04	5.06E+01	2.64E+00	2.73E+00	7.90E+00	1.30E+01	1.61E+01
Lu-171	5.21E+03	1.14E+01	7.10E-01	6.99E-01	1.94E+00	2.99E+00	3.36E+00
Lu-171m	1.84E+00	4.18E-03	3.38E-04	2.65E-04	5.27E-04	5.77E-04	5.77E-04
Lu-172	1.67E+04	3.62E+01	2.13E+00	2.15E+00	6.13E+00	9.69E+00	1.12E+01
Lu-172m	7.29E-03	1.69E-05	5.32E-06	1.00E-06	1.38E-06	1.39E-06	1.39E-06
Lu-173	1.21E+03	2.69E+00	1.92E-01	1.71E-01	4.09E-01	5.51E-01	5.75E-01
Lu-174	8.33E+02	1.84E+00	1.20E-01	1.10E-01	2.76E-01	4.07E-01	4.71E-01
Lu-174m	3.33E+02	7.55E-01	6.08E-02	4.80E-02	9.66E-02	1.15E-01	1.21E-01
Lu-176	3.87E+03	8.44E+00	5.23E-01	5.27E-01	1.48E+00	2.17E+00	2.28E+00
Lu-176m	1.44E+02	2.63E-01	6.57E-02	1.68E-02	3.36E-02	3.94E-02	3.96E-02
Lu-177	2.80E+02	6.07E-01	3.75E-02	3.72E-02	1.01E-01	1.41E-01	1.45E-01
Lu-177m	7.90E+03	1.74E+01	1.08E+00	1.09E+00	3.01E+00	4.37E+00	4.61E+00
Lu-178	1.20E+03	2.50E+00	2.34E-01	1.51E-01	4.07E-01	6.44E-01	7.64E-01
Lu-178m	8.46E+03	1.85E+01	1.18E+00	1.16E+00	3.23E+00	4.78E+00	5.12E+00
Lu-179	3.04E+02	6.03E-01	9.31E-02	3.85E-02	1.00E-01	1.43E-01	1.50E-01
Lu-180	1.32E+04	2.86E+01	1.71E+00	1.68E+00	4.80E+00	7.64E+00	8.93E+00
Lu-181	4.82E+03	1.04E+01	7.35E-01	6.50E-01	1.81E+00	2.76E+00	3.06E+00
Mg-27	7.77E+03	1.68E+01	1.08E+00	1.01E+00	2.88E+00	4.56E+00	5.25E+00
Mg-28	1.19E+04	2.58E+01	1.47E+00	1.50E+00	4.32E+00	6.91E+00	8.16E+00
Mn-50m	4.07E+04	8.80E+01	5.23E+00	5.21E+00	1.49E+01	2.37E+01	2.76E+01
Mn-51	8.44E+03	1.82E+01	1.25E+00	1.15E+00	3.27E+00	5.01E+00	5.51E+00
Mn-52	3.03E+04	6.56E+01	3.75E+00	3.83E+00	1.11E+01	1.77E+01	2.07E+01
Mn-52m	2.11E+04	4.58E+01	2.76E+00	2.71E+00	7.75E+00	1.23E+01	1.44E+01
Mn-53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Mn-54	7.15E+03	1.55E+01	9.22E-01	9.38E-01	2.69E+00	4.24E+00	4.86E+00
Mn-56	1.53E+04	3.29E+01	1.89E+00	1.87E+00	5.38E+00	8.72E+00	1.05E+01
Mn-57	9.90E+02	2.00E+00	2.54E-01	1.37E-01	3.44E-01	5.14E-01	5.73E-01
Mn-58m	2.15E+04	4.61E+01	2.76E+00	2.69E+00	7.70E+00	1.23E+01	1.46E+01
Mo-101	1.30E+04	2.82E+01	1.64E+00	1.63E+00	4.69E+00	7.51E+00	8.87E+00
Mo-102	1.91E+02	3.75E-01	5.16E-02	2.24E-02	6.00E-02	8.50E-02	8.78E-02
Mo-89	1.06E+04	2.28E+01	1.57E+00	1.45E+00	4.05E+00	6.26E+00	6.99E+00
Mo-90	6.84E+03	1.49E+01	9.15E-01	9.15E-01	2.60E+00	3.92E+00	4.33E+00
Mo-91	8.41E+03	1.80E+01	1.26E+00	1.16E+00	3.23E+00	4.95E+00	5.47E+00
Mo-91m	1.20E+04	2.62E+01	1.59E+00	1.56E+00	4.46E+00	7.06E+00	8.16E+00
Mo-93	3.18E+00	7.45E-03	4.48E-03	4.11E-04	4.09E-04	4.09E-04	4.09E-04
Mo-93m	2.04E+04	4.41E+01	2.49E+00	2.56E+00	7.38E+00	1.18E+01	1.40E+01
Mo-99	1.29E+03	2.76E+00	2.07E-01	1.69E-01	4.78E-01	7.38E-01	8.28E-01
N-13	8.54E+03	1.85E+01	1.20E+00	1.16E+00	3.31E+00	5.08E+00	5.60E+00
N-16	4.84E+04	1.05E+02	4.02E+00	4.26E+00	1.26E+01	2.22E+01	3.23E+01
Na-22	1.91E+04	4.11E+01	2.40E+00	2.45E+00	7.02E+00	1.12E+01	1.29E+01
Na-24	3.89E+04	8.42E+01	4.20E+00	4.32E+00	1.27E+01	2.13E+01	2.73E+01
Nb-87	1.03E+04	2.22E+01	1.54E+00	1.43E+00	3.98E+00	6.01E+00	6.56E+00
Nb-88	3.62E+04	7.85E+01	4.80E+00	4.76E+00	1.36E+01	2.13E+01	2.45E+01
Nb-88m	3.57E+04	7.71E+01	4.66E+00	4.63E+00	1.32E+01	2.09E+01	2.41E+01
Nb-89	1.22E+04	2.62E+01	1.60E+00	1.54E+00	4.37E+00	6.97E+00	8.18E+00
Nb-89m	1.10E+04	2.37E+01	1.57E+00	1.50E+00	4.24E+00	6.54E+00	7.21E+00
Nb-90	3.83E+04	8.29E+01	4.42E+00	4.52E+00	1.32E+01	2.15E+01	2.63E+01
Nb-91	1.58E+01	3.47E-02	5.54E-03	2.13E-03	5.49E-03	8.29E-03	9.12E-03
Nb-91m	2.24E+02	4.84E-01	3.06E-02	2.78E-02	7.96E-02	1.28E-01	1.51E-01
Nb-92	1.28E+04	2.76E+01	1.66E+00	1.68E+00	4.82E+00	7.58E+00	8.63E+00
Nb-92m	8.29E+03	1.80E+01	1.06E+00	1.07E+00	3.08E+00	4.89E+00	5.66E+00
Nb-93m	5.68E-01	1.33E-03	7.98E-04	7.32E-05	7.30E-05	7.30E-05	7.30E-05
Nb-94	1.33E+04	2.90E+01	1.73E+00	1.75E+00	5.02E+00	7.92E+00	9.02E+00
Nb-94m	4.02E+01	8.72E-02	8.15E-03	5.23E-03	1.44E-02	2.26E-02	2.60E-02
Nb-95	6.52E+03	1.41E+01	8.49E-01	8.61E-01	2.47E+00	3.89E+00	4.41E+00
Nb-95m	5.29E+02	1.14E+00	7.31E-02	7.01E-02	1.98E-01	2.90E-01	3.03E-01
Nb-96	2.11E+04	4.58E+01	2.72E+00	2.76E+00	7.92E+00	1.25E+01	1.43E+01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Nb-97	5.68E+03	1.23E+01	7.97E-01	7.57E-01	2.17E+00	3.36E+00	3.79E+00
Nb-98m	2.47E+04	5.34E+01	3.17E+00	3.14E+00	9.04E+00	1.44E+01	1.68E+01
Nb-99	1.55E+03	3.21E+00	3.60E-01	2.28E-01	5.42E-01	7.14E-01	7.25E-01
Nb-99m	7.21E+03	1.54E+01	9.39E-01	8.54E-01	2.41E+00	3.96E+00	4.91E+00
Nd-134	4.33E+03	9.45E+00	6.14E-01	5.90E-01	1.64E+00	2.47E+00	2.67E+00
Nd-135	1.05E+04	2.28E+01	1.52E+00	1.43E+00	4.02E+00	6.13E+00	6.76E+00
Nd-136	2.05E+03	4.50E+00	3.03E-01	2.80E-01	7.53E-01	1.12E+00	1.23E+00
Nd-137	9.96E+03	2.17E+01	1.32E+00	1.30E+00	3.68E+00	5.77E+00	6.61E+00
Nd-138	2.02E+02	4.56E-01	4.44E-02	2.93E-02	6.30E-02	8.50E-02	8.93E-02
Nd-139	3.64E+03	7.88E+00	5.18E-01	4.89E-01	1.37E+00	2.13E+00	2.39E+00
Nd-139m	1.34E+04	2.91E+01	1.73E+00	1.74E+00	4.97E+00	7.83E+00	9.00E+00
Nd-140	8.29E+01	1.94E-01	2.79E-02	1.29E-02	1.67E-02	1.68E-02	1.68E-02
Nd-141	4.93E+02	1.08E+00	8.11E-02	6.65E-02	1.71E-01	2.58E-01	2.91E-01
Nd-141m	5.90E+03	1.28E+01	7.81E-01	7.83E-01	2.24E+00	3.51E+00	4.00E+00
Nd-144	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-147	1.07E+03	2.34E+00	1.64E-01	1.45E-01	3.89E-01	5.70E-01	6.18E-01
Nd-149	3.04E+03	6.59E+00	4.61E-01	4.11E-01	1.15E+00	1.70E+00	1.83E+00
Nd-151	7.34E+03	1.59E+01	1.00E+00	9.49E-01	2.69E+00	4.20E+00	4.80E+00
Nd-152	1.36E+03	2.93E+00	2.05E-01	1.83E-01	5.17E-01	7.68E-01	8.14E-01
Ne-19	8.65E+03	1.86E+01	1.27E+00	1.18E+00	3.34E+00	5.12E+00	5.64E+00
Ne-24	4.63E+03	9.96E+00	7.19E-01	6.31E-01	1.77E+00	2.73E+00	3.01E+00
Ni-56	1.46E+04	3.18E+01	1.88E+00	1.92E+00	5.49E+00	8.56E+00	9.69E+00
Ni-57	1.72E+04	3.72E+01	2.08E+00	2.13E+00	6.15E+00	9.90E+00	1.18E+01
Ni-59	1.29E-01	2.80E-04	1.73E-05	1.76E-05	5.02E-05	7.73E-05	8.54E-05
Ni-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-65	5.08E+03	1.09E+01	6.75E-01	6.24E-01	1.79E+00	2.90E+00	3.47E+00
Ni-66	2.54E+00	2.76E-03	4.03E-05	2.24E-05	4.18E-05	4.74E-05	4.76E-05
Np-232	9.99E+03	2.17E+01	1.31E+00	1.32E+00	3.75E+00	5.81E+00	6.54E+00
Np-233	6.31E+02	1.40E+00	9.02E-02	8.72E-02	2.22E-01	2.90E-01	2.93E-01
Np-234	9.77E+03	2.11E+01	1.17E+00	1.19E+00	3.44E+00	5.55E+00	6.67E+00
Np-235	5.31E+00	1.20E-02	2.53E-03	7.25E-04	1.53E-03	1.89E-03	1.89E-03
Np-235+D	5.31E+00	1.20E-02	2.53E-03	7.25E-04	1.53E-03	1.89E-03	1.89E-03
Np-235+E	5.31E+00	1.20E-02	2.53E-03	7.25E-04	1.53E-03	1.89E-03	1.89E-03

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Np-236	1.04E+03	2.30E+00	1.50E-01	1.43E-01	3.74E-01	4.95E-01	5.01E-01
Np-236m	3.55E+02	7.81E-01	5.05E-02	4.82E-02	1.24E-01	1.64E-01	1.69E-01
Np-237	1.61E+02	3.61E-01	2.85E-02	2.24E-02	5.34E-02	6.69E-02	6.71E-02
Np-237+D	1.89E+03	4.15E+00	2.64E-01	2.60E-01	7.14E-01	1.03E+00	1.09E+00
Np-237+E	1.89E+03	4.15E+00	2.64E-01	2.60E-01	7.14E-01	1.03E+00	1.09E+00
Np-238	5.08E+03	1.10E+01	6.58E-01	6.50E-01	1.87E+00	2.97E+00	3.46E+00
Np-239	1.37E+03	3.03E+00	1.89E-01	1.87E-01	5.06E-01	7.02E-01	7.25E-01
Np-240	8.84E+03	1.92E+01	1.17E+00	1.16E+00	3.31E+00	5.16E+00	5.85E+00
Np-240m	2.78E+03	5.98E+00	4.38E-01	3.68E-01	1.04E+00	1.62E+00	1.83E+00
Np-241	3.34E+02	6.86E-01	8.51E-02	4.26E-02	1.08E-01	1.45E-01	1.49E-01
Np-242	2.48E+03	5.27E+00	4.02E-01	3.14E-01	8.72E-01	1.40E+00	1.66E+00
Np-242m	7.77E+03	1.68E+01	1.07E+00	1.02E+00	2.90E+00	4.54E+00	5.16E+00
O-14	3.04E+04	6.58E+01	3.54E+00	3.57E+00	1.04E+01	1.70E+01	2.09E+01
O-15	8.59E+03	1.86E+01	1.25E+00	1.17E+00	3.33E+00	5.10E+00	5.62E+00
O-19	8.59E+03	1.84E+01	1.20E+00	1.10E+00	3.06E+00	4.84E+00	5.68E+00
Os-180	8.72E+02	1.92E+00	1.31E-01	1.21E-01	3.04E-01	4.30E-01	4.63E-01
Os-181	1.18E+04	2.56E+01	1.48E+00	1.51E+00	4.28E+00	6.72E+00	7.79E+00
Os-182	3.40E+03	7.43E+00	4.70E-01	4.67E-01	1.29E+00	1.91E+00	2.05E+00
Os-183	4.97E+03	1.09E+01	6.82E-01	6.76E-01	1.85E+00	2.75E+00	3.01E+00
Os-183m	8.65E+03	1.87E+01	1.09E+00	1.10E+00	3.14E+00	4.99E+00	5.83E+00
Os-185	5.72E+03	1.24E+01	7.65E-01	7.66E-01	2.17E+00	3.34E+00	3.75E+00
Os-186	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Os-189m	1.92E-02	4.45E-05	4.71E-05	1.46E-06	1.46E-06	1.46E-06	1.46E-06
Os-190m	1.32E+04	2.86E+01	1.77E+00	1.79E+00	5.08E+00	7.77E+00	8.52E+00
Os-191	5.51E+02	1.24E+00	8.31E-02	7.73E-02	1.84E-01	2.28E-01	2.30E-01
Os-191m	3.40E+01	7.75E-02	5.89E-03	4.91E-03	9.96E-03	1.10E-02	1.10E-02
Os-193	5.66E+02	1.20E+00	1.05E-01	7.45E-02	2.00E-01	2.91E-01	3.14E-01
Os-194	9.51E+00	2.20E-02	2.58E-03	1.46E-03	2.17E-03	2.20E-03	2.20E-03
Os-194+D	9.00E+02	1.84E+00	2.14E-01	1.22E-01	3.18E-01	4.80E-01	5.31E-01
Os-194+E	9.00E+02	1.84E+00	2.14E-01	1.22E-01	3.18E-01	4.80E-01	5.31E-01
Os-196	6.80E+02	1.44E+00	1.23E-01	9.00E-02	2.45E-01	3.57E-01	3.83E-01
P-30	8.76E+03	1.89E+01	1.32E+00	1.21E+00	3.38E+00	5.17E+00	5.70E+00
P-32	1.00E+02	1.20E-01	9.96E-02	1.24E-02	1.69E-02	1.98E-02	2.04E-02

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
P-33	2.69E+00	2.93E-03	4.26E-05	2.37E-05	4.41E-05	5.01E-05	5.02E-05
Pa-227	1.34E+02	3.01E-01	2.10E-02	1.89E-02	4.45E-02	5.45E-02	5.45E-02
Pa-228	1.16E+04	2.52E+01	1.47E+00	1.50E+00	4.28E+00	6.71E+00	7.71E+00
Pa-229	4.35E+02	9.75E-01	6.38E-02	6.05E-02	1.50E-01	1.87E-01	1.87E-01
Pa-230	5.59E+03	1.21E+01	7.27E-01	7.34E-01	2.07E+00	3.23E+00	3.68E+00
Pa-231	2.71E+02	5.94E-01	4.06E-02	3.74E-02	1.03E-01	1.52E-01	1.61E-01
Pa-232	7.96E+03	1.73E+01	1.03E+00	1.04E+00	2.99E+00	4.69E+00	5.36E+00
Pa-233	1.73E+03	3.79E+00	2.36E-01	2.37E-01	6.59E-01	9.64E-01	1.02E+00
Pa-234	1.25E+04	2.71E+01	1.61E+00	1.62E+00	4.63E+00	7.25E+00	8.28E+00
Pa-234m	2.65E+02	4.58E-01	1.31E-01	3.62E-02	7.66E-02	1.11E-01	1.26E-01
Pa-235	6.26E+01	7.34E-02	5.90E-02	5.57E-03	7.75E-03	9.10E-03	9.30E-03
Pa-236	8.14E+03	1.75E+01	1.08E+00	1.01E+00	2.91E+00	4.67E+00	5.53E+00
Pa-237	5.27E+03	1.13E+01	7.48E-01	6.93E-01	1.98E+00	3.10E+00	3.51E+00
Pb-194	9.23E+03	2.00E+01	1.16E+00	1.18E+00	3.34E+00	5.25E+00	6.09E+00
Pb-195m	1.38E+04	3.01E+01	1.84E+00	1.85E+00	5.23E+00	8.09E+00	9.04E+00
Pb-196	3.92E+03	8.59E+00	5.35E-01	5.36E-01	1.48E+00	2.19E+00	2.37E+00
Pb-197	1.33E+04	2.90E+01	1.64E+00	1.67E+00	4.80E+00	7.62E+00	8.99E+00
Pb-197m	9.75E+03	2.13E+01	1.29E+00	1.30E+00	3.68E+00	5.64E+00	6.30E+00
Pb-198	3.47E+03	7.60E+00	4.73E-01	4.74E-01	1.31E+00	1.92E+00	2.05E+00
Pb-199	8.95E+03	1.94E+01	1.12E+00	1.13E+00	3.23E+00	5.10E+00	5.96E+00
Pb-200	1.52E+03	3.38E+00	2.16E-01	2.11E-01	5.45E-01	7.38E-01	7.62E-01
Pb-201	6.24E+03	1.36E+01	8.24E-01	8.33E-01	2.34E+00	3.57E+00	3.98E+00
Pb-201m	3.04E+03	6.61E+00	4.43E-01	4.09E-01	1.15E+00	1.78E+00	1.98E+00
Pb-202	9.06E-02	2.09E-04	2.20E-04	7.12E-06	7.12E-06	7.12E-06	7.12E-06
Pb-202+D	3.68E+03	8.07E+00	5.06E-01	5.08E-01	1.41E+00	2.11E+00	2.30E+00
Pb-202+E	3.68E+03	8.07E+00	5.06E-01	5.08E-01	1.41E+00	2.11E+00	2.30E+00
Pb-202m	1.69E+04	3.68E+01	2.21E+00	2.24E+00	6.41E+00	1.00E+01	1.14E+01
Pb-203	2.45E+03	5.38E+00	3.36E-01	3.36E-01	9.19E-01	1.32E+00	1.39E+00
Pb-204m	1.77E+04	3.83E+01	2.29E+00	2.32E+00	6.63E+00	1.04E+01	1.19E+01
Pb-205	9.19E-02	2.13E-04	2.22E-04	7.21E-06	7.21E-06	7.21E-06	7.21E-06
Pb-209	1.87E+01	2.09E-02	3.73E-03	2.95E-04	5.96E-04	7.42E-04	7.53E-04
Pb-210	8.80E+00	2.04E-02	2.54E-03	1.33E-03	2.05E-03	2.09E-03	2.09E-03
Pb-211	6.01E+02	1.25E+00	1.26E-01	7.75E-02	2.13E-01	3.29E-01	3.68E-01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Pb-212	1.14E+03	2.50E+00	1.54E-01	1.55E-01	4.26E-01	6.05E-01	6.31E-01
Pb-214	2.07E+03	4.50E+00	2.84E-01	2.80E-01	7.90E-01	1.17E+00	1.26E+00
Pd-100	6.80E+02	1.53E+00	1.17E-01	9.55E-02	2.19E-01	2.63E-01	2.63E-01
Pd-101	2.76E+03	6.01E+00	3.75E-01	3.68E-01	1.05E+00	1.62E+00	1.82E+00
Pd-103	9.88E+00	2.32E-02	8.95E-03	1.42E-03	1.65E-03	1.83E-03	1.87E-03
Pd-107	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-109	7.85E+01	1.29E-01	4.35E-02	7.21E-03	1.42E-02	1.76E-02	1.80E-02
Pd-109m	8.57E+02	1.89E+00	1.17E-01	1.17E-01	3.25E-01	4.63E-01	4.78E-01
Pd-111	5.40E+02	1.05E+00	1.71E-01	7.21E-02	1.78E-01	2.71E-01	3.10E-01
Pd-112	5.01E+00	8.09E-03	2.60E-03	3.12E-04	3.33E-04	3.40E-04	3.40E-04
Pd-114	2.78E+02	5.40E-01	9.77E-02	3.53E-02	8.89E-02	1.26E-01	1.31E-01
Pd-96	1.22E+04	2.63E+01	1.61E+00	1.60E+00	4.58E+00	7.14E+00	8.07E+00
Pd-97	2.09E+04	4.54E+01	2.64E+00	2.63E+00	7.58E+00	1.21E+01	1.42E+01
Pd-98	3.29E+03	7.19E+00	4.47E-01	4.41E-01	1.23E+00	1.86E+00	2.07E+00
Pd-99	1.10E+04	2.39E+01	1.45E+00	1.42E+00	4.05E+00	6.33E+00	7.25E+00
Pm-136	2.34E+04	5.02E+01	3.24E+00	3.16E+00	8.91E+00	1.38E+01	1.54E+01
Pm-137m	1.50E+04	3.25E+01	2.09E+00	2.02E+00	5.68E+00	8.70E+00	9.68E+00
Pm-139	8.01E+03	1.73E+01	1.17E+00	1.09E+00	3.04E+00	4.71E+00	5.25E+00
Pm-140	9.21E+03	1.96E+01	1.38E+00	1.27E+00	3.53E+00	5.42E+00	6.01E+00
Pm-140m	2.60E+04	5.62E+01	3.47E+00	3.44E+00	9.79E+00	1.53E+01	1.74E+01
Pm-141	6.26E+03	1.35E+01	8.88E-01	8.33E-01	2.35E+00	3.66E+00	4.13E+00
Pm-142	7.38E+03	1.58E+01	1.11E+00	1.01E+00	2.82E+00	4.33E+00	4.82E+00
Pm-143	2.52E+03	5.47E+00	3.47E-01	3.36E-01	9.41E-01	1.47E+00	1.66E+00
Pm-144	1.30E+04	2.82E+01	1.74E+00	1.75E+00	4.99E+00	7.73E+00	8.67E+00
Pm-145	1.03E+02	2.39E-01	3.09E-02	1.58E-02	2.24E-02	2.28E-02	2.28E-02
Pm-146	6.22E+03	1.35E+01	8.38E-01	8.37E-01	2.37E+00	3.68E+00	4.11E+00
Pm-147	1.62E+00	1.80E-03	3.28E-05	1.89E-05	3.68E-05	4.30E-05	4.32E-05
Pm-148	5.16E+03	1.11E+01	7.14E-01	6.50E-01	1.85E+00	2.97E+00	3.49E+00
Pm-148m	1.68E+04	3.64E+01	2.22E+00	2.24E+00	6.43E+00	9.99E+00	1.12E+01
Pm-149	1.42E+02	2.63E-01	4.84E-02	1.58E-02	4.17E-02	6.15E-02	6.59E-02
Pm-150	1.30E+04	2.80E+01	1.68E+00	1.64E+00	4.71E+00	7.51E+00	8.82E+00
Pm-151	2.69E+03	5.83E+00	3.80E-01	3.62E-01	1.02E+00	1.52E+00	1.65E+00
Pm-152	2.71E+03	5.68E+00	4.72E-01	3.57E-01	9.58E-01	1.49E+00	1.74E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Pm-152m	1.32E+04	2.86E+01	1.75E+00	1.69E+00	4.82E+00	7.57E+00	8.74E+00
Pm-153	6.35E+02	1.31E+00	1.73E-01	8.65E-02	2.09E-01	2.82E-01	2.91E-01
Pm-154	1.63E+04	3.51E+01	1.99E+00	1.94E+00	5.64E+00	9.21E+00	1.12E+01
Pm-154m	1.59E+04	3.44E+01	2.05E+00	1.98E+00	5.68E+00	9.06E+00	1.07E+01
Po-203	1.41E+04	3.06E+01	1.78E+00	1.80E+00	5.14E+00	8.13E+00	9.47E+00
Po-204	9.64E+03	2.09E+01	1.26E+00	1.27E+00	3.57E+00	5.49E+00	6.20E+00
Po-205	1.37E+04	2.97E+01	1.72E+00	1.74E+00	4.99E+00	7.88E+00	9.19E+00
Po-206	9.96E+03	2.17E+01	1.30E+00	1.32E+00	3.74E+00	5.77E+00	6.52E+00
Po-207	1.09E+04	2.37E+01	1.40E+00	1.42E+00	4.03E+00	6.35E+00	7.32E+00
Po-208	1.75E-01	3.81E-04	2.34E-05	2.35E-05	6.63E-05	1.01E-04	1.12E-04
Po-209	5.16E+01	1.12E-01	6.75E-03	6.82E-03	1.92E-02	2.95E-02	3.33E-02
Po-210	8.31E-02	1.80E-04	1.08E-05	1.09E-05	3.14E-05	4.93E-05	5.64E-05
Po-211	6.97E+01	1.51E-01	9.07E-03	9.19E-03	2.63E-02	4.13E-02	4.71E-02
Po-212	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-212m	7.45E+02	1.62E+00	7.90E-02	8.28E-02	2.43E-01	4.07E-01	5.21E-01
Po-213	3.19E-01	6.93E-04	4.17E-05	4.22E-05	1.21E-04	1.91E-04	2.17E-04
Po-214	7.10E-01	1.54E-03	9.20E-05	9.34E-05	2.67E-04	4.22E-04	4.80E-04
Po-215	1.46E+00	3.18E-03	1.96E-04	2.00E-04	5.70E-04	8.67E-04	9.45E-04
Po-216	1.31E-01	2.84E-04	1.70E-05	1.72E-05	4.93E-05	7.77E-05	8.87E-05
Po-218	4.89E-04	5.34E-07	7.77E-09	4.33E-09	8.11E-09	9.23E-09	9.23E-09
Pr-134	2.69E+04	5.83E+01	3.60E+00	3.57E+00	1.01E+01	1.58E+01	1.79E+01
Pr-134m	2.02E+04	4.37E+01	2.68E+00	2.62E+00	7.45E+00	1.17E+01	1.36E+01
Pr-135	7.27E+03	1.57E+01	1.04E+00	9.79E-01	2.75E+00	4.22E+00	4.71E+00
Pr-136	1.86E+04	4.02E+01	2.43E+00	2.39E+00	6.86E+00	1.08E+01	1.25E+01
Pr-137	3.03E+03	6.54E+00	4.34E-01	4.05E-01	1.14E+00	1.76E+00	1.98E+00
Pr-138	6.97E+03	1.50E+01	1.05E+00	9.60E-01	2.67E+00	4.11E+00	4.54E+00
Pr-138m	2.11E+04	4.58E+01	2.75E+00	2.76E+00	7.90E+00	1.24E+01	1.42E+01
Pr-139	9.53E+02	2.07E+00	1.45E-01	1.28E-01	3.49E-01	5.36E-01	6.00E-01
Pr-140	4.56E+03	9.84E+00	6.85E-01	6.24E-01	1.75E+00	2.69E+00	2.97E+00
Pr-142	6.52E+02	1.30E+00	1.72E-01	8.16E-02	2.09E-01	3.33E-01	4.02E-01
Pr-142m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-143	3.64E+01	4.15E-02	2.43E-02	1.54E-03	2.39E-03	2.88E-03	2.93E-03
Pr-144	4.69E+02	8.31E-01	1.88E-01	6.82E-02	1.43E-01	2.11E-01	2.47E-01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Pr-144m	4.71E+01	1.08E-01	1.27E-02	6.91E-03	1.18E-02	1.50E-02	1.65E-02
Pr-145	2.56E+02	4.60E-01	1.15E-01	3.29E-02	7.57E-02	1.12E-01	1.27E-01
Pr-146	9.19E+03	1.98E+01	1.24E+00	1.15E+00	3.27E+00	5.25E+00	6.22E+00
Pr-147	4.07E+03	8.76E+00	6.43E-01	5.38E-01	1.48E+00	2.28E+00	2.58E+00
Pr-148	9.02E+03	1.92E+01	1.25E+00	1.15E+00	3.23E+00	5.14E+00	6.01E+00
Pr-148m	8.16E+03	1.75E+01	1.23E+00	1.11E+00	3.10E+00	4.74E+00	5.27E+00
Pt-184	5.64E+03	1.24E+01	7.81E-01	7.71E-01	2.09E+00	3.06E+00	3.31E+00
Pt-186	5.59E+03	1.22E+01	7.52E-01	7.51E-01	2.11E+00	3.21E+00	3.59E+00
Pt-187	4.97E+03	1.09E+01	6.75E-01	6.65E-01	1.83E+00	2.76E+00	3.06E+00
Pt-188	1.50E+03	3.33E+00	2.15E-01	2.07E-01	5.42E-01	7.51E-01	7.85E-01
Pt-189	3.85E+03	8.42E+00	5.25E-01	5.17E-01	1.41E+00	2.11E+00	2.35E+00
Pt-190	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt-191	2.20E+03	4.86E+00	3.16E-01	3.04E-01	8.03E-01	1.15E+00	1.23E+00
Pt-193	5.29E-02	1.23E-04	1.25E-04	4.37E-06	4.37E-06	4.37E-06	4.37E-06
Pt-193m	6.87E+01	1.50E-01	1.06E-02	9.13E-03	1.94E-02	2.19E-02	2.19E-02
Pt-195m	4.58E+02	1.03E+00	7.25E-02	6.43E-02	1.42E-01	1.66E-01	1.66E-01
Pt-197	1.85E+02	3.92E-01	2.83E-02	2.35E-02	5.73E-02	7.29E-02	7.42E-02
Pt-197m	6.09E+02	1.32E+00	8.50E-02	8.11E-02	2.09E-01	2.90E-01	3.04E-01
Pt-199	1.72E+03	3.68E+00	2.88E-01	2.32E-01	6.46E-01	9.84E-01	1.08E+00
Pt-200	4.35E+02	9.51E-01	6.31E-02	5.87E-02	1.48E-01	1.96E-01	2.02E-01
Pt-202	9.40E+01	1.13E-01	9.11E-02	1.16E-02	1.58E-02	1.86E-02	1.91E-02
Pt-202+D	1.76E+03	3.57E+00	4.20E-01	2.34E-01	6.09E-01	9.41E-01	1.08E+00
Pt-202+E	1.76E+03	3.57E+00	4.20E-01	2.34E-01	6.09E-01	9.41E-01	1.08E+00
Pu-232	4.32E+02	9.64E-01	6.21E-02	5.98E-02	1.51E-01	1.92E-01	1.92E-01
Pu-234	4.67E+02	1.04E+00	6.75E-02	6.46E-02	1.64E-01	2.09E-01	2.09E-01
Pu-235	6.46E+02	1.44E+00	9.33E-02	8.91E-02	2.28E-01	2.99E-01	3.04E-01
Pu-236	8.09E-01	1.87E-03	7.82E-04	1.09E-04	1.52E-04	1.70E-04	1.72E-04
Pu-237	3.34E+02	7.47E-01	4.99E-02	4.63E-02	1.16E-01	1.47E-01	1.47E-01
Pu-238	6.28E-01	1.46E-03	7.00E-04	8.37E-05	1.03E-04	1.11E-04	1.11E-04
Pu-239	7.04E-01	1.59E-03	3.58E-04	9.66E-05	2.02E-04	2.67E-04	2.76E-04
Pu-239+D	7.04E-01	1.59E-03	3.58E-04	9.66E-05	2.02E-04	2.67E-04	2.76E-04
Pu-239+E	7.04E-01	1.59E-03	3.58E-04	9.66E-05	2.02E-04	2.67E-04	2.76E-04
Pu-240	6.15E-01	1.43E-03	6.64E-04	8.24E-05	1.04E-04	1.12E-04	1.13E-04

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Pu-241	1.15E-02	2.56E-05	1.67E-06	1.59E-06	4.03E-06	5.21E-06	5.23E-06
Pu-242	1.20E+00	2.67E-03	6.50E-04	1.51E-04	3.21E-04	4.78E-04	5.64E-04
Pu-243	1.80E+02	3.89E-01	2.65E-02	2.35E-02	5.64E-02	7.04E-02	7.15E-02
Pu-244	1.81E+02	3.90E-01	2.24E-02	2.17E-02	6.24E-02	1.01E-01	1.23E-01
Pu-244+D	3.01E+03	6.46E+00	4.68E-01	3.96E-01	1.11E+00	1.74E+00	1.98E+00
Pu-244+E	3.01E+03	6.46E+00	4.68E-01	3.96E-01	1.11E+00	1.74E+00	1.98E+00
Pu-245	3.38E+03	7.32E+00	4.57E-01	4.48E-01	1.27E+00	1.94E+00	2.17E+00
Pu-246	1.01E+03	2.24E+00	1.46E-01	1.40E-01	3.70E-01	5.10E-01	5.23E-01
Ra-219	1.38E+03	3.01E+00	1.86E-01	1.89E-01	5.29E-01	7.83E-01	8.35E-01
Ra-219+D	1.38E+03	3.01E+00	1.86E-01	1.89E-01	5.29E-01	7.83E-01	8.35E-01
Ra-219+E	1.38E+03	3.01E+00	1.86E-01	1.89E-01	5.29E-01	7.83E-01	8.35E-01
Ra-220	3.87E+01	8.42E-02	5.21E-03	5.31E-03	1.51E-02	2.32E-02	2.52E-02
Ra-221	2.75E+02	6.05E-01	3.82E-02	3.75E-02	9.90E-02	1.33E-01	1.36E-01
Ra-221+D	2.75E+02	6.05E-01	3.82E-02	3.75E-02	9.92E-02	1.33E-01	1.36E-01
Ra-221+E	2.75E+02	6.05E-01	3.82E-02	3.75E-02	9.92E-02	1.33E-01	1.36E-01
Ra-222	7.55E+01	1.65E-01	1.01E-02	1.03E-02	2.95E-02	4.41E-02	4.71E-02
Ra-223	1.07E+03	2.37E+00	1.48E-01	1.48E-01	3.96E-01	5.55E-01	5.79E-01
Ra-223+D	1.55E+03	3.42E+00	2.13E-01	2.13E-01	5.83E-01	8.33E-01	8.78E-01
Ra-223+E	1.55E+03	3.42E+00	2.13E-01	2.13E-01	5.83E-01	8.33E-01	8.78E-01
Ra-224	8.42E+01	1.84E-01	1.12E-02	1.15E-02	3.25E-02	4.74E-02	4.95E-02
Ra-224+D	8.97E+01	1.96E-01	1.19E-02	1.22E-02	3.46E-02	5.06E-02	5.31E-02
Ra-224+E	8.97E+01	1.96E-01	1.19E-02	1.22E-02	3.46E-02	5.06E-02	5.31E-02
Ra-225	4.61E+01	1.01E-01	1.29E-02	6.46E-03	8.87E-03	8.91E-03	8.91E-03
Ra-226	5.81E+01	1.28E-01	7.81E-03	7.92E-03	2.19E-02	3.10E-02	3.18E-02
Ra-226+D	1.54E+04	3.34E+01	1.95E+00	1.92E+00	5.53E+00	8.84E+00	1.04E+01
Ra-226+E	1.54E+04	3.34E+01	1.95E+00	1.92E+00	5.53E+00	8.84E+00	1.04E+01
Ra-227	1.19E+03	2.56E+00	1.98E-01	1.59E-01	4.43E-01	6.59E-01	7.10E-01
Ra-228	5.40E-01	1.27E-03	8.58E-04	6.59E-05	6.58E-05	6.58E-05	6.58E-05
Ra-228+D	7.49E+03	1.62E+01	9.82E-01	9.62E-01	2.76E+00	4.35E+00	5.04E+00
Ra-228+E	7.49E+03	1.62E+01	9.82E-01	9.62E-01	2.76E+00	4.35E+00	5.04E+00
Ra-230	6.22E+02	1.35E+00	8.81E-02	8.37E-02	2.26E-01	3.25E-01	3.44E-01
Rb-77	1.32E+04	2.86E+01	1.89E+00	1.79E+00	5.01E+00	7.71E+00	8.61E+00
Rb-78	3.81E+04	8.24E+01	4.29E+00	4.37E+00	1.27E+01	2.09E+01	2.60E+01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Rb-78m	2.84E+04	6.13E+01	3.64E+00	3.61E+00	1.03E+01	1.64E+01	1.92E+01
Rb-79	1.22E+04	2.63E+01	1.71E+00	1.65E+00	4.67E+00	7.15E+00	7.92E+00
Rb-80	1.03E+04	2.22E+01	1.55E+00	1.43E+00	3.98E+00	6.11E+00	6.74E+00
Rb-81	4.20E+03	9.13E+00	5.73E-01	5.70E-01	1.63E+00	2.50E+00	2.76E+00
Rb-81m	2.00E+02	4.35E-01	2.84E-02	2.65E-02	7.32E-02	1.11E-01	1.24E-01
Rb-82	9.51E+03	2.04E+01	1.41E+00	1.30E+00	3.66E+00	5.62E+00	6.22E+00
Rb-82m	2.50E+04	5.44E+01	3.20E+00	3.27E+00	9.38E+00	1.48E+01	1.70E+01
Rb-83	4.03E+03	8.76E+00	5.42E-01	5.49E-01	1.57E+00	2.41E+00	2.67E+00
Rb-84	7.71E+03	1.67E+01	1.02E+00	1.02E+00	2.91E+00	4.58E+00	5.19E+00
Rb-84m	3.14E+03	6.84E+00	4.19E-01	4.28E-01	1.22E+00	1.82E+00	1.94E+00
Rb-86	9.12E+02	1.89E+00	1.93E-01	1.16E-01	3.16E-01	4.97E-01	5.81E-01
Rb-86m	4.56E+03	9.90E+00	6.11E-01	6.20E-01	1.77E+00	2.73E+00	3.03E+00
Rb-87	6.67E+00	7.29E-03	9.22E-05	5.73E-05	1.15E-04	1.34E-04	1.35E-04
Rb-88	6.30E+03	1.33E+01	8.74E-01	7.70E-01	2.13E+00	3.47E+00	4.28E+00
Rb-89	2.04E+04	4.41E+01	2.48E+00	2.47E+00	7.10E+00	1.16E+01	1.41E+01
Rb-90	2.02E+04	4.35E+01	2.15E+00	2.15E+00	6.20E+00	1.05E+01	1.38E+01
Rb-90m	3.04E+04	6.56E+01	3.45E+00	3.47E+00	1.01E+01	1.67E+01	2.09E+01
Re-178	1.53E+04	3.31E+01	1.85E+00	1.84E+00	5.29E+00	8.48E+00	1.02E+01
Re-179	9.15E+03	2.00E+01	1.17E+00	1.18E+00	3.36E+00	5.23E+00	5.98E+00
Re-180	1.02E+04	2.20E+01	1.32E+00	1.33E+00	3.75E+00	5.88E+00	6.76E+00
Re-181	6.58E+03	1.43E+01	8.77E-01	8.78E-01	2.45E+00	3.74E+00	4.17E+00
Re-182	1.51E+04	3.29E+01	1.93E+00	1.94E+00	5.47E+00	8.52E+00	9.79E+00
Re-182m	1.04E+04	2.28E+01	1.31E+00	1.32E+00	3.74E+00	5.90E+00	6.95E+00
Re-183	1.03E+03	2.32E+00	1.60E-01	1.45E-01	3.47E-01	4.48E-01	4.58E-01
Re-184	7.45E+03	1.62E+01	9.76E-01	9.81E-01	2.76E+00	4.32E+00	4.91E+00
Re-184m	3.06E+03	6.69E+00	4.11E-01	4.09E-01	1.12E+00	1.68E+00	1.87E+00
Re-186	1.86E+02	3.72E-01	5.07E-02	2.24E-02	5.44E-02	7.06E-02	7.17E-02
Re-186m	7.96E+01	1.82E-01	1.53E-02	1.16E-02	2.22E-02	2.43E-02	2.43E-02
Re-186m+D	2.65E+02	5.53E-01	6.60E-02	3.40E-02	7.66E-02	9.49E-02	9.60E-02
Re-186m+E	2.65E+02	5.53E-01	6.60E-02	3.40E-02	7.66E-02	9.49E-02	9.60E-02
Re-187	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-188	6.15E+02	1.23E+00	1.73E-01	8.28E-02	2.07E-01	3.03E-01	3.29E-01
Re-188m	4.22E+02	9.56E-01	6.94E-02	6.03E-02	1.30E-01	1.50E-01	1.50E-01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Re-189	4.76E+02	1.01E+00	8.35E-02	6.20E-02	1.70E-01	2.47E-01	2.60E-01
Re-190	1.13E+04	2.45E+01	1.57E+00	1.51E+00	4.30E+00	6.61E+00	7.34E+00
Re-190m	7.71E+03	1.67E+01	1.07E+00	1.04E+00	2.93E+00	4.48E+00	4.95E+00
Rh-100	2.47E+04	5.32E+01	2.88E+00	2.97E+00	8.61E+00	1.40E+01	1.70E+01
Rh-100m	3.79E+02	8.28E-01	6.02E-02	4.93E-02	1.33E-01	2.05E-01	2.35E-01
Rh-101	2.19E+03	4.82E+00	3.00E-01	2.99E-01	8.28E-01	1.17E+00	1.21E+00
Rh-101m	2.26E+03	4.93E+00	3.10E-01	3.10E-01	8.82E-01	1.32E+00	1.41E+00
Rh-102	4.18E+03	9.08E+00	5.77E-01	5.64E-01	1.61E+00	2.48E+00	2.76E+00
Rh-102m	1.82E+04	3.94E+01	2.37E+00	2.41E+00	6.89E+00	1.08E+01	1.23E+01
Rh-103m	1.05E+00	2.47E-03	9.66E-04	1.52E-04	1.58E-04	1.58E-04	1.58E-04
Rh-104	2.62E+02	4.22E-01	1.50E-01	3.94E-02	7.53E-02	1.04E-01	1.13E-01
Rh-104m	1.71E+02	3.90E-01	4.01E-02	2.50E-02	4.61E-02	5.12E-02	5.17E-02
Rh-105	6.48E+02	1.40E+00	8.63E-02	8.72E-02	2.48E-01	3.72E-01	3.96E-01
Rh-106	2.00E+03	4.11E+00	4.04E-01	2.80E-01	7.34E-01	1.12E+00	1.25E+00
Rh-106m	2.47E+04	5.34E+01	3.14E+00	3.19E+00	9.15E+00	1.45E+01	1.67E+01
Rh-107	2.63E+03	5.70E+00	3.95E-01	3.57E-01	1.01E+00	1.52E+00	1.63E+00
Rh-108	3.01E+03	6.24E+00	5.60E-01	4.30E-01	1.13E+00	1.71E+00	1.89E+00
Rh-109	2.58E+03	5.51E+00	4.57E-01	3.57E-01	9.81E-01	1.45E+00	1.55E+00
Rh-94	3.38E+04	7.27E+01	4.33E+00	4.30E+00	1.22E+01	1.94E+01	2.30E+01
Rh-95	2.26E+04	4.89E+01	2.86E+00	2.84E+00	8.16E+00	1.31E+01	1.54E+01
Rh-95m	8.01E+03	1.74E+01	9.63E-01	9.77E-01	2.82E+00	4.52E+00	5.42E+00
Rh-96	3.38E+04	7.34E+01	4.41E+00	4.41E+00	1.26E+01	2.00E+01	2.30E+01
Rh-96m	1.13E+04	2.43E+01	1.45E+00	1.43E+00	4.09E+00	6.54E+00	7.66E+00
Rh-97	1.23E+04	2.67E+01	1.66E+00	1.62E+00	4.63E+00	7.25E+00	8.22E+00
Rh-97m	1.98E+04	4.32E+01	2.30E+00	2.35E+00	6.86E+00	1.12E+01	1.37E+01
Rh-98	1.56E+04	3.36E+01	2.16E+00	2.07E+00	5.90E+00	9.19E+00	1.04E+01
Rh-99	4.52E+03	9.86E+00	6.11E-01	6.11E-01	1.73E+00	2.63E+00	2.91E+00
Rh-99m	5.40E+03	1.17E+01	7.11E-01	7.17E-01	2.05E+00	3.18E+00	3.55E+00
Rn-207	8.24E+03	1.79E+01	1.11E+00	1.10E+00	3.12E+00	4.82E+00	5.36E+00
Rn-209	1.02E+04	2.22E+01	1.30E+00	1.32E+00	3.75E+00	5.88E+00	6.76E+00
Rn-210	5.06E+02	1.10E+00	6.67E-02	6.74E-02	1.91E-01	2.93E-01	3.29E-01
Rn-211	1.61E+04	3.49E+01	2.03E+00	2.07E+00	5.94E+00	9.40E+00	1.09E+01
Rn-212	2.86E+00	6.20E-03	3.78E-04	3.83E-04	1.09E-03	1.71E-03	1.92E-03

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Rn-215	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-216	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-217	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-218	6.35E+00	1.38E-02	8.46E-04	8.57E-04	2.45E-03	3.81E-03	4.26E-03
Rn-219	4.78E+02	1.05E+00	6.43E-02	6.58E-02	1.86E-01	2.78E-01	2.97E-01
Rn-219+D	4.80E+02	1.05E+00	6.45E-02	6.59E-02	1.87E-01	2.78E-01	2.99E-01
Rn-219+E	4.80E+02	1.05E+00	6.45E-02	6.59E-02	1.87E-01	2.78E-01	2.99E-01
Rn-220	5.25E+00	1.14E-02	7.03E-04	7.14E-04	2.04E-03	3.14E-03	3.47E-03
Rn-222	3.23E+00	7.02E-03	4.35E-04	4.41E-04	1.26E-03	1.94E-03	2.13E-03
Rn-222+D	3.23E+00	7.02E-03	4.35E-04	4.41E-04	1.26E-03	1.94E-03	2.13E-03
Rn-222+E	3.23E+00	7.02E-03	4.35E-04	4.41E-04	1.26E-03	1.94E-03	2.13E-03
Rn-223	2.91E+03	6.26E+00	4.44E-01	3.85E-01	1.08E+00	1.66E+00	1.86E+00
Ru-103	4.13E+03	8.97E+00	5.54E-01	5.62E-01	1.60E+00	2.47E+00	2.71E+00
Ru-105	6.33E+03	1.37E+01	8.74E-01	8.44E-01	2.41E+00	3.74E+00	4.18E+00
Ru-106	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-106+D	2.00E+03	4.11E+00	4.04E-01	2.80E-01	7.34E-01	1.12E+00	1.25E+00
Ru-106+E	2.00E+03	4.11E+00	4.04E-01	2.80E-01	7.34E-01	1.12E+00	1.25E+00
Ru-107	3.16E+03	6.67E+00	5.17E-01	4.15E-01	1.15E+00	1.79E+00	2.05E+00
Ru-108	5.45E+02	1.14E+00	1.23E-01	7.14E-02	1.89E-01	2.60E-01	2.65E-01
Ru-92	1.76E+04	3.83E+01	2.34E+00	2.30E+00	6.54E+00	1.01E+01	1.15E+01
Ru-94	4.26E+03	9.27E+00	5.67E-01	5.72E-01	1.63E+00	2.52E+00	2.80E+00
Ru-95	1.06E+04	2.30E+01	1.36E+00	1.37E+00	3.94E+00	6.22E+00	7.14E+00
Ru-97	1.86E+03	4.07E+00	2.54E-01	2.54E-01	7.17E-01	1.05E+00	1.10E+00
S-35	5.73E-01	6.35E-04	1.55E-05	6.97E-06	1.13E-05	1.22E-05	1.22E-05
S-37	2.88E+04	6.24E+01	2.90E+00	2.97E+00	8.80E+00	1.51E+01	2.00E+01
S-38	1.58E+04	3.42E+01	1.78E+00	1.81E+00	5.29E+00	8.82E+00	1.11E+01
Sb-111	1.26E+04	2.73E+01	1.81E+00	1.72E+00	4.82E+00	7.40E+00	8.20E+00
Sb-113	1.07E+04	2.32E+01	1.51E+00	1.45E+00	4.09E+00	6.31E+00	7.01E+00
Sb-114	2.37E+04	5.12E+01	3.05E+00	3.03E+00	8.65E+00	1.38E+01	1.61E+01
Sb-115	7.36E+03	1.60E+01	1.02E+00	9.99E-01	2.84E+00	4.37E+00	4.84E+00
Sb-116	2.02E+04	4.35E+01	2.51E+00	2.50E+00	7.23E+00	1.16E+01	1.38E+01
Sb-116m	2.67E+04	5.81E+01	3.38E+00	3.42E+00	9.83E+00	1.56E+01	1.82E+01
Sb-117	1.35E+03	2.97E+00	1.94E-01	1.85E-01	5.04E-01	7.14E-01	7.43E-01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Sb-118	6.82E+03	1.47E+01	1.01E+00	9.32E-01	2.62E+00	4.03E+00	4.46E+00
Sb-118m	2.26E+04	4.88E+01	2.82E+00	2.86E+00	8.22E+00	1.31E+01	1.53E+01
Sb-119	2.82E+01	6.63E-02	1.82E-02	4.35E-03	4.50E-03	4.48E-03	4.48E-03
Sb-120	3.74E+03	8.07E+00	5.46E-01	5.08E-01	1.43E+00	2.20E+00	2.45E+00
Sb-120m	2.11E+04	4.60E+01	2.67E+00	2.71E+00	7.73E+00	1.23E+01	1.43E+01
Sb-122	3.81E+03	8.20E+00	5.70E-01	5.12E-01	1.45E+00	2.24E+00	2.50E+00
Sb-122m	3.31E+02	7.55E-01	6.87E-02	4.80E-02	9.32E-02	1.03E-01	1.03E-01
Sb-124	1.64E+04	3.55E+01	2.02E+00	2.04E+00	5.90E+00	9.51E+00	1.13E+01
Sb-124m	3.70E+03	8.03E+00	5.03E-01	4.99E-01	1.43E+00	2.20E+00	2.47E+00
Sb-124n	1.05E-03	2.47E-06	6.65E-07	1.63E-07	1.68E-07	1.68E-07	1.68E-07
Sb-125	3.55E+03	7.70E+00	4.84E-01	4.82E-01	1.37E+00	2.09E+00	2.32E+00
Sb-126	2.34E+04	5.06E+01	3.10E+00	3.12E+00	8.91E+00	1.39E+01	1.56E+01
Sb-126m	1.31E+04	2.84E+01	1.81E+00	1.76E+00	5.02E+00	7.79E+00	8.72E+00
Sb-127	5.87E+03	1.27E+01	7.95E-01	7.85E-01	2.24E+00	3.47E+00	3.89E+00
Sb-128	2.63E+04	5.70E+01	3.48E+00	3.49E+00	9.99E+00	1.56E+01	1.76E+01
Sb-128m	1.63E+04	3.53E+01	2.24E+00	2.17E+00	6.18E+00	9.64E+00	1.09E+01
Sb-129	1.28E+04	2.76E+01	1.62E+00	1.63E+00	4.69E+00	7.45E+00	8.70E+00
Sb-130	2.82E+04	6.09E+01	3.68E+00	3.68E+00	1.05E+01	1.65E+01	1.89E+01
Sb-130m	2.35E+04	5.08E+01	3.11E+00	3.04E+00	8.72E+00	1.38E+01	1.59E+01
Sb-131	1.84E+04	3.98E+01	2.29E+00	2.30E+00	6.61E+00	1.06E+01	1.26E+01
Sb-133	2.48E+04	5.36E+01	2.97E+00	2.99E+00	8.67E+00	1.41E+01	1.71E+01
Sc-42m	3.70E+04	8.00E+01	4.71E+00	4.69E+00	1.35E+01	2.15E+01	2.52E+01
Sc-43	8.24E+03	1.78E+01	1.15E+00	1.12E+00	3.19E+00	4.89E+00	5.40E+00
Sc-44	1.84E+04	4.00E+01	2.43E+00	2.39E+00	6.87E+00	1.09E+01	1.24E+01
Sc-44m	2.28E+03	4.97E+00	2.99E-01	3.08E-01	8.78E-01	1.31E+00	1.41E+00
Sc-46	1.75E+04	3.79E+01	2.20E+00	2.24E+00	6.44E+00	1.03E+01	1.20E+01
Sc-47	8.78E+02	1.92E+00	1.17E-01	1.19E-01	3.27E-01	4.54E-01	4.63E-01
Sc-48	2.95E+04	6.39E+01	3.64E+00	3.72E+00	1.07E+01	1.72E+01	2.04E+01
Sc-49	1.33E+02	1.72E-01	1.18E-01	1.87E-02	2.73E-02	3.38E-02	3.61E-02
Sc-50	2.88E+04	6.20E+01	3.62E+00	3.57E+00	1.03E+01	1.66E+01	1.98E+01
Se-70	5.87E+03	1.28E+01	8.14E-01	8.00E-01	2.26E+00	3.44E+00	3.77E+00
Se-71	1.38E+04	2.99E+01	1.94E+00	1.85E+00	5.21E+00	8.09E+00	9.10E+00
Se-72	1.14E+02	2.63E-01	2.84E-02	1.74E-02	2.67E-02	2.71E-02	2.71E-02

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Se-73	8.99E+03	1.96E+01	1.26E+00	1.23E+00	3.46E+00	5.27E+00	5.75E+00
Se-73m	2.20E+03	4.76E+00	3.12E-01	2.99E-01	8.46E-01	1.30E+00	1.43E+00
Se-75	3.10E+03	6.80E+00	4.16E-01	4.24E-01	1.19E+00	1.73E+00	1.81E+00
Se-77m	6.91E+02	1.52E+00	9.21E-02	9.40E-02	2.60E-01	3.61E-01	3.68E-01
Se-79	5.70E-01	6.31E-04	1.70E-05	7.45E-06	1.19E-05	1.28E-05	1.27E-05
Se-79m	6.72E+01	1.50E-01	1.00E-02	9.25E-03	2.30E-02	2.86E-02	2.86E-02
Se-81	1.52E+02	2.48E-01	9.38E-02	1.86E-02	3.89E-02	5.47E-02	5.90E-02
Se-81m	1.03E+02	2.30E-01	1.48E-02	1.42E-02	3.61E-02	4.60E-02	4.61E-02
Se-83	2.32E+04	5.01E+01	2.86E+00	2.90E+00	8.37E+00	1.33E+01	1.57E+01
Se-83m	8.93E+03	1.91E+01	1.22E+00	1.12E+00	3.19E+00	5.12E+00	6.05E+00
Se-84	3.55E+03	7.64E+00	5.41E-01	4.84E-01	1.37E+00	2.07E+00	2.24E+00
Si-31	9.02E+01	1.15E-01	8.33E-02	9.64E-03	1.47E-02	1.85E-02	1.98E-02
Si-32	1.96E+00	2.13E-03	3.36E-05	1.77E-05	3.21E-05	3.59E-05	3.59E-05
Si-32+D	1.02E+02	1.23E-01	9.96E-02	1.24E-02	1.69E-02	1.98E-02	2.04E-02
Si-32+E	1.02E+02	1.23E-01	9.96E-02	1.24E-02	1.69E-02	1.98E-02	2.04E-02
Sm-139	1.24E+04	2.69E+01	1.73E+00	1.66E+00	4.71E+00	7.27E+00	8.13E+00
Sm-140	4.73E+03	1.03E+01	6.39E-01	6.18E-01	1.74E+00	2.71E+00	3.10E+00
Sm-141	1.21E+04	2.62E+01	1.64E+00	1.59E+00	4.52E+00	7.06E+00	8.03E+00
Sm-141m	1.67E+04	3.61E+01	2.17E+00	2.17E+00	6.18E+00	9.69E+00	1.11E+01
Sm-142	7.79E+02	1.70E+00	1.24E-01	1.07E-01	2.84E-01	4.26E-01	4.71E-01
Sm-143	4.41E+03	9.55E+00	6.56E-01	6.01E-01	1.68E+00	2.60E+00	2.88E+00
Sm-143m	5.81E+03	1.26E+01	7.72E-01	7.70E-01	2.20E+00	3.46E+00	3.92E+00
Sm-145	2.30E+02	5.34E-01	6.38E-02	3.53E-02	5.19E-02	5.32E-02	5.32E-02
Sm-146	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-151	4.95E-03	1.16E-05	4.45E-06	7.19E-07	7.25E-07	7.25E-07	7.25E-07
Sm-153	3.96E+02	8.69E-01	7.31E-02	5.38E-02	1.18E-01	1.45E-01	1.46E-01
Sm-155	8.28E+02	1.76E+00	1.81E-01	1.12E-01	2.76E-01	3.59E-01	3.66E-01
Sm-156	8.84E+02	1.94E+00	1.25E-01	1.20E-01	3.21E-01	4.48E-01	4.61E-01
Sm-157	3.57E+03	7.64E+00	5.65E-01	4.73E-01	1.31E+00	1.98E+00	2.19E+00
Sn-106	1.01E+04	2.19E+01	1.33E+00	1.34E+00	3.81E+00	5.92E+00	6.65E+00
Sn-108	5.53E+03	1.20E+01	7.48E-01	7.49E-01	2.13E+00	3.21E+00	3.51E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Sn-109	1.96E+04	4.26E+01	2.33E+00	2.39E+00	6.93E+00	1.12E+01	1.36E+01
Sn-110	2.26E+03	4.95E+00	3.13E-01	3.10E-01	8.80E-01	1.30E+00	1.38E+00
Sn-111	4.13E+03	8.95E+00	5.59E-01	5.38E-01	1.54E+00	2.41E+00	2.76E+00
Sn-113	6.44E+01	1.44E-01	1.99E-02	9.15E-03	2.04E-02	2.86E-02	2.97E-02
Sn-113m	1.91E+01	4.45E-02	1.09E-02	2.91E-03	3.46E-03	3.59E-03	3.59E-03
Sn-117m	1.15E+03	2.52E+00	1.64E-01	1.56E-01	4.22E-01	5.87E-01	6.00E-01
Sn-119m	1.72E+01	4.05E-02	1.15E-02	2.65E-03	2.75E-03	2.75E-03	2.75E-03
Sn-121	7.43E+00	8.14E-03	1.06E-04	6.99E-05	1.46E-04	1.75E-04	1.76E-04
Sn-121m	9.92E+00	2.09E-02	4.27E-03	1.28E-03	1.44E-03	1.45E-03	1.45E-03
Sn-121m+D	1.57E+01	2.73E-02	4.35E-03	1.34E-03	1.55E-03	1.58E-03	1.58E-03
Sn-121m+E	1.57E+01	2.73E-02	4.35E-03	1.34E-03	1.55E-03	1.58E-03	1.58E-03
Sn-123	1.31E+02	2.15E-01	7.66E-02	1.47E-02	3.18E-02	4.67E-02	5.31E-02
Sn-123m	1.16E+03	2.50E+00	2.05E-01	1.55E-01	4.20E-01	5.83E-01	5.96E-01
Sn-125	3.06E+03	6.52E+00	4.69E-01	3.90E-01	1.10E+00	1.75E+00	2.05E+00
Sn-125m	2.99E+03	6.39E+00	4.94E-01	4.07E-01	1.14E+00	1.71E+00	1.84E+00
Sn-126	3.40E+02	7.64E-01	5.63E-02	4.74E-02	1.09E-01	1.30E-01	1.30E-01
Sn-126+D	1.67E+04	3.62E+01	2.30E+00	2.24E+00	6.39E+00	9.86E+00	1.10E+01
Sn-126+E	1.67E+04	3.62E+01	2.30E+00	2.24E+00	6.39E+00	9.86E+00	1.10E+01
Sn-127	1.68E+04	3.64E+01	2.10E+00	2.11E+00	6.07E+00	9.73E+00	1.15E+01
Sn-127m	4.99E+03	1.07E+01	7.77E-01	6.71E-01	1.87E+00	2.90E+00	3.27E+00
Sn-128	4.71E+03	1.03E+01	6.63E-01	6.41E-01	1.80E+00	2.73E+00	3.01E+00
Sn-129	8.89E+03	1.91E+01	1.26E+00	1.17E+00	3.29E+00	5.19E+00	5.98E+00
Sn-130	7.77E+03	1.69E+01	1.07E+00	1.04E+00	2.93E+00	4.50E+00	5.01E+00
Sn-130m	7.85E+03	1.68E+01	1.13E+00	1.02E+00	2.84E+00	4.48E+00	5.19E+00
Sr-79	1.01E+04	2.17E+01	1.52E+00	1.40E+00	3.87E+00	5.88E+00	6.44E+00
Sr-80	3.59E+03	7.79E+00	4.83E-01	4.88E-01	1.39E+00	2.13E+00	2.35E+00
Sr-81	1.17E+04	2.52E+01	1.67E+00	1.59E+00	4.48E+00	6.86E+00	7.57E+00
Sr-82	8.84E-01	2.05E-03	1.78E-03	9.38E-05	9.38E-05	9.38E-05	9.38E-05
Sr-82+D	9.51E+03	2.04E+01	1.41E+00	1.30E+00	3.66E+00	5.62E+00	6.22E+00
Sr-82+E	9.51E+03	2.04E+01	1.41E+00	1.30E+00	3.66E+00	5.62E+00	6.22E+00
Sr-83	6.91E+03	1.50E+01	9.12E-01	9.12E-01	2.62E+00	4.09E+00	4.63E+00
Sr-85	4.09E+03	8.91E+00	5.52E-01	5.59E-01	1.59E+00	2.45E+00	2.71E+00
Sr-85m	1.76E+03	3.87E+00	2.34E-01	2.41E-01	6.80E-01	9.88E-01	1.03E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Sr-87m	2.63E+03	5.73E+00	3.54E-01	3.61E-01	1.03E+00	1.56E+00	1.68E+00
Sr-89	8.20E+01	9.83E-02	8.04E-02	9.04E-03	1.25E-02	1.48E-02	1.52E-02
Sr-90	1.84E+01	2.04E-02	1.92E-03	2.35E-04	5.08E-04	6.39E-04	6.46E-04
Sr-90+D	1.66E+02	2.04E-01	1.31E-01	2.37E-02	3.31E-02	3.92E-02	4.07E-02
Sr-90+E	1.66E+02	2.04E-01	1.31E-01	2.37E-02	3.31E-02	3.92E-02	4.07E-02
Sr-91	6.20E+03	1.33E+01	8.59E-01	8.03E-01	2.30E+00	3.62E+00	4.18E+00
Sr-92	1.20E+04	2.60E+01	1.43E+00	1.46E+00	4.24E+00	6.89E+00	8.29E+00
Sr-93	2.00E+04	4.32E+01	2.54E+00	2.50E+00	7.23E+00	1.15E+01	1.36E+01
Sr-94	1.29E+04	2.78E+01	1.64E+00	1.57E+00	4.56E+00	7.42E+00	8.95E+00
Ta-170	9.12E+03	1.96E+01	1.33E+00	1.25E+00	3.46E+00	5.29E+00	5.88E+00
Ta-172	1.46E+04	3.16E+01	1.89E+00	1.89E+00	5.34E+00	8.41E+00	9.73E+00
Ta-173	4.78E+03	1.04E+01	6.34E-01	6.18E-01	1.71E+00	2.65E+00	3.04E+00
Ta-174	8.33E+03	1.81E+01	1.10E+00	1.07E+00	3.03E+00	4.71E+00	5.42E+00
Ta-175	9.51E+03	2.07E+01	1.18E+00	1.19E+00	3.38E+00	5.34E+00	6.28E+00
Ta-176	2.00E+04	4.33E+01	2.34E+00	2.39E+00	6.93E+00	1.13E+01	1.37E+01
Ta-177	4.05E+02	9.15E-01	6.89E-02	5.79E-02	1.24E-01	1.52E-01	1.58E-01
Ta-178	8.82E+02	1.94E+00	1.27E-01	1.17E-01	2.95E-01	4.28E-01	4.89E-01
Ta-178m	9.17E+03	2.02E+01	1.26E+00	1.26E+00	3.49E+00	5.16E+00	5.49E+00
Ta-179	1.30E+02	2.97E-01	2.48E-02	1.91E-02	3.55E-02	3.77E-02	3.77E-02
Ta-180	2.65E+02	6.01E-01	4.89E-02	3.83E-02	7.42E-02	8.13E-02	8.13E-02
Ta-182	1.12E+04	2.43E+01	1.39E+00	1.41E+00	4.02E+00	6.39E+00	7.49E+00
Ta-182m	1.96E+03	4.32E+00	2.77E-01	2.69E-01	7.06E-01	9.66E-01	9.92E-01
Ta-183	2.24E+03	4.91E+00	3.16E-01	3.06E-01	8.16E-01	1.15E+00	1.20E+00
Ta-184	1.32E+04	2.88E+01	1.77E+00	1.76E+00	5.01E+00	7.70E+00	8.59E+00
Ta-185	1.25E+03	2.67E+00	2.51E-01	1.70E-01	4.39E-01	6.11E-01	6.37E-01
Ta-186	1.20E+04	2.60E+01	1.70E+00	1.62E+00	4.56E+00	6.97E+00	7.73E+00
Tb-146	3.25E+04	7.04E+01	4.00E+00	4.02E+00	1.15E+01	1.86E+01	2.24E+01
Tb-147	1.91E+04	4.11E+01	2.40E+00	2.41E+00	6.89E+00	1.10E+01	1.29E+01
Tb-147m	1.70E+04	3.68E+01	2.07E+00	2.07E+00	6.01E+00	9.73E+00	1.17E+01
Tb-148	2.07E+04	4.48E+01	2.64E+00	2.62E+00	7.51E+00	1.20E+01	1.41E+01
Tb-148m	2.65E+04	5.77E+01	3.51E+00	3.53E+00	1.01E+01	1.57E+01	1.78E+01
Tb-149	1.17E+04	2.54E+01	1.47E+00	1.49E+00	4.26E+00	6.74E+00	7.86E+00
Tb-149m	1.16E+04	2.50E+01	1.55E+00	1.54E+00	4.37E+00	6.84E+00	7.73E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Tb-150	2.19E+04	4.74E+01	2.58E+00	2.63E+00	7.60E+00	1.23E+01	1.50E+01
Tb-150m	2.09E+04	4.56E+01	2.82E+00	2.84E+00	8.07E+00	1.25E+01	1.39E+01
Tb-151	8.11E+03	1.77E+01	1.09E+00	1.09E+00	3.06E+00	4.67E+00	5.19E+00
Tb-151m	5.98E+02	1.31E+00	8.53E-02	8.13E-02	2.20E-01	3.33E-01	3.68E-01
Tb-152	1.30E+04	2.82E+01	1.62E+00	1.63E+00	4.67E+00	7.45E+00	8.78E+00
Tb-152m	6.13E+03	1.34E+01	8.35E-01	8.31E-01	2.34E+00	3.51E+00	3.85E+00
Tb-153	2.52E+03	5.55E+00	3.57E-01	3.42E-01	9.28E-01	1.37E+00	1.50E+00
Tb-154	2.07E+04	4.48E+01	2.36E+00	2.43E+00	7.04E+00	1.15E+01	1.42E+01
Tb-155	1.18E+03	2.62E+00	1.86E-01	1.65E-01	4.05E-01	5.40E-01	5.55E-01
Tb-156	1.66E+04	3.61E+01	2.09E+00	2.11E+00	6.05E+00	9.56E+00	1.11E+01
Tb-156m	1.73E+02	3.98E-01	3.82E-02	2.60E-02	4.28E-02	4.39E-02	4.39E-02
Tb-156n	1.86E+01	4.20E-02	3.75E-03	2.69E-03	5.02E-03	5.60E-03	5.60E-03
Tb-157	1.84E+01	4.26E-02	4.72E-03	2.82E-03	4.20E-03	4.26E-03	4.26E-03
Tb-158	6.74E+03	1.46E+01	8.80E-01	8.76E-01	2.48E+00	3.90E+00	4.48E+00
Tb-160	9.71E+03	2.11E+01	1.24E+00	1.25E+00	3.59E+00	5.66E+00	6.54E+00
Tb-161	1.71E+02	3.75E-01	3.54E-02	2.35E-02	4.28E-02	4.71E-02	4.73E-02
Tb-162	9.41E+03	2.04E+01	1.27E+00	1.24E+00	3.53E+00	5.49E+00	6.18E+00
Tb-163	6.56E+03	1.42E+01	9.05E-01	8.93E-01	2.54E+00	3.87E+00	4.20E+00
Tb-164	2.13E+04	4.61E+01	2.75E+00	2.71E+00	7.79E+00	1.23E+01	1.43E+01
Tb-165	7.55E+03	1.62E+01	1.01E+00	9.38E-01	2.69E+00	4.32E+00	5.14E+00
Tc-101	2.84E+03	6.13E+00	4.28E-01	3.85E-01	1.09E+00	1.63E+00	1.75E+00
Tc-102	1.09E+03	2.05E+00	3.03E-01	1.68E-01	3.77E-01	5.59E-01	6.31E-01
Tc-102m	2.20E+04	4.78E+01	2.74E+00	2.73E+00	7.86E+00	1.27E+01	1.51E+01
Tc-104	2.05E+04	4.43E+01	2.54E+00	2.48E+00	7.14E+00	1.15E+01	1.40E+01
Tc-105	7.04E+03	1.51E+01	1.01E+00	9.15E-01	2.56E+00	3.98E+00	4.56E+00
Tc-91	2.24E+04	4.86E+01	2.82E+00	2.76E+00	7.94E+00	1.28E+01	1.53E+01
Tc-91m	1.23E+04	2.65E+01	1.79E+00	1.68E+00	4.71E+00	7.27E+00	8.09E+00
Tc-92	3.34E+04	7.25E+01	4.34E+00	4.30E+00	1.23E+01	1.94E+01	2.26E+01
Tc-93	1.39E+04	3.03E+01	1.66E+00	1.70E+00	4.95E+00	8.03E+00	9.68E+00
Tc-93m	8.70E+03	1.89E+01	9.71E-01	1.01E+00	2.93E+00	4.82E+00	5.98E+00
Tc-94	2.26E+04	4.91E+01	2.93E+00	2.97E+00	8.54E+00	1.35E+01	1.54E+01
Tc-94m	1.70E+04	3.68E+01	2.23E+00	2.19E+00	6.28E+00	9.94E+00	1.15E+01
Tc-95	6.71E+03	1.45E+01	8.74E-01	8.84E-01	2.54E+00	3.98E+00	4.54E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Tc-95m	5.72E+03	1.24E+01	7.52E-01	7.60E-01	2.17E+00	3.36E+00	3.75E+00
Tc-96	2.13E+04	4.63E+01	2.76E+00	2.80E+00	8.03E+00	1.27E+01	1.45E+01
Tc-96m	3.62E+02	7.86E-01	4.86E-02	4.67E-02	1.34E-01	2.13E-01	2.47E-01
Tc-97	4.13E+00	9.71E-03	5.33E-03	5.55E-04	5.51E-04	5.51E-04	5.51E-04
Tc-97m	6.87E+00	1.51E-02	5.11E-03	8.69E-04	1.33E-03	1.52E-03	1.52E-03
Tc-98	1.20E+04	2.60E+01	1.57E+00	1.60E+00	4.58E+00	7.15E+00	8.07E+00
Tc-99	5.38E+00	5.87E-03	7.66E-05	4.73E-05	9.40E-05	1.10E-04	1.10E-04
Tc-99m	9.84E+02	2.19E+00	1.33E-01	1.35E-01	3.64E-01	4.97E-01	5.04E-01
Te-113	1.96E+04	4.24E+01	2.60E+00	2.52E+00	7.19E+00	1.14E+01	1.33E+01
Te-114	1.11E+04	2.39E+01	1.38E+00	1.39E+00	3.98E+00	6.37E+00	7.51E+00
Te-115	1.96E+04	4.22E+01	2.55E+00	2.52E+00	7.19E+00	1.14E+01	1.32E+01
Te-115m	2.28E+04	4.95E+01	2.90E+00	2.90E+00	8.31E+00	1.33E+01	1.56E+01
Te-116	6.84E+02	1.51E+00	1.13E-01	9.38E-02	2.43E-01	3.47E-01	3.75E-01
Te-117	1.35E+04	2.93E+01	1.70E+00	1.70E+00	4.89E+00	7.85E+00	9.25E+00
Te-118	2.82E+01	6.65E-02	1.66E-02	4.43E-03	4.63E-03	4.63E-03	4.63E-03
Te-118+D	6.86E+03	1.48E+01	1.03E+00	9.36E-01	2.62E+00	4.03E+00	4.46E+00
Te-118+E	6.86E+03	1.48E+01	1.03E+00	9.36E-01	2.62E+00	4.03E+00	4.46E+00
Te-119	6.41E+03	1.39E+01	8.43E-01	8.46E-01	2.41E+00	3.79E+00	4.32E+00
Te-119m	1.30E+04	2.82E+01	1.61E+00	1.64E+00	4.71E+00	7.49E+00	8.80E+00
Te-121	4.69E+03	1.02E+01	6.39E-01	6.37E-01	1.81E+00	2.80E+00	3.10E+00
Te-121m	1.68E+03	3.70E+00	2.31E-01	2.28E-01	6.39E-01	9.38E-01	9.94E-01
Te-123	4.91E-02	1.16E-04	2.89E-05	7.68E-06	8.05E-06	8.03E-06	8.03E-06
Te-123m	1.09E+03	2.39E+00	1.54E-01	1.49E-01	4.03E-01	5.60E-01	5.72E-01
Te-125m	6.28E+01	1.45E-01	3.13E-02	9.60E-03	1.09E-02	1.11E-02	1.11E-02
Te-127	6.26E+01	1.12E-01	1.23E-02	5.94E-03	1.65E-02	2.47E-02	2.67E-02
Te-127m	2.09E+01	4.76E-02	9.98E-03	3.10E-03	3.81E-03	4.05E-03	4.11E-03
Te-129	5.59E+02	1.15E+00	1.36E-01	7.30E-02	1.96E-01	2.99E-01	3.29E-01
Te-129m	2.93E+02	6.09E-01	6.82E-02	3.87E-02	1.02E-01	1.57E-01	1.77E-01
Te-131	3.59E+03	7.73E+00	5.52E-01	4.78E-01	1.33E+00	2.02E+00	2.24E+00
Te-131m	1.25E+04	2.71E+01	1.59E+00	1.62E+00	4.63E+00	7.32E+00	8.42E+00
Te-132	1.75E+03	3.83E+00	2.49E-01	2.39E-01	6.61E-01	9.55E-01	9.94E-01
Te-133	1.06E+04	2.30E+01	1.38E+00	1.34E+00	3.85E+00	6.09E+00	7.12E+00
Te-133m	1.61E+04	3.49E+01	2.06E+00	2.07E+00	5.94E+00	9.41E+00	1.09E+01

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Te-134	7.23E+03	1.57E+01	9.64E-01	9.71E-01	2.76E+00	4.22E+00	4.67E+00
Th-223	5.19E+02	1.15E+00	7.43E-02	7.17E-02	1.82E-01	2.34E-01	2.37E-01
Th-224	1.82E+02	4.00E-01	2.45E-02	2.48E-02	6.89E-02	9.83E-02	1.02E-01
Th-226	6.00E+01	1.32E-01	8.43E-03	8.20E-03	2.19E-02	2.95E-02	3.01E-02
Th-227	9.75E+02	2.15E+00	1.34E-01	1.34E-01	3.72E-01	5.38E-01	5.64E-01
Th-228	1.54E+01	3.44E-02	2.53E-03	2.13E-03	5.42E-03	7.12E-03	7.25E-03
Th-229	6.20E+02	1.38E+00	9.06E-02	8.57E-02	2.19E-01	2.84E-01	2.88E-01
Th-229+D	6.67E+02	1.48E+00	1.03E-01	9.23E-02	2.28E-01	2.93E-01	2.97E-01
Th-229+E	6.67E+02	1.48E+00	1.03E-01	9.23E-02	2.28E-01	2.93E-01	2.97E-01
Th-230	2.84E+00	6.39E-03	7.49E-04	3.94E-04	8.87E-04	1.09E-03	1.11E-03
Th-231	8.65E+01	1.91E-01	1.78E-02	1.17E-02	2.67E-02	3.25E-02	3.25E-02
Th-232	1.48E+00	3.36E-03	5.30E-04	2.05E-04	4.15E-04	4.76E-04	4.78E-04
Th-232+D	7.49E+03	1.62E+01	9.82E-01	9.62E-01	2.76E+00	4.35E+00	5.04E+00
Th-232+E	7.49E+03	1.62E+01	9.82E-01	9.62E-01	2.76E+00	4.35E+00	5.04E+00
Th-233	3.34E+02	6.78E-01	8.17E-02	4.20E-02	1.12E-01	1.67E-01	1.83E-01
Th-234	6.01E+01	1.35E-01	9.57E-03	8.39E-03	1.92E-02	2.32E-02	2.32E-02
Th-234+D	3.25E+02	5.92E-01	1.40E-01	4.46E-02	9.58E-02	1.34E-01	1.49E-01
Th-234+E	3.25E+02	5.92E-01	1.40E-01	4.46E-02	9.58E-02	1.34E-01	1.49E-01
Th-235	5.47E+02	1.09E+00	1.52E-01	7.27E-02	1.89E-01	2.86E-01	3.18E-01
Th-236	3.14E+02	6.43E-01	6.97E-02	3.94E-02	1.06E-01	1.56E-01	1.68E-01
Ti-44	9.12E+02	2.05E+00	1.44E-01	1.29E-01	2.84E-01	3.25E-01	3.25E-01
Ti-44+D	1.94E+04	4.20E+01	2.57E+00	2.52E+00	7.15E+00	1.12E+01	1.28E+01
Ti-44+E	1.94E+04	4.20E+01	2.57E+00	2.52E+00	7.15E+00	1.12E+01	1.28E+01
Ti-45	7.29E+03	1.58E+01	1.01E+00	9.90E-01	2.82E+00	4.33E+00	4.78E+00
Ti-51	3.19E+03	6.84E+00	5.31E-01	4.35E-01	1.22E+00	1.83E+00	1.98E+00
Ti-52	1.07E+03	2.28E+00	2.40E-01	1.47E-01	3.72E-01	4.89E-01	4.95E-01
Tl-190	1.11E+04	2.39E+01	1.59E+00	1.52E+00	4.24E+00	6.52E+00	7.23E+00
Tl-190m	2.07E+04	4.50E+01	2.81E+00	2.78E+00	7.92E+00	1.23E+01	1.37E+01
Tl-194	7.66E+03	1.66E+01	1.08E+00	1.05E+00	2.93E+00	4.48E+00	4.95E+00
Tl-194m	2.11E+04	4.60E+01	2.82E+00	2.84E+00	8.05E+00	1.24E+01	1.39E+01
Tl-195	1.07E+04	2.34E+01	1.30E+00	1.32E+00	3.79E+00	6.07E+00	7.25E+00
Tl-196	1.64E+04	3.57E+01	2.01E+00	2.05E+00	5.88E+00	9.40E+00	1.11E+01
Tl-197	3.77E+03	8.22E+00	4.93E-01	4.93E-01	1.37E+00	2.09E+00	2.37E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Tl-198	1.77E+04	3.85E+01	2.13E+00	2.19E+00	6.30E+00	1.01E+01	1.21E+01
Tl-198m	1.00E+04	2.19E+01	1.34E+00	1.36E+00	3.85E+00	5.87E+00	6.46E+00
Tl-199	1.92E+03	4.24E+00	2.68E-01	2.65E-01	7.10E-01	1.02E+00	1.10E+00
Tl-200	1.12E+04	2.43E+01	1.43E+00	1.44E+00	4.11E+00	6.46E+00	7.42E+00
Tl-201	6.09E+02	1.37E+00	9.27E-02	8.54E-02	2.00E-01	2.43E-01	2.45E-01
Tl-202	3.72E+03	8.14E+00	5.11E-01	5.14E-01	1.43E+00	2.13E+00	2.32E+00
Tl-204	3.27E+01	4.56E-02	1.27E-02	1.77E-03	3.57E-03	4.17E-03	4.18E-03
Tl-206	7.42E+01	8.87E-02	7.15E-02	7.58E-03	1.06E-02	1.25E-02	1.28E-02
Tl-206m	2.04E+04	4.43E+01	2.68E+00	2.71E+00	7.73E+00	1.20E+01	1.34E+01
Tl-207	8.61E+01	1.21E-01	6.56E-02	8.70E-03	1.60E-02	2.19E-02	2.39E-02
Tl-208	3.14E+04	6.80E+01	3.46E+00	3.55E+00	1.04E+01	1.72E+01	2.17E+01
Tl-209	1.91E+04	4.11E+01	2.36E+00	2.35E+00	6.76E+00	1.08E+01	1.29E+01
Tl-210	2.47E+04	5.32E+01	3.09E+00	3.06E+00	8.80E+00	1.41E+01	1.68E+01
Tm-161	1.10E+04	2.39E+01	1.39E+00	1.37E+00	3.87E+00	6.11E+00	7.23E+00
Tm-162	1.71E+04	3.70E+01	2.08E+00	2.09E+00	5.98E+00	9.64E+00	1.16E+01
Tm-163	1.13E+04	2.45E+01	1.40E+00	1.42E+00	4.02E+00	6.37E+00	7.53E+00
Tm-164	6.67E+03	1.44E+01	9.16E-01	8.70E-01	2.45E+00	3.83E+00	4.39E+00
Tm-165	4.48E+03	9.77E+00	6.11E-01	6.03E-01	1.67E+00	2.52E+00	2.78E+00
Tm-166	1.74E+04	3.77E+01	2.09E+00	2.13E+00	6.15E+00	9.90E+00	1.18E+01
Tm-167	1.03E+03	2.26E+00	1.55E-01	1.42E-01	3.59E-01	4.97E-01	5.16E-01
Tm-168	1.03E+04	2.24E+01	1.37E+00	1.37E+00	3.87E+00	5.98E+00	6.71E+00
Tm-170	6.07E+01	9.60E-02	2.91E-02	5.04E-03	9.75E-03	1.13E-02	1.14E-02
Tm-171	3.18E+00	7.27E-03	6.21E-04	4.67E-04	8.50E-04	9.00E-04	9.00E-04
Tm-172	4.28E+03	9.19E+00	5.66E-01	5.23E-01	1.50E+00	2.43E+00	2.91E+00
Tm-173	3.21E+03	6.99E+00	4.51E-01	4.39E-01	1.24E+00	1.89E+00	2.04E+00
Tm-174	1.50E+04	3.27E+01	1.99E+00	1.98E+00	5.64E+00	8.72E+00	9.79E+00
Tm-175	9.27E+03	2.00E+01	1.25E+00	1.22E+00	3.47E+00	5.44E+00	6.18E+00
Tm-176	1.75E+04	3.79E+01	2.19E+00	2.15E+00	6.18E+00	9.90E+00	1.18E+01
U-227	9.06E+02	2.00E+00	1.24E-01	1.24E-01	3.38E-01	4.76E-01	4.93E-01
U-228	2.97E+01	6.59E-02	4.57E-03	4.09E-03	1.07E-02	1.43E-02	1.46E-02
U-230	8.52E+00	1.91E-02	1.78E-03	1.17E-03	2.91E-03	3.87E-03	3.96E-03
U-231	4.97E+02	1.11E+00	7.80E-02	6.91E-02	1.70E-01	2.13E-01	2.15E-01
U-232	2.02E+00	4.54E-03	8.53E-04	2.76E-04	5.77E-04	7.14E-04	7.23E-04

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
U-233	1.98E+00	4.39E-03	5.56E-04	2.71E-04	6.56E-04	8.89E-04	9.19E-04
U-234	1.15E+00	2.62E-03	6.78E-04	1.57E-04	2.91E-04	3.44E-04	3.46E-04
U-235	1.28E+03	2.82E+00	1.74E-01	1.76E-01	4.86E-01	6.82E-01	7.01E-01
U-235+D	1.37E+03	3.01E+00	1.92E-01	1.87E-01	5.12E-01	7.14E-01	7.32E-01
U-235+E	1.37E+03	3.01E+00	1.92E-01	1.87E-01	5.12E-01	7.14E-01	7.32E-01
U-235m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-236	7.06E-01	1.62E-03	5.63E-04	9.53E-05	1.54E-04	1.75E-04	1.76E-04
U-237	9.86E+02	2.19E+00	1.44E-01	1.36E-01	3.49E-01	4.69E-01	4.78E-01
U-238	5.98E-01	1.37E-03	4.57E-04	7.96E-05	1.34E-04	1.62E-04	1.71E-04
U-238+D	3.46E+02	6.37E-01	1.44E-01	4.73E-02	1.03E-01	1.46E-01	1.62E-01
U-238+E	3.46E+02	6.37E-01	1.44E-01	4.73E-02	1.03E-01	1.46E-01	1.62E-01
U-239	3.92E+02	8.24E-01	9.53E-02	5.10E-02	1.17E-01	1.49E-01	1.56E-01
U-240	3.87E+01	8.03E-02	6.53E-03	4.67E-03	1.15E-02	1.48E-02	1.49E-02
U-242	3.66E+02	7.53E-01	8.43E-02	4.69E-02	1.23E-01	1.79E-01	1.94E-01
V-47	8.41E+03	1.82E+01	1.23E+00	1.15E+00	3.25E+00	4.99E+00	5.49E+00
V-48	2.54E+04	5.51E+01	3.17E+00	3.23E+00	9.32E+00	1.49E+01	1.74E+01
V-49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
V-50	1.28E+04	2.78E+01	1.50E+00	1.55E+00	4.50E+00	7.36E+00	8.95E+00
V-52	1.32E+04	2.84E+01	1.67E+00	1.60E+00	4.61E+00	7.53E+00	9.12E+00
V-53	9.21E+03	1.98E+01	1.27E+00	1.18E+00	3.36E+00	5.36E+00	6.26E+00
W-177	7.45E+03	1.63E+01	9.94E-01	9.90E-01	2.75E+00	4.17E+00	4.65E+00
W-178	8.09E+01	1.85E-01	1.50E-02	1.18E-02	2.24E-02	2.41E-02	2.41E-02
W-178+D	9.62E+02	2.13E+00	1.43E-01	1.29E-01	3.18E-01	4.52E-01	5.14E-01
W-178+E	9.62E+02	2.13E+00	1.43E-01	1.29E-01	3.18E-01	4.52E-01	5.14E-01
W-179	2.71E+02	6.20E-01	5.31E-02	3.98E-02	7.42E-02	7.94E-02	7.94E-02
W-179m	3.72E+02	8.20E-01	5.70E-02	5.10E-02	1.20E-01	1.54E-01	1.57E-01
W-181	2.15E+02	4.91E-01	3.97E-02	3.16E-02	5.98E-02	6.41E-02	6.41E-02
W-185	9.27E+00	1.06E-02	1.95E-04	1.36E-04	2.99E-04	3.66E-04	3.70E-04
W-185m	1.74E+02	3.83E-01	2.51E-02	2.37E-02	5.88E-02	7.66E-02	7.79E-02
W-187	3.74E+03	8.09E+00	5.16E-01	5.01E-01	1.41E+00	2.17E+00	2.41E+00
W-188	2.05E+01	3.89E-02	2.12E-03	2.11E-03	5.83E-03	8.46E-03	8.89E-03
W-190	1.07E+03	2.35E+00	1.80E-01	1.46E-01	3.55E-01	4.60E-01	4.65E-01
Xe-120	3.08E+03	6.72E+00	4.34E-01	4.15E-01	1.16E+00	1.77E+00	1.96E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Xe-121	1.30E+04	2.80E+01	1.64E+00	1.61E+00	4.61E+00	7.38E+00	8.74E+00
Xe-122	4.09E+02	8.99E-01	7.03E-02	5.70E-02	1.50E-01	2.19E-01	2.34E-01
Xe-123	5.32E+03	1.16E+01	7.12E-01	6.95E-01	1.96E+00	3.04E+00	3.46E+00
Xe-125	2.02E+03	4.43E+00	2.89E-01	2.75E-01	7.60E-01	1.11E+00	1.19E+00
Xe-127	2.11E+03	4.63E+00	2.99E-01	2.90E-01	8.00E-01	1.16E+00	1.21E+00
Xe-127m	1.23E+03	2.71E+00	1.77E-01	1.68E-01	4.46E-01	6.07E-01	6.18E-01
Xe-129m	1.71E+02	3.75E-01	4.87E-02	2.37E-02	4.35E-02	5.57E-02	5.72E-02
Xe-131m	6.67E+01	1.43E-01	1.91E-02	8.76E-03	1.55E-02	1.92E-02	1.96E-02
Xe-133	2.56E+02	5.72E-01	4.75E-02	3.57E-02	7.62E-02	8.91E-02	8.89E-02
Xe-133m	2.41E+02	5.14E-01	4.13E-02	3.14E-02	7.98E-02	1.14E-01	1.19E-01
Xe-135	2.05E+03	4.46E+00	2.92E-01	2.78E-01	7.88E-01	1.16E+00	1.23E+00
Xe-135m	3.53E+03	7.64E+00	4.85E-01	4.78E-01	1.36E+00	2.11E+00	2.32E+00
Xe-137	1.94E+03	3.96E+00	4.07E-01	2.78E-01	7.06E-01	1.07E+00	1.20E+00
Xe-138	1.02E+04	2.20E+01	1.25E+00	1.22E+00	3.53E+00	5.75E+00	6.99E+00
Y-81	9.99E+03	2.15E+01	1.51E+00	1.39E+00	3.83E+00	5.79E+00	6.35E+00
Y-83	1.15E+04	2.48E+01	1.65E+00	1.55E+00	4.35E+00	6.76E+00	7.60E+00
Y-83m	7.04E+03	1.52E+01	1.03E+00	9.69E-01	2.73E+00	4.15E+00	4.54E+00
Y-84m	3.44E+04	7.43E+01	4.51E+00	4.48E+00	1.28E+01	2.02E+01	2.34E+01
Y-85	9.06E+03	1.96E+01	1.27E+00	1.23E+00	3.49E+00	5.38E+00	5.96E+00
Y-85m	1.15E+04	2.50E+01	1.51E+00	1.48E+00	4.24E+00	6.71E+00	7.77E+00
Y-86	3.14E+04	6.80E+01	3.87E+00	3.94E+00	1.14E+01	1.83E+01	2.15E+01
Y-86m	1.79E+03	3.92E+00	2.37E-01	2.43E-01	6.87E-01	1.00E+00	1.06E+00
Y-87	3.62E+03	7.90E+00	4.91E-01	4.97E-01	1.41E+00	2.17E+00	2.39E+00
Y-87m	2.52E+03	5.49E+00	3.40E-01	3.46E-01	9.86E-01	1.49E+00	1.61E+00
Y-88	2.43E+04	5.27E+01	2.82E+00	2.91E+00	8.48E+00	1.39E+01	1.69E+01
Y-89m	7.77E+03	1.68E+01	9.92E-01	1.01E+00	2.90E+00	4.60E+00	5.31E+00
Y-90	1.48E+02	1.84E-01	1.29E-01	2.35E-02	3.25E-02	3.87E-02	4.02E-02
Y-90m	5.23E+03	1.14E+01	7.04E-01	7.14E-01	2.04E+00	3.04E+00	3.29E+00
Y-91	1.12E+02	1.61E-01	8.69E-02	1.31E-02	2.32E-02	3.16E-02	3.49E-02
Y-91m	4.41E+03	9.58E+00	5.94E-01	6.00E-01	1.71E+00	2.65E+00	2.93E+00
Y-92	2.47E+03	5.12E+00	4.48E-01	3.31E-01	8.80E-01	1.38E+00	1.60E+00
Y-93	1.05E+03	2.11E+00	2.54E-01	1.41E-01	3.55E-01	5.47E-01	6.41E-01
Y-94	7.14E+03	1.52E+01	1.04E+00	9.27E-01	2.58E+00	4.09E+00	4.78E+00

Continued on next page

Table 2.1: Dose coefficients for external exposure

Nuclide	Submersion	Immersion	Ground Plane	1cm	5cm	15cm	Soil Volume
	(mrem per pCi yr cm ⁻³)	(mrem per pCi yr g ⁻¹)	(mrem per pCi yr cm ⁻²)	(mrem per pCi yr g ⁻¹)			
Y-95	1.07E+04	2.30E+01	1.27E+00	1.22E+00	3.49E+00	5.81E+00	7.36E+00
Yb-162	1.87E+03	4.13E+00	2.69E-01	2.58E-01	6.80E-01	9.66E-01	1.03E+00
Yb-163	6.15E+03	1.33E+01	8.23E-01	8.00E-01	2.24E+00	3.53E+00	4.05E+00
Yb-164	3.01E+02	6.80E-01	5.58E-02	4.37E-02	8.97E-02	1.12E-01	1.18E-01
Yb-165	2.56E+03	5.62E+00	3.66E-01	3.42E-01	9.02E-01	1.35E+00	1.52E+00
Yb-166	4.43E+02	1.01E+00	8.76E-02	6.54E-02	1.20E-01	1.29E-01	1.29E-01
Yb-167	1.78E+03	4.00E+00	2.78E-01	2.50E-01	5.98E-01	7.77E-01	8.03E-01
Yb-169	2.22E+03	4.95E+00	3.45E-01	3.12E-01	7.58E-01	1.01E+00	1.03E+00
Yb-175	3.23E+02	6.97E-01	4.31E-02	4.33E-02	1.21E-01	1.79E-01	1.92E-01
Yb-177	1.70E+03	3.64E+00	2.61E-01	2.17E-01	6.05E-01	9.36E-01	1.08E+00
Yb-178	3.29E+02	6.99E-01	4.57E-02	4.32E-02	1.22E-01	1.84E-01	1.98E-01
Yb-179	8.22E+03	1.78E+01	1.18E+00	1.11E+00	3.16E+00	4.86E+00	5.40E+00
Zn-60	1.29E+04	2.78E+01	1.86E+00	1.76E+00	4.97E+00	7.64E+00	8.44E+00
Zn-61	1.35E+04	2.90E+01	1.88E+00	1.78E+00	5.02E+00	7.86E+00	8.99E+00
Zn-62	3.62E+03	7.86E+00	4.90E-01	4.93E-01	1.40E+00	2.15E+00	2.37E+00
Zn-63	9.32E+03	2.02E+01	1.36E+00	1.26E+00	3.57E+00	5.51E+00	6.13E+00
Zn-65	5.08E+03	1.10E+01	6.28E-01	6.41E-01	1.85E+00	2.97E+00	3.49E+00
Zn-69	3.74E+01	4.26E-02	2.44E-02	1.52E-03	2.41E-03	2.90E-03	2.95E-03
Zn-69m	3.44E+03	7.49E+00	4.65E-01	4.73E-01	1.34E+00	2.05E+00	2.24E+00
Zn-71	2.84E+03	6.01E+00	4.90E-01	3.83E-01	1.05E+00	1.63E+00	1.83E+00
Zn-71m	1.32E+04	2.86E+01	1.80E+00	1.77E+00	5.04E+00	7.79E+00	8.65E+00
Zn-72	1.15E+03	2.56E+00	1.55E-01	1.58E-01	4.28E-01	5.87E-01	5.98E-01
Zr-85	1.26E+04	2.71E+01	1.80E+00	1.71E+00	4.80E+00	7.43E+00	8.28E+00
Zr-86	2.24E+03	4.91E+00	3.07E-01	3.06E-01	8.67E-01	1.28E+00	1.35E+00
Zr-87	7.88E+03	1.70E+01	1.15E+00	1.07E+00	3.03E+00	4.65E+00	5.17E+00
Zr-88	3.16E+03	6.87E+00	4.28E-01	4.33E-01	1.23E+00	1.87E+00	2.02E+00
Zr-89	9.88E+03	2.15E+01	1.29E+00	1.29E+00	3.70E+00	5.85E+00	6.69E+00
Zr-89m	5.38E+03	1.17E+01	7.06E-01	7.14E-01	2.04E+00	3.19E+00	3.61E+00
Zr-93	1.20E-04	1.26E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-95	6.22E+03	1.35E+01	8.14E-01	8.26E-01	2.37E+00	3.72E+00	4.20E+00
Zr-97	7.60E+03	1.64E+01	1.07E+00	1.00E+00	2.86E+00	4.48E+00	5.10E+00

2.2 Dose rate coefficients for ingestion

Explanation of Entries:

Table 2.2 contains the dose rate coefficients used for internal exposure due to ingestion of a radionuclide.

Form: Separate dose rate coefficients are given for ^3H as tritiated water and organically bound tritium, and for inorganic and organic forms of radioisotopes of sulfur, mercury, and polonium.

f1: This is the fractional uptake from the small intestine to blood (f1) for common chemical forms of the radionuclide.

Per Capita: This is the population weighted dose rate coefficient for the entire population considering the fractional distribution of all age groups.

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ac-223		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-223+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-223+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-224		5.00E-03	1.94E-04	5.37E-05	2.79E-05	1.99E-05	1.45E-05	5.77E-06	1.03E-05	
Ac-225		5.00E-03	2.04E-03	8.99E-04	4.44E-04	3.02E-04	1.78E-04	1.43E-04	1.94E-04	
Ac-225+D		–	2.04E-03	8.99E-04	4.44E-04	3.02E-04	1.78E-04	1.43E-04	1.93E-04	
Ac-225+E		–	2.04E-03	8.99E-04	4.44E-04	3.02E-04	1.78E-04	1.43E-04	1.93E-04	
Ac-226		5.00E-03	5.07E-04	2.87E-04	1.43E-04	8.47E-05	4.81E-05	3.85E-05	5.37E-05	
Ac-227		5.00E-03	2.69E-02	2.47E-03	1.85E-03	1.38E-03	1.19E-03	1.19E-03	1.45E-03	
Ac-228		5.00E-03	1.86E-05	9.25E-06	4.77E-06	2.89E-06	1.75E-06	1.40E-06	1.90E-06	
Ac-230		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-231		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-232		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-233		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-100m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-101		1.00E-01	1.35E-06	7.62E-07	3.81E-07	2.22E-07	1.52E-07	1.20E-07	1.58E-07	
Ag-102		1.00E-01	1.61E-06	9.21E-07	4.66E-07	2.77E-07	1.92E-07	1.52E-07	1.98E-07	
Ag-102m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-103		1.00E-01	1.38E-06	8.44E-07	4.37E-07	2.66E-07	1.77E-07	1.41E-07	1.84E-07	
Ag-104		1.00E-01	1.63E-06	1.10E-06	6.29E-07	4.11E-07	2.82E-07	2.27E-07	2.82E-07	
Ag-104m		1.00E-01	2.69E-06	1.55E-06	7.77E-07	4.59E-07	3.11E-07	2.46E-07	3.23E-07	
Ag-105		1.00E-01	1.44E-05	9.03E-06	5.11E-06	3.35E-06	2.16E-06	1.71E-06	2.19E-06	
Ag-105m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-106		1.00E-01	1.35E-06	7.62E-07	3.77E-07	2.19E-07	1.49E-07	1.17E-07	1.56E-07	
Ag-106m		1.00E-01	3.60E-05	2.57E-05	1.51E-05	1.02E-05	6.85E-06	5.44E-06	6.77E-06	
Ag-108		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ag-108m		1.00E-01	7.62E-05	4.11E-05	2.41E-05	1.59E-05	1.05E-05	8.70E-06	1.09E-05	
Ag-108m+D		–	7.62E-05	4.11E-05	2.41E-05	1.59E-05	1.05E-05	8.70E-06	1.09E-05	
Ag-108m+E		–	7.62E-05	4.11E-05	2.41E-05	1.59E-05	1.05E-05	8.70E-06	1.09E-05	
Ag-109m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-110		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-110m		1.00E-01	9.03E-05	5.14E-05	2.96E-05	1.95E-05	1.28E-05	1.04E-05	1.31E-05	
Ag-110m+D		–	9.03E-05	5.14E-05	2.96E-05	1.95E-05	1.28E-05	1.04E-05	1.32E-05	
Ag-110m+E		–	9.03E-05	5.14E-05	2.96E-05	1.95E-05	1.28E-05	1.04E-05	1.32E-05	
Ag-111		1.00E-01	5.29E-05	3.43E-05	1.71E-05	1.02E-05	5.77E-06	4.63E-06	6.40E-06	
Ag-111m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-112		1.00E-01	1.79E-05	1.11E-05	5.51E-06	3.24E-06	1.96E-06	1.56E-06	2.12E-06	
Ag-113		1.00E-01	1.69E-05	1.07E-05	5.29E-06	3.12E-06	1.82E-06	1.45E-06	2.00E-06	
Ag-113m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-114		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-115		1.00E-01	2.77E-06	1.57E-06	7.66E-07	4.40E-07	2.91E-07	2.28E-07	3.07E-07	
Ag-116		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-117		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-99		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Al-26		2.00E-02	1.25E-04	7.84E-05	4.18E-05	2.62E-05	1.61E-05	1.29E-05	1.70E-05	
Al-28		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Al-29		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Am-237		5.00E-03	6.55E-07	4.00E-07	2.10E-07	1.28E-07	8.55E-08	6.77E-08	8.81E-08	
Am-238		5.00E-03	9.32E-07	6.07E-07	3.39E-07	2.20E-07	1.48E-07	1.19E-07	1.50E-07	
Am-239		5.00E-03	9.77E-06	6.33E-06	3.21E-06	1.94E-06	1.14E-06	9.07E-07	1.23E-06	
Am-240		5.00E-03	1.79E-05	1.24E-05	6.77E-06	4.37E-06	2.75E-06	2.19E-06	2.82E-06	
Am-241		5.00E-03	1.38E-02	1.39E-03	1.01E-03	8.21E-04	7.55E-04	7.55E-04	8.81E-04	
Am-242		5.00E-03	1.85E-05	8.07E-06	4.03E-06	2.39E-06	1.38E-06	1.11E-06	1.56E-06	
Am-242m		5.00E-03	1.14E-02	1.11E-03	8.66E-04	7.36E-04	6.99E-04	7.03E-04	7.99E-04	
Am-242m+D		–	1.15E-02	1.12E-03	8.70E-04	7.40E-04	6.99E-04	7.03E-04	8.02E-04	
Am-242m+E		–	1.15E-02	1.12E-03	8.70E-04	7.40E-04	6.99E-04	7.03E-04	8.02E-04	
Am-243		5.00E-03	1.35E-02	1.37E-03	1.01E-03	8.18E-04	7.51E-04	7.51E-04	8.73E-04	
Am-243+D		–	1.36E-02	1.39E-03	1.02E-03	8.25E-04	7.55E-04	7.55E-04	8.79E-04	
Am-243+E		–	1.36E-02	1.39E-03	1.02E-03	8.25E-04	7.55E-04	7.55E-04	8.79E-04	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Am-244		5.00E-03	1.79E-05	1.13E-05	5.81E-06	3.53E-06	2.12E-06	1.69E-06	2.27E-06	
Am-244m		5.00E-03	1.40E-06	7.59E-07	3.67E-07	2.08E-07	1.41E-07	1.10E-07	1.48E-07	
Am-245		5.00E-03	2.51E-06	1.66E-06	8.14E-07	4.74E-07	2.91E-07	2.31E-07	3.13E-07	
Am-246		5.00E-03	2.77E-06	1.57E-06	7.73E-07	4.48E-07	3.00E-07	2.36E-07	3.15E-07	
Am-246m		5.00E-03	1.45E-06	8.21E-07	4.11E-07	2.39E-07	1.63E-07	1.28E-07	1.69E-07	
Am-247		5.00E-03	1.40E-06	7.73E-07	3.74E-07	2.13E-07	1.44E-07	1.12E-07	1.51E-07	
Ar-37		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-39		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-41		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-42		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-42+D		–	1.89E-05	1.12E-05	5.51E-06	3.23E-06	2.02E-06	1.62E-06	2.18E-06	
Ar-42+E		–	1.89E-05	1.12E-05	5.51E-06	3.23E-06	2.02E-06	1.62E-06	2.18E-06	
Ar-43		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-44		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
As-68		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
As-69		1.00E+00	2.33E-06	1.33E-06	6.55E-07	3.77E-07	2.58E-07	2.02E-07	2.69E-07	
As-70		1.00E+00	4.40E-06	2.98E-06	1.55E-06	9.40E-07	6.36E-07	5.07E-07	6.51E-07	
As-71		1.00E+00	1.02E-05	1.03E-05	5.48E-06	3.42E-06	2.10E-06	1.69E-06	2.17E-06	
As-72		1.00E+00	4.03E-05	4.63E-05	2.36E-05	1.44E-05	8.55E-06	6.85E-06	8.95E-06	
As-73		1.00E+00	9.47E-06	6.92E-06	3.46E-06	2.07E-06	1.19E-06	9.58E-07	1.30E-06	
As-74		1.00E+00	3.85E-05	3.02E-05	1.58E-05	9.73E-06	5.88E-06	4.74E-06	6.22E-06	
As-76		1.00E+00	3.67E-05	4.22E-05	2.11E-05	1.26E-05	7.33E-06	5.88E-06	7.81E-06	
As-77		1.00E+00	9.77E-06	1.07E-05	5.33E-06	3.17E-06	1.82E-06	1.46E-06	1.95E-06	
As-78		1.00E+00	6.92E-06	4.88E-06	2.43E-06	1.42E-06	9.21E-07	7.29E-07	9.66E-07	
As-79		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-204		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-205		1.00E+00	2.33E-06	1.41E-06	7.07E-07	4.22E-07	2.74E-07	2.21E-07	2.90E-07	
At-206		1.00E+00	2.44E-06	1.50E-06	7.70E-07	4.66E-07	3.07E-07	2.48E-07	3.22E-07	
At-207		1.00E+00	8.81E-06	5.51E-06	2.78E-06	1.68E-06	1.04E-06	8.40E-07	1.12E-06	
At-208		1.00E+00	3.02E-06	1.93E-06	1.02E-06	6.33E-07	4.22E-07	3.43E-07	4.37E-07	
At-209		1.00E+00	1.45E-05	9.18E-06	4.63E-06	2.82E-06	1.72E-06	1.41E-06	1.86E-06	
At-210		1.00E+00	3.33E-05	2.18E-05	1.10E-05	6.62E-06	4.00E-06	3.25E-06	4.33E-06	
At-211		1.00E+00	4.63E-04	2.90E-04	1.42E-04	8.47E-05	4.96E-05	4.03E-05	5.48E-05	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
At-211+D		–	4.63E-04	2.90E-04	1.42E-04	8.47E-05	4.96E-05	4.03E-05	5.48E-05	
At-211+E		–	4.63E-04	2.90E-04	1.42E-04	8.47E-05	4.96E-05	4.03E-05	5.48E-05	
At-215		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-216		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-217		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-218		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-219		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-220		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-186		2.00E-01	1.81E-06	1.05E-06	5.25E-07	3.11E-07	2.11E-07	1.66E-07	2.19E-07	
Au-187		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-190		2.00E-01	1.36E-06	8.55E-07	4.59E-07	2.87E-07	1.97E-07	1.58E-07	2.00E-07	
Au-191		2.00E-01	2.29E-06	1.58E-06	8.51E-07	5.33E-07	3.38E-07	2.70E-07	3.50E-07	
Au-192		2.00E-01	4.59E-06	3.33E-06	1.86E-06	1.23E-06	7.99E-07	6.44E-07	8.10E-07	
Au-193		2.00E-01	4.33E-06	3.09E-06	1.61E-06	9.95E-07	5.99E-07	4.77E-07	6.33E-07	
Au-193m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-194		2.00E-01	1.03E-05	7.88E-06	4.44E-06	2.93E-06	1.89E-06	1.51E-06	1.91E-06	
Au-195		2.00E-01	9.36E-06	6.66E-06	3.42E-06	2.08E-06	1.22E-06	9.81E-07	1.31E-06	
Au-195m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-196		2.00E-01	9.69E-06	7.25E-06	4.03E-06	2.61E-06	1.65E-06	1.31E-06	1.68E-06	
Au-196m		2.00E-01	1.49E-05	1.02E-05	5.14E-06	3.08E-06	1.81E-06	1.44E-06	1.95E-06	
Au-198		2.00E-01	3.77E-05	2.67E-05	1.36E-05	8.18E-06	4.77E-06	3.81E-06	5.14E-06	
Au-198m		2.00E-01	4.26E-05	3.03E-05	1.55E-05	9.47E-06	5.55E-06	4.48E-06	5.96E-06	
Au-199		2.00E-01	1.68E-05	1.18E-05	5.96E-06	3.59E-06	2.07E-06	1.66E-06	2.25E-06	
Au-200		2.00E-01	3.04E-06	1.71E-06	8.36E-07	4.81E-07	3.18E-07	2.49E-07	3.36E-07	
Au-200m		2.00E-01	3.17E-05	2.30E-05	1.22E-05	7.66E-06	4.70E-06	3.74E-06	4.88E-06	
Au-201		2.00E-01	1.13E-06	6.22E-07	3.01E-07	1.71E-07	1.15E-07	8.99E-08	1.21E-07	
Au-202		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ba-124		6.00E-01	3.09E-06	1.71E-06	8.33E-07	4.77E-07	3.26E-07	2.56E-07	3.42E-07	
Ba-126		6.00E-01	9.62E-06	6.14E-06	3.10E-06	1.82E-06	1.15E-06	9.40E-07	1.24E-06	
Ba-127		6.00E-01	1.04E-06	5.92E-07	2.93E-07	1.70E-07	1.16E-07	9.18E-08	1.21E-07	
Ba-128		6.00E-01	7.73E-05	6.66E-05	3.41E-05	1.99E-05	1.12E-05	1.01E-05	1.32E-05	
Ba-129		6.00E-01	1.50E-06	1.08E-06	5.66E-07	3.42E-07	2.14E-07	1.80E-07	2.32E-07	
Ba-129m		6.00E-01	1.57E-06	1.27E-06	7.25E-07	4.74E-07	3.15E-07	2.66E-07	3.26E-07	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ba-131		6.00E-01	1.57E-05	9.88E-06	5.40E-06	3.56E-06	2.35E-06	1.71E-06	2.25E-06	
Ba-131m		6.00E-01	2.17E-07	1.21E-07	5.99E-08	3.48E-08	2.38E-08	1.85E-08	2.46E-08	
Ba-133		6.00E-01	7.99E-05	2.33E-05	1.45E-05	1.74E-05	2.68E-05	5.70E-06	9.03E-06	
Ba-133m		6.00E-01	1.58E-05	1.38E-05	6.99E-06	4.03E-06	2.24E-06	2.04E-06	2.66E-06	
Ba-135m		6.00E-01	1.22E-05	1.08E-05	5.48E-06	3.16E-06	1.75E-06	1.61E-06	2.09E-06	
Ba-137m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ba-139		6.00E-01	5.25E-06	3.16E-06	1.54E-06	8.81E-07	5.59E-07	4.51E-07	6.07E-07	
Ba-140		6.00E-01	1.18E-04	6.70E-05	3.43E-05	2.17E-05	1.38E-05	9.69E-06	1.34E-05	
Ba-141		6.00E-01	3.00E-06	1.85E-06	9.14E-07	5.25E-07	3.37E-07	2.74E-07	3.64E-07	
Ba-142		6.00E-01	1.29E-06	7.92E-07	4.00E-07	2.37E-07	1.56E-07	1.26E-07	1.65E-07	
Be-10		2.00E-02	5.25E-05	2.98E-05	1.51E-05	8.92E-06	5.14E-06	4.22E-06	5.77E-06	
Be-7		2.00E-02	6.59E-07	4.81E-07	2.89E-07	1.98E-07	1.32E-07	1.04E-07	1.29E-07	
Bi-197		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-200		1.00E-01	1.79E-06	1.14E-06	6.14E-07	3.85E-07	2.60E-07	2.08E-07	2.65E-07	
Bi-201		1.00E-01	3.55E-06	2.38E-06	1.30E-06	8.29E-07	5.40E-07	4.33E-07	5.51E-07	
Bi-202		1.00E-01	2.80E-06	1.89E-06	1.06E-06	6.92E-07	4.63E-07	3.74E-07	4.66E-07	
Bi-203		1.00E-01	1.32E-05	9.51E-06	5.37E-06	3.54E-06	2.29E-06	1.84E-06	2.32E-06	
Bi-204		1.00E-01	1.46E-05	1.07E-05	6.11E-06	4.07E-06	2.66E-06	2.13E-06	2.67E-06	
Bi-205		1.00E-01	2.29E-05	1.69E-05	9.69E-06	6.48E-06	4.26E-06	3.39E-06	4.26E-06	
Bi-206		1.00E-01	5.22E-05	3.77E-05	2.13E-05	1.41E-05	9.07E-06	7.22E-06	9.14E-06	
Bi-207		1.00E-01	3.77E-05	2.67E-05	1.47E-05	9.47E-06	5.96E-06	4.74E-06	6.11E-06	
Bi-208		1.00E-01	2.68E-05	2.02E-05	1.18E-05	8.07E-06	5.37E-06	4.29E-06	5.33E-06	
Bi-210		1.00E-01	5.55E-05	3.60E-05	1.79E-05	1.06E-05	6.03E-06	4.85E-06	6.66E-06	
Bi-210m		1.00E-01	7.84E-04	3.37E-04	1.75E-04	1.10E-04	6.88E-05	5.55E-05	7.44E-05	
Bi-210m+D		–	7.84E-04	3.37E-04	1.75E-04	1.10E-04	6.88E-05	5.55E-05	7.44E-05	
Bi-210m+E		–	7.84E-04	3.37E-04	1.75E-04	1.10E-04	6.88E-05	5.55E-05	7.44E-05	
Bi-211		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-212		1.00E-01	1.20E-05	6.66E-06	3.26E-06	1.88E-06	1.23E-06	9.66E-07	1.30E-06	
Bi-212+D		–	1.20E-05	6.66E-06	3.26E-06	1.88E-06	1.23E-06	9.66E-07	1.30E-06	
Bi-212+E		–	1.20E-05	6.66E-06	3.26E-06	1.88E-06	1.23E-06	9.66E-07	1.30E-06	
Bi-212n		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-213		1.00E-01	9.29E-06	5.14E-06	2.50E-06	1.43E-06	9.32E-07	7.33E-07	9.92E-07	
Bi-213+D		–	9.29E-06	5.14E-06	2.50E-06	1.43E-06	9.32E-07	7.33E-07	9.94E-07	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Bi-213+E		–	9.29E-06	5.14E-06	2.50E-06	1.43E-06	9.32E-07	7.33E-07	9.94E-07	
Bi-214		1.00E-01	5.07E-06	2.78E-06	1.36E-06	7.77E-07	5.25E-07	4.14E-07	5.51E-07	
Bi-214+D		–	5.07E-06	2.78E-06	1.36E-06	7.77E-07	5.25E-07	4.14E-07	5.54E-07	
Bi-214+E		–	5.07E-06	2.78E-06	1.36E-06	7.77E-07	5.25E-07	4.14E-07	5.54E-07	
Bi-215		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-215+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-215+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-216		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bk-245		5.00E-03	2.27E-05	1.48E-05	7.55E-06	4.59E-06	2.68E-06	2.14E-06	2.90E-06	
Bk-246		5.00E-03	1.35E-05	9.40E-06	5.18E-06	3.33E-06	2.11E-06	1.67E-06	2.15E-06	
Bk-247		5.00E-03	3.29E-02	3.16E-03	2.33E-03	1.71E-03	1.41E-03	1.30E-03	1.64E-03	
Bk-248m		5.00E-03	2.72E-05	1.13E-05	5.77E-06	3.44E-06	1.96E-06	1.58E-06	2.24E-06	
Bk-249		5.00E-03	8.14E-05	1.07E-05	7.18E-06	5.07E-06	4.03E-06	3.67E-06	4.63E-06	
Bk-250		5.00E-03	5.59E-06	3.21E-06	1.67E-06	1.02E-06	6.36E-07	5.11E-07	6.77E-07	
Bk-251		5.00E-03	1.72E-06	9.73E-07	4.74E-07	2.72E-07	1.78E-07	1.40E-07	1.89E-07	
Br-72		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-73		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-74		1.00E+00	3.23E-06	1.85E-06	9.29E-07	5.51E-07	3.81E-07	3.03E-07	3.96E-07	
Br-74m		1.00E+00	5.40E-06	3.09E-06	1.55E-06	9.14E-07	6.29E-07	5.00E-07	6.51E-07	
Br-75		1.00E+00	3.15E-06	1.81E-06	9.07E-07	5.37E-07	3.64E-07	2.90E-07	3.81E-07	
Br-76		1.00E+00	1.52E-05	9.73E-06	5.14E-06	3.19E-06	2.08E-06	1.71E-06	2.19E-06	
Br-76m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-77		1.00E+00	2.36E-06	1.67E-06	9.62E-07	6.33E-07	4.29E-07	3.62E-07	4.44E-07	
Br-77m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-78		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-80		1.00E+00	1.45E-06	7.92E-07	3.81E-07	2.16E-07	1.47E-07	1.15E-07	1.55E-07	
Br-80m		1.00E+00	5.14E-06	2.96E-06	1.45E-06	8.36E-07	5.37E-07	4.26E-07	5.74E-07	
Br-82		1.00E+00	1.39E-05	9.62E-06	5.51E-06	3.56E-06	2.41E-06	2.03E-06	2.50E-06	
Br-82m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-83		1.00E+00	2.04E-06	1.14E-06	5.51E-07	3.16E-07	2.09E-07	1.64E-07	2.21E-07	
Br-84		1.00E+00	3.89E-06	2.16E-06	1.06E-06	6.11E-07	4.14E-07	3.27E-07	4.37E-07	
Br-84m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-85		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
C-10		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C-11		1.00E+00	9.66E-07	5.48E-07	2.72E-07	1.60E-07	1.11E-07	8.73E-08	1.15E-07	1.15E-07
C-14		1.00E+00	5.29E-06	5.96E-06	3.68E-06	2.96E-06	2.13E-06	2.15E-06	2.34E-06	2.34E-06
Ca-41		6.00E-01	5.37E-06	2.26E-06	1.72E-06	2.06E-06	2.16E-06	8.40E-07	1.10E-06	1.10E-06
Ca-45		6.00E-01	4.14E-05	1.81E-05	9.51E-06	6.73E-06	4.85E-06	2.62E-06	3.85E-06	3.85E-06
Ca-47		6.00E-01	4.77E-05	3.51E-05	1.83E-05	1.13E-05	6.88E-06	5.92E-06	7.59E-06	7.59E-06
Ca-49		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-101		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-102		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-103		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-104		1.00E-01	3.85E-06	2.39E-06	1.23E-06	7.44E-07	4.70E-07	3.74E-07	4.96E-07	4.96E-07
Cd-105		1.00E-01	1.51E-06	9.14E-07	4.77E-07	2.92E-07	1.96E-07	1.57E-07	2.02E-07	2.02E-07
Cd-107		1.00E-01	2.65E-06	1.71E-06	8.51E-07	5.03E-07	2.92E-07	2.31E-07	3.18E-07	3.18E-07
Cd-109		1.00E-01	7.59E-05	3.50E-05	2.04E-05	1.31E-05	8.77E-06	7.40E-06	9.32E-06	9.32E-06
Cd-111m		1.00E-01	5.33E-07	3.15E-07	1.61E-07	9.58E-08	6.44E-08	5.11E-08	6.70E-08	6.70E-08
Cd-113		1.00E-01	3.70E-04	1.75E-04	1.35E-04	1.10E-04	9.66E-05	9.07E-05	9.73E-05	9.73E-05
Cd-113m		1.00E-01	4.51E-04	2.09E-04	1.47E-04	1.09E-04	9.14E-05	8.66E-05	9.51E-05	9.51E-05
Cd-115		1.00E-01	5.51E-05	3.70E-05	1.86E-05	1.12E-05	6.44E-06	5.14E-06	7.03E-06	7.03E-06
Cd-115m		1.00E-01	1.50E-04	7.18E-05	3.58E-05	2.55E-05	1.51E-05	1.22E-05	1.61E-05	1.61E-05
Cd-117		1.00E-01	1.08E-05	6.96E-06	3.54E-06	2.13E-06	1.29E-06	1.03E-06	1.38E-06	1.38E-06
Cd-117m		1.00E-01	9.47E-06	6.33E-06	3.35E-06	2.10E-06	1.31E-06	1.05E-06	1.37E-06	1.37E-06
Cd-118		1.00E-01	8.51E-06	4.77E-06	2.32E-06	1.32E-06	8.70E-07	6.81E-07	9.25E-07	9.25E-07
Cd-119		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-119m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce-130		5.00E-03	2.88E-06	1.65E-06	8.33E-07	4.92E-07	3.34E-07	2.64E-07	3.47E-07	3.47E-07
Ce-131		5.00E-03	1.11E-06	6.36E-07	3.20E-07	1.89E-07	1.30E-07	1.02E-07	1.34E-07	1.34E-07
Ce-132		5.00E-03	1.19E-05	7.92E-06	4.14E-06	2.57E-06	1.54E-06	1.23E-06	1.64E-06	1.64E-06
Ce-133		5.00E-03	3.54E-06	2.37E-06	1.20E-06	7.18E-07	4.14E-07	3.27E-07	4.48E-07	4.48E-07
Ce-133m		5.00E-03	6.11E-06	4.22E-06	2.35E-06	1.52E-06	9.73E-07	7.81E-07	9.95E-07	9.95E-07
Ce-134		5.00E-03	1.08E-04	6.99E-05	3.54E-05	2.13E-05	1.23E-05	9.84E-06	1.34E-05	1.34E-05
Ce-135		5.00E-03	7.22E-06	5.14E-06	2.92E-06	1.91E-06	1.23E-06	9.77E-07	1.24E-06	1.24E-06
Ce-137		5.00E-03	9.99E-07	6.55E-07	3.41E-07	2.08E-07	1.24E-07	9.81E-08	1.32E-07	1.32E-07
Ce-137m		5.00E-03	2.31E-05	1.49E-05	7.47E-06	4.48E-06	2.56E-06	2.05E-06	2.81E-06	2.81E-06

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ce-139		5.00E-03	9.69E-06	6.11E-06	3.25E-06	2.03E-06	1.23E-06	9.77E-07	1.30E-06	
Ce-141		5.00E-03	3.02E-05	1.91E-05	9.62E-06	5.74E-06	3.29E-06	2.64E-06	3.62E-06	
Ce-143		5.00E-03	4.66E-05	3.01E-05	1.51E-05	9.07E-06	5.22E-06	4.18E-06	5.70E-06	
Ce-144		5.00E-03	2.45E-04	1.44E-04	7.18E-05	4.26E-05	2.41E-05	1.94E-05	2.68E-05	
Ce-144+D		–	2.47E-04	1.45E-04	7.25E-05	4.29E-05	2.43E-05	1.95E-05	2.71E-05	
Ce-144+E		–	2.47E-04	1.45E-04	7.25E-05	4.29E-05	2.43E-05	1.95E-05	2.71E-05	
Ce-145		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cf-244		5.00E-03	3.62E-06	1.79E-06	8.70E-07	4.96E-07	3.32E-07	2.60E-07	3.53E-07	
Cf-246		5.00E-03	1.85E-04	9.07E-05	4.55E-05	2.69E-05	1.51E-05	1.22E-05	1.71E-05	
Cf-247		5.00E-03	8.62E-07	5.37E-07	2.72E-07	1.64E-07	1.01E-07	7.99E-08	1.07E-07	
Cf-248		5.00E-03	5.59E-03	5.92E-04	3.64E-04	2.22E-04	1.22E-04	1.05E-04	1.73E-04	
Cf-249		5.00E-03	3.33E-02	3.20E-03	2.35E-03	1.72E-03	1.41E-03	1.30E-03	1.65E-03	
Cf-250		5.00E-03	2.09E-02	2.01E-03	1.35E-03	8.58E-04	6.33E-04	5.96E-04	8.21E-04	
Cf-251		5.00E-03	3.37E-02	3.25E-03	2.39E-03	1.75E-03	1.44E-03	1.32E-03	1.68E-03	
Cf-252		5.00E-03	1.84E-02	1.91E-03	1.20E-03	6.88E-04	3.85E-04	3.35E-04	5.59E-04	
Cf-253		5.00E-03	3.74E-04	4.22E-05	2.32E-05	1.43E-05	6.92E-06	5.48E-06	1.02E-05	
Cf-254		5.00E-03	4.26E-02	9.84E-03	5.33E-03	3.32E-03	1.86E-03	1.49E-03	2.23E-03	
Cf-255		5.00E-03	2.79E-06	1.02E-06	5.07E-07	2.96E-07	1.79E-07	1.41E-07	2.02E-07	
Cl-34		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cl-34m		1.00E+00	4.40E-06	2.48E-06	1.22E-06	7.10E-07	4.88E-07	3.85E-07	5.07E-07	
Cl-36		1.00E+00	3.59E-05	2.33E-05	1.17E-05	7.07E-06	4.26E-06	3.43E-06	4.59E-06	
Cl-38		1.00E+00	5.22E-06	2.90E-06	1.41E-06	8.10E-07	5.51E-07	4.33E-07	5.77E-07	
Cl-39		1.00E+00	3.61E-06	2.04E-06	1.01E-06	5.85E-07	4.00E-07	3.15E-07	4.18E-07	
Cl-40		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cm-238		5.00E-03	2.08E-06	1.34E-06	7.22E-07	4.59E-07	2.92E-07	2.34E-07	3.02E-07	
Cm-239		5.00E-03	3.05E-06	2.01E-06	1.04E-06	6.36E-07	3.77E-07	3.03E-07	4.03E-07	
Cm-240		5.00E-03	8.10E-04	1.79E-04	9.14E-05	5.55E-05	3.42E-05	2.83E-05	4.14E-05	
Cm-241		5.00E-03	4.00E-05	2.19E-05	1.14E-05	7.07E-06	4.26E-06	3.42E-06	4.59E-06	
Cm-242		5.00E-03	2.16E-03	2.81E-04	1.45E-04	8.73E-05	5.40E-05	4.33E-05	7.10E-05	
Cm-243		5.00E-03	1.20E-02	1.21E-03	8.18E-04	6.18E-04	5.48E-04	5.55E-04	6.66E-04	
Cm-244		5.00E-03	1.08E-02	1.08E-03	7.14E-04	5.18E-04	4.48E-04	4.55E-04	5.59E-04	
Cm-245		5.00E-03	1.38E-02	1.40E-03	1.03E-03	8.44E-04	7.73E-04	7.70E-04	8.95E-04	
Cm-246		5.00E-03	1.39E-02	1.39E-03	1.02E-03	8.36E-04	7.70E-04	7.66E-04	8.92E-04	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Cm-247		5.00E-03	1.27E-02	1.30E-03	9.51E-04	7.73E-04	7.10E-04	7.07E-04	8.21E-04	
Cm-247+D		–	1.27E-02	1.30E-03	9.51E-04	7.73E-04	7.10E-04	7.07E-04	8.23E-04	
Cm-247+E		–	1.27E-02	1.30E-03	9.51E-04	7.73E-04	7.10E-04	7.07E-04	8.23E-04	
Cm-248		5.00E-03	5.14E-02	5.33E-03	3.89E-03	3.16E-03	2.89E-03	2.87E-03	3.34E-03	
Cm-249		5.00E-03	1.44E-06	8.10E-07	3.96E-07	2.26E-07	1.47E-07	1.15E-07	1.57E-07	
Cm-250		5.00E-03	3.50E-01	3.70E-02	2.69E-02	2.17E-02	1.98E-02	1.96E-02	2.29E-02	
Cm-250+D		–	3.50E-01	3.70E-02	2.69E-02	2.17E-02	1.98E-02	1.96E-02	2.29E-02	
Cm-250+E		–	3.50E-01	3.70E-02	2.69E-02	2.17E-02	1.98E-02	1.96E-02	2.29E-02	
Cm-251		5.00E-03	1.31E-06	7.33E-07	3.57E-07	2.04E-07	1.36E-07	1.06E-07	1.43E-07	
Co-54m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Co-55		6.00E-01	2.25E-05	2.04E-05	1.08E-05	6.73E-06	4.11E-06	3.81E-06	4.70E-06	
Co-56		6.00E-01	9.44E-05	5.66E-05	3.27E-05	2.15E-05	1.43E-05	9.36E-06	1.27E-05	
Co-57		6.00E-01	1.06E-05	5.85E-06	3.30E-06	2.14E-06	1.38E-06	7.81E-07	1.16E-06	
Co-58		6.00E-01	2.72E-05	1.65E-05	9.55E-06	6.25E-06	4.18E-06	2.77E-06	3.74E-06	
Co-58m		6.00E-01	7.22E-07	5.70E-07	2.88E-07	1.73E-07	1.03E-07	8.84E-08	1.15E-07	
Co-60		6.00E-01	2.01E-04	9.92E-05	6.25E-05	4.14E-05	2.94E-05	1.27E-05	2.03E-05	
Co-60m		6.00E-01	7.84E-08	4.29E-08	2.08E-08	1.18E-08	8.03E-09	6.22E-09	8.40E-09	
Co-61		6.00E-01	3.06E-06	1.90E-06	9.32E-07	5.40E-07	3.44E-07	2.78E-07	3.70E-07	
Co-62		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Co-62m		6.00E-01	2.05E-06	1.15E-06	5.74E-07	3.36E-07	2.32E-07	1.82E-07	2.40E-07	
Cr-48		2.00E-01	5.00E-06	3.60E-06	2.08E-06	1.39E-06	9.14E-07	7.29E-07	9.14E-07	
Cr-49		2.00E-01	2.53E-06	1.45E-06	7.29E-07	4.29E-07	2.88E-07	2.28E-07	3.01E-07	
Cr-51		2.00E-01	1.27E-06	8.47E-07	4.55E-07	2.89E-07	1.79E-07	1.43E-07	1.86E-07	
Cr-55		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cr-56		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-121		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-121m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-123		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-124		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-125		1.00E+00	1.43E-06	8.10E-07	4.03E-07	2.36E-07	1.62E-07	1.28E-07	1.69E-07	
Cs-126		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-127		1.00E+00	6.96E-07	4.59E-07	2.53E-07	1.62E-07	1.11E-07	9.21E-08	1.14E-07	
Cs-128		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Cs-129		1.00E+00	1.61E-06	1.10E-06	6.18E-07	4.00E-07	2.66E-07	2.24E-07	2.78E-07	
Cs-130		1.00E+00	1.16E-06	6.48E-07	3.19E-07	1.84E-07	1.26E-07	9.92E-08	1.32E-07	
Cs-130m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-131		1.00E+00	1.69E-06	1.07E-06	5.85E-07	3.77E-07	2.59E-07	2.15E-07	2.67E-07	
Cs-132		1.00E+00	1.01E-05	6.96E-06	4.29E-06	2.92E-06	2.16E-06	1.90E-06	2.22E-06	
Cs-134		1.00E+00	9.55E-05	5.81E-05	4.88E-05	5.22E-05	7.03E-05	7.14E-05	6.92E-05	
Cs-134m		1.00E+00	7.84E-07	4.44E-07	2.20E-07	1.30E-07	9.18E-08	7.47E-08	9.66E-08	
Cs-135		1.00E+00	2.00E-05	1.14E-05	8.25E-06	8.18E-06	9.99E-06	9.81E-06	9.77E-06	
Cs-135m		1.00E+00	4.96E-07	3.24E-07	1.85E-07	1.21E-07	8.81E-08	7.18E-08	8.77E-08	
Cs-136		1.00E+00	5.37E-05	3.54E-05	2.25E-05	1.61E-05	1.27E-05	1.12E-05	1.28E-05	
Cs-137		1.00E+00	7.81E-05	4.59E-05	3.59E-05	3.77E-05	4.96E-05	5.03E-05	4.92E-05	
Cs-137+D		–	7.81E-05	4.59E-05	3.59E-05	3.77E-05	4.96E-05	5.03E-05	4.91E-05	
Cs-137+E		–	7.81E-05	4.59E-05	3.59E-05	3.77E-05	4.96E-05	5.03E-05	4.91E-05	
Cs-138		1.00E+00	4.11E-06	2.31E-06	1.14E-06	6.62E-07	4.55E-07	3.57E-07	4.74E-07	
Cs-138m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-139		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-140		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-57		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-59		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-60		1.00E+00	2.64E-06	1.60E-06	8.14E-07	4.88E-07	3.36E-07	2.66E-07	3.45E-07	
Cu-61		1.00E+00	2.61E-06	2.72E-06	1.40E-06	8.47E-07	5.37E-07	4.29E-07	5.51E-07	
Cu-62		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-64		1.00E+00	1.95E-06	3.10E-06	1.58E-06	9.47E-07	5.66E-07	4.55E-07	5.88E-07	
Cu-66		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-67		1.00E+00	7.51E-06	8.58E-06	4.33E-06	2.59E-06	1.52E-06	1.22E-06	1.61E-06	
Cu-69		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-148		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-149		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-150		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-151		5.00E-03	6.36E-07	4.00E-07	2.15E-07	1.35E-07	9.18E-08	7.29E-08	9.32E-08	
Dy-152		5.00E-03	3.57E-06	2.42E-06	1.30E-06	8.18E-07	5.03E-07	4.03E-07	5.25E-07	
Dy-153		5.00E-03	5.59E-06	3.77E-06	2.06E-06	1.32E-06	8.29E-07	6.62E-07	8.58E-07	
Dy-154		5.00E-03	6.07E-03	5.96E-04	3.92E-04	2.66E-04	2.17E-04	2.06E-04	2.69E-04	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Dy-155		5.00E-03	4.03E-06	2.83E-06	1.59E-06	1.04E-06	6.70E-07	5.37E-07	6.81E-07	
Dy-157		5.00E-03	1.64E-06	1.16E-06	6.66E-07	4.40E-07	2.86E-07	2.28E-07	2.87E-07	
Dy-159		5.00E-03	3.89E-06	2.48E-06	1.32E-06	8.21E-07	4.92E-07	3.92E-07	5.22E-07	
Dy-165		5.00E-03	4.85E-06	2.92E-06	1.43E-06	8.36E-07	5.07E-07	4.03E-07	5.51E-07	
Dy-165m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-166		5.00E-03	7.03E-05	4.55E-05	2.27E-05	1.35E-05	7.66E-06	6.14E-06	8.47E-06	
Dy-167		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-168		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-154		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-156		5.00E-03	1.32E-06	7.92E-07	4.03E-07	2.44E-07	1.61E-07	1.27E-07	1.67E-07	
Er-159		5.00E-03	7.18E-07	4.55E-07	2.47E-07	1.56E-07	1.07E-07	8.55E-08	1.08E-07	
Er-161		5.00E-03	2.53E-06	1.72E-06	9.47E-07	6.11E-07	3.92E-07	3.14E-07	4.00E-07	
Er-163		5.00E-03	8.84E-08	5.59E-08	2.98E-08	1.85E-08	1.23E-08	9.73E-09	1.25E-08	
Er-165		5.00E-03	6.51E-07	4.40E-07	2.36E-07	1.48E-07	9.07E-08	7.25E-08	9.51E-08	
Er-167m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-169		5.00E-03	1.61E-05	1.03E-05	5.14E-06	3.04E-06	1.72E-06	1.38E-06	1.91E-06	
Er-171		5.00E-03	1.46E-05	9.29E-06	4.70E-06	2.81E-06	1.65E-06	1.32E-06	1.79E-06	
Er-172		5.00E-03	3.96E-05	2.61E-05	1.34E-05	8.18E-06	4.81E-06	3.85E-06	5.18E-06	
Er-173		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Es-249		5.00E-03	6.99E-07	4.40E-07	2.37E-07	1.49E-07	9.84E-08	7.88E-08	1.01E-07	
Es-250		5.00E-03	1.81E-05	1.10E-05	5.74E-06	3.54E-06	2.15E-06	1.72E-06	2.29E-06	
Es-250m		5.00E-03	1.21E-06	5.77E-07	3.24E-07	2.10E-07	1.40E-07	1.14E-07	1.45E-07	
Es-251		5.00E-03	7.33E-06	4.63E-06	2.36E-06	1.43E-06	8.36E-07	6.66E-07	9.07E-07	
Es-253		5.00E-03	6.29E-04	1.68E-04	8.66E-05	5.18E-05	2.80E-05	2.24E-05	3.41E-05	
Es-254		5.00E-03	5.25E-03	6.03E-04	3.62E-04	2.21E-04	1.22E-04	1.04E-04	1.70E-04	
Es-254+D		–	5.25E-03	6.07E-04	3.64E-04	2.22E-04	1.23E-04	1.04E-04	1.71E-04	
Es-254+E		–	5.25E-03	6.07E-04	3.64E-04	2.22E-04	1.23E-04	1.04E-04	1.71E-04	
Es-254m		5.00E-03	2.15E-04	1.16E-04	5.85E-05	3.49E-05	1.98E-05	1.60E-05	2.22E-05	
Es-255		5.00E-03	9.77E-04	1.68E-04	8.88E-05	5.40E-05	2.76E-05	2.21E-05	3.67E-05	
Es-256		5.00E-03	1.05E-04	6.70E-05	3.53E-05	2.19E-05	1.37E-05	1.09E-05	1.43E-05	
Eu-142		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-142m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-143		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Eu-144		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-145		5.00E-03	1.70E-05	1.23E-05	7.07E-06	4.74E-06	3.10E-06	2.46E-06	3.09E-06	3.09E-06
Eu-146		5.00E-03	3.04E-05	2.22E-05	1.28E-05	8.58E-06	5.62E-06	4.48E-06	5.59E-06	5.59E-06
Eu-147		5.00E-03	1.38E-05	9.40E-06	5.14E-06	3.30E-06	2.06E-06	1.64E-06	2.12E-06	2.12E-06
Eu-148		5.00E-03	3.24E-05	2.32E-05	1.36E-05	9.18E-06	6.11E-06	4.81E-06	5.99E-06	5.99E-06
Eu-149		5.00E-03	6.11E-06	3.92E-06	2.05E-06	1.26E-06	7.47E-07	5.96E-07	7.96E-07	7.96E-07
Eu-150		5.00E-03	4.74E-05	2.02E-05	1.21E-05	8.29E-06	5.66E-06	4.63E-06	5.81E-06	5.81E-06
Eu-150m		5.00E-03	1.64E-05	1.05E-05	5.22E-06	3.09E-06	1.77E-06	1.42E-06	1.95E-06	1.95E-06
Eu-152		5.00E-03	5.70E-05	2.68E-05	1.48E-05	9.51E-06	6.07E-06	4.96E-06	6.44E-06	6.44E-06
Eu-152m		5.00E-03	2.09E-05	1.33E-05	6.66E-06	3.96E-06	2.31E-06	1.85E-06	2.52E-06	2.52E-06
Eu-152n		5.00E-03	5.33E-07	3.18E-07	1.78E-07	9.51E-08	6.11E-08	4.81E-08	6.51E-08	6.51E-08
Eu-154		5.00E-03	8.88E-05	4.33E-05	2.32E-05	1.45E-05	8.95E-06	7.29E-06	9.66E-06	9.66E-06
Eu-154m		5.00E-03	3.38E-07	1.94E-07	9.62E-08	5.62E-08	3.77E-08	2.95E-08	3.92E-08	3.92E-08
Eu-155		5.00E-03	1.62E-05	8.29E-06	4.26E-06	2.58E-06	1.51E-06	1.23E-06	1.67E-06	1.67E-06
Eu-156		5.00E-03	8.70E-05	5.70E-05	2.93E-05	1.79E-05	1.05E-05	8.47E-06	1.14E-05	1.14E-05
Eu-157		5.00E-03	2.52E-05	1.62E-05	8.18E-06	4.88E-06	2.84E-06	2.27E-06	3.10E-06	3.10E-06
Eu-158		5.00E-03	3.85E-06	2.21E-06	1.10E-06	6.44E-07	4.29E-07	3.38E-07	4.48E-07	4.48E-07
Eu-159		5.00E-03	2.20E-06	1.24E-06	6.07E-07	3.49E-07	2.30E-07	1.81E-07	2.43E-07	2.43E-07
F-17		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F-18		1.00E+00	1.85E-06	1.08E-06	5.48E-07	3.27E-07	2.24E-07	1.77E-07	2.31E-07	2.31E-07
Fe-52		6.00E-01	4.81E-05	3.38E-05	1.71E-05	1.04E-05	6.18E-06	5.11E-06	6.77E-06	6.77E-06
Fe-53		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-53m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-55		6.00E-01	2.76E-05	8.70E-06	6.44E-06	4.14E-06	2.85E-06	1.22E-06	2.04E-06	2.04E-06
Fe-59		6.00E-01	1.45E-04	4.77E-05	2.78E-05	1.75E-05	1.14E-05	6.62E-06	1.01E-05	1.01E-05
Fe-60		6.00E-01	3.01E-03	1.06E-03	1.05E-03	9.51E-04	8.99E-04	4.29E-04	5.48E-04	5.48E-04
Fe-60+D		–	3.21E-03	1.16E-03	1.12E-03	9.92E-04	9.29E-04	4.40E-04	5.66E-04	5.66E-04
Fe-60+E		–	3.21E-03	1.16E-03	1.12E-03	9.92E-04	9.29E-04	4.40E-04	5.66E-04	5.66E-04
Fe-61		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-62		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fm-251		5.00E-03	2.86E-06	1.82E-06	9.36E-07	5.70E-07	3.40E-07	2.70E-07	3.64E-07	3.64E-07
Fm-252		5.00E-03	1.54E-04	7.84E-05	3.92E-05	2.33E-05	1.32E-05	1.06E-05	1.48E-05	1.48E-05
Fm-253		5.00E-03	1.04E-04	3.23E-05	1.65E-05	9.88E-06	5.44E-06	4.37E-06	6.44E-06	6.44E-06

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Fm-254		5.00E-03	2.15E-05	1.23E-05	6.07E-06	3.55E-06	2.13E-06	1.69E-06	2.33E-06	
Fm-255		5.00E-03	1.23E-04	7.07E-05	3.51E-05	2.08E-05	1.18E-05	9.44E-06	1.31E-05	
Fm-256		5.00E-03	6.85E-04	4.29E-04	2.26E-04	1.39E-04	8.84E-05	7.07E-05	9.25E-05	
Fm-257		5.00E-03	3.74E-03	4.48E-04	2.52E-04	1.55E-04	7.51E-05	6.03E-05	1.09E-04	
Fr-212		1.00E+00	1.99E-05	1.40E-05	7.62E-06	4.59E-06	3.02E-06	2.61E-06	3.26E-06	
Fr-219		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-222		1.00E+00	2.26E-05	1.41E-05	7.36E-06	4.59E-06	3.12E-06	2.63E-06	3.31E-06	
Fr-223		1.00E+00	9.66E-05	6.29E-05	3.10E-05	1.85E-05	1.08E-05	8.81E-06	1.20E-05	
Fr-224		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-227		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ga-64		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ga-65		1.00E-02	1.58E-06	8.81E-07	4.37E-07	2.52E-07	1.73E-07	1.36E-07	1.80E-07	
Ga-66		1.00E-02	4.51E-05	2.94E-05	1.51E-05	9.18E-06	5.48E-06	4.37E-06	5.88E-06	
Ga-67		1.00E-02	6.88E-06	4.59E-06	2.42E-06	1.51E-06	9.07E-07	7.25E-07	9.62E-07	
Ga-68		1.00E-02	4.26E-06	2.48E-06	1.24E-06	7.29E-07	4.77E-07	3.77E-07	5.03E-07	
Ga-70		1.00E-02	1.47E-06	8.03E-07	3.89E-07	2.19E-07	1.48E-07	1.16E-07	1.56E-07	
Ga-72		1.00E-02	3.85E-05	2.58E-05	1.36E-05	8.47E-06	5.14E-06	4.14E-06	5.44E-06	
Ga-73		1.00E-02	1.10E-05	6.92E-06	3.47E-06	2.06E-06	1.22E-06	9.77E-07	1.33E-06	
Ga-74		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-142		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-143m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-144		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-145		5.00E-03	1.21E-06	7.22E-07	3.77E-07	2.31E-07	1.59E-07	1.27E-07	1.63E-07	
Gd-145m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-146		5.00E-03	3.42E-05	2.20E-05	1.17E-05	7.29E-06	4.44E-06	3.53E-06	4.66E-06	
Gd-147		5.00E-03	1.76E-05	1.25E-05	7.07E-06	4.63E-06	2.99E-06	2.38E-06	3.02E-06	
Gd-148		5.00E-03	6.07E-03	5.99E-04	3.92E-04	2.66E-04	2.14E-04	2.02E-04	2.66E-04	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Gd-149		5.00E-03	1.76E-05	1.20E-05	6.51E-06	4.14E-06	2.55E-06	2.03E-06	2.65E-06	
Gd-150		5.00E-03	5.51E-03	5.44E-04	3.61E-04	2.50E-04	2.04E-04	1.94E-04	2.51E-04	
Gd-151		5.00E-03	9.07E-06	5.70E-06	2.94E-06	1.79E-06	1.05E-06	8.40E-07	1.14E-06	
Gd-152		5.00E-03	4.33E-03	4.29E-04	2.83E-04	1.96E-04	1.60E-04	1.52E-04	1.97E-04	
Gd-153		5.00E-03	1.10E-05	6.73E-06	3.53E-06	2.17E-06	1.29E-06	1.03E-06	1.38E-06	
Gd-159		5.00E-03	2.16E-05	1.38E-05	6.88E-06	4.07E-06	2.33E-06	1.87E-06	2.57E-06	
Gd-162		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ge-66		1.00E+00	3.02E-06	1.94E-06	1.08E-06	6.92E-07	4.70E-07	3.77E-07	4.74E-07	
Ge-67		1.00E+00	2.60E-06	1.44E-06	7.10E-07	4.07E-07	2.80E-07	2.20E-07	2.93E-07	
Ge-68		1.00E+00	4.55E-05	2.97E-05	1.57E-05	9.73E-06	5.96E-06	4.74E-06	6.25E-06	
Ge-68+D		–	4.96E-05	3.22E-05	1.69E-05	1.05E-05	6.44E-06	5.11E-06	6.75E-06	
Ge-68+E		–	4.96E-05	3.22E-05	1.69E-05	1.05E-05	6.44E-06	5.11E-06	6.75E-06	
Ge-69		1.00E+00	5.77E-06	3.89E-06	2.20E-06	1.42E-06	9.51E-07	7.70E-07	9.66E-07	
Ge-71		1.00E+00	4.59E-07	2.92E-07	1.49E-07	9.07E-08	5.51E-08	4.37E-08	5.85E-08	
Ge-75		1.00E+00	2.06E-06	1.15E-06	5.59E-07	3.23E-07	2.19E-07	1.71E-07	2.29E-07	
Ge-77		1.00E+00	1.10E-05	6.85E-06	3.66E-06	2.29E-06	1.52E-06	1.21E-06	1.56E-06	
Ge-78		1.00E+00	4.18E-06	2.46E-06	1.27E-06	7.77E-07	5.33E-07	4.22E-07	5.44E-07	
H-3	Tritiated	1.00E+00	2.79E-07	2.04E-07	1.25E-07	9.07E-08	7.07E-08	7.07E-08	7.77E-08	
H-3	Organically Bound	1.00E+00	4.40E-07	4.37E-07	2.69E-07	2.11E-07	1.54E-07	1.55E-07	1.69E-07	
Hf-167		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hf-169		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hf-170		2.00E-02	1.20E-05	8.44E-06	4.66E-06	3.02E-06	1.92E-06	1.53E-06	1.96E-06	
Hf-172		2.00E-02	7.36E-05	2.33E-05	1.26E-05	7.73E-06	4.77E-06	3.92E-06	5.40E-06	
Hf-172+D		–	7.40E-05	2.34E-05	1.26E-05	7.77E-06	4.77E-06	3.92E-06	5.40E-06	
Hf-172+E		–	7.40E-05	2.34E-05	1.26E-05	7.77E-06	4.77E-06	3.92E-06	5.40E-06	
Hf-173		2.00E-02	6.96E-06	4.81E-06	2.61E-06	1.67E-06	1.04E-06	8.29E-07	1.07E-06	
Hf-174		2.00E-02	2.25E-02	2.10E-03	1.52E-03	1.15E-03	9.99E-04	9.44E-04	1.17E-03	
Hf-175		2.00E-02	1.38E-05	8.77E-06	4.77E-06	3.04E-06	1.88E-06	1.49E-06	1.95E-06	
Hf-177m		2.00E-02	2.96E-06	1.79E-06	9.36E-07	5.70E-07	3.89E-07	3.08E-07	4.00E-07	
Hf-178m		2.00E-02	2.08E-04	5.85E-05	3.49E-05	2.39E-05	1.71E-05	1.47E-05	1.84E-05	
Hf-179m		2.00E-02	4.51E-05	2.94E-05	1.56E-05	9.77E-06	5.92E-06	4.70E-06	6.22E-06	
Hf-180m		2.00E-02	5.44E-06	3.66E-06	1.98E-06	1.25E-06	7.88E-07	6.33E-07	8.18E-07	
Hf-181		2.00E-02	4.40E-05	2.75E-05	1.42E-05	8.73E-06	5.18E-06	4.11E-06	5.55E-06	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Hf-182		2.00E-02	1.94E-04	2.63E-05	1.81E-05	1.37E-05	1.14E-05	1.05E-05	1.27E-05	
Hf-182+D		–	2.46E-04	6.07E-05	3.64E-05	2.52E-05	1.84E-05	1.61E-05	2.01E-05	
Hf-182+E		–	2.46E-04	6.07E-05	3.64E-05	2.52E-05	1.84E-05	1.61E-05	2.01E-05	
Hf-182m		2.00E-02	1.68E-06	1.01E-06	5.25E-07	3.18E-07	2.12E-07	1.69E-07	2.20E-07	
Hf-183		2.00E-02	3.02E-06	1.80E-06	9.07E-07	5.37E-07	3.46E-07	2.75E-07	3.65E-07	
Hf-184		2.00E-02	2.04E-05	1.32E-05	6.77E-06	4.11E-06	2.43E-06	1.94E-06	2.61E-06	
Hg-190	Inorganic	4.00E-02	7.03E-07	4.44E-07	2.38E-07	1.49E-07	1.01E-07	8.07E-08	1.03E-07	
Hg-190	Methyl	1.00E+00	5.51E-07	3.32E-07	1.74E-07	1.07E-07	7.47E-08	5.99E-08	7.62E-08	
Hg-190	Organic	8.00E-01	6.25E-07	4.29E-07	2.29E-07	1.43E-07	9.73E-08	7.81E-08	9.88E-08	
Hg-191m	Inorganic	4.00E-02	1.70E-06	1.10E-06	5.96E-07	3.77E-07	2.49E-07	1.99E-07	2.55E-07	
Hg-191m	Methyl	1.00E+00	1.08E-06	6.66E-07	3.54E-07	2.20E-07	1.54E-07	1.24E-07	1.57E-07	
Hg-191m	Organic	8.00E-01	1.30E-06	9.95E-07	5.37E-07	3.39E-07	2.26E-07	1.81E-07	2.29E-07	
Hg-192	Inorganic	4.00E-02	6.62E-06	4.63E-06	2.55E-06	1.66E-06	1.05E-06	8.40E-07	1.08E-06	
Hg-192	Methyl	1.00E+00	1.91E-06	1.27E-06	7.33E-07	4.66E-07	3.16E-07	2.63E-07	3.26E-07	
Hg-192	Organic	8.00E-01	3.02E-06	3.49E-06	1.92E-06	1.24E-06	7.92E-07	6.36E-07	7.99E-07	
Hg-193	Inorganic	4.00E-02	3.40E-06	2.30E-06	1.24E-06	7.88E-07	4.96E-07	4.00E-07	5.14E-07	
Hg-193	Methyl	1.00E+00	1.27E-06	8.03E-07	4.33E-07	2.70E-07	1.84E-07	1.50E-07	1.89E-07	
Hg-193	Organic	8.00E-01	1.82E-06	1.83E-06	9.88E-07	6.29E-07	4.00E-07	3.21E-07	4.07E-07	
Hg-193+D		–	3.40E-06	2.30E-06	1.24E-06	7.88E-07	4.96E-07	4.00E-07	5.16E-07	
Hg-193+E		–	3.40E-06	2.30E-06	1.24E-06	7.88E-07	4.96E-07	4.00E-07	5.16E-07	
Hg-193m	Inorganic	4.00E-02	1.37E-05	9.44E-06	5.07E-06	3.23E-06	2.00E-06	1.60E-06	2.08E-06	
Hg-193m	Methyl	1.00E+00	4.18E-06	2.74E-06	1.49E-06	9.44E-07	6.33E-07	5.22E-07	6.55E-07	
Hg-193m	Organic	8.00E-01	6.11E-06	6.96E-06	3.77E-06	2.39E-06	1.49E-06	1.20E-06	1.52E-06	
Hg-194	Inorganic	4.00E-02	2.68E-05	1.36E-05	9.62E-06	7.22E-06	5.74E-06	5.14E-06	5.77E-06	
Hg-194	Methyl	1.00E+00	4.88E-04	4.26E-04	3.11E-04	2.43E-04	2.05E-04	1.90E-04	2.05E-04	
Hg-194	Organic	8.00E-01	3.96E-04	1.76E-04	1.28E-04	9.95E-05	8.36E-05	7.73E-05	8.51E-05	
Hg-194+D		–	3.70E-05	2.15E-05	1.41E-05	1.01E-05	7.62E-06	6.66E-06	7.69E-06	
Hg-194+E		–	3.70E-05	2.15E-05	1.41E-05	1.01E-05	7.62E-06	6.66E-06	7.69E-06	
Hg-195	Inorganic	4.00E-02	3.74E-06	2.48E-06	1.29E-06	7.92E-07	4.77E-07	3.81E-07	5.07E-07	
Hg-195	Methyl	1.00E+00	1.15E-06	7.92E-07	4.11E-07	2.52E-07	1.65E-07	1.34E-07	1.72E-07	
Hg-195	Organic	8.00E-01	1.77E-06	1.89E-06	9.81E-07	6.03E-07	3.66E-07	2.93E-07	3.81E-07	
Hg-195m	Inorganic	4.00E-02	2.13E-05	1.41E-05	7.22E-06	4.37E-06	2.55E-06	2.05E-06	2.76E-06	
Hg-195m	Methyl	1.00E+00	7.59E-06	4.88E-06	2.52E-06	1.56E-06	9.95E-07	8.10E-07	1.05E-06	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Hg-195m	Organic	8.00E-01	9.55E-06	1.03E-05	5.25E-06	3.19E-06	1.88E-06	1.51E-06	1.99E-06	
Hg-197	Inorganic	4.00E-02	9.84E-06	6.48E-06	3.29E-06	1.99E-06	1.15E-06	9.25E-07	1.25E-06	
Hg-197	Methyl	1.00E+00	3.89E-06	2.50E-06	1.27E-06	7.81E-07	4.92E-07	3.96E-07	5.22E-07	
Hg-197	Organic	8.00E-01	5.14E-06	4.81E-06	2.43E-06	1.47E-06	8.58E-07	6.92E-07	9.18E-07	
Hg-197m	Inorganic	4.00E-02	1.98E-05	1.29E-05	6.48E-06	3.85E-06	2.22E-06	1.78E-06	2.43E-06	
Hg-197m	Methyl	1.00E+00	5.85E-06	3.63E-06	1.82E-06	1.10E-06	6.92E-07	5.55E-07	7.36E-07	
Hg-197m	Organic	8.00E-01	8.25E-06	9.29E-06	4.66E-06	2.77E-06	1.61E-06	1.29E-06	1.71E-06	
Hg-199m	Inorganic	4.00E-02	1.37E-06	7.70E-07	3.77E-07	2.17E-07	1.45E-07	1.14E-07	1.52E-07	
Hg-199m	Methyl	1.00E+00	1.26E-06	6.99E-07	3.41E-07	1.95E-07	1.32E-07	1.04E-07	1.39E-07	
Hg-199m	Organic	8.00E-01	1.32E-06	7.59E-07	3.74E-07	2.14E-07	1.43E-07	1.12E-07	1.50E-07	
Hg-203	Inorganic	4.00E-02	2.05E-05	1.32E-05	6.85E-06	4.22E-06	2.49E-06	1.99E-06	2.68E-06	
Hg-203	Methyl	1.00E+00	5.62E-05	3.96E-05	2.11E-05	1.33E-05	8.58E-06	7.07E-06	8.99E-06	
Hg-203	Organic	8.00E-01	4.92E-05	2.37E-05	1.25E-05	7.81E-06	4.88E-06	4.00E-06	5.29E-06	
Hg-205		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hg-206		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hg-207		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-150		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-153		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-153m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-154		5.00E-03	1.74E-06	9.73E-07	4.81E-07	2.79E-07	1.92E-07	1.51E-07	2.00E-07	
Ho-154m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-155		5.00E-03	1.41E-06	8.66E-07	4.51E-07	2.78E-07	1.84E-07	1.46E-07	1.90E-07	
Ho-156		5.00E-03	3.74E-06	2.21E-06	1.13E-06	6.77E-07	4.55E-07	3.60E-07	4.70E-07	
Ho-157		5.00E-03	2.45E-07	1.49E-07	7.96E-08	4.92E-08	3.39E-08	2.70E-08	3.45E-08	
Ho-159		5.00E-03	2.88E-07	1.76E-07	9.32E-08	5.77E-08	4.00E-08	3.17E-08	4.03E-08	
Ho-160		5.00E-03	4.77E-07	3.07E-07	1.72E-07	1.12E-07	7.88E-08	6.33E-08	7.88E-08	
Ho-161		5.00E-03	5.33E-07	3.34E-07	1.56E-07	1.03E-07	5.88E-08	4.66E-08	6.33E-08	
Ho-162		5.00E-03	1.29E-07	7.36E-08	3.74E-08	2.20E-08	1.52E-08	1.20E-08	1.57E-08	
Ho-162m		5.00E-03	8.62E-07	5.37E-07	2.85E-07	1.77E-07	1.18E-07	9.40E-08	1.21E-07	
Ho-163		5.00E-03	1.94E-07	6.96E-08	3.56E-08	2.15E-08	1.28E-08	1.07E-08	1.48E-08	
Ho-164		5.00E-03	4.33E-07	2.40E-07	1.17E-07	6.66E-08	4.48E-08	3.50E-08	4.70E-08	
Ho-164m		5.00E-03	7.36E-07	4.18E-07	2.06E-07	1.19E-07	7.81E-08	6.14E-08	8.25E-08	
Ho-166		5.00E-03	6.03E-05	3.85E-05	1.92E-05	1.14E-05	6.48E-06	5.18E-06	7.14E-06	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ho-166m		5.00E-03	9.99E-05	3.55E-05	2.02E-05	1.33E-05	8.81E-06	7.29E-06	9.44E-06	
Ho-167		5.00E-03	3.45E-06	2.15E-06	1.10E-06	6.55E-07	4.07E-07	3.23E-07	4.33E-07	
Ho-168		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-168m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-170		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-118		1.00E+00	7.47E-06	5.77E-06	3.11E-06	1.60E-06	1.05E-06	7.22E-07	1.02E-06	
I-118m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-119		1.00E+00	1.67E-06	1.10E-06	5.74E-07	3.10E-07	2.12E-07	1.57E-07	2.13E-07	
I-120		1.00E+00	1.21E-05	8.70E-06	4.48E-06	2.27E-06	1.52E-06	1.08E-06	1.52E-06	
I-120m		1.00E+00	6.07E-06	4.03E-06	2.08E-06	1.13E-06	7.70E-07	5.74E-07	7.77E-07	
I-121		1.00E+00	1.99E-06	1.70E-06	1.01E-06	5.74E-07	4.00E-07	2.81E-07	3.70E-07	
I-122		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-123		1.00E+00	8.40E-06	7.40E-06	4.00E-06	1.89E-06	1.25E-06	8.18E-07	1.20E-06	
I-124		1.00E+00	4.44E-04	4.18E-04	2.35E-04	1.15E-04	7.55E-05	4.85E-05	7.03E-05	
I-125		1.00E+00	1.96E-04	2.16E-04	1.56E-04	1.18E-04	8.29E-05	5.74E-05	6.99E-05	
I-126		1.00E+00	7.81E-04	7.81E-04	4.74E-04	2.56E-04	1.69E-04	1.08E-04	1.51E-04	
I-128		1.00E+00	2.11E-06	1.22E-06	5.99E-07	3.28E-07	2.22E-07	1.69E-07	2.31E-07	
I-129		1.00E+00	6.96E-04	8.14E-04	6.51E-04	7.10E-04	5.29E-04	4.00E-04	4.48E-04	
I-130		1.00E+00	7.22E-05	6.36E-05	3.44E-05	1.61E-05	1.07E-05	6.92E-06	1.02E-05	
I-130m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-131		1.00E+00	6.81E-04	6.62E-04	3.81E-04	1.94E-04	1.27E-04	8.03E-05	1.16E-04	
I-132		1.00E+00	1.11E-05	8.77E-06	4.63E-06	2.28E-06	1.53E-06	1.05E-06	1.50E-06	
I-132m		1.00E+00	7.99E-06	6.59E-06	3.52E-06	1.67E-06	1.10E-06	7.33E-07	1.07E-06	
I-133		1.00E+00	1.84E-04	1.64E-04	8.70E-05	3.92E-05	2.53E-05	1.60E-05	2.44E-05	
I-134		1.00E+00	3.89E-06	2.59E-06	1.34E-06	7.33E-07	5.03E-07	3.74E-07	5.07E-07	
I-134m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-135		1.00E+00	3.61E-05	3.11E-05	1.65E-05	7.66E-06	5.03E-06	3.27E-06	4.85E-06	
In-103		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-105		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-106		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-106m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-107		4.00E-02	1.54E-06	9.18E-07	4.70E-07	2.82E-07	1.89E-07	1.50E-07	1.96E-07	
In-108		4.00E-02	2.13E-06	1.42E-06	7.99E-07	5.22E-07	3.58E-07	2.89E-07	3.60E-07	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
In-108m		4.00E-02	3.10E-06	1.82E-06	9.32E-07	5.59E-07	3.77E-07	3.00E-07	3.92E-07	
In-109		4.00E-02	1.66E-06	1.15E-06	6.44E-07	4.18E-07	2.72E-07	2.18E-07	2.76E-07	
In-109m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-110		4.00E-02	5.66E-06	4.18E-06	2.48E-06	1.68E-06	1.13E-06	9.07E-07	1.12E-06	
In-110m		4.00E-02	4.00E-06	2.38E-06	1.21E-06	7.22E-07	4.77E-07	3.77E-07	4.96E-07	
In-111		4.00E-02	8.92E-06	6.18E-06	3.40E-06	2.19E-06	1.37E-06	1.08E-06	1.40E-06	
In-111m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-112		4.00E-02	4.63E-07	2.57E-07	1.26E-07	7.25E-08	4.96E-08	3.89E-08	5.18E-08	
In-112m		4.00E-02	7.51E-07	4.22E-07	2.07E-07	1.19E-07	8.03E-08	6.29E-08	8.44E-08	
In-113m		4.00E-02	1.15E-06	6.92E-07	3.89E-07	2.32E-07	1.35E-07	1.07E-07	1.45E-07	
In-114		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-114m		4.00E-02	2.10E-04	1.17E-04	5.77E-05	3.39E-05	1.94E-05	1.53E-05	2.15E-05	
In-114m+D		–	2.10E-04	1.17E-04	5.77E-05	3.39E-05	1.94E-05	1.53E-05	2.15E-05	
In-114m+E		–	2.10E-04	1.17E-04	5.77E-05	3.39E-05	1.94E-05	1.53E-05	2.15E-05	
In-115		4.00E-02	5.00E-04	2.37E-04	1.78E-04	1.59E-04	1.35E-04	1.21E-04	1.31E-04	
In-115m		4.00E-02	3.61E-06	2.27E-06	1.14E-06	6.81E-07	4.07E-07	3.25E-07	4.40E-07	
In-116m		4.00E-02	2.15E-06	1.33E-06	7.07E-07	4.40E-07	2.99E-07	2.38E-07	3.05E-07	
In-117		4.00E-02	1.20E-06	7.03E-07	3.56E-07	2.12E-07	1.43E-07	1.13E-07	1.48E-07	
In-117m		4.00E-02	5.25E-06	3.19E-06	1.59E-06	9.40E-07	5.77E-07	4.59E-07	6.22E-07	
In-118		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-118m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-119		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-119m		4.00E-02	2.14E-06	1.17E-06	5.66E-07	3.22E-07	2.18E-07	1.70E-07	2.29E-07	
In-121		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-121m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-180		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-182		2.00E-02	2.19E-06	1.25E-06	6.22E-07	3.64E-07	2.47E-07	1.94E-07	2.57E-07	
Ir-183		2.00E-02	1.68E-06	1.09E-06	5.88E-07	3.74E-07	2.46E-07	1.97E-07	2.52E-07	
Ir-184		2.00E-02	6.29E-06	4.07E-06	2.18E-06	1.37E-06	8.73E-07	6.96E-07	9.03E-07	
Ir-185		2.00E-02	1.08E-05	7.29E-06	3.89E-06	2.46E-06	1.51E-06	1.21E-06	1.58E-06	
Ir-186		2.00E-02	1.71E-05	1.18E-05	6.48E-06	4.14E-06	2.61E-06	2.09E-06	2.69E-06	
Ir-186m		2.00E-02	2.23E-06	1.48E-06	8.10E-07	5.22E-07	3.39E-07	2.72E-07	3.47E-07	
Ir-187		2.00E-02	3.85E-06	2.59E-06	1.38E-06	8.70E-07	5.37E-07	4.29E-07	5.62E-07	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ir-188		2.00E-02	1.98E-05	1.43E-05	8.14E-06	5.44E-06	3.54E-06	2.83E-06	3.56E-06	
Ir-189		2.00E-02	9.32E-06	6.11E-06	3.14E-06	1.91E-06	1.12E-06	8.99E-07	1.21E-06	
Ir-190		2.00E-02	2.98E-05	2.11E-05	1.19E-05	7.77E-06	5.00E-06	3.96E-06	5.03E-06	
Ir-190m		2.00E-02	2.49E-07	1.58E-07	8.29E-08	5.11E-08	3.29E-08	2.59E-08	3.40E-08	
Ir-190n		2.00E-02	3.50E-06	2.38E-06	1.32E-06	8.44E-07	5.48E-07	4.37E-07	5.59E-07	
Ir-191m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-192		2.00E-02	4.96E-05	3.24E-05	1.70E-05	1.05E-05	6.33E-06	5.07E-06	6.73E-06	
Ir-192m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-192n		2.00E-02	3.96E-05	2.29E-05	1.18E-05	7.10E-06	4.14E-06	3.39E-06	4.59E-06	
Ir-193m		2.00E-02	1.24E-05	7.99E-06	3.96E-06	2.36E-06	1.34E-06	1.07E-06	1.48E-06	
Ir-194		2.00E-02	5.70E-05	3.66E-05	1.82E-05	1.08E-05	6.14E-06	4.92E-06	6.81E-06	
Ir-194m		2.00E-02	6.14E-05	4.07E-05	2.29E-05	1.49E-05	9.58E-06	7.62E-06	9.73E-06	
Ir-195		2.00E-02	4.48E-06	2.70E-06	1.33E-06	7.81E-07	4.74E-07	3.74E-07	5.11E-07	
Ir-195m		2.00E-02	5.44E-06	3.44E-06	1.74E-06	1.05E-06	6.33E-07	5.03E-07	6.77E-07	
Ir-196		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-196m		2.00E-02	3.69E-06	2.32E-06	1.24E-06	7.70E-07	5.14E-07	4.11E-07	5.29E-07	
K-38		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
K-40		1.00E+00	2.26E-04	1.55E-04	7.81E-05	4.70E-05	2.79E-05	2.28E-05	3.04E-05	
K-42		1.00E+00	1.89E-05	1.12E-05	5.51E-06	3.23E-06	2.02E-06	1.62E-06	2.18E-06	
K-43		1.00E+00	8.33E-06	5.33E-06	2.79E-06	1.73E-06	1.12E-06	9.21E-07	1.18E-06	
K-44		1.00E+00	3.63E-06	2.02E-06	9.95E-07	5.74E-07	3.92E-07	3.09E-07	4.11E-07	
K-45		1.00E+00	2.11E-06	1.17E-06	5.81E-07	3.34E-07	2.30E-07	1.81E-07	2.40E-07	
K-46		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-74		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-75		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-77		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-79		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-81		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-81m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-83m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Kr-85		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-87		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-88		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-89		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-128		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-129		5.00E-03	1.11E-06	6.33E-07	3.16E-07	1.85E-07	1.25E-07	9.88E-08	1.31E-07	1.31E-07
La-130		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-131		5.00E-03	1.25E-06	7.51E-07	3.89E-07	2.35E-07	1.57E-07	1.24E-07	1.62E-07	1.62E-07
La-132		5.00E-03	1.49E-05	9.66E-06	5.00E-06	3.08E-06	1.89E-06	1.51E-06	2.00E-06	2.00E-06
La-132m		5.00E-03	1.32E-06	8.44E-07	4.40E-07	2.70E-07	1.71E-07	1.36E-07	1.79E-07	1.79E-07
La-133		5.00E-03	1.17E-06	7.51E-07	3.92E-07	2.39E-07	1.48E-07	1.18E-07	1.56E-07	1.56E-07
La-134		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-135		5.00E-03	1.07E-06	7.25E-07	3.89E-07	2.42E-07	1.47E-07	1.15E-07	1.52E-07	1.52E-07
La-136		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-137		5.00E-03	4.14E-06	1.74E-06	9.51E-07	6.03E-07	3.81E-07	3.11E-07	4.11E-07	4.11E-07
La-138		5.00E-03	4.74E-05	1.72E-05	1.02E-05	6.96E-06	4.81E-06	4.03E-06	5.07E-06	5.07E-06
La-140		5.00E-03	7.18E-05	4.77E-05	2.50E-05	1.55E-05	9.29E-06	7.44E-06	9.88E-06	9.88E-06
La-141		5.00E-03	1.65E-05	1.01E-05	5.00E-06	2.92E-06	1.72E-06	1.37E-06	1.89E-06	1.89E-06
La-142		5.00E-03	6.85E-06	4.14E-06	2.10E-06	1.26E-06	8.14E-07	6.48E-07	8.55E-07	8.55E-07
La-143		5.00E-03	2.54E-06	1.42E-06	6.92E-07	3.96E-07	2.63E-07	2.06E-07	2.78E-07	2.78E-07
Lu-165		5.00E-03	8.58E-07	4.96E-07	2.51E-07	1.49E-07	1.02E-07	8.07E-08	1.05E-07	1.05E-07
Lu-167		5.00E-03	1.54E-06	9.77E-07	5.25E-07	3.31E-07	2.23E-07	1.78E-07	2.27E-07	2.27E-07
Lu-169		5.00E-03	1.45E-05	1.03E-05	5.81E-06	3.85E-06	2.48E-06	1.98E-06	2.50E-06	2.50E-06
Lu-169m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-170		5.00E-03	2.49E-05	1.80E-05	1.02E-05	6.85E-06	4.48E-06	3.59E-06	4.51E-06	4.51E-06
Lu-171		5.00E-03	2.28E-05	1.55E-05	8.29E-06	5.22E-06	3.21E-06	2.56E-06	3.35E-06	3.35E-06
Lu-171m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-172		5.00E-03	3.81E-05	2.67E-05	1.48E-05	9.66E-06	6.14E-06	4.92E-06	6.25E-06	6.25E-06
Lu-172m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-173		5.00E-03	1.44E-05	8.51E-06	4.51E-06	2.80E-06	1.68E-06	1.35E-06	1.80E-06	1.80E-06
Lu-174		5.00E-03	1.25E-05	6.81E-06	3.57E-06	2.18E-06	1.30E-06	1.05E-06	1.42E-06	1.42E-06
Lu-174m		5.00E-03	2.37E-05	1.44E-05	7.29E-06	4.37E-06	2.50E-06	2.02E-06	2.76E-06	2.76E-06

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Lu-176		5.00E-03	9.10E-05	4.11E-05	2.15E-05	1.32E-05	8.10E-06	6.70E-06	8.95E-06	
Lu-176m		5.00E-03	7.33E-06	4.48E-06	2.21E-06	1.29E-06	7.70E-07	6.11E-07	8.40E-07	
Lu-177		5.00E-03	2.25E-05	1.45E-05	7.25E-06	4.29E-06	2.45E-06	1.97E-06	2.71E-06	
Lu-177m		5.00E-03	6.40E-05	4.03E-05	2.12E-05	1.32E-05	7.92E-06	6.33E-06	8.40E-06	
Lu-178		5.00E-03	2.14E-06	1.18E-06	5.74E-07	3.26E-07	2.19E-07	1.72E-07	2.31E-07	
Lu-178m		5.00E-03	1.36E-06	7.77E-07	3.89E-07	2.28E-07	1.57E-07	1.24E-07	1.62E-07	
Lu-179		5.00E-03	9.51E-06	5.88E-06	2.91E-06	1.71E-06	1.01E-06	7.99E-07	1.10E-06	
Lu-180		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-181		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mg-27		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mg-28		1.00E+00	4.29E-05	5.37E-05	2.75E-05	1.67E-05	9.99E-06	7.99E-06	1.04E-05	
Mn-50m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mn-51		2.00E-01	3.96E-06	2.27E-06	1.12E-06	6.51E-07	4.37E-07	3.43E-07	4.55E-07	
Mn-52		2.00E-01	4.55E-05	3.28E-05	1.89E-05	1.27E-05	8.36E-06	6.70E-06	8.36E-06	
Mn-52m		2.00E-01	2.89E-06	1.64E-06	8.14E-07	4.77E-07	3.27E-07	2.57E-07	3.39E-07	
Mn-53		2.00E-01	1.51E-06	7.99E-07	4.07E-07	2.38E-07	1.37E-07	1.10E-07	1.53E-07	
Mn-54		2.00E-01	2.04E-05	1.18E-05	7.07E-06	4.81E-06	3.28E-06	2.67E-06	3.29E-06	
Mn-56		2.00E-01	9.88E-06	6.25E-06	3.17E-06	1.90E-06	1.19E-06	9.47E-07	1.26E-06	
Mn-57		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mn-58m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-101		1.00E+00	1.72E-06	9.62E-07	4.74E-07	2.76E-07	1.90E-07	1.49E-07	1.97E-07	
Mo-102		1.00E+00	3.23E-06	1.76E-06	8.51E-07	4.81E-07	3.28E-07	2.56E-07	3.45E-07	
Mo-89		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-90		1.00E+00	6.48E-06	4.26E-06	2.33E-06	1.49E-06	9.92E-07	8.14E-07	1.02E-06	
Mo-91		1.00E+00	2.70E-06	1.49E-06	7.25E-07	4.14E-07	2.83E-07	2.22E-07	2.97E-07	
Mo-91m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-93		1.00E+00	2.76E-05	2.40E-05	1.73E-05	1.36E-05	1.17E-05	1.07E-05	1.15E-05	
Mo-93m		1.00E+00	3.12E-06	2.10E-06	1.19E-06	7.70E-07	5.33E-07	4.44E-07	5.44E-07	
Mo-99		1.00E+00	2.02E-05	1.30E-05	6.55E-06	4.00E-06	2.81E-06	2.24E-06	2.86E-06	
N-13		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
N-16		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Na-22		1.00E+00	7.59E-05	5.44E-05	3.13E-05	2.04E-05	1.39E-05	1.17E-05	1.44E-05	
Na-24		1.00E+00	1.31E-05	8.47E-06	4.59E-06	2.90E-06	1.95E-06	1.61E-06	2.02E-06	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Nb-87		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-88		2.00E-02	2.90E-06	1.65E-06	8.29E-07	4.88E-07	3.38E-07	2.66E-07	3.49E-07	
Nb-88m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-89		2.00E-02	1.08E-05	7.29E-06	3.67E-06	2.19E-06	1.36E-06	9.88E-07	1.37E-06	
Nb-89m		2.00E-02	5.29E-06	3.17E-06	1.62E-06	9.69E-07	6.36E-07	5.07E-07	6.66E-07	
Nb-90		2.00E-02	3.92E-05	2.69E-05	1.45E-05	9.29E-06	5.77E-06	4.63E-06	5.99E-06	
Nb-91		2.00E-02	2.09E-06	1.30E-06	6.40E-07	3.77E-07	2.12E-07	1.62E-07	2.30E-07	
Nb-91m		2.00E-02	1.75E-05	1.12E-05	5.62E-06	3.33E-06	1.90E-06	1.52E-06	2.09E-06	
Nb-92		2.00E-02	2.58E-05	1.74E-05	1.04E-05	7.03E-06	4.74E-06	3.77E-06	4.70E-06	
Nb-92m		2.00E-02	1.23E-05	8.95E-06	5.22E-06	3.52E-06	2.35E-06	1.86E-06	2.32E-06	
Nb-93m		2.00E-02	5.59E-06	3.52E-06	1.76E-06	1.04E-06	5.96E-07	4.77E-07	6.59E-07	
Nb-94		2.00E-02	5.55E-05	3.60E-05	1.97E-05	1.27E-05	7.96E-06	6.40E-06	8.25E-06	
Nb-94m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-95		2.00E-02	1.69E-05	1.18E-05	6.59E-06	4.29E-06	2.74E-06	2.17E-06	2.78E-06	
Nb-95m		2.00E-02	2.54E-05	1.64E-05	8.25E-06	4.92E-06	2.81E-06	2.25E-06	3.09E-06	
Nb-96		2.00E-02	3.42E-05	2.35E-05	1.28E-05	8.14E-06	5.11E-06	4.07E-06	5.25E-06	
Nb-97		2.00E-02	2.86E-06	1.68E-06	8.40E-07	4.96E-07	3.23E-07	2.55E-07	3.40E-07	
Nb-98m		2.00E-02	4.11E-06	2.43E-06	1.25E-06	7.55E-07	5.07E-07	4.03E-07	5.25E-07	
Nb-99		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-99m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nd-134		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nd-135		5.00E-03	2.48E-06	1.40E-06	6.96E-07	4.07E-07	2.76E-07	2.17E-07	2.87E-07	
Nd-136		5.00E-03	3.81E-06	2.27E-06	1.17E-06	6.99E-07	4.63E-07	3.68E-07	4.81E-07	
Nd-137		5.00E-03	2.05E-06	1.23E-06	6.29E-07	3.77E-07	2.50E-07	1.98E-07	2.60E-07	
Nd-138		5.00E-03	2.67E-05	1.68E-05	8.44E-06	5.00E-06	2.97E-06	2.37E-06	3.22E-06	
Nd-139		5.00E-03	8.33E-07	4.88E-07	2.46E-07	1.45E-07	9.69E-08	7.66E-08	1.01E-07	
Nd-139m		5.00E-03	7.29E-06	5.00E-06	2.74E-06	1.76E-06	1.12E-06	8.95E-07	1.15E-06	
Nd-140		5.00E-03	7.99E-05	5.22E-05	2.64E-05	1.59E-05	9.18E-06	7.36E-06	1.00E-05	
Nd-141		5.00E-03	3.02E-07	1.94E-07	1.03E-07	6.33E-08	4.03E-08	3.19E-08	4.18E-08	
Nd-141m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nd-144		5.00E-03	4.26E-03	4.18E-04	2.78E-04	1.95E-04	1.59E-04	1.51E-04	1.95E-04	
Nd-147		5.00E-03	4.48E-05	2.89E-05	1.45E-05	8.70E-06	4.96E-06	4.00E-06	5.48E-06	
Nd-149		5.00E-03	5.33E-06	3.23E-06	1.61E-06	9.44E-07	5.81E-07	4.63E-07	6.25E-07	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Nd-151		5.00E-03	1.22E-06	7.03E-07	3.48E-07	2.03E-07	1.35E-07	1.06E-07	1.41E-07	
Nd-152		5.00E-03	2.23E-06	1.22E-06	5.92E-07	3.36E-07	2.29E-07	1.79E-07	2.41E-07	
Ne-19		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ne-24		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ni-56		1.00E-01	2.02E-05	1.50E-05	8.88E-06	6.03E-06	4.07E-06	3.22E-06	4.00E-06	
Ni-57		1.00E-01	2.67E-05	1.91E-05	1.04E-05	6.73E-06	4.22E-06	3.38E-06	4.33E-06	
Ni-59		1.00E-01	2.32E-06	1.25E-06	6.88E-07	4.14E-07	2.66E-07	2.31E-07	2.95E-07	
Ni-63		1.00E-01	5.81E-06	3.15E-06	1.72E-06	1.04E-06	6.62E-07	5.74E-07	7.33E-07	
Ni-65		1.00E-01	7.59E-06	4.66E-06	2.34E-06	1.38E-06	8.47E-07	6.73E-07	9.10E-07	
Ni-66		1.00E-01	1.24E-04	8.29E-05	4.14E-05	2.45E-05	1.39E-05	1.12E-05	1.54E-05	
Np-232		5.00E-03	3.29E-07	1.92E-07	1.02E-07	6.40E-08	4.55E-08	3.65E-08	4.59E-08	
Np-233		5.00E-03	8.10E-08	4.88E-08	2.54E-08	1.54E-08	1.07E-08	8.40E-09	1.09E-08	
Np-234		5.00E-03	1.87E-05	1.31E-05	7.22E-06	4.70E-06	2.99E-06	2.39E-06	3.06E-06	
Np-235		5.00E-03	2.80E-06	1.61E-06	7.99E-07	4.70E-07	2.66E-07	2.09E-07	2.95E-07	
Np-235+D		–	2.80E-06	1.61E-06	7.99E-07	4.70E-07	2.66E-07	2.09E-07	2.94E-07	
Np-235+E		–	2.80E-06	1.61E-06	7.99E-07	4.70E-07	2.66E-07	2.09E-07	2.94E-07	
Np-236		5.00E-03	1.01E-03	1.25E-04	9.58E-05	9.32E-05	9.58E-05	9.18E-05	9.99E-05	
Np-236m		5.00E-03	9.44E-06	4.92E-06	2.50E-06	1.51E-06	8.92E-07	7.25E-07	9.88E-07	
Np-237		5.00E-03	7.40E-03	7.84E-04	5.29E-04	4.26E-04	4.00E-04	3.96E-04	4.63E-04	
Np-237+D		–	7.44E-03	8.10E-04	5.40E-04	4.33E-04	4.03E-04	4.00E-04	4.69E-04	
Np-237+E		–	7.44E-03	8.10E-04	5.40E-04	4.33E-04	4.03E-04	4.00E-04	4.69E-04	
Np-238		5.00E-03	3.44E-05	2.23E-05	1.15E-05	6.99E-06	4.11E-06	3.31E-06	4.44E-06	
Np-239		5.00E-03	3.35E-05	2.17E-05	1.09E-05	6.55E-06	3.77E-06	3.01E-06	4.11E-06	
Np-240		5.00E-03	2.92E-06	1.72E-06	8.66E-07	5.14E-07	3.39E-07	2.68E-07	3.55E-07	
Np-240m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Np-241		5.00E-03	7.25E-07	3.96E-07	1.92E-07	1.08E-07	7.36E-08	5.77E-08	7.73E-08	
Np-242		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Np-242m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-14		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-15		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-19		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Os-180		2.00E-02	6.55E-07	3.89E-07	2.04E-07	1.25E-07	8.66E-08	6.88E-08	8.84E-08	
Os-181		2.00E-02	2.82E-06	1.90E-06	1.04E-06	6.62E-07	4.26E-07	3.41E-07	4.37E-07	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Os-182		2.00E-02	1.78E-05	1.23E-05	6.73E-06	4.29E-06	2.69E-06	2.15E-06	2.78E-06	
Os-183		2.00E-02	7.18E-06	4.92E-06	2.66E-06	1.69E-06	1.05E-06	8.40E-07	1.09E-06	
Os-183m		2.00E-02	5.77E-06	4.07E-06	2.27E-06	1.49E-06	9.62E-07	7.70E-07	9.77E-07	
Os-185		2.00E-02	1.37E-05	9.40E-06	5.40E-06	3.59E-06	2.35E-06	1.86E-06	2.35E-06	
Os-186		2.00E-02	1.72E-03	6.88E-04	3.77E-04	2.32E-04	1.44E-04	1.18E-04	1.59E-04	
Os-189m		2.00E-02	7.55E-07	4.70E-07	2.32E-07	1.37E-07	7.92E-08	6.33E-08	8.73E-08	
Os-190m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Os-191		2.00E-02	2.38E-05	1.54E-05	7.77E-06	4.66E-06	2.68E-06	2.15E-06	2.94E-06	
Os-191m		2.00E-02	4.22E-06	2.69E-06	1.34E-06	7.96E-07	4.55E-07	3.65E-07	5.03E-07	
Os-193		2.00E-02	3.50E-05	2.25E-05	1.12E-05	6.70E-06	3.81E-06	3.06E-06	4.22E-06	
Os-194		2.00E-02	1.09E-04	6.55E-05	3.32E-05	1.98E-05	1.14E-05	9.18E-06	1.26E-05	
Os-194+D		–	1.66E-04	1.02E-04	5.14E-05	3.06E-05	1.75E-05	1.41E-05	1.94E-05	
Os-194+E		–	1.66E-04	1.02E-04	5.14E-05	3.06E-05	1.75E-05	1.41E-05	1.94E-05	
Os-196		2.00E-02	5.03E-06	2.80E-06	1.36E-06	7.77E-07	5.18E-07	4.07E-07	5.48E-07	
P-30		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
P-32		1.00E+00	1.15E-04	7.14E-05	3.50E-05	1.97E-05	1.16E-05	8.88E-06	1.25E-05	
P-33		1.00E+00	1.00E-05	6.77E-06	3.37E-06	1.95E-06	1.15E-06	9.07E-07	1.25E-06	
Pa-227		5.00E-03	2.14E-05	1.18E-05	5.70E-06	3.24E-06	2.16E-06	1.68E-06	2.28E-06	
Pa-228		5.00E-03	4.37E-05	1.78E-05	9.58E-06	6.07E-06	3.85E-06	2.95E-06	4.00E-06	
Pa-229		5.00E-03	3.69E-06	2.05E-06	1.06E-06	6.51E-07	3.85E-07	3.08E-07	4.18E-07	
Pa-230		5.00E-03	8.03E-05	1.92E-05	1.03E-05	6.40E-06	4.00E-06	3.07E-06	4.48E-06	
Pa-231		5.00E-03	3.05E-02	3.03E-03	2.48E-03	2.09E-03	1.88E-03	1.77E-03	2.07E-03	
Pa-232		5.00E-03	2.32E-05	1.55E-05	8.18E-06	5.11E-06	3.12E-06	2.49E-06	3.28E-06	
Pa-233		5.00E-03	3.96E-05	2.54E-05	1.29E-05	7.73E-06	4.48E-06	3.57E-06	4.88E-06	
Pa-234		5.00E-03	1.52E-05	9.92E-06	5.18E-06	3.18E-06	1.94E-06	1.55E-06	2.06E-06	
Pa-234m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pa-235		5.00E-03	1.24E-06	6.81E-07	3.28E-07	1.86E-07	1.25E-07	9.77E-08	1.32E-07	
Pa-236		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pa-237		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pb-194		6.00E-01	7.96E-07	4.59E-07	2.32E-07	1.38E-07	9.51E-08	7.55E-08	9.84E-08	
Pb-195m		6.00E-01	8.88E-07	5.25E-07	2.73E-07	1.66E-07	1.15E-07	9.21E-08	1.18E-07	
Pb-196		6.00E-01	8.77E-07	5.51E-07	2.93E-07	1.81E-07	1.24E-07	1.01E-07	1.28E-07	
Pb-197		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Pb-197m		6.00E-01	1.52E-06	9.40E-07	4.92E-07	3.02E-07	2.05E-07	1.65E-07	2.12E-07	
Pb-198		6.00E-01	1.91E-06	1.42E-06	7.92E-07	5.11E-07	3.38E-07	2.93E-07	3.59E-07	
Pb-199		6.00E-01	1.04E-06	7.33E-07	4.03E-07	2.59E-07	1.73E-07	1.46E-07	1.81E-07	
Pb-200		6.00E-01	9.14E-06	7.36E-06	3.96E-06	2.52E-06	1.58E-06	1.43E-06	1.76E-06	
Pb-201		6.00E-01	3.53E-06	2.89E-06	1.59E-06	1.02E-06	6.55E-07	6.03E-07	7.29E-07	
Pb-201m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pb-202		6.00E-01	3.89E-04	1.89E-04	1.27E-04	1.41E-04	1.65E-04	5.77E-05	7.73E-05	
Pb-202+D		–	4.00E-04	1.96E-04	1.31E-04	1.44E-04	1.67E-04	5.96E-05	7.95E-05	
Pb-202+E		–	4.00E-04	1.96E-04	1.31E-04	1.44E-04	1.67E-04	5.96E-05	7.95E-05	
Pb-202m		6.00E-01	3.38E-06	2.60E-06	1.45E-06	9.40E-07	6.18E-07	5.48E-07	6.66E-07	
Pb-203		6.00E-01	5.88E-06	4.77E-06	2.57E-06	1.62E-06	1.01E-06	9.25E-07	1.14E-06	
Pb-204m		6.00E-01	1.26E-06	8.66E-07	4.88E-07	3.16E-07	2.17E-07	1.80E-07	2.22E-07	
Pb-205		6.00E-01	7.36E-06	3.56E-06	2.22E-06	2.21E-06	2.35E-06	1.00E-06	1.30E-06	
Pb-209		6.00E-01	2.11E-06	1.41E-06	6.92E-07	4.03E-07	2.46E-07	2.10E-07	2.76E-07	
Pb-210		6.00E-01	3.08E-02	1.35E-02	8.07E-03	7.22E-03	7.10E-03	2.58E-03	3.77E-03	
Pb-211		6.00E-01	1.16E-05	5.37E-06	2.63E-06	1.54E-06	1.01E-06	6.59E-07	9.69E-07	
Pb-212		6.00E-01	5.29E-04	2.35E-04	1.22E-04	7.55E-05	4.63E-05	2.22E-05	3.81E-05	
Pb-214		6.00E-01	8.07E-06	3.89E-06	1.93E-06	1.14E-06	7.51E-07	5.14E-07	7.36E-07	
Pd-100		5.00E-02	2.65E-05	1.87E-05	1.04E-05	6.77E-06	4.29E-06	3.40E-06	4.37E-06	
Pd-101		5.00E-02	2.97E-06	2.06E-06	1.11E-06	7.07E-07	4.40E-07	3.46E-07	4.51E-07	
Pd-103		5.00E-02	8.14E-06	5.29E-06	2.65E-06	1.57E-06	8.88E-07	7.03E-07	9.73E-07	
Pd-107		5.00E-02	1.67E-06	1.05E-06	5.25E-07	3.12E-07	1.76E-07	1.42E-07	1.96E-07	
Pd-109		5.00E-02	2.37E-05	1.54E-05	7.66E-06	4.51E-06	2.58E-06	2.06E-06	2.85E-06	
Pd-109m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-111		5.00E-02	2.32E-06	1.28E-06	6.22E-07	3.54E-07	2.36E-07	1.85E-07	2.50E-07	
Pd-112		5.00E-02	1.05E-04	6.99E-05	3.51E-05	2.09E-05	1.19E-05	9.55E-06	1.31E-05	
Pd-114		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-96		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-97		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pd-98		5.00E-02	2.62E-06	1.48E-06	7.36E-07	4.29E-07	2.93E-07	2.31E-07	3.05E-07	
Pd-99		5.00E-02	1.35E-06	7.92E-07	4.03E-07	2.42E-07	1.65E-07	1.30E-07	1.70E-07	
Pm-136		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-137m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Pm-139		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-140		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-140m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-141		5.00E-03	1.51E-06	8.51E-07	4.18E-07	2.43E-07	1.65E-07	1.30E-07	1.72E-07	
Pm-142		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-143		5.00E-03	7.14E-06	4.51E-06	2.58E-06	1.70E-06	1.10E-06	8.70E-07	1.11E-06	
Pm-144		5.00E-03	2.86E-05	1.76E-05	1.04E-05	6.99E-06	4.63E-06	3.65E-06	4.59E-06	
Pm-145		5.00E-03	5.40E-06	2.46E-06	1.32E-06	8.21E-07	5.03E-07	4.11E-07	5.48E-07	
Pm-146		5.00E-03	3.77E-05	1.88E-05	1.03E-05	6.55E-06	4.11E-06	3.32E-06	4.37E-06	
Pm-147		5.00E-03	1.34E-05	7.03E-06	3.53E-06	2.09E-06	1.20E-06	9.66E-07	1.34E-06	
Pm-148		5.00E-03	1.11E-04	7.18E-05	3.61E-05	2.16E-05	1.24E-05	9.95E-06	1.36E-05	
Pm-148m		5.00E-03	5.51E-05	3.74E-05	2.04E-05	1.31E-05	8.21E-06	6.51E-06	8.44E-06	
Pm-149		5.00E-03	4.26E-05	2.73E-05	1.36E-05	8.07E-06	4.59E-06	3.67E-06	5.07E-06	
Pm-150		5.00E-03	1.04E-05	6.40E-06	3.25E-06	1.95E-06	1.21E-06	9.66E-07	1.29E-06	
Pm-151		5.00E-03	2.95E-05	1.91E-05	9.69E-06	5.85E-06	3.39E-06	2.72E-06	3.69E-06	
Pm-152		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-152m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-153		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-154		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-154m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-203	Organic	1.00E+00	1.12E-06	9.29E-07	5.07E-07	3.23E-07	2.18E-07	1.75E-07	2.19E-07	
Po-203	Inorganic	2.00E-01	1.57E-06	1.05E-06	5.77E-07	3.70E-07	2.48E-07	1.98E-07	2.51E-07	
Po-204	Organic	1.00E+00	5.51E-06	4.88E-06	2.67E-06	1.71E-06	1.11E-06	8.92E-07	1.12E-06	
Po-204	Inorganic	2.00E-01	8.36E-06	5.96E-06	3.29E-06	2.13E-06	1.37E-06	1.10E-06	1.39E-06	
Po-205	Organic	1.00E+00	1.21E-06	9.99E-07	5.66E-07	3.74E-07	2.52E-07	2.04E-07	2.52E-07	
Po-205	Inorganic	2.00E-01	1.52E-06	1.04E-06	5.88E-07	3.85E-07	2.60E-07	2.09E-07	2.61E-07	
Po-206	Organic	1.00E+00	1.29E-03	4.29E-04	2.15E-04	1.30E-04	7.96E-05	6.18E-05	8.84E-05	
Po-206	Inorganic	2.00E-01	3.02E-04	1.15E-04	5.88E-05	3.58E-05	2.20E-05	1.72E-05	2.41E-05	
Po-207	Organic	1.00E+00	1.67E-06	2.06E-06	1.17E-06	7.70E-07	5.11E-07	4.11E-07	5.07E-07	
Po-207	Inorganic	2.00E-01	3.54E-06	2.60E-06	1.48E-06	9.77E-07	6.40E-07	5.14E-07	6.44E-07	
Po-208	Organic	1.00E+00	1.18E-01	4.07E-02	2.03E-02	1.20E-02	7.29E-03	5.62E-03	8.10E-03	
Po-208	Inorganic	2.00E-01	2.39E-02	8.18E-03	4.11E-03	2.42E-03	1.47E-03	1.14E-03	1.64E-03	
Po-209	Organic	1.00E+00	1.17E-01	4.03E-02	2.01E-02	1.19E-02	7.25E-03	5.59E-03	8.07E-03	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Po-209	Inorganic	2.00E-01	2.36E-02	8.10E-03	4.07E-03	2.41E-03	1.46E-03	1.13E-03	1.63E-03	
Po-210	Organic	1.00E+00	9.66E-02	3.26E-02	1.62E-02	9.58E-03	5.81E-03	4.48E-03	6.48E-03	
Po-210	Inorganic	2.00E-01	1.96E-02	6.62E-03	3.29E-03	1.94E-03	1.18E-03	9.07E-04	1.32E-03	
Po-211		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-212		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-212m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-213		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-214		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-215		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-216		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-218		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-134		5.00E-03	1.98E-06	1.15E-06	5.77E-07	3.40E-07	2.29E-07	1.82E-07	2.39E-07	
Pr-134m		5.00E-03	3.61E-06	2.06E-06	1.02E-06	5.92E-07	3.96E-07	3.13E-07	4.14E-07	
Pr-135		5.00E-03	1.75E-06	1.01E-06	5.11E-07	3.02E-07	2.05E-07	1.61E-07	2.12E-07	
Pr-136		5.00E-03	1.38E-06	7.84E-07	3.92E-07	2.31E-07	1.60E-07	1.26E-07	1.65E-07	
Pr-137		5.00E-03	1.46E-06	8.81E-07	4.48E-07	2.66E-07	1.72E-07	1.36E-07	1.80E-07	
Pr-138		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-138m		5.00E-03	3.89E-06	2.77E-06	1.52E-06	9.73E-07	5.96E-07	4.77E-07	6.18E-07	
Pr-139		5.00E-03	1.21E-06	7.81E-07	4.07E-07	2.48E-07	1.52E-07	1.21E-07	1.61E-07	
Pr-140		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-142		5.00E-03	5.70E-05	3.64E-05	1.81E-05	1.07E-05	6.11E-06	4.88E-06	6.73E-06	
Pr-142m		5.00E-03	7.25E-07	4.63E-07	2.31E-07	1.37E-07	7.73E-08	6.22E-08	8.58E-08	
Pr-143		5.00E-03	5.03E-05	3.23E-05	1.61E-05	9.51E-06	5.40E-06	4.33E-06	5.99E-06	
Pr-144		5.00E-03	2.37E-06	1.30E-06	6.25E-07	3.54E-07	2.40E-07	1.87E-07	2.52E-07	
Pr-144m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-145		5.00E-03	1.74E-05	1.08E-05	5.37E-06	3.15E-06	1.83E-06	1.46E-06	2.01E-06	
Pr-146		5.00E-03	3.47E-06	1.93E-06	9.44E-07	5.40E-07	3.67E-07	2.87E-07	3.85E-07	
Pr-147		5.00E-03	1.52E-06	8.44E-07	4.11E-07	2.35E-07	1.59E-07	1.25E-07	1.67E-07	
Pr-148		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-148m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pt-184		2.00E-02	1.05E-06	6.59E-07	3.44E-07	2.12E-07	1.39E-07	1.11E-07	1.44E-07	
Pt-186		2.00E-02	3.22E-06	2.21E-06	1.22E-06	7.88E-07	5.03E-07	4.03E-07	5.18E-07	
Pt-187		2.00E-02	2.97E-06	1.92E-06	1.01E-06	6.29E-07	3.96E-07	3.16E-07	4.14E-07	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Pt-188		2.00E-02	2.69E-05	1.84E-05	9.95E-06	6.33E-06	3.92E-06	3.13E-06	4.07E-06	
Pt-189		2.00E-02	6.73E-06	4.51E-06	2.39E-06	1.49E-06	9.10E-07	7.29E-07	9.58E-07	
Pt-190		2.00E-02	3.67E-04	1.61E-04	8.40E-05	5.14E-05	3.16E-05	2.57E-05	3.47E-05	
Pt-191		2.00E-02	1.29E-05	8.66E-06	4.55E-06	2.83E-06	1.71E-06	1.37E-06	1.81E-06	
Pt-193		2.00E-02	1.56E-06	9.95E-07	4.92E-07	2.91E-07	1.64E-07	1.32E-07	1.82E-07	
Pt-193m		2.00E-02	1.95E-05	1.25E-05	6.25E-06	3.70E-06	2.11E-06	1.69E-06	2.33E-06	
Pt-195m		2.00E-02	2.67E-05	1.73E-05	8.70E-06	5.18E-06	2.97E-06	2.39E-06	3.27E-06	
Pt-197		2.00E-02	1.85E-05	1.18E-05	5.88E-06	3.49E-06	1.99E-06	1.60E-06	2.20E-06	
Pt-197m		2.00E-02	3.70E-06	2.26E-06	1.11E-06	6.51E-07	3.96E-07	3.14E-07	4.29E-07	
Pt-199		2.00E-02	1.79E-06	1.01E-06	4.92E-07	2.83E-07	1.88E-07	1.47E-07	1.98E-07	
Pt-200		2.00E-02	4.96E-05	3.18E-05	1.59E-05	9.47E-06	5.40E-06	4.33E-06	5.96E-06	
Pt-202		2.00E-02	1.88E-04	1.21E-04	6.03E-05	3.57E-05	2.03E-05	1.63E-05	2.25E-05	
Pt-202+D		–	1.88E-04	1.21E-04	6.03E-05	3.57E-05	2.03E-05	1.63E-05	2.25E-05	
Pt-202+E		–	1.88E-04	1.21E-04	6.03E-05	3.57E-05	2.03E-05	1.63E-05	2.25E-05	
Pu-232		5.00E-03	6.18E-06	3.43E-06	1.68E-06	9.66E-07	6.44E-07	5.07E-07	6.81E-07	
Pu-234		5.00E-03	7.59E-06	3.77E-06	1.94E-06	1.18E-06	7.03E-07	5.62E-07	7.70E-07	
Pu-235		5.00E-03	8.77E-08	5.11E-08	2.60E-08	1.54E-08	1.07E-08	8.36E-09	1.09E-08	
Pu-236		5.00E-03	7.84E-03	8.07E-04	5.44E-04	3.92E-04	3.24E-04	3.29E-04	4.07E-04	
Pu-237		5.00E-03	4.40E-06	2.81E-06	1.45E-06	8.84E-07	5.22E-07	4.14E-07	5.59E-07	
Pu-238		5.00E-03	1.47E-02	1.48E-03	1.13E-03	9.03E-04	8.14E-04	8.44E-04	9.73E-04	
Pu-239		5.00E-03	1.55E-02	1.56E-03	1.23E-03	1.00E-03	9.10E-04	9.29E-04	1.07E-03	
Pu-239+D		–	1.55E-02	1.56E-03	1.23E-03	1.00E-03	9.10E-04	9.29E-04	1.07E-03	
Pu-239+E		–	1.55E-02	1.56E-03	1.23E-03	1.00E-03	9.10E-04	9.29E-04	1.07E-03	
Pu-240		5.00E-03	1.55E-02	1.56E-03	1.23E-03	1.00E-03	9.10E-04	9.29E-04	1.07E-03	
Pu-241		5.00E-03	2.08E-04	2.14E-05	2.03E-05	1.87E-05	1.77E-05	1.75E-05	1.93E-05	
Pu-242		5.00E-03	1.47E-02	1.48E-03	1.17E-03	9.55E-04	8.66E-04	8.84E-04	1.01E-03	
Pu-243		5.00E-03	3.74E-06	2.32E-06	1.15E-06	6.77E-07	3.96E-07	3.16E-07	4.33E-07	
Pu-244		5.00E-03	1.47E-02	1.53E-03	1.19E-03	9.62E-04	8.62E-04	8.81E-04	1.01E-03	
Pu-244+D		–	1.47E-02	1.56E-03	1.20E-03	9.69E-04	8.66E-04	8.84E-04	1.02E-03	
Pu-244+E		–	1.47E-02	1.56E-03	1.20E-03	9.69E-04	8.66E-04	8.84E-04	1.02E-03	
Pu-245		5.00E-03	2.82E-05	1.82E-05	9.14E-06	5.48E-06	3.16E-06	2.53E-06	3.46E-06	
Pu-246		5.00E-03	1.10E-04	7.18E-05	3.66E-05	2.22E-05	1.30E-05	1.04E-05	1.41E-05	
Ra-219		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Ra-219+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-219+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-220		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-222		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-223		6.00E-01	1.95E-02	4.07E-03	2.12E-03	1.68E-03	1.39E-03	3.81E-04	8.03E-04	8.03E-04
Ra-223+D		–	1.95E-02	4.07E-03	2.12E-03	1.68E-03	1.39E-03	3.81E-04	8.03E-04	8.03E-04
Ra-223+E		–	1.95E-02	4.07E-03	2.12E-03	1.68E-03	1.39E-03	3.81E-04	8.03E-04	8.03E-04
Ra-224		6.00E-01	1.00E-02	2.41E-03	1.28E-03	9.47E-04	7.22E-04	2.39E-04	4.66E-04	4.66E-04
Ra-224+D		–	1.00E-02	2.41E-03	1.28E-03	9.47E-04	7.22E-04	2.39E-04	4.65E-04	4.65E-04
Ra-224+E		–	1.00E-02	2.41E-03	1.28E-03	9.47E-04	7.22E-04	2.39E-04	4.65E-04	4.65E-04
Ra-225		6.00E-01	2.59E-02	4.44E-03	2.28E-03	1.86E-03	1.62E-03	3.69E-04	8.81E-04	8.81E-04
Ra-226		6.00E-01	1.72E-02	3.53E-03	2.28E-03	2.97E-03	5.62E-03	1.04E-03	1.68E-03	1.68E-03
Ra-226+D		–	1.72E-02	3.54E-03	2.28E-03	2.97E-03	5.62E-03	1.04E-03	1.68E-03	1.68E-03
Ra-226+E		–	1.72E-02	3.54E-03	2.28E-03	2.97E-03	5.62E-03	1.04E-03	1.68E-03	1.68E-03
Ra-227		6.00E-01	4.11E-06	1.61E-06	9.25E-07	6.29E-07	5.03E-07	3.03E-07	4.11E-07	4.11E-07
Ra-228		6.00E-01	1.09E-01	2.09E-02	1.27E-02	1.45E-02	1.90E-02	2.58E-03	5.92E-03	5.92E-03
Ra-228+D		–	1.09E-01	2.09E-02	1.27E-02	1.45E-02	1.90E-02	2.58E-03	5.92E-03	5.92E-03
Ra-228+E		–	1.09E-01	2.09E-02	1.27E-02	1.45E-02	1.90E-02	2.58E-03	5.92E-03	5.92E-03
Ra-230		6.00E-01	7.36E-06	4.55E-06	2.26E-06	1.30E-06	8.21E-07	6.66E-07	8.92E-07	8.92E-07
Rb-77		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-78		1.00E+00	2.91E-06	1.64E-06	8.18E-07	4.77E-07	3.31E-07	2.62E-07	3.44E-07	3.44E-07
Rb-78m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-79		1.00E+00	2.11E-06	1.18E-06	5.85E-07	3.40E-07	2.34E-07	1.84E-07	2.43E-07	2.43E-07
Rb-80		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-81		1.00E+00	1.76E-06	1.06E-06	5.48E-07	3.32E-07	2.23E-07	1.81E-07	2.33E-07	2.33E-07
Rb-81m		1.00E+00	3.89E-07	2.23E-07	1.11E-07	6.55E-08	4.40E-08	3.50E-08	4.63E-08	4.63E-08
Rb-82		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-82m		1.00E+00	3.35E-06	2.26E-06	1.30E-06	8.44E-07	5.92E-07	4.96E-07	6.03E-07	6.03E-07
Rb-83		1.00E+00	3.89E-05	2.89E-05	1.69E-05	1.12E-05	7.62E-06	6.55E-06	7.92E-06	7.92E-06
Rb-84		1.00E+00	7.62E-05	5.40E-05	2.97E-05	1.88E-05	1.24E-05	1.04E-05	1.30E-05	1.30E-05

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Rb-84m		1.00E+00	2.56E-07	1.52E-07	7.84E-08	4.74E-08	3.28E-08	2.63E-08	3.39E-08	
Rb-86		1.00E+00	1.12E-04	7.33E-05	3.66E-05	2.17E-05	1.30E-05	1.04E-05	1.41E-05	
Rb-86m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-87		1.00E+00	5.70E-05	3.96E-05	1.99E-05	1.17E-05	6.99E-06	5.66E-06	7.59E-06	
Rb-88		1.00E+00	4.18E-06	2.29E-06	1.11E-06	6.29E-07	4.29E-07	3.36E-07	4.51E-07	
Rb-89		1.00E+00	1.90E-06	1.07E-06	5.29E-07	3.08E-07	2.12E-07	1.67E-07	2.20E-07	
Rb-90		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-90m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-178		1.00E+00	1.19E-06	6.55E-07	3.26E-07	1.90E-07	1.31E-07	1.03E-07	1.36E-07	
Re-179		1.00E+00	4.66E-07	2.73E-07	1.44E-07	8.73E-08	6.11E-08	4.85E-08	6.22E-08	
Re-180		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-181		1.00E+00	1.57E-05	1.05E-05	5.44E-06	3.10E-06	2.05E-06	1.57E-06	2.10E-06	
Re-182		1.00E+00	5.03E-05	3.28E-05	1.71E-05	1.01E-05	6.77E-06	5.29E-06	6.92E-06	
Re-182m		1.00E+00	9.29E-06	6.51E-06	3.47E-06	2.04E-06	1.38E-06	1.07E-06	1.39E-06	
Re-183		1.00E+00	4.33E-05	2.50E-05	1.22E-05	7.03E-06	4.59E-06	3.57E-06	4.85E-06	
Re-184		1.00E+00	3.31E-05	2.09E-05	1.12E-05	6.88E-06	4.70E-06	3.74E-06	4.77E-06	
Re-184m		1.00E+00	6.29E-05	3.66E-05	1.82E-05	1.06E-05	6.99E-06	5.48E-06	7.33E-06	
Re-186		1.00E+00	6.81E-05	4.07E-05	1.98E-05	1.09E-05	6.99E-06	5.29E-06	7.36E-06	
Re-186m		1.00E+00	1.10E-04	5.96E-05	2.82E-05	1.61E-05	1.06E-05	8.25E-06	1.12E-05	
Re-186m+D		–	1.78E-04	1.00E-04	4.81E-05	2.70E-05	1.76E-05	1.35E-05	1.86E-05	
Re-186m+E		–	1.78E-04	1.00E-04	4.81E-05	2.70E-05	1.76E-05	1.35E-05	1.86E-05	
Re-187		1.00E+00	2.33E-07	1.32E-07	6.29E-08	3.53E-08	2.29E-08	1.77E-08	2.44E-08	
Re-188		1.00E+00	6.40E-05	4.07E-05	1.98E-05	1.05E-05	6.81E-06	5.03E-06	7.10E-06	
Re-188m		1.00E+00	1.40E-06	8.62E-07	4.22E-07	2.27E-07	1.47E-07	1.10E-07	1.54E-07	
Re-189		1.00E+00	3.46E-05	2.18E-05	1.07E-05	5.74E-06	3.68E-06	2.75E-06	3.85E-06	
Re-190		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-190m		1.00E+00	1.66E-05	1.01E-05	5.03E-06	2.73E-06	1.80E-06	1.35E-06	1.86E-06	
Rh-100		1.00E-01	1.67E-05	1.24E-05	7.14E-06	4.77E-06	3.14E-06	2.51E-06	3.14E-06	
Rh-100m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-101		1.00E-01	1.75E-05	9.88E-06	5.70E-06	3.70E-06	2.45E-06	2.04E-06	2.55E-06	
Rh-101m		1.00E-01	6.29E-06	4.44E-06	2.45E-06	1.58E-06	9.88E-07	7.77E-07	1.01E-06	
Rh-102		1.00E-01	4.63E-05	2.80E-05	1.47E-05	9.07E-06	5.48E-06	4.40E-06	5.88E-06	
Rh-102m		1.00E-01	7.29E-05	4.03E-05	2.53E-05	1.70E-05	1.20E-05	1.02E-05	1.23E-05	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Rh-103m		1.00E-01	1.74E-07	9.84E-08	4.77E-08	2.72E-08	1.78E-08	1.39E-08	1.89E-08	
Rh-104		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-104m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-105		1.00E-01	1.48E-05	9.84E-06	4.96E-06	2.95E-06	1.69E-06	1.36E-06	1.86E-06	
Rh-106		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-106m		1.00E-01	5.29E-06	3.77E-06	2.03E-06	1.18E-06	7.73E-07	6.22E-07	8.07E-07	
Rh-107		1.00E-01	1.07E-06	5.92E-07	2.90E-07	1.66E-07	1.13E-07	8.84E-08	1.18E-07	
Rh-108		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-109		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-94		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-95		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-95m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-96		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-96m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-97		1.00E-01	1.86E-06	1.08E-06	5.48E-07	3.24E-07	2.21E-07	1.75E-07	2.29E-07	
Rh-97m		1.00E-01	1.52E-06	9.55E-07	5.11E-07	3.20E-07	2.18E-07	1.74E-07	2.22E-07	
Rh-98		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-99		1.00E-01	1.84E-05	1.24E-05	6.73E-06	4.26E-06	2.64E-06	2.09E-06	2.73E-06	
Rh-99m		1.00E-01	1.87E-06	1.31E-06	7.33E-07	4.74E-07	3.08E-07	2.46E-07	3.13E-07	
Rn-207		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-209		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-210		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-211		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-212		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-215		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-216		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-217		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-218		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-220		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-222		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Rn-222+D		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-222+E		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-223		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-103		1.00E-01	2.50E-05	1.64E-05	8.70E-06	5.44E-06	3.30E-06	2.64E-06	3.48E-06	
Ru-105		1.00E-01	1.08E-05	7.03E-06	3.58E-06	2.15E-06	1.30E-06	1.03E-06	1.39E-06	
Ru-106		1.00E-01	3.10E-04	1.84E-04	9.32E-05	5.55E-05	3.20E-05	2.60E-05	3.55E-05	
Ru-106+D		–	3.10E-04	1.84E-04	9.32E-05	5.55E-05	3.20E-05	2.60E-05	3.55E-05	
Ru-106+E		–	3.10E-04	1.84E-04	9.32E-05	5.55E-05	3.20E-05	2.60E-05	3.55E-05	
Ru-107		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-108		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-92		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-94		1.00E-01	3.47E-06	2.20E-06	1.14E-06	6.99E-07	4.40E-07	3.52E-07	4.63E-07	
Ru-95		1.00E-01	1.71E-06	1.17E-06	6.55E-07	4.26E-07	2.84E-07	2.28E-07	2.87E-07	
Ru-97		1.00E-01	4.40E-06	3.14E-06	1.74E-06	1.12E-06	7.10E-07	5.55E-07	7.18E-07	
S-35	Inorganic	1.00E+00	4.70E-06	3.20E-06	1.64E-06	9.92E-07	5.99E-07	4.85E-07	6.44E-07	
S-35	Organic	1.00E+00	2.81E-05	1.98E-05	9.95E-06	5.92E-06	3.51E-06	2.86E-06	3.85E-06	
S-37		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
S-38	Inorganic	1.00E+00	1.15E-05	6.92E-06	3.67E-06	2.30E-06	1.60E-06	1.26E-06	1.61E-06	
S-38	Organic	1.00E+00	1.08E-05	6.33E-06	3.17E-06	1.86E-06	1.23E-06	9.84E-07	1.30E-06	
Sb-111		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-113		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-114		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-115		2.00E-01	9.18E-07	5.37E-07	2.75E-07	1.65E-07	1.13E-07	8.95E-08	1.17E-07	
Sb-116		2.00E-01	1.17E-06	6.73E-07	3.44E-07	2.05E-07	1.42E-07	1.12E-07	1.47E-07	
Sb-116m		2.00E-01	1.80E-06	1.20E-06	6.73E-07	4.37E-07	3.00E-07	2.41E-07	3.01E-07	
Sb-117		2.00E-01	5.96E-07	4.00E-07	2.13E-07	1.33E-07	8.55E-08	6.77E-08	8.77E-08	
Sb-118		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-118m		2.00E-01	5.03E-06	3.77E-06	2.19E-06	1.48E-06	9.84E-07	7.92E-07	9.81E-07	
Sb-119		2.00E-01	3.18E-06	2.21E-06	1.12E-06	6.70E-07	3.85E-07	3.03E-07	4.14E-07	
Sb-120		2.00E-01	6.22E-07	3.48E-07	1.72E-07	9.95E-08	6.81E-08	5.37E-08	7.10E-08	
Sb-120m		2.00E-01	3.01E-05	2.26E-05	1.31E-05	8.77E-06	5.81E-06	4.63E-06	5.77E-06	
Sb-122		2.00E-01	6.51E-05	4.51E-05	2.27E-05	1.36E-05	7.84E-06	6.29E-06	8.55E-06	
Sb-122m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Sb-124		2.00E-01	9.07E-05	5.88E-05	3.11E-05	1.93E-05	1.18E-05	9.44E-06	1.25E-05	
Sb-124m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-124n		2.00E-01	3.81E-07	2.20E-07	1.11E-07	6.62E-08	4.51E-08	3.59E-08	4.70E-08	
Sb-125		2.00E-01	4.03E-05	2.28E-05	1.27E-05	7.92E-06	5.07E-06	4.26E-06	5.44E-06	
Sb-126		2.00E-01	8.36E-05	5.85E-05	3.16E-05	2.00E-05	1.24E-05	9.92E-06	1.29E-05	
Sb-126m		2.00E-01	1.55E-06	8.81E-07	4.44E-07	2.60E-07	1.79E-07	1.41E-07	1.85E-07	
Sb-127		2.00E-01	6.22E-05	4.29E-05	2.19E-05	1.33E-05	7.73E-06	6.22E-06	8.36E-06	
Sb-128		2.00E-01	2.55E-05	1.81E-05	9.66E-06	6.07E-06	3.77E-06	3.01E-06	3.92E-06	
Sb-128m		2.00E-01	1.41E-06	7.96E-07	3.96E-07	2.30E-07	1.58E-07	1.25E-07	1.64E-07	
Sb-129		2.00E-01	1.59E-05	1.07E-05	5.44E-06	3.30E-06	1.98E-06	1.58E-06	2.12E-06	
Sb-130		2.00E-01	3.47E-06	2.06E-06	1.06E-06	6.44E-07	4.37E-07	3.47E-07	4.51E-07	
Sb-130m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-131		2.00E-01	4.07E-06	2.78E-06	1.48E-06	8.18E-07	5.48E-07	4.00E-07	5.44E-07	
Sb-133		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sc-42m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sc-43		1.00E-03	8.33E-06	5.29E-06	2.72E-06	1.65E-06	1.01E-06	8.07E-07	1.08E-06	
Sc-44		1.00E-03	1.30E-05	8.33E-06	4.33E-06	2.67E-06	1.66E-06	1.32E-06	1.75E-06	
Sc-44m		1.00E-03	8.81E-05	5.88E-05	3.07E-05	1.90E-05	1.14E-05	9.07E-06	1.21E-05	
Sc-46		1.00E-03	4.26E-05	2.95E-05	1.64E-05	1.07E-05	6.85E-06	5.44E-06	6.96E-06	
Sc-47		1.00E-03	2.24E-05	1.45E-05	7.29E-06	4.37E-06	2.52E-06	2.02E-06	2.76E-06	
Sc-48		1.00E-03	4.88E-05	3.39E-05	1.87E-05	1.21E-05	7.73E-06	6.18E-06	7.92E-06	
Sc-49		1.00E-03	3.74E-06	2.11E-06	1.02E-06	5.85E-07	3.81E-07	3.00E-07	4.07E-07	
Sc-50		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-70		1.00E+00	3.00E-06	2.13E-06	1.11E-06	6.73E-07	4.48E-07	3.59E-07	4.63E-07	
Se-71		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-72		1.00E+00	2.51E-04	1.65E-04	1.02E-04	7.73E-05	2.60E-05	1.91E-05	3.05E-05	
Se-73		1.00E+00	5.81E-06	5.14E-06	2.79E-06	1.81E-06	9.58E-07	7.66E-07	1.03E-06	
Se-73m		1.00E+00	9.25E-07	6.73E-07	3.52E-07	2.19E-07	1.28E-07	1.01E-07	1.36E-07	
Se-75		1.00E+00	7.25E-05	4.81E-05	3.07E-05	2.22E-05	1.16E-05	9.55E-06	1.24E-05	
Se-77m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-79		1.00E+00	1.42E-04	9.77E-05	6.62E-05	4.77E-05	1.41E-05	1.01E-05	1.73E-05	
Se-79m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-81		1.00E+00	1.25E-06	6.88E-07	3.32E-07	1.88E-07	1.27E-07	9.92E-08	1.34E-07	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Se-81m		1.00E+00	2.22E-06	1.39E-06	6.81E-07	3.92E-07	2.50E-07	1.96E-07	2.65E-07	
Se-83		1.00E+00	1.59E-06	1.01E-06	5.14E-07	3.09E-07	2.11E-07	1.68E-07	2.17E-07	
Se-83m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-84		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Si-31		2.00E-02	7.14E-06	3.89E-06	1.91E-06	1.11E-06	7.44E-07	5.92E-07	7.88E-07	
Si-32		2.00E-02	2.75E-05	1.55E-05	7.81E-06	4.63E-06	2.65E-06	2.14E-06	2.96E-06	
Si-32+D		–	1.42E-04	8.70E-05	4.29E-05	2.43E-05	1.42E-05	1.10E-05	1.55E-05	
Si-32+E		–	1.42E-04	8.70E-05	4.29E-05	2.43E-05	1.42E-05	1.10E-05	1.55E-05	
Sm-139		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-140		5.00E-03	4.29E-06	2.40E-06	1.18E-06	6.73E-07	4.55E-07	3.57E-07	4.77E-07	
Sm-141		5.00E-03	1.65E-06	9.25E-07	4.59E-07	2.67E-07	1.83E-07	1.44E-07	1.90E-07	
Sm-141m		5.00E-03	2.46E-06	1.43E-06	7.25E-07	4.29E-07	2.92E-07	2.31E-07	3.03E-07	
Sm-142		5.00E-03	7.84E-06	4.55E-06	2.25E-06	1.31E-06	8.51E-07	6.70E-07	8.99E-07	
Sm-143		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-143m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-145		5.00E-03	8.84E-06	5.18E-06	2.71E-06	1.66E-06	9.84E-07	7.84E-07	1.06E-06	
Sm-146		5.00E-03	5.66E-03	5.55E-04	3.69E-04	2.59E-04	2.12E-04	2.01E-04	2.59E-04	
Sm-147		5.00E-03	5.18E-03	5.07E-04	3.37E-04	2.36E-04	1.94E-04	1.83E-04	2.37E-04	
Sm-148		5.00E-03	4.44E-03	4.37E-04	2.90E-04	2.03E-04	1.66E-04	1.58E-04	2.04E-04	
Sm-151		5.00E-03	5.55E-06	2.39E-06	1.22E-06	7.36E-07	4.40E-07	3.66E-07	5.00E-07	
Sm-153		5.00E-03	3.09E-05	1.99E-05	9.99E-06	5.92E-06	3.39E-06	2.72E-06	3.74E-06	
Sm-155		5.00E-03	1.36E-06	7.47E-07	3.62E-07	2.06E-07	1.39E-07	1.09E-07	1.47E-07	
Sm-156		5.00E-03	1.05E-05	6.73E-06	3.39E-06	2.03E-06	1.18E-06	9.47E-07	1.29E-06	
Sm-157		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-106		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-108		4.00E-02	7.96E-07	4.81E-07	2.48E-07	1.51E-07	1.02E-07	8.14E-08	1.05E-07	
Sn-109		4.00E-02	5.25E-07	3.46E-07	1.95E-07	1.27E-07	8.81E-08	7.07E-08	8.81E-08	
Sn-110		4.00E-02	1.35E-05	8.92E-06	4.63E-06	2.84E-06	1.70E-06	1.36E-06	1.82E-06	
Sn-111		4.00E-02	8.25E-07	4.85E-07	2.47E-07	1.48E-07	9.92E-08	7.84E-08	1.03E-07	
Sn-113		4.00E-02	2.92E-05	1.89E-05	9.73E-06	5.92E-06	3.47E-06	2.77E-06	3.74E-06	
Sn-113m		4.00E-02	1.49E-07	8.29E-08	4.03E-08	2.29E-08	1.55E-08	1.21E-08	1.62E-08	
Sn-117m		4.00E-02	2.88E-05	1.86E-05	9.47E-06	5.70E-06	3.29E-06	2.64E-06	3.59E-06	
Sn-119m		4.00E-02	1.54E-05	9.66E-06	4.85E-06	2.87E-06	1.64E-06	1.31E-06	1.80E-06	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Sn-121		4.00E-02	9.84E-06	6.33E-06	3.15E-06	1.86E-06	1.06E-06	8.51E-07	1.17E-06	
Sn-121m		4.00E-02	1.71E-05	1.03E-05	5.22E-06	3.07E-06	1.76E-06	1.43E-06	1.96E-06	
Sn-121m+D		–	2.47E-05	1.52E-05	7.66E-06	4.51E-06	2.59E-06	2.09E-06	2.87E-06	
Sn-121m+E		–	2.47E-05	1.52E-05	7.66E-06	4.51E-06	2.59E-06	2.09E-06	2.87E-06	
Sn-123		4.00E-02	9.18E-05	5.81E-05	2.90E-05	1.72E-05	9.73E-06	7.81E-06	1.08E-05	
Sn-123m		4.00E-02	1.75E-06	9.77E-07	4.77E-07	2.72E-07	1.82E-07	1.42E-07	1.92E-07	
Sn-125		4.00E-02	1.28E-04	8.25E-05	4.14E-05	2.46E-05	1.41E-05	1.13E-05	1.55E-05	
Sn-125m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-126		4.00E-02	1.85E-04	1.14E-04	5.96E-05	3.65E-05	2.19E-05	1.78E-05	2.36E-05	
Sn-126+D		–	1.98E-04	1.22E-04	6.44E-05	3.96E-05	2.39E-05	1.93E-05	2.56E-05	
Sn-126+E		–	1.98E-04	1.22E-04	6.44E-05	3.96E-05	2.39E-05	1.93E-05	2.56E-05	
Sn-127		4.00E-02	7.40E-06	4.66E-06	2.42E-06	1.48E-06	9.25E-07	7.40E-07	9.77E-07	
Sn-127m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-128		4.00E-02	6.03E-06	3.61E-06	1.84E-06	1.10E-06	7.22E-07	5.70E-07	7.55E-07	
Sn-129		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-130		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-130m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-79		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-80		6.00E-01	1.49E-05	9.29E-06	4.63E-06	2.70E-06	1.72E-06	1.40E-06	1.85E-06	
Sr-81		6.00E-01	2.73E-06	1.59E-06	7.92E-07	4.63E-07	3.12E-07	2.48E-07	3.27E-07	
Sr-82		6.00E-01	2.66E-04	1.52E-04	7.66E-05	4.96E-05	3.24E-05	2.29E-05	3.12E-05	
Sr-82+D		–	2.66E-04	1.52E-04	7.66E-05	4.96E-05	3.24E-05	2.29E-05	3.12E-05	
Sr-82+E		–	2.66E-04	1.52E-04	7.66E-05	4.96E-05	3.24E-05	2.29E-05	3.12E-05	
Sr-83		6.00E-01	1.31E-05	1.06E-05	5.62E-06	3.54E-06	2.21E-06	1.90E-06	2.39E-06	
Sr-85		6.00E-01	2.76E-05	1.13E-05	6.25E-06	5.37E-06	4.85E-06	2.04E-06	2.94E-06	
Sr-85m		6.00E-01	1.66E-07	1.10E-07	6.14E-08	4.03E-08	2.86E-08	2.23E-08	2.79E-08	
Sr-87m		6.00E-01	8.95E-07	6.36E-07	3.37E-07	2.08E-07	1.34E-07	1.12E-07	1.43E-07	
Sr-89		6.00E-01	1.33E-04	6.62E-05	3.29E-05	2.16E-05	1.47E-05	9.51E-06	1.34E-05	
Sr-90		6.00E-01	8.40E-04	2.68E-04	1.73E-04	2.21E-04	2.91E-04	1.02E-04	1.33E-04	
Sr-90+D		–	9.55E-04	3.42E-04	2.10E-04	2.42E-04	3.03E-04	1.12E-04	1.47E-04	
Sr-90+E		–	9.55E-04	3.42E-04	2.10E-04	2.42E-04	3.03E-04	1.12E-04	1.47E-04	
Sr-91		6.00E-01	1.94E-05	1.51E-05	7.73E-06	4.66E-06	2.79E-06	2.43E-06	3.13E-06	
Sr-92		6.00E-01	1.26E-05	9.95E-06	5.03E-06	3.02E-06	1.77E-06	1.55E-06	2.01E-06	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Sr-93		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-94		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-170		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-172		1.00E-02	2.25E-06	1.31E-06	6.66E-07	3.96E-07	2.70E-07	2.13E-07	2.79E-07	2.79E-07
Ta-173		1.00E-02	3.85E-06	2.49E-06	1.31E-06	8.14E-07	5.07E-07	4.07E-07	5.33E-07	5.33E-07
Ta-174		1.00E-02	2.87E-06	1.70E-06	8.58E-07	5.11E-07	3.36E-07	2.66E-07	3.52E-07	3.52E-07
Ta-175		1.00E-02	6.81E-06	4.74E-06	2.64E-06	1.72E-06	1.10E-06	8.84E-07	1.12E-06	1.12E-06
Ta-176		1.00E-02	8.55E-06	6.03E-06	3.40E-06	2.25E-06	1.46E-06	1.17E-06	1.48E-06	1.48E-06
Ta-177		1.00E-02	3.92E-06	2.62E-06	1.38E-06	8.51E-07	5.07E-07	4.07E-07	5.40E-07	5.40E-07
Ta-178		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-178m		1.00E-02	2.92E-06	1.76E-06	1.04E-06	6.55E-07	3.92E-07	3.15E-07	4.11E-07	4.11E-07
Ta-179		1.00E-02	2.19E-06	1.42E-06	7.47E-07	4.63E-07	2.76E-07	2.22E-07	2.95E-07	2.95E-07
Ta-180		1.00E-02	2.24E-06	1.44E-06	7.29E-07	4.40E-07	2.58E-07	2.06E-07	2.80E-07	2.80E-07
Ta-182		1.00E-02	5.22E-05	3.44E-05	1.83E-05	1.15E-05	6.99E-06	5.62E-06	7.36E-06	7.36E-06
Ta-182m		1.00E-02	5.33E-07	2.99E-07	1.47E-07	8.47E-08	5.81E-08	4.55E-08	6.03E-08	6.03E-08
Ta-183		1.00E-02	5.48E-05	3.55E-05	1.80E-05	1.08E-05	6.25E-06	5.00E-06	6.81E-06	6.81E-06
Ta-184		1.00E-02	2.48E-05	1.62E-05	8.40E-06	5.14E-06	3.11E-06	2.49E-06	3.31E-06	3.31E-06
Ta-185		1.00E-02	3.14E-06	1.76E-06	8.58E-07	4.92E-07	3.25E-07	2.55E-07	3.44E-07	3.44E-07
Ta-186		1.00E-02	1.52E-06	8.47E-07	4.18E-07	2.41E-07	1.65E-07	1.30E-07	1.72E-07	1.72E-07
Tb-146		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-147		5.00E-03	4.00E-06	2.60E-06	1.41E-06	8.95E-07	5.88E-07	4.70E-07	5.99E-07	5.99E-07
Tb-147m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-148		5.00E-03	4.85E-06	2.87E-06	1.46E-06	8.73E-07	5.81E-07	4.59E-07	6.03E-07	6.03E-07
Tb-148m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-149		5.00E-03	6.22E-06	4.03E-06	2.16E-06	1.35E-06	8.55E-07	6.85E-07	8.88E-07	8.88E-07
Tb-149m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-150		5.00E-03	6.99E-06	4.63E-06	2.49E-06	1.58E-06	1.01E-06	8.07E-07	1.04E-06	1.04E-06
Tb-150m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-151		5.00E-03	1.08E-05	7.47E-06	4.14E-06	2.66E-06	1.68E-06	1.34E-06	1.72E-06	1.72E-06
Tb-151m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-152		5.00E-03	2.36E-05	1.59E-05	8.44E-06	5.29E-06	3.23E-06	2.59E-06	3.40E-06	3.40E-06
Tb-152m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-153		5.00E-03	9.40E-06	6.40E-06	3.45E-06	2.18E-06	1.34E-06	1.07E-06	1.40E-06	1.40E-06

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Tb-154		5.00E-03	1.67E-05	1.19E-05	6.73E-06	4.48E-06	2.90E-06	2.32E-06	2.93E-06	
Tb-155		5.00E-03	9.14E-06	6.14E-06	3.27E-06	2.04E-06	1.23E-06	9.84E-07	1.30E-06	
Tb-156		5.00E-03	3.22E-05	2.28E-05	1.28E-05	8.44E-06	5.44E-06	4.33E-06	5.48E-06	
Tb-156m		5.00E-03	5.00E-06	3.46E-06	1.90E-06	1.22E-06	7.66E-07	6.11E-07	7.88E-07	
Tb-156n		5.00E-03	3.16E-06	2.07E-06	1.08E-06	6.66E-07	4.07E-07	3.23E-07	4.29E-07	
Tb-157		5.00E-03	2.04E-06	9.14E-07	4.74E-07	2.90E-07	1.75E-07	1.44E-07	1.95E-07	
Tb-158		5.00E-03	4.96E-05	2.19E-05	1.21E-05	7.77E-06	5.03E-06	4.14E-06	5.37E-06	
Tb-160		5.00E-03	5.92E-05	3.81E-05	2.00E-05	1.24E-05	7.47E-06	5.99E-06	7.96E-06	
Tb-161		5.00E-03	3.15E-05	2.03E-05	1.01E-05	6.03E-06	3.43E-06	2.76E-06	3.77E-06	
Tb-162		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-163		5.00E-03	8.77E-07	5.00E-07	2.49E-07	1.46E-07	1.00E-07	7.92E-08	1.04E-07	
Tb-164		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-165		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-101		1.00E+00	8.81E-07	4.63E-07	2.25E-07	1.29E-07	8.81E-08	6.88E-08	9.25E-08	
Tc-102		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-102m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-104		1.00E+00	3.85E-06	1.99E-06	9.77E-07	5.62E-07	3.85E-07	3.02E-07	4.03E-07	
Tc-105		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-91		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-91m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-92		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-93		1.00E+00	1.76E-06	1.32E-06	7.47E-07	4.81E-07	3.27E-07	2.62E-07	3.27E-07	
Tc-93m		1.00E+00	1.02E-06	6.51E-07	3.53E-07	2.21E-07	1.50E-07	1.20E-07	1.52E-07	
Tc-94		1.00E+00	4.33E-06	3.70E-06	2.14E-06	1.39E-06	9.47E-07	7.59E-07	9.36E-07	
Tc-94m		1.00E+00	4.88E-06	2.42E-06	1.22E-06	7.14E-07	4.77E-07	3.74E-07	5.03E-07	
Tc-95		1.00E+00	3.74E-06	3.27E-06	1.91E-06	1.25E-06	8.51E-07	6.77E-07	8.36E-07	
Tc-95m		1.00E+00	1.78E-05	1.06E-05	5.99E-06	3.89E-06	2.64E-06	2.11E-06	2.66E-06	
Tc-96		1.00E+00	2.50E-05	1.91E-05	1.13E-05	7.55E-06	5.18E-06	4.18E-06	5.11E-06	
Tc-96m		1.00E+00	3.81E-07	2.40E-07	1.34E-07	8.55E-08	5.81E-08	4.63E-08	5.85E-08	
Tc-97		1.00E+00	3.70E-06	1.82E-06	8.99E-07	5.22E-07	3.29E-07	2.52E-07	3.50E-07	
Tc-97m		1.00E+00	3.20E-05	1.51E-05	7.33E-06	4.18E-06	2.61E-06	2.03E-06	2.85E-06	
Tc-98		1.00E+00	7.73E-05	4.03E-05	2.13E-05	1.31E-05	8.66E-06	6.88E-06	8.99E-06	
Tc-99		1.00E+00	3.81E-05	1.76E-05	8.51E-06	4.85E-06	3.05E-06	2.38E-06	3.33E-06	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Tc-99m		1.00E+00	7.55E-07	4.96E-07	2.66E-07	1.61E-07	1.05E-07	8.25E-08	1.08E-07	
Te-113		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-114		6.00E-01	2.68E-06	1.53E-06	7.66E-07	4.51E-07	3.12E-07	2.46E-07	3.22E-07	
Te-115		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-115m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-116		6.00E-01	6.11E-06	4.51E-06	2.35E-06	1.45E-06	9.18E-07	7.33E-07	9.55E-07	
Te-117		6.00E-01	1.68E-06	1.11E-06	5.88E-07	3.66E-07	2.45E-07	1.95E-07	2.50E-07	
Te-118		6.00E-01	1.10E-04	8.14E-05	4.14E-05	2.43E-05	1.42E-05	1.12E-05	1.53E-05	
Te-118+D		–	1.10E-04	8.14E-05	4.14E-05	2.43E-05	1.42E-05	1.12E-05	1.53E-05	
Te-118+E		–	1.10E-04	8.14E-05	4.14E-05	2.43E-05	1.42E-05	1.12E-05	1.53E-05	
Te-119		6.00E-01	3.74E-06	3.45E-06	1.96E-06	1.28E-06	8.29E-07	6.62E-07	8.29E-07	
Te-119m		6.00E-01	1.63E-05	1.30E-05	7.55E-06	5.00E-06	3.33E-06	2.67E-06	3.32E-06	
Te-121		6.00E-01	1.21E-05	7.96E-06	4.66E-06	3.11E-06	2.09E-06	1.68E-06	2.09E-06	
Te-121m		6.00E-01	9.95E-05	4.44E-05	2.59E-05	1.59E-05	1.04E-05	8.73E-06	1.12E-05	
Te-123		6.00E-01	2.37E-05	1.10E-05	8.07E-06	6.18E-06	5.40E-06	5.03E-06	5.51E-06	
Te-123m		6.00E-01	7.07E-05	3.26E-05	1.80E-05	1.02E-05	6.22E-06	5.07E-06	6.92E-06	
Te-125m		6.00E-01	4.74E-05	2.34E-05	1.23E-05	6.88E-06	4.03E-06	3.22E-06	4.51E-06	
Te-127		6.00E-01	5.62E-06	4.63E-06	2.30E-06	1.36E-06	7.88E-07	6.29E-07	8.51E-07	
Te-127m		6.00E-01	1.52E-04	6.85E-05	3.53E-05	1.92E-05	1.12E-05	8.70E-06	1.26E-05	
Te-129		6.00E-01	2.79E-06	1.64E-06	7.96E-07	4.55E-07	2.97E-07	2.33E-07	3.15E-07	
Te-129m		6.00E-01	1.62E-04	8.73E-05	4.40E-05	2.46E-05	1.43E-05	1.10E-05	1.57E-05	
Te-131		6.00E-01	3.31E-06	2.42E-06	1.31E-06	6.96E-07	4.63E-07	3.22E-07	4.48E-07	
Te-131m		6.00E-01	7.44E-05	5.14E-05	2.86E-05	1.59E-05	1.00E-05	7.14E-06	9.95E-06	
Te-132		6.00E-01	1.77E-04	1.09E-04	5.77E-05	3.07E-05	1.94E-05	1.40E-05	1.98E-05	
Te-133		6.00E-01	2.97E-06	2.27E-06	1.18E-06	5.74E-07	3.77E-07	2.58E-07	3.74E-07	
Te-133m		6.00E-01	1.03E-05	8.21E-06	4.33E-06	2.10E-06	1.37E-06	9.25E-07	1.35E-06	
Te-134		6.00E-01	3.66E-06	2.52E-06	1.32E-06	7.25E-07	4.85E-07	3.63E-07	4.92E-07	
Th-223		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-224		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-226		5.00E-03	1.67E-05	9.07E-06	4.40E-06	2.49E-06	1.68E-06	1.30E-06	1.76E-06	
Th-227		5.00E-03	1.12E-03	2.64E-04	1.35E-04	8.55E-05	5.51E-05	3.37E-05	5.44E-05	
Th-228		5.00E-03	1.37E-02	1.37E-03	8.10E-04	5.07E-04	3.46E-04	2.66E-04	4.29E-04	
Th-229		5.00E-03	4.03E-02	3.85E-03	2.92E-03	2.31E-03	2.00E-03	1.85E-03	2.25E-03	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Th-229+D		–	6.62E-02	8.29E-03	5.22E-03	4.18E-03	3.61E-03	2.22E-03	3.14E-03	
Th-229+E		–	6.62E-02	8.29E-03	5.22E-03	4.18E-03	3.61E-03	2.22E-03	3.14E-03	
Th-230		5.00E-03	1.53E-02	1.52E-03	1.14E-03	9.10E-04	8.10E-04	7.92E-04	9.36E-04	
Th-231		5.00E-03	1.44E-05	9.21E-06	4.59E-06	2.72E-06	1.54E-06	1.24E-06	1.71E-06	
Th-232		5.00E-03	1.71E-02	1.69E-03	1.32E-03	1.07E-03	9.36E-04	8.55E-04	1.03E-03	
Th-232+D		–	1.26E-01	2.26E-02	1.40E-02	1.56E-02	1.99E-02	3.43E-03	6.95E-03	
Th-232+E		–	1.26E-01	2.26E-02	1.40E-02	1.56E-02	1.99E-02	3.43E-03	6.95E-03	
Th-233		5.00E-03	1.01E-06	5.55E-07	2.69E-07	1.53E-07	1.03E-07	8.07E-08	1.08E-07	
Th-234		5.00E-03	1.47E-04	9.32E-05	4.66E-05	2.76E-05	1.56E-05	1.25E-05	1.73E-05	
Th-234+D		–	1.47E-04	9.36E-05	4.66E-05	2.76E-05	1.57E-05	1.26E-05	1.74E-05	
Th-234+E		–	1.47E-04	9.36E-05	4.66E-05	2.76E-05	1.57E-05	1.26E-05	1.74E-05	
Th-235		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-236		5.00E-03	3.85E-06	2.17E-06	1.07E-06	6.18E-07	4.11E-07	3.23E-07	4.33E-07	
Ti-44		2.00E-02	2.04E-04	1.15E-04	6.40E-05	4.00E-05	2.55E-05	2.15E-05	2.74E-05	
Ti-44+D		–	2.16E-04	1.24E-04	6.85E-05	4.26E-05	2.72E-05	2.28E-05	2.92E-05	
Ti-44+E		–	2.16E-04	1.24E-04	6.85E-05	4.26E-05	2.72E-05	2.28E-05	2.92E-05	
Ti-45		2.00E-02	5.77E-06	3.64E-06	1.87E-06	1.13E-06	7.03E-07	5.59E-07	7.44E-07	
Ti-51		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ti-52		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-190		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-190m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-194		1.00E+00	1.95E-06	1.10E-06	5.40E-07	3.13E-07	2.15E-07	1.69E-07	2.24E-07	
Tl-194m		1.00E+00	1.33E-06	7.92E-07	4.14E-07	2.55E-07	1.80E-07	1.44E-07	1.83E-07	
Tl-195		1.00E+00	7.59E-07	4.74E-07	2.57E-07	1.61E-07	1.13E-07	9.14E-08	1.15E-07	
Tl-196		1.00E+00	1.63E-06	1.00E-06	5.37E-07	3.33E-07	2.32E-07	1.88E-07	2.38E-07	
Tl-197		1.00E+00	7.66E-07	4.81E-07	2.53E-07	1.57E-07	1.06E-07	8.55E-08	1.10E-07	
Tl-198		1.00E+00	1.80E-06	1.23E-06	7.14E-07	4.70E-07	3.29E-07	2.74E-07	3.34E-07	
Tl-198m		1.00E+00	1.81E-06	1.11E-06	5.88E-07	3.64E-07	2.51E-07	2.05E-07	2.59E-07	
Tl-199		1.00E+00	9.18E-07	5.74E-07	3.01E-07	1.86E-07	1.24E-07	1.00E-07	1.29E-07	
Tl-200		1.00E+00	4.74E-06	3.33E-06	1.98E-06	1.30E-06	8.92E-07	7.47E-07	9.14E-07	
Tl-201		1.00E+00	3.23E-06	2.13E-06	1.11E-06	6.88E-07	4.55E-07	3.66E-07	4.70E-07	
Tl-202		1.00E+00	1.09E-05	7.81E-06	4.48E-06	2.95E-06	2.03E-06	1.69E-06	2.07E-06	
Tl-204		1.00E+00	4.81E-05	3.13E-05	1.56E-05	9.32E-06	5.44E-06	4.40E-06	5.96E-06	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Tl-206		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-206m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-207		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-208		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-209		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-210		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tm-161		5.00E-03	1.33E-06	8.29E-07	4.40E-07	2.72E-07	1.82E-07	1.45E-07	1.87E-07	
Tm-162		5.00E-03	1.57E-06	8.99E-07	4.55E-07	2.69E-07	1.85E-07	1.46E-07	1.91E-07	
Tm-163		5.00E-03	1.54E-06	1.11E-06	6.22E-07	4.03E-07	2.50E-07	2.01E-07	2.58E-07	
Tm-164		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tm-165		5.00E-03	1.12E-05	7.73E-06	4.18E-06	2.68E-06	1.66E-06	1.32E-06	1.72E-06	
Tm-166		5.00E-03	7.88E-06	5.51E-06	3.10E-06	2.04E-06	1.32E-06	1.06E-06	1.34E-06	
Tm-167		5.00E-03	2.32E-05	1.51E-05	7.66E-06	4.63E-06	2.69E-06	2.16E-06	2.93E-06	
Tm-168		5.00E-03	3.17E-05	2.13E-05	1.18E-05	7.66E-06	4.85E-06	3.85E-06	4.96E-06	
Tm-170		5.00E-03	5.85E-05	3.60E-05	1.80E-05	1.07E-05	6.03E-06	4.85E-06	6.70E-06	
Tm-171		5.00E-03	5.37E-06	2.89E-06	1.45E-06	8.58E-07	4.88E-07	3.92E-07	5.48E-07	
Tm-172		5.00E-03	6.96E-05	4.51E-05	2.27E-05	1.36E-05	7.84E-06	6.29E-06	8.58E-06	
Tm-173		5.00E-03	1.21E-05	7.73E-06	3.92E-06	2.36E-06	1.39E-06	1.11E-06	1.51E-06	
Tm-174		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tm-175		5.00E-03	1.08E-06	6.11E-07	3.05E-07	1.78E-07	1.22E-07	9.58E-08	1.27E-07	
Tm-176		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
U-227		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
U-228		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
U-230		4.00E-02	2.87E-03	1.10E-03	5.59E-04	3.66E-04	2.41E-04	2.06E-04	2.67E-04	
U-231		4.00E-02	1.38E-05	9.03E-06	4.55E-06	2.73E-06	1.58E-06	1.25E-06	1.71E-06	
U-232		4.00E-02	9.36E-03	3.04E-03	2.17E-03	2.12E-03	2.38E-03	1.24E-03	1.49E-03	
U-233		4.00E-02	1.41E-03	5.11E-04	3.39E-04	2.89E-04	2.89E-04	1.89E-04	2.23E-04	
U-234		4.00E-02	1.37E-03	4.96E-04	3.27E-04	2.76E-04	2.76E-04	1.83E-04	2.15E-04	
U-235		4.00E-02	1.30E-03	4.77E-04	3.15E-04	2.64E-04	2.60E-04	1.73E-04	2.03E-04	
U-235+D		–	1.32E-03	4.85E-04	3.19E-04	2.66E-04	2.61E-04	1.74E-04	2.05E-04	
U-235+E		–	1.32E-03	4.85E-04	3.19E-04	2.66E-04	2.61E-04	1.74E-04	2.05E-04	
U-235m		4.00E-02	2.02E-10	1.11E-10	5.37E-11	3.03E-11	2.04E-11	1.59E-11	2.15E-11	
U-236		4.00E-02	1.29E-03	4.66E-04	3.08E-04	2.59E-04	2.60E-04	1.72E-04	2.02E-04	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
U-237		4.00E-02	3.16E-05	2.06E-05	1.04E-05	6.25E-06	3.60E-06	2.87E-06	3.92E-06	
U-238		4.00E-02	1.24E-03	4.48E-04	2.97E-04	2.50E-04	2.49E-04	1.65E-04	1.94E-04	
U-238+D		–	1.38E-03	5.40E-04	3.43E-04	2.78E-04	2.64E-04	1.77E-04	2.11E-04	
U-238+E		–	1.38E-03	5.40E-04	3.43E-04	2.78E-04	2.64E-04	1.77E-04	2.11E-04	
U-239		4.00E-02	1.25E-06	7.10E-07	3.46E-07	1.99E-07	1.30E-07	1.02E-07	1.38E-07	
U-240		4.00E-02	4.55E-05	2.95E-05	1.48E-05	8.77E-06	5.03E-06	4.03E-06	5.55E-06	
U-242		4.00E-02	2.43E-06	1.33E-06	6.48E-07	3.67E-07	2.49E-07	1.95E-07	2.62E-07	
V-47		2.00E-02	2.70E-06	1.52E-06	7.55E-07	4.37E-07	2.96E-07	2.33E-07	3.10E-07	
V-48		2.00E-02	5.62E-05	3.96E-05	2.21E-05	1.44E-05	9.25E-06	7.36E-06	9.40E-06	
V-49		2.00E-02	7.96E-07	5.03E-07	2.52E-07	1.49E-07	8.44E-08	6.81E-08	9.36E-08	
V-50		2.00E-02	5.29E-05	2.96E-05	2.12E-05	1.68E-05	1.39E-05	1.26E-05	1.39E-05	
V-52		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
V-53		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-177		6.00E-01	1.59E-06	1.15E-06	6.25E-07	4.00E-07	2.61E-07	2.09E-07	2.66E-07	
W-178		6.00E-01	7.62E-06	5.96E-06	3.11E-06	1.92E-06	1.15E-06	9.21E-07	1.21E-06	
W-178+D		–	7.62E-06	5.96E-06	3.11E-06	1.92E-06	1.15E-06	9.21E-07	1.21E-06	
W-178+E		–	7.62E-06	5.96E-06	3.11E-06	1.92E-06	1.15E-06	9.21E-07	1.21E-06	
W-179		6.00E-01	1.44E-07	8.36E-08	4.22E-08	2.49E-08	1.69E-08	1.33E-08	1.75E-08	
W-179m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-181		6.00E-01	2.68E-06	2.01E-06	1.07E-06	6.62E-07	3.96E-07	3.20E-07	4.18E-07	
W-185		6.00E-01	1.63E-05	1.21E-05	6.07E-06	3.59E-06	2.05E-06	1.64E-06	2.24E-06	
W-185m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-187		6.00E-01	1.95E-05	1.51E-05	7.73E-06	4.70E-06	2.76E-06	2.21E-06	2.95E-06	
W-188		6.00E-01	7.70E-05	5.70E-05	2.85E-05	1.69E-05	9.58E-06	7.73E-06	1.05E-05	
W-190		6.00E-01	3.56E-06	2.02E-06	9.99E-07	5.81E-07	3.92E-07	3.10E-07	4.11E-07	
Xe-120		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-121		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-122		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-123		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-125		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-127		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-127m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-129m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Xe-131m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-133		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-133m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-135		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-135m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-137		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-138		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-81		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-83		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-83m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-84m		1.00E-03	5.29E-06	3.10E-06	1.58E-06	9.44E-07	6.40E-07	5.07E-07	6.62E-07	6.62E-07
Y-85		1.00E-03	6.92E-06	4.33E-06	2.23E-06	1.35E-06	8.51E-07	6.77E-07	8.99E-07	8.99E-07
Y-85m		1.00E-03	1.42E-05	9.07E-06	4.66E-06	2.82E-06	1.71E-06	1.37E-06	1.83E-06	1.83E-06
Y-86		1.00E-03	2.78E-05	1.93E-05	1.07E-05	6.96E-06	4.40E-06	3.54E-06	4.51E-06	4.51E-06
Y-86m		1.00E-03	1.64E-06	1.13E-06	6.25E-07	4.07E-07	2.59E-07	2.08E-07	2.65E-07	2.65E-07
Y-87		1.00E-03	1.71E-05	1.18E-05	6.48E-06	4.14E-06	2.56E-06	2.02E-06	2.63E-06	2.63E-06
Y-87m		1.00E-03	7.55E-06	5.07E-06	2.68E-06	1.68E-06	1.02E-06	8.10E-07	1.07E-06	1.07E-06
Y-88		1.00E-03	3.06E-05	2.25E-05	1.32E-05	9.07E-06	6.07E-06	4.81E-06	5.96E-06	5.96E-06
Y-89m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-90		1.00E-03	1.15E-04	7.40E-05	3.69E-05	2.18E-05	1.24E-05	9.92E-06	1.37E-05	1.37E-05
Y-90m		1.00E-03	6.77E-06	4.44E-06	2.26E-06	1.37E-06	8.03E-07	6.44E-07	8.70E-07	8.70E-07
Y-91		1.00E-03	1.02E-04	6.51E-05	3.25E-05	1.93E-05	1.09E-05	8.77E-06	1.21E-05	1.21E-05
Y-91m		1.00E-03	3.47E-07	2.26E-07	1.24E-07	7.88E-08	5.29E-08	4.29E-08	5.40E-08	5.40E-08
Y-92		1.00E-03	2.18E-05	1.33E-05	6.59E-06	3.85E-06	2.31E-06	1.83E-06	2.51E-06	2.51E-06
Y-93		1.00E-03	5.03E-05	3.19E-05	1.58E-05	9.36E-06	5.37E-06	4.29E-06	5.92E-06	5.92E-06
Y-94		1.00E-03	3.85E-06	2.12E-06	1.03E-06	5.88E-07	4.00E-07	3.13E-07	4.18E-07	4.18E-07
Y-95		1.00E-03	1.93E-06	1.06E-06	5.18E-07	2.96E-07	2.02E-07	1.58E-07	2.11E-07	2.11E-07
Yb-162		5.00E-03	1.18E-06	6.96E-07	3.56E-07	2.14E-07	1.45E-07	1.15E-07	1.50E-07	1.50E-07
Yb-163		5.00E-03	5.85E-07	3.48E-07	1.80E-07	1.10E-07	7.47E-08	5.92E-08	7.66E-08	7.66E-08
Yb-164		5.00E-03	3.77E-06	2.23E-06	1.12E-06	6.59E-07	4.29E-07	3.39E-07	4.51E-07	4.51E-07
Yb-165		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Yb-166		5.00E-03	2.83E-05	1.98E-05	1.09E-05	7.03E-06	4.44E-06	3.54E-06	4.55E-06	4.55E-06
Yb-167		5.00E-03	2.69E-07	1.57E-07	7.96E-08	4.74E-08	3.23E-08	2.55E-08	3.33E-08	3.33E-08

Continued on next page

Table 2.2: Dose coefficients for ingestion

Nuclide	Form	f1	(mrem per pCi)							Per Capita
			Newborn	1 y	5 y	10 y	15 y	Adult		
Yb-169		5.00E-03	3.06E-05	2.00E-05	1.04E-05	6.40E-06	3.77E-06	3.03E-06	4.07E-06	
Yb-175		5.00E-03	1.85E-05	1.19E-05	5.96E-06	3.54E-06	2.02E-06	1.62E-06	2.23E-06	
Yb-177		5.00E-03	3.92E-06	2.59E-06	1.28E-06	7.51E-07	4.18E-07	3.32E-07	4.63E-07	
Yb-178		5.00E-03	5.18E-06	3.07E-06	1.51E-06	8.81E-07	5.44E-07	4.29E-07	5.85E-07	
Yb-179		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-60		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-61		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-62		1.00E+00	1.57E-05	2.41E-05	1.22E-05	7.29E-06	4.33E-06	3.46E-06	4.51E-06	
Zn-63		1.00E+00	3.23E-06	1.94E-06	9.58E-07	5.59E-07	3.74E-07	2.96E-07	3.92E-07	
Zn-65		1.00E+00	1.34E-04	5.77E-05	3.60E-05	2.38E-05	1.67E-05	1.45E-05	1.76E-05	
Zn-69		1.00E+00	1.30E-06	7.99E-07	3.89E-07	2.21E-07	1.45E-07	1.14E-07	1.53E-07	
Zn-69m		1.00E+00	4.77E-06	8.55E-06	4.33E-06	2.62E-06	1.54E-06	1.23E-06	1.60E-06	
Zn-71		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-71m		1.00E+00	5.11E-06	5.66E-06	2.92E-06	1.78E-06	1.11E-06	8.92E-07	1.15E-06	
Zn-72		1.00E+00	3.24E-05	3.22E-05	1.70E-05	1.05E-05	6.48E-06	5.25E-06	6.73E-06	
Zr-85		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zr-86		2.00E-02	2.55E-05	1.78E-05	9.81E-06	6.33E-06	4.00E-06	3.17E-06	4.07E-06	
Zr-87		2.00E-02	7.40E-06	4.96E-06	2.50E-06	1.49E-06	8.51E-07	6.73E-07	9.29E-07	
Zr-88		2.00E-02	1.03E-05	7.14E-06	4.22E-06	2.92E-06	1.97E-06	1.63E-06	1.99E-06	
Zr-89		2.00E-02	2.43E-05	1.68E-05	9.18E-06	5.85E-06	3.68E-06	2.93E-06	3.77E-06	
Zr-89m		–	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zr-93		2.00E-02	4.22E-06	2.77E-06	1.85E-06	2.11E-06	3.16E-06	3.96E-06	3.70E-06	
Zr-95		2.00E-02	3.19E-05	2.12E-05	1.14E-05	7.18E-06	4.44E-06	3.58E-06	4.66E-06	
Zr-97		2.00E-02	8.25E-05	5.37E-05	2.72E-05	1.64E-05	9.55E-06	7.62E-06	1.04E-05	

2.3 Dose rate coefficients for inhalation

Explanation of Entries:

Table 2.3 contains the dose rate coefficients used for internal exposure due to inhalation of a radionuclide.

Type (F, M, S, V, G): Type F, Type M, and Type S are particulate aerosols that represent, respectively, fast, medium, and slow absorption to the blood. There are a few specific elements that have a vapor (Type V) or gaseous (Type G) form- see **Special**.

Special: Cases where Type V and Type G are present include: tritium as a vapor (HTO) or gas (HT), carbon in gaseous form as carbon monoxide (CO) or carbon dioxide (CO₂), sulfur as a vapor (SO₂ or CS₂), nickel as a vapor, ruthenium as a vapor (RuO₄), iodine as a vapor or a gas (methyl iodide, CH₃I), tellurium as a vapor, and mercury as a vapor. Designations such as elemental, inorganic or organic are included for certain vapor or gaseous forms.

f: This is the fractional uptake from the small intestine to the blood, also called the gastrointestinal uptake.

Per Capita: This is the population weighted dose rate coefficient for the entire population considering the fractional distribution of all age groups.

Special note on Radon- Radon dose rate coefficients are based on epidemiological data and encompass dose from both radon and its progeny products. These are per capita values and should not be applied to specific age groups.

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ac-223			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-224	F		5.00E-03	2.17E-04	1.15E-04	5.99E-05	4.03E-05	2.85E-05	3.01E-05	3.28E-05	3.28E-05
Ac-224	M		5.00E-03	1.39E-03	1.04E-03	6.70E-04	5.00E-04	4.74E-04	3.77E-04	4.07E-04	4.07E-04
Ac-224	S		5.00E-03	1.54E-03	1.15E-03	7.51E-04	5.59E-04	5.33E-04	4.22E-04	4.59E-04	4.59E-04
Ac-225	F		5.00E-03	3.70E-02	2.49E-02	1.12E-02	6.48E-03	3.92E-03	2.95E-03	3.77E-03	3.77E-03
Ac-225	M		5.00E-03	1.01E-01	7.66E-02	4.88E-02	3.64E-02	3.44E-02	2.73E-02	2.96E-02	2.96E-02
Ac-225	S		5.00E-03	1.13E-01	8.58E-02	5.55E-02	4.14E-02	3.96E-02	3.14E-02	3.40E-02	3.40E-02
Ac-225+D	S			1.13E-01	8.58E-02	5.55E-02	4.14E-02	3.96E-02	3.14E-02	3.40E-02	3.40E-02
Ac-225+E	S			1.13E-01	8.58E-02	5.55E-02	4.14E-02	3.96E-02	3.14E-02	3.40E-02	3.40E-02
Ac-226	F		5.00E-03	3.74E-03	2.46E-03	1.11E-03	6.44E-04	3.92E-04	4.70E-04	5.22E-04	5.22E-04
Ac-226	M		5.00E-03	1.60E-02	1.19E-02	7.70E-03	5.74E-03	5.48E-03	4.37E-03	4.70E-03	4.70E-03
Ac-226	S		5.00E-03	1.74E-02	1.31E-02	8.51E-03	6.36E-03	6.07E-03	4.85E-03	5.22E-03	5.22E-03
Ac-227	F		5.00E-03	1.36E+00	1.28E+00	8.81E-01	6.59E-01	5.55E-01	5.77E-01	5.96E-01	5.96E-01
Ac-227	M		5.00E-03	6.03E-01	5.62E-01	4.00E-01	2.89E-01	2.66E-01	2.69E-01	2.78E-01	2.78E-01
Ac-227	S		5.00E-03	6.55E-01	5.96E-01	3.92E-01	2.56E-01	2.19E-01	2.05E-01	2.19E-01	2.19E-01
Ac-228	F		5.00E-03	2.39E-04	1.98E-04	1.15E-04	7.29E-05	4.96E-05	4.44E-05	5.03E-05	5.03E-05
Ac-228	M		5.00E-03	1.82E-04	1.49E-04	9.32E-05	6.29E-05	5.29E-05	4.40E-05	4.88E-05	4.88E-05
Ac-228	S		5.00E-03	2.17E-04	1.80E-04	1.13E-04	7.59E-05	6.44E-05	5.40E-05	5.96E-05	5.96E-05

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ac-230			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-231			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-232			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ac-233			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-100m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-101	F		1.00E-01	3.40E-07	2.39E-07	1.12E-07	6.92E-08	4.18E-08	3.49E-08	4.22E-08	
Ag-101	M		1.00E-01	4.63E-07	3.20E-07	1.50E-07	9.44E-08	5.92E-08	4.92E-08	5.92E-08	
Ag-101	S		2.00E-02	4.77E-07	3.30E-07	1.54E-07	9.73E-08	6.11E-08	5.11E-08	6.11E-08	
Ag-102	F		1.00E-01	4.51E-07	3.30E-07	1.59E-07	9.73E-08	5.88E-08	4.81E-08	5.88E-08	
Ag-102	M		1.00E-01	6.03E-07	4.33E-07	2.08E-07	1.29E-07	7.99E-08	6.59E-08	7.96E-08	
Ag-102	S		2.00E-02	6.18E-07	4.44E-07	2.13E-07	1.32E-07	8.21E-08	6.77E-08	8.18E-08	
Ag-102m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-103	F		1.00E-01	5.00E-07	3.70E-07	1.79E-07	1.09E-07	6.44E-08	5.25E-08	6.48E-08	
Ag-103	M		1.00E-01	7.55E-07	5.48E-07	2.69E-07	1.71E-07	1.12E-07	9.10E-08	1.08E-07	
Ag-103	S		2.00E-02	7.88E-07	5.66E-07	2.80E-07	1.79E-07	1.18E-07	9.55E-08	1.14E-07	
Ag-104	F		1.00E-01	8.58E-07	7.14E-07	3.70E-07	2.23E-07	1.31E-07	1.04E-07	1.29E-07	
Ag-104	M		1.00E-01	1.08E-06	8.77E-07	4.55E-07	2.80E-07	1.71E-07	1.35E-07	1.65E-07	
Ag-104	S		2.00E-02	1.11E-06	8.95E-07	4.66E-07	2.86E-07	1.75E-07	1.38E-07	1.69E-07	
Ag-104m	F		1.00E-01	6.88E-07	4.81E-07	2.26E-07	1.38E-07	8.14E-08	6.70E-08	8.25E-08	
Ag-104m	M		1.00E-01	1.02E-06	6.99E-07	3.29E-07	2.05E-07	1.28E-07	1.06E-07	1.28E-07	
Ag-104m	S		2.00E-02	1.06E-06	7.22E-07	3.41E-07	2.13E-07	1.34E-07	1.10E-07	1.33E-07	
Ag-105	F		1.00E-01	1.42E-05	1.24E-05	6.40E-06	3.68E-06	2.33E-06	1.99E-06	2.37E-06	
Ag-105	M		1.00E-01	1.64E-05	1.28E-05	7.29E-06	4.85E-06	3.31E-06	2.71E-06	3.15E-06	
Ag-105	S		2.00E-02	1.66E-05	1.34E-05	7.84E-06	4.70E-06	3.70E-06	3.02E-06	3.44E-06	
Ag-105m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-106	F		1.00E-01	3.44E-07	2.33E-07	1.06E-07	6.59E-08	3.96E-08	3.32E-08	4.03E-08	
Ag-106	M		1.00E-01	5.18E-07	3.47E-07	1.60E-07	1.01E-07	6.48E-08	5.40E-08	6.48E-08	
Ag-106	S		2.00E-02	5.40E-07	3.59E-07	1.66E-07	1.05E-07	6.77E-08	5.66E-08	6.73E-08	
Ag-106m	F		1.00E-01	2.82E-05	2.26E-05	1.19E-05	7.62E-06	4.70E-06	3.92E-06	4.66E-06	
Ag-106m	M		1.00E-01	2.66E-05	2.14E-05	1.18E-05	7.62E-06	5.11E-06	4.11E-06	4.81E-06	
Ag-106m	S		2.00E-02	2.58E-05	2.11E-05	1.17E-05	7.62E-06	5.18E-06	4.11E-06	4.81E-06	
Ag-108			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-108m	F		1.00E-01	1.28E-04	1.04E-04	5.77E-05	3.81E-05	2.55E-05	2.27E-05	2.59E-05	
Ag-108m	M		1.00E-01	1.21E-04	1.00E-04	6.18E-05	4.11E-05	3.19E-05	2.77E-05	3.07E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ag-108m	S		2.00E-02	3.32E-04	3.25E-04	2.36E-04	1.67E-04	1.48E-04	1.42E-04	1.49E-04	
Ag-108m+D	S			3.32E-04	3.25E-04	2.36E-04	1.67E-04	1.48E-04	1.42E-04	1.49E-04	
Ag-108m+E	S			3.32E-04	3.25E-04	2.36E-04	1.67E-04	1.48E-04	1.42E-04	1.49E-04	
Ag-109m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-110			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-110m	F		1.00E-01	1.31E-04	1.04E-04	5.55E-05	3.65E-05	2.37E-05	2.06E-05	2.39E-05	
Ag-110m	M		1.00E-01	1.32E-04	1.07E-04	6.48E-05	4.37E-05	3.43E-05	2.88E-05	3.21E-05	
Ag-110m	S		2.00E-02	1.74E-04	1.53E-04	9.88E-05	6.70E-05	5.48E-05	4.63E-05	5.11E-05	
Ag-110m+D	S			1.74E-04	1.53E-04	9.88E-05	6.70E-05	5.48E-05	4.63E-05	5.09E-05	
Ag-110m+E	S			1.74E-04	1.53E-04	9.88E-05	6.70E-05	5.48E-05	4.63E-05	5.09E-05	
Ag-111	F		1.00E-01	1.78E-05	1.20E-05	5.22E-06	3.24E-06	1.77E-06	1.46E-06	1.84E-06	
Ag-111	M		1.00E-01	3.38E-05	2.43E-05	1.29E-05	8.95E-06	7.07E-06	5.70E-06	6.48E-06	
Ag-111	S		2.00E-02	3.64E-05	2.62E-05	1.41E-05	9.84E-06	7.92E-06	6.36E-06	7.18E-06	
Ag-111m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-112	F		1.00E-01	3.61E-06	2.38E-06	1.03E-06	6.29E-07	3.36E-07	2.80E-07	3.55E-07	
Ag-112	M		1.00E-01	6.25E-06	4.14E-06	1.88E-06	1.18E-06	7.18E-07	6.03E-07	7.29E-07	
Ag-112	S		2.00E-02	6.66E-06	4.37E-06	1.99E-06	1.25E-06	7.62E-07	6.40E-07	7.77E-07	
Ag-113	F		1.00E-01	3.29E-06	2.15E-06	9.03E-07	5.55E-07	2.87E-07	2.42E-07	3.09E-07	
Ag-113	M		1.00E-01	5.59E-06	3.70E-06	1.69E-06	1.08E-06	6.81E-07	5.62E-07	6.77E-07	
Ag-113	S		2.00E-02	6.03E-06	3.96E-06	1.81E-06	1.16E-06	7.36E-07	6.07E-07	7.29E-07	
Ag-113m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-114			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-115	F		1.00E-01	5.99E-07	3.85E-07	1.68E-07	1.05E-07	6.22E-08	5.29E-08	6.44E-08	
Ag-115	M		1.00E-01	9.47E-07	6.14E-07	2.80E-07	1.81E-07	1.19E-07	9.99E-08	1.18E-07	
Ag-115	S		2.00E-02	9.92E-07	6.40E-07	2.93E-07	1.90E-07	1.26E-07	1.05E-07	1.25E-07	
Ag-116			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-117			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ag-99			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Al-26	F		2.00E-02	2.96E-04	2.29E-04	1.18E-04	7.40E-05	4.77E-05	4.14E-05	4.85E-05	
Al-26	M		2.00E-02	3.22E-04	2.70E-04	1.61E-04	1.06E-04	8.29E-05	7.22E-05	7.99E-05	
Al-26	S		2.00E-02	9.84E-04	9.47E-04	6.66E-04	4.66E-04	4.14E-04	4.03E-04	4.22E-04	
Al-28			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Al-29			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Am-237	F		5.00E-03	3.74E-07	2.76E-07	1.32E-07	8.25E-08	5.07E-08	4.18E-08	5.03E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Am-237	M		5.00E-03	6.25E-07	4.55E-07	2.33E-07	1.55E-07	1.14E-07	9.25E-08	1.07E-07	
Am-237	S		5.00E-03	6.55E-07	4.77E-07	2.45E-07	1.64E-07	1.21E-07	9.84E-08	1.13E-07	
Am-238	F		5.00E-03	1.56E-06	1.43E-06	9.44E-07	7.51E-07	6.70E-07	6.96E-07	7.14E-07	
Am-238	M		5.00E-03	1.14E-06	9.84E-07	4.74E-07	3.57E-07	3.28E-07	3.32E-07	3.45E-07	
Am-238	S		5.00E-03	9.88E-07	8.14E-07	4.70E-07	3.03E-07	2.26E-07	1.99E-07	2.22E-07	
Am-239	F		5.00E-03	3.10E-06	2.20E-06	1.01E-06	6.14E-07	3.42E-07	2.87E-07	3.56E-07	
Am-239	M		5.00E-03	5.81E-06	4.14E-06	2.12E-06	1.42E-06	1.04E-06	8.40E-07	9.69E-07	
Am-239	S		5.00E-03	6.11E-06	4.37E-06	2.24E-06	1.51E-06	9.66E-07	8.99E-07	1.02E-06	
Am-240	F		5.00E-03	7.96E-06	6.25E-06	3.31E-06	2.12E-06	1.34E-06	8.70E-07	1.12E-06	
Am-240	M		5.00E-03	1.09E-05	8.36E-06	4.44E-06	2.89E-06	1.98E-06	1.62E-06	1.89E-06	
Am-240	S		5.00E-03	1.12E-05	8.55E-06	4.51E-06	2.94E-06	2.01E-06	1.61E-06	1.89E-06	
Am-241	F		5.00E-03	6.88E-01	6.59E-01	4.55E-01	3.74E-01	3.43E-01	3.57E-01	3.63E-01	
Am-241	M		5.00E-03	2.73E-01	2.58E-01	1.89E-01	1.50E-01	1.49E-01	1.54E-01	1.56E-01	
Am-241	S		5.00E-03	1.70E-01	1.48E-01	1.01E-01	6.99E-02	6.29E-02	5.92E-02	6.25E-02	
Am-242	F		5.00E-03	3.38E-04	2.61E-04	1.28E-04	7.73E-05	5.03E-05	4.14E-05	4.96E-05	
Am-242	M		5.00E-03	2.78E-04	2.18E-04	1.31E-04	9.03E-05	7.81E-05	6.40E-05	7.07E-05	
Am-242	S		5.00E-03	2.92E-04	2.29E-04	1.44E-04	1.00E-04	8.92E-05	7.29E-05	7.99E-05	
Am-242m	F		5.00E-03	5.77E-01	5.66E-01	4.11E-01	3.47E-01	3.25E-01	3.39E-01	3.43E-01	
Am-242m	M		5.00E-03	1.95E-01	1.96E-01	1.52E-01	1.25E-01	1.28E-01	1.36E-01	1.36E-01	
Am-242m	S		5.00E-03	9.29E-02	8.84E-02	6.33E-02	4.48E-02	4.11E-02	4.11E-02	4.26E-02	
Am-242m+D	F			5.77E-01	5.66E-01	4.11E-01	3.47E-01	3.25E-01	3.39E-01	3.43E-01	
Am-242m+E	F			5.77E-01	5.66E-01	4.11E-01	3.47E-01	3.25E-01	3.39E-01	3.43E-01	
Am-243	F		5.00E-03	6.77E-01	6.48E-01	4.48E-01	3.70E-01	3.42E-01	3.54E-01	3.61E-01	
Am-243	M		5.00E-03	2.66E-01	2.52E-01	1.86E-01	1.48E-01	1.47E-01	1.52E-01	1.54E-01	
Am-243	S		5.00E-03	1.63E-01	1.43E-01	9.73E-02	6.73E-02	6.07E-02	5.74E-02	6.03E-02	
Am-243+D	F			6.77E-01	6.48E-01	4.48E-01	3.70E-01	3.42E-01	3.54E-01	3.60E-01	
Am-243+E	F			6.77E-01	6.48E-01	4.48E-01	3.70E-01	3.42E-01	3.54E-01	3.60E-01	
Am-244	F		5.00E-03	3.77E-05	3.40E-05	2.08E-05	1.51E-05	1.30E-05	1.37E-05	1.42E-05	
Am-244	M		5.00E-03	2.23E-05	1.86E-05	1.17E-05	8.36E-06	7.55E-06	7.44E-06	7.77E-06	
Am-244	S		5.00E-03	2.22E-05	1.75E-05	8.84E-06	6.03E-06	5.03E-06	4.44E-06	4.88E-06	
Am-244m	F		5.00E-03	1.69E-06	1.49E-06	9.03E-07	6.59E-07	5.66E-07	5.96E-07	6.18E-07	
Am-244m	M		5.00E-03	1.24E-06	7.88E-07	4.85E-07	3.43E-07	3.11E-07	3.10E-07	3.24E-07	
Am-244m	S		5.00E-03	1.12E-06	8.29E-07	4.51E-07	3.03E-07	2.37E-07	2.13E-07	2.35E-07	
Am-245	F		5.00E-03	7.99E-07	5.22E-07	2.29E-07	1.49E-07	9.07E-08	7.96E-08	9.47E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Am-245	M		5.00E-03	1.47E-06	9.84E-07	4.74E-07	3.24E-07	2.38E-07	1.97E-07	2.26E-07	
Am-245	S		5.00E-03	1.54E-06	1.04E-06	5.00E-07	3.42E-07	2.53E-07	2.08E-07	2.39E-07	
Am-246	F		5.00E-03	1.23E-06	8.40E-07	3.81E-07	2.48E-07	1.57E-07	1.35E-07	1.60E-07	
Am-246	M		5.00E-03	2.07E-06	1.41E-06	6.70E-07	4.55E-07	3.24E-07	2.70E-07	3.12E-07	
Am-246	S		5.00E-03	2.16E-06	1.48E-06	7.03E-07	4.77E-07	3.41E-07	2.84E-07	3.27E-07	
Am-246m	F		5.00E-03	4.85E-07	3.34E-07	1.55E-07	9.88E-08	6.18E-08	5.29E-08	6.29E-08	
Am-246m	M		5.00E-03	7.25E-07	4.96E-07	2.32E-07	1.51E-07	9.99E-08	8.40E-08	9.88E-08	
Am-246m	S		5.00E-03	7.55E-07	5.14E-07	2.40E-07	1.56E-07	1.04E-07	8.66E-08	1.02E-07	
Am-247	F		5.00E-03	5.07E-07	3.31E-07	1.45E-07	9.51E-08	5.99E-08	5.22E-08	6.18E-08	
Am-247	M		5.00E-03	8.14E-07	5.37E-07	2.45E-07	1.65E-07	1.13E-07	9.58E-08	1.12E-07	
Am-247	S		5.00E-03	8.51E-07	5.59E-07	2.55E-07	1.72E-07	1.19E-07	1.01E-07	1.17E-07	
Ar-37			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-39			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-41			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-42			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-42+D	G			1.00E-05	6.77E-06	3.26E-06	2.13E-06	1.54E-06	1.32E-06	1.51E-06	
Ar-42+E	G			1.00E-05	6.77E-06	3.26E-06	2.13E-06	1.54E-06	1.32E-06	1.51E-06	
Ar-43			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ar-44			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
As-68			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
As-69	F		1.00E+00	5.18E-07	3.49E-07	1.58E-07	9.84E-08	5.92E-08	5.00E-08	6.07E-08	
As-69	M		1.00E+00	7.44E-07	4.96E-07	2.27E-07	1.44E-07	9.07E-08	7.66E-08	9.14E-08	
As-69	S		1.00E+00	7.66E-07	5.11E-07	2.35E-07	1.49E-07	9.44E-08	7.96E-08	9.51E-08	
As-70	F		1.00E+00	1.55E-06	1.20E-06	5.88E-07	3.58E-07	2.11E-07	1.71E-07	2.11E-07	
As-70	M		1.00E+00	2.16E-06	1.65E-06	8.10E-07	5.03E-07	3.15E-07	2.56E-07	3.09E-07	
As-70	S		1.00E+00	2.23E-06	1.70E-06	8.33E-07	5.18E-07	3.26E-07	2.65E-07	3.20E-07	
As-71	F		1.00E+00	5.29E-06	4.40E-06	2.13E-06	1.32E-06	7.47E-07	6.18E-07	7.59E-07	
As-71	M		1.00E+00	8.18E-06	7.10E-06	3.74E-06	2.50E-06	1.82E-06	1.46E-06	1.68E-06	
As-71	S		1.00E+00	8.51E-06	7.44E-06	3.92E-06	2.66E-06	1.72E-06	1.37E-06	1.62E-06	
As-72	F		1.00E+00	1.72E-05	1.50E-05	6.96E-06	4.26E-06	2.32E-06	1.91E-06	2.39E-06	
As-72	M		1.00E+00	2.18E-05	2.12E-05	1.02E-05	6.51E-06	4.07E-06	3.37E-06	4.03E-06	
As-72	S		1.00E+00	2.24E-05	2.19E-05	1.06E-05	6.77E-06	4.26E-06	3.54E-06	4.22E-06	
As-73	F		1.00E+00	3.57E-06	2.49E-06	1.10E-06	6.66E-07	3.55E-07	2.96E-07	3.74E-07	
As-73	M		1.00E+00	1.98E-05	1.47E-05	8.66E-06	5.66E-06	4.51E-06	3.85E-06	4.29E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
As-73	S		1.00E+00	2.56E-05	1.94E-05	1.14E-05	7.44E-06	5.92E-06	5.03E-06	5.62E-06	
As-74	F		1.00E+00	1.70E-05	1.28E-05	6.03E-06	3.74E-06	2.10E-06	1.75E-06	2.16E-06	
As-74	M		1.00E+00	3.92E-05	3.08E-05	1.72E-05	1.20E-05	9.66E-06	7.88E-06	8.81E-06	
As-74	S		1.00E+00	4.40E-05	3.51E-05	1.98E-05	1.38E-05	1.13E-05	9.21E-06	1.03E-05	
As-76	F		1.00E+00	1.26E-05	1.08E-05	4.77E-06	2.90E-06	1.52E-06	1.27E-06	1.60E-06	
As-76	M		1.00E+00	1.70E-05	1.68E-05	7.88E-06	5.07E-06	3.20E-06	2.70E-06	3.19E-06	
As-76	S		1.00E+00	1.75E-05	1.74E-05	8.25E-06	5.33E-06	3.40E-06	2.86E-06	3.37E-06	
As-77	F		1.00E+00	4.14E-06	3.35E-06	1.26E-06	8.95E-07	4.74E-07	4.03E-07	5.00E-07	
As-77	M		1.00E+00	7.92E-06	6.25E-06	3.28E-06	2.29E-06	1.83E-06	1.45E-06	1.64E-06	
As-77	S		1.00E+00	7.47E-06	6.62E-06	3.52E-06	2.48E-06	2.00E-06	1.59E-06	1.79E-06	
As-78	F		1.00E+00	1.81E-06	1.32E-06	6.03E-07	3.67E-07	2.11E-07	1.74E-07	2.16E-07	
As-78	M		1.00E+00	2.81E-06	2.07E-06	9.62E-07	6.03E-07	3.81E-07	3.18E-07	3.81E-07	
As-78	S		1.00E+00	2.92E-06	2.15E-06	9.99E-07	6.33E-07	4.00E-07	3.34E-07	4.00E-07	
As-79			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-204			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-205	F		1.00E+00	4.70E-06	3.38E-06	1.93E-06	1.35E-06	1.02E-06	8.18E-07	9.32E-07	
At-205	M		1.00E+00	9.44E-06	6.92E-06	4.51E-06	3.27E-06	3.09E-06	2.49E-06	2.70E-06	
At-205	S		1.00E+00	1.01E-05	7.40E-06	4.81E-06	3.51E-06	3.32E-06	2.68E-06	2.90E-06	
At-206	F		1.00E+00	1.24E-06	9.03E-07	4.59E-07	2.92E-07	2.01E-07	1.64E-07	1.92E-07	
At-206	M		1.00E+00	3.49E-06	2.50E-06	1.55E-06	1.09E-06	9.58E-07	7.88E-07	8.62E-07	
At-206	S		1.00E+00	3.85E-06	2.79E-06	1.73E-06	1.22E-06	1.08E-06	8.84E-07	9.69E-07	
At-207	F		1.00E+00	8.21E-06	5.81E-06	3.08E-06	2.04E-06	1.53E-06	1.26E-06	1.44E-06	
At-207	M		1.00E+00	2.97E-05	2.15E-05	1.39E-05	9.95E-06	9.18E-06	7.51E-06	8.14E-06	
At-207	S		1.00E+00	3.23E-05	2.34E-05	1.52E-05	1.09E-05	1.01E-05	8.21E-06	8.92E-06	
At-208	F		1.00E+00	2.04E-06	1.57E-06	7.96E-07	4.88E-07	3.08E-07	2.50E-07	3.01E-07	
At-208	M		1.00E+00	7.47E-06	5.70E-06	3.36E-06	1.94E-06	1.67E-06	1.38E-06	1.55E-06	
At-208	S		1.00E+00	1.14E-05	9.14E-06	4.63E-06	3.07E-06	2.56E-06	2.19E-06	2.43E-06	
At-209	F		1.00E+00	9.32E-06	6.66E-06	3.29E-06	2.06E-06	1.35E-06	1.11E-06	1.32E-06	
At-209	M		1.00E+00	3.81E-05	2.76E-05	1.76E-05	1.25E-05	1.13E-05	9.29E-06	1.01E-05	
At-209	S		1.00E+00	4.22E-05	3.05E-05	1.95E-05	1.38E-05	1.25E-05	1.03E-05	1.12E-05	
At-210	F		1.00E+00	1.55E-05	1.10E-05	5.11E-06	3.05E-06	1.71E-06	1.41E-06	1.76E-06	
At-210	M		1.00E+00	1.26E-04	9.47E-05	5.85E-05	4.03E-05	3.51E-05	2.91E-05	3.19E-05	
At-210	S		1.00E+00	1.71E-04	1.31E-04	8.10E-05	5.51E-05	4.74E-05	3.92E-05	4.33E-05	
At-211	F		1.00E+00	5.37E-04	3.62E-04	1.60E-04	1.06E-04	6.51E-05	5.81E-05	6.85E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
At-211	M		1.00E+00	1.92E-03	1.39E-03	7.18E-04	5.29E-04	4.96E-04	4.00E-04	4.37E-04	
At-211	S		1.00E+00	2.07E-03	1.50E-03	7.88E-04	5.81E-04	5.48E-04	4.40E-04	4.81E-04	
At-211+D	S			2.07E-03	1.50E-03	7.88E-04	5.81E-04	5.48E-04	4.40E-04	4.81E-04	
At-211+E	S			2.07E-03	1.50E-03	7.88E-04	5.81E-04	5.48E-04	4.40E-04	4.81E-04	
At-215			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-216			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-217			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-218			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-219			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
At-220			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-186	F		2.00E-01	4.66E-07	3.32E-07	1.56E-07	9.69E-08	5.85E-08	4.88E-08	5.92E-08	
Au-186	M		2.00E-01	6.51E-07	4.55E-07	2.16E-07	1.38E-07	8.73E-08	7.29E-08	8.70E-08	
Au-186	S		2.00E-01	6.73E-07	4.70E-07	2.23E-07	1.42E-07	9.07E-08	7.55E-08	8.99E-08	
Au-187			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-190	F		2.00E-01	5.40E-07	4.26E-07	2.13E-07	1.30E-07	7.70E-08	6.22E-08	7.62E-08	
Au-190	M		2.00E-01	7.29E-07	5.55E-07	2.78E-07	1.73E-07	1.07E-07	8.58E-08	1.04E-07	
Au-190	S		2.00E-01	7.47E-07	5.70E-07	2.85E-07	1.77E-07	1.10E-07	8.84E-08	1.07E-07	
Au-191	F		2.00E-01	8.92E-07	6.96E-07	3.40E-07	2.08E-07	1.20E-07	9.81E-08	1.21E-07	
Au-191	M		2.00E-01	1.55E-06	1.18E-06	6.11E-07	4.00E-07	2.80E-07	2.25E-07	2.63E-07	
Au-191	S		2.00E-01	1.62E-06	1.23E-06	6.40E-07	4.22E-07	2.99E-07	2.40E-07	2.80E-07	
Au-192	F		2.00E-01	2.03E-06	1.68E-06	8.66E-07	5.29E-07	3.06E-07	2.46E-07	3.03E-07	
Au-192	M		2.00E-01	2.69E-06	2.18E-06	1.12E-06	7.03E-07	4.26E-07	3.40E-07	4.14E-07	
Au-192	S		2.00E-01	2.76E-06	2.23E-06	1.15E-06	7.22E-07	4.37E-07	3.50E-07	4.26E-07	
Au-193	F		2.00E-01	1.30E-06	9.92E-07	4.63E-07	2.82E-07	1.55E-07	1.28E-07	1.60E-07	
Au-193	M		2.00E-01	2.52E-06	1.89E-06	9.62E-07	6.40E-07	4.51E-07	3.64E-07	4.26E-07	
Au-193	S		2.00E-01	2.66E-06	1.99E-06	1.02E-06	6.81E-07	4.88E-07	3.92E-07	4.55E-07	
Au-193m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Au-194	F		2.00E-01	4.14E-06	3.42E-06	1.76E-06	1.08E-06	6.29E-07	5.11E-07	6.25E-07	
Au-194	M		2.00E-01	5.99E-06	4.88E-06	2.54E-06	1.63E-06	1.03E-06	8.29E-07	9.92E-07	
Au-194	S		2.00E-01	6.22E-06	5.03E-06	2.63E-06	1.70E-06	1.08E-06	8.66E-07	1.03E-06	
Au-195	F		2.00E-01	2.70E-06	2.01E-06	9.21E-07	5.59E-07	3.05E-07	2.49E-07	3.14E-07	
Au-195	M		2.00E-01	1.98E-05	1.55E-05	9.03E-06	6.18E-06	5.14E-06	4.14E-06	4.63E-06	
Au-195	S		2.00E-01	3.07E-05	2.50E-05	1.48E-05	9.92E-06	8.07E-06	6.62E-06	7.40E-06	
Au-195m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Au-196	F		2.00E-01	3.56E-06	2.86E-06	1.44E-06	8.99E-07	5.18E-07	4.26E-07	5.18E-07	
Au-196	M		2.00E-01	7.22E-06	5.70E-06	3.10E-06	2.08E-06	1.52E-06	1.21E-06	1.40E-06	
Au-196	S		2.00E-01	7.73E-06	6.11E-06	3.34E-06	2.25E-06	1.67E-06	1.16E-06	1.39E-06	
Au-196m	F		2.00E-01	4.40E-06	3.13E-06	1.38E-06	8.66E-07	4.74E-07	4.07E-07	5.03E-07	
Au-196m	M		2.00E-01	1.02E-05	7.44E-06	3.85E-06	2.67E-06	1.82E-06	1.45E-06	1.70E-06	
Au-196m	S		2.00E-01	1.09E-05	7.92E-06	4.14E-06	2.87E-06	2.00E-06	1.59E-06	1.85E-06	
Au-198	F		2.00E-01	8.62E-06	6.25E-06	2.80E-06	1.74E-06	9.25E-07	7.73E-07	9.73E-07	
Au-198	M		2.00E-01	1.85E-05	1.51E-05	6.99E-06	4.77E-06	3.59E-06	2.88E-06	3.32E-06	
Au-198	S		2.00E-01	1.99E-05	1.61E-05	7.59E-06	5.22E-06	3.96E-06	3.17E-06	3.64E-06	
Au-198m	F		2.00E-01	1.17E-05	8.47E-06	3.85E-06	2.41E-06	1.31E-06	1.11E-06	1.37E-06	
Au-198m	M		2.00E-01	3.44E-05	2.29E-05	1.28E-05	9.18E-06	7.73E-06	6.11E-06	6.85E-06	
Au-198m	S		2.00E-01	3.34E-05	2.51E-05	1.41E-05	1.01E-05	8.62E-06	6.81E-06	7.59E-06	
Au-199	F		2.00E-01	4.26E-06	3.02E-06	1.32E-06	8.25E-07	4.37E-07	3.74E-07	4.70E-07	
Au-199	M		2.00E-01	1.30E-05	9.62E-06	5.44E-06	3.96E-06	3.41E-06	2.69E-06	2.98E-06	
Au-199	S		2.00E-01	1.42E-05	1.06E-05	6.03E-06	4.37E-06	3.81E-06	3.00E-06	3.33E-06	
Au-200	F		2.00E-01	6.96E-07	4.44E-07	1.92E-07	1.21E-07	7.22E-08	6.11E-08	7.44E-08	
Au-200	M		2.00E-01	1.18E-06	7.55E-07	3.42E-07	2.21E-07	1.47E-07	1.23E-07	1.45E-07	
Au-200	S		2.00E-01	1.23E-06	7.88E-07	3.59E-07	2.32E-07	1.55E-07	1.30E-07	1.53E-07	
Au-200m	F		2.00E-01	9.58E-06	7.47E-06	3.61E-06	2.23E-06	1.25E-06	1.02E-06	1.27E-06	
Au-200m	M		2.00E-01	1.69E-05	1.30E-05	6.59E-06	4.33E-06	2.92E-06	2.35E-06	2.77E-06	
Au-200m	S		2.00E-01	1.77E-05	1.35E-05	6.92E-06	4.55E-06	3.12E-06	2.50E-06	2.94E-06	
Au-201	F		2.00E-01	3.32E-07	2.12E-07	9.18E-08	5.99E-08	3.74E-08	3.23E-08	3.85E-08	
Au-201	M		2.00E-01	5.48E-07	3.53E-07	1.59E-07	1.06E-07	7.18E-08	6.11E-08	7.14E-08	
Au-201	S		2.00E-01	5.70E-07	3.69E-07	1.66E-07	1.11E-07	7.59E-08	6.44E-08	7.51E-08	
Au-202			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ba-124	F		6.00E-01	6.07E-07	4.07E-07	1.85E-07	1.12E-07	6.66E-08	5.92E-08	7.10E-08	
Ba-124	M		2.00E-01	8.29E-07	5.40E-07	2.44E-07	1.53E-07	9.51E-08	8.10E-08	9.73E-08	
Ba-124	S		2.00E-02	8.55E-07	5.55E-07	2.50E-07	1.57E-07	9.84E-08	8.33E-08	1.00E-07	
Ba-126	F		6.00E-01	2.53E-06	2.02E-06	9.51E-07	5.33E-07	2.78E-07	2.90E-07	3.45E-07	
Ba-126	M		2.00E-01	3.89E-06	2.65E-06	1.24E-06	7.66E-07	4.70E-07	3.96E-07	4.77E-07	
Ba-126	S		2.00E-02	4.07E-06	2.73E-06	1.27E-06	7.96E-07	4.92E-07	4.07E-07	4.92E-07	
Ba-127	F		6.00E-01	2.67E-07	1.91E-07	8.84E-08	5.44E-08	3.25E-08	2.89E-08	3.46E-08	
Ba-127	M		2.00E-01	3.74E-07	2.54E-07	1.18E-07	7.51E-08	4.77E-08	4.03E-08	4.81E-08	
Ba-127	S		2.00E-02	3.85E-07	2.61E-07	1.21E-07	7.77E-08	4.96E-08	4.14E-08	4.96E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ba-128	F		6.00E-01	2.23E-05	2.05E-05	9.47E-06	5.18E-06	2.79E-06	2.90E-06	3.43E-06	
Ba-128	M		2.00E-01	4.07E-05	2.98E-05	1.42E-05	9.03E-06	5.59E-06	4.85E-06	5.77E-06	
Ba-128	S		2.00E-02	4.59E-05	3.16E-05	1.50E-05	9.69E-06	6.07E-06	5.14E-06	6.11E-06	
Ba-129	F		6.00E-01	5.55E-07	4.74E-07	2.32E-07	1.35E-07	7.29E-08	7.18E-08	8.51E-08	
Ba-129	M		2.00E-01	8.51E-07	6.25E-07	3.07E-07	1.96E-07	1.24E-07	1.02E-07	1.22E-07	
Ba-129	S		2.00E-02	8.99E-07	6.48E-07	3.18E-07	2.04E-07	1.31E-07	1.06E-07	1.27E-07	
Ba-129m	F		6.00E-01	9.58E-07	8.62E-07	4.51E-07	2.68E-07	1.53E-07	1.37E-07	1.64E-07	
Ba-129m	M		2.00E-01	1.26E-06	1.03E-06	5.37E-07	3.36E-07	2.07E-07	1.67E-07	2.01E-07	
Ba-129m	S		2.00E-02	1.31E-06	1.05E-06	5.51E-07	3.45E-07	2.15E-07	1.71E-07	2.06E-07	
Ba-131	F		6.00E-01	7.99E-06	5.44E-06	2.69E-06	1.78E-06	1.15E-06	8.14E-07	1.01E-06	
Ba-131	M		2.00E-01	1.54E-05	1.16E-05	5.85E-06	4.22E-06	3.55E-06	2.79E-06	3.13E-06	
Ba-131	S		2.00E-02	1.47E-05	1.11E-05	6.55E-06	4.70E-06	4.00E-06	3.17E-06	3.52E-06	
Ba-131m	F		6.00E-01	1.13E-07	7.81E-08	3.74E-08	2.52E-08	1.76E-08	1.50E-08	1.73E-08	
Ba-131m	M		2.00E-01	1.80E-07	1.25E-07	6.29E-08	4.37E-08	3.34E-08	2.77E-08	3.14E-08	
Ba-131m	S		2.00E-02	1.88E-07	1.30E-07	6.59E-08	4.59E-08	3.53E-08	2.92E-08	3.31E-08	
Ba-133	F		6.00E-01	4.18E-05	1.68E-05	9.84E-06	1.37E-05	2.20E-05	5.62E-06	7.62E-06	
Ba-133	M		2.00E-01	5.51E-05	3.89E-05	2.42E-05	1.92E-05	2.02E-05	1.18E-05	1.36E-05	
Ba-133	S		2.00E-02	1.20E-04	1.10E-04	7.44E-05	5.03E-05	4.26E-05	3.85E-05	4.14E-05	
Ba-133m	F		6.00E-01	5.22E-06	4.03E-06	1.86E-06	1.19E-06	5.59E-07	5.66E-07	6.85E-07	
Ba-133m	M		2.00E-01	1.14E-05	8.36E-06	3.85E-06	2.62E-06	1.99E-06	1.60E-06	1.84E-06	
Ba-133m	S		2.00E-02	1.16E-05	8.99E-06	4.14E-06	2.87E-06	2.20E-06	1.75E-06	2.01E-06	
Ba-135m	F		6.00E-01	4.03E-06	3.70E-06	1.69E-06	9.29E-07	4.29E-07	5.25E-07	6.14E-07	
Ba-135m	M		2.00E-01	8.99E-06	6.59E-06	3.29E-06	2.02E-06	1.52E-06	1.23E-06	1.43E-06	
Ba-135m	S		2.00E-02	1.01E-05	7.03E-06	3.18E-06	2.20E-06	1.68E-06	1.33E-06	1.54E-06	
Ba-137m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ba-139	F		6.00E-01	1.22E-06	8.92E-07	3.96E-07	2.23E-07	1.16E-07	1.26E-07	1.49E-07	
Ba-139	M		2.00E-01	2.04E-06	1.30E-06	5.88E-07	3.77E-07	2.45E-07	2.09E-07	2.48E-07	
Ba-139	S		2.00E-02	2.13E-06	1.35E-06	6.11E-07	3.96E-07	2.60E-07	2.18E-07	2.59E-07	
Ba-140	F		6.00E-01	5.00E-05	2.92E-05	1.33E-05	8.99E-06	5.88E-06	3.85E-06	4.92E-06	
Ba-140	M		2.00E-01	9.95E-05	7.29E-05	4.07E-05	2.85E-05	2.33E-05	1.88E-05	2.11E-05	
Ba-140	S		2.00E-02	1.08E-04	8.10E-05	4.63E-05	3.22E-05	2.65E-05	2.17E-05	2.41E-05	
Ba-141	F		6.00E-01	7.40E-07	5.51E-07	2.49E-07	1.45E-07	7.96E-08	7.99E-08	9.51E-08	
Ba-141	M		2.00E-01	1.18E-06	7.84E-07	3.58E-07	2.29E-07	1.45E-07	1.24E-07	1.47E-07	
Ba-141	S		2.00E-02	1.24E-06	8.14E-07	3.74E-07	2.39E-07	1.54E-07	1.30E-07	1.54E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ba-142	F		6.00E-01	4.59E-07	3.48E-07	1.64E-07	9.95E-08	5.74E-08	5.37E-08	6.36E-08	
Ba-142	M		2.00E-01	6.70E-07	4.66E-07	2.21E-07	1.42E-07	9.03E-08	7.62E-08	9.07E-08	
Ba-142	S		2.00E-02	6.96E-07	4.81E-07	2.27E-07	1.47E-07	9.40E-08	7.88E-08	9.36E-08	
Be-10	F		2.00E-02	1.37E-04	1.16E-04	6.33E-05	3.74E-05	2.60E-05	2.43E-05	2.75E-05	
Be-10	M		2.00E-02	1.52E-04	1.26E-04	7.51E-05	4.96E-05	4.11E-05	3.55E-05	3.89E-05	
Be-10	S		2.00E-02	3.61E-04	3.34E-04	2.24E-04	1.52E-04	1.34E-04	1.28E-04	1.35E-04	
Be-7	F		2.00E-02	8.33E-07	6.81E-07	3.67E-07	2.48E-07	1.64E-07	1.41E-07	1.62E-07	
Be-7	M		2.00E-02	9.21E-07	7.77E-07	4.63E-07	3.09E-07	2.31E-07	1.88E-07	2.13E-07	
Be-7	S		2.00E-02	1.04E-06	8.88E-07	5.37E-07	3.60E-07	2.53E-07	2.06E-07	2.37E-07	
Bi-197			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-200	F		1.00E-01	7.62E-07	5.92E-07	2.96E-07	1.82E-07	1.08E-07	8.70E-08	1.07E-07	
Bi-200	M		1.00E-01	1.04E-06	7.88E-07	4.00E-07	2.52E-07	1.63E-07	1.31E-07	1.57E-07	
Bi-200	S		1.00E-01	1.07E-06	8.10E-07	4.11E-07	2.59E-07	1.69E-07	1.36E-07	1.62E-07	
Bi-201	F		1.00E-01	1.57E-06	1.24E-06	6.29E-07	3.85E-07	2.24E-07	1.80E-07	2.22E-07	
Bi-201	M		1.00E-01	2.10E-06	1.62E-06	8.29E-07	5.22E-07	3.34E-07	2.67E-07	3.21E-07	
Bi-201	S		1.00E-01	2.16E-06	1.67E-06	8.51E-07	5.40E-07	3.47E-07	2.77E-07	3.32E-07	
Bi-202	F		1.00E-01	1.43E-06	1.16E-06	6.03E-07	3.68E-07	2.18E-07	1.74E-07	2.13E-07	
Bi-202	M		1.00E-01	1.79E-06	1.42E-06	7.33E-07	4.55E-07	2.82E-07	2.24E-07	2.72E-07	
Bi-202	S		1.00E-01	1.83E-06	1.45E-06	7.47E-07	4.66E-07	2.89E-07	2.30E-07	2.79E-07	
Bi-203	F		1.00E-01	5.99E-06	4.88E-06	2.51E-06	1.55E-06	8.95E-07	7.18E-07	8.84E-07	
Bi-203	M		1.00E-01	7.73E-06	6.18E-06	3.20E-06	2.04E-06	1.28E-06	1.02E-06	1.22E-06	
Bi-203	S		1.00E-01	7.92E-06	6.33E-06	3.28E-06	2.09E-06	1.32E-06	1.05E-06	1.27E-06	
Bi-204	F		1.00E-01	6.99E-06	5.77E-06	3.00E-06	1.85E-06	1.08E-06	8.62E-07	1.06E-06	
Bi-204	M		1.00E-01	8.70E-06	7.03E-06	3.66E-06	2.32E-06	1.42E-06	1.13E-06	1.37E-06	
Bi-204	S		1.00E-01	8.88E-06	7.18E-06	3.74E-06	2.37E-06	1.47E-06	1.17E-06	1.41E-06	
Bi-205	F		1.00E-01	1.13E-05	9.14E-06	4.77E-06	3.00E-06	1.76E-06	1.43E-06	1.74E-06	
Bi-205	M		1.00E-01	2.06E-05	1.68E-05	9.36E-06	6.14E-06	4.40E-06	3.53E-06	4.07E-06	
Bi-205	S		1.00E-01	2.25E-05	1.83E-05	1.03E-05	6.77E-06	4.92E-06	3.96E-06	4.55E-06	
Bi-206	F		1.00E-01	2.32E-05	1.85E-05	9.47E-06	5.92E-06	3.46E-06	2.79E-06	3.42E-06	
Bi-206	M		1.00E-01	3.85E-05	3.05E-05	1.67E-05	1.11E-05	7.99E-06	6.36E-06	7.36E-06	
Bi-206	S		1.00E-01	4.07E-05	3.23E-05	1.77E-05	1.19E-05	8.66E-06	6.88E-06	7.96E-06	
Bi-207	F		1.00E-01	1.60E-05	1.24E-05	6.22E-06	3.89E-06	2.25E-06	1.83E-06	2.25E-06	
Bi-207	M		1.00E-01	8.81E-05	7.55E-05	4.63E-05	3.10E-05	2.45E-05	2.10E-05	2.33E-05	
Bi-207	S		1.00E-01	3.56E-04	3.46E-04	2.45E-04	1.71E-04	1.49E-04	1.44E-04	1.51E-04	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Bi-208	F		1.00E-01	1.46E-05	1.20E-05	6.33E-06	4.07E-06	2.41E-06	1.96E-06	2.38E-06	
Bi-208	M		1.00E-01	6.55E-05	5.81E-05	3.64E-05	2.47E-05	1.98E-05	1.66E-05	1.84E-05	
Bi-208	S		1.00E-01	3.02E-04	3.00E-04	2.20E-04	1.59E-04	1.42E-04	1.36E-04	1.42E-04	
Bi-210	F		1.00E-01	3.92E-05	2.55E-05	1.20E-05	7.66E-06	4.74E-06	3.96E-06	4.77E-06	
Bi-210	M		1.00E-01	1.43E-03	1.09E-03	6.85E-04	4.74E-04	4.14E-04	3.45E-04	3.77E-04	
Bi-210	S		1.00E-01	2.08E-03	1.62E-03	1.01E-03	6.88E-04	5.88E-04	4.92E-04	5.40E-04	
Bi-210m	F		1.00E-01	1.49E-03	9.58E-04	4.70E-04	3.08E-04	2.06E-04	1.71E-04	2.01E-04	
Bi-210m	M		1.00E-01	5.40E-02	4.14E-02	2.60E-02	1.76E-02	1.51E-02	1.27E-02	1.39E-02	
Bi-210m	S		1.00E-01	1.28E-01	1.12E-01	7.25E-02	4.74E-02	4.00E-02	3.66E-02	3.96E-02	
Bi-210m+D	S			1.28E-01	1.12E-01	7.25E-02	4.74E-02	4.00E-02	3.66E-02	3.94E-02	
Bi-210m+E	S			1.28E-01	1.12E-01	7.25E-02	4.74E-02	4.00E-02	3.66E-02	3.94E-02	
Bi-211			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-212	F		1.00E-01	2.41E-04	1.67E-04	7.81E-05	5.48E-05	3.85E-05	3.34E-05	3.81E-05	
Bi-212	M		1.00E-01	5.74E-04	4.11E-04	2.24E-04	1.64E-04	1.39E-04	1.14E-04	1.26E-04	
Bi-212	S		1.00E-01	6.11E-04	4.37E-04	2.40E-04	1.76E-04	1.51E-04	1.23E-04	1.36E-04	
Bi-212+D	S			6.11E-04	4.37E-04	2.40E-04	1.76E-04	1.51E-04	1.23E-04	1.36E-04	
Bi-212+E	S			6.11E-04	4.37E-04	2.40E-04	1.76E-04	1.51E-04	1.23E-04	1.36E-04	
Bi-212n			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-213	F		1.00E-01	2.85E-04	1.98E-04	9.10E-05	6.40E-05	4.44E-05	3.89E-05	4.44E-05	
Bi-213	M		1.00E-01	5.99E-04	4.29E-04	2.23E-04	1.63E-04	1.34E-04	1.10E-04	1.23E-04	
Bi-213	S		1.00E-01	6.33E-04	4.51E-04	2.38E-04	1.74E-04	1.44E-04	1.18E-04	1.31E-04	
Bi-213+D	S			6.33E-04	4.51E-04	2.38E-04	1.74E-04	1.44E-04	1.18E-04	1.31E-04	
Bi-213+E	S			6.33E-04	4.51E-04	2.38E-04	1.74E-04	1.44E-04	1.18E-04	1.31E-04	
Bi-214	F		1.00E-01	1.90E-04	1.32E-04	6.18E-05	4.33E-05	3.09E-05	2.68E-05	3.05E-05	
Bi-214	M		1.00E-01	3.27E-04	2.31E-04	1.15E-04	8.25E-05	6.44E-05	5.40E-05	6.03E-05	
Bi-214	S		1.00E-01	3.42E-04	2.42E-04	1.21E-04	8.70E-05	6.81E-05	5.70E-05	6.36E-05	
Bi-214+D	S			3.42E-04	2.42E-04	1.21E-04	8.70E-05	6.81E-05	5.70E-05	6.39E-05	
Bi-214+E	S			3.42E-04	2.42E-04	1.21E-04	8.70E-05	6.81E-05	5.70E-05	6.39E-05	
Bi-215			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-215+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-215+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bi-216			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Bk-245	F		5.00E-03	1.72E-05	1.26E-05	6.85E-06	4.51E-06	2.49E-06	2.19E-06	2.62E-06	
Bk-245	M		5.00E-03	3.33E-05	2.47E-05	1.50E-05	1.09E-05	9.69E-06	7.81E-06	8.55E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Bk-245	S		5.00E-03	3.53E-05	2.61E-05	1.59E-05	1.16E-05	1.05E-05	8.36E-06	9.18E-06	
Bk-246	F		5.00E-03	7.36E-06	6.07E-06	2.38E-06	1.65E-06	1.13E-06	1.03E-06	1.18E-06	
Bk-246	M		5.00E-03	7.99E-06	6.25E-06	3.33E-06	2.14E-06	1.42E-06	9.40E-07	1.18E-06	
Bk-246	S		5.00E-03	7.81E-06	6.03E-06	3.14E-06	1.99E-06	1.28E-06	1.04E-06	1.24E-06	
Bk-247	F		5.00E-03	1.65E+00	1.58E+00	1.08E+00	7.96E-01	6.48E-01	6.18E-01	6.55E-01	
Bk-247	M		5.00E-03	5.74E-01	5.55E-01	4.07E-01	2.93E-01	2.65E-01	2.56E-01	2.67E-01	
Bk-247	S		5.00E-03	2.07E-01	1.81E-01	1.25E-01	8.70E-02	7.84E-02	7.33E-02	7.73E-02	
Bk-248m	F		5.00E-03	5.66E-04	4.92E-04	2.93E-04	1.79E-04	9.62E-05	8.66E-05	1.04E-04	
Bk-248m	M		5.00E-03	2.91E-04	2.46E-04	1.58E-04	1.02E-04	7.70E-05	6.62E-05	7.40E-05	
Bk-248m	S		5.00E-03	2.38E-04	1.91E-04	1.20E-04	8.21E-05	7.10E-05	5.92E-05	6.48E-05	
Bk-249	F		5.00E-03	3.85E-03	3.70E-03	2.58E-03	1.92E-03	1.61E-03	1.55E-03	1.63E-03	
Bk-249	M		5.00E-03	1.24E-03	1.24E-03	9.25E-04	6.73E-04	6.25E-04	6.14E-04	6.36E-04	
Bk-249	S		5.00E-03	3.25E-04	3.02E-04	2.19E-04	1.54E-04	1.42E-04	1.39E-04	1.45E-04	
Bk-250	F		5.00E-03	3.04E-05	2.79E-05	1.74E-05	1.11E-05	8.07E-06	7.88E-06	8.62E-06	
Bk-250	M		5.00E-03	1.27E-05	1.14E-05	7.44E-06	4.77E-06	3.92E-06	3.77E-06	4.03E-06	
Bk-250	S		5.00E-03	8.51E-06	6.88E-06	3.55E-06	2.36E-06	1.98E-06	1.77E-06	1.94E-06	
Bk-251	F		5.00E-03	7.96E-07	5.81E-07	2.16E-07	1.50E-07	1.14E-07	1.03E-07	1.17E-07	
Bk-251	M		5.00E-03	1.14E-06	7.81E-07	3.85E-07	2.62E-07	1.94E-07	1.66E-07	1.88E-07	
Bk-251	S		5.00E-03	1.15E-06	7.73E-07	3.70E-07	2.51E-07	1.82E-07	1.52E-07	1.75E-07	
Br-72			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-73			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-74	F		1.00E+00	9.29E-07	6.73E-07	3.20E-07	1.97E-07	1.17E-07	9.58E-08	1.17E-07	
Br-74	M		1.00E+00	1.31E-06	9.25E-07	4.40E-07	2.75E-07	1.71E-07	1.41E-07	1.70E-07	
Br-74	S		1.00E+00	1.35E-06	9.55E-07	4.55E-07	2.84E-07	1.78E-07	1.46E-07	1.76E-07	
Br-74m	F		1.00E+00	1.54E-06	1.10E-06	5.25E-07	3.17E-07	1.87E-07	1.52E-07	1.88E-07	
Br-74m	M		1.00E+00	2.25E-06	1.56E-06	7.47E-07	4.63E-07	2.90E-07	2.38E-07	2.87E-07	
Br-74m	S		1.00E+00	2.32E-06	1.61E-06	7.70E-07	4.77E-07	3.01E-07	2.47E-07	2.98E-07	
Br-75	F		1.00E+00	1.07E-06	7.66E-07	3.62E-07	2.20E-07	1.30E-07	1.07E-07	1.31E-07	
Br-75	M		1.00E+00	1.67E-06	1.17E-06	5.66E-07	3.60E-07	2.41E-07	1.97E-07	2.33E-07	
Br-75	S		1.00E+00	1.73E-06	1.21E-06	5.92E-07	3.77E-07	2.53E-07	2.08E-07	2.45E-07	
Br-76	F		1.00E+00	8.44E-06	6.51E-06	3.26E-06	1.96E-06	1.14E-06	9.32E-07	1.15E-06	
Br-76	M		1.00E+00	1.12E-05	8.58E-06	4.48E-06	2.82E-06	1.86E-06	1.53E-06	1.81E-06	
Br-76	S		1.00E+00	1.15E-05	8.81E-06	4.59E-06	2.91E-06	1.95E-06	1.60E-06	1.88E-06	
Br-76m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Br-77	F		1.00E+00	2.02E-06	1.67E-06	8.44E-07	4.96E-07	2.93E-07	2.35E-07	2.90E-07	
Br-77	M		1.00E+00	2.38E-06	1.95E-06	1.02E-06	6.22E-07	4.07E-07	3.20E-07	3.85E-07	
Br-77	S		1.00E+00	2.43E-06	1.99E-06	1.04E-06	6.40E-07	4.18E-07	3.30E-07	3.96E-07	
Br-77m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-78			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-80	F		1.00E+00	3.31E-07	2.08E-07	8.95E-08	5.74E-08	3.51E-08	3.04E-08	3.65E-08	
Br-80	M		1.00E+00	5.11E-07	3.23E-07	1.43E-07	9.29E-08	6.03E-08	5.18E-08	6.14E-08	
Br-80	S		1.00E+00	5.29E-07	3.36E-07	1.49E-07	9.69E-08	6.33E-08	5.40E-08	6.40E-08	
Br-80m	F		1.00E+00	1.68E-06	1.11E-06	4.85E-07	2.85E-07	1.58E-07	1.30E-07	1.65E-07	
Br-80m	M		1.00E+00	3.12E-06	2.11E-06	1.05E-06	6.81E-07	4.33E-07	3.60E-07	4.29E-07	
Br-80m	S		1.00E+00	3.28E-06	2.22E-06	1.11E-06	7.25E-07	4.70E-07	3.89E-07	4.63E-07	
Br-82	F		1.00E+00	1.02E-05	8.29E-06	4.29E-06	2.62E-06	1.57E-06	1.30E-06	1.57E-06	
Br-82	M		1.00E+00	1.41E-05	1.13E-05	6.22E-06	4.07E-06	2.94E-06	2.35E-06	2.72E-06	
Br-82	S		1.00E+00	1.46E-05	1.17E-05	6.44E-06	4.22E-06	3.10E-06	2.48E-06	2.86E-06	
Br-82m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-83	F		1.00E+00	6.73E-07	4.33E-07	1.85E-07	1.17E-07	6.88E-08	5.96E-08	7.25E-08	
Br-83	M		1.00E+00	1.32E-06	8.81E-07	4.29E-07	2.93E-07	2.21E-07	1.82E-07	2.08E-07	
Br-83	S		1.00E+00	1.39E-06	9.29E-07	4.55E-07	3.12E-07	2.38E-07	1.96E-07	2.23E-07	
Br-84	F		1.00E+00	8.84E-07	5.81E-07	2.63E-07	1.62E-07	9.62E-08	8.03E-08	9.84E-08	
Br-84	M		1.00E+00	1.37E-06	8.92E-07	4.07E-07	2.57E-07	1.63E-07	1.37E-07	1.64E-07	
Br-84	S		1.00E+00	1.42E-06	9.25E-07	4.26E-07	2.67E-07	1.71E-07	1.42E-07	1.71E-07	
Br-84m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Br-85			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
C-10			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
C-11	F		1.00E+00	3.74E-07	2.61E-07	1.20E-07	7.66E-08	4.74E-08	4.00E-08	4.81E-08	
C-11	M		2.00E-01	5.62E-07	3.89E-07	1.82E-07	1.19E-07	7.84E-08	6.55E-08	7.73E-08	
C-11	S		2.00E-02	5.85E-07	4.03E-07	1.89E-07	1.24E-07	8.18E-08	6.85E-08	8.07E-08	
C-11	G	Monoxide	1.00E+00	3.74E-08	2.48E-08	1.32E-08	8.21E-09	5.18E-09	4.37E-09	5.18E-09	
C-11	G	Dioxide	1.00E+00	6.85E-08	4.51E-08	2.41E-08	1.50E-08	9.44E-09	7.99E-09	9.47E-09	
C-14	F		1.00E+00	2.23E-06	2.50E-06	1.35E-06	1.09E-06	7.18E-07	7.51E-07	8.07E-07	
C-14	M		2.00E-01	3.04E-05	2.41E-05	1.47E-05	1.04E-05	9.18E-06	7.51E-06	8.21E-06	
C-14	S		2.00E-02	7.03E-05	6.18E-05	4.00E-05	2.70E-05	2.34E-05	2.12E-05	2.28E-05	
C-14	G	Monoxide	1.00E+00	3.40E-08	2.14E-08	1.05E-08	6.25E-09	3.66E-09	2.96E-09	3.69E-09	
C-14	G	Dioxide	1.00E+00	6.96E-08	7.07E-08	4.22E-08	3.29E-08	2.32E-08	2.31E-08	2.48E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ca-41	F		6.00E-01	2.88E-06	1.64E-06	1.15E-06	1.42E-06	1.44E-06	7.29E-07	8.47E-07	
Ca-41	M		2.00E-01	1.80E-06	1.14E-06	7.44E-07	7.18E-07	6.96E-07	4.11E-07	4.70E-07	
Ca-41	S		2.00E-02	2.86E-06	2.60E-06	1.65E-06	1.04E-06	8.36E-07	7.84E-07	8.51E-07	
Ca-45	F		6.00E-01	2.08E-05	1.09E-05	5.22E-06	3.89E-06	2.78E-06	1.72E-06	2.16E-06	
Ca-45	M		2.00E-01	4.40E-05	3.23E-05	1.94E-05	1.42E-05	1.28E-05	1.00E-05	1.11E-05	
Ca-45	S		2.00E-02	5.40E-05	4.29E-05	2.63E-05	1.87E-05	1.67E-05	1.35E-05	1.48E-05	
Ca-47	F		6.00E-01	1.82E-05	1.34E-05	6.36E-06	3.92E-06	2.28E-06	2.07E-06	2.47E-06	
Ca-47	M		2.00E-01	3.85E-05	2.86E-05	1.55E-05	1.09E-05	8.73E-06	7.03E-06	7.92E-06	
Ca-47	S		2.00E-02	4.33E-05	3.15E-05	1.72E-05	1.21E-05	9.81E-06	7.84E-06	8.81E-06	
Ca-49			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-101			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-102			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-103			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-104	F		1.00E-01	9.92E-07	7.22E-07	3.45E-07	2.08E-07	1.18E-07	9.55E-08	1.19E-07	
Cd-104	M		1.00E-01	1.57E-06	1.11E-06	5.37E-07	3.36E-07	2.11E-07	1.72E-07	2.07E-07	
Cd-104	S		1.00E-01	1.63E-06	1.15E-06	5.59E-07	3.50E-07	2.21E-07	1.80E-07	2.17E-07	
Cd-105	F		1.00E-01	5.25E-07	3.96E-07	1.95E-07	1.19E-07	6.99E-08	5.66E-08	6.96E-08	
Cd-105	M		1.00E-01	7.40E-07	5.44E-07	2.67E-07	1.67E-07	1.04E-07	8.47E-08	1.02E-07	
Cd-105	S		1.00E-01	7.66E-07	5.59E-07	2.76E-07	1.72E-07	1.08E-07	8.77E-08	1.06E-07	
Cd-107	F		1.00E-01	8.81E-07	6.29E-07	2.83E-07	1.73E-07	9.58E-08	7.99E-08	9.99E-08	
Cd-107	M		1.00E-01	1.95E-06	1.40E-06	7.36E-07	5.00E-07	3.30E-07	3.12E-07	3.51E-07	
Cd-107	S		1.00E-01	2.07E-06	1.49E-06	7.84E-07	5.37E-07	3.61E-07	2.88E-07	3.38E-07	
Cd-109	F		1.00E-01	1.66E-04	1.36E-04	7.62E-05	5.00E-05	3.40E-05	3.01E-05	3.42E-05	
Cd-109	M		1.00E-01	1.11E-04	8.55E-05	5.18E-05	3.53E-05	2.89E-05	2.45E-05	2.70E-05	
Cd-109	S		1.00E-01	9.92E-05	7.84E-05	4.81E-05	3.30E-05	2.80E-05	2.32E-05	2.55E-05	
Cd-111m	F		1.00E-01	3.36E-07	2.36E-07	1.07E-07	6.99E-08	4.33E-08	3.74E-08	4.44E-08	
Cd-111m	M		1.00E-01	5.88E-07	4.11E-07	1.98E-07	1.35E-07	9.69E-08	8.07E-08	9.29E-08	
Cd-111m	S		1.00E-01	6.14E-07	4.33E-07	2.08E-07	1.43E-07	1.03E-07	8.55E-08	9.84E-08	
Cd-113	F		1.00E-01	9.51E-04	8.84E-04	6.36E-04	5.22E-04	4.51E-04	4.40E-04	4.59E-04	
Cd-113	M		1.00E-01	4.33E-04	3.70E-04	2.78E-04	2.22E-04	2.08E-04	2.03E-04	2.09E-04	
Cd-113	S		1.00E-01	2.86E-04	2.13E-04	1.48E-04	1.11E-04	9.88E-05	9.40E-05	9.84E-05	
Cd-113m	F		1.00E-01	1.13E-03	1.02E-03	6.70E-04	5.07E-04	4.22E-04	4.14E-04	4.33E-04	
Cd-113m	M		1.00E-01	5.29E-04	4.37E-04	3.01E-04	2.23E-04	1.99E-04	1.97E-04	2.05E-04	
Cd-113m	S		1.00E-01	4.03E-04	3.08E-04	2.03E-04	1.42E-04	1.22E-04	1.16E-04	1.23E-04	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Cd-115	F		1.00E-01	1.49E-05	9.99E-06	4.48E-06	2.85E-06	1.61E-06	1.34E-06	1.65E-06	
Cd-115	M		1.00E-01	2.54E-05	1.80E-05	9.10E-06	6.22E-06	4.59E-06	3.68E-06	4.26E-06	
Cd-115	S		1.00E-01	2.70E-05	1.93E-05	9.81E-06	6.73E-06	5.03E-06	4.03E-06	4.63E-06	
Cd-115m	F		1.00E-01	1.67E-04	1.17E-04	5.66E-05	3.67E-05	2.35E-05	1.96E-05	2.33E-05	
Cd-115m	M		1.00E-01	1.48E-04	9.40E-05	5.14E-05	3.47E-05	2.69E-05	2.29E-05	2.57E-05	
Cd-115m	S		1.00E-01	1.44E-04	1.10E-04	6.18E-05	4.18E-05	3.30E-05	2.83E-05	3.15E-05	
Cd-117	F		1.00E-01	2.76E-06	1.95E-06	8.88E-07	5.48E-07	2.99E-07	2.49E-07	3.12E-07	
Cd-117	M		1.00E-01	4.92E-06	3.46E-06	1.68E-06	1.10E-06	7.29E-07	5.96E-07	7.03E-07	
Cd-117	S		1.00E-01	5.18E-06	3.63E-06	1.76E-06	1.15E-06	7.73E-07	6.33E-07	7.47E-07	
Cd-117m	F		1.00E-01	3.30E-06	2.52E-06	1.22E-06	7.51E-07	4.26E-07	3.50E-07	4.33E-07	
Cd-117m	M		1.00E-01	5.40E-06	4.03E-06	2.04E-06	1.34E-06	9.03E-07	7.25E-07	8.58E-07	
Cd-117m	S		1.00E-01	5.66E-06	4.18E-06	2.13E-06	1.40E-06	9.55E-07	7.70E-07	9.03E-07	
Cd-118	F		1.00E-01	1.68E-06	1.02E-06	4.33E-07	2.66E-07	1.54E-07	1.32E-07	1.62E-07	
Cd-118	M		1.00E-01	2.91E-06	1.81E-06	8.03E-07	5.14E-07	3.33E-07	2.82E-07	3.36E-07	
Cd-118	S		1.00E-01	3.05E-06	1.89E-06	8.47E-07	5.40E-07	3.53E-07	2.99E-07	3.55E-07	
Cd-119			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cd-119m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ce-130	F		5.00E-03	7.77E-07	5.37E-07	2.50E-07	1.52E-07	9.07E-08	7.44E-08	9.14E-08	
Ce-130	M		5.00E-03	1.21E-06	8.14E-07	3.85E-07	2.40E-07	1.52E-07	1.26E-07	1.51E-07	
Ce-130	S		5.00E-03	1.25E-06	8.44E-07	3.96E-07	2.50E-07	1.59E-07	1.31E-07	1.58E-07	
Ce-131	F		5.00E-03	3.17E-07	2.27E-07	1.07E-07	6.66E-08	4.03E-08	3.36E-08	4.07E-08	
Ce-131	M		5.00E-03	4.40E-07	3.11E-07	1.49E-07	9.44E-08	6.07E-08	5.03E-08	5.99E-08	
Ce-131	S		5.00E-03	4.55E-07	3.20E-07	1.54E-07	9.77E-08	6.29E-08	5.22E-08	6.22E-08	
Ce-132	F		5.00E-03	3.13E-06	2.31E-06	1.10E-06	6.70E-07	3.66E-07	2.99E-07	3.74E-07	
Ce-132	M		5.00E-03	4.77E-06	3.45E-06	1.65E-06	1.04E-06	6.07E-07	5.00E-07	6.11E-07	
Ce-132	S		5.00E-03	4.92E-06	3.58E-06	1.72E-06	1.08E-06	6.36E-07	5.22E-07	6.36E-07	
Ce-133	F		5.00E-03	9.51E-07	6.66E-07	3.11E-07	1.91E-07	1.10E-07	9.14E-08	1.12E-07	
Ce-133	M		5.00E-03	1.57E-06	1.08E-06	5.29E-07	3.39E-07	2.24E-07	1.84E-07	2.18E-07	
Ce-133	S		5.00E-03	1.64E-06	1.13E-06	5.51E-07	3.55E-07	2.36E-07	1.94E-07	2.30E-07	
Ce-133m	F		5.00E-03	2.47E-06	2.01E-06	1.02E-06	6.25E-07	3.63E-07	2.93E-07	3.61E-07	
Ce-133m	M		5.00E-03	3.36E-06	2.64E-06	1.35E-06	8.55E-07	5.25E-07	4.22E-07	5.11E-07	
Ce-133m	S		5.00E-03	3.46E-06	2.71E-06	1.39E-06	8.81E-07	5.44E-07	4.33E-07	5.25E-07	
Ce-134	F		5.00E-03	2.99E-05	2.09E-05	9.29E-06	5.62E-06	3.05E-06	2.26E-06	2.97E-06	
Ce-134	M		5.00E-03	4.40E-05	3.01E-05	1.44E-05	9.29E-06	5.92E-06	5.00E-06	5.92E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ce-134	S		5.00E-03	4.55E-05	3.15E-05	1.52E-05	9.84E-06	6.33E-06	5.37E-06	6.33E-06	
Ce-135	F		5.00E-03	2.89E-06	2.37E-06	1.21E-06	7.55E-07	4.37E-07	3.55E-07	4.33E-07	
Ce-135	M		5.00E-03	3.89E-06	3.08E-06	1.59E-06	1.02E-06	6.25E-07	5.00E-07	6.03E-07	
Ce-135	S		5.00E-03	4.03E-06	3.16E-06	1.64E-06	1.05E-06	6.48E-07	5.14E-07	6.22E-07	
Ce-137	F		5.00E-03	2.97E-07	2.21E-07	1.05E-07	6.33E-08	3.45E-08	2.77E-08	3.50E-08	
Ce-137	M		5.00E-03	4.14E-07	3.00E-07	1.42E-07	8.70E-08	4.81E-08	3.85E-08	4.85E-08	
Ce-137	S		5.00E-03	4.26E-07	3.09E-07	1.46E-07	8.95E-08	4.96E-08	4.00E-08	5.00E-08	
Ce-137m	F		5.00E-03	6.18E-06	4.03E-06	1.75E-06	1.07E-06	5.62E-07	4.74E-07	6.03E-07	
Ce-137m	M		5.00E-03	1.18E-05	8.21E-06	4.11E-06	2.54E-06	1.94E-06	1.53E-06	1.78E-06	
Ce-137m	S		5.00E-03	1.24E-05	8.70E-06	3.96E-06	2.74E-06	2.11E-06	1.67E-06	1.92E-06	
Ce-139	F		5.00E-03	4.00E-05	3.17E-05	1.69E-05	1.05E-05	6.70E-06	5.77E-06	6.77E-06	
Ce-139	M		5.00E-03	2.80E-05	2.26E-05	1.35E-05	9.29E-06	7.77E-06	6.33E-06	6.99E-06	
Ce-139	S		5.00E-03	2.88E-05	2.35E-05	1.44E-05	1.02E-05	8.88E-06	7.14E-06	7.88E-06	
Ce-141	F		5.00E-03	4.18E-05	2.69E-05	1.31E-05	7.33E-06	4.29E-06	3.49E-06	4.37E-06	
Ce-141	M		5.00E-03	5.33E-05	4.00E-05	2.35E-05	1.69E-05	1.50E-05	1.19E-05	1.31E-05	
Ce-141	S		5.00E-03	5.77E-05	4.40E-05	2.64E-05	1.94E-05	1.76E-05	1.39E-05	1.52E-05	
Ce-143	F		5.00E-03	1.35E-05	8.77E-06	3.85E-06	2.31E-06	1.23E-06	1.02E-06	1.30E-06	
Ce-143	M		5.00E-03	2.09E-05	1.44E-05	7.18E-06	4.85E-06	3.47E-06	2.82E-06	3.27E-06	
Ce-143	S		5.00E-03	2.20E-05	1.53E-05	7.73E-06	5.22E-06	3.81E-06	3.09E-06	3.57E-06	
Ce-144	F		5.00E-03	1.32E-03	9.95E-04	5.00E-04	2.89E-04	1.77E-04	1.50E-04	1.81E-04	
Ce-144	M		5.00E-03	7.10E-04	5.77E-04	3.26E-04	2.03E-04	1.51E-04	1.33E-04	1.50E-04	
Ce-144	S		5.00E-03	7.88E-04	6.73E-04	4.11E-04	2.70E-04	2.12E-04	1.95E-04	2.13E-04	
Ce-144+D	F			1.32E-03	9.95E-04	5.00E-04	2.89E-04	2.12E-04	1.95E-04	2.21E-04	
Ce-144+E	F			1.32E-03	9.95E-04	5.00E-04	2.89E-04	2.12E-04	1.95E-04	2.21E-04	
Ce-145			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cf-244	F		5.00E-03	1.69E-04	1.20E-04	5.92E-05	4.11E-05	2.86E-05	2.48E-05	2.83E-05	
Cf-244	M		5.00E-03	2.79E-04	1.99E-04	1.04E-04	7.44E-05	5.96E-05	5.00E-05	5.55E-05	
Cf-244	S		5.00E-03	2.92E-04	2.08E-04	1.08E-04	7.81E-05	6.33E-05	5.25E-05	5.85E-05	
Cf-246	F		5.00E-03	2.73E-03	2.05E-03	1.12E-03	7.07E-04	3.26E-04	2.69E-04	3.47E-04	
Cf-246	M		5.00E-03	6.33E-03	4.77E-03	3.07E-03	2.26E-03	2.09E-03	1.67E-03	1.82E-03	
Cf-246	S		5.00E-03	6.77E-03	5.11E-03	3.31E-03	2.45E-03	2.32E-03	1.85E-03	2.01E-03	
Cf-247	F		5.00E-03	6.36E-07	5.44E-07	3.43E-07	2.46E-07	1.91E-07	1.79E-07	1.93E-07	
Cf-247	M		5.00E-03	8.58E-07	6.66E-07	3.81E-07	2.07E-07	1.75E-07	1.53E-07	1.71E-07	
Cf-247	S		5.00E-03	8.03E-07	5.99E-07	3.26E-07	2.15E-07	1.65E-07	1.36E-07	1.54E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Cf-248	F		5.00E-03	2.72E-01	2.36E-01	1.41E-01	8.62E-02	4.63E-02	4.18E-02	5.00E-02	
Cf-248	M		5.00E-03	1.41E-01	1.19E-01	7.66E-02	4.96E-02	3.77E-02	3.25E-02	3.62E-02	
Cf-248	S		5.00E-03	1.15E-01	9.25E-02	5.85E-02	4.00E-02	3.49E-02	2.91E-02	3.18E-02	
Cf-249	F		5.00E-03	1.68E+00	1.59E+00	1.09E+00	7.99E-01	6.48E-01	6.22E-01	6.59E-01	
Cf-249	M		5.00E-03	5.81E-01	5.62E-01	4.11E-01	2.96E-01	2.67E-01	2.59E-01	2.70E-01	
Cf-249	S		5.00E-03	2.15E-01	1.88E-01	1.30E-01	8.99E-02	8.14E-02	7.59E-02	7.99E-02	
Cf-250	F		5.00E-03	1.05E+00	9.73E-01	6.11E-01	3.89E-01	2.85E-01	2.79E-01	3.04E-01	
Cf-250	M		5.00E-03	3.89E-01	3.62E-01	2.43E-01	1.55E-01	1.29E-01	1.25E-01	1.34E-01	
Cf-250	S		5.00E-03	1.85E-01	1.58E-01	1.03E-01	6.81E-02	5.92E-02	5.37E-02	5.77E-02	
Cf-251	F		5.00E-03	1.70E+00	1.62E+00	1.11E+00	8.14E-01	6.62E-01	6.33E-01	6.70E-01	
Cf-251	M		5.00E-03	5.88E-01	5.70E-01	4.18E-01	3.01E-01	2.72E-01	2.63E-01	2.74E-01	
Cf-251	S		5.00E-03	2.15E-01	1.88E-01	1.30E-01	9.07E-02	8.18E-02	7.62E-02	8.03E-02	
Cf-252	F		5.00E-03	9.03E-01	8.07E-01	4.85E-01	2.75E-01	1.49E-01	1.36E-01	1.64E-01	
Cf-252	M		5.00E-03	3.56E-01	3.17E-01	2.05E-01	1.19E-01	8.07E-02	7.29E-02	8.33E-02	
Cf-252	S		5.00E-03	2.20E-01	1.83E-01	1.15E-01	7.29E-02	5.88E-02	5.11E-02	5.66E-02	
Cf-253	F		5.00E-03	1.75E-02	1.32E-02	7.14E-03	4.51E-03	1.94E-03	1.58E-03	2.09E-03	
Cf-253	M		5.00E-03	2.00E-02	1.55E-02	9.69E-03	6.96E-03	6.14E-03	4.92E-03	5.40E-03	
Cf-253	S		5.00E-03	2.23E-02	1.72E-02	1.10E-02	8.03E-03	7.47E-03	5.99E-03	6.51E-03	
Cf-254	F		5.00E-03	1.60E+00	1.23E+00	6.66E-01	4.14E-01	1.77E-01	1.44E-01	1.92E-01	
Cf-254	M		5.00E-03	9.14E-01	6.85E-01	4.07E-01	2.55E-01	1.74E-01	1.51E-01	1.73E-01	
Cf-254	S		5.00E-03	8.47E-01	6.22E-01	3.74E-01	2.36E-01	1.82E-01	1.59E-01	1.78E-01	
Cf-255	F		5.00E-03	6.11E-05	4.59E-05	2.47E-05	1.55E-05	6.59E-06	5.37E-06	7.14E-06	
Cf-255	M		5.00E-03	8.33E-05	6.40E-05	4.03E-05	2.94E-05	2.65E-05	2.11E-05	2.31E-05	
Cf-255	S		5.00E-03	9.21E-05	7.10E-05	4.51E-05	3.34E-05	3.15E-05	2.50E-05	2.72E-05	
Cl-34			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cl-34m	F		1.00E+00	1.06E-06	7.18E-07	3.31E-07	2.02E-07	1.20E-07	9.92E-08	1.22E-07	
Cl-34m	M		1.00E+00	1.61E-06	1.07E-06	4.96E-07	3.10E-07	1.95E-07	1.62E-07	1.95E-07	
Cl-34m	S		1.00E+00	1.67E-06	1.11E-06	5.14E-07	3.21E-07	2.04E-07	1.69E-07	2.04E-07	
Cl-36	F		1.00E+00	1.44E-05	9.62E-06	4.26E-06	2.61E-06	1.45E-06	1.22E-06	1.52E-06	
Cl-36	M		1.00E+00	1.15E-04	9.44E-05	5.59E-05	3.85E-05	3.22E-05	2.70E-05	2.98E-05	
Cl-36	S		1.00E+00	3.81E-04	3.59E-04	2.42E-04	1.65E-04	1.45E-04	1.40E-04	1.48E-04	
Cl-38	F		1.00E+00	1.10E-06	7.03E-07	3.13E-07	1.91E-07	1.12E-07	9.40E-08	1.16E-07	
Cl-38	M		1.00E+00	1.74E-06	1.11E-06	5.03E-07	3.15E-07	1.99E-07	1.68E-07	2.01E-07	
Cl-38	S		1.00E+00	1.81E-06	1.15E-06	5.25E-07	3.28E-07	2.09E-07	1.76E-07	2.11E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Cl-39	F		1.00E+00	9.95E-07	6.77E-07	3.13E-07	1.91E-07	1.14E-07	9.44E-08	1.16E-07	
Cl-39	M		1.00E+00	1.58E-06	1.06E-06	5.00E-07	3.16E-07	2.08E-07	1.72E-07	2.05E-07	
Cl-39	S		1.00E+00	1.64E-06	1.10E-06	5.22E-07	3.30E-07	2.18E-07	1.80E-07	2.14E-07	
Cl-40			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cm-238	F		5.00E-03	1.24E-05	9.07E-06	3.24E-06	2.30E-06	1.91E-06	1.74E-06	1.92E-06	
Cm-238	M		5.00E-03	3.02E-05	2.22E-05	1.17E-05	8.62E-06	8.18E-06	6.66E-06	7.22E-06	
Cm-238	S		5.00E-03	3.22E-05	2.37E-05	1.25E-05	9.21E-06	8.77E-06	7.07E-06	7.70E-06	
Cm-239	F		5.00E-03	9.95E-07	7.33E-07	3.44E-07	2.08E-07	1.15E-07	9.51E-08	1.19E-07	
Cm-239	M		5.00E-03	1.73E-06	1.26E-06	6.44E-07	4.26E-07	3.00E-07	2.41E-07	2.81E-07	
Cm-239	S		5.00E-03	1.82E-06	1.32E-06	6.77E-07	4.48E-07	3.20E-07	2.56E-07	2.98E-07	
Cm-240	F		5.00E-03	3.07E-02	2.33E-02	1.19E-02	7.66E-03	5.51E-03	5.00E-03	5.62E-03	
Cm-240	M		5.00E-03	4.40E-02	3.38E-02	2.14E-02	1.55E-02	1.42E-02	1.17E-02	1.27E-02	
Cm-240	S		5.00E-03	4.77E-02	3.67E-02	2.36E-02	1.71E-02	1.59E-02	1.29E-02	1.40E-02	
Cm-241	F		5.00E-03	4.22E-04	3.30E-04	1.83E-04	1.30E-04	1.03E-04	9.84E-05	1.06E-04	
Cm-241	M		5.00E-03	4.92E-04	3.81E-04	2.43E-04	1.76E-04	1.62E-04	1.38E-04	1.48E-04	
Cm-241	S		5.00E-03	5.22E-04	4.00E-04	2.55E-04	1.83E-04	1.67E-04	1.37E-04	1.49E-04	
Cm-242	F		5.00E-03	9.92E-02	7.66E-02	3.77E-02	2.27E-02	1.48E-02	1.22E-02	1.46E-02	
Cm-242	M		5.00E-03	8.25E-02	6.48E-02	3.92E-02	2.70E-02	2.35E-02	1.92E-02	2.12E-02	
Cm-242	S		5.00E-03	8.70E-02	6.81E-02	4.29E-02	3.00E-02	2.68E-02	2.19E-02	2.39E-02	
Cm-243	F		5.00E-03	5.92E-01	5.55E-01	3.57E-01	2.73E-01	2.44E-01	2.59E-01	2.65E-01	
Cm-243	M		5.00E-03	2.47E-01	2.28E-01	1.57E-01	1.17E-01	1.13E-01	1.17E-01	1.20E-01	
Cm-243	S		5.00E-03	1.70E-01	1.47E-01	9.73E-02	6.62E-02	5.85E-02	5.44E-02	5.77E-02	
Cm-244	F		5.00E-03	5.40E-01	5.00E-01	3.10E-01	2.28E-01	1.99E-01	2.11E-01	2.18E-01	
Cm-244	M		5.00E-03	2.29E-01	2.09E-01	1.39E-01	1.01E-01	9.55E-02	9.84E-02	1.01E-01	
Cm-244	S		5.00E-03	1.64E-01	1.41E-01	9.21E-02	6.22E-02	5.44E-02	5.00E-02	5.33E-02	
Cm-245	F		5.00E-03	6.92E-01	6.62E-01	4.63E-01	3.81E-01	3.52E-01	3.64E-01	3.70E-01	
Cm-245	M		5.00E-03	2.72E-01	2.58E-01	1.91E-01	1.52E-01	1.52E-01	1.57E-01	1.58E-01	
Cm-245	S		5.00E-03	1.67E-01	1.46E-01	9.95E-02	6.92E-02	6.22E-02	5.88E-02	6.18E-02	
Cm-246	F		5.00E-03	6.92E-01	6.62E-01	4.59E-01	3.81E-01	3.50E-01	3.63E-01	3.70E-01	
Cm-246	M		5.00E-03	2.73E-01	2.59E-01	1.91E-01	1.52E-01	1.51E-01	1.57E-01	1.58E-01	
Cm-246	S		5.00E-03	1.68E-01	1.47E-01	9.99E-02	6.96E-02	6.25E-02	5.92E-02	6.22E-02	
Cm-247	F		5.00E-03	6.33E-01	6.07E-01	4.22E-01	3.49E-01	3.21E-01	3.33E-01	3.39E-01	
Cm-247	M		5.00E-03	2.49E-01	2.35E-01	1.74E-01	1.38E-01	1.38E-01	1.43E-01	1.44E-01	
Cm-247	S		5.00E-03	1.51E-01	1.32E-01	8.99E-02	6.22E-02	5.55E-02	5.29E-02	5.55E-02	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Cm-247+D	F			6.33E-01	6.07E-01	4.22E-01	3.49E-01	3.21E-01	3.33E-01	3.39E-01	
Cm-247+E	F			6.33E-01	6.07E-01	4.22E-01	3.49E-01	3.21E-01	3.33E-01	3.39E-01	
Cm-248	F		5.00E-03	2.55E+00	2.44E+00	1.70E+00	1.41E+00	1.29E+00	1.34E+00	1.36E+00	
Cm-248	M		5.00E-03	9.21E-01	8.88E-01	6.59E-01	5.29E-01	5.25E-01	5.51E-01	5.55E-01	
Cm-248	S		5.00E-03	5.00E-01	4.48E-01	3.05E-01	2.09E-01	1.85E-01	1.80E-01	1.89E-01	
Cm-249	F		5.00E-03	6.62E-07	3.65E-07	2.19E-07	1.71E-07	1.49E-07	1.49E-07	1.55E-07	
Cm-249	M		5.00E-03	8.88E-07	6.07E-07	3.05E-07	2.15E-07	1.38E-07	1.22E-07	1.40E-07	
Cm-249	S		5.00E-03	8.92E-07	5.96E-07	2.88E-07	1.97E-07	1.45E-07	1.24E-07	1.41E-07	
Cm-250	F		5.00E-03	1.74E+01	1.66E+01	1.15E+01	9.55E+00	8.77E+00	9.10E+00	9.29E+00	
Cm-250	M		5.00E-03	6.14E+00	5.92E+00	4.40E+00	3.53E+00	3.52E+00	3.70E+00	3.74E+00	
Cm-250	S		5.00E-03	3.19E+00	2.87E+00	1.96E+00	1.34E+00	1.18E+00	1.15E+00	1.21E+00	
Cm-250+D	F			1.74E+01	1.66E+01	1.15E+01	9.55E+00	8.77E+00	9.10E+00	9.26E+00	
Cm-250+E	F			1.74E+01	1.66E+01	1.15E+01	9.55E+00	8.77E+00	9.10E+00	9.26E+00	
Cm-251	F		5.00E-03	4.37E-07	2.92E-07	1.34E-07	8.92E-08	5.92E-08	5.33E-08	6.14E-08	
Cm-251	M		5.00E-03	6.99E-07	4.63E-07	2.16E-07	1.46E-07	1.04E-07	8.77E-08	1.01E-07	
Cm-251	S		5.00E-03	7.25E-07	4.81E-07	2.23E-07	1.50E-07	1.06E-07	8.92E-08	1.03E-07	
Co-54m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Co-55	F		6.00E-01	8.03E-06	6.85E-06	3.33E-06	2.05E-06	1.15E-06	9.88E-07	1.20E-06	
Co-55	M		2.00E-01	1.52E-05	1.15E-05	5.66E-06	3.64E-06	2.27E-06	1.84E-06	2.22E-06	
Co-55	S		2.00E-02	1.71E-05	1.24E-05	6.11E-06	3.92E-06	2.45E-06	1.98E-06	2.39E-06	
Co-56	F		6.00E-01	5.11E-05	3.89E-05	2.06E-05	1.32E-05	8.29E-06	6.88E-06	8.18E-06	
Co-56	M		2.00E-01	9.32E-05	7.62E-05	4.03E-05	2.73E-05	2.13E-05	1.78E-05	2.00E-05	
Co-56	S		2.00E-02	1.07E-04	8.95E-05	5.44E-05	3.69E-05	2.93E-05	2.46E-05	2.73E-05	
Co-57	F		6.00E-01	5.37E-06	4.03E-06	2.09E-06	1.37E-06	8.51E-07	6.96E-07	8.29E-07	
Co-57	M		2.00E-01	1.02E-05	8.03E-06	4.70E-06	3.15E-06	2.47E-06	2.04E-06	2.29E-06	
Co-57	S		2.00E-02	1.61E-05	1.37E-05	8.40E-06	5.59E-06	4.40E-06	3.70E-06	4.14E-06	
Co-58	F		6.00E-01	1.48E-05	1.12E-05	5.92E-06	3.81E-06	2.37E-06	1.98E-06	2.35E-06	
Co-58	M		2.00E-01	2.69E-05	2.40E-05	1.29E-05	8.88E-06	7.22E-06	5.88E-06	6.59E-06	
Co-58	S		2.00E-02	3.33E-05	2.75E-05	1.68E-05	1.17E-05	9.62E-06	7.81E-06	8.66E-06	
Co-58m	F		6.00E-01	1.76E-07	1.34E-07	6.18E-08	3.89E-08	2.18E-08	1.91E-08	2.32E-08	
Co-58m	M		2.00E-01	3.92E-07	2.80E-07	1.39E-07	8.95E-08	5.96E-08	4.88E-08	5.77E-08	
Co-58m	S		2.00E-02	4.63E-07	3.29E-07	1.67E-07	1.08E-07	7.44E-08	6.07E-08	7.14E-08	
Co-60	F		6.00E-01	1.11E-04	8.66E-05	5.03E-05	3.29E-05	2.25E-05	1.95E-05	2.23E-05	
Co-60	M		2.00E-01	1.54E-04	1.25E-04	7.88E-05	5.40E-05	4.48E-05	3.77E-05	4.14E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Co-60	S		2.00E-02	3.39E-04	3.17E-04	2.18E-04	1.49E-04	1.27E-04	1.14E-04	1.22E-04	
Co-60m	F		6.00E-01	1.60E-08	1.03E-08	5.62E-09	3.74E-09	3.01E-09	2.50E-09	2.81E-09	
Co-60m	M		2.00E-01	2.59E-08	1.69E-08	9.66E-09	6.51E-09	5.44E-09	4.51E-09	5.03E-09	
Co-60m	S		2.00E-02	2.76E-08	1.84E-08	1.06E-08	7.14E-09	5.99E-09	5.03E-09	5.55E-09	
Co-61	F		6.00E-01	7.92E-07	5.22E-07	2.26E-07	1.43E-07	8.36E-08	7.22E-08	8.77E-08	
Co-61	M		2.00E-01	1.51E-06	9.92E-07	4.63E-07	3.07E-07	2.13E-07	1.76E-07	2.06E-07	
Co-61	S		2.00E-02	1.60E-06	1.05E-06	4.92E-07	3.26E-07	2.28E-07	1.89E-07	2.20E-07	
Co-62			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Co-62m	F		6.00E-01	5.14E-07	3.59E-07	1.68E-07	1.04E-07	6.29E-08	5.22E-08	6.36E-08	
Co-62m	M		2.00E-01	7.14E-07	4.88E-07	2.29E-07	1.44E-07	8.99E-08	7.51E-08	9.03E-08	
Co-62m	S		2.00E-02	7.36E-07	5.03E-07	2.36E-07	1.48E-07	9.29E-08	7.77E-08	9.32E-08	
Cr-48	F		2.00E-01	2.69E-06	2.13E-06	1.11E-06	6.99E-07	4.26E-07	3.54E-07	4.26E-07	
Cr-48	M		2.00E-01	4.07E-06	3.25E-06	1.81E-06	1.21E-06	8.88E-07	7.10E-07	8.18E-07	
Cr-48	S		2.00E-01	4.37E-06	3.48E-06	1.95E-06	1.32E-06	9.77E-07	7.84E-07	8.99E-07	
Cr-49	F		2.00E-01	7.10E-07	4.88E-07	2.24E-07	1.39E-07	8.33E-08	6.96E-08	8.47E-08	
Cr-49	M		2.00E-01	1.12E-06	7.59E-07	3.56E-07	2.29E-07	1.50E-07	1.24E-07	1.48E-07	
Cr-49	S		2.00E-01	1.17E-06	7.88E-07	3.70E-07	2.39E-07	1.57E-07	1.30E-07	1.55E-07	
Cr-51	F		2.00E-01	6.36E-07	4.70E-07	2.33E-07	1.48E-07	8.84E-08	7.44E-08	8.95E-08	
Cr-51	M		2.00E-01	9.40E-07	7.03E-07	3.74E-07	2.36E-07	1.45E-07	1.20E-07	1.44E-07	
Cr-51	S		2.00E-01	9.58E-07	7.77E-07	3.77E-07	2.43E-07	1.67E-07	1.37E-07	1.61E-07	
Cr-55			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cr-56			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-121			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-121m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-123			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-124			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-125	F		1.00E+00	4.14E-07	2.90E-07	1.36E-07	8.33E-08	4.96E-08	4.11E-08	5.00E-08	
Cs-125	M		2.00E-01	6.70E-07	4.59E-07	2.18E-07	1.38E-07	8.84E-08	7.29E-08	8.73E-08	
Cs-125	S		2.00E-02	6.99E-07	4.77E-07	2.26E-07	1.44E-07	9.25E-08	7.62E-08	9.10E-08	
Cs-126			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-127	F		1.00E+00	6.14E-07	5.11E-07	2.63E-07	1.58E-07	9.36E-08	7.51E-08	9.21E-08	
Cs-127	M		2.00E-01	1.05E-06	8.40E-07	4.33E-07	2.75E-07	1.72E-07	1.38E-07	1.66E-07	
Cs-127	S		2.00E-02	1.13E-06	8.81E-07	4.51E-07	2.89E-07	1.82E-07	1.45E-07	1.75E-07	
Cs-128			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Cs-129	F		1.00E+00	1.27E-06	1.04E-06	5.33E-07	3.23E-07	1.92E-07	1.56E-07	1.91E-07	
Cs-129	M		2.00E-01	2.13E-06	1.71E-06	8.77E-07	5.55E-07	3.38E-07	2.70E-07	3.27E-07	
Cs-129	S		2.00E-02	2.33E-06	1.81E-06	9.25E-07	5.85E-07	3.58E-07	2.85E-07	3.46E-07	
Cs-130	F		1.00E+00	2.95E-07	1.98E-07	8.99E-08	5.55E-08	3.34E-08	2.79E-08	3.41E-08	
Cs-130	M		2.00E-01	4.63E-07	3.07E-07	1.42E-07	8.99E-08	5.77E-08	4.81E-08	5.74E-08	
Cs-130	S		2.00E-02	4.81E-07	3.19E-07	1.47E-07	9.36E-08	6.03E-08	5.03E-08	5.99E-08	
Cs-130m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-131	F		1.00E+00	8.92E-07	6.40E-07	3.18E-07	1.99E-07	1.22E-07	1.01E-07	1.22E-07	
Cs-131	M		2.00E-01	1.32E-06	9.88E-07	5.07E-07	3.19E-07	2.05E-07	1.65E-07	1.98E-07	
Cs-131	S		2.00E-02	1.40E-06	1.05E-06	5.40E-07	3.40E-07	2.20E-07	1.76E-07	2.11E-07	
Cs-132	F		1.00E+00	5.81E-06	4.51E-06	2.43E-06	1.56E-06	1.01E-06	8.73E-07	1.01E-06	
Cs-132	M		2.00E-01	7.29E-06	5.85E-06	3.17E-06	2.06E-06	1.39E-06	1.11E-06	1.31E-06	
Cs-132	S		2.00E-02	7.55E-06	6.03E-06	3.29E-06	2.14E-06	1.45E-06	1.15E-06	1.35E-06	
Cs-134	F		1.00E+00	4.18E-05	2.73E-05	1.94E-05	1.98E-05	2.36E-05	2.48E-05	2.43E-05	
Cs-134	M		2.00E-01	1.18E-04	9.55E-05	5.99E-05	4.33E-05	3.89E-05	3.40E-05	3.64E-05	
Cs-134	S		2.00E-02	2.58E-04	2.33E-04	1.54E-04	1.04E-04	8.58E-05	7.55E-05	8.21E-05	
Cs-134m	F		1.00E+00	4.81E-07	3.22E-07	1.42E-07	9.47E-08	5.96E-08	5.33E-08	6.25E-08	
Cs-134m	M		2.00E-01	1.23E-06	8.62E-07	4.40E-07	3.10E-07	2.45E-07	2.00E-07	2.26E-07	
Cs-134m	S		2.00E-02	1.35E-06	9.44E-07	4.88E-07	3.44E-07	2.73E-07	2.23E-07	2.51E-07	
Cs-135	F		1.00E+00	8.29E-06	4.88E-06	3.05E-06	3.00E-06	3.32E-06	3.39E-06	3.38E-06	
Cs-135	M		2.00E-01	5.44E-05	4.29E-05	2.64E-05	1.92E-05	1.75E-05	1.44E-05	1.56E-05	
Cs-135	S		2.00E-02	1.32E-04	1.19E-04	7.84E-05	5.37E-05	4.74E-05	4.33E-05	4.63E-05	
Cs-135m	F		1.00E+00	3.45E-07	2.93E-07	1.55E-07	9.18E-08	5.51E-08	4.33E-08	5.37E-08	
Cs-135m	M		2.00E-01	4.51E-07	3.74E-07	1.96E-07	1.20E-07	7.25E-08	5.70E-08	6.99E-08	
Cs-135m	S		2.00E-02	4.63E-07	3.81E-07	1.99E-07	1.22E-07	7.40E-08	5.85E-08	7.14E-08	
Cs-136	F		1.00E+00	2.67E-05	1.93E-05	1.07E-05	7.29E-06	5.03E-06	4.51E-06	5.11E-06	
Cs-136	M		2.00E-01	4.92E-05	3.77E-05	2.18E-05	1.35E-05	1.14E-05	9.10E-06	1.02E-05	
Cs-136	S		2.00E-02	5.29E-05	4.11E-05	2.09E-05	1.50E-05	1.27E-05	1.01E-05	1.12E-05	
Cs-137	F		1.00E+00	3.25E-05	2.01E-05	1.36E-05	1.39E-05	1.65E-05	1.73E-05	1.70E-05	
Cs-137	M		2.00E-01	1.33E-04	1.08E-04	6.59E-05	4.70E-05	4.14E-05	3.60E-05	3.89E-05	
Cs-137	S		2.00E-02	4.07E-04	3.81E-04	2.58E-04	1.76E-04	1.53E-04	1.46E-04	1.54E-04	
Cs-137+D	S			4.07E-04	3.81E-04	2.58E-04	1.76E-04	1.53E-04	1.46E-04	1.54E-04	
Cs-137+E	S			4.07E-04	3.81E-04	2.58E-04	1.76E-04	1.53E-04	1.46E-04	1.54E-04	
Cs-138	F		1.00E+00	1.01E-06	6.81E-07	3.15E-07	1.92E-07	1.14E-07	9.44E-08	1.16E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Cs-138	M		2.00E-01	1.57E-06	1.05E-06	4.88E-07	3.05E-07	1.92E-07	1.59E-07	1.92E-07	
Cs-138	S		2.00E-02	1.64E-06	1.09E-06	5.07E-07	3.17E-07	2.00E-07	1.66E-07	2.00E-07	
Cs-138m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-139			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cs-140			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-57			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-59			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-60	F		1.00E+00	8.03E-07	5.92E-07	2.86E-07	1.75E-07	1.04E-07	8.55E-08	1.04E-07	
Cu-60	M		1.00E+00	1.13E-06	8.14E-07	3.92E-07	2.45E-07	1.53E-07	1.25E-07	1.51E-07	
Cu-60	S		1.00E+00	1.16E-06	8.40E-07	4.03E-07	2.52E-07	1.58E-07	1.30E-07	1.56E-07	
Cu-61	F		1.00E+00	1.14E-06	9.95E-07	4.70E-07	2.87E-07	1.64E-07	1.35E-07	1.66E-07	
Cu-61	M		1.00E+00	1.78E-06	1.58E-06	7.73E-07	5.00E-07	3.30E-07	2.68E-07	3.17E-07	
Cu-61	S		1.00E+00	1.85E-06	1.64E-06	8.07E-07	5.22E-07	3.48E-07	2.83E-07	3.34E-07	
Cu-62			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-64	F		1.00E+00	1.06E-06	1.01E-06	4.59E-07	2.83E-07	1.55E-07	1.31E-07	1.62E-07	
Cu-64	M		1.00E+00	2.08E-06	2.01E-06	1.02E-06	6.96E-07	5.11E-07	4.14E-07	4.74E-07	
Cu-64	S		1.00E+00	2.19E-06	2.12E-06	1.08E-06	7.40E-07	4.77E-07	4.44E-07	5.03E-07	
Cu-66			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Cu-67	F		1.00E+00	3.41E-06	2.89E-06	1.27E-06	7.84E-07	4.26E-07	3.64E-07	4.51E-07	
Cu-67	M		1.00E+00	8.18E-06	7.18E-06	4.03E-06	2.93E-06	2.52E-06	1.99E-06	2.21E-06	
Cu-67	S		1.00E+00	8.92E-06	7.81E-06	4.44E-06	3.22E-06	2.80E-06	2.21E-06	2.45E-06	
Cu-69			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-148			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-149			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-150			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-151	F		5.00E-03	9.73E-07	6.77E-07	4.18E-07	2.82E-07	2.36E-07	2.01E-07	2.21E-07	
Dy-151	M		5.00E-03	2.05E-06	1.45E-06	9.47E-07	6.48E-07	5.70E-07	4.85E-07	5.25E-07	
Dy-151	S		5.00E-03	2.17E-06	1.54E-06	1.00E-06	6.88E-07	6.03E-07	5.14E-07	5.59E-07	
Dy-152	F		5.00E-03	1.17E-06	8.81E-07	4.29E-07	2.66E-07	1.51E-07	1.23E-07	1.52E-07	
Dy-152	M		5.00E-03	1.75E-06	1.30E-06	6.62E-07	4.22E-07	2.69E-07	2.21E-07	2.64E-07	
Dy-152	S		5.00E-03	1.82E-06	1.34E-06	6.88E-07	4.40E-07	2.82E-07	2.32E-07	2.76E-07	
Dy-153	F		5.00E-03	2.16E-06	1.67E-06	8.36E-07	5.14E-07	2.96E-07	2.42E-07	2.97E-07	
Dy-153	M		5.00E-03	3.24E-06	2.45E-06	1.28E-06	8.29E-07	5.55E-07	4.51E-07	5.29E-07	
Dy-153	S		5.00E-03	3.37E-06	2.54E-06	1.33E-06	8.70E-07	5.88E-07	4.77E-07	5.59E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Dy-154	F		5.00E-03	3.02E-01	2.77E-01	1.72E-01	1.18E-01	9.66E-02	9.55E-02	1.01E-01	
Dy-154	M		5.00E-03	1.11E-01	1.03E-01	6.88E-02	4.63E-02	4.14E-02	4.14E-02	4.33E-02	
Dy-154	S		5.00E-03	6.88E-02	6.11E-02	4.00E-02	2.59E-02	2.19E-02	2.12E-02	2.26E-02	
Dy-155	F		5.00E-03	1.72E-06	1.37E-06	6.99E-07	4.33E-07	2.50E-07	2.03E-07	2.49E-07	
Dy-155	M		5.00E-03	2.36E-06	1.84E-06	9.66E-07	6.25E-07	4.07E-07	3.25E-07	3.85E-07	
Dy-155	S		5.00E-03	2.44E-06	1.90E-06	9.99E-07	6.48E-07	4.26E-07	3.40E-07	4.03E-07	
Dy-157	F		5.00E-03	6.85E-07	5.59E-07	2.88E-07	1.79E-07	1.04E-07	8.36E-08	1.03E-07	
Dy-157	M		5.00E-03	8.88E-07	7.07E-07	3.65E-07	2.31E-07	1.40E-07	1.12E-07	1.36E-07	
Dy-157	S		5.00E-03	9.10E-07	7.22E-07	3.74E-07	2.37E-07	1.44E-07	1.15E-07	1.39E-07	
Dy-159	F		5.00E-03	1.30E-05	1.02E-05	5.40E-06	3.16E-06	1.94E-06	1.67E-06	1.99E-06	
Dy-159	M		5.00E-03	8.14E-06	6.44E-06	3.74E-06	2.34E-06	1.72E-06	1.46E-06	1.66E-06	
Dy-159	S		5.00E-03	8.44E-06	6.77E-06	4.00E-06	2.62E-06	2.01E-06	1.69E-06	1.90E-06	
Dy-165	F		5.00E-03	1.08E-06	6.85E-07	2.92E-07	1.82E-07	1.02E-07	8.73E-08	1.08E-07	
Dy-165	M		5.00E-03	1.93E-06	1.26E-06	5.88E-07	3.89E-07	2.69E-07	2.23E-07	2.61E-07	
Dy-165	S		5.00E-03	2.02E-06	1.32E-06	6.22E-07	4.14E-07	2.88E-07	2.38E-07	2.78E-07	
Dy-165m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-166	F		5.00E-03	2.61E-05	1.67E-05	7.36E-06	4.22E-06	2.23E-06	1.81E-06	2.35E-06	
Dy-166	M		5.00E-03	4.40E-05	3.11E-05	1.65E-05	1.12E-05	8.73E-06	7.14E-06	8.07E-06	
Dy-166	S		5.00E-03	4.63E-05	3.30E-05	1.77E-05	1.22E-05	9.66E-06	7.84E-06	8.88E-06	
Dy-167			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Dy-168			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-154			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-156	F		5.00E-03	3.81E-07	2.71E-07	1.30E-07	7.96E-08	4.66E-08	3.81E-08	4.70E-08	
Er-156	M		5.00E-03	6.03E-07	4.18E-07	2.06E-07	1.31E-07	8.66E-08	7.07E-08	8.40E-08	
Er-156	S		5.00E-03	6.29E-07	4.37E-07	2.15E-07	1.37E-07	9.10E-08	7.44E-08	8.81E-08	
Er-159	F		5.00E-03	3.29E-07	2.56E-07	1.28E-07	7.88E-08	4.70E-08	3.85E-08	4.66E-08	
Er-159	M		5.00E-03	4.77E-07	3.60E-07	1.82E-07	1.17E-07	7.66E-08	6.22E-08	7.36E-08	
Er-159	S		5.00E-03	4.96E-07	3.70E-07	1.89E-07	1.21E-07	7.99E-08	6.48E-08	7.66E-08	
Er-161	F		5.00E-03	1.07E-06	8.55E-07	4.33E-07	2.64E-07	1.53E-07	1.23E-07	1.52E-07	
Er-161	M		5.00E-03	1.49E-06	1.15E-06	5.92E-07	3.77E-07	2.38E-07	1.91E-07	2.29E-07	
Er-161	S		5.00E-03	1.54E-06	1.19E-06	6.11E-07	3.89E-07	2.48E-07	1.98E-07	2.38E-07	
Er-163	F		5.00E-03	2.96E-08	2.26E-08	1.12E-08	6.85E-09	4.00E-09	3.22E-09	3.96E-09	
Er-163	M		5.00E-03	4.07E-08	2.99E-08	1.50E-08	9.32E-09	5.70E-09	4.63E-09	5.59E-09	
Er-163	S		5.00E-03	4.18E-08	3.07E-08	1.54E-08	9.58E-09	5.88E-09	4.77E-09	5.77E-09	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Er-165	F		5.00E-03	2.01E-07	1.51E-07	7.36E-08	4.51E-08	2.53E-08	2.06E-08	2.56E-08	
Er-165	M		5.00E-03	2.80E-07	2.05E-07	1.01E-07	6.36E-08	3.74E-08	3.04E-08	3.74E-08	
Er-165	S		5.00E-03	2.89E-07	2.11E-07	1.04E-07	6.59E-08	3.85E-08	3.15E-08	3.85E-08	
Er-167m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Er-169	F		5.00E-03	8.10E-06	5.37E-06	2.53E-06	1.42E-06	7.70E-07	6.51E-07	8.25E-07	
Er-169	M		5.00E-03	1.74E-05	1.28E-05	7.44E-06	5.44E-06	4.81E-06	3.81E-06	4.18E-06	
Er-169	S		5.00E-03	1.90E-05	1.41E-05	8.25E-06	6.07E-06	5.48E-06	4.33E-06	4.74E-06	
Er-171	F		5.00E-03	3.74E-06	2.51E-06	1.12E-06	6.85E-07	3.70E-07	3.10E-07	3.89E-07	
Er-171	M		5.00E-03	6.55E-06	4.48E-06	2.18E-06	1.44E-06	9.84E-07	8.07E-07	9.47E-07	
Er-171	S		5.00E-03	6.85E-06	4.70E-06	2.30E-06	1.53E-06	9.32E-07	8.62E-07	9.99E-07	
Er-172	F		5.00E-03	1.59E-05	1.08E-05	4.96E-06	2.95E-06	1.63E-06	1.12E-06	1.51E-06	
Er-172	M		5.00E-03	2.46E-05	1.76E-05	9.51E-06	6.55E-06	5.14E-06	4.14E-06	4.70E-06	
Er-172	S		5.00E-03	2.60E-05	1.88E-05	1.02E-05	7.10E-06	5.66E-06	4.55E-06	5.14E-06	
Er-173			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Es-249	F		5.00E-03	2.49E-06	1.99E-06	8.33E-07	6.03E-07	4.88E-07	4.44E-07	4.88E-07	
Es-249	M		5.00E-03	4.18E-06	3.12E-06	1.83E-06	1.32E-06	9.99E-07	8.21E-07	9.21E-07	
Es-249	S		5.00E-03	4.22E-06	3.10E-06	1.80E-06	1.30E-06	9.77E-07	7.84E-07	8.88E-07	
Es-250	F		5.00E-03	8.10E-05	7.44E-05	4.63E-05	2.94E-05	2.13E-05	2.09E-05	2.28E-05	
Es-250	M		5.00E-03	3.54E-05	3.14E-05	2.04E-05	1.30E-05	1.07E-05	1.02E-05	1.10E-05	
Es-250	S		5.00E-03	2.46E-05	1.98E-05	1.01E-05	6.73E-06	5.62E-06	5.00E-06	5.48E-06	
Es-250m	F		5.00E-03	2.05E-05	1.90E-05	1.19E-05	7.55E-06	5.51E-06	5.40E-06	5.88E-06	
Es-250m	M		5.00E-03	7.77E-06	7.18E-06	4.81E-06	3.05E-06	2.53E-06	2.46E-06	2.63E-06	
Es-250m	S		5.00E-03	3.85E-06	3.24E-06	2.09E-06	1.38E-06	1.18E-06	1.07E-06	1.15E-06	
Es-251	F		5.00E-03	1.55E-05	1.25E-05	7.62E-06	5.29E-06	3.62E-06	3.34E-06	3.70E-06	
Es-251	M		5.00E-03	2.95E-05	2.23E-05	1.44E-05	1.05E-05	9.69E-06	7.96E-06	8.58E-06	
Es-251	S		5.00E-03	3.02E-05	2.24E-05	1.44E-05	1.05E-05	9.81E-06	7.92E-06	8.58E-06	
Es-253	F		5.00E-03	2.10E-02	1.54E-02	8.21E-03	5.18E-03	2.23E-03	1.82E-03	2.42E-03	
Es-253	M		5.00E-03	3.85E-02	2.93E-02	1.86E-02	1.37E-02	1.26E-02	1.01E-02	1.10E-02	
Es-253	S		5.00E-03	4.29E-02	3.26E-02	2.09E-02	1.55E-02	1.47E-02	1.17E-02	1.27E-02	
Es-254	F		5.00E-03	2.51E-01	2.17E-01	1.28E-01	7.84E-02	4.22E-02	3.81E-02	4.55E-02	
Es-254	M		5.00E-03	1.36E-01	1.15E-01	7.33E-02	4.81E-02	3.70E-02	3.17E-02	3.53E-02	
Es-254	S		5.00E-03	1.15E-01	9.21E-02	5.81E-02	4.03E-02	3.55E-02	2.93E-02	3.21E-02	
Es-254+D	F			2.51E-01	2.17E-01	1.28E-01	7.84E-02	4.22E-02	3.81E-02	4.56E-02	
Es-254+E	F			2.51E-01	2.17E-01	1.28E-01	7.84E-02	4.22E-02	3.81E-02	4.56E-02	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Es-254m	F		5.00E-03	2.25E-03	1.64E-03	8.99E-04	5.66E-04	2.80E-04	2.43E-04	3.02E-04	
Es-254m	M		5.00E-03	6.44E-03	4.85E-03	3.14E-03	2.34E-03	2.21E-03	1.76E-03	1.91E-03	
Es-254m	S		5.00E-03	6.92E-03	5.22E-03	3.38E-03	2.54E-03	2.43E-03	1.93E-03	2.09E-03	
Es-255	F		5.00E-03	4.11E-02	3.08E-02	1.66E-02	1.04E-02	4.44E-03	3.60E-03	4.81E-03	
Es-255	M		5.00E-03	5.59E-02	4.29E-02	2.72E-02	1.98E-02	1.79E-02	1.42E-02	1.56E-02	
Es-255	S		5.00E-03	6.18E-02	4.77E-02	3.04E-02	2.25E-02	2.12E-02	1.69E-02	1.83E-02	
Es-256	F		5.00E-03	3.33E-04	2.25E-04	1.12E-04	6.96E-05	3.44E-05	2.86E-05	3.66E-05	
Es-256	M		5.00E-03	7.03E-04	4.88E-04	3.04E-04	1.98E-04	1.61E-04	1.41E-04	1.55E-04	
Es-256	S		5.00E-03	7.44E-04	5.18E-04	3.26E-04	2.13E-04	1.75E-04	1.53E-04	1.68E-04	
Eu-142			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-142m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-143			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-144			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Eu-145	F		5.00E-03	1.18E-05	9.44E-06	4.96E-06	3.18E-06	1.96E-06	1.64E-06	1.95E-06	
Eu-145	M		5.00E-03	1.21E-05	9.73E-06	5.29E-06	3.44E-06	2.32E-06	1.87E-06	2.19E-06	
Eu-145	S		5.00E-03	1.23E-05	9.84E-06	5.40E-06	3.52E-06	2.39E-06	1.92E-06	2.25E-06	
Eu-146	F		5.00E-03	1.77E-05	1.42E-05	7.44E-06	4.77E-06	2.92E-06	2.40E-06	2.87E-06	
Eu-146	M		5.00E-03	1.95E-05	1.57E-05	8.40E-06	5.44E-06	3.54E-06	2.84E-06	3.37E-06	
Eu-146	S		5.00E-03	1.98E-05	1.58E-05	8.55E-06	5.55E-06	3.64E-06	2.91E-06	3.44E-06	
Eu-147	F		5.00E-03	1.48E-05	1.11E-05	5.66E-06	3.63E-06	2.29E-06	1.94E-06	2.29E-06	
Eu-147	M		5.00E-03	1.82E-05	1.39E-05	8.21E-06	5.81E-06	4.88E-06	3.92E-06	4.33E-06	
Eu-147	S		5.00E-03	1.94E-05	1.49E-05	8.95E-06	6.40E-06	5.51E-06	4.40E-06	4.85E-06	
Eu-148	F		5.00E-03	7.70E-05	6.25E-05	3.37E-05	2.32E-05	1.55E-05	1.34E-05	1.53E-05	
Eu-148	M		5.00E-03	5.29E-05	4.44E-05	2.61E-05	1.74E-05	1.20E-05	9.99E-06	1.15E-05	
Eu-148	S		5.00E-03	5.22E-05	4.40E-05	2.65E-05	1.59E-05	1.25E-05	1.03E-05	1.17E-05	
Eu-149	F		5.00E-03	1.59E-05	1.23E-05	6.25E-06	3.81E-06	2.34E-06	1.98E-06	2.37E-06	
Eu-149	M		5.00E-03	9.36E-06	7.25E-06	4.00E-06	2.51E-06	1.78E-06	1.49E-06	1.72E-06	
Eu-149	S		5.00E-03	9.18E-06	7.18E-06	4.03E-06	2.59E-06	1.90E-06	1.58E-06	1.81E-06	
Eu-150	F		5.00E-03	1.16E-03	1.10E-03	7.47E-04	5.70E-04	4.81E-04	4.74E-04	4.96E-04	
Eu-150	M		5.00E-03	4.07E-04	3.96E-04	2.89E-04	2.15E-04	1.98E-04	1.99E-04	2.05E-04	
Eu-150	S		5.00E-03	2.73E-04	2.63E-04	1.94E-04	1.40E-04	1.26E-04	1.21E-04	1.26E-04	
Eu-150m	F		5.00E-03	3.69E-06	2.41E-06	1.02E-06	6.29E-07	3.24E-07	2.73E-07	3.49E-07	
Eu-150m	M		5.00E-03	6.07E-06	4.07E-06	1.95E-06	1.29E-06	8.81E-07	7.14E-07	8.40E-07	
Eu-150m	S		5.00E-03	6.40E-06	4.33E-06	2.07E-06	1.38E-06	9.51E-07	7.70E-07	9.03E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Eu-152	F		5.00E-03	1.06E-03	9.73E-04	6.22E-04	4.44E-04	3.54E-04	3.45E-04	3.67E-04	
Eu-152	M		5.00E-03	4.07E-04	3.81E-04	2.60E-04	1.81E-04	1.59E-04	1.56E-04	1.63E-04	
Eu-152	S		5.00E-03	3.27E-04	3.05E-04	2.11E-04	1.46E-04	1.27E-04	1.20E-04	1.27E-04	
Eu-152m	F		5.00E-03	4.59E-06	3.06E-06	1.34E-06	8.14E-07	4.26E-07	3.54E-07	4.51E-07	
Eu-152m	M		5.00E-03	7.07E-06	4.70E-06	2.44E-06	1.57E-06	8.77E-07	8.03E-07	9.55E-07	
Eu-152m	S		5.00E-03	7.40E-06	4.96E-06	2.29E-06	1.48E-06	9.36E-07	7.73E-07	9.29E-07	
Eu-152n	F		5.00E-03	1.42E-07	9.95E-08	4.88E-08	3.07E-08	1.94E-08	1.67E-08	1.98E-08	
Eu-152n	M		5.00E-03	2.43E-07	1.64E-07	8.47E-08	5.44E-08	3.81E-08	3.23E-08	3.74E-08	
Eu-152n	S		5.00E-03	2.55E-07	1.72E-07	8.88E-08	5.70E-08	3.54E-08	2.99E-08	3.55E-08	
Eu-154	F		5.00E-03	1.41E-03	1.28E-03	7.88E-04	5.33E-04	4.11E-04	3.96E-04	4.26E-04	
Eu-154	M		5.00E-03	5.77E-04	5.29E-04	3.46E-04	2.33E-04	1.99E-04	1.90E-04	2.02E-04	
Eu-154	S		5.00E-03	5.00E-04	4.59E-04	3.09E-04	2.09E-04	1.80E-04	1.68E-04	1.79E-04	
Eu-154m	F		5.00E-03	8.66E-08	6.11E-08	3.03E-08	1.89E-08	1.22E-08	1.06E-08	1.25E-08	
Eu-154m	M		5.00E-03	1.24E-07	8.21E-08	4.07E-08	2.55E-08	1.73E-08	1.45E-08	1.71E-08	
Eu-154m	S		5.00E-03	1.28E-07	8.47E-08	4.22E-08	2.64E-08	1.79E-08	1.50E-08	1.76E-08	
Eu-155	F		5.00E-03	2.10E-04	1.86E-04	1.09E-04	6.77E-05	4.85E-05	4.59E-05	5.11E-05	
Eu-155	M		5.00E-03	9.73E-05	8.51E-05	5.37E-05	3.43E-05	2.82E-05	2.59E-05	2.81E-05	
Eu-155	S		5.00E-03	8.33E-05	7.14E-05	4.55E-05	3.00E-05	2.50E-05	2.21E-05	2.41E-05	
Eu-156	F		5.00E-03	5.51E-05	3.81E-05	1.79E-05	1.11E-05	6.59E-06	5.40E-06	6.62E-06	
Eu-156	M		5.00E-03	7.25E-05	5.33E-05	2.93E-05	2.01E-05	1.58E-05	1.30E-05	1.46E-05	
Eu-156	S		5.00E-03	7.66E-05	5.70E-05	3.19E-05	2.20E-05	1.77E-05	1.46E-05	1.63E-05	
Eu-157	F		5.00E-03	5.96E-06	4.00E-06	1.76E-06	1.08E-06	5.66E-07	4.70E-07	5.99E-07	
Eu-157	M		5.00E-03	9.32E-06	7.14E-06	3.40E-06	2.23E-06	1.33E-06	1.08E-06	1.31E-06	
Eu-157	S		5.00E-03	9.81E-06	7.47E-06	3.59E-06	2.36E-06	1.43E-06	1.16E-06	1.41E-06	
Eu-158	F		5.00E-03	9.95E-07	6.66E-07	3.06E-07	1.89E-07	1.12E-07	9.36E-08	1.15E-07	
Eu-158	M		5.00E-03	1.59E-06	1.06E-06	4.96E-07	3.18E-07	2.09E-07	1.74E-07	2.06E-07	
Eu-158	S		5.00E-03	1.65E-06	1.10E-06	5.18E-07	3.32E-07	2.20E-07	1.82E-07	2.16E-07	
Eu-159	F		5.00E-03	5.07E-07	3.24E-07	1.41E-07	8.92E-08	5.33E-08	4.55E-08	5.55E-08	
Eu-159	M		5.00E-03	7.99E-07	5.18E-07	2.35E-07	1.53E-07	1.01E-07	8.51E-08	1.00E-07	
Eu-159	S		5.00E-03	8.29E-07	5.37E-07	2.45E-07	1.60E-07	1.06E-07	8.95E-08	1.05E-07	
F-17			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
F-18	F		1.00E+00	9.47E-07	6.88E-07	3.27E-07	2.02E-07	1.21E-07	9.95E-08	1.21E-07	
F-18	M		1.00E+00	1.47E-06	1.05E-06	5.29E-07	3.48E-07	2.48E-07	2.00E-07	2.33E-07	
F-18	S		1.00E+00	1.52E-06	1.10E-06	5.51E-07	3.64E-07	2.61E-07	2.11E-07	2.46E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Fe-52	F		6.00E-01	1.92E-05	1.32E-05	5.70E-06	3.31E-06	1.81E-06	1.44E-06	1.85E-06	
Fe-52	M		2.00E-01	2.15E-05	1.52E-05	7.18E-06	4.51E-06	2.72E-06	2.22E-06	2.71E-06	
Fe-52	S		2.00E-02	2.22E-05	1.57E-05	7.44E-06	4.74E-06	2.85E-06	2.35E-06	2.85E-06	
Fe-53			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fe-53m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fe-55	F		6.00E-01	1.52E-05	1.18E-05	8.10E-06	5.22E-06	3.49E-06	2.89E-06	3.34E-06	
Fe-55	M		2.00E-01	7.03E-06	5.33E-06	3.65E-06	2.30E-06	1.62E-06	1.44E-06	1.62E-06	
Fe-55	S		2.00E-02	3.64E-06	3.09E-06	1.84E-06	1.08E-06	7.47E-07	6.77E-07	7.70E-07	
Fe-59	F		6.00E-01	7.55E-05	4.85E-05	2.63E-05	1.64E-05	9.81E-06	8.25E-06	9.92E-06	
Fe-59	M		2.00E-01	6.81E-05	4.92E-05	2.91E-05	2.04E-05	1.69E-05	1.37E-05	1.52E-05	
Fe-59	S		2.00E-02	6.33E-05	4.96E-05	3.00E-05	2.14E-05	1.86E-05	1.49E-05	1.65E-05	
Fe-60	F		6.00E-01	1.67E-03	1.51E-03	1.37E-03	1.24E-03	1.13E-03	1.07E-03	1.10E-03	
Fe-60	M		2.00E-01	7.66E-04	6.70E-04	6.14E-04	5.44E-04	5.33E-04	5.33E-04	5.37E-04	
Fe-60	S		2.00E-02	3.70E-04	3.48E-04	2.66E-04	2.04E-04	1.94E-04	1.92E-04	1.96E-04	
Fe-60+D	F			2.01E-03	1.82E-03	1.59E-03	1.38E-03	1.25E-03	1.19E-03	1.22E-03	
Fe-60+E	F			2.01E-03	1.82E-03	1.59E-03	1.38E-03	1.25E-03	1.19E-03	1.22E-03	
Fe-61			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fe-62			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fm-251	F		5.00E-03	1.21E-05	8.66E-06	4.33E-06	2.90E-06	1.20E-06	1.03E-06	1.35E-06	
Fm-251	M		5.00E-03	3.19E-05	2.33E-05	1.20E-05	8.88E-06	8.44E-06	6.77E-06	7.40E-06	
Fm-251	S		5.00E-03	3.40E-05	2.49E-05	1.30E-05	9.62E-06	9.14E-06	7.33E-06	7.99E-06	
Fm-252	F		5.00E-03	1.99E-03	1.54E-03	8.62E-04	5.37E-04	2.71E-04	2.32E-04	2.88E-04	
Fm-252	M		5.00E-03	4.85E-03	3.67E-03	2.38E-03	1.75E-03	1.64E-03	1.31E-03	1.42E-03	
Fm-252	S		5.00E-03	5.14E-03	3.89E-03	2.52E-03	1.88E-03	1.79E-03	1.43E-03	1.54E-03	
Fm-253	F		5.00E-03	3.10E-03	2.26E-03	1.21E-03	7.66E-04	3.30E-04	2.69E-04	3.56E-04	
Fm-253	M		5.00E-03	5.59E-03	4.26E-03	2.71E-03	1.99E-03	1.83E-03	1.46E-03	1.59E-03	
Fm-253	S		5.00E-03	6.22E-03	4.74E-03	3.04E-03	2.26E-03	2.13E-03	1.70E-03	1.84E-03	
Fm-254	F		5.00E-03	4.55E-04	3.20E-04	1.52E-04	1.02E-04	6.48E-05	5.81E-05	6.73E-05	
Fm-254	M		5.00E-03	1.17E-03	8.55E-04	4.96E-04	3.63E-04	2.83E-04	2.25E-04	2.53E-04	
Fm-254	S		5.00E-03	1.25E-03	9.10E-04	5.33E-04	3.92E-04	3.09E-04	2.45E-04	2.75E-04	
Fm-255	F		5.00E-03	1.52E-03	1.04E-03	3.27E-04	3.26E-04	1.64E-04	1.44E-04	1.74E-04	
Fm-255	M		5.00E-03	4.37E-03	2.69E-03	1.75E-03	1.30E-03	1.24E-03	9.88E-04	1.07E-03	
Fm-255	S		5.00E-03	3.92E-03	2.93E-03	1.91E-03	1.43E-03	1.37E-03	1.09E-03	1.18E-03	
Fm-256	F		5.00E-03	2.13E-03	1.44E-03	7.36E-04	4.59E-04	2.49E-04	2.10E-04	2.60E-04	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Fm-256	M		5.00E-03	4.40E-03	3.05E-03	1.91E-03	1.24E-03	1.01E-03	8.84E-04	9.73E-04	
Fm-256	S		5.00E-03	4.66E-03	3.23E-03	2.04E-03	1.33E-03	1.10E-03	9.62E-04	1.05E-03	
Fm-257	F		5.00E-03	1.76E-01	1.42E-01	7.92E-02	4.92E-02	2.14E-02	1.76E-02	2.32E-02	
Fm-257	M		5.00E-03	1.22E-01	9.77E-02	6.07E-02	4.14E-02	3.29E-02	2.67E-02	2.99E-02	
Fm-257	S		5.00E-03	1.22E-01	9.66E-02	6.03E-02	4.26E-02	3.81E-02	3.10E-02	3.39E-02	
Fr-212	F		1.00E+00	4.51E-05	3.22E-05	1.68E-05	1.17E-05	9.10E-06	7.66E-06	8.58E-06	
Fr-212	M		1.00E+00	1.09E-04	7.96E-05	4.70E-05	2.86E-05	2.72E-05	2.18E-05	2.41E-05	
Fr-212	S		1.00E+00	1.17E-04	8.51E-05	4.22E-05	3.10E-05	2.95E-05	2.36E-05	2.58E-05	
Fr-219			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-220+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-221+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-222	F		1.00E+00	3.37E-04	2.36E-04	1.13E-04	7.99E-05	5.88E-05	5.03E-05	5.70E-05	
Fr-222	M		1.00E+00	5.70E-04	4.03E-04	2.04E-04	1.47E-04	1.15E-04	9.66E-05	1.08E-04	
Fr-222	S		1.00E+00	5.96E-04	4.22E-04	2.14E-04	1.54E-04	1.22E-04	1.02E-04	1.14E-04	
Fr-223	F		1.00E+00	4.11E-05	2.75E-05	1.19E-05	7.22E-06	3.92E-06	3.34E-06	4.18E-06	
Fr-223	M		1.00E+00	1.64E-04	1.21E-04	7.36E-05	5.37E-05	4.85E-05	3.89E-05	4.26E-05	
Fr-223	S		1.00E+00	1.85E-04	1.37E-04	8.44E-05	6.14E-05	5.62E-05	4.48E-05	4.92E-05	
Fr-224			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fr-227			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ga-64			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ga-65	F		1.00E-02	4.00E-07	2.70E-07	1.23E-07	7.73E-08	4.74E-08	4.00E-08	4.85E-08	
Ga-65	M		1.00E-02	5.77E-07	3.89E-07	1.78E-07	1.14E-07	7.33E-08	6.14E-08	7.33E-08	
Ga-65	S		1.00E-02	5.99E-07	4.00E-07	1.85E-07	1.18E-07	7.62E-08	6.40E-08	7.62E-08	
Ga-66	F		1.00E-02	1.06E-05	7.51E-06	3.46E-06	2.12E-06	1.13E-06	9.29E-07	1.17E-06	
Ga-66	M		1.00E-02	1.67E-05	1.17E-05	5.48E-06	3.43E-06	1.98E-06	1.64E-06	2.02E-06	
Ga-66	S		1.00E-02	1.74E-05	1.22E-05	5.70E-06	3.58E-06	2.07E-06	1.72E-06	2.11E-06	
Ga-67	F		1.00E-02	2.43E-06	1.74E-06	8.21E-07	5.14E-07	2.89E-07	2.43E-07	2.99E-07	
Ga-67	M		1.00E-02	5.25E-06	3.85E-06	1.90E-06	1.37E-06	1.14E-06	9.03E-07	1.01E-06	
Ga-67	S		1.00E-02	5.00E-06	4.11E-06	2.07E-06	1.49E-06	1.26E-06	9.95E-07	1.11E-06	
Ga-68	F		1.00E-02	1.05E-06	7.10E-07	3.23E-07	1.98E-07	1.15E-07	9.55E-08	1.18E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ga-68	M		1.00E-02	1.71E-06	1.14E-06	5.33E-07	3.39E-07	2.19E-07	1.81E-07	2.16E-07	
Ga-68	S		1.00E-02	1.78E-06	1.19E-06	5.55E-07	3.55E-07	2.30E-07	1.90E-07	2.27E-07	
Ga-70	F		1.00E-02	3.53E-07	2.21E-07	9.47E-08	6.07E-08	3.74E-08	3.24E-08	3.89E-08	
Ga-70	M		1.00E-02	5.62E-07	3.56E-07	1.58E-07	1.04E-07	6.81E-08	5.85E-08	6.88E-08	
Ga-70	S		1.00E-02	5.85E-07	3.70E-07	1.64E-07	1.08E-07	7.14E-08	6.11E-08	7.22E-08	
Ga-72	F		1.00E-02	1.10E-05	8.18E-06	3.92E-06	2.41E-06	1.34E-06	1.09E-06	1.36E-06	
Ga-72	M		1.00E-02	1.70E-05	1.24E-05	6.07E-06	3.89E-06	2.42E-06	1.97E-06	2.37E-06	
Ga-72	S		1.00E-02	1.76E-05	1.29E-05	6.33E-06	4.07E-06	2.54E-06	2.07E-06	2.49E-06	
Ga-73	F		1.00E-02	2.52E-06	1.68E-06	7.40E-07	4.55E-07	2.44E-07	2.05E-07	2.58E-07	
Ga-73	M		1.00E-02	4.66E-06	3.15E-06	1.50E-06	9.81E-07	6.51E-07	5.37E-07	6.36E-07	
Ga-73	S		1.00E-02	4.88E-06	3.31E-06	1.59E-06	1.04E-06	6.96E-07	5.74E-07	6.77E-07	
Ga-74			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-142			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-143m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-144			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-145	F		5.00E-03	4.11E-07	3.12E-07	1.55E-07	9.47E-08	5.66E-08	4.59E-08	5.62E-08	
Gd-145	M		5.00E-03	5.48E-07	4.03E-07	2.00E-07	1.24E-07	7.70E-08	6.25E-08	7.59E-08	
Gd-145	S		5.00E-03	5.62E-07	4.14E-07	2.05E-07	1.28E-07	7.96E-08	6.44E-08	7.81E-08	
Gd-145m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Gd-146	F		5.00E-03	1.04E-04	8.14E-05	4.29E-05	2.80E-05	1.83E-05	1.57E-05	1.83E-05	
Gd-146	M		5.00E-03	9.95E-05	7.88E-05	4.77E-05	3.33E-05	2.82E-05	2.30E-05	2.54E-05	
Gd-146	S		5.00E-03	1.07E-04	8.55E-05	5.29E-05	3.74E-05	3.24E-05	2.62E-05	2.88E-05	
Gd-147	F		5.00E-03	8.10E-06	6.40E-06	3.27E-06	2.05E-06	1.22E-06	9.95E-07	1.21E-06	
Gd-147	M		5.00E-03	1.07E-05	8.33E-06	4.40E-06	2.90E-06	1.95E-06	1.55E-06	1.83E-06	
Gd-147	S		5.00E-03	1.10E-05	8.58E-06	4.59E-06	3.02E-06	2.05E-06	1.64E-06	1.92E-06	
Gd-148	F		5.00E-03	3.01E-01	2.75E-01	1.70E-01	1.17E-01	9.47E-02	9.36E-02	9.92E-02	
Gd-148	M		5.00E-03	1.16E-01	1.06E-01	7.03E-02	4.74E-02	4.18E-02	4.18E-02	4.37E-02	
Gd-148	S		5.00E-03	7.73E-02	6.77E-02	4.44E-02	2.86E-02	2.40E-02	2.29E-02	2.45E-02	
Gd-149	F		5.00E-03	1.03E-05	8.92E-06	3.68E-06	2.33E-06	1.42E-06	1.19E-06	1.44E-06	
Gd-149	M		5.00E-03	1.75E-05	1.33E-05	6.66E-06	4.74E-06	3.96E-06	3.13E-06	3.52E-06	
Gd-149	S		5.00E-03	1.66E-05	1.25E-05	7.22E-06	5.18E-06	4.40E-06	3.47E-06	3.89E-06	
Gd-150	F		5.00E-03	2.75E-01	2.52E-01	1.58E-01	1.11E-01	9.07E-02	8.95E-02	9.47E-02	
Gd-150	M		5.00E-03	1.01E-01	9.40E-02	6.33E-02	4.29E-02	3.85E-02	3.85E-02	4.03E-02	
Gd-150	S		5.00E-03	6.36E-02	5.66E-02	3.74E-02	2.42E-02	2.04E-02	1.97E-02	2.10E-02	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Gd-151	F		5.00E-03	2.77E-05	2.16E-05	1.12E-05	6.62E-06	4.03E-06	3.44E-06	4.11E-06	
Gd-151	M		5.00E-03	1.95E-05	1.54E-05	8.84E-06	5.85E-06	4.63E-06	3.77E-06	4.26E-06	
Gd-151	S		5.00E-03	2.03E-05	1.61E-05	9.51E-06	6.48E-06	5.33E-06	4.33E-06	4.85E-06	
Gd-152	F		5.00E-03	2.16E-01	1.98E-01	1.24E-01	8.70E-02	7.10E-02	7.03E-02	7.44E-02	
Gd-152	M		5.00E-03	7.62E-02	7.14E-02	4.77E-02	3.27E-02	2.93E-02	2.95E-02	3.07E-02	
Gd-152	S		5.00E-03	4.59E-02	4.14E-02	2.71E-02	1.74E-02	1.47E-02	1.43E-02	1.52E-02	
Gd-153	F		5.00E-03	5.44E-05	4.44E-05	2.40E-05	1.44E-05	9.03E-06	7.81E-06	9.21E-06	
Gd-153	M		5.00E-03	3.67E-05	2.95E-05	1.77E-05	1.15E-05	9.18E-06	7.73E-06	8.62E-06	
Gd-153	S		5.00E-03	3.85E-05	3.10E-05	1.91E-05	1.29E-05	1.06E-05	8.88E-06	9.81E-06	
Gd-159	F		5.00E-03	4.51E-06	3.35E-06	1.44E-06	8.73E-07	4.51E-07	3.77E-07	4.85E-07	
Gd-159	M		5.00E-03	8.36E-06	5.66E-06	2.74E-06	1.83E-06	1.28E-06	1.03E-06	1.21E-06	
Gd-159	S		5.00E-03	8.81E-06	5.96E-06	2.92E-06	1.95E-06	1.38E-06	1.11E-06	1.30E-06	
Gd-162			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ge-66	F		1.00E+00	1.67E-06	1.29E-06	6.59E-07	4.11E-07	2.46E-07	1.99E-07	2.42E-07	
Ge-66	M		1.00E+00	2.34E-06	1.78E-06	9.36E-07	6.03E-07	4.03E-07	3.33E-07	3.89E-07	
Ge-66	S		1.00E+00	2.41E-06	1.83E-06	9.66E-07	6.22E-07	4.22E-07	3.48E-07	4.07E-07	
Ge-67	F		1.00E+00	5.81E-07	3.85E-07	1.75E-07	1.08E-07	6.55E-08	5.48E-08	6.66E-08	
Ge-67	M		1.00E+00	8.62E-07	5.70E-07	2.61E-07	1.65E-07	1.05E-07	8.81E-08	1.05E-07	
Ge-67	S		1.00E+00	8.95E-07	5.88E-07	2.70E-07	1.71E-07	1.10E-07	9.18E-08	1.10E-07	
Ge-68	F		1.00E+00	1.99E-05	1.41E-05	6.66E-06	4.11E-06	2.32E-06	1.91E-06	2.37E-06	
Ge-68	M		1.00E+00	2.16E-04	1.80E-04	1.07E-04	7.18E-05	5.70E-05	5.03E-05	5.55E-05	
Ge-68	S		1.00E+00	4.33E-04	3.81E-04	2.38E-04	1.57E-04	1.25E-04	1.14E-04	1.24E-04	
Ge-68+D	S			4.33E-04	3.81E-04	2.38E-04	1.57E-04	1.25E-04	1.14E-04	1.24E-04	
Ge-68+E	S			4.33E-04	3.81E-04	2.38E-04	1.57E-04	1.25E-04	1.14E-04	1.24E-04	
Ge-69	F		1.00E+00	3.89E-06	3.11E-06	1.61E-06	9.84E-07	5.85E-07	4.70E-07	5.77E-07	
Ge-69	M		1.00E+00	5.59E-06	4.40E-06	2.41E-06	1.56E-06	1.10E-06	8.84E-07	1.03E-06	
Ge-69	S		1.00E+00	5.81E-06	4.55E-06	2.50E-06	1.63E-06	1.16E-06	9.32E-07	1.08E-06	
Ge-71	F		1.00E+00	2.17E-07	1.55E-07	7.07E-08	4.03E-08	2.19E-08	1.73E-08	2.23E-08	
Ge-71	M		1.00E+00	4.33E-07	3.07E-07	1.48E-07	7.51E-08	4.63E-08	3.81E-08	4.77E-08	
Ge-71	S		1.00E+00	4.18E-07	3.35E-07	1.62E-07	8.36E-08	5.22E-08	4.29E-08	5.33E-08	
Ge-75	F		1.00E+00	5.88E-07	3.74E-07	1.61E-07	1.04E-07	6.40E-08	5.48E-08	6.59E-08	
Ge-75	M		1.00E+00	1.09E-06	7.07E-07	3.33E-07	2.25E-07	1.62E-07	1.35E-07	1.56E-07	
Ge-75	S		1.00E+00	1.14E-06	7.44E-07	3.52E-07	2.38E-07	1.73E-07	1.44E-07	1.66E-07	
Ge-77	F		1.00E+00	4.88E-06	3.54E-06	1.74E-06	1.09E-06	6.44E-07	5.29E-07	6.44E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ge-77	M		1.00E+00	8.44E-06	6.18E-06	3.29E-06	2.23E-06	1.68E-06	1.37E-06	1.56E-06	
Ge-77	S		1.00E+00	8.88E-06	6.48E-06	3.47E-06	2.36E-06	1.80E-06	1.46E-06	1.67E-06	
Ge-78	F		1.00E+00	1.54E-06	1.07E-06	5.14E-07	3.26E-07	1.99E-07	1.64E-07	1.98E-07	
Ge-78	M		1.00E+00	2.62E-06	1.81E-06	9.03E-07	5.96E-07	4.18E-07	3.47E-07	4.03E-07	
Ge-78	S		1.00E+00	2.74E-06	1.89E-06	9.47E-07	6.25E-07	4.44E-07	3.67E-07	4.26E-07	
H-3	F		1.00E+00	9.73E-08	7.47E-08	4.11E-08	3.04E-08	2.20E-08	2.31E-08	2.47E-08	
H-3	M		2.00E-01	1.25E-06	9.81E-07	5.14E-07	3.02E-07	1.93E-07	1.67E-07	1.97E-07	
H-3	S		2.00E-02	4.22E-06	3.81E-06	2.32E-06	1.38E-06	1.03E-06	9.69E-07	1.07E-06	
H-3	V		1.00E+00	2.35E-07	1.79E-07	1.14E-07	8.40E-08	6.66E-08	6.77E-08	7.14E-08	
H-3	G	Elemental	1.00E+00	2.35E-11	1.79E-11	1.14E-11	8.40E-12	6.66E-12	6.77E-12	7.14E-12	
H-3	G	Organic	1.00E+00	3.96E-07	4.14E-07	2.59E-07	2.05E-07	1.51E-07	1.53E-07	1.62E-07	
Hf-167			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hf-169			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hf-170	F		2.00E-02	4.59E-06	3.55E-06	1.79E-06	1.13E-06	6.66E-07	5.51E-07	6.70E-07	
Hf-170	M		2.00E-02	6.96E-06	5.29E-06	2.81E-06	1.85E-06	1.27E-06	1.02E-06	1.20E-06	
Hf-170	S		2.00E-02	7.22E-06	5.51E-06	2.93E-06	1.94E-06	1.34E-06	1.08E-06	1.26E-06	
Hf-172	F		2.00E-02	5.74E-04	5.00E-04	2.96E-04	1.86E-04	1.32E-04	1.23E-04	1.37E-04	
Hf-172	M		2.00E-02	3.06E-04	2.59E-04	1.64E-04	1.06E-04	8.58E-05	7.70E-05	8.40E-05	
Hf-172	S		2.00E-02	3.44E-04	2.97E-04	1.94E-04	1.29E-04	1.05E-04	9.21E-05	1.01E-04	
Hf-172+D	F			5.74E-04	5.00E-04	2.96E-04	1.86E-04	1.32E-04	1.23E-04	1.37E-04	
Hf-172+E	F			5.74E-04	5.00E-04	2.96E-04	1.86E-04	1.32E-04	1.23E-04	1.37E-04	
Hf-173	F		2.00E-02	2.45E-06	1.86E-06	9.25E-07	5.74E-07	3.31E-07	2.76E-07	3.37E-07	
Hf-173	M		2.00E-02	4.03E-06	3.01E-06	1.59E-06	1.06E-06	7.51E-07	6.07E-07	7.03E-07	
Hf-173	S		2.00E-02	4.22E-06	3.16E-06	1.68E-06	1.13E-06	8.07E-07	6.51E-07	7.51E-07	
Hf-174	F		2.00E-02	2.86E-01	2.66E-01	1.78E-01	1.35E-01	1.16E-01	1.13E-01	1.18E-01	
Hf-174	M		2.00E-02	1.06E-01	9.66E-02	6.88E-02	5.03E-02	4.70E-02	4.70E-02	4.85E-02	
Hf-174	S		2.00E-02	6.14E-02	5.07E-02	3.38E-02	2.23E-02	1.91E-02	1.85E-02	1.96E-02	
Hf-175	F		2.00E-02	1.96E-05	1.45E-05	7.51E-06	4.74E-06	3.04E-06	2.59E-06	3.05E-06	
Hf-175	M		2.00E-02	2.09E-05	1.62E-05	9.47E-06	6.48E-06	5.18E-06	4.26E-06	4.77E-06	
Hf-175	S		2.00E-02	2.36E-05	1.87E-05	1.12E-05	7.70E-06	6.33E-06	5.18E-06	5.74E-06	
Hf-177m	F		2.00E-02	1.46E-06	1.05E-06	4.96E-07	3.18E-07	1.96E-07	1.65E-07	1.98E-07	
Hf-177m	M		2.00E-02	2.45E-06	1.75E-06	8.58E-07	5.77E-07	4.07E-07	3.36E-07	3.89E-07	
Hf-177m	S		2.00E-02	2.56E-06	1.82E-06	8.99E-07	6.07E-07	4.29E-07	3.54E-07	4.11E-07	
Hf-178m	F		2.00E-02	1.84E-03	1.72E-03	1.21E-03	9.51E-04	8.29E-04	8.18E-04	8.51E-04	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Hf-178m	M		2.00E-02	7.59E-04	6.96E-04	5.07E-04	3.89E-04	3.66E-04	3.63E-04	3.74E-04	
Hf-178m	S		2.00E-02	6.62E-04	5.96E-04	4.22E-04	2.98E-04	2.66E-04	2.51E-04	2.64E-04	
Hf-179m	F		2.00E-02	3.61E-05	2.54E-05	1.27E-05	7.73E-06	4.70E-06	4.03E-06	4.81E-06	
Hf-179m	M		2.00E-02	6.36E-05	4.81E-05	2.86E-05	2.05E-05	1.78E-05	1.42E-05	1.57E-05	
Hf-179m	S		2.00E-02	7.07E-05	5.37E-05	3.24E-05	2.34E-05	2.07E-05	1.65E-05	1.81E-05	
Hf-180m	F		2.00E-02	2.00E-06	1.53E-06	7.44E-07	4.63E-07	2.66E-07	2.19E-07	2.69E-07	
Hf-180m	M		2.00E-02	3.42E-06	2.55E-06	1.33E-06	8.81E-07	6.18E-07	5.00E-07	5.81E-07	
Hf-180m	S		2.00E-02	3.58E-06	2.67E-06	1.39E-06	9.29E-07	6.59E-07	5.29E-07	6.18E-07	
Hf-181	F		2.00E-02	4.96E-05	3.53E-05	1.78E-05	1.03E-05	6.14E-06	5.29E-06	6.40E-06	
Hf-181	M		2.00E-02	8.03E-05	6.11E-05	3.65E-05	2.62E-05	2.32E-05	1.84E-05	2.03E-05	
Hf-181	S		2.00E-02	9.07E-05	6.96E-05	4.22E-05	3.07E-05	2.77E-05	2.20E-05	2.41E-05	
Hf-182	F		2.00E-02	2.29E-03	2.19E-03	1.57E-03	1.26E-03	1.11E-03	1.09E-03	1.12E-03	
Hf-182	M		2.00E-02	8.33E-04	7.84E-04	5.96E-04	4.66E-04	4.51E-04	4.48E-04	4.59E-04	
Hf-182	S		2.00E-02	5.62E-04	5.07E-04	3.70E-04	2.66E-04	2.43E-04	2.37E-04	2.46E-04	
Hf-182+D	F			2.45E-03	2.31E-03	1.64E-03	1.32E-03	1.16E-03	1.12E-03	1.17E-03	
Hf-182+E	F			2.45E-03	2.31E-03	1.64E-03	1.32E-03	1.16E-03	1.12E-03	1.17E-03	
Hf-182m	F		2.00E-02	7.51E-07	5.40E-07	2.56E-07	1.62E-07	9.95E-08	8.36E-08	1.00E-07	
Hf-182m	M		2.00E-02	1.29E-06	9.18E-07	4.63E-07	3.10E-07	2.25E-07	1.84E-07	2.12E-07	
Hf-182m	S		2.00E-02	1.35E-06	9.62E-07	4.85E-07	3.28E-07	2.41E-07	1.96E-07	2.26E-07	
Hf-183	F		2.00E-02	9.51E-07	6.51E-07	2.99E-07	1.84E-07	1.07E-07	9.03E-08	1.11E-07	
Hf-183	M		2.00E-02	1.64E-06	1.13E-06	5.59E-07	3.74E-07	2.67E-07	2.18E-07	2.53E-07	
Hf-183	S		2.00E-02	1.72E-06	1.19E-06	5.92E-07	3.96E-07	2.86E-07	2.33E-07	2.70E-07	
Hf-184	F		2.00E-02	5.11E-06	3.53E-06	1.59E-06	9.81E-07	5.29E-07	4.44E-07	5.55E-07	
Hf-184	M		2.00E-02	9.47E-06	6.62E-06	3.27E-06	2.16E-06	1.48E-06	1.21E-06	1.41E-06	
Hf-184	S		2.00E-02	9.95E-06	6.96E-06	3.45E-06	2.29E-06	1.58E-06	1.29E-06	1.51E-06	
Hg-190	F	Inorganic	4.00E-02	2.88E-07	2.23E-07	1.11E-07	6.77E-08	4.00E-08	3.24E-08	4.00E-08	
Hg-190	M	Inorganic	4.00E-02	4.07E-07	3.06E-07	1.52E-07	9.58E-08	6.07E-08	4.88E-08	5.88E-08	
Hg-190	S	Inorganic	4.00E-02	4.22E-07	3.15E-07	1.57E-07	9.92E-08	6.29E-08	5.07E-08	6.11E-08	
Hg-190	F	Organic	8.00E-01	2.78E-07	2.21E-07	1.10E-07	6.70E-08	3.96E-08	3.21E-08	3.92E-08	
Hg-190	M	Organic	8.00E-01	3.92E-07	3.02E-07	1.51E-07	9.47E-08	5.99E-08	4.85E-08	5.85E-08	
Hg-190	S	Organic	8.00E-01	4.03E-07	3.11E-07	1.55E-07	9.81E-08	6.22E-08	5.03E-08	6.07E-08	
Hg-190	V		4.00E-02	1.08E-06	8.73E-07	5.59E-07	4.14E-07	3.09E-07	2.83E-07	3.08E-07	
Hg-191m	F	Inorganic	4.00E-02	7.40E-07	5.74E-07	2.83E-07	1.73E-07	1.01E-07	8.29E-08	1.01E-07	
Hg-191m	M	Inorganic	4.00E-02	1.13E-06	8.51E-07	4.33E-07	2.78E-07	1.86E-07	1.50E-07	1.77E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Hg-191m	S	Inorganic	4.00E-02	1.17E-06	8.84E-07	4.48E-07	2.90E-07	1.95E-07	1.57E-07	1.86E-07	
Hg-191m	F	Organic	8.00E-01	6.85E-07	5.59E-07	2.75E-07	1.68E-07	9.88E-08	8.07E-08	9.88E-08	
Hg-191m	M	Organic	8.00E-01	1.03E-06	8.25E-07	4.18E-07	2.70E-07	1.82E-07	1.47E-07	1.73E-07	
Hg-191m	S	Organic	8.00E-01	1.07E-06	8.55E-07	4.37E-07	2.82E-07	1.91E-07	1.54E-07	1.81E-07	
Hg-191m	V		4.00E-02	4.40E-06	3.58E-06	2.31E-06	1.71E-06	1.28E-06	1.18E-06	1.28E-06	
Hg-192	F	Inorganic	4.00E-02	2.40E-06	1.92E-06	9.58E-07	5.88E-07	3.33E-07	2.70E-07	3.34E-07	
Hg-192	M	Inorganic	4.00E-02	3.49E-06	2.70E-06	1.37E-06	8.77E-07	5.44E-07	4.40E-07	5.29E-07	
Hg-192	S	Inorganic	4.00E-02	3.61E-06	2.79E-06	1.42E-06	9.10E-07	5.70E-07	4.59E-07	5.51E-07	
Hg-192	F	Organic	8.00E-01	1.89E-06	1.74E-06	8.77E-07	5.33E-07	3.05E-07	2.46E-07	3.04E-07	
Hg-192	M	Organic	8.00E-01	2.55E-06	2.41E-06	1.24E-06	7.84E-07	5.00E-07	4.00E-07	4.77E-07	
Hg-192	S	Organic	8.00E-01	2.62E-06	2.48E-06	1.28E-06	8.14E-07	5.22E-07	4.18E-07	5.00E-07	
Hg-192	V		4.00E-02	1.38E-05	1.12E-05	7.25E-06	5.33E-06	4.00E-06	3.68E-06	4.00E-06	
Hg-193	F	Inorganic	4.00E-02	1.28E-06	9.99E-07	4.88E-07	2.97E-07	1.69E-07	1.37E-07	1.70E-07	
Hg-193	M	Inorganic	4.00E-02	2.02E-06	1.53E-06	7.81E-07	5.03E-07	3.36E-07	2.69E-07	3.19E-07	
Hg-193	S	Inorganic	4.00E-02	2.11E-06	1.59E-06	8.14E-07	5.29E-07	3.54E-07	2.84E-07	3.36E-07	
Hg-193	F	Organic	8.00E-01	1.06E-06	9.29E-07	4.59E-07	2.76E-07	1.58E-07	1.28E-07	1.58E-07	
Hg-193	M	Organic	8.00E-01	1.61E-06	1.41E-06	7.29E-07	4.70E-07	3.19E-07	2.55E-07	3.00E-07	
Hg-193	S	Organic	8.00E-01	1.68E-06	1.47E-06	7.59E-07	4.92E-07	3.37E-07	2.69E-07	3.16E-07	
Hg-193	V		4.00E-02	1.19E-05	9.69E-06	6.25E-06	4.63E-06	3.48E-06	3.22E-06	3.49E-06	
Hg-193+D	V			1.19E-05	9.69E-06	6.25E-06	4.63E-06	3.48E-06	3.22E-06	3.49E-06	
Hg-193+E	V			1.19E-05	9.69E-06	6.25E-06	4.63E-06	3.48E-06	3.22E-06	3.49E-06	
Hg-193m	F	Inorganic	4.00E-02	4.55E-06	3.51E-06	1.71E-06	1.05E-06	5.88E-07	4.77E-07	5.96E-07	
Hg-193m	M	Inorganic	4.00E-02	7.33E-06	5.51E-06	2.81E-06	1.82E-06	1.21E-06	9.66E-07	1.15E-06	
Hg-193m	S	Inorganic	4.00E-02	7.62E-06	5.74E-06	2.93E-06	1.91E-06	1.27E-06	1.02E-06	1.21E-06	
Hg-193m	F	Organic	8.00E-01	3.45E-06	3.14E-06	1.54E-06	9.32E-07	5.29E-07	4.29E-07	5.33E-07	
Hg-193m	M	Organic	8.00E-01	5.29E-06	4.88E-06	2.52E-06	1.64E-06	1.11E-06	8.88E-07	1.04E-06	
Hg-193m	S	Organic	8.00E-01	5.51E-06	5.07E-06	2.63E-06	1.72E-06	1.18E-06	9.40E-07	1.10E-06	
Hg-193m	V		4.00E-02	4.11E-05	3.36E-05	2.16E-05	1.60E-05	1.20E-05	1.11E-05	1.20E-05	
Hg-194	F	Inorganic	4.00E-02	1.17E-04	1.06E-04	7.40E-05	5.96E-05	5.07E-05	4.88E-05	5.11E-05	
Hg-194	M	Inorganic	4.00E-02	7.84E-05	6.96E-05	4.77E-05	3.74E-05	3.29E-05	3.06E-05	3.22E-05	
Hg-194	S	Inorganic	4.00E-02	2.05E-04	1.99E-04	1.44E-04	1.02E-04	9.07E-05	8.70E-05	9.10E-05	
Hg-194	F	Organic	8.00E-01	1.78E-04	1.36E-04	8.92E-05	6.96E-05	5.59E-05	5.37E-05	5.70E-05	
Hg-194	M	Organic	8.00E-01	1.98E-04	1.26E-04	8.25E-05	6.18E-05	5.07E-05	4.74E-05	5.07E-05	
Hg-194	S	Organic	8.00E-01	3.20E-04	2.53E-04	1.78E-04	1.29E-04	1.12E-04	1.07E-04	1.12E-04	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Hg-194	V		4.00E-02	3.50E-04	3.10E-04	2.33E-04	1.87E-04	1.61E-04	1.50E-04	1.57E-04	
Hg-194+D	V			3.56E-04	3.15E-04	2.36E-04	1.89E-04	1.62E-04	1.51E-04	1.58E-04	
Hg-194+E	V			3.56E-04	3.15E-04	2.36E-04	1.89E-04	1.62E-04	1.51E-04	1.58E-04	
Hg-195	F	Inorganic	4.00E-02	1.05E-06	7.88E-07	3.70E-07	2.21E-07	1.21E-07	9.81E-08	1.24E-07	
Hg-195	M	Inorganic	4.00E-02	2.07E-06	1.50E-06	7.81E-07	5.03E-07	3.47E-07	2.85E-07	3.33E-07	
Hg-195	S	Inorganic	4.00E-02	2.20E-06	1.60E-06	8.36E-07	5.40E-07	3.77E-07	3.10E-07	3.61E-07	
Hg-195	F	Organic	8.00E-01	7.81E-07	7.03E-07	3.33E-07	1.98E-07	1.10E-07	8.84E-08	1.11E-07	
Hg-195	M	Organic	8.00E-01	1.55E-06	1.35E-06	7.14E-07	4.59E-07	3.27E-07	2.68E-07	3.10E-07	
Hg-195	S	Organic	8.00E-01	1.66E-06	1.44E-06	7.66E-07	4.96E-07	3.57E-07	2.93E-07	3.37E-07	
Hg-195	V		4.00E-02	2.03E-05	1.67E-05	1.08E-05	7.99E-06	5.99E-06	5.55E-06	6.03E-06	
Hg-195m	F	Inorganic	4.00E-02	5.85E-06	4.14E-06	1.86E-06	1.14E-06	6.07E-07	5.07E-07	6.40E-07	
Hg-195m	M	Inorganic	4.00E-02	1.33E-05	9.55E-06	5.03E-06	3.07E-06	2.41E-06	1.93E-06	2.22E-06	
Hg-195m	S	Inorganic	4.00E-02	1.42E-05	1.02E-05	4.85E-06	3.36E-06	2.67E-06	2.14E-06	2.43E-06	
Hg-195m	F	Organic	8.00E-01	4.11E-06	3.53E-06	1.59E-06	9.62E-07	5.22E-07	4.37E-07	5.44E-07	
Hg-195m	M	Organic	8.00E-01	1.01E-05	8.51E-06	4.59E-06	2.79E-06	2.28E-06	1.83E-06	2.08E-06	
Hg-195m	S	Organic	8.00E-01	1.09E-05	9.18E-06	4.37E-06	3.08E-06	2.53E-06	2.03E-06	2.29E-06	
Hg-195m	V		4.00E-02	1.10E-04	9.03E-05	5.81E-05	4.33E-05	3.23E-05	3.00E-05	3.26E-05	
Hg-197	F	Inorganic	4.00E-02	2.69E-06	1.89E-06	8.44E-07	5.11E-07	2.71E-07	2.24E-07	2.85E-07	
Hg-197	M	Inorganic	4.00E-02	6.59E-06	4.66E-06	2.60E-06	1.82E-06	1.48E-06	1.20E-06	1.34E-06	
Hg-197	S	Inorganic	4.00E-02	7.10E-06	5.07E-06	2.85E-06	2.00E-06	1.64E-06	1.33E-06	1.48E-06	
Hg-197	F	Organic	8.00E-01	1.89E-06	1.60E-06	7.14E-07	4.26E-07	2.29E-07	1.89E-07	2.39E-07	
Hg-197	M	Organic	8.00E-01	5.14E-06	4.22E-06	2.41E-06	1.69E-06	1.42E-06	1.15E-06	1.28E-06	
Hg-197	S	Organic	8.00E-01	5.62E-06	4.59E-06	2.65E-06	1.87E-06	1.58E-06	1.28E-06	1.42E-06	
Hg-197	V		4.00E-02	6.36E-05	5.18E-05	3.35E-05	2.48E-05	1.86E-05	1.73E-05	1.87E-05	
Hg-197m	F	Inorganic	4.00E-02	5.22E-06	3.55E-06	1.53E-06	9.47E-07	4.96E-07	4.26E-07	5.37E-07	
Hg-197m	M	Inorganic	4.00E-02	1.31E-05	9.29E-06	4.33E-06	3.07E-06	2.53E-06	2.00E-06	2.27E-06	
Hg-197m	S	Inorganic	4.00E-02	1.40E-05	9.95E-06	4.74E-06	3.36E-06	2.79E-06	2.21E-06	2.49E-06	
Hg-197m	F	Organic	8.00E-01	3.54E-06	2.98E-06	1.28E-06	7.96E-07	4.22E-07	3.65E-07	4.55E-07	
Hg-197m	M	Organic	8.00E-01	9.95E-06	8.29E-06	3.92E-06	2.82E-06	2.41E-06	1.91E-06	2.13E-06	
Hg-197m	S	Organic	8.00E-01	1.07E-05	8.92E-06	4.29E-06	3.09E-06	2.67E-06	2.11E-06	2.36E-06	
Hg-197m	V		4.00E-02	7.99E-05	6.51E-05	4.22E-05	3.12E-05	2.34E-05	2.18E-05	2.36E-05	
Hg-199m	F	Inorganic	4.00E-02	5.33E-07	3.53E-07	1.55E-07	1.01E-07	6.22E-08	5.40E-08	6.44E-08	
Hg-199m	M	Inorganic	4.00E-02	9.32E-07	6.25E-07	2.92E-07	1.98E-07	1.40E-07	1.17E-07	1.35E-07	
Hg-199m	S	Inorganic	4.00E-02	9.77E-07	6.55E-07	3.07E-07	2.08E-07	1.48E-07	1.24E-07	1.43E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Hg-199m	F	Organic	8.00E-01	5.25E-07	3.52E-07	1.54E-07	1.00E-07	6.22E-08	5.37E-08	6.40E-08	
Hg-199m	M	Organic	8.00E-01	9.25E-07	6.25E-07	2.91E-07	1.97E-07	1.40E-07	1.17E-07	1.35E-07	
Hg-199m	S	Organic	8.00E-01	9.69E-07	6.55E-07	3.06E-07	2.08E-07	1.48E-07	1.24E-07	1.43E-07	
Hg-199m	V		4.00E-02	2.42E-06	1.95E-06	1.26E-06	9.36E-07	7.03E-07	6.55E-07	7.07E-07	
Hg-203	F	Inorganic	4.00E-02	1.53E-05	1.08E-05	5.22E-06	3.32E-06	2.03E-06	1.73E-06	2.07E-06	
Hg-203	M	Inorganic	4.00E-02	3.77E-05	2.89E-05	1.73E-05	1.25E-05	1.11E-05	8.84E-06	9.73E-06	
Hg-203	S	Inorganic	4.00E-02	4.48E-05	3.47E-05	2.10E-05	1.52E-05	1.36E-05	1.08E-05	1.19E-05	
Hg-203	F	Organic	8.00E-01	2.09E-05	1.36E-05	6.44E-06	4.07E-06	2.46E-06	2.10E-06	2.53E-06	
Hg-203	M	Organic	8.00E-01	4.40E-05	3.13E-05	1.84E-05	1.32E-05	1.15E-05	9.18E-06	1.01E-05	
Hg-203	S	Organic	8.00E-01	5.14E-05	3.70E-05	2.21E-05	1.59E-05	1.40E-05	1.12E-05	1.24E-05	
Hg-203	V		4.00E-02	1.10E-04	8.66E-05	5.40E-05	3.89E-05	2.84E-05	2.60E-05	2.85E-05	
Hg-205			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hg-206			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Hg-207			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-150			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-153			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-153m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-154	F		5.00E-03	3.85E-07	2.63E-07	1.22E-07	7.59E-08	4.59E-08	3.85E-08	4.66E-08	
Ho-154	M		5.00E-03	5.25E-07	3.56E-07	1.66E-07	1.04E-07	6.48E-08	5.40E-08	6.51E-08	
Ho-154	S		5.00E-03	5.40E-07	3.66E-07	1.70E-07	1.07E-07	6.66E-08	5.59E-08	6.73E-08	
Ho-154m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-155	F		5.00E-03	4.66E-07	3.43E-07	1.67E-07	1.03E-07	6.11E-08	5.00E-08	6.11E-08	
Ho-155	M		5.00E-03	6.99E-07	5.00E-07	2.49E-07	1.60E-07	1.05E-07	8.55E-08	1.02E-07	
Ho-155	S		5.00E-03	7.25E-07	5.18E-07	2.59E-07	1.67E-07	1.10E-07	8.99E-08	1.06E-07	
Ho-156	F		5.00E-03	1.12E-06	8.07E-07	3.85E-07	2.36E-07	1.39E-07	1.15E-07	1.41E-07	
Ho-156	M		5.00E-03	1.71E-06	1.20E-06	5.77E-07	3.67E-07	2.38E-07	1.95E-07	2.33E-07	
Ho-156	S		5.00E-03	1.78E-06	1.24E-06	5.99E-07	3.81E-07	2.48E-07	2.04E-07	2.43E-07	
Ho-157	F		5.00E-03	1.05E-07	7.99E-08	3.92E-08	2.46E-08	1.52E-08	1.25E-08	1.51E-08	
Ho-157	M		5.00E-03	1.43E-07	1.06E-07	5.22E-08	3.34E-08	2.15E-08	1.77E-08	2.11E-08	
Ho-157	S		5.00E-03	1.47E-07	1.09E-07	5.37E-08	3.44E-08	2.22E-08	1.83E-08	2.17E-08	
Ho-159	F		5.00E-03	1.23E-07	9.21E-08	4.55E-08	2.85E-08	1.76E-08	1.45E-08	1.75E-08	
Ho-159	M		5.00E-03	1.81E-07	1.33E-07	6.70E-08	4.33E-08	2.93E-08	2.40E-08	2.82E-08	
Ho-159	S		5.00E-03	1.88E-07	1.37E-07	6.96E-08	4.51E-08	3.07E-08	2.51E-08	2.94E-08	
Ho-160	F		5.00E-03	2.70E-07	2.17E-07	1.11E-07	6.85E-08	4.22E-08	3.38E-08	4.11E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ho-160	M		5.00E-03	3.63E-07	2.85E-07	1.48E-07	9.32E-08	6.11E-08	4.88E-08	5.85E-08	
Ho-160	S		5.00E-03	3.74E-07	2.93E-07	1.52E-07	9.58E-08	6.33E-08	5.07E-08	6.03E-08	
Ho-161	F		5.00E-03	1.49E-07	1.09E-07	5.18E-08	3.13E-08	1.78E-08	1.43E-08	1.79E-08	
Ho-161	M		5.00E-03	2.30E-07	1.64E-07	8.07E-08	5.07E-08	3.26E-08	2.64E-08	3.17E-08	
Ho-161	S		5.00E-03	2.39E-07	1.69E-07	8.40E-08	5.29E-08	3.43E-08	2.78E-08	3.32E-08	
Ho-162	F		5.00E-03	5.22E-08	3.70E-08	1.78E-08	1.16E-08	7.70E-09	6.40E-09	7.55E-09	
Ho-162	M		5.00E-03	7.77E-08	5.44E-08	2.69E-08	1.79E-08	1.27E-08	1.05E-08	1.22E-08	
Ho-162	S		5.00E-03	8.03E-08	5.66E-08	2.79E-08	1.86E-08	1.33E-08	1.10E-08	1.27E-08	
Ho-162m	F		5.00E-03	3.42E-07	2.57E-07	1.27E-07	7.81E-08	4.70E-08	3.85E-08	4.66E-08	
Ho-162m	M		5.00E-03	5.48E-07	4.00E-07	2.06E-07	1.34E-07	9.32E-08	7.55E-08	8.84E-08	
Ho-162m	S		5.00E-03	5.70E-07	4.18E-07	2.15E-07	1.41E-07	9.84E-08	7.96E-08	9.29E-08	
Ho-163	F		5.00E-03	4.77E-06	2.74E-06	1.72E-06	1.21E-06	9.92E-07	9.81E-07	1.04E-06	
Ho-163	M		5.00E-03	1.03E-06	9.69E-07	6.48E-07	4.44E-07	3.96E-07	4.00E-07	4.18E-07	
Ho-163	S		5.00E-03	5.96E-07	5.40E-07	3.50E-07	2.25E-07	1.88E-07	1.85E-07	1.96E-07	
Ho-164	F		5.00E-03	1.49E-07	9.69E-08	4.26E-08	2.80E-08	1.78E-08	1.54E-08	1.82E-08	
Ho-164	M		5.00E-03	2.52E-07	1.67E-07	7.73E-08	5.22E-08	3.69E-08	3.11E-08	3.60E-08	
Ho-164	S		5.00E-03	2.64E-07	1.74E-07	8.10E-08	5.51E-08	3.92E-08	3.28E-08	3.77E-08	
Ho-164m	F		5.00E-03	1.72E-07	1.10E-07	4.92E-08	3.06E-08	1.85E-08	1.55E-08	1.89E-08	
Ho-164m	M		5.00E-03	3.43E-07	2.24E-07	1.12E-07	7.36E-08	4.81E-08	4.51E-08	5.14E-08	
Ho-164m	S		5.00E-03	3.62E-07	2.36E-07	1.19E-07	7.84E-08	5.18E-08	4.18E-08	5.00E-08	
Ho-166	F		5.00E-03	1.54E-05	9.62E-06	4.03E-06	2.54E-06	1.27E-06	1.01E-06	1.32E-06	
Ho-166	M		5.00E-03	2.22E-05	1.49E-05	7.03E-06	4.55E-06	2.96E-06	2.44E-06	2.91E-06	
Ho-166	S		5.00E-03	2.33E-05	1.57E-05	7.44E-06	4.85E-06	3.18E-06	2.62E-06	3.12E-06	
Ho-166m	F		5.00E-03	2.75E-03	2.56E-03	1.72E-03	1.29E-03	1.06E-03	1.04E-03	1.10E-03	
Ho-166m	M		5.00E-03	9.62E-04	9.18E-04	6.62E-04	4.85E-04	4.40E-04	4.40E-04	4.55E-04	
Ho-166m	S		5.00E-03	5.03E-04	4.74E-04	3.40E-04	2.45E-04	2.22E-04	2.13E-04	2.22E-04	
Ho-167	F		5.00E-03	1.10E-06	7.62E-07	3.46E-07	2.18E-07	1.25E-07	1.05E-07	1.29E-07	
Ho-167	M		5.00E-03	2.00E-06	1.39E-06	6.92E-07	4.66E-07	3.35E-07	2.73E-07	3.17E-07	
Ho-167	S		5.00E-03	2.10E-06	1.47E-06	7.29E-07	4.96E-07	3.59E-07	2.92E-07	3.37E-07	
Ho-168			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-168m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ho-170			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-118	F		1.00E+00	2.10E-06	1.87E-06	9.14E-07	4.63E-07	2.78E-07	1.90E-07	2.54E-07	
I-118	M		2.00E-01	1.34E-06	8.88E-07	4.18E-07	2.45E-07	1.52E-07	1.22E-07	1.51E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
I-118	S		2.00E-02	1.07E-06	7.03E-07	3.24E-07	2.02E-07	1.27E-07	1.06E-07	1.28E-07	
I-118	V	Vapor	1.00E+00	4.92E-06	4.37E-06	2.47E-06	1.28E-06	8.55E-07	5.92E-07	7.51E-07	
I-118	V	Methyl Iodide	1.00E+00	3.37E-06	3.13E-06	1.75E-06	8.58E-07	5.55E-07	3.56E-07	4.74E-07	
I-118m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-119	F		1.00E+00	5.51E-07	4.33E-07	2.08E-07	1.15E-07	7.10E-08	5.44E-08	6.85E-08	
I-119	M		2.00E-01	5.51E-07	3.81E-07	1.79E-07	1.12E-07	7.03E-08	5.77E-08	6.96E-08	
I-119	S		2.00E-02	5.40E-07	3.70E-07	1.75E-07	1.11E-07	6.99E-08	5.77E-08	6.96E-08	
I-119	V	Vapor	1.00E+00	1.11E-06	8.92E-07	5.18E-07	3.09E-07	2.21E-07	1.80E-07	2.09E-07	
I-119	V	Methyl Iodide	1.00E+00	5.55E-07	4.77E-07	2.62E-07	1.30E-07	8.70E-08	5.88E-08	7.62E-08	
I-120	F		1.00E+00	3.96E-06	3.26E-06	1.51E-06	7.33E-07	4.44E-07	3.13E-07	4.18E-07	
I-120	M		2.00E-01	3.42E-06	2.38E-06	1.12E-06	6.81E-07	4.14E-07	3.38E-07	4.14E-07	
I-120	S		2.00E-02	3.28E-06	2.24E-06	1.06E-06	6.59E-07	4.03E-07	3.33E-07	4.03E-07	
I-120	V	Vapor	1.00E+00	9.21E-06	7.55E-06	4.03E-06	1.99E-06	1.34E-06	9.32E-07	1.20E-06	
I-120	V	Methyl Iodide	1.00E+00	7.03E-06	6.07E-06	3.19E-06	1.49E-06	9.77E-07	6.40E-07	8.55E-07	
I-120m	F		1.00E+00	2.31E-06	1.86E-06	8.92E-07	4.81E-07	2.91E-07	2.18E-07	2.79E-07	
I-120m	M		2.00E-01	2.22E-06	1.59E-06	7.70E-07	4.74E-07	2.92E-07	2.36E-07	2.88E-07	
I-120m	S		2.00E-02	2.21E-06	1.57E-06	7.62E-07	4.74E-07	2.93E-07	2.39E-07	2.89E-07	
I-120m	V	Vapor	1.00E+00	4.07E-06	3.21E-06	1.75E-06	9.44E-07	6.51E-07	4.92E-07	5.99E-07	
I-120m	V	Methyl Iodide	1.00E+00	2.75E-06	2.34E-06	1.24E-06	6.03E-07	4.00E-07	2.69E-07	3.52E-07	
I-121	F		1.00E+00	7.47E-07	6.81E-07	3.58E-07	2.02E-07	1.30E-07	9.32E-08	1.17E-07	
I-121	M		2.00E-01	6.92E-07	5.22E-07	2.67E-07	1.68E-07	1.11E-07	8.73E-08	1.05E-07	
I-121	S		2.00E-02	6.33E-07	4.74E-07	2.40E-07	1.54E-07	1.01E-07	8.14E-08	9.69E-08	
I-121	V	Vapor	1.00E+00	1.85E-06	1.66E-06	9.99E-07	5.77E-07	4.07E-07	2.93E-07	3.55E-07	
I-121	V	Methyl Iodide	1.00E+00	1.33E-06	1.23E-06	7.29E-07	4.03E-07	2.79E-07	1.91E-07	2.38E-07	
I-122			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-123	F		1.00E+00	3.33E-06	3.02E-06	1.44E-06	6.81E-07	4.18E-07	2.82E-07	3.81E-07	
I-123	M		2.00E-01	2.03E-06	1.48E-06	7.47E-07	4.59E-07	3.11E-07	2.41E-07	2.90E-07	
I-123	S		2.00E-02	1.65E-06	1.22E-06	6.29E-07	4.14E-07	2.87E-07	2.28E-07	2.68E-07	
I-123	V	Vapor	1.00E+00	7.88E-06	6.99E-06	3.81E-06	1.81E-06	1.21E-06	8.03E-07	1.05E-06	
I-123	V	Methyl Iodide	1.00E+00	6.07E-06	5.40E-06	2.93E-06	1.37E-06	9.07E-07	5.88E-07	7.84E-07	
I-124	F		1.00E+00	1.74E-04	1.68E-04	8.33E-05	4.07E-05	2.48E-05	1.65E-05	2.22E-05	
I-124	M		2.00E-01	5.11E-05	3.46E-05	1.73E-05	9.47E-06	6.03E-06	4.40E-06	5.59E-06	
I-124	S		2.00E-02	2.30E-05	1.65E-05	8.40E-06	5.37E-06	3.54E-06	2.87E-06	3.41E-06	
I-124	V	Vapor	1.00E+00	4.03E-04	3.81E-04	2.14E-04	1.04E-04	6.88E-05	4.40E-05	5.81E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
I-124	V	Methyl Iodide	1.00E+00	3.16E-04	2.97E-04	1.67E-04	8.14E-05	5.37E-05	3.43E-05	4.55E-05	
I-125	F		1.00E+00	7.66E-05	8.66E-05	5.51E-05	4.18E-05	2.71E-05	1.94E-05	2.31E-05	
I-125	M		2.00E-01	2.62E-05	2.12E-05	1.37E-05	9.99E-06	6.96E-06	5.14E-06	5.99E-06	
I-125	S		2.00E-02	9.03E-06	6.73E-06	3.85E-06	2.53E-06	1.82E-06	1.47E-06	1.69E-06	
I-125	V	Vapor	1.00E+00	1.78E-04	1.96E-04	1.42E-04	1.07E-04	7.51E-05	5.18E-05	6.11E-05	
I-125	V	Methyl Iodide	1.00E+00	1.39E-04	1.53E-04	1.11E-04	8.36E-05	5.85E-05	4.03E-05	4.77E-05	
I-126	F		1.00E+00	3.05E-04	3.13E-04	1.67E-04	9.07E-05	5.51E-05	3.68E-05	4.85E-05	
I-126	M		2.00E-01	9.07E-05	6.51E-05	3.55E-05	2.07E-05	1.41E-05	1.01E-05	1.25E-05	
I-126	S		2.00E-02	3.11E-05	2.22E-05	1.23E-05	8.40E-06	6.70E-06	5.33E-06	6.03E-06	
I-126	V	Vapor	1.00E+00	7.07E-04	7.10E-04	4.29E-04	2.32E-04	1.54E-04	9.84E-05	1.27E-04	
I-126	V	Methyl Iodide	1.00E+00	5.51E-04	5.55E-04	3.35E-04	1.81E-04	1.20E-04	7.66E-05	9.92E-05	
I-128	F		1.00E+00	5.62E-07	3.92E-07	1.72E-07	9.81E-08	5.99E-08	4.81E-08	5.99E-08	
I-128	M		2.00E-01	6.96E-07	4.40E-07	1.95E-07	1.25E-07	8.18E-08	6.92E-08	8.21E-08	
I-128	S		2.00E-02	7.10E-07	4.48E-07	1.98E-07	1.28E-07	8.40E-08	7.18E-08	8.47E-08	
I-128	V	Vapor	1.00E+00	1.55E-06	1.02E-06	5.92E-07	3.77E-07	2.73E-07	2.36E-07	2.69E-07	
I-128	V	Methyl Iodide	1.00E+00	5.44E-07	4.51E-07	2.31E-07	1.10E-07	7.10E-08	4.70E-08	6.29E-08	
I-129	F		1.00E+00	2.72E-04	3.26E-04	2.31E-04	2.52E-04	1.72E-04	1.36E-04	1.50E-04	
I-129	M		2.00E-01	1.38E-04	1.23E-04	9.14E-05	9.03E-05	7.03E-05	5.70E-05	6.18E-05	
I-129	S		2.00E-02	1.10E-04	9.84E-05	6.70E-05	4.74E-05	4.07E-05	3.74E-05	4.00E-05	
I-129	V	Vapor	1.00E+00	6.33E-04	7.40E-04	5.92E-04	6.44E-04	4.77E-04	3.63E-04	4.00E-04	
I-129	V	Methyl Iodide	1.00E+00	4.92E-04	5.77E-04	4.63E-04	5.03E-04	3.74E-04	2.83E-04	3.11E-04	
I-130	F		1.00E+00	2.86E-05	2.60E-05	1.24E-05	5.81E-06	3.54E-06	2.38E-06	3.24E-06	
I-130	M		2.00E-01	1.52E-05	1.11E-05	5.55E-06	3.33E-06	2.12E-06	1.65E-06	2.02E-06	
I-130	S		2.00E-02	1.20E-05	8.88E-06	4.48E-06	2.90E-06	1.88E-06	1.50E-06	1.79E-06	
I-130	V	Vapor	1.00E+00	6.70E-05	5.96E-05	3.22E-05	1.51E-05	1.01E-05	6.59E-06	8.73E-06	
I-130	V	Methyl Iodide	1.00E+00	5.22E-05	4.66E-05	2.52E-05	1.17E-05	7.73E-06	5.00E-06	6.66E-06	
I-130m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-131	F		1.00E+00	2.66E-04	2.65E-04	1.35E-04	6.88E-05	4.14E-05	2.73E-05	3.67E-05	
I-131	M		2.00E-01	8.18E-05	5.70E-05	3.02E-05	1.75E-05	1.24E-05	8.99E-06	1.10E-05	
I-131	S		2.00E-02	3.23E-05	2.29E-05	1.28E-05	8.99E-06	7.51E-06	5.92E-06	6.62E-06	
I-131	V	Vapor	1.00E+00	6.18E-04	6.03E-04	3.48E-04	1.76E-04	1.15E-04	7.33E-05	9.66E-05	
I-131	V	Methyl Iodide	1.00E+00	4.81E-04	4.70E-04	2.71E-04	1.37E-04	8.95E-05	5.70E-05	7.51E-05	
I-132	F		1.00E+00	4.14E-06	3.54E-06	1.67E-06	8.07E-07	4.96E-07	3.44E-07	4.59E-07	
I-132	M		2.00E-01	3.67E-06	2.69E-06	1.32E-06	8.21E-07	5.25E-07	4.18E-07	5.07E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
I-132	S		2.00E-02	3.46E-06	2.52E-06	1.24E-06	7.96E-07	5.14E-07	4.14E-07	4.96E-07	
I-132	V	Vapor	1.00E+00	1.01E-05	8.58E-06	4.66E-06	2.35E-06	1.59E-06	1.13E-06	1.43E-06	
I-132	V	Methyl Iodide	1.00E+00	7.51E-06	6.55E-06	3.49E-06	1.64E-06	1.08E-06	7.10E-07	9.40E-07	
I-132m	F		1.00E+00	3.01E-06	2.62E-06	1.25E-06	5.92E-07	3.60E-07	2.46E-07	3.33E-07	
I-132m	M		2.00E-01	2.91E-06	2.28E-06	1.11E-06	6.48E-07	4.29E-07	3.32E-07	4.03E-07	
I-132m	S		2.00E-02	2.78E-06	2.18E-06	1.07E-06	6.36E-07	4.26E-07	3.33E-07	4.03E-07	
I-132m	V	Vapor	1.00E+00	7.59E-06	6.51E-06	3.60E-06	1.80E-06	1.21E-06	8.66E-07	1.10E-06	
I-132m	V	Methyl Iodide	1.00E+00	5.25E-06	4.59E-06	2.49E-06	1.15E-06	7.47E-07	4.85E-07	6.51E-07	
I-133	F		1.00E+00	7.25E-05	6.62E-05	3.10E-05	1.41E-05	8.40E-06	5.48E-06	7.66E-06	
I-133	M		2.00E-01	2.46E-05	1.64E-05	7.73E-06	4.33E-06	2.75E-06	2.06E-06	2.60E-06	
I-133	S		2.00E-02	1.41E-05	1.08E-05	5.18E-06	3.35E-06	1.97E-06	1.78E-06	2.10E-06	
I-133	V	Vapor	1.00E+00	1.69E-04	1.51E-04	8.03E-05	3.63E-05	2.35E-05	1.49E-05	2.03E-05	
I-133	V	Methyl Iodide	1.00E+00	1.32E-04	1.19E-04	6.29E-05	2.83E-05	1.83E-05	1.15E-05	1.58E-05	
I-134	F		1.00E+00	1.64E-06	1.31E-06	6.29E-07	3.47E-07	2.11E-07	1.61E-07	2.04E-07	
I-134	M		2.00E-01	1.72E-06	1.24E-06	6.07E-07	3.81E-07	2.44E-07	1.98E-07	2.38E-07	
I-134	S		2.00E-02	1.73E-06	1.24E-06	6.03E-07	3.85E-07	2.48E-07	2.02E-07	2.42E-07	
I-134	V	Vapor	1.00E+00	3.08E-06	2.45E-06	1.38E-06	8.07E-07	5.70E-07	5.33E-07	5.99E-07	
I-134	V	Methyl Iodide	1.00E+00	1.75E-06	1.49E-06	7.96E-07	3.89E-07	2.57E-07	1.74E-07	2.27E-07	
I-134m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
I-135	F		1.00E+00	1.43E-05	1.28E-05	5.99E-06	2.78E-06	1.69E-06	1.13E-06	1.55E-06	
I-135	M		2.00E-01	7.99E-06	5.74E-06	2.81E-06	1.69E-06	1.08E-06	8.51E-07	1.04E-06	
I-135	S		2.00E-02	6.55E-06	4.74E-06	2.35E-06	1.52E-06	9.84E-07	7.96E-07	9.47E-07	
I-135	V	Vapor	1.00E+00	3.38E-05	2.96E-05	1.59E-05	7.40E-06	4.88E-06	3.23E-06	4.29E-06	
I-135	V	Methyl Iodide	1.00E+00	2.63E-05	2.32E-05	1.24E-05	5.66E-06	3.70E-06	2.38E-06	3.20E-06	
In-103			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-105			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-106			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-106m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-107	F		4.00E-02	4.96E-07	3.62E-07	1.73E-07	1.05E-07	6.14E-08	5.03E-08	6.22E-08	
In-107	M		4.00E-02	7.51E-07	5.40E-07	2.66E-07	1.69E-07	1.12E-07	9.07E-08	1.08E-07	
In-107	S		4.00E-02	7.81E-07	5.59E-07	2.76E-07	1.76E-07	1.17E-07	9.55E-08	1.13E-07	
In-108	F		4.00E-02	1.07E-06	8.81E-07	4.55E-07	2.75E-07	1.62E-07	1.30E-07	1.59E-07	
In-108	M		4.00E-02	1.36E-06	1.09E-06	5.66E-07	3.48E-07	2.13E-07	1.69E-07	2.06E-07	
In-108	S		4.00E-02	1.39E-06	1.12E-06	5.77E-07	3.56E-07	2.19E-07	1.74E-07	2.11E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
In-108m	F		4.00E-02	8.81E-07	6.36E-07	3.04E-07	1.85E-07	1.08E-07	8.81E-08	1.09E-07	
In-108m	M		4.00E-02	1.26E-06	8.84E-07	4.26E-07	2.64E-07	1.63E-07	1.33E-07	1.62E-07	
In-108m	S		4.00E-02	1.30E-06	9.14E-07	4.37E-07	2.72E-07	1.69E-07	1.38E-07	1.68E-07	
In-109	F		4.00E-02	8.81E-07	7.14E-07	3.63E-07	2.18E-07	1.27E-07	1.02E-07	1.26E-07	
In-109	M		4.00E-02	1.08E-06	8.62E-07	4.44E-07	2.79E-07	1.75E-07	1.39E-07	1.68E-07	
In-109	S		4.00E-02	1.11E-06	8.77E-07	4.55E-07	2.86E-07	1.81E-07	1.44E-07	1.74E-07	
In-109m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-110	F		4.00E-02	3.15E-06	2.69E-06	1.42E-06	8.62E-07	5.07E-07	4.03E-07	4.96E-07	
In-110	M		4.00E-02	3.77E-06	3.17E-06	1.67E-06	1.04E-06	6.14E-07	4.85E-07	5.96E-07	
In-110	S		4.00E-02	3.85E-06	3.23E-06	1.70E-06	1.05E-06	6.25E-07	4.92E-07	6.07E-07	
In-110m	F		4.00E-02	1.11E-06	7.88E-07	3.70E-07	2.25E-07	1.30E-07	1.06E-07	1.32E-07	
In-110m	M		4.00E-02	1.66E-06	1.15E-06	5.48E-07	3.44E-07	2.16E-07	1.77E-07	2.13E-07	
In-110m	S		4.00E-02	1.72E-06	1.19E-06	5.70E-07	3.57E-07	2.25E-07	1.85E-07	2.22E-07	
In-111	F		4.00E-02	4.33E-06	3.23E-06	1.58E-06	9.84E-07	5.77E-07	4.70E-07	5.77E-07	
In-111	M		4.00E-02	5.74E-06	4.37E-06	2.31E-06	1.54E-06	1.09E-06	8.62E-07	1.01E-06	
In-111	S		4.00E-02	5.92E-06	4.51E-06	2.40E-06	1.61E-06	1.15E-06	9.10E-07	1.06E-06	
In-111m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-112	F		4.00E-02	1.68E-07	1.14E-07	5.11E-08	3.32E-08	2.07E-08	1.78E-08	2.12E-08	
In-112	M		4.00E-02	2.50E-07	1.69E-07	7.70E-08	5.07E-08	3.34E-08	2.85E-08	3.35E-08	
In-112	S		4.00E-02	2.59E-07	1.75E-07	7.96E-08	5.29E-08	3.49E-08	2.97E-08	3.49E-08	
In-112m	F		4.00E-02	3.77E-07	2.54E-07	1.12E-07	7.36E-08	4.59E-08	4.00E-08	4.74E-08	
In-112m	M		4.00E-02	6.40E-07	4.33E-07	1.99E-07	1.35E-07	9.29E-08	7.88E-08	9.14E-08	
In-112m	S		4.00E-02	6.70E-07	4.51E-07	2.09E-07	1.42E-07	9.84E-08	8.29E-08	9.62E-08	
In-113m	F		4.00E-02	3.77E-07	2.65E-07	1.22E-07	7.55E-08	4.40E-08	3.65E-08	4.48E-08	
In-113m	M		4.00E-02	6.14E-07	4.29E-07	2.06E-07	1.35E-07	9.14E-08	7.47E-08	8.81E-08	
In-113m	S		4.00E-02	6.40E-07	4.44E-07	2.15E-07	1.41E-07	9.66E-08	7.88E-08	9.25E-08	
In-114			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-114m	F		4.00E-02	4.33E-04	2.90E-04	1.27E-04	7.03E-05	4.03E-05	3.50E-05	4.37E-05	
In-114m	M		4.00E-02	2.67E-04	1.94E-04	1.04E-04	6.81E-05	5.25E-05	4.37E-05	4.96E-05	
In-114m	S		4.00E-02	2.53E-04	1.89E-04	1.07E-04	7.33E-05	5.92E-05	5.00E-05	5.55E-05	
In-114m+D	F			4.33E-04	2.90E-04	1.27E-04	7.33E-05	5.92E-05	5.00E-05	5.75E-05	
In-114m+E	F			4.33E-04	2.90E-04	1.27E-04	7.33E-05	5.92E-05	5.00E-05	5.75E-05	
In-115	F		4.00E-02	3.07E-03	2.90E-03	2.05E-03	1.85E-03	1.56E-03	1.45E-03	1.51E-03	
In-115	M		4.00E-02	1.13E-03	1.05E-03	8.88E-04	6.96E-04	6.40E-04	6.07E-04	6.25E-04	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
In-115	S		4.00E-02	4.66E-04	3.74E-04	2.65E-04	1.97E-04	1.75E-04	1.64E-04	1.73E-04	
In-115m	F		4.00E-02	1.05E-06	7.14E-07	3.16E-07	1.93E-07	1.07E-07	8.88E-08	1.11E-07	
In-115m	M		4.00E-02	1.78E-06	1.23E-06	5.92E-07	3.92E-07	2.70E-07	2.19E-07	2.58E-07	
In-115m	S		4.00E-02	1.86E-06	1.28E-06	6.22E-07	4.14E-07	2.88E-07	2.34E-07	2.74E-07	
In-116m	F		4.00E-02	9.21E-07	6.96E-07	3.44E-07	2.11E-07	1.26E-07	1.03E-07	1.26E-07	
In-116m	M		4.00E-02	1.35E-06	9.95E-07	4.96E-07	3.18E-07	2.08E-07	1.69E-07	2.01E-07	
In-116m	S		4.00E-02	1.39E-06	1.03E-06	5.14E-07	3.29E-07	2.17E-07	1.76E-07	2.09E-07	
In-117	F		4.00E-02	5.11E-07	3.57E-07	1.65E-07	1.05E-07	6.44E-08	5.48E-08	6.55E-08	
In-117	M		4.00E-02	8.36E-07	5.81E-07	2.78E-07	1.86E-07	1.28E-07	1.07E-07	1.24E-07	
In-117	S		4.00E-02	8.73E-07	6.07E-07	2.91E-07	1.95E-07	1.35E-07	1.12E-07	1.31E-07	
In-117m	F		4.00E-02	1.28E-06	8.47E-07	3.74E-07	2.29E-07	1.29E-07	1.08E-07	1.34E-07	
In-117m	M		4.00E-02	2.21E-06	1.49E-06	7.10E-07	4.70E-07	3.24E-07	2.66E-07	3.11E-07	
In-117m	S		4.00E-02	2.32E-06	1.56E-06	7.47E-07	4.96E-07	3.45E-07	2.83E-07	3.31E-07	
In-118			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-118m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-119			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-119m	F		4.00E-02	4.40E-07	2.72E-07	1.17E-07	7.36E-08	4.44E-08	3.85E-08	4.66E-08	
In-119m	M		4.00E-02	6.73E-07	4.18E-07	1.85E-07	1.19E-07	7.59E-08	6.51E-08	7.73E-08	
In-119m	S		4.00E-02	6.99E-07	4.37E-07	1.92E-07	1.24E-07	7.96E-08	6.81E-08	8.10E-08	
In-121			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
In-121m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-180			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-182	F		2.00E-02	5.66E-07	3.89E-07	1.79E-07	1.12E-07	6.81E-08	5.70E-08	6.92E-08	
Ir-182	M		2.00E-02	8.29E-07	5.62E-07	2.64E-07	1.69E-07	1.10E-07	9.18E-08	1.09E-07	
Ir-182	S		2.00E-02	8.58E-07	5.81E-07	2.74E-07	1.76E-07	1.14E-07	9.55E-08	1.14E-07	
Ir-183	F		2.00E-02	7.03E-07	5.48E-07	2.71E-07	1.66E-07	9.84E-08	7.99E-08	9.77E-08	
Ir-183	M		2.00E-02	1.05E-06	7.92E-07	4.03E-07	2.60E-07	1.74E-07	1.40E-07	1.66E-07	
Ir-183	S		2.00E-02	1.09E-06	8.21E-07	4.22E-07	2.72E-07	1.83E-07	1.48E-07	1.74E-07	
Ir-184	F		2.00E-02	2.30E-06	1.76E-06	8.62E-07	5.29E-07	3.05E-07	2.48E-07	3.06E-07	
Ir-184	M		2.00E-02	3.49E-06	2.59E-06	1.31E-06	8.40E-07	5.48E-07	4.44E-07	5.29E-07	
Ir-184	S		2.00E-02	3.62E-06	2.69E-06	1.35E-06	8.73E-07	5.77E-07	4.66E-07	5.51E-07	
Ir-185	F		2.00E-02	3.70E-06	2.84E-06	1.38E-06	8.51E-07	4.81E-07	3.92E-07	4.85E-07	
Ir-185	M		2.00E-02	5.99E-06	4.44E-06	2.29E-06	1.49E-06	1.01E-06	8.14E-07	9.62E-07	
Ir-185	S		2.00E-02	6.25E-06	4.66E-06	2.41E-06	1.58E-06	1.08E-06	8.70E-07	1.02E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)						
				Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Ir-186	F		2.00E-02	6.18E-06	4.81E-06	2.39E-06	1.48E-06	8.44E-07	6.88E-07	8.47E-07
Ir-186	M		2.00E-02	9.29E-06	7.10E-06	3.64E-06	2.38E-06	1.56E-06	1.25E-06	1.49E-06
Ir-186	S		2.00E-02	9.66E-06	7.33E-06	3.77E-06	2.48E-06	1.64E-06	1.32E-06	1.56E-06
Ir-186m	F		2.00E-02	9.44E-07	7.44E-07	3.74E-07	2.29E-07	1.33E-07	1.08E-07	1.33E-07
Ir-186m	M		2.00E-02	1.36E-06	1.04E-06	5.33E-07	3.41E-07	2.21E-07	1.78E-07	2.12E-07
Ir-186m	S		2.00E-02	1.41E-06	1.08E-06	5.51E-07	3.53E-07	2.31E-07	1.85E-07	2.21E-07
Ir-187	F		2.00E-02	1.27E-06	9.69E-07	4.70E-07	2.85E-07	1.60E-07	1.29E-07	1.61E-07
Ir-187	M		2.00E-02	2.06E-06	1.53E-06	7.81E-07	5.03E-07	3.33E-07	2.69E-07	3.19E-07
Ir-187	S		2.00E-02	2.15E-06	1.59E-06	8.18E-07	5.25E-07	3.53E-07	2.85E-07	3.37E-07
Ir-188	F		2.00E-02	8.99E-06	7.25E-06	3.74E-06	2.34E-06	1.37E-06	1.12E-06	1.36E-06
Ir-188	M		2.00E-02	1.20E-05	9.51E-06	5.03E-06	3.28E-06	2.14E-06	1.71E-06	2.03E-06
Ir-188	S		2.00E-02	1.23E-05	9.77E-06	5.18E-06	3.39E-06	2.23E-06	1.78E-06	2.11E-06
Ir-189	F		2.00E-02	4.22E-06	3.02E-06	1.40E-06	8.62E-07	4.92E-07	4.03E-07	5.00E-07
Ir-189	M		2.00E-02	9.47E-06	6.85E-06	3.92E-06	2.71E-06	2.23E-06	1.82E-06	2.03E-06
Ir-189	S		2.00E-02	1.05E-05	7.59E-06	4.44E-06	3.06E-06	2.55E-06	2.08E-06	2.32E-06
Ir-190	F		2.00E-02	1.96E-05	1.53E-05	7.84E-06	5.03E-06	3.07E-06	2.57E-06	3.07E-06
Ir-190	M		2.00E-02	2.75E-05	2.15E-05	1.21E-05	8.29E-06	5.66E-06	4.51E-06	5.25E-06
Ir-190	S		2.00E-02	2.90E-05	2.28E-05	1.30E-05	8.88E-06	6.25E-06	5.00E-06	5.77E-06
Ir-190m	F		2.00E-02	1.01E-07	7.51E-08	3.70E-08	2.32E-08	1.39E-08	1.16E-08	1.40E-08
Ir-190m	M		2.00E-02	1.45E-07	1.07E-07	5.70E-08	3.81E-08	2.51E-08	2.01E-08	2.38E-08
Ir-190m	S		2.00E-02	1.53E-07	1.13E-07	6.07E-08	4.07E-08	2.76E-08	2.20E-08	2.58E-08
Ir-190n	F		2.00E-02	1.51E-06	1.20E-06	6.03E-07	3.68E-07	2.13E-07	1.72E-07	2.12E-07
Ir-190n	M		2.00E-02	2.21E-06	1.71E-06	8.77E-07	5.62E-07	3.69E-07	2.96E-07	3.52E-07
Ir-190n	S		2.00E-02	2.29E-06	1.76E-06	9.10E-07	5.85E-07	3.89E-07	3.09E-07	3.67E-07
Ir-191m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-192	F		2.00E-02	5.62E-05	4.22E-05	2.11E-05	1.23E-05	7.59E-06	6.51E-06	7.81E-06
Ir-192	M		2.00E-02	8.66E-05	6.77E-05	4.00E-05	2.81E-05	2.38E-05	1.93E-05	2.13E-05
Ir-192	S		2.00E-02	1.04E-04	8.33E-05	5.00E-05	3.51E-05	3.02E-05	2.45E-05	2.70E-05
Ir-192m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-192n	F		2.00E-02	1.65E-04	1.36E-04	7.25E-05	4.59E-05	2.93E-05	2.56E-05	2.98E-05
Ir-192n	M		2.00E-02	1.86E-04	1.57E-04	9.51E-05	6.48E-05	5.37E-05	4.51E-05	4.96E-05
Ir-192n	S		2.00E-02	5.62E-04	5.37E-04	3.70E-04	2.55E-04	2.25E-04	2.15E-04	2.26E-04
Ir-193m	F		2.00E-02	4.03E-06	2.99E-06	1.31E-06	8.03E-07	4.33E-07	3.65E-07	4.59E-07
Ir-193m	M		2.00E-02	1.71E-05	1.26E-05	7.59E-06	5.51E-06	4.96E-06	3.92E-06	4.33E-06

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ir-193m	S		2.00E-02	1.93E-05	1.42E-05	8.62E-06	6.29E-06	5.70E-06	4.55E-06	5.00E-06	
Ir-194	F		2.00E-02	1.09E-05	7.10E-06	3.01E-06	1.84E-06	9.18E-07	7.62E-07	9.92E-07	
Ir-194	M		2.00E-02	1.96E-05	1.31E-05	5.96E-06	3.81E-06	2.33E-06	1.94E-06	2.35E-06	
Ir-194	S		2.00E-02	2.05E-05	1.37E-05	6.33E-06	4.03E-06	2.49E-06	2.07E-06	2.50E-06	
Ir-194m	F		2.00E-02	1.22E-04	9.84E-05	5.29E-05	3.47E-05	2.27E-05	1.99E-05	2.29E-05	
Ir-194m	M		2.00E-02	1.36E-04	1.11E-04	6.77E-05	4.70E-05	3.85E-05	3.18E-05	3.52E-05	
Ir-194m	S		2.00E-02	1.75E-04	1.48E-04	9.32E-05	6.44E-05	5.40E-05	4.44E-05	4.92E-05	
Ir-195	F		2.00E-02	1.07E-06	6.99E-07	3.00E-07	1.88E-07	1.07E-07	9.10E-08	1.12E-07	
Ir-195	M		2.00E-02	2.01E-06	1.34E-06	6.36E-07	4.26E-07	3.02E-07	2.48E-07	2.89E-07	
Ir-195	S		2.00E-02	2.11E-06	1.41E-06	6.73E-07	4.51E-07	3.23E-07	2.65E-07	3.08E-07	
Ir-195m	F		2.00E-02	1.64E-06	1.14E-06	5.11E-07	3.19E-07	1.79E-07	1.51E-07	1.86E-07	
Ir-195m	M		2.00E-02	3.12E-06	2.19E-06	1.10E-06	7.44E-07	5.44E-07	4.40E-07	5.07E-07	
Ir-195m	S		2.00E-02	3.29E-06	2.31E-06	1.17E-06	7.92E-07	5.85E-07	4.74E-07	5.44E-07	
Ir-196			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ir-196m	F		2.00E-02	1.58E-06	1.20E-06	5.85E-07	3.62E-07	2.16E-07	1.77E-07	2.16E-07	
Ir-196m	M		2.00E-02	2.43E-06	1.80E-06	9.03E-07	5.88E-07	4.00E-07	3.23E-07	3.81E-07	
Ir-196m	S		2.00E-02	2.53E-06	1.86E-06	9.40E-07	6.14E-07	4.22E-07	3.40E-07	4.00E-07	
K-38			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
K-40	F		1.00E+00	8.77E-05	6.14E-05	2.73E-05	1.65E-05	9.03E-06	7.66E-06	9.55E-06	
K-40	M		1.00E+00	2.58E-04	2.09E-04	1.18E-04	7.70E-05	5.81E-05	5.14E-05	5.74E-05	
K-40	S		1.00E+00	8.33E-04	7.84E-04	5.29E-04	3.63E-04	3.17E-04	3.13E-04	3.28E-04	
K-42	F		1.00E+00	5.85E-06	3.74E-06	1.64E-06	9.92E-07	5.48E-07	4.63E-07	5.81E-07	
K-42	M		1.00E+00	1.00E-05	6.77E-06	3.07E-06	2.00E-06	1.43E-06	1.22E-06	1.41E-06	
K-42	S		1.00E+00	9.62E-06	6.48E-06	3.26E-06	2.13E-06	1.54E-06	1.32E-06	1.51E-06	
K-43	F		1.00E+00	4.77E-06	3.57E-06	1.74E-06	1.07E-06	6.22E-07	5.18E-07	6.33E-07	
K-43	M		1.00E+00	7.88E-06	5.88E-06	3.17E-06	2.14E-06	1.62E-06	1.31E-06	1.50E-06	
K-43	S		1.00E+00	8.21E-06	6.18E-06	3.34E-06	2.27E-06	1.74E-06	1.40E-06	1.60E-06	
K-44	F		1.00E+00	8.07E-07	5.37E-07	2.46E-07	1.51E-07	8.99E-08	7.51E-08	9.18E-08	
K-44	M		1.00E+00	1.19E-06	7.84E-07	3.61E-07	2.25E-07	1.41E-07	1.18E-07	1.42E-07	
K-44	S		1.00E+00	1.24E-06	8.10E-07	3.74E-07	2.33E-07	1.47E-07	1.23E-07	1.48E-07	
K-45	F		1.00E+00	5.18E-07	3.50E-07	1.61E-07	9.95E-08	6.03E-08	5.07E-08	6.14E-08	
K-45	M		1.00E+00	7.51E-07	5.03E-07	2.32E-07	1.47E-07	9.32E-08	7.81E-08	9.36E-08	
K-45	S		1.00E+00	7.81E-07	5.22E-07	2.41E-07	1.52E-07	9.69E-08	8.14E-08	9.73E-08	
K-46			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Kr-74			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-75			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-76+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-77			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-79			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-81			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-81m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-83m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-85			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-85m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-87			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-88			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Kr-89			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
La-128			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
La-129	F		5.00E-03	2.88E-07	2.00E-07	9.29E-08	5.81E-08	3.52E-08	2.94E-08	3.57E-08	
La-129	M		5.00E-03	4.07E-07	2.78E-07	1.30E-07	8.33E-08	5.29E-08	4.40E-08	5.25E-08	
La-129	S		5.00E-03	4.18E-07	2.87E-07	1.34E-07	8.58E-08	5.48E-08	4.59E-08	5.48E-08	
La-130			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
La-131	F		5.00E-03	4.37E-07	3.18E-07	1.53E-07	9.47E-08	5.66E-08	4.63E-08	5.66E-08	
La-131	M		5.00E-03	6.62E-07	4.74E-07	2.35E-07	1.52E-07	1.03E-07	8.36E-08	9.88E-08	
La-131	S		5.00E-03	6.88E-07	4.92E-07	2.45E-07	1.59E-07	1.09E-07	8.81E-08	1.04E-07	
La-132	F		5.00E-03	4.03E-06	2.96E-06	1.41E-06	8.62E-07	4.77E-07	3.89E-07	4.85E-07	
La-132	M		5.00E-03	6.07E-06	4.37E-06	2.09E-06	1.31E-06	7.77E-07	6.36E-07	7.77E-07	
La-132	S		5.00E-03	6.29E-06	4.51E-06	2.17E-06	1.36E-06	8.10E-07	6.62E-07	8.10E-07	
La-132m	F		5.00E-03	4.26E-07	3.15E-07	1.51E-07	9.36E-08	5.48E-08	4.48E-08	5.51E-08	
La-132m	M		5.00E-03	6.44E-07	4.66E-07	2.26E-07	1.44E-07	9.07E-08	7.44E-08	8.92E-08	
La-132m	S		5.00E-03	6.66E-07	4.81E-07	2.35E-07	1.50E-07	9.44E-08	7.73E-08	9.29E-08	
La-133	F		5.00E-03	3.81E-07	2.87E-07	1.41E-07	8.66E-08	5.07E-08	4.22E-08	5.14E-08	
La-133	M		5.00E-03	5.44E-07	3.96E-07	1.94E-07	1.22E-07	7.62E-08	6.22E-08	7.47E-08	
La-133	S		5.00E-03	5.62E-07	4.07E-07	1.99E-07	1.26E-07	7.84E-08	6.36E-08	7.70E-08	
La-134			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
La-135	F		5.00E-03	3.85E-07	2.95E-07	1.44E-07	8.73E-08	4.88E-08	3.89E-08	4.88E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
La-135	M		5.00E-03	5.11E-07	3.85E-07	1.88E-07	1.16E-07	6.66E-08	5.29E-08	6.59E-08	
La-135	S		5.00E-03	5.25E-07	3.92E-07	1.94E-07	1.20E-07	6.88E-08	5.48E-08	6.81E-08	
La-136			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
La-137	F		5.00E-03	9.32E-05	8.62E-05	5.59E-05	4.07E-05	3.36E-05	3.31E-05	3.49E-05	
La-137	M		5.00E-03	3.25E-05	3.09E-05	2.14E-05	1.53E-05	1.38E-05	1.38E-05	1.43E-05	
La-137	S		5.00E-03	2.06E-05	1.95E-05	1.38E-05	9.66E-06	8.51E-06	8.21E-06	8.58E-06	
La-138	F		5.00E-03	1.37E-03	1.29E-03	8.88E-04	6.85E-04	5.81E-04	5.77E-04	5.99E-04	
La-138	M		5.00E-03	4.70E-04	4.59E-04	3.37E-04	2.53E-04	2.38E-04	2.39E-04	2.45E-04	
La-138	S		5.00E-03	2.57E-04	2.46E-04	1.82E-04	1.34E-04	1.23E-04	1.19E-04	1.23E-04	
La-140	F		5.00E-03	2.13E-05	1.55E-05	7.36E-06	4.55E-06	2.56E-06	2.10E-06	2.61E-06	
La-140	M		5.00E-03	3.24E-05	2.35E-05	1.16E-05	7.55E-06	4.88E-06	3.96E-06	4.74E-06	
La-140	S		5.00E-03	3.37E-05	2.44E-05	1.21E-05	7.88E-06	5.14E-06	4.18E-06	5.00E-06	
La-141	F		5.00E-03	2.99E-06	2.09E-06	8.81E-07	5.37E-07	2.82E-07	2.38E-07	3.02E-07	
La-141	M		5.00E-03	5.44E-06	3.54E-06	1.63E-06	1.04E-06	6.70E-07	5.51E-07	6.62E-07	
La-141	S		5.00E-03	5.74E-06	3.74E-06	1.73E-06	1.11E-06	7.22E-07	5.96E-07	7.14E-07	
La-142	F		5.00E-03	1.86E-06	1.32E-06	6.18E-07	3.77E-07	2.16E-07	1.78E-07	2.21E-07	
La-142	M		5.00E-03	2.90E-06	2.01E-06	9.58E-07	6.07E-07	3.85E-07	3.15E-07	3.77E-07	
La-142	S		5.00E-03	3.02E-06	2.09E-06	9.99E-07	6.33E-07	4.00E-07	3.30E-07	3.96E-07	
La-143	F		5.00E-03	5.11E-07	3.23E-07	1.40E-07	8.77E-08	5.18E-08	4.44E-08	5.40E-08	
La-143	M		5.00E-03	7.77E-07	5.00E-07	2.25E-07	1.45E-07	9.47E-08	8.03E-08	9.51E-08	
La-143	S		5.00E-03	8.07E-07	5.18E-07	2.35E-07	1.52E-07	9.99E-08	8.47E-08	1.00E-07	
Lu-165	F		5.00E-03	2.75E-07	1.95E-07	9.29E-08	5.88E-08	3.69E-08	3.07E-08	3.68E-08	
Lu-165	M		5.00E-03	4.00E-07	2.79E-07	1.36E-07	8.81E-08	5.92E-08	4.92E-08	5.77E-08	
Lu-165	S		5.00E-03	4.14E-07	2.89E-07	1.41E-07	9.14E-08	6.18E-08	5.11E-08	6.03E-08	
Lu-167	F		5.00E-03	6.48E-07	5.00E-07	2.50E-07	1.53E-07	9.10E-08	7.36E-08	9.03E-08	
Lu-167	M		5.00E-03	9.84E-07	7.36E-07	3.85E-07	2.47E-07	1.69E-07	1.37E-07	1.60E-07	
Lu-167	S		5.00E-03	1.02E-06	7.66E-07	4.00E-07	2.58E-07	1.79E-07	1.44E-07	1.69E-07	
Lu-169	F		5.00E-03	7.10E-06	5.55E-06	2.85E-06	1.75E-06	1.03E-06	8.47E-07	1.03E-06	
Lu-169	M		5.00E-03	9.81E-06	7.62E-06	4.11E-06	2.72E-06	1.89E-06	1.52E-06	1.77E-06	
Lu-169	S		5.00E-03	1.03E-05	7.99E-06	4.37E-06	2.89E-06	2.05E-06	1.65E-06	1.91E-06	
Lu-169m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-170	F		5.00E-03	1.12E-05	8.95E-06	4.66E-06	2.94E-06	1.74E-06	1.43E-06	1.73E-06	
Lu-170	M		5.00E-03	1.54E-05	1.22E-05	6.51E-06	4.29E-06	2.84E-06	2.28E-06	2.69E-06	
Lu-170	S		5.00E-03	1.59E-05	1.26E-05	6.73E-06	4.44E-06	2.97E-06	2.38E-06	2.80E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Lu-171	F		5.00E-03	1.02E-05	7.10E-06	3.49E-06	2.16E-06	1.28E-06	1.09E-06	1.32E-06	
Lu-171	M		5.00E-03	1.79E-05	1.48E-05	7.36E-06	5.11E-06	4.07E-06	3.31E-06	3.74E-06	
Lu-171	S		5.00E-03	1.91E-05	1.58E-05	7.99E-06	5.59E-06	4.51E-06	3.66E-06	4.11E-06	
Lu-171m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-172	F		5.00E-03	2.00E-05	1.52E-05	7.81E-06	4.92E-06	2.99E-06	2.49E-06	2.99E-06	
Lu-172	M		5.00E-03	3.24E-05	2.49E-05	1.40E-05	9.55E-06	6.55E-06	5.25E-06	6.11E-06	
Lu-172	S		5.00E-03	3.43E-05	2.64E-05	1.49E-05	1.03E-05	7.22E-06	5.77E-06	6.66E-06	
Lu-172m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-173	F		5.00E-03	1.01E-04	8.51E-05	4.85E-05	2.85E-05	1.87E-05	1.69E-05	1.95E-05	
Lu-173	M		5.00E-03	5.37E-05	4.51E-05	2.75E-05	1.72E-05	1.34E-05	1.17E-05	1.30E-05	
Lu-173	S		5.00E-03	5.44E-05	4.63E-05	2.90E-05	1.91E-05	1.54E-05	1.31E-05	1.45E-05	
Lu-174	F		5.00E-03	1.34E-04	1.18E-04	6.81E-05	4.07E-05	2.83E-05	2.67E-05	3.00E-05	
Lu-174	M		5.00E-03	6.70E-05	5.81E-05	3.61E-05	2.27E-05	1.85E-05	1.67E-05	1.82E-05	
Lu-174	S		5.00E-03	6.36E-05	5.48E-05	3.49E-05	2.31E-05	1.92E-05	1.67E-05	1.83E-05	
Lu-174m	F		5.00E-03	8.84E-05	7.03E-05	3.74E-05	2.09E-05	1.28E-05	1.14E-05	1.36E-05	
Lu-174m	M		5.00E-03	7.07E-05	5.48E-05	3.28E-05	2.09E-05	1.66E-05	1.42E-05	1.58E-05	
Lu-174m	S		5.00E-03	7.51E-05	5.81E-05	3.54E-05	2.35E-05	1.92E-05	1.62E-05	1.80E-05	
Lu-176	F		5.00E-03	1.68E-03	1.54E-03	9.73E-04	6.85E-04	5.70E-04	5.62E-04	5.96E-04	
Lu-176	M		5.00E-03	6.77E-04	6.25E-04	4.22E-04	2.93E-04	2.67E-04	2.62E-04	2.73E-04	
Lu-176	S		5.00E-03	5.59E-04	5.11E-04	3.50E-04	2.44E-04	2.19E-04	2.08E-04	2.19E-04	
Lu-176m	F		5.00E-03	1.83E-06	1.17E-06	5.00E-07	3.11E-07	1.70E-07	1.45E-07	1.81E-07	
Lu-176m	M		5.00E-03	3.27E-06	2.17E-06	1.03E-06	6.88E-07	4.26E-07	3.96E-07	4.59E-07	
Lu-176m	S		5.00E-03	3.43E-06	2.28E-06	1.09E-06	7.29E-07	4.59E-07	4.26E-07	4.88E-07	
Lu-177	F		5.00E-03	9.25E-06	6.11E-06	2.86E-06	1.62E-06	8.73E-07	7.36E-07	9.32E-07	
Lu-177	M		5.00E-03	1.93E-05	1.40E-05	7.96E-06	5.74E-06	5.00E-06	3.92E-06	4.37E-06	
Lu-177	S		5.00E-03	2.08E-05	1.52E-05	8.73E-06	6.36E-06	5.59E-06	4.40E-06	4.88E-06	
Lu-177m	F		5.00E-03	2.33E-04	1.84E-04	9.88E-05	5.77E-05	3.61E-05	3.16E-05	3.74E-05	
Lu-177m	M		5.00E-03	2.11E-04	1.68E-04	1.02E-04	6.99E-05	5.92E-05	4.85E-05	5.37E-05	
Lu-177m	S		5.00E-03	2.38E-04	1.92E-04	1.19E-04	8.36E-05	7.29E-05	5.92E-05	6.51E-05	
Lu-178	F		5.00E-03	5.14E-07	3.24E-07	1.40E-07	8.92E-08	5.44E-08	4.66E-08	5.62E-08	
Lu-178	M		5.00E-03	8.36E-07	5.29E-07	2.39E-07	1.56E-07	1.04E-07	8.84E-08	1.04E-07	
Lu-178	S		5.00E-03	8.73E-07	5.55E-07	2.49E-07	1.64E-07	1.10E-07	9.29E-08	1.09E-07	
Lu-178m	F		5.00E-03	5.77E-07	4.00E-07	1.82E-07	1.19E-07	7.51E-08	6.36E-08	7.59E-08	
Lu-178m	M		5.00E-03	9.03E-07	6.22E-07	2.92E-07	1.96E-07	1.34E-07	1.12E-07	1.31E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Lu-178m	S		5.00E-03	9.40E-07	6.48E-07	3.05E-07	2.04E-07	1.41E-07	1.18E-07	1.37E-07	
Lu-179	F		5.00E-03	2.24E-06	1.44E-06	6.11E-07	3.77E-07	2.01E-07	1.69E-07	2.14E-07	
Lu-179	M		5.00E-03	3.81E-06	2.51E-06	1.16E-06	7.62E-07	4.51E-07	4.18E-07	4.88E-07	
Lu-179	S		5.00E-03	3.96E-06	2.63E-06	1.22E-06	8.03E-07	4.85E-07	3.92E-07	4.81E-07	
Lu-180			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Lu-181			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mg-27			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mg-28	F		1.00E+00	1.97E-05	1.76E-05	8.18E-06	4.96E-06	2.71E-06	2.23E-06	2.78E-06	
Mg-28	M		1.00E+00	2.69E-05	2.66E-05	1.30E-05	8.36E-06	5.37E-06	4.44E-06	5.25E-06	
Mg-28	S		1.00E+00	2.77E-05	2.76E-05	1.36E-05	8.73E-06	5.70E-06	4.70E-06	5.55E-06	
Mn-50m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mn-51	F		2.00E-01	9.32E-07	6.18E-07	2.78E-07	1.71E-07	1.00E-07	8.36E-08	1.03E-07	
Mn-51	M		2.00E-01	1.49E-06	9.81E-07	4.51E-07	2.86E-07	1.83E-07	1.52E-07	1.82E-07	
Mn-51	S		2.00E-01	1.55E-06	1.02E-06	4.70E-07	2.99E-07	1.92E-07	1.60E-07	1.91E-07	
Mn-52	F		2.00E-01	2.59E-05	2.06E-05	1.08E-05	6.88E-06	4.22E-06	3.51E-06	4.18E-06	
Mn-52	M		2.00E-01	3.19E-05	2.53E-05	1.38E-05	9.10E-06	6.33E-06	5.03E-06	5.88E-06	
Mn-52	S		2.00E-01	3.27E-05	2.60E-05	1.43E-05	9.44E-06	6.62E-06	5.25E-06	6.14E-06	
Mn-52m	F		2.00E-01	7.03E-07	4.85E-07	2.26E-07	1.39E-07	8.29E-08	6.88E-08	8.40E-08	
Mn-52m	M		2.00E-01	1.02E-06	6.92E-07	3.23E-07	2.02E-07	1.27E-07	1.05E-07	1.27E-07	
Mn-52m	S		2.00E-01	1.06E-06	7.14E-07	3.34E-07	2.09E-07	1.31E-07	1.09E-07	1.31E-07	
Mn-53	F		2.00E-01	1.18E-06	8.07E-07	3.89E-07	2.20E-07	1.24E-07	1.05E-07	1.31E-07	
Mn-53	M		2.00E-01	1.67E-06	1.22E-06	6.36E-07	3.68E-07	2.32E-07	1.99E-07	2.38E-07	
Mn-53	S		2.00E-01	4.77E-06	4.29E-06	2.68E-06	1.65E-06	1.30E-06	1.25E-06	1.35E-06	
Mn-54	F		2.00E-01	1.96E-05	1.54E-05	8.36E-06	5.59E-06	3.70E-06	3.21E-06	3.69E-06	
Mn-54	M		2.00E-01	2.83E-05	2.33E-05	1.43E-05	8.88E-06	6.96E-06	5.81E-06	6.55E-06	
Mn-54	S		2.00E-01	4.48E-05	3.92E-05	2.60E-05	1.76E-05	1.43E-05	1.21E-05	1.33E-05	
Mn-56	F		2.00E-01	2.58E-06	1.83E-06	8.47E-07	5.14E-07	2.89E-07	2.38E-07	2.97E-07	
Mn-56	M		2.00E-01	4.14E-06	2.90E-06	1.38E-06	8.73E-07	5.48E-07	4.51E-07	5.44E-07	
Mn-56	S		2.00E-01	4.29E-06	3.01E-06	1.44E-06	9.14E-07	5.77E-07	4.74E-07	5.70E-07	
Mn-57			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mn-58m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-101	F		1.00E+00	5.29E-07	3.61E-07	1.65E-07	1.04E-07	6.36E-08	5.37E-08	6.48E-08	
Mo-101	M		2.00E-01	8.29E-07	5.59E-07	2.59E-07	1.68E-07	1.10E-07	9.25E-08	1.10E-07	
Mo-101	S		2.00E-02	8.62E-07	5.81E-07	2.69E-07	1.75E-07	1.15E-07	9.66E-08	1.14E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Mo-102	F		1.00E+00	6.36E-07	4.00E-07	1.71E-07	1.10E-07	6.70E-08	5.85E-08	6.99E-08	
Mo-102	M		2.00E-01	9.21E-07	5.77E-07	2.53E-07	1.63E-07	1.04E-07	9.03E-08	1.07E-07	
Mo-102	S		2.00E-02	9.51E-07	5.96E-07	2.62E-07	1.69E-07	1.08E-07	9.36E-08	1.11E-07	
Mo-89			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-90	F		1.00E+00	4.59E-06	3.92E-06	1.97E-06	1.20E-06	6.99E-07	5.74E-07	6.99E-07	
Mo-90	M		2.00E-01	9.51E-06	7.36E-06	3.69E-06	2.39E-06	1.54E-06	1.24E-06	1.48E-06	
Mo-90	S		2.00E-02	1.05E-05	7.84E-06	3.92E-06	2.55E-06	1.65E-06	1.33E-06	1.58E-06	
Mo-91	F		1.00E+00	5.25E-07	3.40E-07	1.51E-07	9.32E-08	5.62E-08	4.74E-08	5.77E-08	
Mo-91	M		2.00E-01	7.70E-07	4.92E-07	2.21E-07	1.39E-07	8.66E-08	7.36E-08	8.84E-08	
Mo-91	S		2.00E-02	7.96E-07	5.11E-07	2.29E-07	1.44E-07	8.99E-08	7.66E-08	9.18E-08	
Mo-91m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Mo-93	F		1.00E+00	1.08E-05	8.99E-06	5.74E-06	4.55E-06	3.62E-06	3.44E-06	3.65E-06	
Mo-93	M		2.00E-01	8.10E-06	6.40E-06	4.00E-06	2.81E-06	2.33E-06	2.07E-06	2.24E-06	
Mo-93	S		2.00E-02	2.18E-05	2.10E-05	1.45E-05	1.01E-05	8.73E-06	8.25E-06	8.73E-06	
Mo-93m	F		1.00E+00	2.88E-06	2.53E-06	1.31E-06	7.92E-07	4.66E-07	3.77E-07	4.63E-07	
Mo-93m	M		2.00E-01	4.70E-06	3.81E-06	1.97E-06	1.25E-06	7.92E-07	6.29E-07	7.59E-07	
Mo-93m	S		2.00E-02	5.03E-06	3.96E-06	2.06E-06	1.32E-06	8.33E-07	6.62E-07	7.96E-07	
Mo-99	F		1.00E+00	8.51E-06	6.36E-06	2.84E-06	1.76E-06	9.81E-07	8.21E-07	1.02E-06	
Mo-99	M		2.00E-01	2.23E-05	1.61E-05	8.18E-06	5.55E-06	4.11E-06	3.31E-06	3.81E-06	
Mo-99	S		2.00E-02	2.54E-05	1.78E-05	8.99E-06	6.14E-06	4.55E-06	3.67E-06	4.22E-06	
N-13			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
N-16			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Na-22	F		1.00E+00	3.56E-05	2.71E-05	1.39E-05	8.92E-06	5.48E-06	4.74E-06	5.59E-06	
Na-22	M		1.00E+00	1.51E-04	1.26E-04	7.70E-05	5.29E-05	4.40E-05	3.66E-05	4.03E-05	
Na-22	S		1.00E+00	3.57E-04	3.27E-04	2.16E-04	1.46E-04	1.21E-04	1.08E-04	1.17E-04	
Na-24	F		1.00E+00	8.73E-06	6.96E-06	3.54E-06	2.15E-06	1.27E-06	1.03E-06	1.27E-06	
Na-24	M		1.00E+00	1.20E-05	9.36E-06	4.96E-06	3.18E-06	2.17E-06	1.76E-06	2.06E-06	
Na-24	S		1.00E+00	1.23E-05	9.62E-06	5.14E-06	3.30E-06	2.28E-06	1.85E-06	2.16E-06	
Nb-87			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-88	F		2.00E-02	7.36E-07	5.25E-07	2.52E-07	1.54E-07	9.36E-08	7.70E-08	9.36E-08	
Nb-88	M		2.00E-02	1.01E-06	7.07E-07	3.39E-07	2.10E-07	1.32E-07	1.09E-07	1.31E-07	
Nb-88	S		2.00E-02	1.04E-06	7.29E-07	3.49E-07	2.17E-07	1.37E-07	1.13E-07	1.36E-07	
Nb-88m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-89	F		2.00E-02	2.58E-06	1.76E-06	8.07E-07	4.88E-07	2.73E-07	2.25E-07	2.81E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Nb-89	M		2.00E-02	4.11E-06	2.78E-06	1.31E-06	8.21E-07	5.07E-07	4.18E-07	5.07E-07	
Nb-89	S		2.00E-02	4.26E-06	2.89E-06	1.36E-06	8.58E-07	5.33E-07	4.40E-07	5.33E-07	
Nb-89m	F		2.00E-02	1.48E-06	1.05E-06	5.00E-07	3.04E-07	1.76E-07	1.44E-07	1.78E-07	
Nb-89m	M		2.00E-02	2.26E-06	1.57E-06	7.55E-07	4.77E-07	3.02E-07	2.47E-07	2.97E-07	
Nb-89m	S		2.00E-02	2.34E-06	1.63E-06	7.84E-07	4.96E-07	3.16E-07	2.59E-07	3.10E-07	
Nb-90	F		2.00E-02	1.32E-05	1.02E-05	5.03E-06	3.09E-06	1.75E-06	1.42E-06	1.76E-06	
Nb-90	M		2.00E-02	1.92E-05	1.45E-05	7.29E-06	4.66E-06	2.90E-06	2.34E-06	2.82E-06	
Nb-90	S		2.00E-02	1.98E-05	1.50E-05	7.55E-06	4.85E-06	3.03E-06	2.45E-06	2.94E-06	
Nb-91	F		2.00E-02	3.60E-06	3.02E-06	1.48E-06	7.96E-07	4.88E-07	4.14E-07	5.03E-07	
Nb-91	M		2.00E-02	5.40E-06	4.51E-06	2.55E-06	1.63E-06	1.22E-06	9.73E-07	1.12E-06	
Nb-91	S		2.00E-02	1.97E-05	1.88E-05	1.28E-05	8.70E-06	7.36E-06	6.81E-06	7.29E-06	
Nb-91m	F		2.00E-02	1.09E-05	7.99E-06	3.64E-06	2.28E-06	1.15E-06	1.09E-06	1.33E-06	
Nb-91m	M		2.00E-02	4.81E-05	3.74E-05	2.28E-05	1.69E-05	1.58E-05	1.24E-05	1.35E-05	
Nb-91m	S		2.00E-02	5.96E-05	4.63E-05	2.86E-05	2.12E-05	1.97E-05	1.55E-05	1.69E-05	
Nb-92	F		2.00E-02	8.21E-05	7.22E-05	3.92E-05	2.72E-05	1.85E-05	1.66E-05	1.87E-05	
Nb-92	M		2.00E-02	7.03E-05	6.25E-05	4.00E-05	2.70E-05	2.13E-05	1.83E-05	2.02E-05	
Nb-92	S		2.00E-02	2.25E-04	2.23E-04	1.65E-04	1.18E-04	1.05E-04	1.00E-04	1.05E-04	
Nb-92m	F		2.00E-02	8.77E-06	7.18E-06	3.81E-06	2.46E-06	1.54E-06	1.28E-06	1.52E-06	
Nb-92m	M		2.00E-02	1.01E-05	8.25E-06	4.55E-06	2.91E-06	1.98E-06	1.57E-06	1.85E-06	
Nb-92m	S		2.00E-02	1.04E-05	8.47E-06	4.70E-06	3.01E-06	2.06E-06	1.63E-06	1.92E-06	
Nb-93m	F		2.00E-02	6.77E-06	5.51E-06	2.69E-06	1.70E-06	1.02E-06	8.55E-07	1.03E-06	
Nb-93m	M		2.00E-02	1.19E-05	9.21E-06	5.18E-06	3.20E-06	2.29E-06	1.98E-06	2.26E-06	
Nb-93m	S		2.00E-02	2.87E-05	2.54E-05	1.58E-05	9.73E-06	7.55E-06	7.03E-06	7.73E-06	
Nb-94	F		2.00E-02	1.16E-04	9.95E-05	5.44E-05	3.69E-05	2.45E-05	2.16E-05	2.46E-05	
Nb-94	M		2.00E-02	1.59E-04	1.35E-04	8.33E-05	5.70E-05	4.70E-05	3.96E-05	4.37E-05	
Nb-94	S		2.00E-02	4.51E-04	4.33E-04	3.05E-04	2.14E-04	1.90E-04	1.80E-04	1.89E-04	
Nb-94m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-95	F		2.00E-02	1.42E-05	1.14E-05	5.88E-06	3.89E-06	2.46E-06	2.09E-06	2.45E-06	
Nb-95	M		2.00E-02	2.45E-05	1.90E-05	1.14E-05	8.03E-06	6.77E-06	5.48E-06	6.07E-06	
Nb-95	S		2.00E-02	2.81E-05	2.19E-05	1.34E-05	9.40E-06	8.03E-06	6.48E-06	7.14E-06	
Nb-95m	F		2.00E-02	8.99E-06	5.99E-06	2.70E-06	1.62E-06	8.99E-07	7.55E-07	9.44E-07	
Nb-95m	M		2.00E-02	1.64E-05	1.18E-05	6.40E-06	4.55E-06	3.74E-06	2.95E-06	3.32E-06	
Nb-95m	S		2.00E-02	1.77E-05	1.28E-05	7.07E-06	5.03E-06	4.18E-06	3.31E-06	3.70E-06	
Nb-96	F		2.00E-02	1.16E-05	8.88E-06	4.40E-06	2.71E-06	1.55E-06	1.26E-06	1.56E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Nb-96	M		2.00E-02	1.76E-05	1.33E-05	6.81E-06	4.44E-06	2.91E-06	2.33E-06	2.77E-06	
Nb-96	S		2.00E-02	1.83E-05	1.38E-05	7.07E-06	4.63E-06	3.07E-06	2.45E-06	2.91E-06	
Nb-97	F		2.00E-02	8.21E-07	5.55E-07	2.53E-07	1.57E-07	9.25E-08	7.73E-08	9.47E-08	
Nb-97	M		2.00E-02	1.37E-06	9.29E-07	4.40E-07	2.86E-07	1.92E-07	1.59E-07	1.87E-07	
Nb-97	S		2.00E-02	1.43E-06	9.66E-07	4.59E-07	3.00E-07	2.04E-07	1.68E-07	1.97E-07	
Nb-98m	F		2.00E-02	1.25E-06	9.07E-07	4.37E-07	2.66E-07	1.57E-07	1.28E-07	1.58E-07	
Nb-98m	M		2.00E-02	1.87E-06	1.32E-06	6.36E-07	4.03E-07	2.55E-07	2.09E-07	2.51E-07	
Nb-98m	S		2.00E-02	1.94E-06	1.37E-06	6.62E-07	4.18E-07	2.66E-07	2.18E-07	2.61E-07	
Nb-99			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nb-99m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nd-134			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nd-135	F		5.00E-03	6.07E-07	4.11E-07	1.89E-07	1.18E-07	7.14E-08	5.96E-08	7.25E-08	
Nd-135	M		5.00E-03	8.92E-07	5.96E-07	2.79E-07	1.77E-07	1.13E-07	9.47E-08	1.13E-07	
Nd-135	S		5.00E-03	9.21E-07	6.18E-07	2.88E-07	1.84E-07	1.18E-07	9.84E-08	1.18E-07	
Nd-136	F		5.00E-03	1.10E-06	7.88E-07	3.77E-07	2.28E-07	1.33E-07	1.08E-07	1.34E-07	
Nd-136	M		5.00E-03	1.71E-06	1.19E-06	5.77E-07	3.61E-07	2.30E-07	1.88E-07	2.26E-07	
Nd-136	S		5.00E-03	1.78E-06	1.23E-06	5.99E-07	3.77E-07	2.41E-07	1.97E-07	2.36E-07	
Nd-137	F		5.00E-03	6.03E-07	4.37E-07	2.09E-07	1.27E-07	7.44E-08	6.07E-08	7.47E-08	
Nd-137	M		5.00E-03	9.03E-07	6.36E-07	3.08E-07	1.94E-07	1.23E-07	1.00E-07	1.21E-07	
Nd-137	S		5.00E-03	9.36E-07	6.59E-07	3.19E-07	2.01E-07	1.28E-07	1.04E-07	1.25E-07	
Nd-138	F		5.00E-03	5.74E-06	3.85E-06	1.70E-06	1.03E-06	5.48E-07	4.48E-07	5.74E-07	
Nd-138	M		5.00E-03	8.47E-06	6.25E-06	2.86E-06	1.79E-06	1.04E-06	8.73E-07	1.07E-06	
Nd-138	S		5.00E-03	8.88E-06	6.51E-06	2.98E-06	1.87E-06	1.10E-06	9.18E-07	1.12E-06	
Nd-139	F		5.00E-03	2.38E-07	1.68E-07	7.88E-08	4.85E-08	2.88E-08	2.38E-08	2.91E-08	
Nd-139	M		5.00E-03	3.53E-07	2.44E-07	1.16E-07	7.36E-08	4.70E-08	3.89E-08	4.63E-08	
Nd-139	S		5.00E-03	3.66E-07	2.53E-07	1.20E-07	7.62E-08	4.92E-08	4.03E-08	4.85E-08	
Nd-139m	F		5.00E-03	2.91E-06	2.31E-06	1.16E-06	7.14E-07	4.11E-07	3.32E-07	4.11E-07	
Nd-139m	M		5.00E-03	4.11E-06	3.17E-06	1.63E-06	1.04E-06	6.70E-07	5.37E-07	6.40E-07	
Nd-139m	S		5.00E-03	4.26E-06	3.27E-06	1.68E-06	1.08E-06	6.99E-07	5.59E-07	6.70E-07	
Nd-140	F		5.00E-03	2.28E-05	1.65E-05	7.40E-06	4.48E-06	2.18E-06	1.77E-06	2.32E-06	
Nd-140	M		5.00E-03	3.34E-05	2.30E-05	1.11E-05	7.18E-06	4.63E-06	3.89E-06	4.63E-06	
Nd-140	S		5.00E-03	3.47E-05	2.40E-05	1.17E-05	7.59E-06	4.96E-06	4.18E-06	4.92E-06	
Nd-141	F		5.00E-03	1.15E-07	8.84E-08	4.33E-08	2.63E-08	1.51E-08	1.21E-08	1.51E-08	
Nd-141	M		5.00E-03	1.62E-07	1.21E-07	5.99E-08	3.77E-08	2.34E-08	1.88E-08	2.28E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Nd-141	S		5.00E-03	1.67E-07	1.25E-07	6.22E-08	3.89E-08	2.43E-08	1.95E-08	2.36E-08	
Nd-141m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Nd-144	F		5.00E-03	2.13E-01	1.96E-01	1.23E-01	8.70E-02	7.14E-02	7.03E-02	7.44E-02	
Nd-144	M		5.00E-03	7.25E-02	6.88E-02	4.63E-02	3.19E-02	2.87E-02	2.89E-02	3.00E-02	
Nd-144	S		5.00E-03	3.89E-02	3.53E-02	2.32E-02	1.50E-02	1.27E-02	1.25E-02	1.32E-02	
Nd-147	F		5.00E-03	2.46E-05	1.68E-05	7.73E-06	4.63E-06	2.67E-06	2.19E-06	2.73E-06	
Nd-147	M		5.00E-03	4.07E-05	2.97E-05	1.67E-05	1.17E-05	9.84E-06	7.92E-06	8.81E-06	
Nd-147	S		5.00E-03	4.37E-05	3.21E-05	1.83E-05	1.30E-05	1.11E-05	8.92E-06	9.88E-06	
Nd-149	F		5.00E-03	1.44E-06	9.51E-07	4.18E-07	2.59E-07	1.47E-07	1.24E-07	1.53E-07	
Nd-149	M		5.00E-03	2.55E-06	1.72E-06	8.25E-07	5.51E-07	3.85E-07	3.16E-07	3.69E-07	
Nd-149	S		5.00E-03	2.68E-06	1.81E-06	8.73E-07	5.81E-07	4.11E-07	3.38E-07	3.92E-07	
Nd-151	F		5.00E-03	3.63E-07	2.46E-07	1.11E-07	7.07E-08	4.33E-08	3.67E-08	4.40E-08	
Nd-151	M		5.00E-03	5.40E-07	3.65E-07	1.70E-07	1.11E-07	7.33E-08	6.18E-08	7.29E-08	
Nd-151	S		5.00E-03	5.59E-07	3.77E-07	1.76E-07	1.16E-07	7.66E-08	6.44E-08	7.59E-08	
Nd-152	F		5.00E-03	5.40E-07	3.42E-07	1.48E-07	9.47E-08	5.81E-08	5.00E-08	6.03E-08	
Nd-152	M		5.00E-03	8.29E-07	5.25E-07	2.33E-07	1.51E-07	9.81E-08	8.40E-08	9.95E-08	
Nd-152	S		5.00E-03	8.58E-07	5.48E-07	2.43E-07	1.58E-07	1.02E-07	8.77E-08	1.04E-07	
Ne-19			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ne-24			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ni-56	F		1.00E-01	1.25E-05	1.03E-05	5.51E-06	3.49E-06	2.16E-06	1.82E-06	2.16E-06	
Ni-56	M		1.00E-01	1.84E-05	1.52E-05	8.62E-06	5.66E-06	4.00E-06	3.26E-06	3.74E-06	
Ni-56	S		2.00E-02	2.06E-05	1.72E-05	9.95E-06	6.59E-06	4.77E-06	3.89E-06	4.44E-06	
Ni-56	V		1.00E-01	2.58E-05	1.99E-05	1.21E-05	7.92E-06	5.51E-06	4.74E-06	5.40E-06	
Ni-57	F		1.00E-01	8.47E-06	6.73E-06	3.40E-06	2.11E-06	1.20E-06	9.73E-07	1.20E-06	
Ni-57	M		1.00E-01	1.41E-05	1.09E-05	5.62E-06	3.66E-06	2.38E-06	1.91E-06	2.27E-06	
Ni-57	S		2.00E-02	1.52E-05	1.16E-05	5.96E-06	3.89E-06	2.55E-06	2.05E-06	2.43E-06	
Ni-57	V		1.00E-01	1.25E-05	9.18E-06	5.44E-06	3.64E-06	2.59E-06	2.24E-06	2.53E-06	
Ni-59	F		1.00E-01	3.49E-06	2.95E-06	1.64E-06	1.01E-06	7.07E-07	6.70E-07	7.47E-07	
Ni-59	M		1.00E-01	2.85E-06	2.23E-06	1.25E-06	7.47E-07	5.25E-07	4.85E-07	5.48E-07	
Ni-59	S		2.00E-02	6.03E-06	5.51E-06	3.46E-06	2.13E-06	1.69E-06	1.63E-06	1.76E-06	
Ni-59	V		1.00E-01	1.44E-05	1.20E-05	7.33E-06	4.59E-06	3.30E-06	3.03E-06	3.38E-06	
Ni-63	F		1.00E-01	8.66E-06	7.33E-06	4.07E-06	2.50E-06	1.73E-06	1.64E-06	1.84E-06	
Ni-63	M		1.00E-01	9.40E-06	7.25E-06	4.26E-06	2.65E-06	2.00E-06	1.80E-06	2.01E-06	
Ni-63	S		2.00E-02	1.80E-05	1.59E-05	1.00E-05	6.29E-06	5.03E-06	4.77E-06	5.18E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)						
				Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Ni-63	V		1.00E-01	3.56E-05	2.96E-05	1.80E-05	1.13E-05	8.07E-06	7.40E-06	8.25E-06
Ni-65	F		1.00E-01	1.63E-06	1.10E-06	5.00E-07	3.15E-07	1.82E-07	1.51E-07	1.86E-07
Ni-65	M		1.00E-01	2.84E-06	1.91E-06	8.99E-07	5.81E-07	3.77E-07	3.13E-07	3.74E-07
Ni-65	S		2.00E-02	3.00E-06	2.01E-06	9.47E-07	6.11E-07	4.00E-07	3.32E-07	3.96E-07
Ni-65	V		1.00E-01	7.44E-06	5.37E-06	3.01E-06	2.07E-06	1.48E-06	1.35E-06	1.50E-06
Ni-66	F		1.00E-01	2.13E-05	1.43E-05	6.11E-06	3.77E-06	1.89E-06	1.57E-06	2.02E-06
Ni-66	M		1.00E-01	5.03E-05	3.51E-05	1.69E-05	1.10E-05	7.33E-06	6.11E-06	7.18E-06
Ni-66	S		2.00E-02	5.59E-05	3.85E-05	1.85E-05	1.21E-05	8.07E-06	6.73E-06	7.92E-06
Ni-66	V		1.00E-01	3.85E-05	2.68E-05	1.48E-05	9.99E-06	6.88E-06	6.03E-06	6.88E-06
Np-232	F		5.00E-03	7.70E-07	7.44E-07	4.85E-07	4.18E-07	4.18E-07	4.44E-07	4.44E-07
Np-232	M		5.00E-03	3.44E-07	3.13E-07	2.13E-07	1.74E-07	1.83E-07	1.92E-07	1.92E-07
Np-232	S		5.00E-03	4.37E-07	3.68E-07	2.19E-07	1.47E-07	9.40E-08	9.07E-08	1.01E-07
Np-233	F		5.00E-03	4.29E-08	3.40E-08	1.64E-08	9.58E-09	5.70E-09	4.48E-09	5.62E-09
Np-233	M		5.00E-03	5.88E-08	4.48E-08	2.20E-08	1.33E-08	8.47E-09	6.70E-09	8.14E-09
Np-233	S		5.00E-03	6.07E-08	4.63E-08	2.26E-08	1.37E-08	8.77E-09	6.92E-09	8.40E-09
Np-234	F		5.00E-03	8.58E-06	6.70E-06	3.40E-06	2.13E-06	1.27E-06	1.03E-06	1.25E-06
Np-234	M		5.00E-03	1.15E-05	8.88E-06	4.66E-06	3.00E-06	1.97E-06	1.59E-06	1.88E-06
Np-234	S		5.00E-03	1.19E-05	9.18E-06	4.85E-06	3.12E-06	2.07E-06	1.67E-06	1.97E-06
Np-235	F		5.00E-03	1.79E-05	1.49E-05	8.18E-06	4.85E-06	3.18E-06	2.69E-06	3.16E-06
Np-235	M		5.00E-03	9.62E-06	7.92E-06	4.63E-06	2.83E-06	2.08E-06	1.75E-06	2.00E-06
Np-235	S		5.00E-03	1.05E-05	8.81E-06	5.22E-06	3.26E-06	2.45E-06	2.05E-06	2.33E-06
Np-235+D	F			1.79E-05	1.49E-05	8.18E-06	4.85E-06	3.18E-06	2.69E-06	3.16E-06
Np-235+E	F			1.79E-05	1.49E-05	8.18E-06	4.85E-06	3.18E-06	2.69E-06	3.16E-06
Np-236	F		5.00E-03	4.85E-02	4.96E-02	3.89E-02	4.00E-02	4.26E-02	4.26E-02	4.22E-02
Np-236	M		5.00E-03	1.64E-02	1.70E-02	1.44E-02	1.44E-02	1.66E-02	1.69E-02	1.67E-02
Np-236	S		5.00E-03	8.62E-03	8.62E-03	6.81E-03	5.44E-03	5.44E-03	5.44E-03	5.51E-03
Np-236m	F		5.00E-03	1.05E-04	9.58E-05	5.70E-05	4.00E-05	3.37E-05	3.40E-05	3.57E-05
Np-236m	M		5.00E-03	5.99E-05	5.18E-05	3.30E-05	2.32E-05	2.11E-05	2.00E-05	2.10E-05
Np-236m	S		5.00E-03	5.88E-05	4.92E-05	3.13E-05	2.09E-05	1.79E-05	1.58E-05	1.71E-05
Np-237	F		5.00E-03	3.66E-01	3.49E-01	2.25E-01	1.86E-01	1.78E-01	1.84E-01	1.87E-01
Np-237	M		5.00E-03	1.63E-01	1.50E-01	1.04E-01	8.14E-02	8.21E-02	8.40E-02	8.51E-02
Np-237	S		5.00E-03	1.35E-01	1.18E-01	7.88E-02	5.33E-02	4.66E-02	4.40E-02	4.66E-02
Np-237+D	F			3.66E-01	3.49E-01	2.25E-01	1.86E-01	1.78E-01	1.84E-01	1.87E-01
Np-237+E	F			3.66E-01	3.49E-01	2.25E-01	1.86E-01	1.78E-01	1.84E-01	1.87E-01

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Np-238	F		5.00E-03	3.34E-05	2.96E-05	1.78E-05	1.38E-05	1.25E-05	1.29E-05	1.32E-05	
Np-238	M		5.00E-03	2.70E-05	2.14E-05	1.27E-05	9.25E-06	8.25E-06	7.88E-06	8.29E-06	
Np-238	S		5.00E-03	2.96E-05	2.29E-05	1.16E-05	7.88E-06	6.36E-06	5.55E-06	6.14E-06	
Np-239	F		5.00E-03	9.77E-06	5.22E-06	2.40E-06	1.46E-06	7.92E-07	6.55E-07	8.33E-07	
Np-239	M		5.00E-03	2.21E-05	1.58E-05	7.66E-06	5.40E-06	4.44E-06	3.52E-06	4.00E-06	
Np-239	S		5.00E-03	2.13E-05	1.51E-05	8.29E-06	5.88E-06	4.88E-06	3.89E-06	4.33E-06	
Np-240	F		5.00E-03	1.13E-06	7.96E-07	3.70E-07	2.34E-07	1.44E-07	1.21E-07	1.46E-07	
Np-240	M		5.00E-03	1.94E-06	1.35E-06	6.59E-07	4.40E-07	3.12E-07	2.56E-07	2.97E-07	
Np-240	S		5.00E-03	2.02E-06	1.41E-06	6.92E-07	4.63E-07	3.30E-07	2.70E-07	3.13E-07	
Np-240m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Np-241	F		5.00E-03	2.53E-07	1.68E-07	7.55E-08	5.18E-08	3.52E-08	3.16E-08	3.62E-08	
Np-241	M		5.00E-03	3.77E-07	2.48E-07	1.12E-07	7.55E-08	5.11E-08	4.44E-08	5.18E-08	
Np-241	S		5.00E-03	3.89E-07	2.56E-07	1.15E-07	7.73E-08	5.18E-08	4.48E-08	5.22E-08	
Np-242			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Np-242m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-14			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-15			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
O-19			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Os-180	F		2.00E-02	2.79E-07	2.07E-07	1.01E-07	6.29E-08	3.89E-08	3.18E-08	3.85E-08	
Os-180	M		2.00E-02	4.22E-07	3.07E-07	1.51E-07	9.77E-08	6.55E-08	5.33E-08	6.29E-08	
Os-180	S		2.00E-02	4.37E-07	3.18E-07	1.57E-07	1.01E-07	6.85E-08	5.55E-08	6.55E-08	
Os-181	F		2.00E-02	1.12E-06	8.84E-07	4.44E-07	2.71E-07	1.57E-07	1.27E-07	1.57E-07	
Os-181	M		2.00E-02	1.68E-06	1.28E-06	6.59E-07	4.26E-07	2.79E-07	2.24E-07	2.66E-07	
Os-181	S		2.00E-02	1.74E-06	1.32E-06	6.85E-07	4.40E-07	2.93E-07	2.35E-07	2.79E-07	
Os-182	F		2.00E-02	6.11E-06	4.70E-06	2.32E-06	1.44E-06	8.21E-07	6.70E-07	8.25E-07	
Os-182	M		2.00E-02	9.81E-06	7.36E-06	3.85E-06	2.54E-06	1.74E-06	1.40E-06	1.64E-06	
Os-182	S		2.00E-02	1.02E-05	7.66E-06	4.03E-06	2.67E-06	1.85E-06	1.48E-06	1.74E-06	
Os-183	F		2.00E-02	2.62E-06	2.02E-06	9.84E-07	6.07E-07	3.45E-07	2.82E-07	3.48E-07	
Os-183	M		2.00E-02	4.40E-06	3.31E-06	1.74E-06	1.14E-06	7.99E-07	6.44E-07	7.51E-07	
Os-183	S		2.00E-02	4.66E-06	3.50E-06	1.85E-06	1.22E-06	8.66E-07	6.99E-07	8.14E-07	
Os-183m	F		2.00E-02	2.51E-06	2.02E-06	1.02E-06	6.29E-07	3.63E-07	2.94E-07	3.61E-07	
Os-183m	M		2.00E-02	3.63E-06	2.84E-06	1.49E-06	9.66E-07	6.40E-07	5.14E-07	6.07E-07	
Os-183m	S		2.00E-02	3.81E-06	2.97E-06	1.57E-06	1.02E-06	6.85E-07	5.48E-07	6.44E-07	
Os-185	F		2.00E-02	2.58E-05	2.09E-05	1.12E-05	6.81E-06	4.44E-06	3.89E-06	4.51E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Os-185	M		2.00E-02	2.36E-05	1.96E-05	1.05E-05	7.10E-06	5.48E-06	4.59E-06	5.14E-06
Os-185	S		2.00E-02	2.50E-05	2.10E-05	1.29E-05	8.73E-06	6.96E-06	5.74E-06	6.40E-06
Os-186	F		2.00E-02	2.08E-02	1.65E-02	8.33E-03	5.11E-03	3.15E-03	2.68E-03	3.20E-03
Os-186	M		2.00E-02	2.38E-02	1.86E-02	1.10E-02	6.85E-03	5.14E-03	4.51E-03	5.07E-03
Os-186	S		2.00E-02	5.62E-02	5.03E-02	3.22E-02	2.01E-02	1.62E-02	1.54E-02	1.67E-02
Os-189m	F		2.00E-02	1.36E-07	9.88E-08	4.18E-08	2.20E-08	1.24E-08	9.18E-09	1.23E-08
Os-189m	M		2.00E-02	2.33E-07	1.48E-07	6.48E-08	3.92E-08	2.13E-08	1.79E-08	2.26E-08
Os-189m	S		2.00E-02	2.43E-07	1.55E-07	6.77E-08	4.14E-08	2.25E-08	1.89E-08	2.38E-08
Os-190m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Os-191	F		2.00E-02	1.04E-05	7.10E-06	3.22E-06	2.00E-06	1.13E-06	9.40E-07	1.17E-06
Os-191	M		2.00E-02	3.05E-05	2.22E-05	1.31E-05	9.18E-06	7.84E-06	6.40E-06	7.07E-06
Os-191	S		2.00E-02	3.44E-05	2.51E-05	1.50E-05	1.05E-05	9.14E-06	7.44E-06	8.18E-06
Os-191m	F		2.00E-02	1.13E-06	7.62E-07	3.33E-07	2.04E-07	1.10E-07	9.21E-08	1.16E-07
Os-191m	M		2.00E-02	2.96E-06	2.08E-06	1.17E-06	8.10E-07	6.66E-07	5.44E-07	6.07E-07
Os-191m	S		2.00E-02	3.23E-06	2.28E-06	1.30E-06	9.03E-07	7.51E-07	6.11E-07	6.81E-07
Os-193	F		2.00E-02	6.99E-06	4.59E-06	1.96E-06	1.20E-06	6.99E-07	5.88E-07	7.29E-07
Os-193	M		2.00E-02	1.44E-05	9.81E-06	4.81E-06	3.23E-06	2.29E-06	1.85E-06	2.16E-06
Os-193	S		2.00E-02	1.52E-05	1.04E-05	5.14E-06	3.47E-06	2.49E-06	2.01E-06	2.34E-06
Os-194	F		2.00E-02	3.24E-04	2.54E-04	1.27E-04	7.84E-05	4.77E-05	4.07E-05	4.85E-05
Os-194	M		2.00E-02	3.69E-04	3.08E-04	1.80E-04	1.17E-04	8.92E-05	7.99E-05	8.84E-05
Os-194	S		2.00E-02	9.69E-04	9.03E-04	5.96E-04	3.92E-04	3.25E-04	3.16E-04	3.36E-04
Os-194+D	S			9.92E-04	9.18E-04	6.03E-04	3.96E-04	3.28E-04	3.18E-04	3.39E-04
Os-194+E	S			9.92E-04	9.18E-04	6.03E-04	3.96E-04	3.28E-04	3.18E-04	3.39E-04
Os-196	F		2.00E-02	1.15E-06	7.18E-07	3.09E-07	1.94E-07	1.16E-07	9.92E-08	1.21E-07
Os-196	M		2.00E-02	1.92E-06	1.21E-06	5.48E-07	3.53E-07	2.33E-07	1.97E-07	2.33E-07
Os-196	S		2.00E-02	2.01E-06	1.27E-06	5.74E-07	3.70E-07	2.46E-07	2.08E-07	2.46E-07
P-30			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
P-32	F		1.00E+00	4.37E-05	2.78E-05	1.20E-05	6.73E-06	3.65E-06	2.88E-06	3.77E-06
P-32	M		1.00E+00	7.92E-05	5.66E-05	2.97E-05	1.96E-05	1.50E-05	1.25E-05	1.42E-05
P-32	S		1.00E+00	8.62E-05	6.22E-05	3.32E-05	2.22E-05	1.72E-05	1.44E-05	1.62E-05
P-33	F		1.00E+00	4.29E-06	2.89E-06	1.12E-06	7.47E-07	4.11E-07	3.43E-07	4.29E-07
P-33	M		1.00E+00	2.22E-05	1.69E-05	1.03E-05	7.59E-06	7.03E-06	5.55E-06	6.07E-06
P-33	S		1.00E+00	2.61E-05	2.00E-05	1.22E-05	9.07E-06	8.44E-06	6.66E-06	7.25E-06
Pa-227	F		5.00E-03	5.51E-04	3.85E-04	1.85E-04	1.29E-04	9.44E-05	8.07E-05	9.14E-05

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Pa-227	M		5.00E-03	1.32E-03	9.51E-04	5.25E-04	3.85E-04	3.30E-04	2.70E-04	2.98E-04	
Pa-227	S		5.00E-03	1.41E-03	1.01E-03	5.66E-04	4.14E-04	2.96E-04	2.92E-04	3.17E-04	
Pa-228	F		5.00E-03	8.88E-04	7.29E-04	4.11E-04	2.55E-04	1.73E-04	1.44E-04	1.68E-04	
Pa-228	M		5.00E-03	8.77E-04	6.99E-04	4.40E-04	3.05E-04	2.66E-04	2.18E-04	2.39E-04	
Pa-228	S		5.00E-03	1.02E-03	8.29E-04	5.25E-04	3.61E-04	3.17E-04	2.63E-04	2.88E-04	
Pa-229	F		5.00E-03	3.45E-05	2.35E-05	1.21E-05	6.85E-06	4.22E-06	3.33E-06	4.14E-06	
Pa-229	M		5.00E-03	8.81E-05	6.62E-05	4.22E-05	3.11E-05	2.91E-05	2.33E-05	2.53E-05	
Pa-229	S		5.00E-03	9.77E-05	7.36E-05	4.74E-05	3.52E-05	3.33E-05	2.66E-05	2.88E-05	
Pa-230	F		5.00E-03	2.86E-03	1.64E-03	8.03E-04	4.70E-04	3.04E-04	2.06E-04	2.67E-04	
Pa-230	M		5.00E-03	7.51E-03	5.74E-03	3.62E-03	2.65E-03	2.46E-03	1.96E-03	2.13E-03	
Pa-230	S		5.00E-03	9.29E-03	7.22E-03	4.59E-03	3.35E-03	3.13E-03	2.50E-03	2.72E-03	
Pa-231	F		5.00E-03	1.54E+00	1.51E+00	1.16E+00	9.77E-01	8.70E-01	8.51E-01	8.77E-01	
Pa-231	M		5.00E-03	5.37E-01	5.37E-01	4.37E-01	3.57E-01	3.47E-01	3.46E-01	3.52E-01	
Pa-231	S		5.00E-03	2.36E-01	2.17E-01	1.60E-01	1.17E-01	1.10E-01	1.07E-01	1.11E-01	
Pa-232	F		5.00E-03	1.24E-05	1.01E-05	6.25E-06	4.88E-06	4.66E-06	4.26E-06	4.44E-06	
Pa-232	M		5.00E-03	1.98E-05	1.52E-05	8.55E-06	5.88E-06	4.29E-06	3.46E-06	3.96E-06	
Pa-232	S		5.00E-03	3.65E-05	3.15E-05	1.69E-05	1.13E-05	9.55E-06	8.92E-06	9.62E-06	
Pa-233	F		5.00E-03	4.81E-05	3.23E-05	1.59E-05	9.10E-06	5.33E-06	4.18E-06	5.29E-06	
Pa-233	M		5.00E-03	6.18E-05	4.59E-05	2.69E-05	1.91E-05	1.67E-05	1.32E-05	1.47E-05	
Pa-233	S		5.00E-03	6.62E-05	5.03E-05	2.99E-05	2.16E-05	1.93E-05	1.53E-05	1.69E-05	
Pa-234	F		5.00E-03	4.96E-06	3.64E-06	1.72E-06	1.05E-06	5.88E-07	4.85E-07	6.03E-07	
Pa-234	M		5.00E-03	8.70E-06	6.29E-06	3.19E-06	2.11E-06	1.47E-06	1.18E-06	1.39E-06	
Pa-234	S		5.00E-03	9.10E-06	6.59E-06	3.35E-06	2.22E-06	1.57E-06	1.26E-06	1.47E-06	
Pa-234m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pa-235	F		5.00E-03	3.36E-07	2.12E-07	9.07E-08	5.88E-08	3.63E-08	3.16E-08	3.77E-08	
Pa-235	M		5.00E-03	5.48E-07	3.51E-07	1.57E-07	1.04E-07	6.99E-08	5.96E-08	6.96E-08	
Pa-235	S		5.00E-03	5.74E-07	3.66E-07	1.64E-07	1.09E-07	7.36E-08	6.25E-08	7.33E-08	
Pa-236			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pa-237			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pb-194	F		6.00E-01	2.88E-07	2.07E-07	9.77E-08	5.99E-08	3.61E-08	2.98E-08	3.63E-08	
Pb-194	M		2.00E-01	4.26E-07	2.98E-07	1.41E-07	8.88E-08	5.62E-08	4.66E-08	5.59E-08	
Pb-194	S		2.00E-02	4.44E-07	3.09E-07	1.46E-07	9.18E-08	5.88E-08	4.85E-08	5.81E-08	
Pb-195m	F		6.00E-01	4.51E-07	3.39E-07	1.64E-07	1.02E-07	6.36E-08	5.25E-08	6.33E-08	
Pb-195m	M		2.00E-01	6.44E-07	4.74E-07	2.33E-07	1.50E-07	1.00E-07	8.21E-08	9.69E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)						
				Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Pb-195m	S		2.00E-02	6.66E-07	4.88E-07	2.41E-07	1.55E-07	1.04E-07	8.55E-08	1.01E-07
Pb-196	F		6.00E-01	5.03E-07	3.92E-07	1.95E-07	1.19E-07	7.07E-08	5.81E-08	7.07E-08
Pb-196	M		2.00E-01	7.10E-07	5.37E-07	2.68E-07	1.69E-07	1.10E-07	8.92E-08	1.07E-07
Pb-196	S		2.00E-02	7.33E-07	5.51E-07	2.76E-07	1.75E-07	1.14E-07	9.29E-08	1.11E-07
Pb-197			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb-197m	F		6.00E-01	7.84E-07	5.88E-07	2.83E-07	1.75E-07	1.05E-07	8.81E-08	1.07E-07
Pb-197m	M		2.00E-01	1.25E-06	9.14E-07	4.51E-07	2.96E-07	2.04E-07	1.67E-07	1.95E-07
Pb-197m	S		2.00E-02	1.31E-06	9.51E-07	4.74E-07	3.10E-07	2.15E-07	1.75E-07	2.05E-07
Pb-198	F		6.00E-01	1.24E-06	1.04E-06	5.29E-07	3.18E-07	1.86E-07	1.53E-07	1.87E-07
Pb-198	M		2.00E-01	1.71E-06	1.37E-06	7.03E-07	4.44E-07	2.85E-07	2.28E-07	2.73E-07
Pb-198	S		2.00E-02	1.79E-06	1.41E-06	7.29E-07	4.59E-07	2.96E-07	2.37E-07	2.83E-07
Pb-199	F		6.00E-01	5.66E-07	4.66E-07	2.36E-07	1.41E-07	8.25E-08	6.73E-08	8.25E-08
Pb-199	M		2.00E-01	8.10E-07	6.36E-07	3.29E-07	2.07E-07	1.35E-07	1.07E-07	1.28E-07
Pb-199	S		2.00E-02	8.44E-07	6.59E-07	3.40E-07	2.15E-07	1.41E-07	1.12E-07	1.34E-07
Pb-200	F		6.00E-01	4.29E-06	3.47E-06	1.70E-06	1.04E-06	6.03E-07	5.22E-07	6.29E-07
Pb-200	M		2.00E-01	7.92E-06	6.07E-06	3.17E-06	2.10E-06	1.49E-06	1.20E-06	1.39E-06
Pb-200	S		2.00E-02	8.70E-06	6.48E-06	3.38E-06	2.25E-06	1.61E-06	1.29E-06	1.50E-06
Pb-201	F		6.00E-01	1.82E-06	1.54E-06	7.70E-07	4.63E-07	2.66E-07	2.24E-07	2.73E-07
Pb-201	M		2.00E-01	3.01E-06	2.38E-06	1.22E-06	7.88E-07	5.22E-07	4.14E-07	4.92E-07
Pb-201	S		2.00E-02	3.27E-06	2.51E-06	1.30E-06	8.36E-07	5.55E-07	4.44E-07	5.25E-07
Pb-201m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb-202	F		6.00E-01	2.15E-04	1.48E-04	8.95E-05	9.99E-05	1.11E-04	7.51E-05	8.07E-05
Pb-202	M		2.00E-01	2.53E-04	1.86E-04	1.14E-04	8.70E-05	8.25E-05	6.77E-05	7.29E-05
Pb-202	S		2.00E-02	5.99E-04	5.48E-04	3.60E-04	2.32E-04	1.92E-04	1.82E-04	1.96E-04
Pb-202+D	S			6.07E-04	5.55E-04	3.64E-04	2.35E-04	1.94E-04	1.84E-04	1.97E-04
Pb-202+E	S			6.07E-04	5.55E-04	3.64E-04	2.35E-04	1.94E-04	1.84E-04	1.97E-04
Pb-202m	F		6.00E-01	1.84E-06	1.55E-06	7.92E-07	4.77E-07	2.80E-07	2.33E-07	2.83E-07
Pb-202m	M		2.00E-01	2.74E-06	2.18E-06	1.12E-06	7.14E-07	4.55E-07	3.64E-07	4.37E-07
Pb-202m	S		2.00E-02	2.90E-06	2.26E-06	1.17E-06	7.44E-07	4.77E-07	3.81E-07	4.59E-07
Pb-203	F		6.00E-01	2.70E-06	2.20E-06	1.07E-06	6.51E-07	3.70E-07	3.21E-07	3.89E-07
Pb-203	M		2.00E-01	5.07E-06	3.92E-06	2.02E-06	1.34E-06	9.55E-07	7.59E-07	8.84E-07
Pb-203	S		2.00E-02	5.59E-06	4.18E-06	2.17E-06	1.45E-06	1.04E-06	8.21E-07	9.55E-07
Pb-204m	F		6.00E-01	6.40E-07	5.33E-07	2.76E-07	1.66E-07	9.84E-08	7.96E-08	9.73E-08
Pb-204m	M		2.00E-01	8.40E-07	6.73E-07	3.47E-07	2.14E-07	1.31E-07	1.04E-07	1.27E-07

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Pb-204m	S		2.00E-02	8.66E-07	6.88E-07	3.56E-07	2.20E-07	1.35E-07	1.08E-07	1.31E-07	
Pb-205	F		6.00E-01	3.89E-06	2.48E-06	1.43E-06	1.48E-06	1.54E-06	1.21E-06	1.27E-06	
Pb-205	M		2.00E-01	3.77E-06	2.75E-06	1.55E-06	1.15E-06	1.03E-06	8.84E-07	9.55E-07	
Pb-205	S		2.00E-02	1.02E-05	9.51E-06	6.14E-06	3.96E-06	3.25E-06	3.05E-06	3.29E-06	
Pb-209	F		6.00E-01	6.73E-07	4.55E-07	1.95E-07	1.25E-07	7.22E-08	6.40E-08	7.73E-08	
Pb-209	M		2.00E-01	1.49E-06	1.02E-06	4.96E-07	3.42E-07	2.55E-07	2.09E-07	2.39E-07	
Pb-209	S		2.00E-02	1.61E-06	1.09E-06	5.33E-07	3.68E-07	2.76E-07	2.26E-07	2.58E-07	
Pb-210	F		6.00E-01	1.71E-02	1.06E-02	5.74E-03	5.14E-03	4.81E-03	3.36E-03	3.74E-03	
Pb-210	M		2.00E-01	1.83E-02	1.37E-02	8.21E-03	5.74E-03	4.92E-03	4.11E-03	4.48E-03	
Pb-210	S		2.00E-02	6.77E-02	6.48E-02	4.26E-02	2.64E-02	2.16E-02	2.08E-02	2.23E-02	
Pb-211	F		6.00E-01	9.21E-05	6.36E-05	3.19E-05	2.24E-05	1.70E-05	1.44E-05	1.62E-05	
Pb-211	M		2.00E-01	2.27E-04	1.64E-04	9.40E-05	6.85E-05	5.18E-05	4.11E-05	4.66E-05	
Pb-211	S		2.00E-02	2.42E-04	1.75E-04	1.01E-04	7.36E-05	5.62E-05	4.44E-05	5.03E-05	
Pb-212	F		6.00E-01	7.25E-04	4.66E-04	2.04E-04	1.33E-04	7.59E-05	6.66E-05	8.07E-05	
Pb-212	M		2.00E-01	2.77E-03	1.71E-03	1.11E-03	8.33E-04	8.03E-04	6.36E-04	6.88E-04	
Pb-212	S		2.00E-02	2.50E-03	1.87E-03	1.22E-03	9.18E-04	8.88E-04	7.03E-04	7.59E-04	
Pb-214	F		6.00E-01	8.18E-05	5.62E-05	2.60E-05	1.81E-05	1.24E-05	1.08E-05	1.24E-05	
Pb-214	M		2.00E-01	2.39E-04	1.72E-04	9.62E-05	7.07E-05	5.14E-05	5.03E-05	5.44E-05	
Pb-214	S		2.00E-02	2.56E-04	1.85E-04	1.04E-04	7.66E-05	5.66E-05	5.44E-05	5.92E-05	
Pd-100	F		5.00E-02	1.41E-05	1.10E-05	5.62E-06	3.58E-06	2.13E-06	1.74E-06	2.11E-06	
Pd-100	M		5.00E-02	1.84E-05	1.43E-05	7.73E-06	5.07E-06	3.52E-06	2.83E-06	3.30E-06	
Pd-100	S		5.00E-02	1.90E-05	1.47E-05	8.03E-06	5.25E-06	3.70E-06	2.99E-06	3.47E-06	
Pd-101	F		5.00E-02	1.35E-06	1.08E-06	5.37E-07	3.24E-07	1.84E-07	1.46E-07	1.82E-07	
Pd-101	M		5.00E-02	1.77E-06	1.39E-06	7.03E-07	4.40E-07	2.75E-07	2.16E-07	2.63E-07	
Pd-101	S		5.00E-02	1.82E-06	1.43E-06	7.25E-07	4.55E-07	2.86E-07	2.25E-07	2.73E-07	
Pd-103	F		5.00E-02	3.56E-06	2.40E-06	1.09E-06	6.88E-07	4.00E-07	3.27E-07	4.03E-07	
Pd-103	M		5.00E-02	8.29E-06	5.85E-06	3.34E-06	2.18E-06	1.67E-06	1.42E-06	1.60E-06	
Pd-103	S		5.00E-02	9.36E-06	6.62E-06	3.81E-06	2.49E-06	1.94E-06	1.65E-06	1.85E-06	
Pd-107	F		5.00E-02	1.00E-06	6.77E-07	3.12E-07	1.98E-07	1.18E-07	9.73E-08	1.19E-07	
Pd-107	M		5.00E-02	2.48E-06	1.89E-06	9.99E-07	5.92E-07	3.85E-07	3.31E-07	3.89E-07	
Pd-107	S		5.00E-02	8.36E-06	7.66E-06	4.81E-06	2.96E-06	2.34E-06	2.25E-06	2.44E-06	
Pd-109	F		5.00E-02	5.62E-06	3.74E-06	1.60E-06	9.92E-07	5.14E-07	4.37E-07	5.55E-07	
Pd-109	M		5.00E-02	9.73E-06	6.70E-06	3.31E-06	2.23E-06	1.61E-06	1.30E-06	1.51E-06	
Pd-109	S		5.00E-02	1.03E-05	7.07E-06	3.53E-06	2.38E-06	1.75E-06	1.41E-06	1.63E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Pd-109m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-111	F		5.00E-02	5.18E-07	3.23E-07	1.40E-07	8.84E-08	5.40E-08	4.63E-08	5.59E-08	
Pd-111	M		5.00E-02	8.51E-07	5.44E-07	2.49E-07	1.62E-07	1.11E-07	9.36E-08	1.10E-07	
Pd-111	S		5.00E-02	8.92E-07	5.66E-07	2.61E-07	1.71E-07	1.18E-07	9.92E-08	1.16E-07	
Pd-112	F		5.00E-02	2.25E-05	1.50E-05	6.48E-06	4.00E-06	2.02E-06	1.68E-06	2.16E-06	
Pd-112	M		5.00E-02	3.74E-05	2.55E-05	1.18E-05	7.51E-06	4.55E-06	3.81E-06	4.59E-06	
Pd-112	S		5.00E-02	3.89E-05	2.67E-05	1.24E-05	7.92E-06	4.81E-06	4.03E-06	4.88E-06	
Pd-114			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-96			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-97			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-98	F		5.00E-02	6.40E-07	4.29E-07	1.97E-07	1.20E-07	7.10E-08	5.85E-08	7.22E-08	
Pd-98	M		5.00E-02	9.95E-07	6.55E-07	3.03E-07	1.89E-07	1.19E-07	9.84E-08	1.19E-07	
Pd-98	S		5.00E-02	1.04E-06	6.81E-07	3.15E-07	1.96E-07	1.24E-07	1.03E-07	1.24E-07	
Pd-99	F		5.00E-02	4.29E-07	3.10E-07	1.48E-07	9.14E-08	5.48E-08	4.51E-08	5.51E-08	
Pd-99	M		5.00E-02	6.07E-07	4.33E-07	2.06E-07	1.30E-07	8.25E-08	6.77E-08	8.14E-08	
Pd-99	S		5.00E-02	6.29E-07	4.44E-07	2.13E-07	1.35E-07	8.55E-08	7.03E-08	8.44E-08	
Pm-136			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-137m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-139			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-140			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-140m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-141	F		5.00E-03	3.46E-07	2.31E-07	1.05E-07	6.51E-08	3.89E-08	3.24E-08	3.96E-08	
Pm-141	M		5.00E-03	5.11E-07	3.37E-07	1.55E-07	9.73E-08	6.14E-08	5.11E-08	6.18E-08	
Pm-141	S		5.00E-03	5.29E-07	3.49E-07	1.61E-07	1.01E-07	6.36E-08	5.33E-08	6.40E-08	
Pm-142			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-143	F		5.00E-03	5.44E-05	4.66E-05	2.67E-05	1.78E-05	1.21E-05	1.07E-05	1.21E-05	
Pm-143	M		5.00E-03	2.35E-05	2.04E-05	1.27E-05	8.36E-06	6.36E-06	5.55E-06	6.18E-06	
Pm-143	S		5.00E-03	2.08E-05	1.84E-05	1.18E-05	7.92E-06	6.33E-06	5.37E-06	5.92E-06	
Pm-144	F		5.00E-03	2.85E-04	2.49E-04	1.47E-04	1.01E-04	7.03E-05	6.33E-05	7.07E-05	
Pm-144	M		5.00E-03	1.15E-04	1.03E-04	6.62E-05	4.48E-05	3.47E-05	3.09E-05	3.39E-05	
Pm-144	S		5.00E-03	9.88E-05	8.95E-05	5.96E-05	4.07E-05	3.30E-05	2.82E-05	3.10E-05	
Pm-145	F		5.00E-03	1.02E-04	9.25E-05	5.70E-05	3.89E-05	3.05E-05	2.97E-05	3.19E-05	
Pm-145	M		5.00E-03	3.74E-05	3.47E-05	2.29E-05	1.53E-05	1.32E-05	1.30E-05	1.37E-05	
Pm-145	S		5.00E-03	2.57E-05	2.34E-05	1.58E-05	1.05E-05	8.92E-06	8.40E-06	8.95E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Pm-146	F		5.00E-03	6.03E-04	5.44E-04	3.34E-04	2.27E-04	1.71E-04	1.63E-04	1.77E-04	
Pm-146	M		5.00E-03	2.35E-04	2.16E-04	1.42E-04	9.55E-05	7.96E-05	7.55E-05	8.07E-05	
Pm-146	S		5.00E-03	1.93E-04	1.78E-04	1.21E-04	8.14E-05	6.88E-05	6.36E-05	6.81E-05	
Pm-147	F		5.00E-03	1.46E-04	1.27E-04	7.10E-05	4.22E-05	2.80E-05	2.58E-05	2.95E-05	
Pm-147	M		5.00E-03	7.66E-05	6.51E-05	4.00E-05	2.56E-05	2.09E-05	1.83E-05	2.01E-05	
Pm-147	S		5.00E-03	6.99E-05	5.88E-05	3.68E-05	2.47E-05	2.11E-05	1.80E-05	1.96E-05	
Pm-148	F		5.00E-03	3.77E-05	2.48E-05	1.10E-05	6.62E-06	3.64E-06	2.95E-06	3.74E-06	
Pm-148	M		5.00E-03	5.48E-05	3.81E-05	1.92E-05	1.27E-05	8.88E-06	7.40E-06	8.58E-06	
Pm-148	S		5.00E-03	5.70E-05	4.03E-05	2.04E-05	1.35E-05	9.66E-06	8.07E-06	9.29E-06	
Pm-148m	F		5.00E-03	1.01E-04	7.73E-05	3.96E-05	2.58E-05	1.66E-05	1.41E-05	1.65E-05	
Pm-148m	M		5.00E-03	8.81E-05	6.92E-05	4.07E-05	2.83E-05	2.33E-05	1.89E-05	2.11E-05	
Pm-148m	S		5.00E-03	9.18E-05	7.25E-05	4.37E-05	3.07E-05	2.60E-05	2.11E-05	2.33E-05	
Pm-149	F		5.00E-03	1.03E-05	6.62E-06	2.83E-06	1.70E-06	8.81E-07	7.14E-07	9.29E-07	
Pm-149	M		5.00E-03	1.86E-05	1.28E-05	6.33E-06	4.26E-06	3.05E-06	2.47E-06	2.86E-06	
Pm-149	S		5.00E-03	1.95E-05	1.35E-05	6.73E-06	4.55E-06	3.32E-06	2.68E-06	3.10E-06	
Pm-150	F		5.00E-03	2.67E-06	1.86E-06	8.58E-07	5.25E-07	2.94E-07	2.42E-07	3.02E-07	
Pm-150	M		5.00E-03	4.26E-06	2.93E-06	1.39E-06	8.84E-07	5.55E-07	4.59E-07	5.51E-07	
Pm-150	S		5.00E-03	4.44E-06	3.05E-06	1.45E-06	9.25E-07	5.85E-07	4.81E-07	5.77E-07	
Pm-151	F		5.00E-03	7.62E-06	5.18E-06	2.30E-06	1.41E-06	7.55E-07	6.25E-07	7.92E-07	
Pm-151	M		5.00E-03	1.22E-05	9.47E-06	4.70E-06	3.13E-06	2.01E-06	1.62E-06	1.93E-06	
Pm-151	S		5.00E-03	1.29E-05	9.95E-06	4.96E-06	3.01E-06	2.18E-06	1.75E-06	2.05E-06	
Pm-152			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-152m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-153			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-154			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pm-154m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-203	F		2.00E-01	7.84E-07	6.14E-07	3.10E-07	1.91E-07	1.17E-07	9.47E-08	1.15E-07	
Po-203	M		2.00E-01	1.15E-06	8.84E-07	4.59E-07	2.96E-07	2.01E-07	1.62E-07	1.91E-07	
Po-203	S		2.00E-02	1.21E-06	9.18E-07	4.77E-07	3.10E-07	2.11E-07	1.71E-07	2.01E-07	
Po-204	F		2.00E-01	4.14E-06	3.24E-06	1.64E-06	1.00E-06	6.03E-07	4.88E-07	5.96E-07	
Po-204	M		2.00E-01	8.51E-06	6.48E-06	3.69E-06	2.47E-06	1.63E-06	1.35E-06	1.57E-06	
Po-204	S		2.00E-02	9.18E-06	6.88E-06	3.96E-06	2.65E-06	1.79E-06	1.47E-06	1.71E-06	
Po-205	F		2.00E-01	8.58E-07	7.03E-07	3.63E-07	2.20E-07	1.32E-07	1.05E-07	1.29E-07	
Po-205	M		2.00E-01	1.15E-06	9.18E-07	4.88E-07	3.07E-07	2.03E-07	1.62E-07	1.93E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Po-205	S		2.00E-02	1.18E-06	9.40E-07	5.03E-07	3.17E-07	2.11E-07	1.69E-07	2.00E-07	
Po-206	F		2.00E-01	3.70E-04	2.32E-04	1.06E-04	6.36E-05	3.81E-05	3.06E-05	3.81E-05	
Po-206	M		2.00E-01	9.18E-04	6.51E-04	4.11E-04	2.89E-04	2.57E-04	2.12E-04	2.32E-04	
Po-206	S		2.00E-02	9.66E-04	7.10E-04	4.59E-04	3.24E-04	2.92E-04	2.41E-04	2.62E-04	
Po-207	F		2.00E-01	1.78E-06	1.48E-06	7.59E-07	4.59E-07	2.66E-07	2.12E-07	2.63E-07	
Po-207	M		2.00E-01	2.39E-06	1.94E-06	1.02E-06	6.40E-07	4.03E-07	3.23E-07	3.89E-07	
Po-207	S		2.00E-02	2.54E-06	2.03E-06	1.06E-06	6.70E-07	4.26E-07	3.41E-07	4.11E-07	
Po-208	F		2.00E-01	3.33E-02	2.22E-02	1.01E-02	5.99E-03	3.54E-03	2.83E-03	3.54E-03	
Po-208	M		2.00E-01	6.62E-02	4.85E-02	2.95E-02	1.98E-02	1.67E-02	1.39E-02	1.54E-02	
Po-208	S		2.00E-02	1.04E-01	8.58E-02	5.40E-02	3.50E-02	2.88E-02	2.50E-02	2.75E-02	
Po-209	F		2.00E-01	3.29E-02	2.20E-02	1.01E-02	5.96E-03	3.52E-03	2.81E-03	3.52E-03	
Po-209	M		2.00E-01	6.48E-02	4.77E-02	2.89E-02	1.92E-02	1.60E-02	1.34E-02	1.49E-02	
Po-209	S		2.00E-02	1.25E-01	1.08E-01	6.99E-02	4.55E-02	3.81E-02	3.49E-02	3.77E-02	
Po-210	F		2.00E-01	2.73E-02	1.79E-02	8.10E-03	4.77E-03	2.83E-03	2.26E-03	2.83E-03	
Po-210	M		2.00E-01	5.55E-02	4.03E-02	2.47E-02	1.69E-02	1.47E-02	1.21E-02	1.33E-02	
Po-210	S		2.00E-02	6.62E-02	5.11E-02	3.20E-02	2.19E-02	1.90E-02	1.58E-02	1.73E-02	
Po-211			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-212			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-212m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-213			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-214			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-215			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-216			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Po-218			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-134	F		5.00E-03	5.14E-07	3.64E-07	1.72E-07	1.06E-07	6.33E-08	5.22E-08	6.36E-08	
Pr-134	M		5.00E-03	6.92E-07	4.88E-07	2.32E-07	1.45E-07	9.03E-08	7.51E-08	9.03E-08	
Pr-134	S		5.00E-03	7.14E-07	5.00E-07	2.39E-07	1.49E-07	9.32E-08	7.77E-08	9.32E-08	
Pr-134m	F		5.00E-03	7.84E-07	5.29E-07	2.42E-07	1.48E-07	8.73E-08	7.25E-08	8.92E-08	
Pr-134m	M		5.00E-03	1.12E-06	7.51E-07	3.49E-07	2.18E-07	1.35E-07	1.13E-07	1.37E-07	
Pr-134m	S		5.00E-03	1.17E-06	7.77E-07	3.61E-07	2.25E-07	1.41E-07	1.18E-07	1.42E-07	
Pr-135	F		5.00E-03	4.59E-07	3.19E-07	1.49E-07	9.25E-08	5.55E-08	4.59E-08	5.59E-08	
Pr-135	M		5.00E-03	6.73E-07	4.59E-07	2.18E-07	1.38E-07	8.77E-08	7.29E-08	8.70E-08	
Pr-135	S		5.00E-03	6.96E-07	4.77E-07	2.25E-07	1.43E-07	9.14E-08	7.59E-08	9.07E-08	
Pr-136	F		5.00E-03	3.49E-07	2.48E-07	1.18E-07	7.22E-08	4.37E-08	3.59E-08	4.37E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Pr-136	M		5.00E-03	4.74E-07	3.30E-07	1.56E-07	9.73E-08	6.03E-08	5.00E-08	6.03E-08	
Pr-136	S		5.00E-03	4.85E-07	3.39E-07	1.61E-07	9.99E-08	6.22E-08	5.14E-08	6.22E-08	
Pr-137	F		5.00E-03	4.07E-07	2.87E-07	1.34E-07	8.21E-08	4.74E-08	3.89E-08	4.81E-08	
Pr-137	M		5.00E-03	6.29E-07	4.33E-07	2.06E-07	1.30E-07	8.25E-08	6.77E-08	8.14E-08	
Pr-137	S		5.00E-03	6.55E-07	4.51E-07	2.14E-07	1.36E-07	8.62E-08	7.07E-08	8.51E-08	
Pr-138			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-138m	F		5.00E-03	1.62E-06	1.30E-06	6.59E-07	4.00E-07	2.33E-07	1.88E-07	2.31E-07	
Pr-138m	M		5.00E-03	2.20E-06	1.70E-06	8.66E-07	5.40E-07	3.36E-07	2.69E-07	3.26E-07	
Pr-138m	S		5.00E-03	2.26E-06	1.74E-06	8.88E-07	5.55E-07	3.47E-07	2.78E-07	3.36E-07	
Pr-139	F		5.00E-03	4.14E-07	3.08E-07	1.48E-07	9.10E-08	5.18E-08	4.26E-08	5.25E-08	
Pr-139	M		5.00E-03	5.88E-07	4.29E-07	2.11E-07	1.35E-07	8.70E-08	7.03E-08	8.44E-08	
Pr-139	S		5.00E-03	6.14E-07	4.44E-07	2.21E-07	1.42E-07	9.21E-08	7.47E-08	8.92E-08	
Pr-140			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-142	F		5.00E-03	1.12E-05	7.22E-06	3.05E-06	1.85E-06	9.36E-07	7.73E-07	1.00E-06	
Pr-142	M		5.00E-03	1.95E-05	1.30E-05	5.92E-06	3.77E-06	2.30E-06	1.91E-06	2.32E-06	
Pr-142	S		5.00E-03	2.05E-05	1.36E-05	6.25E-06	4.00E-06	2.45E-06	2.04E-06	2.47E-06	
Pr-142m	F		5.00E-03	1.42E-07	9.18E-08	3.89E-08	2.36E-08	1.19E-08	9.77E-09	1.27E-08	
Pr-142m	M		5.00E-03	2.49E-07	1.65E-07	7.55E-08	4.81E-08	2.92E-08	2.43E-08	2.95E-08	
Pr-142m	S		5.00E-03	2.61E-07	1.74E-07	7.96E-08	5.11E-08	3.12E-08	2.60E-08	3.14E-08	
Pr-143	F		5.00E-03	2.60E-05	1.75E-05	7.73E-06	4.74E-06	2.70E-06	2.16E-06	2.72E-06	
Pr-143	M		5.00E-03	4.26E-05	3.12E-05	1.71E-05	1.20E-05	9.88E-06	7.96E-06	8.92E-06	
Pr-143	S		5.00E-03	4.63E-05	3.40E-05	1.89E-05	1.34E-05	1.12E-05	9.03E-06	1.01E-05	
Pr-144	F		5.00E-03	4.51E-07	2.76E-07	1.18E-07	7.40E-08	4.48E-08	3.89E-08	4.70E-08	
Pr-144	M		5.00E-03	6.88E-07	4.26E-07	1.85E-07	1.18E-07	7.55E-08	6.48E-08	7.73E-08	
Pr-144	S		5.00E-03	7.14E-07	4.40E-07	1.93E-07	1.24E-07	7.88E-08	6.77E-08	8.07E-08	
Pr-144m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-145	F		5.00E-03	3.15E-06	2.01E-06	8.47E-07	5.81E-07	3.00E-07	2.53E-07	3.17E-07	
Pr-145	M		5.00E-03	5.77E-06	3.77E-06	1.73E-06	1.11E-06	7.03E-07	5.81E-07	6.96E-07	
Pr-145	S		5.00E-03	6.07E-06	3.96E-06	1.83E-06	1.18E-06	7.51E-07	6.18E-07	7.44E-07	
Pr-146	F		5.00E-03	7.18E-07	4.59E-07	2.04E-07	1.26E-07	7.47E-08	6.29E-08	7.73E-08	
Pr-146	M		5.00E-03	1.10E-06	6.99E-07	3.15E-07	1.98E-07	1.25E-07	1.06E-07	1.27E-07	
Pr-146	S		5.00E-03	1.14E-06	7.25E-07	3.27E-07	2.06E-07	1.31E-07	1.10E-07	1.32E-07	
Pr-147	F		5.00E-03	3.85E-07	2.52E-07	1.12E-07	7.18E-08	4.44E-08	3.81E-08	4.55E-08	
Pr-147	M		5.00E-03	5.70E-07	3.74E-07	1.72E-07	1.12E-07	7.51E-08	6.36E-08	7.47E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Pr-147	S		5.00E-03	5.92E-07	3.89E-07	1.79E-07	1.17E-07	7.88E-08	6.70E-08	7.84E-08	
Pr-148			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pr-148m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pt-184	F		2.00E-02	4.59E-07	3.39E-07	1.64E-07	1.03E-07	6.33E-08	5.25E-08	6.33E-08	
Pt-184	M		2.00E-02	7.03E-07	5.11E-07	2.52E-07	1.65E-07	1.12E-07	9.21E-08	1.08E-07	
Pt-184	S		2.00E-02	7.29E-07	5.29E-07	2.62E-07	1.72E-07	1.18E-07	9.66E-08	1.13E-07	
Pt-186	F		2.00E-02	1.32E-06	1.05E-06	5.29E-07	3.24E-07	1.86E-07	1.51E-07	1.86E-07	
Pt-186	M		2.00E-02	1.91E-06	1.48E-06	7.59E-07	4.85E-07	3.14E-07	2.51E-07	3.00E-07	
Pt-186	S		2.00E-02	1.97E-06	1.52E-06	7.84E-07	5.03E-07	3.28E-07	2.63E-07	3.13E-07	
Pt-187	F		2.00E-02	1.09E-06	8.14E-07	3.89E-07	2.40E-07	1.38E-07	1.14E-07	1.40E-07	
Pt-187	M		2.00E-02	1.82E-06	1.33E-06	6.73E-07	4.44E-07	3.06E-07	2.48E-07	2.90E-07	
Pt-187	S		2.00E-02	1.91E-06	1.39E-06	7.07E-07	4.66E-07	3.24E-07	2.62E-07	3.07E-07	
Pt-188	F		2.00E-02	1.51E-05	1.13E-05	5.66E-06	3.62E-06	2.17E-06	1.83E-06	2.19E-06	
Pt-188	M		2.00E-02	3.10E-05	2.36E-05	1.39E-05	9.92E-06	8.44E-06	6.73E-06	7.47E-06	
Pt-188	S		2.00E-02	3.42E-05	2.62E-05	1.55E-05	1.11E-05	9.62E-06	7.62E-06	8.44E-06	
Pt-189	F		2.00E-02	2.29E-06	1.71E-06	8.18E-07	5.00E-07	2.80E-07	2.29E-07	2.86E-07	
Pt-189	M		2.00E-02	4.14E-06	3.06E-06	1.59E-06	1.06E-06	7.59E-07	6.11E-07	7.10E-07	
Pt-189	S		2.00E-02	4.37E-06	3.22E-06	1.69E-06	1.13E-06	8.18E-07	6.59E-07	7.62E-07	
Pt-190	F		2.00E-02	3.34E-03	2.43E-03	1.19E-03	7.47E-04	4.74E-04	4.00E-04	4.77E-04	
Pt-190	M		2.00E-02	2.58E-02	1.98E-02	1.21E-02	7.73E-03	6.14E-03	5.33E-03	5.88E-03	
Pt-190	S		2.00E-02	6.92E-02	6.11E-02	3.96E-02	2.49E-02	2.03E-02	1.91E-02	2.06E-02	
Pt-191	F		2.00E-02	4.29E-06	3.16E-06	1.49E-06	9.18E-07	5.11E-07	4.18E-07	5.22E-07	
Pt-191	M		2.00E-02	8.40E-06	6.18E-06	3.30E-06	2.24E-06	1.52E-06	1.22E-06	1.43E-06	
Pt-191	S		2.00E-02	8.92E-06	6.55E-06	3.53E-06	2.41E-06	1.67E-06	1.34E-06	1.56E-06	
Pt-193	F		2.00E-02	8.77E-07	6.11E-07	2.86E-07	1.77E-07	1.03E-07	8.70E-08	1.06E-07	
Pt-193	M		2.00E-02	2.59E-06	2.02E-06	1.07E-06	6.36E-07	4.22E-07	3.50E-07	4.14E-07	
Pt-193	S		2.00E-02	9.18E-06	8.47E-06	5.33E-06	3.33E-06	2.62E-06	2.48E-06	2.69E-06	
Pt-193m	F		2.00E-02	5.81E-06	3.89E-06	1.67E-06	1.02E-06	5.37E-07	4.59E-07	5.81E-07	
Pt-193m	M		2.00E-02	1.56E-05	1.13E-05	6.44E-06	4.70E-06	4.11E-06	3.23E-06	3.58E-06	
Pt-193m	S		2.00E-02	1.70E-05	1.24E-05	7.10E-06	5.22E-06	4.63E-06	3.62E-06	4.00E-06	
Pt-195m	F		2.00E-02	8.10E-06	5.48E-06	2.41E-06	1.47E-06	7.77E-07	6.59E-07	8.29E-07	
Pt-195m	M		2.00E-02	1.95E-05	1.41E-05	7.88E-06	5.70E-06	4.88E-06	3.85E-06	4.29E-06	
Pt-195m	S		2.00E-02	2.12E-05	1.54E-05	8.70E-06	6.33E-06	5.48E-06	4.29E-06	4.77E-06	
Pt-197	F		2.00E-02	4.37E-06	2.89E-06	1.23E-06	7.59E-07	3.92E-07	3.34E-07	4.26E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)						
				Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Pt-197	M		2.00E-02	9.51E-06	6.55E-06	3.03E-06	2.08E-06	1.59E-06	1.28E-06	1.47E-06
Pt-197	S		2.00E-02	9.10E-06	6.96E-06	3.26E-06	2.25E-06	1.74E-06	1.39E-06	1.59E-06
Pt-197m	F		2.00E-02	1.03E-06	6.77E-07	2.93E-07	1.84E-07	1.04E-07	8.84E-08	1.09E-07
Pt-197m	M		2.00E-02	2.05E-06	1.38E-06	6.77E-07	4.59E-07	3.36E-07	2.75E-07	3.17E-07
Pt-197m	S		2.00E-02	2.16E-06	1.46E-06	7.22E-07	4.88E-07	3.61E-07	2.96E-07	3.40E-07
Pt-199	F		2.00E-02	4.88E-07	3.15E-07	1.38E-07	8.77E-08	5.33E-08	4.55E-08	5.51E-08
Pt-199	M		2.00E-02	8.47E-07	5.55E-07	2.59E-07	1.73E-07	1.21E-07	1.01E-07	1.18E-07
Pt-199	S		2.00E-02	8.88E-07	5.81E-07	2.73E-07	1.83E-07	1.30E-07	1.08E-07	1.25E-07
Pt-200	F		2.00E-02	9.44E-06	6.14E-06	3.04E-06	1.86E-06	9.51E-07	7.99E-07	1.01E-06
Pt-200	M		2.00E-02	1.82E-05	1.23E-05	5.85E-06	3.85E-06	2.53E-06	2.08E-06	2.46E-06
Pt-200	S		2.00E-02	1.92E-05	1.30E-05	6.22E-06	4.07E-06	2.73E-06	2.23E-06	2.64E-06
Pt-202	F		2.00E-02	3.96E-05	2.59E-05	1.11E-05	6.73E-06	3.38E-06	2.82E-06	3.65E-06
Pt-202	M		2.00E-02	7.03E-05	4.74E-05	2.22E-05	1.43E-05	9.03E-06	7.55E-06	9.03E-06
Pt-202	S		2.00E-02	7.36E-05	5.00E-05	2.35E-05	1.52E-05	9.69E-06	8.10E-06	9.66E-06
Pt-202+D	S			7.36E-05	5.00E-05	2.35E-05	1.52E-05	9.69E-06	8.10E-06	9.65E-06
Pt-202+E	S			7.36E-05	5.00E-05	2.35E-05	1.52E-05	9.69E-06	8.10E-06	9.65E-06
Pu-232	F		5.00E-03	1.54E-04	1.07E-04	5.14E-05	3.63E-05	2.62E-05	2.30E-05	2.60E-05
Pu-232	M		5.00E-03	3.96E-04	2.86E-04	1.58E-04	1.16E-04	1.01E-04	8.21E-05	9.03E-05
Pu-232	S		1.00E-04	4.22E-04	3.05E-04	1.70E-04	1.25E-04	8.95E-05	8.81E-05	9.58E-05
Pu-234	F		5.00E-03	1.08E-04	7.47E-05	3.62E-05	2.11E-05	1.32E-05	1.12E-05	1.35E-05
Pu-234	M		5.00E-03	2.88E-04	2.17E-04	1.39E-04	1.02E-04	9.51E-05	7.62E-05	8.29E-05
Pu-234	S		1.00E-04	3.22E-04	2.43E-04	1.57E-04	1.16E-04	1.10E-04	8.77E-05	9.51E-05
Pu-235	F		5.00E-03	3.92E-08	3.07E-08	1.49E-08	8.55E-09	5.11E-09	4.00E-09	5.00E-09
Pu-235	M		5.00E-03	5.18E-08	3.96E-08	1.94E-08	1.14E-08	7.25E-09	5.70E-09	6.96E-09
Pu-235	S		1.00E-04	5.33E-08	4.03E-08	1.99E-08	1.18E-08	7.51E-09	5.88E-09	7.22E-09
Pu-236	F		5.00E-03	3.89E-01	3.54E-01	2.30E-01	1.68E-01	1.41E-01	1.51E-01	1.56E-01
Pu-236	M		5.00E-03	1.78E-01	1.59E-01	1.09E-01	7.84E-02	7.22E-02	7.36E-02	7.59E-02
Pu-236	S		1.00E-04	1.34E-01	1.15E-01	7.44E-02	5.03E-02	4.37E-02	3.92E-02	4.22E-02
Pu-237	F		5.00E-03	8.70E-06	6.18E-06	3.10E-06	1.88E-06	1.15E-06	1.02E-06	1.21E-06
Pu-237	M		5.00E-03	7.33E-06	5.44E-06	3.08E-06	2.02E-06	1.58E-06	1.31E-06	1.48E-06
Pu-237	S		1.00E-04	7.51E-06	5.66E-06	3.28E-06	2.19E-06	1.76E-06	1.44E-06	1.61E-06
Pu-238	F		5.00E-03	7.36E-01	7.07E-01	5.11E-01	4.14E-01	3.74E-01	4.00E-01	4.07E-01
Pu-238	M		5.00E-03	2.87E-01	2.75E-01	2.09E-01	1.63E-01	1.60E-01	1.71E-01	1.72E-01
Pu-238	S		1.00E-04	1.65E-01	1.48E-01	1.01E-01	6.96E-02	6.25E-02	5.96E-02	6.25E-02

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Pu-239	F		5.00E-03	7.77E-01	7.55E-01	5.62E-01	4.63E-01	4.14E-01	4.40E-01	4.48E-01	
Pu-239	M		5.00E-03	2.96E-01	2.86E-01	2.23E-01	1.78E-01	1.75E-01	1.86E-01	1.86E-01	
Pu-239	S		1.00E-04	1.58E-01	1.42E-01	9.84E-02	6.88E-02	6.22E-02	5.92E-02	6.22E-02	
Pu-239+D	F			7.77E-01	7.55E-01	5.62E-01	4.63E-01	4.14E-01	4.40E-01	4.47E-01	
Pu-239+E	F			7.77E-01	7.55E-01	5.62E-01	4.63E-01	4.14E-01	4.40E-01	4.47E-01	
Pu-240	F		5.00E-03	7.77E-01	7.55E-01	5.62E-01	4.63E-01	4.14E-01	4.40E-01	4.48E-01	
Pu-240	M		5.00E-03	2.96E-01	2.86E-01	2.23E-01	1.78E-01	1.75E-01	1.86E-01	1.86E-01	
Pu-240	S		1.00E-04	1.58E-01	1.43E-01	9.84E-02	6.88E-02	6.22E-02	5.96E-02	6.22E-02	
Pu-241	F		5.00E-03	1.05E-02	1.08E-02	9.55E-03	8.81E-03	8.21E-03	8.44E-03	8.51E-03	
Pu-241	M		5.00E-03	3.40E-03	3.63E-03	3.42E-03	3.08E-03	3.17E-03	3.33E-03	3.31E-03	
Pu-241	S		1.00E-04	8.21E-04	8.73E-04	7.51E-04	6.25E-04	6.36E-04	6.48E-04	6.48E-04	
Pu-242	F		5.00E-03	7.36E-01	7.14E-01	5.33E-01	4.40E-01	3.96E-01	4.18E-01	4.26E-01	
Pu-242	M		5.00E-03	2.81E-01	2.71E-01	2.12E-01	1.69E-01	1.65E-01	1.76E-01	1.77E-01	
Pu-242	S		1.00E-04	1.49E-01	1.34E-01	9.25E-02	6.44E-02	5.81E-02	5.55E-02	5.85E-02	
Pu-243	F		5.00E-03	1.06E-06	7.18E-07	3.27E-07	2.13E-07	1.30E-07	1.18E-07	1.39E-07	
Pu-243	M		5.00E-03	2.12E-06	1.45E-06	7.25E-07	4.96E-07	3.23E-07	3.07E-07	3.47E-07	
Pu-243	S		1.00E-04	2.23E-06	1.53E-06	7.62E-07	5.22E-07	3.42E-07	3.20E-07	3.63E-07	
Pu-244	F		5.00E-03	7.29E-01	7.07E-01	5.25E-01	4.33E-01	3.89E-01	4.14E-01	4.18E-01	
Pu-244	M		5.00E-03	2.75E-01	2.66E-01	2.08E-01	1.65E-01	1.62E-01	1.73E-01	1.74E-01	
Pu-244	S		1.00E-04	1.44E-01	1.30E-01	8.95E-02	6.25E-02	5.59E-02	5.40E-02	5.66E-02	
Pu-244+D	F			7.29E-01	7.07E-01	5.25E-01	4.33E-01	3.89E-01	4.14E-01	4.20E-01	
Pu-244+E	F			7.29E-01	7.07E-01	5.25E-01	4.33E-01	3.89E-01	4.14E-01	4.20E-01	
Pu-245	F		5.00E-03	6.59E-06	4.48E-06	1.98E-06	1.23E-06	6.66E-07	5.81E-07	7.18E-07	
Pu-245	M		5.00E-03	1.27E-05	8.81E-06	4.33E-06	2.88E-06	1.81E-06	1.46E-06	1.75E-06	
Pu-245	S		1.00E-04	1.34E-05	9.29E-06	4.55E-06	3.06E-06	1.95E-06	1.57E-06	1.87E-06	
Pu-246	F		5.00E-03	6.48E-05	4.40E-05	2.17E-05	1.39E-05	9.07E-06	8.40E-06	9.62E-06	
Pu-246	M		5.00E-03	8.70E-05	6.36E-05	3.53E-05	2.44E-05	1.96E-05	1.63E-05	1.82E-05	
Pu-246	S		1.00E-04	9.10E-05	6.70E-05	3.74E-05	2.59E-05	2.10E-05	1.72E-05	1.92E-05	
Ra-219			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-219+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-219+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-220			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-221			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ra-221+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ra-221+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-222			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-223	F		6.00E-01	1.08E-02	3.81E-03	1.83E-03	1.48E-03	1.22E-03	4.59E-04	6.77E-04	
Ra-223	M		2.00E-01	1.02E-01	7.62E-02	4.92E-02	3.65E-02	3.46E-02	2.75E-02	2.98E-02	
Ra-223	S		2.00E-02	1.17E-01	8.84E-02	5.70E-02	4.26E-02	4.03E-02	3.20E-02	3.47E-02	
Ra-223+D	S			1.17E-01	8.84E-02	5.70E-02	4.26E-02	4.03E-02	3.20E-02	3.47E-02	
Ra-223+E	S			1.17E-01	8.84E-02	5.70E-02	4.26E-02	4.03E-02	3.20E-02	3.47E-02	
Ra-224	F		6.00E-01	5.62E-03	2.22E-03	1.08E-03	8.29E-04	6.29E-04	2.81E-04	3.96E-04	
Ra-224	M		2.00E-01	4.11E-02	3.04E-02	1.96E-02	1.46E-02	1.38E-02	1.10E-02	1.19E-02	
Ra-224	S		2.00E-02	4.51E-02	3.40E-02	2.21E-02	1.64E-02	1.56E-02	1.24E-02	1.35E-02	
Ra-224+D	S			4.51E-02	3.40E-02	2.21E-02	1.64E-02	1.56E-02	1.24E-02	1.35E-02	
Ra-224+E	S			4.51E-02	3.40E-02	2.21E-02	1.64E-02	1.56E-02	1.24E-02	1.35E-02	
Ra-225	F		6.00E-01	1.45E-02	4.44E-03	2.07E-03	1.69E-03	1.41E-03	4.77E-04	7.40E-04	
Ra-225	M		2.00E-01	8.81E-02	6.59E-02	4.22E-02	3.12E-02	2.94E-02	2.32E-02	2.53E-02	
Ra-225	S		2.00E-02	1.04E-01	8.07E-02	5.14E-02	3.81E-02	3.61E-02	2.87E-02	3.11E-02	
Ra-226	F		6.00E-01	9.55E-03	3.43E-03	2.02E-03	2.66E-03	4.88E-03	1.33E-03	1.72E-03	
Ra-226	M		2.00E-01	5.55E-02	4.14E-02	2.59E-02	1.81E-02	1.65E-02	1.28E-02	1.41E-02	
Ra-226	S		2.00E-02	1.24E-01	1.08E-01	6.99E-02	4.55E-02	3.85E-02	3.52E-02	3.81E-02	
Ra-226+D	S			1.25E-01	1.08E-01	7.03E-02	4.55E-02	3.85E-02	3.53E-02	3.80E-02	
Ra-226+E	S			1.25E-01	1.08E-01	7.03E-02	4.55E-02	3.85E-02	3.53E-02	3.80E-02	
Ra-227	F		6.00E-01	5.66E-06	4.55E-06	2.90E-06	2.26E-06	1.95E-06	1.70E-06	1.82E-06	
Ra-227	M		2.00E-01	2.96E-06	2.48E-06	1.64E-06	1.19E-06	1.07E-06	1.01E-06	1.06E-06	
Ra-227	S		2.00E-02	3.74E-06	3.13E-06	1.62E-06	1.07E-06	8.99E-07	8.25E-07	8.95E-07	
Ra-228	F		6.00E-01	6.07E-02	2.10E-02	1.15E-02	1.31E-02	1.65E-02	3.35E-03	5.44E-03	
Ra-228	M		2.00E-01	5.40E-02	3.74E-02	2.34E-02	1.72E-02	1.60E-02	9.77E-03	1.14E-02	
Ra-228	S		2.00E-02	1.79E-01	1.75E-01	1.17E-01	7.29E-02	6.07E-02	5.96E-02	6.33E-02	
Ra-228+D	S			1.79E-01	1.75E-01	1.17E-01	7.29E-02	6.07E-02	5.96E-02	6.35E-02	
Ra-228+E	S			1.79E-01	1.75E-01	1.17E-01	7.29E-02	6.07E-02	5.96E-02	6.35E-02	
Ra-230	F		6.00E-01	2.06E-06	1.57E-06	7.10E-07	4.07E-07	2.15E-07	2.25E-07	2.67E-07	
Ra-230	M		2.00E-01	3.50E-06	2.34E-06	1.10E-06	7.14E-07	4.85E-07	4.07E-07	4.77E-07	
Ra-230	S		2.00E-02	3.68E-06	2.42E-06	1.14E-06	7.47E-07	5.14E-07	4.26E-07	5.00E-07	
Rb-77			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-78	F		1.00E+00	7.25E-07	5.11E-07	2.41E-07	1.48E-07	8.84E-08	7.29E-08	8.92E-08	
Rb-78	M		1.00E+00	1.01E-06	6.99E-07	3.29E-07	2.05E-07	1.27E-07	1.05E-07	1.27E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Rb-78	S		1.00E+00	1.05E-06	7.22E-07	3.39E-07	2.11E-07	1.31E-07	1.09E-07	1.31E-07	
Rb-78m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-79	F		1.00E+00	6.25E-07	4.33E-07	1.98E-07	1.24E-07	7.51E-08	6.29E-08	7.62E-08	
Rb-79	M		1.00E+00	9.40E-07	6.36E-07	2.96E-07	1.89E-07	1.22E-07	1.02E-07	1.22E-07	
Rb-79	S		1.00E+00	9.73E-07	6.62E-07	3.07E-07	1.96E-07	1.28E-07	1.07E-07	1.27E-07	
Rb-80			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-81	F		1.00E+00	1.15E-06	8.84E-07	4.29E-07	2.55E-07	1.49E-07	1.21E-07	1.50E-07	
Rb-81	M		1.00E+00	1.76E-06	1.33E-06	6.81E-07	4.40E-07	3.13E-07	2.51E-07	2.93E-07	
Rb-81	S		1.00E+00	1.83E-06	1.38E-06	7.07E-07	4.59E-07	3.31E-07	2.65E-07	3.09E-07	
Rb-81m	F		1.00E+00	2.32E-07	1.71E-07	8.14E-08	5.03E-08	3.16E-08	2.60E-08	3.13E-08	
Rb-81m	M		1.00E+00	3.89E-07	2.81E-07	1.44E-07	9.58E-08	7.22E-08	5.85E-08	6.70E-08	
Rb-81m	S		1.00E+00	4.03E-07	2.93E-07	1.51E-07	1.01E-07	7.66E-08	6.18E-08	7.10E-08	
Rb-82			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-82m	F		1.00E+00	3.38E-06	2.88E-06	1.51E-06	8.95E-07	5.33E-07	4.22E-07	5.22E-07	
Rb-82m	M		1.00E+00	3.92E-06	3.29E-06	1.75E-06	1.07E-06	6.77E-07	5.33E-07	6.48E-07	
Rb-82m	S		1.00E+00	4.00E-06	3.34E-06	1.78E-06	1.08E-06	6.92E-07	5.48E-07	6.59E-07	
Rb-83	F		1.00E+00	1.71E-05	1.34E-05	6.92E-06	4.48E-06	2.78E-06	2.44E-06	2.85E-06	
Rb-83	M		1.00E+00	2.49E-05	1.99E-05	1.10E-05	7.22E-06	4.70E-06	4.00E-06	4.63E-06	
Rb-83	S		1.00E+00	2.92E-05	2.38E-05	1.24E-05	8.29E-06	6.03E-06	5.07E-06	5.77E-06	
Rb-84	F		1.00E+00	3.25E-05	2.41E-05	1.18E-05	7.44E-06	4.48E-06	3.85E-06	4.63E-06	
Rb-84	M		1.00E+00	5.11E-05	3.89E-05	2.13E-05	1.44E-05	1.08E-05	9.07E-06	1.02E-05	
Rb-84	S		1.00E+00	5.74E-05	4.40E-05	2.45E-05	1.66E-05	1.27E-05	1.07E-05	1.20E-05	
Rb-84m	F		1.00E+00	1.55E-07	1.12E-07	5.18E-08	3.33E-08	2.06E-08	1.75E-08	2.09E-08	
Rb-84m	M		1.00E+00	2.35E-07	1.69E-07	8.03E-08	5.33E-08	3.58E-08	3.01E-08	3.52E-08	
Rb-84m	S		1.00E+00	2.46E-07	1.76E-07	8.44E-08	5.59E-08	3.81E-08	3.19E-08	3.74E-08	
Rb-86	F		1.00E+00	4.26E-05	2.86E-05	1.26E-05	7.51E-06	4.11E-06	3.45E-06	4.37E-06	
Rb-86	M		1.00E+00	8.70E-05	6.40E-05	3.43E-05	2.30E-05	1.77E-05	1.49E-05	1.68E-05	
Rb-86	S		1.00E+00	9.66E-05	7.18E-05	3.92E-05	2.64E-05	2.06E-05	1.74E-05	1.95E-05	
Rb-86m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-87	F		1.00E+00	2.29E-05	1.57E-05	6.96E-06	4.14E-06	2.27E-06	1.91E-06	2.39E-06	
Rb-87	M		1.00E+00	8.14E-05	6.40E-05	3.74E-05	2.60E-05	2.22E-05	1.80E-05	1.99E-05	
Rb-87	S		1.00E+00	1.84E-04	1.65E-04	1.07E-04	7.25E-05	6.33E-05	5.81E-05	6.22E-05	
Rb-88	F		1.00E+00	7.22E-07	4.44E-07	1.92E-07	1.18E-07	7.03E-08	5.99E-08	7.36E-08	
Rb-88	M		1.00E+00	1.09E-06	6.70E-07	2.95E-07	1.84E-07	1.15E-07	9.81E-08	1.18E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Rb-88	S		1.00E+00	1.13E-06	6.96E-07	3.07E-07	1.92E-07	1.20E-07	1.02E-07	1.23E-07	
Rb-89	F		1.00E+00	5.00E-07	3.46E-07	1.61E-07	9.95E-08	6.03E-08	5.03E-08	6.11E-08	
Rb-89	M		1.00E+00	7.18E-07	4.92E-07	2.31E-07	1.46E-07	9.32E-08	7.81E-08	9.32E-08	
Rb-89	S		1.00E+00	7.47E-07	5.11E-07	2.41E-07	1.52E-07	9.81E-08	8.21E-08	9.77E-08	
Rb-90			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rb-90m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-178	F		1.00E+00	4.07E-07	2.85E-07	1.32E-07	8.10E-08	5.07E-08	4.18E-08	5.07E-08	
Re-178	M		1.00E+00	5.11E-07	3.50E-07	1.65E-07	1.06E-07	6.88E-08	5.77E-08	6.85E-08	
Re-178	S		1.00E+00	5.22E-07	3.57E-07	1.68E-07	1.09E-07	7.10E-08	5.96E-08	7.03E-08	
Re-179	F		1.00E+00	2.48E-07	1.86E-07	8.99E-08	5.44E-08	3.39E-08	2.74E-08	3.33E-08	
Re-179	M		1.00E+00	3.21E-07	2.33E-07	1.15E-07	7.36E-08	4.88E-08	4.00E-08	4.74E-08	
Re-179	S		1.00E+00	3.29E-07	2.39E-07	1.17E-07	7.59E-08	5.03E-08	4.14E-08	4.88E-08	
Re-180			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-181	F		1.00E+00	7.40E-06	5.44E-06	2.53E-06	1.44E-06	8.77E-07	6.92E-07	8.62E-07	
Re-181	M		1.00E+00	7.77E-06	5.66E-06	2.80E-06	1.75E-06	1.19E-06	9.47E-07	1.13E-06	
Re-181	S		1.00E+00	7.81E-06	5.70E-06	2.84E-06	1.79E-06	1.23E-06	9.77E-07	1.16E-06	
Re-182	F		1.00E+00	2.39E-05	1.72E-05	8.14E-06	4.77E-06	2.92E-06	2.35E-06	2.89E-06	
Re-182	M		1.00E+00	3.16E-05	2.30E-05	1.22E-05	8.14E-06	5.48E-06	4.37E-06	5.14E-06	
Re-182	S		1.00E+00	3.26E-05	2.38E-05	1.27E-05	8.55E-06	5.92E-06	4.70E-06	5.48E-06	
Re-182m	F		1.00E+00	5.11E-06	3.92E-06	1.92E-06	1.11E-06	6.77E-07	5.37E-07	6.66E-07	
Re-182m	M		1.00E+00	5.66E-06	4.33E-06	2.24E-06	1.42E-06	9.81E-07	7.77E-07	9.18E-07	
Re-182m	S		1.00E+00	5.74E-06	4.40E-06	2.28E-06	1.45E-06	1.01E-06	8.07E-07	9.47E-07	
Re-183	F		1.00E+00	1.67E-05	1.06E-05	4.55E-06	2.62E-06	1.60E-06	1.28E-06	1.61E-06	
Re-183	M		1.00E+00	5.14E-05	3.74E-05	2.16E-05	1.49E-05	1.28E-05	1.04E-05	1.15E-05	
Re-183	S		1.00E+00	6.25E-05	4.63E-05	2.72E-05	1.89E-05	1.63E-05	1.32E-05	1.46E-05	
Re-184	F		1.00E+00	1.54E-05	1.10E-05	5.33E-06	3.23E-06	2.01E-06	1.64E-06	1.99E-06	
Re-184	M		1.00E+00	3.36E-05	2.52E-05	1.48E-05	1.04E-05	8.81E-06	7.03E-06	7.81E-06	
Re-184	S		1.00E+00	3.92E-05	2.99E-05	1.78E-05	1.25E-05	1.07E-05	8.58E-06	9.51E-06	
Re-184m	F		1.00E+00	2.44E-05	1.71E-05	7.55E-06	4.40E-06	2.71E-06	2.20E-06	2.72E-06	
Re-184m	M		1.00E+00	1.08E-04	8.25E-05	4.96E-05	3.45E-05	3.00E-05	2.42E-05	2.67E-05	
Re-184m	S		1.00E+00	1.58E-04	1.27E-04	7.77E-05	5.37E-05	4.59E-05	3.77E-05	4.14E-05	
Re-186	F		1.00E+00	2.60E-05	1.68E-05	7.18E-06	3.92E-06	2.37E-06	1.85E-06	2.37E-06	
Re-186	M		1.00E+00	3.08E-05	2.04E-05	1.00E-05	6.51E-06	4.96E-06	3.92E-06	4.55E-06	
Re-186	S		1.00E+00	3.14E-05	2.09E-05	1.04E-05	6.85E-06	5.33E-06	4.22E-06	4.85E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Re-186m	F		1.00E+00	4.26E-05	2.58E-05	1.08E-05	6.18E-06	3.81E-06	3.07E-06	3.85E-06	
Re-186m	M		1.00E+00	2.15E-04	1.67E-04	9.73E-05	6.44E-05	5.22E-05	4.44E-05	4.92E-05	
Re-186m	S		1.00E+00	6.51E-04	5.99E-04	4.00E-04	2.69E-04	2.33E-04	2.25E-04	2.38E-04	
Re-186m+D	S			6.81E-04	6.22E-04	4.11E-04	2.75E-04	2.38E-04	2.29E-04	2.43E-04	
Re-186m+E	S			6.81E-04	6.22E-04	4.11E-04	2.75E-04	2.38E-04	2.29E-04	2.43E-04	
Re-187	F		1.00E+00	8.99E-08	5.59E-08	2.35E-08	1.32E-08	8.03E-09	6.40E-09	8.10E-09	
Re-187	M		1.00E+00	1.95E-07	1.40E-07	6.99E-08	4.03E-08	2.59E-08	2.18E-08	2.61E-08	
Re-187	S		1.00E+00	5.74E-07	5.07E-07	3.13E-07	1.92E-07	1.51E-07	1.45E-07	1.58E-07	
Re-188	F		1.00E+00	2.42E-05	1.64E-05	7.07E-06	3.70E-06	2.25E-06	1.71E-06	2.22E-06	
Re-188	M		1.00E+00	2.23E-05	1.47E-05	6.59E-06	3.85E-06	2.51E-06	1.99E-06	2.45E-06	
Re-188	S		1.00E+00	2.21E-05	1.45E-05	6.51E-06	3.89E-06	2.54E-06	2.02E-06	2.47E-06	
Re-188m	F		1.00E+00	5.03E-07	3.39E-07	1.48E-07	7.96E-08	5.00E-08	3.81E-08	4.85E-08	
Re-188m	M		1.00E+00	5.48E-07	3.63E-07	1.67E-07	1.01E-07	6.18E-08	5.48E-08	6.55E-08	
Re-188m	S		1.00E+00	5.48E-07	3.62E-07	1.67E-07	1.02E-07	6.29E-08	5.03E-08	6.22E-08	
Re-189	F		1.00E+00	1.31E-05	8.84E-06	3.81E-06	2.02E-06	1.23E-06	9.40E-07	1.21E-06	
Re-189	M		1.00E+00	1.36E-05	9.10E-06	4.29E-06	2.68E-06	1.94E-06	1.52E-06	1.81E-06	
Re-189	S		1.00E+00	1.37E-05	9.10E-06	4.33E-06	2.75E-06	2.02E-06	1.59E-06	1.87E-06	
Re-190			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Re-190m	F		1.00E+00	5.99E-06	4.14E-06	1.84E-06	1.23E-06	7.51E-07	5.77E-07	7.10E-07	
Re-190m	M		1.00E+00	7.10E-06	4.81E-06	2.26E-06	1.38E-06	9.21E-07	7.33E-07	8.84E-07	
Re-190m	S		1.00E+00	7.10E-06	4.77E-06	2.26E-06	1.39E-06	9.40E-07	7.51E-07	9.03E-07	
Rh-100	F		1.00E-01	7.73E-06	6.44E-06	3.34E-06	2.06E-06	1.20E-06	9.66E-07	1.18E-06	
Rh-100	M		1.00E-01	9.58E-06	7.88E-06	4.07E-06	2.58E-06	1.54E-06	1.23E-06	1.50E-06	
Rh-100	S		1.00E-01	9.81E-06	8.03E-06	4.18E-06	2.64E-06	1.58E-06	1.26E-06	1.54E-06	
Rh-100m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-101	F		1.00E-01	2.72E-05	2.26E-05	1.29E-05	8.47E-06	5.77E-06	5.22E-06	5.92E-06	
Rh-101	M		1.00E-01	3.30E-05	2.70E-05	1.67E-05	1.15E-05	9.51E-06	7.96E-06	8.77E-06	
Rh-101	S		1.00E-01	6.36E-05	5.74E-05	3.81E-05	2.59E-05	2.16E-05	1.89E-05	2.06E-05	
Rh-101m	F		1.00E-01	3.02E-06	2.36E-06	1.18E-06	7.29E-07	4.22E-07	3.46E-07	4.22E-07	
Rh-101m	M		1.00E-01	4.55E-06	3.55E-06	1.89E-06	1.26E-06	8.99E-07	7.07E-07	8.25E-07	
Rh-101m	S		1.00E-01	4.77E-06	3.70E-06	2.00E-06	1.33E-06	9.66E-07	7.59E-07	8.81E-07	
Rh-102	F		1.00E-01	4.29E-05	3.26E-05	1.64E-05	1.02E-05	6.25E-06	5.48E-06	6.48E-06	
Rh-102	M		1.00E-01	7.44E-05	5.92E-05	3.45E-05	2.31E-05	1.83E-05	1.56E-05	1.74E-05	
Rh-102	S		1.00E-01	1.13E-04	9.51E-05	5.77E-05	3.85E-05	3.09E-05	2.69E-05	2.96E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Rh-102m	F		1.00E-01	1.34E-04	1.15E-04	6.88E-05	4.55E-05	3.24E-05	3.03E-05	3.35E-05	
Rh-102m	M		1.00E-01	1.16E-04	9.84E-05	5.92E-05	3.96E-05	3.16E-05	2.78E-05	3.06E-05	
Rh-102m	S		1.00E-01	2.21E-04	2.06E-04	1.44E-04	9.84E-05	8.18E-05	7.33E-05	7.88E-05	
Rh-103m	F		1.00E-01	3.16E-08	2.16E-08	9.99E-09	6.03E-09	3.77E-09	3.14E-09	3.81E-09	
Rh-103m	M		1.00E-01	6.99E-08	4.37E-08	2.31E-08	1.47E-08	1.09E-08	9.36E-09	1.07E-08	
Rh-103m	S		1.00E-01	7.40E-08	4.66E-08	2.46E-08	1.57E-08	1.18E-08	1.01E-08	1.15E-08	
Rh-104			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-104m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-105	F		1.00E-01	3.74E-06	2.53E-06	1.10E-06	6.81E-07	3.53E-07	3.02E-07	3.81E-07	
Rh-105	M		1.00E-01	8.25E-06	5.85E-06	2.74E-06	1.91E-06	1.50E-06	1.19E-06	1.36E-06	
Rh-105	S		1.00E-01	8.77E-06	6.25E-06	2.96E-06	2.07E-06	1.64E-06	1.30E-06	1.49E-06	
Rh-106			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-106m	F		1.00E-01	2.13E-06	1.66E-06	8.29E-07	5.07E-07	2.96E-07	2.40E-07	2.95E-07	
Rh-106m	M		1.00E-01	3.10E-06	2.35E-06	1.19E-06	7.59E-07	4.88E-07	3.92E-07	4.70E-07	
Rh-106m	S		1.00E-01	3.21E-06	2.42E-06	1.22E-06	7.84E-07	5.11E-07	4.11E-07	4.88E-07	
Rh-107	F		1.00E-01	3.32E-07	2.19E-07	9.66E-08	6.25E-08	3.89E-08	3.34E-08	4.00E-08	
Rh-107	M		1.00E-01	5.22E-07	3.45E-07	1.57E-07	1.04E-07	6.92E-08	5.88E-08	6.88E-08	
Rh-107	S		1.00E-01	5.44E-07	3.59E-07	1.63E-07	1.08E-07	7.25E-08	6.14E-08	7.22E-08	
Rh-108			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-109			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-94			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-95			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-95m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-96			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-96m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-97	F		1.00E-01	5.29E-07	3.77E-07	1.78E-07	1.09E-07	6.51E-08	5.33E-08	6.55E-08	
Rh-97	M		1.00E-01	7.77E-07	5.40E-07	2.57E-07	1.62E-07	1.02E-07	8.40E-08	1.01E-07	
Rh-97	S		1.00E-01	8.07E-07	5.59E-07	2.66E-07	1.68E-07	1.07E-07	8.73E-08	1.05E-07	
Rh-97m	F		1.00E-01	6.11E-07	4.77E-07	2.40E-07	1.45E-07	8.55E-08	6.88E-08	8.47E-08	
Rh-97m	M		1.00E-01	8.29E-07	6.29E-07	3.16E-07	1.96E-07	1.21E-07	9.77E-08	1.18E-07	
Rh-97m	S		1.00E-01	8.51E-07	6.48E-07	3.24E-07	2.02E-07	1.25E-07	1.01E-07	1.22E-07	
Rh-98			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rh-99	F		1.00E-01	1.05E-05	7.88E-06	3.92E-06	2.45E-06	1.46E-06	1.22E-06	1.48E-06	
Rh-99	M		1.00E-01	1.95E-05	1.68E-05	8.58E-06	6.11E-06	5.11E-06	4.11E-06	4.59E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Rh-99	S		1.00E-01	2.18E-05	1.64E-05	9.73E-06	6.92E-06	5.88E-06	4.70E-06	5.22E-06	
Rh-99m	F		1.00E-01	8.81E-07	7.25E-07	3.68E-07	2.22E-07	1.28E-07	1.02E-07	1.27E-07	
Rh-99m	M		1.00E-01	1.17E-06	9.32E-07	4.77E-07	2.97E-07	1.83E-07	1.45E-07	1.76E-07	
Rh-99m	S		1.00E-01	1.20E-06	9.55E-07	4.88E-07	3.06E-07	1.89E-07	1.49E-07	1.82E-07	
Rn-207			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-209			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-210			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-211			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-212			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-215			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-216			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-217			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-218			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-219+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-220			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Rn-222			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04	
Rn-222+D				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04	
Rn-222+E				0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04	
Rn-223			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ru-103	F		1.00E-01	1.51E-05	1.11E-05	5.44E-06	3.42E-06	2.06E-06	1.77E-06	2.12E-06	
Ru-103	M		1.00E-01	3.96E-05	2.99E-05	1.79E-05	1.26E-05	1.08E-05	8.73E-06	9.66E-06	
Ru-103	S		2.00E-02	4.63E-05	3.54E-05	2.15E-05	1.51E-05	1.31E-05	1.06E-05	1.17E-05	
Ru-103	V		1.00E-01	3.21E-05	2.22E-05	1.21E-05	7.62E-06	4.81E-06	4.00E-06	4.77E-06	
Ru-105	F		1.00E-01	2.86E-06	2.02E-06	9.18E-07	5.66E-07	3.12E-07	2.60E-07	3.24E-07	
Ru-105	M		1.00E-01	5.29E-06	3.74E-06	1.85E-06	1.22E-06	8.47E-07	6.88E-07	8.07E-07	
Ru-105	S		2.00E-02	5.70E-06	4.00E-06	1.96E-06	1.31E-06	9.14E-07	7.40E-07	8.66E-07	
Ru-105	V		1.00E-01	6.25E-06	4.07E-06	2.08E-06	1.43E-06	8.81E-07	7.18E-07	8.58E-07	
Ru-106	F		1.00E-01	2.66E-04	1.99E-04	9.73E-05	5.81E-05	3.42E-05	2.96E-05	3.58E-05	
Ru-106	M		1.00E-01	5.11E-04	4.11E-04	2.35E-04	1.52E-04	1.14E-04	1.03E-04	1.15E-04	
Ru-106	S		2.00E-02	9.40E-04	8.33E-04	5.14E-04	3.35E-04	2.62E-04	2.46E-04	2.68E-04	
Ru-106	V		1.00E-01	5.99E-04	4.26E-04	2.28E-04	1.37E-04	8.29E-05	6.92E-05	8.36E-05	
Ru-106+D	S			9.40E-04	8.33E-04	5.14E-04	3.35E-04	2.62E-04	2.46E-04	2.67E-04	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ru-106+E	S			9.40E-04	8.33E-04	5.14E-04	3.35E-04	2.62E-04	2.46E-04	2.67E-04	
Ru-107			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ru-108			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ru-92			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ru-94	F		1.00E-01	9.51E-07	7.10E-07	3.44E-07	2.07E-07	1.18E-07	9.47E-08	1.18E-07	
Ru-94	M		1.00E-01	1.45E-06	1.04E-06	5.11E-07	3.17E-07	1.96E-07	1.59E-07	1.93E-07	
Ru-94	S		2.00E-02	1.51E-06	1.08E-06	5.29E-07	3.30E-07	2.05E-07	1.66E-07	2.01E-07	
Ru-94	V		1.00E-01	2.04E-06	1.30E-06	6.77E-07	4.14E-07	2.64E-07	2.12E-07	2.56E-07	
Ru-95	F		1.00E-01	8.10E-07	6.66E-07	3.42E-07	2.06E-07	1.20E-07	9.62E-08	1.19E-07	
Ru-95	M		1.00E-01	1.06E-06	8.44E-07	4.33E-07	2.68E-07	1.64E-07	1.30E-07	1.59E-07	
Ru-95	S		2.00E-02	1.10E-06	8.70E-07	4.44E-07	2.76E-07	1.69E-07	1.34E-07	1.64E-07	
Ru-95	V		1.00E-01	1.19E-06	8.36E-07	4.74E-07	3.05E-07	2.06E-07	1.67E-07	1.96E-07	
Ru-97	F		1.00E-01	2.05E-06	1.65E-06	8.21E-07	5.00E-07	2.89E-07	2.32E-07	2.87E-07	
Ru-97	M		1.00E-01	2.86E-06	2.26E-06	1.17E-06	7.47E-07	4.88E-07	3.85E-07	4.59E-07	
Ru-97	S		2.00E-02	3.01E-06	2.36E-06	1.22E-06	7.84E-07	5.18E-07	4.03E-07	4.85E-07	
Ru-97	V		1.00E-01	3.22E-06	2.29E-06	1.28E-06	8.33E-07	5.37E-07	4.29E-07	5.11E-07	
S-35	F		1.00E+00	2.01E-06	1.46E-06	6.51E-07	4.03E-07	2.22E-07	1.90E-07	2.35E-07	
S-35	M		2.00E-01	2.16E-05	1.66E-05	1.01E-05	7.29E-06	6.59E-06	5.29E-06	5.77E-06	
S-35	S		2.00E-02	2.82E-05	2.18E-05	1.33E-05	9.51E-06	8.55E-06	6.88E-06	7.55E-06	
S-35	V	Dioxide	1.00E+00	3.47E-06	2.44E-06	1.27E-06	7.73E-07	4.74E-07	4.03E-07	4.81E-07	
S-35	V	Carbon Disulfide	1.00E+00	2.55E-05	1.76E-05	8.92E-06	5.33E-06	3.16E-06	2.59E-06	3.17E-06	
S-37			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
S-38	F		1.00E+00	4.18E-06	3.35E-06	1.63E-06	1.03E-06	6.14E-07	5.00E-07	6.11E-07	
S-38	M		2.00E-01	9.51E-06	6.66E-06	3.15E-06	2.00E-06	1.23E-06	1.02E-06	1.23E-06	
S-38	S		2.00E-02	1.03E-05	7.07E-06	3.33E-06	2.12E-06	1.31E-06	1.08E-06	1.31E-06	
S-38	V	Dioxide	1.00E+00	5.00E-06	3.68E-06	2.15E-06	1.25E-06	8.77E-07	6.99E-07	8.25E-07	
S-38	V	Carbon Disulfide	1.00E+00	5.18E-06	3.77E-06	2.02E-06	1.24E-06	8.10E-07	6.66E-07	7.88E-07	
Sb-111			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-113			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-114			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-115	F		2.00E-01	2.98E-07	2.18E-07	1.04E-07	6.44E-08	3.85E-08	3.14E-08	3.85E-08	
Sb-115	M		2.00E-02	4.33E-07	3.08E-07	1.48E-07	9.32E-08	5.92E-08	4.85E-08	5.81E-08	
Sb-115	S		2.00E-02	4.48E-07	3.18E-07	1.53E-07	9.66E-08	6.18E-08	5.03E-08	6.03E-08	
Sb-116	F		2.00E-01	3.50E-07	2.56E-07	1.24E-07	7.59E-08	4.59E-08	3.74E-08	4.59E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Sb-116	M		2.00E-02	4.74E-07	3.41E-07	1.64E-07	1.02E-07	6.36E-08	5.22E-08	6.29E-08	
Sb-116	S		2.00E-02	4.88E-07	3.50E-07	1.69E-07	1.05E-07	6.55E-08	5.40E-08	6.51E-08	
Sb-116m	F		2.00E-01	9.51E-07	7.73E-07	4.00E-07	2.42E-07	1.45E-07	1.16E-07	1.42E-07	
Sb-116m	M		2.00E-02	1.28E-06	1.01E-06	5.25E-07	3.30E-07	2.12E-07	1.69E-07	2.02E-07	
Sb-116m	S		2.00E-02	1.32E-06	1.04E-06	5.40E-07	3.40E-07	2.19E-07	1.74E-07	2.09E-07	
Sb-117	F		2.00E-01	2.97E-07	2.31E-07	1.12E-07	6.88E-08	4.00E-08	3.26E-08	4.03E-08	
Sb-117	M		2.00E-02	4.66E-07	3.50E-07	1.76E-07	1.15E-07	7.81E-08	6.25E-08	7.36E-08	
Sb-117	S		2.00E-02	4.85E-07	3.63E-07	1.84E-07	1.20E-07	8.21E-08	6.59E-08	7.73E-08	
Sb-118			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-118m	F		2.00E-01	2.76E-06	2.35E-06	1.24E-06	7.47E-07	4.40E-07	3.50E-07	4.29E-07	
Sb-118m	M		2.00E-02	3.50E-06	2.88E-06	1.51E-06	9.36E-07	5.62E-07	4.44E-07	5.44E-07	
Sb-118m	S		2.00E-02	3.57E-06	2.94E-06	1.54E-06	9.58E-07	5.74E-07	4.55E-07	5.55E-07	
Sb-119	F		2.00E-01	1.04E-06	7.81E-07	3.66E-07	2.13E-07	1.14E-07	9.07E-08	1.17E-07	
Sb-119	M		2.00E-02	1.54E-06	1.10E-06	5.14E-07	3.07E-07	1.69E-07	1.34E-07	1.71E-07	
Sb-119	S		2.00E-02	1.59E-06	1.14E-06	5.29E-07	3.17E-07	1.75E-07	1.39E-07	1.76E-07	
Sb-120	F		2.00E-01	1.69E-07	1.16E-07	5.29E-08	3.32E-08	2.02E-08	1.70E-08	2.06E-08	
Sb-120	M		2.00E-02	2.45E-07	1.65E-07	7.59E-08	4.85E-08	3.10E-08	2.60E-08	3.10E-08	
Sb-120	S		2.00E-02	2.53E-07	1.71E-07	7.84E-08	5.03E-08	3.22E-08	2.70E-08	3.22E-08	
Sb-120m	F		2.00E-01	1.54E-05	1.25E-05	6.59E-06	4.14E-06	2.51E-06	2.06E-06	2.48E-06	
Sb-120m	M		2.00E-02	2.35E-05	1.88E-05	1.03E-05	6.81E-06	4.77E-06	3.81E-06	4.44E-06	
Sb-120m	S		2.00E-02	2.46E-05	1.96E-05	1.09E-05	7.18E-06	5.11E-06	4.07E-06	4.70E-06	
Sb-122	F		2.00E-01	1.54E-05	1.03E-05	5.14E-06	3.12E-06	1.64E-06	1.35E-06	1.71E-06	
Sb-122	M		2.00E-02	3.07E-05	2.12E-05	1.04E-05	6.85E-06	4.70E-06	3.85E-06	4.51E-06	
Sb-122	S		2.00E-02	3.25E-05	2.25E-05	1.11E-05	7.36E-06	5.11E-06	4.18E-06	4.88E-06	
Sb-122m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-124	F		2.00E-01	4.55E-05	3.26E-05	1.59E-05	9.81E-06	5.81E-06	4.88E-06	5.92E-06	
Sb-124	M		2.00E-02	1.14E-04	8.95E-05	5.14E-05	3.53E-05	2.85E-05	2.38E-05	2.65E-05	
Sb-124	S		2.00E-02	1.44E-04	1.15E-04	6.77E-05	4.63E-05	3.77E-05	3.17E-05	3.51E-05	
Sb-124m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-124n	F		2.00E-01	1.22E-07	8.66E-08	4.07E-08	2.54E-08	1.54E-08	1.28E-08	1.55E-08	
Sb-124n	M		2.00E-02	1.92E-07	1.36E-07	6.59E-08	4.26E-08	2.84E-08	2.35E-08	2.77E-08	
Sb-124n	S		2.00E-02	2.04E-07	1.45E-07	7.07E-08	4.59E-08	3.10E-08	2.57E-08	3.01E-08	
Sb-125	F		2.00E-01	3.24E-05	2.55E-05	1.40E-05	8.70E-06	5.81E-06	5.29E-06	6.03E-06	
Sb-125	M		2.00E-02	7.47E-05	6.14E-05	3.74E-05	2.56E-05	2.16E-05	1.79E-05	1.97E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Sb-125	S		2.00E-02	1.58E-04	1.41E-04	9.10E-05	6.07E-05	5.03E-05	4.44E-05	4.81E-05	
Sb-126	F		2.00E-01	3.53E-05	2.63E-05	1.30E-05	8.14E-06	4.77E-06	3.96E-06	4.81E-06	
Sb-126	M		2.00E-02	7.07E-05	5.40E-05	2.98E-05	1.81E-05	1.41E-05	1.14E-05	1.31E-05	
Sb-126	S		2.00E-02	7.66E-05	5.88E-05	2.91E-05	2.02E-05	1.60E-05	1.30E-05	1.47E-05	
Sb-126m	F		2.00E-01	4.48E-07	3.13E-07	1.46E-07	9.10E-08	5.55E-08	4.59E-08	5.59E-08	
Sb-126m	M		2.00E-02	6.51E-07	4.48E-07	2.11E-07	1.34E-07	8.58E-08	7.14E-08	8.51E-08	
Sb-126m	S		2.00E-02	6.73E-07	4.63E-07	2.18E-07	1.39E-07	8.92E-08	7.44E-08	8.84E-08	
Sb-127	F		2.00E-01	1.88E-05	1.31E-05	5.92E-06	3.60E-06	1.95E-06	1.61E-06	2.03E-06	
Sb-127	M		2.00E-02	3.81E-05	2.73E-05	1.44E-05	1.00E-05	7.81E-06	6.25E-06	7.10E-06	
Sb-127	S		2.00E-02	4.11E-05	2.96E-05	1.58E-05	1.10E-05	8.70E-06	6.96E-06	7.88E-06	
Sb-128	F		2.00E-01	8.33E-06	6.51E-06	3.19E-06	1.95E-06	1.11E-06	8.99E-07	1.11E-06	
Sb-128	M		2.00E-02	1.31E-05	9.77E-06	4.85E-06	3.09E-06	1.91E-06	1.55E-06	1.86E-06	
Sb-128	S		2.00E-02	1.36E-05	1.01E-05	5.00E-06	3.21E-06	2.00E-06	1.62E-06	1.95E-06	
Sb-128m	F		2.00E-01	3.65E-07	2.54E-07	1.18E-07	7.40E-08	4.51E-08	3.77E-08	4.59E-08	
Sb-128m	M		2.00E-02	4.96E-07	3.41E-07	1.59E-07	1.01E-07	6.33E-08	5.29E-08	6.36E-08	
Sb-128m	S		2.00E-02	5.11E-07	3.50E-07	1.63E-07	1.04E-07	6.51E-08	5.48E-08	6.55E-08	
Sb-129	F		2.00E-01	4.26E-06	3.08E-06	1.42E-06	8.70E-07	4.77E-07	3.96E-07	4.96E-07	
Sb-129	M		2.00E-02	7.55E-06	5.29E-06	2.56E-06	1.66E-06	1.07E-06	8.77E-07	1.05E-06	
Sb-129	S		2.00E-02	7.92E-06	5.55E-06	2.69E-06	1.75E-06	1.14E-06	9.36E-07	1.11E-06	
Sb-130	F		2.00E-01	1.14E-06	8.36E-07	4.03E-07	2.48E-07	1.48E-07	1.22E-07	1.49E-07	
Sb-130	M		2.00E-02	1.68E-06	1.20E-06	5.81E-07	3.67E-07	2.34E-07	1.92E-07	2.29E-07	
Sb-130	S		2.00E-02	1.74E-06	1.24E-06	5.99E-07	3.81E-07	2.43E-07	1.99E-07	2.38E-07	
Sb-130m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sb-131	F		2.00E-01	1.34E-06	1.07E-06	3.85E-07	2.93E-07	1.76E-07	1.34E-07	1.65E-07	
Sb-131	M		2.00E-02	1.50E-06	1.02E-06	4.88E-07	3.09E-07	2.05E-07	1.67E-07	1.99E-07	
Sb-131	S		2.00E-02	1.46E-06	9.92E-07	4.74E-07	3.05E-07	2.05E-07	1.68E-07	1.99E-07	
Sb-133			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sc-42m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sc-43	F		1.00E-03	2.30E-06	1.64E-06	7.62E-07	4.70E-07	2.62E-07	2.15E-07	2.68E-07	
Sc-43	M		1.00E-03	3.77E-06	2.66E-06	1.29E-06	8.29E-07	5.37E-07	4.37E-07	5.22E-07	
Sc-43	S		1.00E-03	3.92E-06	2.77E-06	1.34E-06	8.70E-07	5.66E-07	4.63E-07	5.51E-07	
Sc-44	F		1.00E-03	3.74E-06	2.76E-06	1.32E-06	8.03E-07	4.51E-07	3.67E-07	4.59E-07	
Sc-44	M		1.00E-03	5.77E-06	4.18E-06	2.03E-06	1.29E-06	8.03E-07	6.55E-07	7.88E-07	
Sc-44	S		1.00E-03	5.99E-06	4.33E-06	2.11E-06	1.34E-06	8.44E-07	6.85E-07	8.25E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Sc-44m	F		1.00E-03	2.84E-05	1.99E-05	9.32E-06	5.74E-06	3.22E-06	2.63E-06	3.29E-06	
Sc-44m	M		1.00E-03	4.14E-05	3.00E-05	1.50E-05	9.81E-06	6.51E-06	5.29E-06	6.25E-06	
Sc-44m	S		1.00E-03	3.89E-05	3.12E-05	1.57E-05	1.03E-05	6.22E-06	5.07E-06	6.11E-06	
Sc-46	F		1.00E-03	1.56E-04	1.24E-04	6.59E-05	4.33E-05	2.87E-05	2.41E-05	2.81E-05	
Sc-46	M		1.00E-03	9.66E-05	7.84E-05	4.70E-05	3.26E-05	2.70E-05	2.21E-05	2.45E-05	
Sc-46	S		1.00E-03	1.02E-04	8.33E-05	5.14E-05	3.61E-05	3.09E-05	2.50E-05	2.76E-05	
Sc-47	F		1.00E-03	7.47E-06	4.85E-06	2.15E-06	1.31E-06	7.25E-07	5.70E-07	7.29E-07	
Sc-47	M		1.00E-03	1.36E-05	9.66E-06	5.25E-06	3.74E-06	3.07E-06	2.42E-06	2.72E-06	
Sc-47	S		1.00E-03	1.45E-05	1.04E-05	5.70E-06	4.07E-06	3.40E-06	2.68E-06	3.00E-06	
Sc-48	F		1.00E-03	1.94E-05	1.50E-05	7.51E-06	4.70E-06	2.73E-06	2.23E-06	2.73E-06	
Sc-48	M		1.00E-03	2.76E-05	2.11E-05	1.10E-05	7.25E-06	4.88E-06	3.89E-06	4.59E-06	
Sc-48	S		1.00E-03	2.85E-05	2.18E-05	1.14E-05	7.55E-06	5.14E-06	4.11E-06	4.81E-06	
Sc-49	F		1.00E-03	7.88E-07	4.81E-07	2.02E-07	1.26E-07	7.29E-08	6.22E-08	7.70E-08	
Sc-49	M		1.00E-03	1.37E-06	8.58E-07	3.85E-07	2.48E-07	1.63E-07	1.38E-07	1.63E-07	
Sc-49	S		1.00E-03	1.44E-06	8.99E-07	4.03E-07	2.61E-07	1.73E-07	1.46E-07	1.73E-07	
Sc-50			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-70	F		1.00E+00	1.28E-06	1.01E-06	4.96E-07	3.00E-07	1.72E-07	1.39E-07	1.72E-07	
Se-70	M		2.00E-01	2.10E-06	1.53E-06	7.51E-07	4.70E-07	2.95E-07	2.39E-07	2.88E-07	
Se-70	S		2.00E-02	2.19E-06	1.59E-06	7.77E-07	4.88E-07	3.08E-07	2.50E-07	3.01E-07	
Se-71			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-72	F		1.00E+00	9.81E-05	7.25E-05	4.03E-05	3.09E-05	9.40E-06	7.10E-06	1.05E-05	
Se-72	M		2.00E-01	8.29E-05	5.96E-05	3.26E-05	2.23E-05	1.46E-05	1.24E-05	1.44E-05	
Se-72	S		2.00E-02	8.03E-05	5.92E-05	3.21E-05	2.14E-05	1.59E-05	1.36E-05	1.54E-05	
Se-73	F		1.00E+00	2.90E-06	2.44E-06	1.23E-06	7.99E-07	3.77E-07	3.02E-07	3.92E-07	
Se-73	M		2.00E-01	6.11E-06	4.51E-06	2.20E-06	1.41E-06	8.88E-07	7.22E-07	8.66E-07	
Se-73	S		2.00E-02	6.73E-06	4.81E-06	2.35E-06	1.51E-06	9.55E-07	7.77E-07	9.32E-07	
Se-73m	F		1.00E+00	3.50E-07	2.74E-07	1.34E-07	8.55E-08	4.29E-08	3.49E-08	4.44E-08	
Se-73m	M		2.00E-01	6.66E-07	4.77E-07	2.30E-07	1.47E-07	9.29E-08	7.59E-08	9.10E-08	
Se-73m	S		2.00E-02	7.22E-07	5.07E-07	2.43E-07	1.55E-07	9.92E-08	8.10E-08	9.73E-08	
Se-75	F		1.00E+00	2.83E-05	2.20E-05	1.25E-05	9.07E-06	4.37E-06	3.74E-06	4.59E-06	
Se-75	M		2.00E-01	2.01E-05	1.69E-05	9.25E-06	6.48E-06	4.70E-06	3.85E-06	4.37E-06	
Se-75	S		2.00E-02	2.05E-05	1.72E-05	1.07E-05	7.29E-06	5.96E-06	4.85E-06	5.40E-06	
Se-77m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-79	F		1.00E+00	5.55E-05	4.48E-05	2.70E-05	1.96E-05	5.33E-06	4.00E-06	6.22E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Se-79	M		2.00E-01	4.92E-05	3.77E-05	2.39E-05	1.68E-05	1.14E-05	9.10E-06	1.05E-05	
Se-79	S		2.00E-02	7.77E-05	6.85E-05	4.44E-05	2.99E-05	2.59E-05	2.33E-05	2.51E-05	
Se-79m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-81	F		1.00E+00	3.16E-07	1.99E-07	8.58E-08	5.55E-08	3.41E-08	2.97E-08	3.56E-08	
Se-81	M		2.00E-01	4.96E-07	3.15E-07	1.39E-07	9.18E-08	6.03E-08	5.18E-08	6.11E-08	
Se-81	S		2.00E-02	5.14E-07	3.27E-07	1.45E-07	9.58E-08	6.33E-08	5.44E-08	6.36E-08	
Se-81m	F		1.00E+00	6.88E-07	4.59E-07	2.01E-07	1.29E-07	7.22E-08	6.11E-08	7.51E-08	
Se-81m	M		2.00E-01	1.44E-06	9.40E-07	4.48E-07	2.98E-07	2.15E-07	1.77E-07	2.05E-07	
Se-81m	S		2.00E-02	1.52E-06	9.95E-07	4.74E-07	3.17E-07	2.31E-07	1.90E-07	2.20E-07	
Se-83	F		1.00E+00	6.18E-07	4.59E-07	2.19E-07	1.37E-07	8.10E-08	6.70E-08	8.18E-08	
Se-83	M		2.00E-01	9.95E-07	7.07E-07	3.42E-07	2.20E-07	1.45E-07	1.19E-07	1.41E-07	
Se-83	S		2.00E-02	1.04E-06	7.36E-07	3.56E-07	2.29E-07	1.52E-07	1.25E-07	1.48E-07	
Se-83m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Se-84			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Si-31	F		2.00E-02	1.34E-06	8.44E-07	3.53E-07	2.19E-07	1.18E-07	1.01E-07	1.27E-07	
Si-31	M		2.00E-02	2.54E-06	1.65E-06	7.55E-07	4.92E-07	3.27E-07	2.72E-07	3.23E-07	
Si-31	S		2.00E-02	2.67E-06	1.74E-06	7.99E-07	5.22E-07	3.50E-07	2.92E-07	3.44E-07	
Si-32	F		2.00E-02	1.11E-04	8.47E-05	4.03E-05	2.39E-05	1.39E-05	1.18E-05	1.45E-05	
Si-32	M		2.00E-02	2.62E-04	2.23E-04	1.33E-04	8.77E-05	6.96E-05	6.18E-05	6.81E-05	
Si-32	S		2.00E-02	1.03E-03	9.95E-04	6.88E-04	4.70E-04	4.14E-04	4.11E-04	4.29E-04	
Si-32+D	S			1.11E-03	1.06E-03	7.22E-04	4.92E-04	4.33E-04	4.26E-04	4.46E-04	
Si-32+E	S			1.11E-03	1.06E-03	7.22E-04	4.92E-04	4.33E-04	4.26E-04	4.46E-04	
Sm-139			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-140	F		5.00E-03	8.33E-07	5.40E-07	2.41E-07	1.48E-07	8.81E-08	7.40E-08	9.07E-08	
Sm-140	M		5.00E-03	1.20E-06	7.73E-07	3.51E-07	2.20E-07	1.37E-07	1.16E-07	1.39E-07	
Sm-140	S		5.00E-03	1.24E-06	7.99E-07	3.64E-07	2.28E-07	1.43E-07	1.21E-07	1.45E-07	
Sm-141	F		5.00E-03	3.85E-07	2.61E-07	1.21E-07	7.40E-08	4.44E-08	3.69E-08	4.51E-08	
Sm-141	M		5.00E-03	5.55E-07	3.70E-07	1.72E-07	1.08E-07	6.77E-08	5.62E-08	6.77E-08	
Sm-141	S		5.00E-03	5.74E-07	3.85E-07	1.78E-07	1.11E-07	6.99E-08	5.85E-08	7.03E-08	
Sm-141m	F		5.00E-03	7.14E-07	5.03E-07	2.38E-07	1.45E-07	8.62E-08	7.07E-08	8.70E-08	
Sm-141m	M		5.00E-03	1.07E-06	7.40E-07	3.52E-07	2.21E-07	1.39E-07	1.15E-07	1.38E-07	
Sm-141m	S		5.00E-03	1.11E-06	7.66E-07	3.64E-07	2.29E-07	1.45E-07	1.20E-07	1.44E-07	
Sm-142	F		5.00E-03	1.68E-06	1.09E-06	4.85E-07	2.93E-07	1.66E-07	1.37E-07	1.72E-07	
Sm-142	M		5.00E-03	2.72E-06	1.75E-06	7.99E-07	5.00E-07	3.09E-07	2.59E-07	3.13E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Sm-142	S		5.00E-03	2.83E-06	1.83E-06	8.36E-07	5.22E-07	3.25E-07	2.72E-07	3.28E-07	
Sm-143			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-143m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sm-145	F		5.00E-03	6.48E-05	5.44E-05	3.00E-05	1.83E-05	1.19E-05	1.05E-05	1.22E-05	
Sm-145	M		5.00E-03	2.96E-05	2.48E-05	1.48E-05	9.21E-06	6.85E-06	6.03E-06	6.77E-06	
Sm-145	S		5.00E-03	2.63E-05	2.20E-05	1.35E-05	8.70E-06	6.70E-06	5.77E-06	6.44E-06	
Sm-146	F		5.00E-03	2.83E-01	2.60E-01	1.64E-01	1.15E-01	9.47E-02	9.36E-02	9.88E-02	
Sm-146	M		5.00E-03	9.99E-02	9.36E-02	6.33E-02	4.37E-02	3.92E-02	3.92E-02	4.07E-02	
Sm-146	S		5.00E-03	5.62E-02	5.03E-02	3.31E-02	2.15E-02	1.82E-02	1.78E-02	1.88E-02	
Sm-147	F		5.00E-03	2.58E-01	2.38E-01	1.49E-01	1.05E-01	8.66E-02	8.55E-02	9.03E-02	
Sm-147	M		5.00E-03	9.03E-02	8.47E-02	5.74E-02	3.92E-02	3.54E-02	3.56E-02	3.70E-02	
Sm-147	S		5.00E-03	4.96E-02	4.48E-02	2.95E-02	1.91E-02	1.62E-02	1.58E-02	1.68E-02	
Sm-148	F		5.00E-03	2.22E-01	2.04E-01	1.28E-01	9.07E-02	7.44E-02	7.33E-02	7.77E-02	
Sm-148	M		5.00E-03	7.62E-02	7.18E-02	4.85E-02	3.34E-02	3.00E-02	3.02E-02	3.14E-02	
Sm-148	S		5.00E-03	4.07E-02	3.70E-02	2.44E-02	1.58E-02	1.34E-02	1.31E-02	1.39E-02	
Sm-151	F		5.00E-03	1.08E-04	9.92E-05	6.18E-05	4.29E-05	3.48E-05	3.43E-05	3.64E-05	
Sm-151	M		5.00E-03	4.03E-05	3.74E-05	2.47E-05	1.68E-05	1.49E-05	1.48E-05	1.55E-05	
Sm-151	S		5.00E-03	2.44E-05	2.14E-05	1.39E-05	9.07E-06	7.62E-06	7.33E-06	7.81E-06	
Sm-153	F		5.00E-03	8.44E-06	5.55E-06	2.43E-06	1.47E-06	7.77E-07	6.51E-07	8.29E-07	
Sm-153	M		5.00E-03	1.54E-05	1.07E-05	5.55E-06	3.81E-06	2.93E-06	2.35E-06	2.68E-06	
Sm-153	S		5.00E-03	1.63E-05	1.14E-05	5.96E-06	4.11E-06	3.20E-06	2.57E-06	2.92E-06	
Sm-155	F		5.00E-03	3.64E-07	2.32E-07	1.01E-07	6.51E-08	4.07E-08	3.51E-08	4.18E-08	
Sm-155	M		5.00E-03	5.81E-07	3.74E-07	1.68E-07	1.11E-07	7.44E-08	6.33E-08	7.44E-08	
Sm-155	S		5.00E-03	6.03E-07	3.89E-07	1.75E-07	1.16E-07	7.81E-08	6.66E-08	7.77E-08	
Sm-156	F		5.00E-03	3.74E-06	2.54E-06	1.15E-06	7.10E-07	4.00E-07	3.34E-07	4.14E-07	
Sm-156	M		5.00E-03	6.07E-06	4.29E-06	2.19E-06	1.33E-06	1.01E-06	8.18E-07	9.47E-07	
Sm-156	S		5.00E-03	6.40E-06	4.51E-06	2.09E-06	1.44E-06	1.11E-06	8.99E-07	1.03E-06	
Sm-157			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-106			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-108	F		4.00E-02	2.66E-07	1.98E-07	9.58E-08	5.85E-08	3.44E-08	2.78E-08	3.43E-08	
Sn-108	M		4.00E-02	3.81E-07	2.73E-07	1.32E-07	8.21E-08	5.11E-08	4.14E-08	5.03E-08	
Sn-108	S		4.00E-02	3.92E-07	2.81E-07	1.36E-07	8.47E-08	5.29E-08	4.29E-08	5.18E-08	
Sn-109	F		4.00E-02	2.74E-07	2.27E-07	1.18E-07	7.07E-08	4.22E-08	3.33E-08	4.11E-08	
Sn-109	M		4.00E-02	3.40E-07	2.77E-07	1.44E-07	8.77E-08	5.37E-08	4.26E-08	5.18E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)						
				Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Sn-109	S		4.00E-02	3.49E-07	2.83E-07	1.47E-07	8.99E-08	5.51E-08	4.37E-08	5.33E-08
Sn-110	F		4.00E-02	4.00E-06	2.93E-06	1.39E-06	8.51E-07	4.70E-07	3.81E-07	4.77E-07
Sn-110	M		4.00E-02	5.59E-06	4.07E-06	1.95E-06	1.22E-06	7.29E-07	5.96E-07	7.29E-07
Sn-110	S		4.00E-02	5.77E-06	4.18E-06	2.01E-06	1.27E-06	7.59E-07	6.18E-07	7.55E-07
Sn-111	F		4.00E-02	2.64E-07	1.89E-07	8.95E-08	5.51E-08	3.29E-08	2.70E-08	3.31E-08
Sn-111	M		4.00E-02	3.92E-07	2.77E-07	1.33E-07	8.51E-08	5.55E-08	4.55E-08	5.40E-08
Sn-111	S		4.00E-02	4.07E-07	2.86E-07	1.38E-07	8.84E-08	5.81E-08	4.74E-08	5.66E-08
Sn-113	F		4.00E-02	1.90E-05	1.38E-05	6.62E-06	4.03E-06	2.41E-06	2.03E-06	2.46E-06
Sn-113	M		4.00E-02	4.81E-05	3.81E-05	2.19E-05	1.49E-05	1.21E-05	1.00E-05	1.12E-05
Sn-113	S		4.00E-02	6.66E-05	5.44E-05	3.20E-05	2.17E-05	1.77E-05	1.48E-05	1.64E-05
Sn-113m	F		4.00E-02	5.88E-08	4.03E-08	1.96E-08	1.27E-08	8.81E-09	7.33E-09	8.55E-09
Sn-113m	M		4.00E-02	1.01E-07	6.96E-08	3.62E-08	2.45E-08	1.89E-08	1.56E-08	1.77E-08
Sn-113m	S		4.00E-02	1.07E-07	7.44E-08	3.92E-08	2.64E-08	2.06E-08	1.70E-08	1.92E-08
Sn-117m	F		4.00E-02	1.24E-05	8.33E-06	3.92E-06	2.28E-06	1.26E-06	1.06E-06	1.33E-06
Sn-117m	M		4.00E-02	3.81E-05	2.87E-05	1.70E-05	1.27E-05	1.16E-05	9.03E-06	9.92E-06
Sn-117m	S		4.00E-02	4.26E-05	3.24E-05	1.94E-05	1.45E-05	1.35E-05	1.05E-05	1.15E-05
Sn-119m	F		4.00E-02	1.15E-05	8.44E-06	4.00E-06	2.29E-06	1.31E-06	1.08E-06	1.35E-06
Sn-119m	M		4.00E-02	3.89E-05	2.96E-05	1.76E-05	1.19E-05	9.88E-06	8.14E-06	9.07E-06
Sn-119m	S		4.00E-02	5.77E-05	4.63E-05	2.79E-05	1.85E-05	1.51E-05	1.26E-05	1.40E-05
Sn-121	F		4.00E-02	2.86E-06	1.88E-06	8.18E-07	5.00E-07	2.61E-07	2.25E-07	2.83E-07
Sn-121	M		4.00E-02	5.74E-06	4.00E-06	1.90E-06	1.33E-06	1.07E-06	8.47E-07	9.66E-07
Sn-121	S		4.00E-02	6.07E-06	4.26E-06	2.04E-06	1.44E-06	1.17E-06	9.25E-07	1.05E-06
Sn-121m	F		4.00E-02	2.56E-05	2.02E-05	1.02E-05	5.81E-06	3.49E-06	2.99E-06	3.62E-06
Sn-121m	M		4.00E-02	6.99E-05	5.62E-05	3.39E-05	2.35E-05	2.03E-05	1.65E-05	1.82E-05
Sn-121m	S		4.00E-02	1.71E-04	1.55E-04	1.02E-04	6.88E-05	5.99E-05	5.55E-05	5.88E-05
Sn-121m+D	S			1.76E-04	1.59E-04	1.04E-04	6.99E-05	6.07E-05	5.62E-05	6.00E-05
Sn-121m+E	S			1.76E-04	1.59E-04	1.04E-04	6.99E-05	6.07E-05	5.62E-05	6.00E-05
Sn-123	F		4.00E-02	5.22E-05	3.66E-05	1.67E-05	9.62E-06	5.33E-06	4.37E-06	5.55E-06
Sn-123	M		4.00E-02	1.47E-04	1.16E-04	6.62E-05	4.44E-05	3.51E-05	3.02E-05	3.35E-05
Sn-123	S		4.00E-02	2.12E-04	1.75E-04	1.02E-04	6.85E-05	5.44E-05	4.77E-05	5.25E-05
Sn-123m	F		4.00E-02	5.18E-07	3.33E-07	1.45E-07	9.32E-08	5.70E-08	4.88E-08	5.88E-08
Sn-123m	M		4.00E-02	8.73E-07	5.66E-07	2.59E-07	1.73E-07	1.19E-07	9.99E-08	1.17E-07
Sn-123m	S		4.00E-02	9.10E-07	5.92E-07	2.72E-07	1.82E-07	1.26E-07	1.05E-07	1.23E-07
Sn-125	F		4.00E-02	4.51E-05	2.93E-05	1.29E-05	7.55E-06	4.03E-06	3.28E-06	4.22E-06

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Sn-125	M		4.00E-02	7.59E-05	5.44E-05	2.80E-05	1.85E-05	1.34E-05	1.14E-05	1.30E-05	
Sn-125	S		4.00E-02	8.18E-05	5.92E-05	3.10E-05	2.07E-05	1.52E-05	1.30E-05	1.47E-05	
Sn-125m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-126	F		4.00E-02	2.71E-04	2.20E-04	1.19E-04	7.36E-05	4.81E-05	4.26E-05	4.92E-05	
Sn-126	M		4.00E-02	4.59E-04	3.81E-04	2.30E-04	1.52E-04	1.21E-04	1.05E-04	1.17E-04	
Sn-126	S		4.00E-02	1.48E-03	1.41E-03	9.81E-04	6.77E-04	5.99E-04	5.88E-04	6.14E-04	
Sn-126+D	S			1.49E-03	1.42E-03	9.84E-04	6.81E-04	6.03E-04	5.92E-04	6.19E-04	
Sn-126+E	S			1.49E-03	1.42E-03	9.84E-04	6.81E-04	6.03E-04	5.92E-04	6.19E-04	
Sn-127	F		4.00E-02	2.45E-06	1.76E-06	8.36E-07	5.14E-07	2.94E-07	2.41E-07	2.98E-07	
Sn-127	M		4.00E-02	3.81E-06	2.75E-06	1.37E-06	8.95E-07	6.07E-07	4.92E-07	5.81E-07	
Sn-127	S		4.00E-02	4.00E-06	2.86E-06	1.44E-06	9.40E-07	6.48E-07	5.25E-07	6.14E-07	
Sn-127m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-128	F		4.00E-02	1.86E-06	1.31E-06	6.18E-07	3.77E-07	2.22E-07	1.83E-07	2.25E-07	
Sn-128	M		4.00E-02	2.94E-06	2.03E-06	9.77E-07	6.25E-07	4.11E-07	3.37E-07	4.00E-07	
Sn-128	S		4.00E-02	3.06E-06	2.11E-06	1.02E-06	6.55E-07	4.33E-07	3.54E-07	4.22E-07	
Sn-129			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-130			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sn-130m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-79			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-80	F		6.00E-01	3.29E-06	2.29E-06	1.04E-06	6.22E-07	3.43E-07	3.08E-07	3.77E-07	
Sr-80	M		2.00E-01	5.74E-06	3.81E-06	1.75E-06	1.08E-06	6.59E-07	5.51E-07	6.70E-07	
Sr-80	S		2.00E-02	6.11E-06	4.00E-06	1.84E-06	1.14E-06	6.96E-07	5.81E-07	7.07E-07	
Sr-81	F		6.00E-01	6.99E-07	4.88E-07	2.25E-07	1.38E-07	8.18E-08	6.99E-08	8.47E-08	
Sr-81	M		2.00E-01	1.08E-06	7.33E-07	3.42E-07	2.16E-07	1.38E-07	1.15E-07	1.38E-07	
Sr-81	S		2.00E-02	1.12E-06	7.59E-07	3.55E-07	2.26E-07	1.45E-07	1.20E-07	1.44E-07	
Sr-82	F		6.00E-01	1.05E-04	5.55E-05	2.48E-05	1.74E-05	1.20E-05	7.84E-06	9.92E-06	
Sr-82	M		2.00E-01	2.03E-04	1.48E-04	7.92E-05	5.25E-05	3.85E-05	3.33E-05	3.77E-05	
Sr-82	S		2.00E-02	2.29E-04	1.72E-04	9.40E-05	6.18E-05	4.55E-05	4.00E-05	4.51E-05	
Sr-82+D	S			2.29E-04	1.72E-04	9.40E-05	6.18E-05	4.55E-05	4.00E-05	4.49E-05	
Sr-82+E	S			2.29E-04	1.72E-04	9.40E-05	6.18E-05	4.55E-05	4.00E-05	4.49E-05	
Sr-83	F		6.00E-01	5.37E-06	4.37E-06	2.13E-06	1.30E-06	7.59E-07	6.25E-07	7.66E-07	
Sr-83	M		2.00E-01	9.66E-06	7.40E-06	3.70E-06	2.36E-06	1.51E-06	1.21E-06	1.45E-06	
Sr-83	S		2.00E-02	1.08E-05	7.99E-06	4.00E-06	2.55E-06	1.64E-06	1.32E-06	1.58E-06	
Sr-85	F		6.00E-01	1.58E-05	8.25E-06	4.07E-06	3.48E-06	3.02E-06	1.38E-06	1.81E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Sr-85	M		2.00E-01	1.57E-05	1.14E-05	6.48E-06	4.48E-06	3.21E-06	2.32E-06	2.76E-06	
Sr-85	S		2.00E-02	1.61E-05	1.35E-05	7.96E-06	4.70E-06	3.70E-06	2.99E-06	3.41E-06	
Sr-85m	F		6.00E-01	8.99E-08	7.10E-08	3.59E-08	2.23E-08	1.38E-08	1.07E-08	1.31E-08	
Sr-85m	M		2.00E-01	1.19E-07	9.32E-08	4.77E-08	3.00E-08	1.93E-08	1.53E-08	1.84E-08	
Sr-85m	S		2.00E-02	1.23E-07	9.69E-08	4.96E-08	3.13E-08	2.02E-08	1.61E-08	1.93E-08	
Sr-87m	F		6.00E-01	3.63E-07	2.89E-07	1.41E-07	8.58E-08	4.92E-08	4.26E-08	5.14E-08	
Sr-87m	M		2.00E-01	5.96E-07	4.44E-07	2.21E-07	1.42E-07	9.21E-08	7.44E-08	8.88E-08	
Sr-87m	S		2.00E-02	6.33E-07	4.66E-07	2.31E-07	1.49E-07	9.73E-08	7.84E-08	9.36E-08	
Sr-89	F		6.00E-01	5.66E-05	2.70E-05	1.19E-05	8.62E-06	6.18E-06	3.74E-06	4.81E-06	
Sr-89	M		2.00E-01	1.21E-04	8.92E-05	4.96E-05	3.39E-05	2.70E-05	2.26E-05	2.53E-05	
Sr-89	S		2.00E-02	1.44E-04	1.12E-04	6.36E-05	4.29E-05	3.43E-05	2.95E-05	3.27E-05	
Sr-90	F		6.00E-01	4.55E-04	1.91E-04	1.14E-04	1.51E-04	1.94E-04	8.81E-05	1.02E-04	
Sr-90	M		2.00E-01	5.48E-04	3.92E-04	2.39E-04	1.89E-04	1.82E-04	1.31E-04	1.45E-04	
Sr-90	S		2.00E-02	1.53E-03	1.45E-03	9.92E-04	6.73E-04	5.88E-04	5.77E-04	6.07E-04	
Sr-90+D	S			1.58E-03	1.49E-03	1.01E-03	6.85E-04	5.96E-04	5.85E-04	6.14E-04	
Sr-90+E	S			1.58E-03	1.49E-03	1.01E-03	6.85E-04	5.96E-04	5.85E-04	6.14E-04	
Sr-91	F		6.00E-01	5.44E-06	4.22E-06	1.95E-06	1.18E-06	6.48E-07	5.88E-07	7.14E-07	
Sr-91	M		2.00E-01	1.17E-05	8.47E-06	4.07E-06	2.61E-06	1.66E-06	1.38E-06	1.64E-06	
Sr-91	S		2.00E-02	1.32E-05	9.32E-06	4.48E-06	2.89E-06	1.85E-06	1.53E-06	1.82E-06	
Sr-92	F		6.00E-01	3.29E-06	2.60E-06	1.20E-06	7.18E-07	3.81E-07	3.59E-07	4.37E-07	
Sr-92	M		2.00E-01	7.10E-06	5.07E-06	2.37E-06	1.51E-06	9.18E-07	7.70E-07	9.25E-07	
Sr-92	S		2.00E-02	7.96E-06	5.48E-06	2.55E-06	1.63E-06	9.92E-07	8.25E-07	9.99E-07	
Sr-93			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Sr-94			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ta-170			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ta-172	F		1.00E-02	7.03E-07	5.00E-07	2.37E-07	1.47E-07	8.88E-08	7.33E-08	8.92E-08	
Ta-172	M		1.00E-02	1.08E-06	7.51E-07	3.63E-07	2.33E-07	1.54E-07	1.27E-07	1.51E-07	
Ta-172	S		1.00E-02	1.12E-06	7.84E-07	3.81E-07	2.45E-07	1.64E-07	1.35E-07	1.59E-07	
Ta-173	F		1.00E-02	1.17E-06	8.66E-07	4.14E-07	2.56E-07	1.47E-07	1.20E-07	1.49E-07	
Ta-173	M		1.00E-02	2.04E-06	1.47E-06	7.55E-07	4.96E-07	3.42E-07	2.78E-07	3.25E-07	
Ta-173	S		1.00E-02	2.13E-06	1.55E-06	7.96E-07	5.25E-07	3.66E-07	2.97E-07	3.47E-07	
Ta-174	F		1.00E-02	8.47E-07	5.88E-07	2.74E-07	1.70E-07	1.01E-07	8.40E-08	1.02E-07	
Ta-174	M		1.00E-02	1.41E-06	9.66E-07	4.70E-07	3.05E-07	2.08E-07	1.71E-07	2.01E-07	
Ta-174	S		1.00E-02	1.47E-06	1.01E-06	4.92E-07	3.20E-07	2.19E-07	1.80E-07	2.11E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ta-175	F		1.00E-02	2.63E-06	2.09E-06	1.06E-06	6.55E-07	3.77E-07	3.07E-07	3.77E-07	
Ta-175	M		1.00E-02	3.89E-06	3.00E-06	1.57E-06	1.01E-06	6.55E-07	5.25E-07	6.25E-07	
Ta-175	S		1.00E-02	4.03E-06	3.12E-06	1.63E-06	1.06E-06	6.92E-07	5.59E-07	6.62E-07	
Ta-176	F		1.00E-02	3.65E-06	2.96E-06	1.52E-06	9.32E-07	5.40E-07	4.37E-07	5.37E-07	
Ta-176	M		1.00E-02	5.22E-06	4.11E-06	2.16E-06	1.39E-06	8.95E-07	7.18E-07	8.55E-07	
Ta-176	S		1.00E-02	5.40E-06	4.26E-06	2.23E-06	1.44E-06	9.36E-07	7.51E-07	8.92E-07	
Ta-177	F		1.00E-02	1.25E-06	8.88E-07	4.14E-07	2.55E-07	1.41E-07	1.18E-07	1.47E-07	
Ta-177	M		1.00E-02	2.44E-06	1.76E-06	9.40E-07	5.74E-07	4.48E-07	3.59E-07	4.14E-07	
Ta-177	S		1.00E-02	2.58E-06	1.87E-06	1.01E-06	6.22E-07	4.92E-07	3.92E-07	4.51E-07	
Ta-178			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ta-178m	F		1.00E-02	1.14E-06	8.70E-07	4.26E-07	2.65E-07	1.57E-07	1.29E-07	1.58E-07	
Ta-178m	M		1.00E-02	1.88E-06	1.39E-06	7.18E-07	4.77E-07	3.34E-07	2.70E-07	3.15E-07	
Ta-178m	S		1.00E-02	1.95E-06	1.45E-06	7.51E-07	5.00E-07	3.54E-07	2.85E-07	3.32E-07	
Ta-179	F		1.00E-02	2.99E-06	2.28E-06	1.13E-06	7.10E-07	4.44E-07	3.70E-07	4.44E-07	
Ta-179	M		1.00E-02	4.00E-06	3.19E-06	1.80E-06	1.14E-06	8.29E-07	6.99E-07	7.99E-07	
Ta-179	S		1.00E-02	7.96E-06	6.96E-06	4.33E-06	2.74E-06	2.06E-06	1.81E-06	2.02E-06	
Ta-180	F		1.00E-02	5.85E-07	4.00E-07	1.76E-07	1.10E-07	5.92E-08	5.03E-08	6.29E-08	
Ta-180	M		1.00E-02	1.19E-06	8.25E-07	4.14E-07	2.83E-07	1.81E-07	1.68E-07	1.92E-07	
Ta-180	S		1.00E-02	1.25E-06	8.73E-07	4.44E-07	3.02E-07	1.97E-07	1.58E-07	1.87E-07	
Ta-182	F		1.00E-02	5.55E-05	4.18E-05	2.12E-05	1.35E-05	8.58E-06	7.40E-06	8.70E-06	
Ta-182	M		1.00E-02	1.19E-04	9.40E-05	5.70E-05	4.03E-05	3.50E-05	2.82E-05	3.10E-05	
Ta-182	S		1.00E-02	1.55E-04	1.25E-04	7.70E-05	5.44E-05	4.70E-05	3.81E-05	4.22E-05	
Ta-182m	F		1.00E-02	3.89E-07	2.65E-07	1.19E-07	7.99E-08	5.18E-08	4.51E-08	5.29E-08	
Ta-182m	M		1.00E-02	6.11E-07	4.18E-07	1.93E-07	1.33E-07	9.25E-08	7.92E-08	9.14E-08	
Ta-182m	S		1.00E-02	6.36E-07	4.37E-07	2.03E-07	1.40E-07	9.81E-08	8.36E-08	9.62E-08	
Ta-183	F		1.00E-02	1.68E-05	1.12E-05	5.07E-06	3.02E-06	1.62E-06	1.37E-06	1.72E-06	
Ta-183	M		1.00E-02	3.96E-05	2.83E-05	1.58E-05	1.12E-05	9.32E-06	7.44E-06	8.33E-06	
Ta-183	S		1.00E-02	4.26E-05	3.07E-05	1.73E-05	1.23E-05	1.04E-05	8.29E-06	9.25E-06	
Ta-184	F		1.00E-02	6.73E-06	4.85E-06	2.25E-06	1.38E-06	7.62E-07	6.33E-07	7.88E-07	
Ta-184	M		1.00E-02	1.18E-05	8.47E-06	4.22E-06	2.76E-06	1.85E-06	1.51E-06	1.78E-06	
Ta-184	S		1.00E-02	1.24E-05	8.88E-06	4.40E-06	2.92E-06	1.98E-06	1.61E-06	1.89E-06	
Ta-185	F		1.00E-02	8.21E-07	5.22E-07	2.26E-07	1.44E-07	8.70E-08	7.47E-08	9.03E-08	
Ta-185	M		1.00E-02	1.47E-06	9.51E-07	4.44E-07	2.95E-07	2.07E-07	1.73E-07	2.02E-07	
Ta-185	S		1.00E-02	1.54E-06	1.00E-06	4.70E-07	3.13E-07	2.22E-07	1.85E-07	2.15E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Ta-186	F		1.00E-02	4.26E-07	2.88E-07	1.31E-07	8.36E-08	5.18E-08	4.44E-08	5.29E-08	
Ta-186	M		1.00E-02	5.92E-07	4.00E-07	1.82E-07	1.18E-07	7.59E-08	6.48E-08	7.66E-08	
Ta-186	S		1.00E-02	6.11E-07	4.11E-07	1.88E-07	1.22E-07	7.84E-08	6.70E-08	7.92E-08	
Tb-146			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-147	F		5.00E-03	1.54E-06	1.20E-06	6.03E-07	3.70E-07	2.17E-07	1.75E-07	2.15E-07	
Tb-147	M		5.00E-03	2.11E-06	1.60E-06	8.14E-07	5.14E-07	3.25E-07	2.62E-07	3.15E-07	
Tb-147	S		5.00E-03	2.17E-06	1.65E-06	8.40E-07	5.33E-07	3.39E-07	2.72E-07	3.26E-07	
Tb-147m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-148	F		5.00E-03	1.76E-06	1.35E-06	5.03E-07	3.30E-07	2.33E-07	2.18E-07	2.48E-07	
Tb-148	M		5.00E-03	2.08E-06	1.48E-06	7.36E-07	4.63E-07	3.05E-07	2.62E-07	3.06E-07	
Tb-148	S		5.00E-03	2.09E-06	1.47E-06	7.18E-07	4.48E-07	2.87E-07	2.41E-07	2.87E-07	
Tb-148m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-149	F		5.00E-03	1.36E-05	9.10E-06	4.70E-06	2.89E-06	1.96E-06	1.66E-06	1.95E-06	
Tb-149	M		5.00E-03	6.36E-05	4.51E-05	2.96E-05	2.02E-05	1.76E-05	1.51E-05	1.64E-05	
Tb-149	S		5.00E-03	6.92E-05	4.92E-05	3.24E-05	2.21E-05	1.94E-05	1.66E-05	1.80E-05	
Tb-149m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-150	F		5.00E-03	2.46E-06	1.92E-06	9.58E-07	5.85E-07	3.35E-07	2.69E-07	3.34E-07	
Tb-150	M		5.00E-03	3.33E-06	2.53E-06	1.26E-06	7.88E-07	4.70E-07	3.81E-07	4.63E-07	
Tb-150	S		5.00E-03	3.43E-06	2.60E-06	1.29E-06	8.10E-07	4.85E-07	3.92E-07	4.77E-07	
Tb-150m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-151	F		5.00E-03	4.18E-06	3.27E-06	1.64E-06	1.01E-06	5.85E-07	4.77E-07	5.85E-07	
Tb-151	M		5.00E-03	6.22E-06	4.77E-06	2.49E-06	1.63E-06	1.10E-06	8.84E-07	1.04E-06	
Tb-151	S		5.00E-03	6.48E-06	4.92E-06	2.59E-06	1.71E-06	1.16E-06	9.32E-07	1.10E-06	
Tb-151m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-152	F		5.00E-03	7.10E-06	5.29E-06	2.56E-06	1.58E-06	8.81E-07	7.14E-07	8.92E-07	
Tb-152	M		5.00E-03	1.01E-05	7.40E-06	3.61E-06	2.29E-06	1.37E-06	1.12E-06	1.36E-06	
Tb-152	S		5.00E-03	1.04E-05	7.62E-06	3.74E-06	2.38E-06	1.43E-06	1.16E-06	1.41E-06	
Tb-152m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-153	F		5.00E-03	3.96E-06	2.98E-06	1.49E-06	9.18E-07	5.33E-07	3.41E-07	4.55E-07	
Tb-153	M		5.00E-03	5.77E-06	4.29E-06	2.29E-06	1.51E-06	1.06E-06	8.66E-07	1.01E-06	
Tb-153	S		5.00E-03	6.03E-06	4.48E-06	2.42E-06	1.60E-06	1.00E-06	8.21E-07	9.77E-07	
Tb-154	F		5.00E-03	7.10E-06	5.70E-06	2.94E-06	1.84E-06	1.07E-06	8.70E-07	1.06E-06	
Tb-154	M		5.00E-03	9.47E-06	7.47E-06	3.92E-06	2.53E-06	1.60E-06	1.28E-06	1.54E-06	
Tb-154	S		5.00E-03	9.77E-06	7.70E-06	4.03E-06	2.61E-06	1.67E-06	1.33E-06	1.59E-06	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Tb-155	F		5.00E-03	3.44E-06	2.38E-06	1.14E-06	7.07E-07	4.03E-07	3.40E-07	4.18E-07	
Tb-155	M		5.00E-03	6.66E-06	4.88E-06	2.68E-06	1.65E-06	1.30E-06	1.04E-06	1.20E-06	
Tb-155	S		5.00E-03	7.03E-06	5.18E-06	2.55E-06	1.78E-06	1.42E-06	1.14E-06	1.30E-06	
Tb-156	F		5.00E-03	1.76E-05	1.37E-05	7.07E-06	4.51E-06	2.74E-06	2.27E-06	2.73E-06	
Tb-156	M		5.00E-03	2.52E-05	1.95E-05	1.08E-05	7.33E-06	5.44E-06	4.33E-06	5.00E-06	
Tb-156	S		5.00E-03	2.63E-05	2.04E-05	1.14E-05	7.73E-06	5.85E-06	4.66E-06	5.33E-06	
Tb-156m	F		5.00E-03	2.83E-06	2.13E-06	1.09E-06	7.03E-07	4.33E-07	3.62E-07	4.33E-07	
Tb-156m	M		5.00E-03	4.18E-06	3.17E-06	1.79E-06	1.10E-06	8.73E-07	7.03E-07	8.03E-07	
Tb-156m	S		5.00E-03	4.40E-06	3.34E-06	1.68E-06	1.18E-06	9.51E-07	7.62E-07	8.62E-07	
Tb-156n	F		5.00E-03	1.30E-06	9.25E-07	4.44E-07	2.83E-07	1.68E-07	1.43E-07	1.72E-07	
Tb-156n	M		5.00E-03	2.45E-06	1.77E-06	9.62E-07	6.70E-07	4.74E-07	3.77E-07	4.37E-07	
Tb-156n	S		5.00E-03	2.59E-06	1.87E-06	1.02E-06	7.18E-07	5.18E-07	4.11E-07	4.74E-07	
Tb-157	F		5.00E-03	3.77E-05	3.46E-05	2.15E-05	1.49E-05	1.21E-05	1.19E-05	1.27E-05	
Tb-157	M		5.00E-03	1.33E-05	1.24E-05	8.21E-06	5.55E-06	4.92E-06	4.92E-06	5.14E-06	
Tb-157	S		5.00E-03	8.25E-06	7.55E-06	4.96E-06	3.25E-06	2.73E-06	2.65E-06	2.82E-06	
Tb-158	F		5.00E-03	1.02E-03	9.51E-04	6.29E-04	4.70E-04	3.92E-04	3.89E-04	4.07E-04	
Tb-158	M		5.00E-03	3.92E-04	3.69E-04	2.59E-04	1.89E-04	1.74E-04	1.72E-04	1.78E-04	
Tb-158	S		5.00E-03	2.99E-04	2.79E-04	1.97E-04	1.39E-04	1.25E-04	1.20E-04	1.25E-04	
Tb-160	F		5.00E-03	1.23E-04	9.32E-05	4.74E-05	2.91E-05	1.82E-05	1.55E-05	1.84E-05	
Tb-160	M		5.00E-03	1.20E-04	9.36E-05	5.51E-05	3.81E-05	3.20E-05	2.60E-05	2.89E-05	
Tb-160	S		5.00E-03	1.31E-04	1.04E-04	6.25E-05	4.40E-05	3.81E-05	3.08E-05	3.39E-05	
Tb-161	F		5.00E-03	1.30E-05	8.62E-06	4.00E-06	2.31E-06	1.26E-06	1.05E-06	1.33E-06	
Tb-161	M		5.00E-03	2.50E-05	1.79E-05	1.00E-05	7.07E-06	5.92E-06	4.74E-06	5.29E-06	
Tb-161	S		5.00E-03	2.68E-05	1.94E-05	1.10E-05	7.81E-06	6.62E-06	5.29E-06	5.88E-06	
Tb-162			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-163	F		5.00E-03	3.41E-07	2.36E-07	1.08E-07	6.99E-08	4.37E-08	3.70E-08	4.40E-08	
Tb-163	M		5.00E-03	5.18E-07	3.55E-07	1.65E-07	1.10E-07	7.29E-08	6.14E-08	7.22E-08	
Tb-163	S		5.00E-03	5.37E-07	3.69E-07	1.72E-07	1.14E-07	7.62E-08	6.40E-08	7.51E-08	
Tb-164			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tb-165			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tc-101	F		1.00E+00	3.13E-07	2.09E-07	9.25E-08	5.77E-08	3.61E-08	3.05E-08	3.67E-08	
Tc-101	M		2.00E-01	4.00E-07	2.64E-07	1.19E-07	7.84E-08	5.14E-08	4.40E-08	5.18E-08	
Tc-101	S		2.00E-02	4.07E-07	2.70E-07	1.22E-07	8.07E-08	5.33E-08	4.55E-08	5.33E-08	
Tc-102			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Tc-102m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-104	F		1.00E+00	1.01E-06	6.77E-07	3.07E-07	1.77E-07	1.08E-07	8.70E-08	1.08E-07	1.08E-07
Tc-104	M		2.00E-01	1.10E-06	7.22E-07	3.30E-07	2.05E-07	1.28E-07	1.07E-07	1.29E-07	1.29E-07
Tc-104	S		2.00E-02	1.11E-06	7.25E-07	3.33E-07	2.08E-07	1.30E-07	1.09E-07	1.31E-07	1.31E-07
Tc-105			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-91			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-91m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-92			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-93	F		1.00E+00	1.25E-06	1.04E-06	5.37E-07	3.12E-07	1.89E-07	1.48E-07	1.84E-07	1.84E-07
Tc-93	M		2.00E-01	1.34E-06	1.09E-06	5.66E-07	3.48E-07	2.12E-07	1.67E-07	2.05E-07	2.05E-07
Tc-93	S		2.00E-02	1.35E-06	1.10E-06	5.70E-07	3.52E-07	2.14E-07	1.69E-07	2.07E-07	2.07E-07
Tc-93m	F		1.00E+00	5.81E-07	4.59E-07	2.28E-07	1.33E-07	8.07E-08	6.36E-08	7.88E-08	7.88E-08
Tc-93m	M		2.00E-01	6.22E-07	4.81E-07	2.43E-07	1.52E-07	9.44E-08	7.59E-08	9.18E-08	9.18E-08
Tc-93m	S		2.00E-02	6.29E-07	4.85E-07	2.45E-07	1.54E-07	9.62E-08	7.70E-08	9.32E-08	9.32E-08
Tc-94	F		1.00E+00	3.30E-06	2.80E-06	1.46E-06	8.58E-07	5.25E-07	4.14E-07	5.07E-07	5.07E-07
Tc-94	M		2.00E-01	3.64E-06	3.02E-06	1.57E-06	9.73E-07	5.88E-07	4.66E-07	5.66E-07	5.66E-07
Tc-94	S		2.00E-02	3.70E-06	3.05E-06	1.59E-06	9.92E-07	5.96E-07	4.70E-07	5.77E-07	5.77E-07
Tc-94m	F		1.00E+00	1.81E-06	1.27E-06	5.85E-07	3.24E-07	1.98E-07	1.54E-07	1.95E-07	1.95E-07
Tc-94m	M		2.00E-01	1.64E-06	1.13E-06	5.37E-07	3.32E-07	2.09E-07	1.70E-07	2.06E-07	2.06E-07
Tc-94m	S		2.00E-02	1.62E-06	1.12E-06	5.33E-07	3.33E-07	2.10E-07	1.72E-07	2.08E-07	2.08E-07
Tc-95	F		1.00E+00	2.83E-06	2.39E-06	1.25E-06	7.44E-07	4.55E-07	3.60E-07	4.40E-07	4.40E-07
Tc-95	M		2.00E-01	3.15E-06	2.61E-06	1.36E-06	8.40E-07	5.03E-07	3.96E-07	4.85E-07	4.85E-07
Tc-95	S		2.00E-02	3.23E-06	2.65E-06	1.38E-06	8.55E-07	5.11E-07	4.00E-07	4.92E-07	4.92E-07
Tc-95m	F		1.00E+00	9.21E-06	6.99E-06	3.53E-06	2.18E-06	1.36E-06	1.11E-06	1.34E-06	1.34E-06
Tc-95m	M		2.00E-01	1.85E-05	1.51E-05	8.81E-06	5.85E-06	4.11E-06	3.33E-06	3.85E-06	3.85E-06
Tc-95m	S		2.00E-02	2.26E-05	1.89E-05	1.01E-05	6.88E-06	5.51E-06	4.48E-06	5.03E-06	5.03E-06
Tc-96	F		1.00E+00	1.56E-05	1.28E-05	6.77E-06	4.18E-06	2.62E-06	2.12E-06	2.55E-06	2.55E-06
Tc-96	M		2.00E-01	1.78E-05	1.46E-05	7.88E-06	5.03E-06	3.24E-06	2.57E-06	3.07E-06	3.07E-06
Tc-96	S		2.00E-02	1.81E-05	1.48E-05	8.03E-06	5.14E-06	3.33E-06	2.63E-06	3.14E-06	3.14E-06
Tc-96m	F		1.00E+00	1.96E-07	1.54E-07	7.81E-08	4.66E-08	2.88E-08	2.29E-08	2.80E-08	2.80E-08
Tc-96m	M		2.00E-01	2.09E-07	1.64E-07	8.62E-08	5.37E-08	3.44E-08	2.73E-08	3.29E-08	3.29E-08
Tc-96m	S		2.00E-02	2.11E-07	1.65E-07	8.73E-08	5.48E-08	3.52E-08	2.80E-08	3.36E-08	3.36E-08
Tc-97	F		1.00E+00	1.95E-06	1.38E-06	6.29E-07	3.53E-07	2.09E-07	1.62E-07	2.07E-07	2.07E-07
Tc-97	M		2.00E-01	4.66E-06	3.77E-06	2.13E-06	1.35E-06	1.03E-06	8.10E-07	9.32E-07	9.32E-07

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Tc-97	S		2.00E-02	1.87E-05	1.79E-05	1.22E-05	8.36E-06	7.10E-06	6.59E-06	7.03E-06	
Tc-97m	F		1.00E+00	1.24E-05	8.51E-06	3.63E-06	2.06E-06	1.12E-06	9.99E-07	1.25E-06	
Tc-97m	M		2.00E-01	4.85E-05	3.69E-05	2.25E-05	1.65E-05	1.52E-05	1.20E-05	1.31E-05	
Tc-97m	S		2.00E-02	6.03E-05	4.70E-05	2.90E-05	2.12E-05	1.95E-05	1.54E-05	1.69E-05	
Tc-98	F		1.00E+00	3.44E-05	2.38E-05	1.12E-05	6.73E-06	4.18E-06	3.42E-06	4.18E-06	
Tc-98	M		2.00E-01	1.21E-04	9.92E-05	6.07E-05	4.22E-05	3.56E-05	2.92E-05	3.22E-05	
Tc-98	S		2.00E-02	3.96E-04	3.77E-04	2.66E-04	1.88E-04	1.67E-04	1.57E-04	1.65E-04	
Tc-99	F		1.00E+00	1.48E-05	9.18E-06	3.89E-06	2.18E-06	1.33E-06	1.06E-06	1.34E-06	
Tc-99	M		2.00E-01	6.22E-05	4.88E-05	2.94E-05	2.08E-05	1.85E-05	1.49E-05	1.64E-05	
Tc-99	S		2.00E-02	1.50E-04	1.35E-04	8.92E-05	6.07E-05	5.37E-05	4.92E-05	5.25E-05	
Tc-99m	F		1.00E+00	4.26E-07	3.22E-07	1.53E-07	8.81E-08	5.40E-08	4.29E-08	5.29E-08	
Tc-99m	M		2.00E-01	4.92E-07	3.66E-07	1.89E-07	1.25E-07	8.88E-08	7.10E-08	8.29E-08	
Tc-99m	S		2.00E-02	4.96E-07	3.70E-07	1.92E-07	1.30E-07	9.25E-08	7.44E-08	8.62E-08	
Te-113			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-114	F		6.00E-01	6.88E-07	4.81E-07	2.29E-07	1.39E-07	8.33E-08	6.81E-08	8.36E-08	
Te-114	M		2.00E-01	9.88E-07	6.81E-07	3.22E-07	1.99E-07	1.24E-07	1.02E-07	1.24E-07	
Te-114	S		2.00E-02	1.02E-06	7.03E-07	3.33E-07	2.06E-07	1.29E-07	1.06E-07	1.28E-07	
Te-114	V		6.00E-01	8.14E-07	5.70E-07	3.25E-07	2.08E-07	1.47E-07	1.23E-07	1.41E-07	
Te-115			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-115m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Te-116	F		6.00E-01	2.22E-06	1.76E-06	8.62E-07	5.22E-07	2.99E-07	2.42E-07	3.00E-07	
Te-116	M		2.00E-01	3.65E-06	2.70E-06	1.34E-06	8.51E-07	5.44E-07	4.40E-07	5.29E-07	
Te-116	S		2.00E-02	3.89E-06	2.83E-06	1.41E-06	8.95E-07	5.74E-07	4.66E-07	5.55E-07	
Te-116	V		6.00E-01	2.51E-06	1.86E-06	1.07E-06	6.66E-07	4.55E-07	3.68E-07	4.33E-07	
Te-117	F		6.00E-01	6.66E-07	5.25E-07	2.62E-07	1.58E-07	9.29E-08	7.47E-08	9.21E-08	
Te-117	M		2.00E-01	9.66E-07	7.25E-07	3.63E-07	2.28E-07	1.44E-07	1.15E-07	1.39E-07	
Te-117	S		2.00E-02	1.00E-06	7.51E-07	3.74E-07	2.36E-07	1.49E-07	1.20E-07	1.45E-07	
Te-117	V		6.00E-01	6.88E-07	5.14E-07	3.00E-07	1.89E-07	1.32E-07	1.07E-07	1.25E-07	
Te-118	F		6.00E-01	3.65E-05	2.87E-05	1.30E-05	7.40E-06	4.07E-06	3.23E-06	4.14E-06	
Te-118	M		2.00E-01	6.40E-05	4.59E-05	2.29E-05	1.48E-05	1.00E-05	8.51E-06	9.92E-06	
Te-118	S		2.00E-02	6.99E-05	4.92E-05	2.48E-05	1.62E-05	1.11E-05	9.44E-06	1.09E-05	
Te-118	V		6.00E-01	7.88E-05	5.48E-05	2.79E-05	1.55E-05	9.51E-06	7.18E-06	9.07E-06	
Te-118+D	V			7.88E-05	5.48E-05	2.79E-05	1.62E-05	1.11E-05	9.44E-06	1.11E-05	
Te-118+E	V			7.88E-05	5.48E-05	2.79E-05	1.62E-05	1.11E-05	9.44E-06	1.11E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Te-119	F		6.00E-01	2.19E-06	1.94E-06	9.99E-07	6.03E-07	3.51E-07	2.80E-07	3.45E-07	
Te-119	M		2.00E-01	3.05E-06	2.52E-06	1.29E-06	8.07E-07	4.81E-07	3.81E-07	4.66E-07	
Te-119	S		2.00E-02	3.30E-06	2.63E-06	1.35E-06	8.47E-07	5.07E-07	4.00E-07	4.88E-07	
Te-119	V		6.00E-01	2.42E-06	1.93E-06	1.15E-06	7.14E-07	4.92E-07	3.89E-07	4.55E-07	
Te-119m	F		6.00E-01	9.36E-06	7.73E-06	4.07E-06	2.52E-06	1.52E-06	1.24E-06	1.50E-06	
Te-119m	M		2.00E-01	1.29E-05	1.04E-05	5.59E-06	3.61E-06	2.40E-06	1.92E-06	2.26E-06	
Te-119m	S		2.00E-02	1.36E-05	1.08E-05	5.85E-06	3.81E-06	2.54E-06	2.02E-06	2.39E-06	
Te-119m	V		6.00E-01	1.43E-05	1.09E-05	6.51E-06	4.14E-06	2.87E-06	2.33E-06	2.71E-06	
Te-121	F		6.00E-01	6.88E-06	5.40E-06	2.85E-06	1.84E-06	1.15E-06	9.66E-07	1.14E-06	
Te-121	M		2.00E-01	9.14E-06	7.33E-06	4.11E-06	2.69E-06	1.89E-06	1.52E-06	1.77E-06	
Te-121	S		2.00E-02	9.55E-06	7.77E-06	4.40E-06	2.88E-06	2.06E-06	1.65E-06	1.91E-06	
Te-121	V		6.00E-01	1.22E-05	8.95E-06	5.37E-06	3.60E-06	2.72E-06	2.10E-06	2.42E-06	
Te-121m	F		6.00E-01	5.22E-05	3.74E-05	2.01E-05	1.23E-05	7.84E-06	6.85E-06	8.03E-06	
Te-121m	M		2.00E-01	7.18E-05	5.48E-05	3.32E-05	2.29E-05	1.93E-05	1.58E-05	1.75E-05	
Te-121m	S		2.00E-02	8.51E-05	6.99E-05	4.37E-05	3.04E-05	2.61E-05	2.14E-05	2.35E-05	
Te-121m	V		6.00E-01	1.33E-04	1.01E-04	6.03E-05	3.69E-05	2.46E-05	2.08E-05	2.42E-05	
Te-123	F		6.00E-01	1.31E-05	1.08E-05	7.22E-06	5.55E-06	4.66E-06	4.51E-06	4.74E-06	
Te-123	M		2.00E-01	6.03E-06	4.63E-06	3.18E-06	2.37E-06	2.11E-06	2.07E-06	2.16E-06	
Te-123	S		2.00E-02	3.19E-06	2.85E-06	1.85E-06	1.20E-06	9.92E-07	9.62E-07	1.03E-06	
Te-123	V		6.00E-01	3.36E-05	2.97E-05	2.19E-05	1.69E-05	1.48E-05	1.39E-05	1.45E-05	
Te-123m	F		6.00E-01	3.60E-05	2.50E-05	1.27E-05	7.07E-06	4.14E-06	3.54E-06	4.33E-06	
Te-123m	M		2.00E-01	6.51E-05	4.88E-05	2.96E-05	2.09E-05	1.84E-05	1.48E-05	1.62E-05	
Te-123m	S		2.00E-02	7.47E-05	5.88E-05	3.64E-05	2.60E-05	2.33E-05	1.88E-05	2.05E-05	
Te-123m	V		6.00E-01	9.07E-05	6.66E-05	3.77E-05	2.09E-05	1.29E-05	1.07E-05	1.30E-05	
Te-125m	F		6.00E-01	2.28E-05	1.54E-05	7.47E-06	4.03E-06	2.26E-06	1.88E-06	2.38E-06	
Te-125m	M		2.00E-01	5.33E-05	4.00E-05	2.41E-05	1.74E-05	1.58E-05	1.24E-05	1.37E-05	
Te-125m	S		2.00E-02	6.07E-05	4.70E-05	2.87E-05	2.11E-05	1.94E-05	1.52E-05	1.67E-05	
Te-125m	V		6.00E-01	5.66E-05	4.00E-05	2.17E-05	1.17E-05	6.92E-06	5.59E-06	6.96E-06	
Te-127	F		6.00E-01	1.60E-06	1.20E-06	5.11E-07	3.17E-07	1.70E-07	1.45E-07	1.82E-07	
Te-127	M		2.00E-01	3.89E-06	2.72E-06	1.32E-06	8.99E-07	5.88E-07	4.70E-07	5.59E-07	
Te-127	S		2.00E-02	4.37E-06	2.96E-06	1.44E-06	9.81E-07	6.48E-07	5.18E-07	6.14E-07	
Te-127	V		6.00E-01	2.29E-06	1.64E-06	8.62E-07	5.37E-07	3.44E-07	2.86E-07	3.40E-07	
Te-127m	F		6.00E-01	7.73E-05	5.18E-05	2.43E-05	1.29E-05	7.25E-06	5.74E-06	7.44E-06	
Te-127m	M		2.00E-01	1.30E-04	9.73E-05	5.70E-05	3.96E-05	3.41E-05	2.75E-05	3.05E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Te-127m	S		2.00E-02	1.51E-04	1.20E-04	7.25E-05	5.11E-05	4.44E-05	3.63E-05	4.00E-05	
Te-127m	V		6.00E-01	1.95E-04	1.37E-04	7.18E-05	3.77E-05	2.25E-05	1.71E-05	2.19E-05	
Te-129	F		6.00E-01	6.85E-07	4.40E-07	1.88E-07	1.18E-07	6.96E-08	5.96E-08	7.25E-08	
Te-129	M		2.00E-01	1.24E-06	7.99E-07	3.66E-07	2.41E-07	1.64E-07	1.37E-07	1.61E-07	
Te-129	S		2.00E-02	1.31E-06	8.40E-07	3.89E-07	2.55E-07	1.75E-07	1.45E-07	1.71E-07	
Te-129	V		6.00E-01	9.44E-07	6.40E-07	3.49E-07	2.29E-07	1.58E-07	1.38E-07	1.57E-07	
Te-129m	F		6.00E-01	7.25E-05	4.77E-05	2.15E-05	1.15E-05	6.40E-06	4.92E-06	6.48E-06	
Te-129m	M		2.00E-01	1.27E-04	9.40E-05	5.25E-05	3.58E-05	2.92E-05	2.41E-05	2.69E-05	
Te-129m	S		2.00E-02	1.40E-04	1.07E-04	6.11E-05	4.22E-05	3.52E-05	2.92E-05	3.23E-05	
Te-129m	V		6.00E-01	1.76E-04	1.19E-04	5.99E-05	3.16E-05	1.89E-05	1.39E-05	1.81E-05	
Te-131	F		6.00E-01	8.58E-07	7.36E-07	3.66E-07	1.95E-07	1.21E-07	8.44E-08	1.10E-07	
Te-131	M		2.00E-01	9.77E-07	6.44E-07	3.01E-07	1.92E-07	1.28E-07	1.05E-07	1.25E-07	
Te-131	S		2.00E-02	9.03E-07	5.92E-07	2.73E-07	1.80E-07	1.23E-07	1.03E-07	1.21E-07	
Te-131	V		6.00E-01	1.88E-06	1.67E-06	9.66E-07	5.25E-07	3.53E-07	2.51E-07	3.13E-07	
Te-131m	F		6.00E-01	3.21E-05	2.82E-05	1.43E-05	7.55E-06	4.59E-06	3.17E-06	4.14E-06	
Te-131m	M		2.00E-01	2.91E-05	2.15E-05	1.12E-05	7.10E-06	5.00E-06	3.92E-06	4.63E-06	
Te-131m	S		2.00E-02	2.56E-05	1.87E-05	9.73E-06	6.55E-06	4.18E-06	3.36E-06	4.00E-06	
Te-131m	V		6.00E-01	7.66E-05	6.96E-05	4.00E-05	2.08E-05	1.35E-05	8.95E-06	1.16E-05	
Te-132	F		6.00E-01	8.10E-05	6.51E-05	3.12E-05	1.52E-05	9.32E-06	6.55E-06	8.70E-06	
Te-132	M		2.00E-01	5.92E-05	4.70E-05	2.39E-05	1.51E-05	9.62E-06	7.62E-06	9.18E-06	
Te-132	S		2.00E-02	5.66E-05	4.14E-05	2.15E-05	1.44E-05	9.40E-06	7.62E-06	8.99E-06	
Te-132	V		6.00E-01	1.97E-04	1.65E-04	8.81E-05	4.22E-05	2.78E-05	1.86E-05	2.45E-05	
Te-133	F		6.00E-01	8.84E-07	7.62E-07	3.55E-07	1.69E-07	1.04E-07	7.07E-08	9.55E-08	
Te-133	M		2.00E-01	7.18E-07	4.85E-07	2.26E-07	1.38E-07	8.81E-08	7.18E-08	8.70E-08	
Te-133	S		2.00E-02	6.29E-07	4.26E-07	1.98E-07	1.28E-07	8.25E-08	6.88E-08	8.21E-08	
Te-133	V		6.00E-01	2.02E-06	1.75E-06	9.40E-07	4.55E-07	3.02E-07	2.07E-07	2.69E-07	
Te-133m	F		6.00E-01	3.63E-06	3.16E-06	1.48E-06	6.99E-07	4.22E-07	2.85E-07	3.89E-07	
Te-133m	M		2.00E-01	2.71E-06	1.89E-06	9.10E-07	5.55E-07	3.60E-07	2.86E-07	3.47E-07	
Te-133m	S		2.00E-02	2.31E-06	1.62E-06	7.92E-07	5.11E-07	3.37E-07	2.74E-07	3.26E-07	
Te-133m	V		6.00E-01	8.25E-06	7.22E-06	3.85E-06	1.81E-06	1.18E-06	7.84E-07	1.04E-06	
Te-134	F		6.00E-01	1.64E-06	1.31E-06	6.29E-07	3.51E-07	2.13E-07	1.65E-07	2.07E-07	
Te-134	M		2.00E-01	1.91E-06	1.38E-06	6.81E-07	4.37E-07	2.90E-07	2.36E-07	2.80E-07	
Te-134	S		2.00E-02	1.94E-06	1.39E-06	6.88E-07	4.48E-07	2.99E-07	2.44E-07	2.88E-07	
Te-134	V		6.00E-01	2.36E-06	1.91E-06	1.05E-06	5.70E-07	3.89E-07	2.94E-07	3.59E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Th-223			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-224			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-226	F		5.00E-03	5.29E-04	3.68E-04	1.79E-04	1.25E-04	9.25E-05	7.92E-05	8.95E-05	
Th-226	M		5.00E-03	1.09E-03	7.77E-04	4.22E-04	3.05E-04	2.56E-04	2.11E-04	2.33E-04	
Th-226	S		5.00E-03	1.15E-03	8.25E-04	4.48E-04	3.25E-04	2.74E-04	2.25E-04	2.49E-04	
Th-227	F		5.00E-03	3.08E-02	1.91E-02	9.55E-03	5.77E-03	3.77E-03	2.47E-03	3.20E-03	
Th-227	M		5.00E-03	1.18E-01	8.99E-02	5.74E-02	4.18E-02	3.89E-02	3.11E-02	3.38E-02	
Th-227	S		5.00E-03	1.42E-01	1.09E-01	6.99E-02	5.11E-02	4.77E-02	3.85E-02	4.14E-02	
Th-228	F		5.00E-03	6.55E-01	5.44E-01	3.07E-01	1.91E-01	1.31E-01	1.09E-01	1.27E-01	
Th-228	M		5.00E-03	4.88E-01	4.00E-01	2.50E-01	1.69E-01	1.43E-01	1.18E-01	1.31E-01	
Th-228	S		5.00E-03	5.81E-01	4.85E-01	3.04E-01	2.04E-01	1.74E-01	1.47E-01	1.61E-01	
Th-229	F		5.00E-03	2.01E+00	1.91E+00	1.35E+00	1.08E+00	9.18E-01	8.84E-01	9.21E-01	
Th-229	M		5.00E-03	8.44E-01	7.99E-01	5.88E-01	4.48E-01	4.14E-01	4.00E-01	4.14E-01	
Th-229	S		5.00E-03	7.81E-01	7.10E-01	4.77E-01	3.22E-01	2.81E-01	2.63E-01	2.79E-01	
Th-229+D	F			2.12E+00	1.99E+00	1.41E+00	1.11E+00	9.55E-01	9.14E-01	9.56E-01	
Th-229+E	F			2.12E+00	1.99E+00	1.41E+00	1.11E+00	9.55E-01	9.14E-01	9.56E-01	
Th-230	F		5.00E-03	7.66E-01	7.36E-01	5.22E-01	4.18E-01	3.70E-01	3.77E-01	3.85E-01	
Th-230	M		5.00E-03	2.85E-01	2.74E-01	2.06E-01	1.60E-01	1.55E-01	1.58E-01	1.61E-01	
Th-230	S		5.00E-03	1.47E-01	1.28E-01	8.81E-02	6.11E-02	5.44E-02	5.18E-02	5.44E-02	
Th-231	F		5.00E-03	4.03E-06	2.77E-06	9.69E-07	5.99E-07	3.40E-07	2.89E-07	3.64E-07	
Th-231	M		5.00E-03	8.25E-06	5.77E-06	3.00E-06	1.81E-06	1.40E-06	1.14E-06	1.31E-06	
Th-231	S		5.00E-03	8.73E-06	6.11E-06	2.83E-06	1.94E-06	1.51E-06	1.22E-06	1.40E-06	
Th-232	F		5.00E-03	8.58E-01	8.33E-01	6.11E-01	4.96E-01	4.29E-01	4.07E-01	4.26E-01	
Th-232	M		5.00E-03	3.06E-01	3.00E-01	2.33E-01	1.84E-01	1.74E-01	1.68E-01	1.73E-01	
Th-232	S		5.00E-03	1.98E-01	1.86E-01	1.36E-01	9.81E-02	9.25E-02	9.18E-02	9.47E-02	
Th-232+D	F			1.04E+00	1.01E+00	7.29E-01	5.70E-01	4.88E-01	4.66E-01	4.88E-01	
Th-232+E	F			1.04E+00	1.01E+00	7.29E-01	5.70E-01	4.88E-01	4.66E-01	4.88E-01	
Th-233	F		5.00E-03	3.34E-07	2.16E-07	9.47E-08	6.11E-08	3.77E-08	3.27E-08	3.92E-08	
Th-233	M		5.00E-03	5.33E-07	3.49E-07	1.61E-07	1.08E-07	7.55E-08	6.36E-08	7.40E-08	
Th-233	S		5.00E-03	5.55E-07	3.66E-07	1.69E-07	1.14E-07	8.03E-08	6.77E-08	7.84E-08	
Th-234	F		5.00E-03	1.46E-04	9.07E-05	4.03E-05	2.25E-05	1.31E-05	9.21E-06	1.23E-05	
Th-234	M		5.00E-03	1.45E-04	1.05E-04	5.70E-05	3.81E-05	2.94E-05	2.46E-05	2.78E-05	
Th-234	S		5.00E-03	1.51E-04	1.13E-04	6.25E-05	4.26E-05	3.36E-05	2.85E-05	3.18E-05	
Th-234+D	S			1.51E-04	1.13E-04	6.25E-05	4.26E-05	3.36E-05	2.85E-05	3.18E-05	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Th-234+E	S			1.51E-04	1.13E-04	6.25E-05	4.26E-05	3.36E-05	2.85E-05	3.18E-05	
Th-235			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Th-236	F		5.00E-03	1.04E-06	6.73E-07	2.98E-07	1.86E-07	1.11E-07	9.36E-08	1.14E-07	
Th-236	M		5.00E-03	1.80E-06	1.17E-06	5.44E-07	3.54E-07	2.40E-07	1.99E-07	2.35E-07	
Th-236	S		5.00E-03	1.88E-06	1.23E-06	5.70E-07	3.74E-07	2.54E-07	2.11E-07	2.48E-07	
Ti-44	F		2.00E-02	1.14E-03	9.81E-04	5.62E-04	3.54E-04	2.46E-04	2.28E-04	2.55E-04	
Ti-44	M		2.00E-02	6.33E-04	5.55E-04	3.42E-04	2.19E-04	1.72E-04	1.58E-04	1.73E-04	
Ti-44	S		2.00E-02	1.20E-03	1.14E-03	7.92E-04	5.48E-04	4.77E-04	4.70E-04	4.92E-04	
Ti-44+D	S			1.21E-03	1.14E-03	7.96E-04	5.48E-04	4.77E-04	4.70E-04	4.92E-04	
Ti-44+E	S			1.21E-03	1.14E-03	7.96E-04	5.48E-04	4.77E-04	4.70E-04	4.92E-04	
Ti-45	F		2.00E-02	1.64E-06	1.17E-06	5.48E-07	3.36E-07	1.89E-07	1.57E-07	1.94E-07	
Ti-45	M		2.00E-02	2.75E-06	1.94E-06	9.40E-07	6.11E-07	4.00E-07	3.27E-07	3.89E-07	
Ti-45	S		2.00E-02	2.87E-06	2.02E-06	9.84E-07	6.40E-07	4.26E-07	3.46E-07	4.11E-07	
Ti-51			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Ti-52			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-190			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-190m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-194	F		1.00E+00	4.51E-07	3.06E-07	1.41E-07	8.55E-08	5.03E-08	4.14E-08	5.14E-08	
Tl-194	M		1.00E+00	6.85E-07	4.51E-07	2.10E-07	1.30E-07	8.18E-08	6.77E-08	8.18E-08	
Tl-194	S		1.00E+00	7.10E-07	4.70E-07	2.18E-07	1.35E-07	8.51E-08	7.07E-08	8.51E-08	
Tl-194m	F		1.00E+00	6.03E-07	4.66E-07	2.31E-07	1.41E-07	8.58E-08	6.96E-08	8.47E-08	
Tl-194m	M		1.00E+00	8.51E-07	6.36E-07	3.18E-07	2.01E-07	1.31E-07	1.06E-07	1.27E-07	
Tl-194m	S		1.00E+00	8.77E-07	6.55E-07	3.27E-07	2.07E-07	1.36E-07	1.10E-07	1.31E-07	
Tl-195	F		1.00E+00	4.66E-07	3.77E-07	1.91E-07	1.14E-07	6.70E-08	5.37E-08	6.62E-08	
Tl-195	M		1.00E+00	6.51E-07	5.11E-07	2.68E-07	1.66E-07	1.10E-07	8.84E-08	1.05E-07	
Tl-195	S		1.00E+00	6.73E-07	5.25E-07	2.77E-07	1.72E-07	1.16E-07	9.29E-08	1.10E-07	
Tl-196	F		1.00E+00	8.81E-07	7.10E-07	3.64E-07	2.17E-07	1.28E-07	1.03E-07	1.27E-07	
Tl-196	M		1.00E+00	1.13E-06	8.84E-07	4.55E-07	2.78E-07	1.75E-07	1.40E-07	1.69E-07	
Tl-196	S		1.00E+00	1.16E-06	9.03E-07	4.66E-07	2.85E-07	1.80E-07	1.44E-07	1.74E-07	
Tl-197	F		1.00E+00	4.88E-07	3.85E-07	1.89E-07	1.14E-07	6.70E-08	5.40E-08	6.66E-08	
Tl-197	M		1.00E+00	8.33E-07	6.33E-07	3.43E-07	2.25E-07	1.69E-07	1.35E-07	1.56E-07	
Tl-197	S		1.00E+00	8.77E-07	6.66E-07	3.61E-07	2.39E-07	1.81E-07	1.45E-07	1.67E-07	
Tl-198	F		1.00E+00	1.79E-06	1.54E-06	8.14E-07	4.85E-07	2.87E-07	2.29E-07	2.81E-07	
Tl-198	M		1.00E+00	2.04E-06	1.72E-06	9.18E-07	5.55E-07	3.46E-07	2.74E-07	3.32E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Tl-198	S		1.00E+00	2.06E-06	1.74E-06	9.29E-07	5.62E-07	3.53E-07	2.79E-07	3.38E-07	
Tl-198m	F		1.00E+00	1.21E-06	9.51E-07	4.74E-07	2.87E-07	1.71E-07	1.40E-07	1.71E-07	
Tl-198m	M		1.00E+00	1.76E-06	1.34E-06	6.88E-07	4.40E-07	3.02E-07	2.43E-07	2.86E-07	
Tl-198m	S		1.00E+00	1.82E-06	1.38E-06	7.10E-07	4.59E-07	3.17E-07	2.55E-07	2.99E-07	
Tl-199	F		1.00E+00	6.70E-07	5.14E-07	2.50E-07	1.51E-07	8.84E-08	7.25E-08	8.92E-08	
Tl-199	M		1.00E+00	1.10E-06	8.33E-07	4.40E-07	2.92E-07	2.19E-07	1.76E-07	2.02E-07	
Tl-199	S		1.00E+00	1.15E-06	8.66E-07	4.63E-07	3.08E-07	2.34E-07	1.88E-07	2.15E-07	
Tl-200	F		1.00E+00	3.89E-06	3.24E-06	1.71E-06	1.03E-06	6.18E-07	5.00E-07	6.11E-07	
Tl-200	M		1.00E+00	4.51E-06	3.74E-06	2.01E-06	1.25E-06	8.10E-07	6.48E-07	7.73E-07	
Tl-200	S		1.00E+00	4.59E-06	3.77E-06	2.04E-06	1.27E-06	8.33E-07	6.66E-07	7.92E-07	
Tl-201	F		1.00E+00	1.75E-06	1.28E-06	5.99E-07	3.64E-07	2.07E-07	1.71E-07	2.12E-07	
Tl-201	M		1.00E+00	3.77E-06	2.80E-06	1.57E-06	9.55E-07	8.21E-07	6.55E-07	7.40E-07	
Tl-201	S		1.00E+00	4.03E-06	2.99E-06	1.69E-06	1.05E-06	9.10E-07	7.25E-07	8.14E-07	
Tl-202	F		1.00E+00	5.55E-06	4.33E-06	2.22E-06	1.41E-06	8.47E-07	7.14E-07	8.55E-07	
Tl-202	M		1.00E+00	8.18E-06	6.44E-06	3.53E-06	2.33E-06	1.67E-06	1.36E-06	1.57E-06	
Tl-202	S		1.00E+00	8.66E-06	6.81E-06	3.77E-06	2.51E-06	1.82E-06	1.48E-06	1.70E-06	
Tl-204	F		1.00E+00	1.83E-05	1.22E-05	5.40E-06	3.24E-06	1.74E-06	1.46E-06	1.85E-06	
Tl-204	M		1.00E+00	1.04E-04	8.40E-05	4.92E-05	3.39E-05	2.82E-05	2.36E-05	2.60E-05	
Tl-204	S		1.00E+00	2.47E-04	2.21E-04	1.41E-04	9.29E-05	7.66E-05	7.03E-05	7.59E-05	
Tl-206			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-206m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-207			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-208			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-209			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tl-210			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Tm-161	F		5.00E-03	5.00E-07	3.81E-07	1.88E-07	1.16E-07	6.96E-08	5.70E-08	6.92E-08	
Tm-161	M		5.00E-03	7.25E-07	5.37E-07	2.70E-07	1.72E-07	1.12E-07	9.14E-08	1.09E-07	
Tm-161	S		5.00E-03	7.51E-07	5.55E-07	2.79E-07	1.78E-07	1.17E-07	9.51E-08	1.13E-07	
Tm-162	F		5.00E-03	4.48E-07	3.19E-07	1.52E-07	9.36E-08	5.70E-08	4.70E-08	5.70E-08	
Tm-162	M		5.00E-03	6.44E-07	4.48E-07	2.15E-07	1.35E-07	8.66E-08	7.14E-08	8.55E-08	
Tm-162	S		5.00E-03	6.66E-07	4.63E-07	2.22E-07	1.40E-07	8.99E-08	7.44E-08	8.88E-08	
Tm-163	F		5.00E-03	7.18E-07	5.77E-07	2.97E-07	1.81E-07	1.07E-07	8.62E-08	1.06E-07	
Tm-163	M		5.00E-03	1.01E-06	7.84E-07	4.11E-07	2.60E-07	1.68E-07	1.35E-07	1.61E-07	
Tm-163	S		5.00E-03	1.04E-06	8.07E-07	4.22E-07	2.69E-07	1.75E-07	1.41E-07	1.68E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Tm-164			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-165	F		5.00E-03	3.89E-06	2.92E-06	1.44E-06	8.92E-07	5.11E-07	4.18E-07	5.14E-07	
Tm-165	M		5.00E-03	5.96E-06	4.44E-06	2.30E-06	1.51E-06	1.01E-06	8.18E-07	9.62E-07	
Tm-165	S		5.00E-03	6.18E-06	4.63E-06	2.40E-06	1.58E-06	1.07E-06	8.66E-07	1.01E-06	
Tm-166	F		5.00E-03	3.35E-06	2.70E-06	1.38E-06	8.55E-07	4.96E-07	4.00E-07	4.92E-07	
Tm-166	M		5.00E-03	4.74E-06	3.74E-06	1.95E-06	1.26E-06	8.10E-07	6.51E-07	7.77E-07	
Tm-166	S		5.00E-03	4.88E-06	3.85E-06	2.01E-06	1.30E-06	8.47E-07	6.81E-07	8.07E-07	
Tm-167	F		5.00E-03	1.17E-05	7.81E-06	3.70E-06	2.13E-06	1.19E-06	1.00E-06	1.25E-06	
Tm-167	M		5.00E-03	2.14E-05	1.57E-05	8.95E-06	6.40E-06	5.51E-06	4.37E-06	4.85E-06	
Tm-167	S		5.00E-03	2.30E-05	1.70E-05	9.81E-06	7.14E-06	6.25E-06	4.92E-06	5.44E-06	
Tm-168	F		5.00E-03	8.55E-05	6.77E-05	3.69E-05	2.39E-05	1.59E-05	1.40E-05	1.61E-05	
Tm-168	M		5.00E-03	7.18E-05	5.77E-05	3.49E-05	2.41E-05	1.99E-05	1.64E-05	1.81E-05	
Tm-168	S		5.00E-03	7.77E-05	6.29E-05	3.89E-05	2.72E-05	2.31E-05	1.88E-05	2.07E-05	
Tm-170	F		5.00E-03	1.58E-04	1.15E-04	5.37E-05	2.92E-05	1.68E-05	1.32E-05	1.69E-05	
Tm-170	M		5.00E-03	1.31E-04	1.02E-04	5.77E-05	3.81E-05	3.07E-05	2.53E-05	2.84E-05	
Tm-170	S		5.00E-03	1.48E-04	1.20E-04	7.07E-05	4.81E-05	4.00E-05	3.38E-05	3.74E-05	
Tm-171	F		5.00E-03	5.14E-05	4.37E-05	2.42E-05	1.34E-05	8.55E-06	7.84E-06	9.18E-06	
Tm-171	M		5.00E-03	2.50E-05	2.09E-05	1.26E-05	7.44E-06	5.66E-06	5.07E-06	5.66E-06	
Tm-171	S		5.00E-03	2.15E-05	1.75E-05	1.07E-05	6.77E-06	5.33E-06	4.63E-06	5.14E-06	
Tm-172	F		5.00E-03	1.86E-05	1.20E-05	5.88E-06	3.49E-06	1.85E-06	1.52E-06	1.93E-06	
Tm-172	M		5.00E-03	3.13E-05	2.16E-05	1.08E-05	7.22E-06	5.11E-06	4.18E-06	4.85E-06	
Tm-172	S		5.00E-03	3.28E-05	2.28E-05	1.15E-05	7.73E-06	5.55E-06	4.55E-06	5.25E-06	
Tm-173	F		5.00E-03	3.16E-06	2.15E-06	9.62E-07	5.92E-07	3.19E-07	2.66E-07	3.34E-07	
Tm-173	M		5.00E-03	5.44E-06	3.77E-06	1.82E-06	1.21E-06	8.14E-07	6.62E-07	7.81E-07	
Tm-173	S		5.00E-03	5.70E-06	3.92E-06	1.92E-06	1.27E-06	8.70E-07	7.07E-07	8.33E-07	
Tm-174			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-175	F		5.00E-03	3.89E-07	2.66E-07	1.22E-07	7.81E-08	4.81E-08	4.11E-08	4.92E-08	
Tm-175	M		5.00E-03	5.74E-07	3.92E-07	1.84E-07	1.21E-07	8.10E-08	6.81E-08	7.99E-08	
Tm-175	S		5.00E-03	5.92E-07	4.07E-07	1.91E-07	1.26E-07	8.47E-08	7.10E-08	8.36E-08	
Tm-176			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-227			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-228			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-230	F		4.00E-02	1.21E-02	5.55E-03	2.72E-03	2.02E-03	1.54E-03	1.43E-03	1.58E-03	
U-230	M		4.00E-02	1.83E-01	1.39E-01	8.95E-02	6.66E-02	6.29E-02	5.00E-02	5.44E-02	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)						
				Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
U-230	S		2.00E-02	2.18E-01	1.67E-01	1.07E-01	7.96E-02	7.51E-02	5.99E-02	6.51E-02
U-231	F		4.00E-02	4.26E-06	2.90E-06	1.37E-06	6.29E-07	4.22E-07	2.66E-07	3.65E-07
U-231	M		4.00E-02	1.10E-05	8.03E-06	3.85E-06	2.64E-06	2.11E-06	1.73E-06	1.96E-06
U-231	S		2.00E-02	1.07E-05	8.77E-06	4.26E-06	2.90E-06	2.32E-06	1.90E-06	2.15E-06
U-232	F		4.00E-02	5.92E-02	3.85E-02	2.55E-02	2.51E-02	2.78E-02	1.49E-02	1.71E-02
U-232	M		4.00E-02	1.11E-01	8.95E-02	5.77E-02	4.14E-02	3.77E-02	2.89E-02	3.19E-02
U-232	S		2.00E-02	3.77E-01	3.58E-01	2.43E-01	1.59E-01	1.40E-01	1.37E-01	1.44E-01
U-233	F		4.00E-02	8.10E-03	5.37E-03	3.48E-03	3.11E-03	3.20E-03	2.15E-03	2.36E-03
U-233	M		4.00E-02	5.48E-02	4.18E-02	2.65E-02	1.82E-02	1.58E-02	1.31E-02	1.44E-02
U-233	S		2.00E-02	1.25E-01	1.08E-01	7.03E-02	4.59E-02	3.89E-02	3.55E-02	3.81E-02
U-234	F		4.00E-02	7.84E-03	5.14E-03	3.34E-03	2.95E-03	3.05E-03	2.07E-03	2.28E-03
U-234	M		4.00E-02	5.37E-02	4.14E-02	2.60E-02	1.78E-02	1.55E-02	1.29E-02	1.41E-02
U-234	S		2.00E-02	1.22E-01	1.07E-01	6.92E-02	4.51E-02	3.81E-02	3.48E-02	3.74E-02
U-235	F		4.00E-02	7.33E-03	4.85E-03	3.14E-03	2.78E-03	2.85E-03	1.93E-03	2.12E-03
U-235	M		4.00E-02	4.85E-02	3.70E-02	2.33E-02	1.58E-02	1.37E-02	1.14E-02	1.25E-02
U-235	S		2.00E-02	1.11E-01	9.69E-02	6.29E-02	4.07E-02	3.40E-02	3.13E-02	3.38E-02
U-235+D	S			1.11E-01	9.69E-02	6.29E-02	4.07E-02	3.40E-02	3.13E-02	3.38E-02
U-235+E	S			1.11E-01	9.69E-02	6.29E-02	4.07E-02	3.40E-02	3.13E-02	3.38E-02
U-235m	F		4.00E-02	2.93E-11	1.74E-11	7.29E-12	4.48E-12	2.59E-12	2.28E-12	2.79E-12
U-235m	M		4.00E-02	4.22E-11	2.39E-11	9.73E-12	5.70E-12	3.15E-12	2.60E-12	3.33E-12
U-235m	S		2.00E-02	4.37E-11	2.46E-11	1.00E-11	5.81E-12	3.21E-12	2.63E-12	3.39E-12
U-236	F		4.00E-02	7.36E-03	4.85E-03	3.14E-03	2.78E-03	2.87E-03	1.95E-03	2.14E-03
U-236	M		4.00E-02	4.96E-02	3.81E-02	2.40E-02	1.63E-02	1.41E-02	1.18E-02	1.29E-02
U-236	S		2.00E-02	1.14E-01	9.92E-02	6.44E-02	4.14E-02	3.49E-02	3.21E-02	3.46E-02
U-237	F		4.00E-02	6.88E-06	5.51E-06	2.48E-06	1.60E-06	7.03E-07	6.73E-07	8.44E-07
U-237	M		4.00E-02	2.92E-05	2.13E-05	1.23E-05	8.92E-06	7.81E-06	6.14E-06	6.81E-06
U-237	S		2.00E-02	3.25E-05	2.38E-05	1.39E-05	1.01E-05	8.88E-06	7.03E-06	7.77E-06
U-238	F		4.00E-02	7.10E-03	4.66E-03	3.02E-03	2.68E-03	2.75E-03	1.86E-03	2.05E-03
U-238	M		4.00E-02	4.51E-02	3.47E-02	2.18E-02	1.48E-02	1.26E-02	1.06E-02	1.16E-02
U-238	S		2.00E-02	1.05E-01	9.21E-02	5.96E-02	3.85E-02	3.22E-02	2.98E-02	3.21E-02
U-238+D	S			1.05E-01	9.21E-02	5.96E-02	3.85E-02	3.22E-02	2.98E-02	3.21E-02
U-238+E	S			1.05E-01	9.21E-02	5.96E-02	3.85E-02	3.22E-02	2.98E-02	3.21E-02
U-239	F		4.00E-02	3.85E-07	2.53E-07	1.12E-07	7.25E-08	4.48E-08	3.92E-08	4.66E-08
U-239	M		4.00E-02	6.62E-07	4.40E-07	2.08E-07	1.41E-07	1.01E-07	8.40E-08	9.69E-08

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
U-239	S		2.00E-02	6.92E-07	4.63E-07	2.19E-07	1.49E-07	1.07E-07	8.92E-08	1.03E-07	
U-240	F		4.00E-02	8.81E-06	5.85E-06	2.60E-06	1.64E-06	8.88E-07	7.36E-07	9.25E-07	
U-240	M		4.00E-02	1.67E-05	1.13E-05	5.40E-06	3.53E-06	2.35E-06	1.93E-06	2.28E-06	
U-240	S		2.00E-02	1.78E-05	1.21E-05	5.77E-06	3.77E-06	2.52E-06	2.07E-06	2.45E-06	
U-242	F		4.00E-02	6.22E-07	4.00E-07	1.74E-07	1.12E-07	6.99E-08	6.14E-08	7.33E-08	
U-242	M		4.00E-02	9.66E-07	6.18E-07	2.75E-07	1.80E-07	1.18E-07	1.01E-07	1.19E-07	
U-242	S		2.00E-02	1.00E-06	6.40E-07	2.86E-07	1.87E-07	1.23E-07	1.05E-07	1.24E-07	
V-47	F		2.00E-02	6.85E-07	4.55E-07	2.07E-07	1.29E-07	7.73E-08	6.44E-08	7.88E-08	
V-47	M		2.00E-02	1.04E-06	6.88E-07	3.17E-07	2.02E-07	1.30E-07	1.09E-07	1.30E-07	
V-47	S		2.00E-02	1.08E-06	7.14E-07	3.29E-07	2.10E-07	1.36E-07	1.14E-07	1.35E-07	
V-48	F		2.00E-02	2.83E-05	2.19E-05	1.12E-05	7.10E-06	4.29E-06	3.55E-06	4.26E-06	
V-48	M		2.00E-02	5.25E-05	4.14E-05	2.33E-05	1.57E-05	1.08E-05	8.70E-06	1.01E-05	
V-48	S		2.00E-02	5.74E-05	4.51E-05	2.58E-05	1.75E-05	1.23E-05	9.92E-06	1.14E-05	
V-49	F		2.00E-02	7.47E-07	5.74E-07	2.82E-07	1.58E-07	9.18E-08	7.73E-08	9.55E-08	
V-49	M		2.00E-02	1.02E-06	7.73E-07	4.00E-07	2.31E-07	1.45E-07	1.24E-07	1.48E-07	
V-49	S		2.00E-02	1.69E-06	1.38E-06	7.55E-07	4.40E-07	2.89E-07	2.52E-07	2.95E-07	
V-50	F		2.00E-02	4.51E-04	4.37E-04	3.29E-04	2.79E-04	2.47E-04	2.40E-04	2.48E-04	
V-50	M		2.00E-02	1.89E-04	1.82E-04	1.42E-04	1.15E-04	1.09E-04	1.07E-04	1.10E-04	
V-50	S		2.00E-02	2.18E-04	2.11E-04	1.57E-04	1.15E-04	1.04E-04	9.95E-05	1.04E-04	
V-52			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
V-53			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-177	F		6.00E-01	7.47E-07	5.99E-07	3.02E-07	1.86E-07	1.11E-07	8.99E-08	1.10E-07	
W-177	M		6.00E-01	1.08E-06	8.47E-07	4.44E-07	2.86E-07	1.95E-07	1.57E-07	1.85E-07	
W-177	S		6.00E-01	1.12E-06	8.77E-07	4.59E-07	2.98E-07	2.04E-07	1.65E-07	1.93E-07	
W-178	F		6.00E-01	3.04E-06	2.29E-06	1.07E-06	6.62E-07	3.66E-07	3.03E-07	3.77E-07	
W-178	M		6.00E-01	1.15E-05	8.95E-06	5.25E-06	3.77E-06	3.29E-06	2.62E-06	2.89E-06	
W-178	S		6.00E-01	1.34E-05	1.04E-05	6.22E-06	4.48E-06	3.92E-06	3.12E-06	3.44E-06	
W-178+D	S			1.34E-05	1.04E-05	6.22E-06	4.48E-06	3.92E-06	3.12E-06	3.44E-06	
W-178+E	S			1.34E-05	1.04E-05	6.22E-06	4.48E-06	3.92E-06	3.12E-06	3.44E-06	
W-179	F		6.00E-01	3.47E-08	2.43E-08	1.15E-08	6.92E-09	4.07E-09	3.28E-09	4.07E-09	
W-179	M		6.00E-01	4.85E-08	3.29E-08	1.56E-08	9.47E-09	5.81E-09	4.70E-09	5.77E-09	
W-179	S		6.00E-01	5.03E-08	3.40E-08	1.62E-08	9.81E-09	6.03E-09	4.88E-09	5.99E-09	
W-179m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-181	F		6.00E-01	1.06E-06	7.96E-07	3.81E-07	2.35E-07	1.32E-07	1.09E-07	1.35E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
W-181	M		6.00E-01	3.89E-06	3.05E-06	1.70E-06	1.10E-06	7.99E-07	6.66E-07	7.62E-07	
W-181	S		6.00E-01	5.70E-06	4.63E-06	2.66E-06	1.71E-06	1.26E-06	1.06E-06	1.20E-06	
W-185	F		6.00E-01	5.29E-06	3.74E-06	1.64E-06	9.88E-07	5.18E-07	4.29E-07	5.48E-07	
W-185	M		6.00E-01	4.40E-05	3.47E-05	2.09E-05	1.52E-05	1.38E-05	1.10E-05	1.20E-05	
W-185	S		6.00E-01	5.70E-05	4.55E-05	2.75E-05	1.99E-05	1.79E-05	1.43E-05	1.57E-05	
W-185m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
W-187	F		6.00E-01	7.10E-06	5.29E-06	2.42E-06	1.49E-06	8.14E-07	6.73E-07	8.44E-07	
W-187	M		6.00E-01	1.06E-05	8.21E-06	4.11E-06	2.75E-06	1.74E-06	1.40E-06	1.68E-06	
W-187	S		6.00E-01	1.10E-05	8.55E-06	4.29E-06	2.90E-06	1.87E-06	1.51E-06	1.79E-06	
W-188	F		6.00E-01	2.62E-05	1.84E-05	8.10E-06	4.85E-06	2.53E-06	2.10E-06	2.68E-06	
W-188	M		6.00E-01	1.84E-04	1.48E-04	8.55E-05	5.88E-05	4.85E-05	4.11E-05	4.51E-05	
W-188	S		6.00E-01	2.49E-04	2.04E-04	1.20E-04	8.18E-05	6.73E-05	5.77E-05	6.36E-05	
W-190	F		6.00E-01	1.28E-06	8.66E-07	3.92E-07	2.52E-07	1.57E-07	1.33E-07	1.59E-07	
W-190	M		6.00E-01	2.12E-06	1.42E-06	6.70E-07	4.44E-07	3.09E-07	2.58E-07	3.00E-07	
W-190	S		6.00E-01	2.21E-06	1.49E-06	6.99E-07	4.66E-07	3.26E-07	2.71E-07	3.16E-07	
Xe-120			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-121			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-122			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-123			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-125			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-127			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-127m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-129m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-131m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-133			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-133m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-135			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-135m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-137			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Xe-138			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-81			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-83			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-83m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-84m	F		1.00E-03	1.46E-06	1.05E-06	5.03E-07	3.04E-07	1.79E-07	1.46E-07	1.80E-07	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Y-84m	M		1.00E-03	2.10E-06	1.47E-06	7.03E-07	4.37E-07	2.70E-07	2.21E-07	2.68E-07	
Y-84m	S		1.00E-03	2.17E-06	1.51E-06	7.25E-07	4.51E-07	2.80E-07	2.29E-07	2.78E-07	
Y-85	F		1.00E-03	2.04E-06	1.48E-06	6.99E-07	4.26E-07	2.43E-07	1.98E-07	2.46E-07	
Y-85	M		1.00E-03	3.06E-06	2.17E-06	1.05E-06	6.62E-07	4.18E-07	3.40E-07	4.11E-07	
Y-85	S		1.00E-03	3.17E-06	2.25E-06	1.09E-06	6.92E-07	4.37E-07	3.57E-07	4.29E-07	
Y-85m	F		1.00E-03	3.81E-06	2.73E-06	1.28E-06	7.77E-07	4.29E-07	3.51E-07	4.40E-07	
Y-85m	M		1.00E-03	5.70E-06	4.00E-06	1.90E-06	1.20E-06	7.22E-07	5.92E-07	7.22E-07	
Y-85m	S		1.00E-03	5.88E-06	4.14E-06	1.98E-06	1.25E-06	7.55E-07	6.22E-07	7.55E-07	
Y-86	F		1.00E-03	1.05E-05	8.40E-06	4.26E-06	2.61E-06	1.51E-06	1.21E-06	1.49E-06	
Y-86	M		1.00E-03	1.39E-05	1.08E-05	5.51E-06	3.47E-06	2.09E-06	1.68E-06	2.04E-06	
Y-86	S		1.00E-03	1.43E-05	1.11E-05	5.62E-06	3.57E-06	2.16E-06	1.73E-06	2.11E-06	
Y-86m	F		1.00E-03	6.25E-07	4.96E-07	2.50E-07	1.54E-07	8.88E-08	7.18E-08	8.84E-08	
Y-86m	M		1.00E-03	8.36E-07	6.48E-07	3.27E-07	2.07E-07	1.26E-07	1.01E-07	1.23E-07	
Y-86m	S		1.00E-03	8.58E-07	6.62E-07	3.36E-07	2.13E-07	1.30E-07	1.04E-07	1.27E-07	
Y-87	F		1.00E-03	7.40E-06	5.66E-06	2.79E-06	1.72E-06	1.00E-06	8.14E-07	9.99E-07	
Y-87	M		1.00E-03	1.01E-05	7.70E-06	4.00E-06	2.59E-06	1.74E-06	1.38E-06	1.63E-06	
Y-87	S		1.00E-03	1.04E-05	7.96E-06	4.14E-06	2.70E-06	1.83E-06	1.45E-06	1.72E-06	
Y-87m	F		1.00E-03	2.60E-06	1.92E-06	9.21E-07	5.70E-07	3.24E-07	2.65E-07	3.28E-07	
Y-87m	M		1.00E-03	3.81E-06	2.81E-06	1.41E-06	9.21E-07	6.11E-07	4.92E-07	5.81E-07	
Y-87m	S		1.00E-03	3.96E-06	2.92E-06	1.47E-06	9.66E-07	6.48E-07	5.18E-07	6.14E-07	
Y-88	F		1.00E-03	1.08E-04	9.62E-05	5.22E-05	3.66E-05	2.57E-05	2.27E-05	2.55E-05	
Y-88	M		1.00E-03	7.14E-05	6.18E-05	3.74E-05	2.52E-05	1.82E-05	1.54E-05	1.74E-05	
Y-88	S		1.00E-03	7.47E-05	6.59E-05	3.70E-05	2.50E-05	2.01E-05	1.67E-05	1.86E-05	
Y-89m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Y-90	F		1.00E-03	2.97E-05	1.89E-05	8.10E-06	4.77E-06	2.44E-06	1.98E-06	2.59E-06	
Y-90	M		1.00E-03	4.63E-05	3.12E-05	1.48E-05	9.51E-06	6.11E-06	5.14E-06	6.11E-06	
Y-90	S		1.00E-03	4.81E-05	3.27E-05	1.56E-05	1.01E-05	6.59E-06	5.55E-06	6.55E-06	
Y-90m	F		1.00E-03	2.05E-06	1.42E-06	6.44E-07	3.85E-07	2.08E-07	1.68E-07	2.14E-07	
Y-90m	M		1.00E-03	3.04E-06	2.15E-06	1.04E-06	6.70E-07	4.26E-07	3.53E-07	4.22E-07	
Y-90m	S		1.00E-03	2.80E-06	2.24E-06	1.09E-06	7.03E-07	4.51E-07	3.77E-07	4.44E-07	
Y-91	F		1.00E-03	1.47E-04	1.02E-04	4.59E-05	2.58E-05	1.48E-05	1.15E-05	1.48E-05	
Y-91	M		1.00E-03	1.44E-04	1.10E-04	6.07E-05	4.00E-05	3.10E-05	2.63E-05	2.95E-05	
Y-91	S		1.00E-03	1.60E-04	1.26E-04	7.14E-05	4.81E-05	3.85E-05	3.31E-05	3.67E-05	
Y-91m	F		1.00E-03	2.25E-07	1.74E-07	8.51E-08	5.03E-08	2.96E-08	2.35E-08	2.92E-08	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)						
				Newborn	1 y	5 y	10 y	15 y	Adult	Per Capita
Y-91m	M		1.00E-03	2.64E-07	2.08E-07	1.09E-07	6.88E-08	4.59E-08	3.77E-08	4.44E-08
Y-91m	S		1.00E-03	2.78E-07	2.20E-07	1.17E-07	7.47E-08	5.11E-08	4.22E-08	4.92E-08
Y-92	F		1.00E-03	4.11E-06	2.56E-06	1.21E-06	7.36E-07	3.89E-07	3.23E-07	4.11E-07
Y-92	M		1.00E-03	6.81E-06	4.37E-06	1.96E-06	1.23E-06	7.36E-07	6.18E-07	7.51E-07
Y-92	S		1.00E-03	7.10E-06	4.55E-06	2.05E-06	1.29E-06	7.81E-07	6.55E-07	7.96E-07
Y-93	F		1.00E-03	1.00E-05	6.40E-06	2.71E-06	1.62E-06	8.18E-07	6.73E-07	8.81E-07
Y-93	M		1.00E-03	1.64E-05	1.07E-05	4.81E-06	3.03E-06	1.76E-06	1.48E-06	1.82E-06
Y-93	S		1.00E-03	1.71E-05	1.12E-05	5.03E-06	3.18E-06	1.87E-06	1.57E-06	1.92E-06
Y-94	F		1.00E-03	7.07E-07	4.40E-07	1.93E-07	1.19E-07	7.07E-08	5.99E-08	7.36E-08
Y-94	M		1.00E-03	1.05E-06	6.59E-07	2.92E-07	1.83E-07	1.14E-07	9.69E-08	1.17E-07
Y-94	S		1.00E-03	1.10E-06	6.85E-07	3.03E-07	1.90E-07	1.19E-07	1.01E-07	1.22E-07
Y-95	F		1.00E-03	3.89E-07	2.54E-07	1.14E-07	7.18E-08	4.37E-08	3.74E-08	4.51E-08
Y-95	M		1.00E-03	5.33E-07	3.47E-07	1.57E-07	9.99E-08	6.33E-08	5.40E-08	6.44E-08
Y-95	S		1.00E-03	5.51E-07	3.58E-07	1.62E-07	1.03E-07	6.59E-08	5.62E-08	6.70E-08
Yb-162	F		5.00E-03	3.54E-07	2.53E-07	1.21E-07	7.40E-08	4.40E-08	3.60E-08	4.40E-08
Yb-162	M		5.00E-03	5.48E-07	3.81E-07	1.85E-07	1.17E-07	7.59E-08	6.22E-08	7.40E-08
Yb-162	S		5.00E-03	5.70E-07	3.96E-07	1.92E-07	1.21E-07	7.96E-08	6.48E-08	7.73E-08
Yb-163	F		5.00E-03	1.86E-07	1.39E-07	6.81E-08	4.22E-08	2.53E-08	2.08E-08	2.53E-08
Yb-163	M		5.00E-03	2.55E-07	1.86E-07	9.21E-08	5.81E-08	3.74E-08	3.05E-08	3.64E-08
Yb-163	S		5.00E-03	2.63E-07	1.91E-07	9.47E-08	5.99E-08	3.85E-08	3.16E-08	3.77E-08
Yb-164	F		5.00E-03	9.47E-07	6.40E-07	2.94E-07	1.79E-07	1.04E-07	8.51E-08	1.06E-07
Yb-164	M		5.00E-03	1.49E-06	9.95E-07	4.70E-07	2.96E-07	1.89E-07	1.56E-07	1.87E-07
Yb-164	S		5.00E-03	1.55E-06	1.04E-06	4.88E-07	3.09E-07	1.98E-07	1.64E-07	1.96E-07
Yb-165			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Yb-166	F		5.00E-03	1.12E-05	8.51E-06	4.29E-06	2.69E-06	1.57E-06	1.30E-06	1.58E-06
Yb-166	M		5.00E-03	1.72E-05	1.31E-05	7.03E-06	4.70E-06	3.33E-06	2.68E-06	3.10E-06
Yb-166	S		5.00E-03	1.80E-05	1.36E-05	7.36E-06	4.96E-06	3.55E-06	2.85E-06	3.29E-06
Yb-167	F		5.00E-03	1.05E-07	7.33E-08	3.52E-08	2.25E-08	1.45E-08	1.22E-08	1.45E-08
Yb-167	M		5.00E-03	1.67E-07	1.18E-07	5.99E-08	4.03E-08	2.98E-08	2.46E-08	2.82E-08
Yb-167	S		5.00E-03	1.75E-07	1.23E-07	6.33E-08	4.26E-08	3.18E-08	2.62E-08	2.99E-08
Yb-169	F		5.00E-03	2.91E-05	2.06E-05	1.02E-05	5.92E-06	3.48E-06	2.97E-06	3.63E-06
Yb-169	M		5.00E-03	4.96E-05	3.70E-05	2.20E-05	1.55E-05	1.33E-05	1.08E-05	1.19E-05
Yb-169	S		5.00E-03	5.51E-05	4.18E-05	2.51E-05	1.79E-05	1.57E-05	1.26E-05	1.39E-05
Yb-175	F		5.00E-03	5.99E-06	3.92E-06	1.80E-06	1.04E-06	5.51E-07	4.66E-07	5.92E-07

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Yb-175	M		5.00E-03	1.28E-05	9.21E-06	5.11E-06	3.64E-06	3.07E-06	2.42E-06	2.71E-06	
Yb-175	S		5.00E-03	1.38E-05	9.92E-06	5.55E-06	4.00E-06	3.42E-06	2.69E-06	3.00E-06	
Yb-177	F		5.00E-03	1.10E-06	7.14E-07	3.16E-07	1.96E-07	1.12E-07	9.51E-08	1.17E-07	
Yb-177	M		5.00E-03	1.95E-06	1.31E-06	6.33E-07	4.26E-07	3.07E-07	2.52E-07	2.92E-07	
Yb-177	S		5.00E-03	2.05E-06	1.38E-06	6.70E-07	4.51E-07	3.31E-07	2.71E-07	3.13E-07	
Yb-178	F		5.00E-03	1.20E-06	7.62E-07	3.29E-07	2.06E-07	1.18E-07	9.99E-08	1.23E-07	
Yb-178	M		5.00E-03	2.17E-06	1.42E-06	6.66E-07	4.44E-07	3.11E-07	2.57E-07	3.00E-07	
Yb-178	S		5.00E-03	2.28E-06	1.49E-06	7.03E-07	4.70E-07	3.32E-07	2.74E-07	3.19E-07	
Yb-179			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-60			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-61			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-62	F		1.00E+00	6.14E-06	6.29E-06	2.84E-06	1.71E-06	9.14E-07	7.51E-07	9.47E-07	
Zn-62	M		2.00E-01	1.64E-05	1.30E-05	5.99E-06	3.77E-06	2.22E-06	1.85E-06	2.25E-06	
Zn-62	S		2.00E-02	1.89E-05	1.26E-05	6.51E-06	4.11E-06	2.41E-06	2.01E-06	2.43E-06	
Zn-63	F		1.00E+00	7.88E-07	5.37E-07	2.43E-07	1.50E-07	8.84E-08	7.36E-08	9.07E-08	
Zn-63	M		2.00E-01	1.28E-06	8.44E-07	3.89E-07	2.46E-07	1.57E-07	1.31E-07	1.57E-07	
Zn-63	S		2.00E-02	1.34E-06	8.77E-07	4.03E-07	2.56E-07	1.64E-07	1.37E-07	1.64E-07	
Zn-65	F		1.00E+00	5.40E-05	3.77E-05	2.12E-05	1.39E-05	9.21E-06	8.29E-06	9.47E-06	
Zn-65	M		2.00E-01	3.14E-05	2.38E-05	1.36E-05	9.07E-06	6.92E-06	5.96E-06	6.66E-06	
Zn-65	S		2.00E-02	2.82E-05	2.49E-05	1.62E-05	1.09E-05	8.77E-06	7.40E-06	8.18E-06	
Zn-69	F		1.00E+00	4.18E-07	2.74E-07	1.17E-07	7.59E-08	4.59E-08	4.00E-08	4.81E-08	
Zn-69	M		2.00E-01	7.99E-07	5.22E-07	2.41E-07	1.63E-07	1.16E-07	9.66E-08	1.12E-07	
Zn-69	S		2.00E-02	8.40E-07	5.48E-07	2.54E-07	1.72E-07	1.24E-07	1.03E-07	1.19E-07	
Zn-69m	F		1.00E+00	2.45E-06	2.49E-06	1.12E-06	6.85E-07	3.65E-07	3.05E-07	3.81E-07	
Zn-69m	M		2.00E-01	7.88E-06	5.74E-06	2.79E-06	1.84E-06	1.11E-06	8.95E-07	1.08E-06	
Zn-69m	S		2.00E-02	8.07E-06	6.25E-06	3.04E-06	2.01E-06	1.22E-06	9.88E-07	1.20E-06	
Zn-71			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zn-71m	F		1.00E+00	2.29E-06	2.05E-06	9.77E-07	5.96E-07	3.38E-07	2.78E-07	3.43E-07	
Zn-71m	M		2.00E-01	4.85E-06	3.53E-06	1.71E-06	1.10E-06	6.99E-07	5.70E-07	6.81E-07	
Zn-71m	S		2.00E-02	5.22E-06	3.74E-06	1.81E-06	1.17E-06	7.44E-07	6.07E-07	7.25E-07	
Zn-72	F		1.00E+00	1.60E-05	1.30E-05	6.25E-06	3.85E-06	2.20E-06	1.85E-06	2.26E-06	
Zn-72	M		2.00E-01	3.26E-05	2.45E-05	1.26E-05	8.44E-06	5.44E-06	4.44E-06	5.25E-06	
Zn-72	S		2.00E-02	3.61E-05	2.63E-05	1.36E-05	9.14E-06	5.99E-06	4.85E-06	5.74E-06	
Zr-85			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Continued on next page

Table 2.3: Dose coefficients for inhalation

Nuclide	Type	Special	f	(mrem per pCi)							Per Capita
				Newborn	1 y	5 y	10 y	15 y	Adult		
Zr-86	F		2.00E-02	9.14E-06	7.14E-06	3.57E-06	2.20E-06	1.27E-06	1.02E-06	1.27E-06	
Zr-86	M		2.00E-02	1.27E-05	9.81E-06	4.96E-06	3.15E-06	1.93E-06	1.55E-06	1.88E-06	
Zr-86	S		2.00E-02	1.31E-05	1.01E-05	5.11E-06	3.26E-06	2.01E-06	1.61E-06	1.95E-06	
Zr-87	F		2.00E-02	1.82E-06	1.25E-06	5.70E-07	3.47E-07	1.96E-07	1.61E-07	2.01E-07	
Zr-87	M		2.00E-02	2.96E-06	2.01E-06	9.51E-07	6.03E-07	3.85E-07	3.16E-07	3.77E-07	
Zr-87	S		2.00E-02	3.08E-06	2.10E-06	9.92E-07	6.33E-07	4.03E-07	3.33E-07	4.00E-07	
Zr-88	F		2.00E-02	2.57E-05	3.05E-05	2.09E-05	1.72E-05	1.32E-05	1.29E-05	1.36E-05	
Zr-88	M		2.00E-02	3.12E-05	2.89E-05	1.89E-05	1.35E-05	1.11E-05	9.77E-06	1.06E-05	
Zr-88	S		2.00E-02	4.92E-05	4.44E-05	2.89E-05	1.95E-05	1.60E-05	1.34E-05	1.48E-05	
Zr-89	F		2.00E-02	9.69E-06	7.40E-06	3.69E-06	2.28E-06	1.34E-06	1.10E-06	1.34E-06	
Zr-89	M		2.00E-02	1.39E-05	1.06E-05	5.51E-06	3.59E-06	2.41E-06	1.92E-06	2.28E-06	
Zr-89	S		2.00E-02	1.44E-05	1.10E-05	5.74E-06	3.74E-06	2.55E-06	2.03E-06	2.39E-06	
Zr-89m			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Zr-93	F		2.00E-02	1.27E-05	1.73E-05	1.92E-05	3.55E-05	6.55E-05	8.92E-05	8.14E-05	
Zr-93	M		2.00E-02	1.18E-05	1.11E-05	1.02E-05	1.49E-05	2.77E-05	3.63E-05	3.34E-05	
Zr-93	S		2.00E-02	2.49E-05	2.27E-05	1.59E-05	1.18E-05	1.17E-05	1.19E-05	1.21E-05	
Zr-95	F		2.00E-02	4.48E-05	4.18E-05	2.39E-05	1.58E-05	1.04E-05	9.47E-06	1.07E-05	
Zr-95	M		2.00E-02	7.29E-05	5.92E-05	3.60E-05	2.55E-05	2.18E-05	1.78E-05	1.96E-05	
Zr-95	S		2.00E-02	8.88E-05	7.14E-05	4.37E-05	3.10E-05	2.70E-05	2.18E-05	2.40E-05	
Zr-97	F		2.00E-02	1.85E-05	1.26E-05	5.62E-06	3.40E-06	1.77E-06	1.46E-06	1.87E-06	
Zr-97	M		2.00E-02	2.88E-05	1.95E-05	1.04E-05	6.70E-06	4.14E-06	3.41E-06	4.07E-06	
Zr-97	S		2.00E-02	3.03E-05	2.06E-05	1.09E-05	7.03E-06	4.40E-06	3.63E-06	4.33E-06	

2.4 Morbidity risk coefficients for external exposure

Explanation of Entries:

Table 2.4 contains the morbidity risk coefficients, also known as slope factors, for external exposure to a radionuclide. Risk coefficients are provided for seven exposure scenarios: exposure from contamination on the ground surface, exposure from an infinitely contaminated soil volume, exposure from soil contamination of thicknesses 1, 5, and 15, immersion in contaminated water, and submersion in contaminated air.

Risk coefficients are expressed as the probability of radiogenic cancer morbidity per unit time-integrated activity concentration in water, air, on the ground surface, or in the soil.

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane (cm ² per pCi yr)	Soil Volume	Soil Volume			Immersion (L per pCi yr)	Submersion (cm ³ per pCi yr)
			1cm	5cm	15cm		
Ac-223	1.50E-08	6.13E-08	1.50E-08	4.06E-08	5.80E-08	1.47E-13	6.71E-05
Ac-223+D	1.82E-08	7.63E-08	1.83E-08	4.99E-08	7.20E-08	1.80E-13	8.23E-05
Ac-223+E	1.82E-08	7.63E-08	1.83E-08	4.99E-08	7.20E-08	1.80E-13	8.23E-05
Ac-224	1.91E-07	7.08E-07	1.91E-07	5.07E-07	6.92E-07	1.88E-12	8.53E-04
Ac-225	1.20E-08	4.13E-08	1.16E-08	2.99E-08	4.02E-08	1.14E-13	5.16E-05
Ac-225+D	3.75E-08	1.47E-07	3.74E-08	1.01E-07	1.43E-07	3.71E-13	1.68E-04
Ac-225+E	3.75E-08	1.47E-07	3.74E-08	1.01E-07	1.43E-07	3.71E-13	1.68E-04
Ac-226	1.14E-07	4.56E-07	1.14E-07	3.10E-07	4.41E-07	1.12E-12	5.12E-04
Ac-227	1.65E-10	1.99E-10	6.88E-11	1.53E-10	1.95E-10	7.11E-16	3.16E-07
Ac-228	7.66E-07	4.04E-06	7.84E-07	2.23E-06	3.51E-06	8.16E-12	3.76E-03
Ac-230	4.82E-07	2.70E-06	4.88E-07	1.41E-06	2.26E-06	5.34E-12	2.48E-03
Ac-231	3.72E-07	1.58E-06	3.72E-07	1.03E-06	1.50E-06	3.66E-12	1.67E-03
Ac-232	9.95E-07	5.86E-06	1.02E-06	2.97E-06	4.82E-06	1.15E-11	5.31E-03
Ac-233	4.64E-07	2.20E-06	4.64E-07	1.30E-06	2.00E-06	4.56E-12	2.10E-03
Ag-100m	2.53E-06	1.34E-05	2.58E-06	7.37E-06	1.16E-05	2.69E-11	1.24E-02
Ag-101	1.40E-06	7.07E-06	1.43E-06	4.06E-06	6.28E-06	1.46E-11	6.71E-03
Ag-102	2.99E-06	1.62E-05	3.07E-06	8.79E-06	1.39E-05	3.26E-11	1.51E-02
Ag-102m	1.68E-06	1.01E-05	1.75E-06	5.07E-06	8.23E-06	1.99E-11	9.20E-03
Ag-103	7.40E-07	3.69E-06	7.54E-07	2.13E-06	3.27E-06	7.70E-12	3.54E-03
Ag-104	2.40E-06	1.26E-05	2.45E-06	7.00E-06	1.10E-05	2.55E-11	1.17E-02
Ag-104m	1.59E-06	8.51E-06	1.62E-06	4.64E-06	7.31E-06	1.72E-11	7.94E-03
Ag-105	4.48E-07	2.10E-06	4.53E-07	1.27E-06	1.93E-06	4.49E-12	2.07E-03
Ag-105m	8.98E-10	4.19E-09	9.03E-10	2.54E-09	3.85E-09	8.98E-15	4.13E-06
Ag-106	6.36E-07	3.04E-06	6.42E-07	1.80E-06	2.76E-06	6.31E-12	2.91E-03
Ag-106m	2.48E-06	1.31E-05	2.54E-06	7.24E-06	1.14E-05	2.63E-11	1.22E-02
Ag-108	2.67E-08	8.84E-08	1.93E-08	5.26E-08	8.00E-08	1.84E-13	8.77E-05
Ag-108m	1.45E-06	7.17E-06	1.48E-06	4.17E-06	6.43E-06	1.47E-11	6.78E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)			(L per pCi yr)	(cm ³ per pCi yr)
Ag-108m+D	1.45E-06	7.18E-06	1.48E-06	4.17E-06	6.44E-06	1.47E-11	6.79E-03
Ag-108m+E	1.45E-06	7.18E-06	1.48E-06	4.17E-06	6.44E-06	1.47E-11	6.79E-03
Ag-109m	5.55E-09	7.62E-09	3.01E-09	6.40E-09	7.63E-09	3.03E-14	1.34E-05
Ag-110	4.93E-08	1.71E-07	3.78E-08	1.01E-07	1.53E-07	3.40E-13	1.65E-04
Ag-110m	2.45E-06	1.31E-05	2.53E-06	7.18E-06	1.13E-05	2.61E-11	1.20E-02
Ag-110m+D	2.45E-06	1.31E-05	2.53E-06	7.18E-06	1.13E-05	2.61E-11	1.20E-02
Ag-110m+E	2.45E-06	1.31E-05	2.53E-06	7.18E-06	1.13E-05	2.61E-11	1.20E-02
Ag-111	2.74E-08	1.10E-07	2.49E-08	6.94E-08	1.03E-07	2.43E-13	1.13E-04
Ag-111m	4.65E-09	1.37E-08	3.35E-09	8.68E-09	1.27E-08	3.34E-14	1.52E-05
Ag-112	6.25E-07	3.40E-06	6.34E-07	1.81E-06	2.89E-06	6.76E-12	3.13E-03
Ag-113	7.72E-08	3.20E-07	6.96E-08	1.95E-07	2.92E-07	6.80E-13	3.17E-04
Ag-113m	1.93E-07	8.95E-07	1.95E-07	5.46E-07	8.24E-07	1.92E-12	8.81E-04
Ag-114	2.68E-07	1.36E-06	2.62E-07	7.35E-07	1.16E-06	2.68E-12	1.25E-03
Ag-115	4.33E-07	2.37E-06	4.38E-07	1.25E-06	2.00E-06	4.77E-12	2.21E-03
Ag-116	1.85E-06	1.10E-05	1.91E-06	5.52E-06	8.95E-06	2.16E-11	1.00E-02
Ag-117	1.11E-06	6.66E-06	1.15E-06	3.33E-06	5.41E-06	1.32E-11	6.10E-03
Ag-99	2.05E-06	1.08E-05	2.09E-06	5.97E-06	9.36E-06	2.19E-11	1.01E-02
Al-26	2.30E-06	1.33E-05	2.38E-06	6.88E-06	1.11E-05	2.63E-11	1.22E-02
Al-28	1.52E-06	9.33E-06	1.57E-06	4.58E-06	7.54E-06	1.81E-11	8.38E-03
Al-29	1.20E-06	6.96E-06	1.24E-06	3.57E-06	5.79E-06	1.37E-11	6.31E-03
Am-237	3.16E-07	1.36E-06	3.18E-07	8.75E-07	1.27E-06	3.16E-12	1.44E-03
Am-238	7.86E-07	4.07E-06	8.04E-07	2.26E-06	3.54E-06	8.35E-12	3.85E-03
Am-239	1.93E-07	7.00E-07	1.91E-07	5.03E-07	6.84E-07	1.88E-12	8.53E-04
Am-240	9.05E-07	4.71E-06	9.28E-07	2.62E-06	4.09E-06	9.57E-12	4.42E-03
Am-241	1.87E-08	2.77E-08	1.38E-08	2.58E-08	2.77E-08	1.32E-13	5.81E-05
Am-242	1.24E-08	3.48E-08	1.09E-08	2.73E-08	3.47E-08	1.09E-13	4.92E-05
Am-242m	1.34E-09	7.59E-10	3.37E-10	6.21E-10	7.53E-10	3.68E-15	1.61E-06
Am-242m+D	1.60E-08	4.79E-08	1.36E-08	3.46E-08	4.61E-08	1.37E-13	6.21E-05
Am-242m+E	1.60E-08	4.79E-08	1.36E-08	3.46E-08	4.61E-08	1.37E-13	6.21E-05
Am-243	4.48E-08	9.80E-08	3.93E-08	8.55E-08	9.80E-08	3.83E-13	1.71E-04
Am-243+D	1.94E-07	6.67E-07	1.89E-07	4.84E-07	6.50E-07	1.86E-12	8.39E-04
Am-243+E	1.94E-07	6.67E-07	1.89E-07	4.84E-07	6.50E-07	1.86E-12	8.39E-04
Am-244	7.06E-07	3.58E-06	7.20E-07	2.02E-06	3.16E-06	7.29E-12	3.37E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Am-244m	2.10E-08	7.27E-08	1.49E-08	4.08E-08	6.32E-08	1.50E-13	7.14E-05
Am-245	2.83E-08	1.04E-07	2.69E-08	7.24E-08	1.01E-07	2.67E-13	1.22E-04
Am-246	6.53E-07	3.14E-06	6.60E-07	1.85E-06	2.83E-06	6.60E-12	3.04E-03
Am-246m	8.70E-07	4.66E-06	8.90E-07	2.53E-06	4.01E-06	9.29E-12	4.29E-03
Am-247	1.19E-07	4.54E-07	1.14E-07	3.10E-07	4.36E-07	1.13E-12	5.14E-04
Ar-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-39	5.14E-10	5.96E-10	2.04E-10	4.64E-10	5.88E-10	2.64E-15	1.94E-06
Ar-41	1.12E-06	6.39E-06	1.16E-06	3.33E-06	5.37E-06	1.25E-11	5.80E-03
Ar-42	7.25E-10	6.98E-10	2.36E-10	5.39E-10	6.86E-10	2.97E-15	2.16E-06
Ar-42+D	2.67E-07	1.47E-06	2.62E-07	7.52E-07	1.22E-06	2.86E-12	1.33E-03
Ar-42+E	2.67E-07	1.47E-06	2.62E-07	7.52E-07	1.22E-06	2.86E-12	1.33E-03
Ar-43	1.33E-06	7.79E-06	1.38E-06	3.97E-06	6.43E-06	1.53E-11	7.08E-03
Ar-44	1.65E-06	9.83E-06	1.71E-06	4.96E-06	8.07E-06	1.94E-11	8.94E-03
As-68	3.28E-06	1.79E-05	3.37E-06	9.63E-06	1.53E-05	3.58E-11	1.65E-02
As-69	1.05E-06	5.09E-06	1.05E-06	2.97E-06	4.57E-06	1.05E-11	4.85E-03
As-70	3.74E-06	2.05E-05	3.85E-06	1.10E-05	1.74E-05	4.08E-11	1.88E-02
As-71	5.09E-07	2.41E-06	5.20E-07	1.46E-06	2.20E-06	5.18E-12	2.38E-03
As-72	1.61E-06	8.16E-06	1.64E-06	4.64E-06	7.21E-06	1.66E-11	7.67E-03
As-73	4.44E-09	5.74E-09	3.20E-09	5.52E-09	5.74E-09	3.04E-14	1.32E-05
As-74	6.85E-07	3.36E-06	6.98E-07	1.96E-06	3.03E-06	6.91E-12	3.18E-03
As-76	3.90E-07	1.94E-06	3.89E-07	1.10E-06	1.71E-06	3.94E-12	1.82E-03
As-77	8.22E-09	3.39E-08	7.76E-09	2.15E-08	3.18E-08	7.70E-14	3.60E-05
As-78	1.16E-06	6.37E-06	1.19E-06	3.40E-06	5.42E-06	1.26E-11	5.86E-03
As-79	4.59E-08	1.66E-07	3.63E-08	9.88E-08	1.50E-07	3.43E-13	1.62E-04
At-204	2.09E-06	1.02E-05	2.13E-06	5.99E-06	9.19E-06	2.12E-11	9.75E-03
At-205	1.01E-06	5.16E-06	1.03E-06	2.90E-06	4.51E-06	1.06E-11	4.89E-03
At-206	2.21E-06	1.11E-05	2.26E-06	6.38E-06	9.87E-06	2.29E-11	1.05E-02
At-207	1.75E-06	9.43E-06	1.80E-06	5.12E-06	8.08E-06	1.91E-11	8.80E-03
At-208	2.68E-06	1.40E-05	2.75E-06	7.78E-06	1.22E-05	2.85E-11	1.32E-02
At-209	2.02E-06	1.02E-05	2.08E-06	5.82E-06	9.01E-06	2.10E-11	9.68E-03
At-210	2.56E-06	1.44E-05	2.64E-06	7.58E-06	1.20E-05	2.86E-11	1.32E-02
At-211	2.81E-08	7.40E-08	2.60E-08	6.04E-08	7.32E-08	2.56E-13	1.14E-04
At-211+D	3.23E-08	9.59E-08	3.03E-08	7.28E-08	9.25E-08	3.00E-13	1.34E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
At-211+E	3.23E-08	9.59E-08	3.03E-08	7.28E-08	9.25E-08	3.00E-13	1.34E-04
At-215	1.53E-10	7.08E-10	1.56E-10	4.38E-10	6.56E-10	1.53E-15	7.03E-07
At-216	2.02E-09	6.48E-09	1.95E-09	4.84E-09	6.32E-09	1.92E-14	8.60E-06
At-217	2.13E-10	9.38E-10	2.17E-10	5.99E-10	8.79E-10	2.14E-15	9.77E-07
At-218	2.00E-11	2.75E-11	8.40E-12	1.85E-11	2.56E-11	5.13E-17	3.09E-08
At-219	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-220	4.19E-07	1.86E-06	4.17E-07	1.17E-06	1.73E-06	4.08E-12	1.87E-03
Au-186	1.34E-06	6.66E-06	1.36E-06	3.83E-06	5.92E-06	1.39E-11	6.39E-03
Au-187	9.15E-07	4.99E-06	9.39E-07	2.67E-06	4.22E-06	1.01E-11	4.68E-03
Au-190	1.99E-06	1.18E-05	2.08E-06	5.97E-06	9.67E-06	2.37E-11	1.09E-02
Au-191	5.20E-07	2.34E-06	5.24E-07	1.44E-06	2.14E-06	5.18E-12	2.37E-03
Au-192	1.64E-06	9.50E-06	1.70E-06	4.88E-06	7.87E-06	1.91E-11	8.79E-03
Au-193	1.38E-07	4.68E-07	1.32E-07	3.31E-07	4.49E-07	1.29E-12	5.82E-04
Au-193m	1.70E-07	7.21E-07	1.71E-07	4.75E-07	6.90E-07	1.70E-12	7.73E-04
Au-194	8.92E-07	4.79E-06	9.16E-07	2.60E-06	4.10E-06	9.84E-12	4.54E-03
Au-195	6.29E-08	1.37E-07	5.52E-08	1.19E-07	1.37E-07	5.39E-13	2.38E-04
Au-195m	1.72E-07	7.35E-07	1.75E-07	4.84E-07	7.01E-07	1.72E-12	7.87E-04
Au-196	4.15E-07	1.81E-06	4.19E-07	1.15E-06	1.70E-06	4.10E-12	1.88E-03
Au-196m	2.01E-07	7.13E-07	1.96E-07	5.12E-07	6.96E-07	1.94E-12	8.79E-04
Au-198	3.65E-07	1.70E-06	3.68E-07	1.04E-06	1.57E-06	3.62E-12	1.67E-03
Au-198m	4.50E-07	1.75E-06	4.53E-07	1.21E-06	1.70E-06	4.45E-12	2.02E-03
Au-199	8.03E-08	3.02E-07	8.06E-08	2.15E-07	2.95E-07	7.96E-13	3.61E-04
Au-200	2.53E-07	1.31E-06	2.53E-07	7.16E-07	1.13E-06	2.63E-12	1.22E-03
Au-200m	1.78E-06	8.52E-06	1.81E-06	5.09E-06	7.75E-06	1.80E-11	8.28E-03
Au-201	3.61E-08	1.48E-07	3.22E-08	8.92E-08	1.36E-07	3.16E-13	1.47E-04
Au-202	1.72E-07	8.32E-07	1.65E-07	4.64E-07	7.25E-07	1.67E-12	7.79E-04
Ba-124	5.04E-07	2.43E-06	5.05E-07	1.42E-06	2.17E-06	5.10E-12	2.35E-03
Ba-126	5.06E-07	2.51E-06	5.11E-07	1.44E-06	2.22E-06	5.21E-12	2.40E-03
Ba-127	6.53E-07	3.17E-06	6.57E-07	1.85E-06	2.84E-06	6.60E-12	3.04E-03
Ba-128	5.14E-08	1.72E-07	4.32E-08	1.13E-07	1.64E-07	4.23E-13	1.92E-04
Ba-129	2.90E-07	1.39E-06	2.88E-07	8.06E-07	1.24E-06	2.92E-12	1.34E-03
Ba-129m	1.39E-06	7.20E-06	1.42E-06	4.02E-06	6.28E-06	1.47E-11	6.77E-03
Ba-131	4.15E-07	1.85E-06	4.11E-07	1.14E-06	1.71E-06	4.06E-12	1.86E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Ba-131m	6.02E-08	1.67E-07	5.39E-08	1.31E-07	1.67E-07	5.32E-13	2.37E-04
Ba-133	3.45E-07	1.44E-06	3.35E-07	9.18E-07	1.34E-06	3.28E-12	1.50E-03
Ba-133m	5.46E-08	2.00E-07	4.88E-08	1.31E-07	1.89E-07	4.82E-13	2.20E-04
Ba-135m	4.80E-08	1.70E-07	4.21E-08	1.11E-07	1.61E-07	4.15E-13	1.89E-04
Ba-137m	5.37E-07	2.69E-06	5.48E-07	1.55E-06	2.40E-06	5.47E-12	2.53E-03
Ba-139	5.47E-08	1.74E-07	4.45E-08	1.18E-07	1.67E-07	4.24E-13	1.99E-04
Ba-140	1.64E-07	7.60E-07	1.63E-07	4.58E-07	6.94E-07	1.61E-12	7.41E-04
Ba-141	8.29E-07	4.21E-06	8.42E-07	2.39E-06	3.69E-06	8.70E-12	4.01E-03
Ba-142	9.26E-07	4.85E-06	9.48E-07	2.69E-06	4.22E-06	9.83E-12	4.54E-03
Be-10	6.71E-10	7.50E-10	2.54E-10	5.80E-10	7.39E-10	3.25E-15	2.37E-06
Be-7	4.49E-08	2.15E-07	4.58E-08	1.29E-07	1.96E-07	4.51E-13	2.07E-04
Bi-197	1.50E-06	7.93E-06	1.53E-06	4.34E-06	6.83E-06	1.60E-11	7.39E-03
Bi-200	2.16E-06	1.08E-05	2.21E-06	6.23E-06	9.60E-06	2.23E-11	1.03E-02
Bi-201	1.50E-06	8.28E-06	1.54E-06	4.40E-06	7.00E-06	1.66E-11	7.66E-03
Bi-202	2.43E-06	1.26E-05	2.51E-06	7.07E-06	1.10E-05	2.57E-11	1.19E-02
Bi-203	2.06E-06	1.16E-05	2.11E-06	6.08E-06	9.74E-06	2.31E-11	1.07E-02
Bi-204	2.56E-06	1.36E-05	2.64E-06	7.46E-06	1.18E-05	2.75E-11	1.26E-02
Bi-205	1.45E-06	8.21E-06	1.50E-06	4.30E-06	6.89E-06	1.64E-11	7.55E-03
Bi-206	2.89E-06	1.52E-05	2.96E-06	8.40E-06	1.32E-05	3.09E-11	1.43E-02
Bi-207	1.36E-06	7.07E-06	1.39E-06	3.93E-06	6.14E-06	1.44E-11	6.62E-03
Bi-208	2.10E-06	1.43E-05	2.23E-06	6.55E-06	1.10E-05	2.79E-11	1.29E-02
Bi-210	4.83E-09	2.77E-09	9.56E-10	2.06E-09	2.69E-09	7.83E-15	5.30E-06
Bi-210m	2.29E-07	1.03E-06	2.34E-07	6.55E-07	9.67E-07	2.31E-12	1.06E-03
Bi-210m+D	2.37E-07	1.03E-06	2.36E-07	6.58E-07	9.73E-07	2.33E-12	1.07E-03
Bi-210m+E	2.37E-07	1.03E-06	2.36E-07	6.58E-07	9.73E-07	2.33E-12	1.07E-03
Bi-211	4.20E-08	1.91E-07	4.26E-08	1.19E-07	1.78E-07	4.19E-13	1.92E-04
Bi-212	9.92E-08	4.97E-07	9.60E-08	2.71E-07	4.28E-07	9.92E-13	4.62E-04
Bi-212+D	9.92E-08	4.97E-07	9.60E-08	2.71E-07	4.28E-07	9.92E-13	4.62E-04
Bi-212+E	9.92E-08	4.97E-07	9.60E-08	2.71E-07	4.28E-07	9.92E-13	4.62E-04
Bi-212n	8.38E-09	5.73E-09	1.96E-09	4.15E-09	5.52E-09	1.38E-14	8.94E-06
Bi-213	1.20E-07	5.44E-07	1.18E-07	3.29E-07	4.98E-07	1.16E-12	5.33E-04
Bi-213+D	1.20E-07	5.44E-07	1.18E-07	3.29E-07	4.98E-07	1.16E-12	5.33E-04
Bi-213+E	1.20E-07	5.44E-07	1.18E-07	3.29E-07	4.98E-07	1.16E-12	5.33E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Bi-214	1.29E-06	7.35E-06	1.33E-06	3.82E-06	6.15E-06	1.45E-11	6.70E-03
Bi-214+D	1.29E-06	7.35E-06	1.33E-06	3.82E-06	6.15E-06	1.45E-11	6.70E-03
Bi-214+E	1.29E-06	7.35E-06	1.33E-06	3.82E-06	6.15E-06	1.45E-11	6.70E-03
Bi-215	2.33E-07	1.08E-06	2.30E-07	6.45E-07	9.78E-07	2.31E-12	1.07E-03
Bi-215+D	2.33E-07	1.09E-06	2.30E-07	6.45E-07	9.80E-07	2.31E-12	1.07E-03
Bi-215+E	2.33E-07	1.09E-06	2.30E-07	6.45E-07	9.80E-07	2.31E-12	1.07E-03
Bi-216	6.89E-07	3.25E-06	6.90E-07	1.95E-06	2.96E-06	6.77E-12	3.12E-03
Bk-245	1.91E-07	7.10E-07	1.89E-07	5.05E-07	6.91E-07	1.87E-12	8.49E-04
Bk-246	7.47E-07	3.80E-06	7.63E-07	2.15E-06	3.33E-06	7.80E-12	3.59E-03
Bk-247	1.23E-07	4.65E-07	1.23E-07	3.25E-07	4.50E-07	1.20E-12	5.47E-04
Bk-248m	4.65E-08	1.86E-07	4.49E-08	1.21E-07	1.74E-07	4.45E-13	2.03E-04
Bk-249	4.24E-12	4.69E-12	2.02E-12	3.72E-12	4.55E-12	1.91E-17	1.13E-08
Bk-250	7.95E-07	4.28E-06	8.17E-07	2.32E-06	3.68E-06	8.51E-12	3.93E-03
Bk-251	7.27E-08	2.41E-07	6.92E-08	1.80E-07	2.38E-07	6.86E-13	3.11E-04
Br-72	2.67E-06	1.41E-05	2.73E-06	7.78E-06	1.23E-05	2.84E-11	1.31E-02
Br-73	1.31E-06	6.29E-06	1.32E-06	3.70E-06	5.68E-06	1.31E-11	6.03E-03
Br-74	3.81E-06	2.37E-05	3.98E-06	1.15E-05	1.89E-05	4.72E-11	2.17E-02
Br-74m	3.55E-06	2.05E-05	3.68E-06	1.06E-05	1.71E-05	4.09E-11	1.88E-02
Br-75	1.08E-06	5.14E-06	1.10E-06	3.10E-06	4.70E-06	1.08E-11	4.99E-03
Br-76	2.40E-06	1.38E-05	2.49E-06	7.14E-06	1.15E-05	2.75E-11	1.26E-02
Br-76m	2.75E-08	5.27E-08	1.98E-08	3.93E-08	4.96E-08	1.91E-13	8.42E-05
Br-77	2.82E-07	1.34E-06	2.88E-07	8.10E-07	1.23E-06	2.85E-12	1.31E-03
Br-77m	1.24E-08	3.87E-08	1.20E-08	3.03E-08	3.87E-08	1.19E-13	5.34E-05
Br-78	9.50E-07	4.55E-06	9.58E-07	2.69E-06	4.13E-06	9.42E-12	4.35E-03
Br-80	8.09E-08	3.50E-07	7.35E-08	2.06E-07	3.14E-07	7.18E-13	3.34E-04
Br-80m	1.06E-08	5.97E-09	4.64E-09	5.97E-09	5.97E-09	4.43E-14	1.91E-05
Br-82	2.35E-06	1.24E-05	2.41E-06	6.85E-06	1.08E-05	2.49E-11	1.15E-02
Br-82m	3.44E-09	1.38E-08	2.82E-09	7.78E-09	1.20E-08	2.81E-14	1.31E-05
Br-83	9.29E-09	3.19E-08	6.92E-09	1.91E-08	2.90E-08	6.80E-14	3.26E-05
Br-84	1.47E-06	9.21E-06	1.54E-06	4.45E-06	7.34E-06	1.81E-11	8.38E-03
Br-84m	2.44E-06	1.33E-05	2.51E-06	7.18E-06	1.14E-05	2.67E-11	1.23E-02
Br-85	7.73E-08	3.39E-07	6.75E-08	1.87E-07	2.93E-07	6.75E-13	3.18E-04
C-10	1.58E-06	7.79E-06	1.61E-06	4.55E-06	6.99E-06	1.60E-11	7.36E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)			(L per pCi yr)	(cm ³ per pCi yr)
C-11	9.24E-07	4.45E-06	9.39E-07	2.66E-06	4.04E-06	9.25E-12	4.27E-03
C-14	9.67E-12	7.87E-12	4.53E-12	7.35E-12	7.87E-12	5.81E-17	4.29E-08
Ca-41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ca-45	3.03E-11	3.96E-11	1.82E-11	3.46E-11	3.96E-11	2.95E-16	2.29E-07
Ca-47	9.20E-07	5.20E-06	9.50E-07	2.73E-06	4.38E-06	1.03E-11	4.73E-03
Ca-49	2.47E-06	1.75E-05	2.62E-06	7.74E-06	1.32E-05	3.45E-11	1.59E-02
Cd-101	2.17E-06	1.19E-05	2.23E-06	6.38E-06	1.01E-05	2.38E-11	1.10E-02
Cd-102	7.40E-07	3.67E-06	7.52E-07	2.13E-06	3.27E-06	7.59E-12	3.50E-03
Cd-103	1.78E-06	1.04E-05	1.84E-06	5.31E-06	8.59E-06	2.05E-11	9.47E-03
Cd-104	2.10E-07	9.39E-07	2.06E-07	5.63E-07	8.45E-07	2.06E-12	9.42E-04
Cd-105	1.12E-06	6.31E-06	1.15E-06	3.31E-06	5.31E-06	1.25E-11	5.80E-03
Cd-107	1.71E-08	3.26E-08	9.35E-09	2.21E-08	3.04E-08	9.53E-14	4.28E-05
Cd-109	1.14E-08	8.70E-09	4.06E-09	7.46E-09	8.70E-09	4.22E-14	1.85E-05
Cd-111m	2.43E-07	1.04E-06	2.47E-07	6.86E-07	9.92E-07	2.43E-12	1.11E-03
Cd-113	4.69E-11	7.24E-11	3.05E-11	6.13E-11	7.21E-11	4.86E-16	3.79E-07
Cd-113m	4.27E-10	6.80E-10	2.09E-10	4.99E-10	6.62E-10	2.58E-15	1.75E-06
Cd-115	1.77E-07	8.37E-07	1.77E-07	4.98E-07	7.61E-07	1.74E-12	8.04E-04
Cd-115m	3.90E-08	1.66E-07	3.25E-08	9.07E-08	1.43E-07	3.31E-13	1.55E-04
Cd-117	9.45E-07	5.20E-06	9.73E-07	2.79E-06	4.43E-06	1.04E-11	4.80E-03
Cd-117m	1.74E-06	1.03E-05	1.81E-06	5.26E-06	8.51E-06	2.02E-11	9.38E-03
Cd-118	1.95E-10	3.16E-10	1.12E-10	2.51E-10	3.12E-10	1.58E-15	1.18E-06
Cd-119	1.41E-06	8.21E-06	1.46E-06	4.21E-06	6.79E-06	1.62E-11	7.50E-03
Cd-119m	1.98E-06	1.16E-05	2.06E-06	5.93E-06	9.59E-06	2.28E-11	1.05E-02
Ce-130	4.31E-07	2.00E-06	4.28E-07	1.19E-06	1.80E-06	4.34E-12	1.99E-03
Ce-131	1.44E-06	7.36E-06	1.47E-06	4.15E-06	6.46E-06	1.51E-11	6.96E-03
Ce-132	2.30E-07	9.08E-07	2.24E-07	6.08E-07	8.71E-07	2.21E-12	1.00E-03
Ce-133	4.79E-07	2.09E-06	4.66E-07	1.28E-06	1.92E-06	4.58E-12	2.10E-03
Ce-133m	1.51E-06	8.02E-06	1.54E-06	4.38E-06	6.90E-06	1.62E-11	7.49E-03
Ce-134	1.80E-08	1.37E-08	8.15E-09	1.19E-08	1.36E-08	7.82E-14	3.38E-05
Ce-135	7.27E-07	3.48E-06	7.33E-07	2.06E-06	3.14E-06	7.33E-12	3.37E-03
Ce-137	2.69E-08	5.58E-08	1.70E-08	3.67E-08	5.16E-08	1.65E-13	7.40E-05
Ce-137m	4.42E-08	1.48E-07	3.76E-08	9.67E-08	1.40E-07	3.71E-13	1.68E-04
Ce-139	1.30E-07	4.54E-07	1.22E-07	3.22E-07	4.44E-07	1.20E-12	5.44E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Ce-141	6.39E-08	2.28E-07	6.27E-08	1.65E-07	2.24E-07	6.21E-13	2.81E-04
Ce-143	2.48E-07	1.08E-06	2.39E-07	6.60E-07	9.91E-07	2.37E-12	1.09E-03
Ce-144	1.57E-08	4.92E-08	1.46E-08	3.68E-08	4.86E-08	1.44E-13	6.50E-05
Ce-144+D	6.25E-08	2.28E-07	5.01E-08	1.33E-07	2.00E-07	4.92E-13	2.34E-04
Ce-144+E	6.25E-08	2.28E-07	5.01E-08	1.33E-07	2.00E-07	4.92E-13	2.34E-04
Ce-145	7.29E-07	3.57E-06	7.28E-07	2.04E-06	3.16E-06	7.34E-12	3.38E-03
Cf-244	4.72E-10	6.07E-11	6.00E-11	6.06E-11	6.07E-11	7.41E-16	3.16E-07
Cf-246	3.62E-10	2.08E-10	7.80E-11	1.40E-10	1.88E-10	9.00E-16	3.95E-07
Cf-247	7.63E-08	2.51E-07	7.28E-08	1.89E-07	2.49E-07	7.21E-13	3.25E-04
Cf-248	6.82E-10	1.70E-09	3.50E-10	9.05E-10	1.41E-09	3.97E-15	1.81E-06
Cf-249	2.90E-07	1.33E-06	2.96E-07	8.30E-07	1.24E-06	2.90E-12	1.33E-03
Cf-250	8.71E-09	4.90E-08	8.73E-09	2.51E-08	4.04E-08	9.84E-14	4.54E-05
Cf-251	9.89E-08	3.62E-07	9.78E-08	2.60E-07	3.54E-07	9.69E-13	4.40E-04
Cf-252	3.90E-07	2.28E-06	4.04E-07	1.16E-06	1.87E-06	4.55E-12	2.09E-03
Cf-253	1.39E-09	3.93E-10	3.09E-10	3.85E-10	3.93E-10	3.43E-15	1.55E-06
Cf-254	1.44E-05	8.42E-05	1.49E-05	4.30E-05	6.93E-05	1.68E-10	7.75E-02
Cf-255	9.13E-10	6.98E-10	2.38E-10	5.35E-10	6.85E-10	2.82E-15	2.03E-06
Cl-34	9.61E-07	4.55E-06	9.65E-07	2.71E-06	4.14E-06	9.43E-12	4.36E-03
Cl-34m	1.78E-06	1.06E-05	1.85E-06	5.35E-06	8.67E-06	2.12E-11	9.77E-03
Cl-36	1.77E-09	1.70E-09	4.92E-10	1.19E-09	1.61E-09	5.32E-15	3.46E-06
Cl-38	1.23E-06	7.70E-06	1.27E-06	3.72E-06	6.15E-06	1.50E-11	6.92E-03
Cl-39	1.27E-06	7.17E-06	1.31E-06	3.76E-06	6.03E-06	1.41E-11	6.56E-03
Cl-40	3.32E-06	2.19E-05	3.48E-06	1.02E-05	1.71E-05	4.30E-11	1.99E-02
Cm-238	6.38E-08	2.03E-07	6.21E-08	1.58E-07	2.02E-07	6.15E-13	2.76E-04
Cm-239	2.13E-07	8.01E-07	2.13E-07	5.72E-07	7.84E-07	2.12E-12	9.60E-04
Cm-240	4.65E-10	9.83E-11	6.64E-11	8.77E-11	9.74E-11	8.02E-16	3.46E-07
Cm-241	4.34E-07	1.94E-06	4.38E-07	1.21E-06	1.79E-06	4.30E-12	1.98E-03
Cm-242	4.13E-10	7.87E-11	5.59E-11	7.00E-11	7.72E-11	6.85E-16	2.95E-07
Cm-243	1.09E-07	4.21E-07	1.09E-07	2.92E-07	4.08E-07	1.07E-12	4.87E-04
Cm-244	3.65E-10	1.40E-10	5.99E-11	9.52E-11	1.25E-10	7.24E-16	3.16E-07
Cm-245	8.35E-08	2.75E-07	8.14E-08	2.09E-07	2.72E-07	8.05E-13	3.62E-04
Cm-246	3.37E-09	1.80E-08	3.24E-09	9.24E-09	1.48E-08	3.65E-14	1.68E-05
Cm-247	2.81E-07	1.31E-06	2.86E-07	8.06E-07	1.22E-06	2.82E-12	1.29E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)			(L per pCi yr)	(cm ³ per pCi yr)
Cm-247+D	3.00E-07	1.37E-06	3.05E-07	8.49E-07	1.27E-06	2.99E-12	1.37E-03
Cm-247+E	3.00E-07	1.37E-06	3.05E-07	8.49E-07	1.27E-06	2.99E-12	1.37E-03
Cm-248	1.12E-06	6.55E-06	1.16E-06	3.35E-06	5.40E-06	1.31E-11	6.03E-03
Cm-249	1.93E-08	8.51E-08	1.80E-08	5.03E-08	7.68E-08	1.79E-13	8.31E-05
Cm-250	1.14E-05	6.66E-05	1.18E-05	3.40E-05	5.48E-05	1.33E-10	6.13E-02
Cm-250+D	1.17E-05	6.79E-05	1.20E-05	3.48E-05	5.59E-05	1.36E-10	6.24E-02
Cm-250+E	1.17E-05	6.79E-05	1.20E-05	3.48E-05	5.59E-05	1.36E-10	6.24E-02
Cm-251	1.04E-07	4.76E-07	1.02E-07	2.84E-07	4.33E-07	1.01E-12	4.64E-04
Co-54m	3.50E-06	1.87E-05	3.59E-06	1.02E-05	1.61E-05	3.75E-11	1.73E-02
Co-55	1.78E-06	9.25E-06	1.83E-06	5.18E-06	8.10E-06	1.87E-11	8.62E-03
Co-56	3.10E-06	1.84E-05	3.22E-06	9.30E-06	1.51E-05	3.62E-11	1.67E-02
Co-57	1.01E-07	3.55E-07	1.02E-07	2.66E-07	3.52E-07	1.01E-12	4.55E-04
Co-58	8.72E-07	4.49E-06	8.96E-07	2.53E-06	3.96E-06	9.05E-12	4.17E-03
Co-58m	4.48E-12	1.00E-12	9.88E-13	1.01E-12	1.00E-12	1.04E-17	4.44E-09
Co-60	2.19E-06	1.24E-05	2.26E-06	6.49E-06	1.04E-05	2.44E-11	1.13E-02
Co-60m	3.82E-09	1.79E-08	3.70E-09	9.89E-09	1.52E-08	3.93E-14	1.80E-05
Co-61	8.77E-08	2.81E-07	7.69E-08	1.87E-07	2.56E-07	7.65E-13	3.47E-04
Co-62	1.40E-06	8.17E-06	1.45E-06	4.15E-06	6.75E-06	1.60E-11	7.42E-03
Co-62m	2.34E-06	1.36E-05	2.43E-06	6.96E-06	1.12E-05	2.65E-11	1.23E-02
Cr-48	3.80E-07	1.62E-06	3.87E-07	1.07E-06	1.54E-06	3.81E-12	1.74E-03
Cr-49	9.52E-07	4.43E-06	9.60E-07	2.67E-06	4.04E-06	9.46E-12	4.35E-03
Cr-51	2.82E-08	1.30E-07	2.90E-08	8.15E-08	1.22E-07	2.84E-13	1.30E-04
Cr-55	2.08E-08	2.95E-08	8.68E-09	1.93E-08	2.72E-08	5.61E-14	3.28E-05
Cr-56	7.98E-08	1.74E-07	6.40E-08	1.46E-07	1.74E-07	6.23E-13	2.81E-04
Cs-121	1.08E-06	5.17E-06	1.09E-06	3.07E-06	4.69E-06	1.08E-11	4.97E-03
Cs-121m	1.08E-06	5.13E-06	1.09E-06	3.07E-06	4.66E-06	1.08E-11	4.97E-03
Cs-123	9.85E-07	4.72E-06	9.91E-07	2.79E-06	4.26E-06	9.83E-12	4.54E-03
Cs-124	1.08E-06	5.23E-06	1.09E-06	3.07E-06	4.70E-06	1.08E-11	4.98E-03
Cs-125	6.76E-07	3.30E-06	6.81E-07	1.93E-06	2.96E-06	6.84E-12	3.14E-03
Cs-126	1.06E-06	5.11E-06	1.07E-06	3.01E-06	4.62E-06	1.06E-11	4.89E-03
Cs-127	3.80E-07	1.74E-06	3.78E-07	1.06E-06	1.60E-06	3.74E-12	1.72E-03
Cs-128	8.15E-07	3.90E-06	8.21E-07	2.30E-06	3.53E-06	8.10E-12	3.74E-03
Cs-129	2.40E-07	1.04E-06	2.32E-07	6.43E-07	9.64E-07	2.28E-12	1.05E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Cs-130	4.55E-07	2.16E-06	4.55E-07	1.28E-06	1.95E-06	4.50E-12	2.07E-03
Cs-130m	5.38E-08	1.12E-07	4.06E-08	8.92E-08	1.10E-07	3.96E-13	1.77E-04
Cs-131	1.33E-08	4.92E-09	4.43E-09	4.92E-09	4.92E-09	4.29E-14	1.82E-05
Cs-132	6.36E-07	3.14E-06	6.42E-07	1.81E-06	2.81E-06	6.43E-12	2.96E-03
Cs-134	1.39E-06	7.11E-06	1.43E-06	4.04E-06	6.30E-06	1.44E-11	6.64E-03
Cs-134m	1.95E-08	5.06E-08	1.58E-08	3.83E-08	5.02E-08	1.55E-13	7.00E-05
Cs-135	4.09E-11	5.85E-11	2.58E-11	5.03E-11	5.82E-11	4.19E-16	3.26E-07
Cs-135m	1.43E-06	7.43E-06	1.47E-06	4.15E-06	6.51E-06	1.50E-11	6.89E-03
Cs-136	1.88E-06	9.94E-06	1.95E-06	5.50E-06	8.65E-06	2.00E-11	9.22E-03
Cs-137	5.54E-10	5.53E-10	1.93E-10	4.25E-10	5.42E-10	2.24E-15	1.62E-06
Cs-137+D	5.07E-07	2.54E-06	5.18E-07	1.46E-06	2.27E-06	5.17E-12	2.38E-03
Cs-137+E	5.07E-07	2.54E-06	5.18E-07	1.46E-06	2.27E-06	5.17E-12	2.38E-03
Cs-138	2.05E-06	1.19E-05	2.11E-06	6.08E-06	9.84E-06	2.34E-11	1.08E-02
Cs-138m	3.61E-07	1.92E-06	3.65E-07	1.04E-06	1.64E-06	3.88E-12	1.79E-03
Cs-139	2.86E-07	1.62E-06	2.84E-07	8.17E-07	1.33E-06	3.17E-12	1.47E-03
Cs-140	1.53E-06	9.15E-06	1.58E-06	4.56E-06	7.45E-06	1.80E-11	8.32E-03
Cu-57	1.11E-06	5.38E-06	1.12E-06	3.14E-06	4.83E-06	1.10E-11	5.09E-03
Cu-59	1.32E-06	6.55E-06	1.34E-06	3.78E-06	5.85E-06	1.34E-11	6.20E-03
Cu-60	3.38E-06	1.94E-05	3.50E-06	1.01E-05	1.61E-05	3.83E-11	1.78E-02
Cu-61	7.43E-07	3.61E-06	7.56E-07	2.13E-06	3.27E-06	7.50E-12	3.46E-03
Cu-62	9.31E-07	4.43E-06	9.37E-07	2.64E-06	4.03E-06	9.19E-12	4.24E-03
Cu-64	1.66E-07	8.08E-07	1.70E-07	4.79E-07	7.33E-07	1.68E-12	7.73E-04
Cu-66	1.06E-07	4.96E-07	9.71E-08	2.71E-07	4.27E-07	9.80E-13	4.59E-04
Cu-67	9.82E-08	3.83E-07	9.93E-08	2.69E-07	3.73E-07	9.83E-13	4.47E-04
Cu-69	4.84E-07	2.54E-06	4.88E-07	1.38E-06	2.19E-06	5.05E-12	2.34E-03
Dy-148	6.38E-07	3.10E-06	6.43E-07	1.80E-06	2.77E-06	6.42E-12	2.95E-03
Dy-149	1.40E-06	7.65E-06	1.44E-06	4.08E-06	6.49E-06	1.54E-11	7.10E-03
Dy-150	2.45E-07	1.09E-06	2.43E-07	6.73E-07	1.01E-06	2.38E-12	1.10E-03
Dy-151	1.20E-06	6.34E-06	1.23E-06	3.46E-06	5.47E-06	1.29E-11	5.92E-03
Dy-152	2.45E-07	1.00E-06	2.43E-07	6.60E-07	9.57E-07	2.38E-12	1.08E-03
Dy-153	7.54E-07	3.68E-06	7.52E-07	2.09E-06	3.21E-06	7.80E-12	3.58E-03
Dy-154	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-155	5.80E-07	2.85E-06	5.84E-07	1.63E-06	2.51E-06	6.03E-12	2.77E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Dy-157	3.02E-07	1.27E-06	2.97E-07	8.15E-07	1.20E-06	2.92E-12	1.33E-03
Dy-159	3.31E-08	3.23E-08	2.06E-08	3.16E-08	3.21E-08	1.94E-13	8.41E-05
Dy-165	2.91E-08	9.81E-08	2.34E-08	6.12E-08	8.97E-08	2.29E-13	1.06E-04
Dy-165m	1.53E-08	5.62E-08	1.43E-08	3.68E-08	5.25E-08	1.40E-13	6.37E-05
Dy-166	3.32E-08	6.49E-08	2.60E-08	5.31E-08	6.35E-08	2.51E-13	1.11E-04
Dy-167	4.84E-07	2.24E-06	4.84E-07	1.35E-06	2.05E-06	4.79E-12	2.20E-03
Dy-168	3.53E-07	1.59E-06	3.52E-07	9.74E-07	1.46E-06	3.47E-12	1.59E-03
Er-154	5.81E-08	1.55E-07	4.58E-08	1.05E-07	1.44E-07	4.45E-13	2.00E-04
Er-156	4.89E-08	8.93E-08	3.52E-08	7.01E-08	8.66E-08	3.38E-13	1.48E-04
Er-159	8.44E-07	4.34E-06	8.57E-07	2.41E-06	3.78E-06	8.90E-12	4.09E-03
Er-161	8.71E-07	4.45E-06	8.85E-07	2.49E-06	3.88E-06	9.12E-12	4.20E-03
Er-163	2.98E-08	3.65E-08	2.02E-08	3.37E-08	3.60E-08	1.92E-13	8.35E-05
Er-165	2.78E-08	3.06E-08	1.86E-08	2.99E-08	3.06E-08	1.75E-13	7.62E-05
Er-167m	8.21E-08	3.27E-07	8.19E-08	2.23E-07	3.17E-07	8.08E-13	3.67E-04
Er-169	5.76E-11	9.56E-11	3.89E-11	8.01E-11	9.52E-11	6.02E-16	4.59E-07
Er-171	3.30E-07	1.39E-06	3.27E-07	9.02E-07	1.32E-06	3.23E-12	1.47E-03
Er-172	4.59E-07	2.13E-06	4.60E-07	1.28E-06	1.93E-06	4.55E-12	2.08E-03
Er-173	7.39E-07	3.50E-06	7.43E-07	2.06E-06	3.12E-06	7.52E-12	3.45E-03
Es-249	3.55E-07	1.61E-06	3.59E-07	9.97E-07	1.48E-06	3.59E-12	1.65E-03
Es-250	1.05E-06	4.99E-06	1.06E-06	2.96E-06	4.48E-06	1.07E-11	4.90E-03
Es-250m	4.77E-07	2.45E-06	4.88E-07	1.37E-06	2.13E-06	5.09E-12	2.34E-03
Es-251	7.55E-08	2.49E-07	7.28E-08	1.89E-07	2.47E-07	7.22E-13	3.25E-04
Es-253	4.07E-10	1.25E-09	3.01E-10	7.97E-10	1.16E-09	2.99E-15	1.37E-06
Es-254	6.35E-09	8.18E-09	2.81E-09	6.02E-09	7.87E-09	2.85E-14	1.26E-05
Es-254+D	8.01E-07	4.29E-06	8.21E-07	2.32E-06	3.69E-06	8.53E-12	3.94E-03
Es-254+E	8.01E-07	4.29E-06	8.21E-07	2.32E-06	3.69E-06	8.53E-12	3.94E-03
Es-254m	4.24E-07	2.12E-06	4.32E-07	1.22E-06	1.89E-06	4.33E-12	1.99E-03
Es-255	6.13E-10	3.45E-09	6.21E-10	1.77E-09	2.84E-09	7.10E-15	3.38E-06
Es-256	1.01E-08	6.92E-09	2.45E-09	5.01E-09	6.64E-09	1.74E-14	1.08E-05
Eu-142	1.13E-06	5.58E-06	1.14E-06	3.22E-06	4.97E-06	1.14E-11	5.27E-03
Eu-142m	3.10E-06	1.58E-05	3.16E-06	8.96E-06	1.39E-05	3.20E-11	1.48E-02
Eu-143	1.02E-06	5.18E-06	1.03E-06	2.92E-06	4.55E-06	1.06E-11	4.87E-03
Eu-144	1.01E-06	5.03E-06	1.02E-06	2.90E-06	4.47E-06	1.03E-11	4.75E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Eu-145	1.11E-06	6.10E-06	1.14E-06	3.24E-06	5.17E-06	1.22E-11	5.62E-03
Eu-146	2.12E-06	1.12E-05	2.17E-06	6.15E-06	9.71E-06	2.26E-11	1.04E-02
Eu-147	4.09E-07	1.93E-06	4.06E-07	1.12E-06	1.72E-06	4.13E-12	1.89E-03
Eu-148	1.98E-06	1.01E-05	2.02E-06	5.72E-06	8.91E-06	2.06E-11	9.47E-03
Eu-149	5.16E-08	1.50E-07	4.17E-08	1.00E-07	1.40E-07	4.06E-13	1.82E-04
Eu-150	1.38E-06	6.77E-06	1.41E-06	3.97E-06	6.08E-06	1.41E-11	6.49E-03
Eu-150m	4.65E-08	2.06E-07	4.38E-08	1.22E-07	1.86E-07	4.41E-13	2.03E-04
Eu-152	1.03E-06	5.41E-06	1.05E-06	2.97E-06	4.66E-06	1.10E-11	5.06E-03
Eu-152m	2.69E-07	1.34E-06	2.67E-07	7.48E-07	1.17E-06	2.74E-12	1.26E-03
Eu-152n	5.90E-08	1.51E-07	5.37E-08	1.25E-07	1.51E-07	5.27E-13	2.35E-04
Eu-154	1.10E-06	5.86E-06	1.13E-06	3.20E-06	5.04E-06	1.18E-11	5.45E-03
Eu-154m	5.31E-08	1.12E-07	4.40E-08	9.50E-08	1.12E-07	4.28E-13	1.89E-04
Eu-155	4.89E-08	1.25E-07	4.41E-08	1.03E-07	1.25E-07	4.34E-13	1.93E-04
Eu-156	1.07E-06	6.14E-06	1.10E-06	3.16E-06	5.11E-06	1.22E-11	5.60E-03
Eu-157	2.60E-07	1.10E-06	2.51E-07	6.79E-07	1.01E-06	2.45E-12	1.13E-03
Eu-158	1.15E-06	6.25E-06	1.17E-06	3.35E-06	5.32E-06	1.25E-11	5.75E-03
Eu-159	2.75E-07	1.16E-06	2.56E-07	6.83E-07	1.03E-06	2.57E-12	1.18E-03
F-17	9.33E-07	4.47E-06	9.43E-07	2.66E-06	4.06E-06	9.27E-12	4.28E-03
F-18	8.92E-07	4.31E-06	9.11E-07	2.56E-06	3.93E-06	8.97E-12	4.13E-03
Fe-52	6.60E-07	3.07E-06	6.73E-07	1.89E-06	2.83E-06	6.65E-12	3.05E-03
Fe-53	1.08E-06	5.17E-06	1.09E-06	3.07E-06	4.69E-06	1.08E-11	4.96E-03
Fe-53m	2.67E-06	1.50E-05	2.77E-06	7.91E-06	1.26E-05	2.95E-11	1.37E-02
Fe-55	1.36E-16	4.79E-16	1.37E-16	3.59E-16	4.76E-16	1.36E-21	6.11E-13
Fe-59	1.04E-06	5.82E-06	1.08E-06	3.09E-06	4.93E-06	1.15E-11	5.31E-03
Fe-60	1.78E-11	1.77E-11	9.28E-12	1.61E-11	1.77E-11	1.39E-16	1.07E-07
Fe-60+D	2.19E-06	1.24E-05	2.26E-06	6.49E-06	1.04E-05	2.44E-11	1.12E-02
Fe-60+E	2.19E-06	1.24E-05	2.26E-06	6.49E-06	1.04E-05	2.44E-11	1.12E-02
Fe-61	1.23E-06	6.83E-06	1.26E-06	3.61E-06	5.77E-06	1.36E-11	6.25E-03
Fe-62	4.71E-07	2.22E-06	4.69E-07	1.32E-06	2.02E-06	4.62E-12	2.13E-03
Fm-251	1.30E-07	5.27E-07	1.29E-07	3.48E-07	4.94E-07	1.29E-12	5.87E-04
Fm-252	6.38E-10	1.33E-09	2.97E-10	7.35E-10	1.12E-09	3.36E-15	1.52E-06
Fm-253	5.03E-08	1.67E-07	4.71E-08	1.23E-07	1.64E-07	4.66E-13	2.10E-04
Fm-254	6.42E-09	3.51E-08	6.28E-09	1.79E-08	2.89E-08	7.06E-14	3.26E-05

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Fm-255	4.91E-09	3.94E-09	1.72E-09	3.31E-09	3.90E-09	1.80E-14	7.89E-06
Fm-256	1.06E-05	6.20E-05	1.10E-05	3.16E-05	5.11E-05	1.24E-10	5.72E-02
Fm-257	1.20E-07	4.91E-07	1.19E-07	3.22E-07	4.57E-07	1.22E-12	5.53E-04
Fr-212	9.91E-07	5.26E-06	1.02E-06	2.88E-06	4.54E-06	1.07E-11	4.94E-03
Fr-219	3.18E-09	1.45E-08	3.24E-09	9.05E-09	1.36E-08	3.18E-14	1.46E-05
Fr-220	7.62E-09	2.28E-08	7.16E-09	1.76E-08	2.24E-08	7.06E-14	3.17E-05
Fr-220+D	9.63E-09	2.92E-08	9.11E-09	2.24E-08	2.88E-08	8.97E-14	4.02E-05
Fr-220+E	9.63E-09	2.92E-08	9.11E-09	2.24E-08	2.88E-08	8.97E-14	4.02E-05
Fr-221	2.53E-08	1.05E-07	2.56E-08	7.07E-08	1.01E-07	2.54E-13	1.15E-04
Fr-221+D	2.55E-08	1.06E-07	2.58E-08	7.13E-08	1.02E-07	2.56E-13	1.16E-04
Fr-221+E	2.55E-08	1.06E-07	2.58E-08	7.13E-08	1.02E-07	2.56E-13	1.16E-04
Fr-222	1.62E-07	6.80E-07	1.58E-07	4.36E-07	6.36E-07	1.58E-12	7.25E-04
Fr-223	4.84E-08	1.36E-07	4.00E-08	9.61E-08	1.30E-07	3.93E-13	1.78E-04
Fr-224	4.92E-07	2.56E-06	4.98E-07	1.41E-06	2.21E-06	5.25E-12	2.42E-03
Fr-227	4.04E-07	1.80E-06	3.98E-07	1.10E-06	1.64E-06	3.97E-12	1.82E-03
Ga-64	2.90E-06	1.68E-05	2.99E-06	8.62E-06	1.39E-05	3.36E-11	1.54E-02
Ga-65	1.05E-06	5.02E-06	1.06E-06	2.97E-06	4.54E-06	1.06E-11	4.86E-03
Ga-66	2.08E-06	1.27E-05	2.17E-06	6.27E-06	1.03E-05	2.55E-11	1.17E-02
Ga-67	1.33E-07	5.41E-07	1.35E-07	3.67E-07	5.18E-07	1.33E-12	6.06E-04
Ga-68	8.67E-07	4.17E-06	8.75E-07	2.47E-06	3.78E-06	8.65E-12	3.99E-03
Ga-70	1.73E-08	4.26E-08	9.41E-09	2.47E-08	3.75E-08	8.76E-14	4.37E-05
Ga-72	2.31E-06	1.36E-05	2.41E-06	6.94E-06	1.12E-05	2.69E-11	1.24E-02
Ga-73	3.13E-07	1.43E-06	3.14E-07	8.85E-07	1.32E-06	3.11E-12	1.43E-03
Ga-74	2.68E-06	1.61E-05	2.77E-06	8.04E-06	1.31E-05	3.17E-11	1.46E-02
Gd-142	9.35E-07	4.70E-06	9.48E-07	2.67E-06	4.15E-06	9.66E-12	4.45E-03
Gd-143m	1.89E-06	9.64E-06	1.93E-06	5.44E-06	8.48E-06	1.98E-11	9.12E-03
Gd-144	7.97E-07	4.24E-06	8.10E-07	2.30E-06	3.64E-06	8.62E-12	3.97E-03
Gd-145	2.05E-06	1.23E-05	2.11E-06	6.13E-06	1.00E-05	2.42E-11	1.12E-02
Gd-145m	6.14E-07	3.07E-06	6.25E-07	1.76E-06	2.74E-06	6.25E-12	2.89E-03
Gd-146	2.01E-07	5.65E-07	1.78E-07	4.30E-07	5.59E-07	1.75E-12	7.83E-04
Gd-147	1.24E-06	6.18E-06	1.26E-06	3.55E-06	5.48E-06	1.29E-11	5.89E-03
Gd-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-149	4.61E-07	2.05E-06	4.56E-07	1.26E-06	1.87E-06	4.54E-12	2.08E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Gd-150	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-151	5.44E-08	1.41E-07	4.40E-08	1.02E-07	1.38E-07	4.28E-13	1.92E-04
Gd-152	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-153	8.08E-08	1.61E-07	6.34E-08	1.35E-07	1.61E-07	6.16E-13	2.72E-04
Gd-159	4.92E-08	1.91E-07	4.53E-08	1.21E-07	1.78E-07	4.42E-13	2.03E-04
Gd-162	3.76E-07	1.75E-06	3.82E-07	1.07E-06	1.62E-06	3.74E-12	1.72E-03
Ge-66	5.99E-07	2.83E-06	6.06E-07	1.70E-06	2.57E-06	6.03E-12	2.77E-03
Ge-67	1.29E-06	6.32E-06	1.31E-06	3.68E-06	5.66E-06	1.32E-11	6.07E-03
Ge-68	1.47E-11	4.06E-13	4.06E-13	4.06E-13	4.06E-13	1.15E-17	4.99E-09
Ge-68+D	8.67E-07	4.17E-06	8.75E-07	2.47E-06	3.78E-06	8.65E-12	3.99E-03
Ge-68+E	8.67E-07	4.17E-06	8.75E-07	2.47E-06	3.78E-06	8.65E-12	3.99E-03
Ge-69	8.42E-07	4.44E-06	8.64E-07	2.45E-06	3.87E-06	8.94E-12	4.13E-03
Ge-71	1.50E-11	4.11E-13	4.11E-13	4.11E-13	4.11E-13	1.17E-17	5.06E-09
Ge-75	3.65E-08	1.41E-07	3.29E-08	9.18E-08	1.34E-07	3.23E-13	1.50E-04
Ge-77	9.62E-07	4.80E-06	9.82E-07	2.79E-06	4.28E-06	1.00E-11	4.62E-03
Ge-78	2.45E-07	1.10E-06	2.53E-07	7.11E-07	1.05E-06	2.48E-12	1.14E-03
H-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-167	5.58E-07	2.54E-06	5.59E-07	1.55E-06	2.34E-06	5.48E-12	2.53E-03
Hf-169	5.73E-07	2.62E-06	5.74E-07	1.59E-06	2.40E-06	5.63E-12	2.58E-03
Hf-170	3.81E-07	1.62E-06	3.76E-07	1.01E-06	1.50E-06	3.71E-12	1.70E-03
Hf-172	7.88E-08	1.51E-07	6.34E-08	1.30E-07	1.51E-07	6.14E-13	2.71E-04
Hf-172+D	7.88E-08	1.51E-07	6.34E-08	1.30E-07	1.51E-07	6.14E-13	2.71E-04
Hf-172+E	7.88E-08	1.51E-07	6.34E-08	1.30E-07	1.51E-07	6.14E-13	2.71E-04
Hf-173	3.37E-07	1.30E-06	3.31E-07	8.75E-07	1.24E-06	3.27E-12	1.48E-03
Hf-174	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-175	3.07E-07	1.29E-06	3.05E-07	8.25E-07	1.20E-06	2.97E-12	1.36E-03
Hf-177m	2.00E-06	8.73E-06	2.02E-06	5.61E-06	8.22E-06	1.99E-11	9.11E-03
Hf-178m	1.99E-06	9.09E-06	2.02E-06	5.63E-06	8.42E-06	1.99E-11	9.11E-03
Hf-179m	8.05E-07	3.50E-06	8.10E-07	2.23E-06	3.27E-06	7.96E-12	3.64E-03
Hf-180m	8.72E-07	3.89E-06	8.83E-07	2.45E-06	3.62E-06	8.66E-12	3.96E-03
Hf-181	4.72E-07	2.14E-06	4.79E-07	1.33E-06	1.98E-06	4.70E-12	2.15E-03
Hf-182	2.09E-07	9.11E-07	2.13E-07	5.95E-07	8.66E-07	2.10E-12	9.61E-04
Hf-182+D	1.33E-06	6.94E-06	1.37E-06	3.85E-06	6.01E-06	1.43E-11	6.59E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Hf-182+E	1.33E-06	6.94E-06	1.37E-06	3.85E-06	6.01E-06	1.43E-11	6.59E-03
Hf-182m	8.04E-07	3.72E-06	8.12E-07	2.24E-06	3.39E-06	8.09E-12	3.72E-03
Hf-183	6.94E-07	3.41E-06	7.01E-07	1.96E-06	3.03E-06	7.08E-12	3.26E-03
Hf-184	2.03E-07	8.09E-07	2.00E-07	5.41E-07	7.72E-07	1.96E-12	8.97E-04
Hg-190	1.64E-07	5.31E-07	1.58E-07	3.98E-07	5.21E-07	1.55E-12	7.01E-04
Hg-191m	1.30E-06	6.57E-06	1.33E-06	3.76E-06	5.79E-06	1.38E-11	6.31E-03
Hg-192	2.30E-07	8.74E-07	2.26E-07	5.99E-07	8.38E-07	2.23E-12	1.01E-03
Hg-193	7.22E-07	3.75E-06	7.37E-07	2.08E-06	3.24E-06	7.79E-12	3.58E-03
Hg-193+D	7.28E-07	3.78E-06	7.43E-07	2.09E-06	3.26E-06	7.84E-12	3.60E-03
Hg-193+E	7.28E-07	3.78E-06	7.43E-07	2.09E-06	3.26E-06	7.84E-12	3.60E-03
Hg-193m	8.94E-07	4.64E-06	9.15E-07	2.58E-06	4.03E-06	9.53E-12	4.38E-03
Hg-194	8.60E-11	3.61E-12	3.61E-12	3.61E-12	3.61E-12	7.33E-17	3.16E-08
Hg-194+D	8.92E-07	4.79E-06	9.16E-07	2.60E-06	4.10E-06	9.84E-12	4.54E-03
Hg-194+E	8.92E-07	4.79E-06	9.16E-07	2.60E-06	4.10E-06	9.84E-12	4.54E-03
Hg-195	1.68E-07	7.20E-07	1.66E-07	4.38E-07	6.45E-07	1.67E-12	7.62E-04
Hg-195m	1.72E-07	7.29E-07	1.71E-07	4.64E-07	6.78E-07	1.70E-12	7.74E-04
Hg-197	5.54E-08	1.22E-07	4.90E-08	1.06E-07	1.22E-07	4.78E-13	2.12E-04
Hg-197m	7.76E-08	2.61E-07	7.58E-08	1.93E-07	2.55E-07	7.46E-13	3.37E-04
Hg-199m	1.53E-07	5.69E-07	1.51E-07	3.98E-07	5.48E-07	1.50E-12	6.77E-04
Hg-203	2.08E-07	9.21E-07	2.13E-07	5.97E-07	8.74E-07	2.10E-12	9.60E-04
Hg-205	1.30E-08	2.47E-08	6.62E-09	1.69E-08	2.36E-08	5.99E-14	2.99E-05
Hg-206	1.12E-07	4.84E-07	1.10E-07	3.07E-07	4.52E-07	1.08E-12	4.97E-04
Hg-207	2.29E-06	1.32E-05	2.38E-06	6.85E-06	1.10E-05	2.62E-11	1.20E-02
Ho-150	1.73E-06	8.58E-06	1.76E-06	4.96E-06	7.66E-06	1.75E-11	8.09E-03
Ho-153	9.21E-07	4.44E-06	9.31E-07	2.62E-06	4.00E-06	9.33E-12	4.29E-03
Ho-153m	9.55E-07	4.48E-06	9.61E-07	2.67E-06	4.07E-06	9.52E-12	4.37E-03
Ho-154	1.70E-06	8.49E-06	1.72E-06	4.86E-06	7.53E-06	1.74E-11	8.04E-03
Ho-154m	2.19E-06	1.06E-05	2.23E-06	6.27E-06	9.60E-06	2.22E-11	1.02E-02
Ho-155	5.37E-07	2.57E-06	5.37E-07	1.50E-06	2.29E-06	5.49E-12	2.53E-03
Ho-156	1.85E-06	9.74E-06	1.89E-06	5.35E-06	8.39E-06	1.99E-11	9.18E-03
Ho-157	5.05E-07	2.26E-06	4.98E-07	1.36E-06	2.05E-06	4.99E-12	2.28E-03
Ho-159	3.25E-07	1.25E-06	3.10E-07	8.15E-07	1.17E-06	3.09E-12	1.40E-03
Ho-160	1.51E-06	7.66E-06	1.53E-06	4.30E-06	6.71E-06	1.55E-11	7.19E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Ho-161	4.09E-08	5.41E-08	2.71E-08	4.83E-08	5.38E-08	2.61E-13	1.14E-04
Ho-162	1.37E-07	5.87E-07	1.28E-07	3.39E-07	5.12E-07	1.32E-12	6.04E-04
Ho-162m	4.84E-07	2.41E-06	4.84E-07	1.35E-06	2.09E-06	5.05E-12	2.33E-03
Ho-163	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-164	2.30E-08	2.77E-08	1.52E-08	2.60E-08	2.77E-08	1.44E-13	6.34E-05
Ho-164m	3.30E-08	3.61E-08	2.17E-08	3.52E-08	3.61E-08	2.06E-13	8.94E-05
Ho-166	3.59E-08	1.20E-07	2.67E-08	6.90E-08	1.03E-07	2.72E-13	1.27E-04
Ho-166m	1.45E-06	7.15E-06	1.48E-06	4.15E-06	6.39E-06	1.48E-11	6.84E-03
Ho-167	3.25E-07	1.45E-06	3.29E-07	9.16E-07	1.36E-06	3.23E-12	1.47E-03
Ho-168	7.93E-07	4.03E-06	8.02E-07	2.26E-06	3.54E-06	8.18E-12	3.78E-03
Ho-168m	4.64E-09	5.12E-09	3.09E-09	4.99E-09	5.12E-09	2.92E-14	1.27E-05
Ho-170	1.52E-06	7.79E-06	1.55E-06	4.36E-06	6.80E-06	1.59E-11	7.33E-03
I-118	1.84E-06	9.26E-06	1.87E-06	5.29E-06	8.21E-06	1.88E-11	8.71E-03
I-118m	3.37E-06	1.72E-05	3.44E-06	9.74E-06	1.52E-05	3.48E-11	1.61E-02
I-119	8.18E-07	3.87E-06	8.27E-07	2.32E-06	3.53E-06	8.18E-12	3.76E-03
I-120	2.30E-06	1.30E-05	2.38E-06	6.81E-06	1.09E-05	2.61E-11	1.20E-02
I-120m	3.12E-06	1.65E-05	3.20E-06	9.11E-06	1.43E-05	3.32E-11	1.53E-02
I-121	3.46E-07	1.55E-06	3.46E-07	9.65E-07	1.44E-06	3.44E-12	1.58E-03
I-122	8.84E-07	4.26E-06	8.90E-07	2.51E-06	3.85E-06	8.80E-12	4.06E-03
I-123	1.40E-07	5.14E-07	1.33E-07	3.57E-07	4.99E-07	1.32E-12	5.99E-04
I-124	9.78E-07	5.17E-06	9.97E-07	2.84E-06	4.48E-06	1.04E-11	4.82E-03
I-125	2.29E-08	7.28E-09	6.75E-09	7.28E-09	7.28E-09	6.66E-14	2.84E-05
I-126	3.88E-07	1.88E-06	3.93E-07	1.10E-06	1.70E-06	3.89E-12	1.79E-03
I-128	7.34E-08	2.97E-07	6.51E-08	1.80E-07	2.72E-07	6.27E-13	2.92E-04
I-129	1.48E-08	6.18E-09	5.33E-09	6.15E-09	6.18E-09	5.13E-14	2.20E-05
I-130	1.92E-06	9.67E-06	1.96E-06	5.56E-06	8.62E-06	1.98E-11	9.09E-03
I-130m	9.88E-08	4.73E-07	9.73E-08	2.73E-07	4.22E-07	9.75E-13	4.50E-04
I-131	3.43E-07	1.60E-06	3.50E-07	9.82E-07	1.48E-06	3.44E-12	1.58E-03
I-132	2.02E-06	1.05E-05	2.08E-06	5.89E-06	9.22E-06	2.13E-11	9.80E-03
I-132m	3.02E-07	1.48E-06	3.05E-07	8.57E-07	1.32E-06	3.05E-12	1.40E-03
I-133	5.54E-07	2.74E-06	5.63E-07	1.59E-06	2.45E-06	5.62E-12	2.60E-03
I-134	2.30E-06	1.23E-05	2.38E-06	6.73E-06	1.06E-05	2.45E-11	1.13E-02
I-134m	2.47E-07	1.07E-06	2.43E-07	6.73E-07	9.98E-07	2.40E-12	1.10E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
I-135	1.38E-06	7.87E-06	1.42E-06	4.10E-06	6.58E-06	1.54E-11	7.15E-03
In-103	2.42E-06	1.31E-05	2.49E-06	7.09E-06	1.12E-05	2.65E-11	1.23E-02
In-105	1.71E-06	8.91E-06	1.75E-06	4.98E-06	7.76E-06	1.82E-11	8.39E-03
In-106	3.19E-06	1.64E-05	3.27E-06	9.24E-06	1.44E-05	3.31E-11	1.53E-02
In-106m	2.47E-06	1.37E-05	2.54E-06	7.28E-06	1.16E-05	2.75E-11	1.26E-02
In-107	1.32E-06	7.26E-06	1.36E-06	3.89E-06	6.18E-06	1.47E-11	6.76E-03
In-108	3.45E-06	1.85E-05	3.55E-06	1.01E-05	1.60E-05	3.71E-11	1.71E-02
In-108m	2.33E-06	1.39E-05	2.41E-06	7.00E-06	1.13E-05	2.77E-11	1.27E-02
In-109	5.56E-07	2.79E-06	5.67E-07	1.61E-06	2.47E-06	5.85E-12	2.69E-03
In-109m	5.48E-07	2.75E-06	5.59E-07	1.58E-06	2.45E-06	5.59E-12	2.57E-03
In-110	2.76E-06	1.44E-05	2.82E-06	8.01E-06	1.25E-05	2.89E-11	1.33E-02
In-110m	1.40E-06	7.26E-06	1.43E-06	4.08E-06	6.36E-06	1.47E-11	6.80E-03
In-111	3.44E-07	1.43E-06	3.46E-07	9.58E-07	1.38E-06	3.41E-12	1.55E-03
In-111m	4.24E-07	2.06E-06	4.32E-07	1.22E-06	1.87E-06	4.27E-12	1.96E-03
In-112	2.41E-07	1.15E-06	2.41E-07	6.81E-07	1.04E-06	2.38E-12	1.10E-03
In-112m	2.36E-08	6.92E-08	1.93E-08	4.96E-08	6.79E-08	1.91E-13	8.63E-05
In-113m	2.30E-07	1.07E-06	2.34E-07	6.57E-07	9.89E-07	2.29E-12	1.05E-03
In-114	1.57E-08	2.35E-08	6.17E-09	1.46E-08	2.12E-08	4.79E-14	2.64E-05
In-114m	6.70E-08	2.95E-07	6.53E-08	1.82E-07	2.71E-07	6.51E-13	2.99E-04
In-114m+D	8.22E-08	3.17E-07	7.13E-08	1.96E-07	2.92E-07	6.98E-13	3.25E-04
In-114m+E	8.22E-08	3.17E-07	7.13E-08	1.96E-07	2.92E-07	6.98E-13	3.25E-04
In-115	1.58E-10	2.75E-10	9.91E-11	2.19E-10	2.72E-10	1.41E-15	1.06E-06
In-115m	1.41E-07	6.34E-07	1.42E-07	3.97E-07	5.93E-07	1.39E-12	6.38E-04
In-116m	2.14E-06	1.23E-05	2.23E-06	6.38E-06	1.03E-05	2.41E-11	1.11E-02
In-117	6.18E-07	2.91E-06	6.30E-07	1.77E-06	2.67E-06	6.23E-12	2.86E-03
In-117m	8.35E-08	3.36E-07	7.91E-08	2.19E-07	3.19E-07	7.75E-13	3.57E-04
In-118	1.04E-07	4.68E-07	9.31E-08	2.54E-07	4.00E-07	8.99E-13	4.30E-04
In-118m	2.45E-06	1.34E-05	2.53E-06	7.20E-06	1.15E-05	2.67E-11	1.23E-02
In-119	6.99E-07	3.54E-06	7.09E-07	2.00E-06	3.12E-06	7.14E-12	3.30E-03
In-119m	7.54E-08	3.31E-07	6.57E-08	1.82E-07	2.85E-07	6.58E-13	3.10E-04
In-121	8.43E-07	4.38E-06	8.57E-07	2.41E-06	3.81E-06	8.77E-12	4.06E-03
In-121m	7.83E-08	2.76E-07	6.12E-08	1.57E-07	2.37E-07	5.86E-13	2.79E-04
Ir-180	1.44E-06	6.97E-06	1.46E-06	4.10E-06	6.28E-06	1.46E-11	6.71E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Ir-182	1.26E-06	6.16E-06	1.28E-06	3.61E-06	5.52E-06	1.30E-11	5.96E-03
Ir-183	1.02E-06	5.45E-06	1.04E-06	2.96E-06	4.64E-06	1.12E-11	5.16E-03
Ir-184	1.72E-06	8.93E-06	1.76E-06	4.98E-06	7.75E-06	1.84E-11	8.46E-03
Ir-185	7.24E-07	3.93E-06	7.39E-07	2.09E-06	3.30E-06	8.09E-12	3.72E-03
Ir-186	1.45E-06	7.53E-06	1.48E-06	4.19E-06	6.52E-06	1.55E-11	7.17E-03
Ir-186m	1.09E-06	5.85E-06	1.11E-06	3.16E-06	4.99E-06	1.18E-11	5.47E-03
Ir-187	2.86E-07	1.29E-06	2.84E-07	7.67E-07	1.15E-06	2.85E-12	1.31E-03
Ir-188	1.77E-06	1.05E-05	1.83E-06	5.27E-06	8.56E-06	2.08E-11	9.59E-03
Ir-189	6.14E-08	1.60E-07	5.48E-08	1.25E-07	1.57E-07	5.33E-13	2.38E-04
Ir-190	1.31E-06	6.22E-06	1.33E-06	3.74E-06	5.66E-06	1.32E-11	6.08E-03
Ir-190m	2.10E-11	7.10E-13	7.11E-13	7.11E-13	7.10E-13	1.71E-17	7.34E-09
Ir-190n	4.38E-08	9.11E-08	3.74E-08	7.86E-08	9.06E-08	3.62E-13	1.60E-04
Ir-191m	5.86E-08	1.60E-07	5.42E-08	1.28E-07	1.59E-07	5.33E-13	2.38E-04
Ir-192	7.28E-07	3.39E-06	7.44E-07	2.09E-06	3.14E-06	7.32E-12	3.37E-03
Ir-192m	1.24E-10	1.79E-10	4.90E-11	1.21E-10	1.70E-10	5.12E-16	2.31E-07
Ir-192n	6.35E-10	1.17E-09	4.32E-10	9.65E-10	1.16E-09	4.85E-15	2.43E-06
Ir-193m	2.65E-10	4.63E-10	2.06E-10	4.19E-10	4.64E-10	2.00E-15	8.85E-07
Ir-194	9.48E-08	4.13E-07	8.73E-08	2.45E-07	3.72E-07	8.66E-13	4.03E-04
Ir-194m	2.09E-06	1.01E-05	2.13E-06	6.02E-06	9.20E-06	2.12E-11	9.75E-03
Ir-195	4.86E-08	1.13E-07	4.13E-08	9.31E-08	1.12E-07	4.03E-13	1.81E-04
Ir-195m	3.32E-07	1.48E-06	3.35E-07	9.24E-07	1.38E-06	3.30E-12	1.51E-03
Ir-196	2.28E-07	1.07E-06	2.21E-07	6.21E-07	9.56E-07	2.20E-12	1.02E-03
Ir-196m	2.21E-06	1.07E-05	2.26E-06	6.36E-06	9.70E-06	2.23E-11	1.03E-02
K-38	2.71E-06	1.61E-05	2.81E-06	8.15E-06	1.32E-05	3.18E-11	1.47E-02
K-40	1.43E-07	8.00E-07	1.42E-07	4.10E-07	6.63E-07	1.57E-12	7.26E-04
K-42	2.65E-07	1.47E-06	2.62E-07	7.52E-07	1.22E-06	2.86E-12	1.33E-03
K-43	8.69E-07	4.21E-06	8.87E-07	2.51E-06	3.82E-06	8.78E-12	4.04E-03
K-44	2.02E-06	1.24E-05	2.09E-06	6.10E-06	1.00E-05	2.43E-11	1.12E-02
K-45	1.55E-06	9.34E-06	1.62E-06	4.69E-06	7.63E-06	1.85E-11	8.53E-03
K-46	2.40E-06	1.53E-05	2.51E-06	7.28E-06	1.20E-05	3.00E-11	1.39E-02
Kr-74	9.52E-07	4.43E-06	9.61E-07	2.69E-06	4.06E-06	9.48E-12	4.36E-03
Kr-75	1.17E-06	5.53E-06	1.18E-06	3.31E-06	5.02E-06	1.17E-11	5.39E-03
Kr-76	3.72E-07	1.70E-06	3.78E-07	1.06E-06	1.58E-06	3.73E-12	1.71E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Kr-76+D	3.72E-07	1.70E-06	3.78E-07	1.06E-06	1.58E-06	3.73E-12	1.71E-03
Kr-76+E	3.72E-07	1.70E-06	3.78E-07	1.06E-06	1.58E-06	3.73E-12	1.71E-03
Kr-77	9.36E-07	4.33E-06	9.46E-07	2.64E-06	3.97E-06	9.34E-12	4.29E-03
Kr-79	2.22E-07	1.07E-06	2.28E-07	6.42E-07	9.76E-07	2.26E-12	1.04E-03
Kr-81	1.16E-09	3.26E-09	7.59E-10	2.11E-09	3.10E-09	7.67E-15	3.51E-06
Kr-81m	1.11E-07	4.59E-07	1.14E-07	3.14E-07	4.47E-07	1.12E-12	5.12E-04
Kr-83m	1.87E-10	1.25E-11	1.19E-11	1.25E-11	1.25E-11	1.89E-16	8.16E-08
Kr-85	3.28E-09	1.06E-08	2.36E-09	6.47E-09	9.74E-09	2.37E-14	1.18E-05
Kr-85m	1.37E-07	5.46E-07	1.38E-07	3.76E-07	5.30E-07	1.37E-12	6.21E-04
Kr-87	6.91E-07	4.01E-06	7.07E-07	2.04E-06	3.30E-06	7.98E-12	3.69E-03
Kr-88	1.62E-06	1.02E-05	1.70E-06	4.96E-06	8.16E-06	2.00E-11	9.22E-03
Kr-89	1.65E-06	9.82E-06	1.71E-06	4.94E-06	8.01E-06	1.94E-11	8.99E-03
La-128	2.54E-06	1.30E-05	2.58E-06	7.33E-06	1.14E-05	2.64E-11	1.22E-02
La-129	8.30E-07	3.93E-06	8.36E-07	2.34E-06	3.57E-06	8.28E-12	3.81E-03
La-130	1.99E-06	1.03E-05	2.04E-06	5.78E-06	9.00E-06	2.09E-11	9.64E-03
La-131	5.87E-07	2.72E-06	5.87E-07	1.64E-06	2.48E-06	5.83E-12	2.68E-03
La-132	1.74E-06	9.43E-06	1.79E-06	5.11E-06	8.08E-06	1.91E-11	8.79E-03
La-132m	5.93E-07	2.84E-06	5.99E-07	1.67E-06	2.56E-06	6.00E-12	2.76E-03
La-133	1.37E-07	6.02E-07	1.30E-07	3.57E-07	5.45E-07	1.29E-12	5.93E-04
La-134	6.58E-07	3.14E-06	6.60E-07	1.86E-06	2.84E-06	6.53E-12	3.02E-03
La-135	2.50E-08	5.17E-08	1.54E-08	3.35E-08	4.75E-08	1.51E-13	6.73E-05
La-136	3.67E-07	1.72E-06	3.65E-07	1.02E-06	1.55E-06	3.60E-12	1.66E-03
La-137	1.53E-08	6.87E-09	5.84E-09	6.86E-09	6.87E-09	5.59E-14	2.38E-05
La-138	1.06E-06	6.06E-06	1.10E-06	3.16E-06	5.09E-06	1.19E-11	5.51E-03
La-140	2.00E-06	1.15E-05	2.06E-06	5.95E-06	9.59E-06	2.27E-11	1.05E-02
La-141	4.09E-08	1.57E-07	3.07E-08	8.38E-08	1.32E-07	3.06E-13	1.47E-04
La-142	1.98E-06	1.24E-05	2.06E-06	6.02E-06	9.91E-06	2.43E-11	1.12E-02
La-143	2.49E-07	1.36E-06	2.45E-07	7.01E-07	1.13E-06	2.68E-12	1.24E-03
Lu-165	9.69E-07	4.87E-06	9.80E-07	2.75E-06	4.26E-06	1.02E-11	4.69E-03
Lu-167	1.44E-06	8.10E-06	1.48E-06	4.25E-06	6.78E-06	1.62E-11	7.50E-03
Lu-169	1.14E-06	6.13E-06	1.16E-06	3.29E-06	5.20E-06	1.24E-11	5.73E-03
Lu-169m	3.86E-12	1.54E-13	1.51E-13	1.55E-13	1.54E-13	3.37E-18	1.45E-09
Lu-170	2.14E-06	1.30E-05	2.23E-06	6.43E-06	1.05E-05	2.57E-11	1.18E-02

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Lu-171	5.69E-07	2.69E-06	5.67E-07	1.55E-06	2.38E-06	5.69E-12	2.62E-03
Lu-171m	2.54E-10	4.34E-10	2.02E-10	3.97E-10	4.34E-10	1.95E-15	8.59E-07
Lu-172	1.72E-06	9.02E-06	1.75E-06	4.96E-06	7.80E-06	1.84E-11	8.44E-03
Lu-172m	2.49E-12	9.33E-13	6.68E-13	9.28E-13	9.33E-13	6.98E-18	3.02E-09
Lu-173	1.50E-07	4.48E-07	1.33E-07	3.20E-07	4.29E-07	1.30E-12	5.83E-04
Lu-174	9.49E-08	3.75E-07	8.72E-08	2.19E-07	3.25E-07	9.02E-13	4.10E-04
Lu-174m	4.62E-08	9.20E-08	3.65E-08	7.33E-08	8.78E-08	3.53E-13	1.57E-04
Lu-176	4.17E-07	1.79E-06	4.25E-07	1.17E-06	1.71E-06	4.17E-12	1.91E-03
Lu-176m	1.71E-08	2.82E-08	1.09E-08	2.36E-08	2.81E-08	1.03E-13	4.80E-05
Lu-177	2.98E-08	1.14E-07	2.97E-08	7.95E-08	1.11E-07	2.93E-13	1.33E-04
Lu-177m	8.67E-07	3.64E-06	8.72E-07	2.39E-06	3.45E-06	8.57E-12	3.92E-03
Lu-178	1.20E-07	6.07E-07	1.14E-07	3.22E-07	5.12E-07	1.23E-12	5.68E-04
Lu-178m	9.25E-07	4.03E-06	9.33E-07	2.58E-06	3.79E-06	9.16E-12	4.19E-03
Lu-179	3.30E-08	1.16E-07	2.79E-08	7.65E-08	1.10E-07	2.72E-13	1.27E-04
Lu-180	1.33E-06	7.17E-06	1.37E-06	3.89E-06	6.15E-06	1.45E-11	6.66E-03
Lu-181	5.20E-07	2.43E-06	5.18E-07	1.44E-06	2.20E-06	5.17E-12	2.37E-03
Mg-27	8.07E-07	4.21E-06	8.21E-07	2.32E-06	3.66E-06	8.42E-12	3.89E-03
Mg-28	1.19E-06	6.56E-06	1.23E-06	3.50E-06	5.58E-06	1.31E-11	6.02E-03
Mn-50m	4.11E-06	2.22E-05	4.23E-06	1.21E-05	1.91E-05	4.43E-11	2.05E-02
Mn-51	9.16E-07	4.37E-06	9.24E-07	2.60E-06	3.97E-06	9.08E-12	4.19E-03
Mn-52	3.04E-06	1.67E-05	3.14E-06	8.98E-06	1.43E-05	3.31E-11	1.53E-02
Mn-52m	2.13E-06	1.15E-05	2.19E-06	6.25E-06	9.90E-06	2.30E-11	1.06E-02
Mn-53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn-54	7.47E-07	3.89E-06	7.67E-07	2.17E-06	3.41E-06	7.82E-12	3.60E-03
Mn-56	1.47E-06	8.45E-06	1.52E-06	4.38E-06	7.05E-06	1.67E-11	7.69E-03
Mn-57	1.05E-07	4.40E-07	9.46E-08	2.60E-07	3.94E-07	9.34E-13	4.36E-04
Mn-58m	2.12E-06	1.18E-05	2.17E-06	6.21E-06	9.94E-06	2.33E-11	1.07E-02
Mo-101	1.29E-06	7.12E-06	1.32E-06	3.80E-06	6.04E-06	1.43E-11	6.56E-03
Mo-102	1.96E-08	6.82E-08	1.70E-08	4.66E-08	6.59E-08	1.67E-13	7.77E-05
Mo-89	1.13E-06	5.53E-06	1.14E-06	3.22E-06	4.96E-06	1.13E-11	5.24E-03
Mo-90	7.26E-07	3.45E-06	7.39E-07	2.08E-06	3.13E-06	7.45E-12	3.41E-03
Mo-91	9.06E-07	4.33E-06	9.13E-07	2.56E-06	3.93E-06	8.97E-12	4.14E-03
Mo-91m	1.23E-06	6.52E-06	1.26E-06	3.59E-06	5.67E-06	1.31E-11	6.06E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Mo-93	2.33E-09	2.13E-10	2.13E-10	2.13E-10	2.13E-10	2.93E-15	1.25E-06
Mo-93m	2.02E-06	1.12E-05	2.08E-06	5.99E-06	9.54E-06	2.23E-11	1.03E-02
Mo-99	1.37E-07	6.58E-07	1.36E-07	3.82E-07	5.88E-07	1.37E-12	6.30E-04
N-13	9.26E-07	4.45E-06	9.41E-07	2.66E-06	4.06E-06	9.26E-12	4.27E-03
N-16	3.14E-06	2.61E-05	3.44E-06	1.00E-05	1.78E-05	5.35E-11	2.45E-02
Na-22	1.94E-06	1.03E-05	2.00E-06	5.69E-06	8.95E-06	2.08E-11	9.57E-03
Na-24	3.37E-06	2.20E-05	3.54E-06	1.04E-05	1.73E-05	4.29E-11	1.99E-02
Nb-87	1.12E-06	5.18E-06	1.13E-06	3.14E-06	4.75E-06	1.10E-11	5.09E-03
Nb-88	3.78E-06	1.95E-05	3.87E-06	1.09E-05	1.71E-05	3.95E-11	1.82E-02
Nb-88m	3.66E-06	1.93E-05	3.74E-06	1.07E-05	1.67E-05	3.88E-11	1.79E-02
Nb-89	1.20E-06	6.52E-06	1.23E-06	3.52E-06	5.56E-06	1.32E-11	6.08E-03
Nb-89m	1.19E-06	5.73E-06	1.20E-06	3.40E-06	5.19E-06	1.19E-11	5.47E-03
Nb-90	3.55E-06	2.13E-05	3.70E-06	1.07E-05	1.74E-05	4.21E-11	1.94E-02
Nb-91	3.39E-09	7.15E-09	1.63E-09	4.32E-09	6.52E-09	1.68E-14	7.67E-06
Nb-91m	2.37E-08	1.22E-07	2.26E-08	6.45E-08	1.03E-07	2.43E-13	1.12E-04
Nb-92	1.34E-06	6.91E-06	1.37E-06	3.89E-06	6.08E-06	1.39E-11	6.43E-03
Nb-92m	8.55E-07	4.56E-06	8.79E-07	2.49E-06	3.94E-06	9.07E-12	4.19E-03
Nb-93m	4.16E-10	3.81E-11	3.83E-11	3.80E-11	3.81E-11	5.26E-16	2.23E-07
Nb-94	1.39E-06	7.22E-06	1.43E-06	4.06E-06	6.35E-06	1.45E-11	6.71E-03
Nb-94m	5.54E-09	2.08E-08	4.19E-09	1.16E-08	1.81E-08	4.33E-14	1.99E-05
Nb-95	6.86E-07	3.53E-06	7.03E-07	1.98E-06	3.11E-06	7.12E-12	3.28E-03
Nb-95m	5.63E-08	2.38E-07	5.63E-08	1.57E-07	2.29E-07	5.58E-13	2.55E-04
Nb-96	2.20E-06	1.15E-05	2.26E-06	6.40E-06	1.00E-05	2.31E-11	1.06E-02
Nb-97	6.06E-07	3.02E-06	6.13E-07	1.73E-06	2.69E-06	6.14E-12	2.83E-03
Nb-98m	2.49E-06	1.36E-05	2.56E-06	7.31E-06	1.16E-05	2.69E-11	1.24E-02
Nb-99	1.68E-07	5.42E-07	1.55E-07	4.00E-07	5.33E-07	1.48E-12	6.80E-04
Nb-99m	6.55E-07	3.93E-06	6.71E-07	1.95E-06	3.17E-06	7.75E-12	3.59E-03
Nd-134	4.76E-07	2.12E-06	4.73E-07	1.31E-06	1.95E-06	4.70E-12	2.15E-03
Nd-135	1.14E-06	5.35E-06	1.14E-06	3.20E-06	4.86E-06	1.13E-11	5.21E-03
Nd-136	2.36E-07	9.78E-07	2.24E-07	5.99E-07	8.91E-07	2.23E-12	1.02E-03
Nd-137	1.04E-06	5.28E-06	1.05E-06	2.96E-06	4.63E-06	1.08E-11	4.99E-03
Nd-138	3.21E-08	6.85E-08	2.19E-08	4.79E-08	6.53E-08	2.13E-13	9.48E-05
Nd-139	3.95E-07	1.89E-06	3.93E-07	1.10E-06	1.70E-06	3.94E-12	1.81E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Nd-139m	1.39E-06	7.22E-06	1.42E-06	4.00E-06	6.28E-06	1.46E-11	6.76E-03
Nd-140	1.89E-08	1.12E-08	8.72E-09	1.12E-08	1.12E-08	8.25E-14	3.54E-05
Nd-141	6.15E-08	2.31E-07	5.24E-08	1.35E-07	2.05E-07	5.30E-13	2.41E-04
Nd-141m	6.24E-07	3.19E-06	6.40E-07	1.80E-06	2.82E-06	6.44E-12	2.97E-03
Nd-144	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-147	1.22E-07	4.89E-07	1.16E-07	3.09E-07	4.51E-07	1.14E-12	5.20E-04
Nd-149	3.31E-07	1.45E-06	3.29E-07	9.09E-07	1.34E-06	3.25E-12	1.48E-03
Nd-151	7.55E-07	3.85E-06	7.67E-07	2.17E-06	3.36E-06	7.94E-12	3.66E-03
Nd-152	1.47E-07	6.43E-07	1.47E-07	4.11E-07	6.07E-07	1.45E-12	6.63E-04
Ne-19	9.38E-07	4.48E-06	9.46E-07	2.66E-06	4.07E-06	9.31E-12	4.28E-03
Ne-24	5.02E-07	2.37E-06	5.03E-07	1.41E-06	2.16E-06	4.94E-12	2.28E-03
Ni-56	1.52E-06	7.75E-06	1.57E-06	4.41E-06	6.85E-06	1.60E-11	7.35E-03
Ni-57	1.68E-06	9.48E-06	1.74E-06	4.99E-06	8.00E-06	1.88E-11	8.69E-03
Ni-59	1.40E-11	6.78E-11	1.43E-11	4.02E-11	6.16E-11	1.40E-16	6.49E-08
Ni-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-65	4.93E-07	2.79E-06	5.05E-07	1.45E-06	2.34E-06	5.49E-12	2.54E-03
Ni-66	2.75E-11	3.53E-11	1.63E-11	3.09E-11	3.52E-11	2.63E-16	2.06E-07
Np-232	1.05E-06	5.23E-06	1.08E-06	3.01E-06	4.64E-06	1.09E-11	5.02E-03
Np-233	7.10E-08	2.28E-07	6.88E-08	1.74E-07	2.26E-07	6.82E-13	3.06E-04
Np-234	9.45E-07	5.38E-06	9.76E-07	2.81E-06	4.49E-06	1.07E-11	4.94E-03
Np-235	1.46E-09	1.41E-09	5.20E-10	1.14E-09	1.41E-09	5.51E-15	2.43E-06
Np-235+D	1.46E-09	1.41E-09	5.20E-10	1.14E-09	1.41E-09	5.51E-15	2.43E-06
Np-235+E	1.46E-09	1.41E-09	5.20E-10	1.14E-09	1.41E-09	5.51E-15	2.43E-06
Np-236	1.17E-07	3.90E-07	1.13E-07	2.92E-07	3.86E-07	1.12E-12	5.05E-04
Np-236m	3.93E-08	1.32E-07	3.80E-08	9.71E-08	1.29E-07	3.78E-13	1.71E-04
Np-237	2.10E-08	5.18E-08	1.74E-08	4.13E-08	5.16E-08	1.72E-13	7.68E-05
Np-237+D	2.09E-07	8.56E-07	2.08E-07	5.65E-07	8.12E-07	2.05E-12	9.32E-04
Np-237+E	2.09E-07	8.56E-07	2.08E-07	5.65E-07	8.12E-07	2.05E-12	9.32E-04
Np-238	5.19E-07	2.78E-06	5.31E-07	1.51E-06	2.40E-06	5.53E-12	2.55E-03
Np-239	1.50E-07	5.69E-07	1.49E-07	3.98E-07	5.52E-07	1.47E-12	6.69E-04
Np-240	9.28E-07	4.68E-06	9.46E-07	2.67E-06	4.14E-06	9.62E-12	4.43E-03
Np-240m	2.95E-07	1.46E-06	2.94E-07	8.29E-07	1.29E-06	2.97E-12	1.37E-03
Np-241	3.66E-08	1.15E-07	3.18E-08	8.27E-08	1.11E-07	3.13E-13	1.44E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Np-242	2.45E-07	1.32E-06	2.43E-07	6.96E-07	1.12E-06	2.62E-12	1.22E-03
Np-242m	8.15E-07	4.13E-06	8.27E-07	2.34E-06	3.64E-06	8.42E-12	3.88E-03
O-14	2.79E-06	1.68E-05	2.92E-06	8.45E-06	1.38E-05	3.33E-11	1.54E-02
O-15	9.33E-07	4.47E-06	9.43E-07	2.66E-06	4.06E-06	9.27E-12	4.28E-03
O-19	8.45E-07	4.52E-06	8.60E-07	2.45E-06	3.87E-06	9.16E-12	4.23E-03
Os-180	1.03E-07	3.65E-07	9.58E-08	2.41E-07	3.38E-07	9.43E-13	4.27E-04
Os-181	1.20E-06	6.24E-06	1.23E-06	3.46E-06	5.40E-06	1.29E-11	5.94E-03
Os-182	3.76E-07	1.62E-06	3.74E-07	1.02E-06	1.51E-06	3.69E-12	1.68E-03
Os-183	5.46E-07	2.38E-06	5.44E-07	1.48E-06	2.19E-06	5.40E-12	2.47E-03
Os-183m	8.80E-07	4.69E-06	9.02E-07	2.54E-06	4.02E-06	9.46E-12	4.36E-03
Os-185	6.15E-07	2.98E-06	6.23E-07	1.73E-06	2.67E-06	6.23E-12	2.86E-03
Os-186	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Os-189m	1.82E-11	5.93E-13	5.91E-13	5.93E-13	5.93E-13	1.47E-17	6.34E-09
Os-190m	1.41E-06	6.77E-06	1.45E-06	4.08E-06	6.18E-06	1.44E-11	6.58E-03
Os-191	6.51E-08	1.78E-07	6.04E-08	1.42E-07	1.77E-07	5.93E-13	2.64E-04
Os-191m	4.51E-09	8.26E-09	3.74E-09	7.52E-09	8.26E-09	3.62E-14	1.60E-05
Os-193	6.20E-08	2.47E-07	5.85E-08	1.58E-07	2.30E-07	5.75E-13	2.64E-04
Os-194	1.80E-09	1.54E-09	1.03E-09	1.53E-09	1.54E-09	9.75E-15	4.22E-06
Os-194+D	9.66E-08	4.14E-07	8.85E-08	2.47E-07	3.73E-07	8.76E-13	4.08E-04
Os-194+E	9.66E-08	4.14E-07	8.85E-08	2.47E-07	3.73E-07	8.76E-13	4.08E-04
Os-196	7.42E-08	3.02E-07	7.09E-08	1.93E-07	2.82E-07	6.97E-13	3.20E-04
P-30	9.48E-07	4.50E-06	9.54E-07	2.67E-06	4.09E-06	9.35E-12	4.31E-03
P-32	1.20E-08	9.43E-09	3.18E-09	6.73E-09	9.01E-09	2.09E-14	1.33E-05
P-33	2.90E-11	3.72E-11	1.72E-11	3.25E-11	3.71E-11	2.79E-16	2.17E-07
Pa-227	1.61E-08	4.20E-08	1.46E-08	3.44E-08	4.20E-08	1.44E-13	6.43E-05
Pa-228	1.19E-06	6.18E-06	1.22E-06	3.44E-06	5.38E-06	1.27E-11	5.85E-03
Pa-229	4.99E-08	1.45E-07	4.75E-08	1.16E-07	1.45E-07	4.70E-13	2.10E-04
Pa-230	5.86E-07	2.95E-06	5.99E-07	1.68E-06	2.58E-06	6.10E-12	2.81E-03
Pa-231	3.14E-08	1.27E-07	2.97E-08	8.21E-08	1.20E-07	2.93E-13	1.34E-04
Pa-232	8.30E-07	4.29E-06	8.51E-07	2.41E-06	3.76E-06	8.69E-12	4.01E-03
Pa-233	1.88E-07	8.04E-07	1.91E-07	5.24E-07	7.61E-07	1.87E-12	8.55E-04
Pa-234	1.29E-06	6.63E-06	1.32E-06	3.74E-06	5.81E-06	1.36E-11	6.27E-03
Pa-234m	2.86E-08	9.07E-08	1.93E-08	5.16E-08	7.94E-08	1.82E-13	8.90E-05

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Pa-235	6.98E-09	4.44E-09	1.53E-09	3.24E-09	4.29E-09	1.12E-14	7.39E-06
Pa-236	8.03E-07	4.43E-06	8.21E-07	2.36E-06	3.75E-06	8.84E-12	4.08E-03
Pa-237	5.54E-07	2.81E-06	5.61E-07	1.59E-06	2.48E-06	5.68E-12	2.62E-03
Pb-194	9.39E-07	4.87E-06	9.60E-07	2.71E-06	4.21E-06	1.01E-11	4.64E-03
Pb-195m	1.47E-06	7.21E-06	1.50E-06	4.21E-06	6.45E-06	1.51E-11	6.93E-03
Pb-196	4.29E-07	1.87E-06	4.32E-07	1.18E-06	1.73E-06	4.27E-12	1.95E-03
Pb-197	1.32E-06	7.21E-06	1.36E-06	3.87E-06	6.14E-06	1.46E-11	6.73E-03
Pb-197m	1.03E-06	5.02E-06	1.05E-06	2.96E-06	4.50E-06	1.06E-11	4.89E-03
Pb-198	3.79E-07	1.62E-06	3.82E-07	1.04E-06	1.52E-06	3.76E-12	1.72E-03
Pb-199	8.99E-07	4.78E-06	9.24E-07	2.62E-06	4.10E-06	9.78E-12	4.51E-03
Pb-200	1.71E-07	5.96E-07	1.67E-07	4.28E-07	5.77E-07	1.65E-12	7.42E-04
Pb-201	6.64E-07	3.17E-06	6.75E-07	1.87E-06	2.85E-06	6.80E-12	3.12E-03
Pb-201m	3.30E-07	1.58E-06	3.31E-07	9.26E-07	1.41E-06	3.30E-12	1.52E-03
Pb-202	8.69E-11	2.99E-12	2.99E-12	2.99E-12	2.99E-12	7.06E-17	3.04E-08
Pb-202+D	4.07E-07	1.81E-06	4.10E-07	1.12E-06	1.68E-06	4.02E-12	1.84E-03
Pb-202+E	4.07E-07	1.81E-06	4.10E-07	1.12E-06	1.68E-06	4.02E-12	1.84E-03
Pb-202m	1.78E-06	9.08E-06	1.83E-06	5.16E-06	8.02E-06	1.85E-11	8.52E-03
Pb-203	2.69E-07	1.10E-06	2.69E-07	7.29E-07	1.04E-06	2.64E-12	1.20E-03
Pb-204m	1.84E-06	9.54E-06	1.89E-06	5.35E-06	8.37E-06	1.93E-11	8.90E-03
Pb-205	8.80E-11	3.03E-12	3.03E-12	3.03E-12	3.03E-12	7.17E-17	3.09E-08
Pb-209	5.66E-10	5.38E-10	1.84E-10	4.17E-10	5.30E-10	2.33E-15	1.71E-06
Pb-210	1.72E-09	1.48E-09	9.54E-10	1.47E-09	1.48E-09	9.09E-15	3.94E-06
Pb-211	6.41E-08	2.91E-07	6.04E-08	1.69E-07	2.61E-07	6.02E-13	2.79E-04
Pb-212	1.24E-07	4.97E-07	1.24E-07	3.37E-07	4.78E-07	1.23E-12	5.58E-04
Pb-214	2.23E-07	9.95E-07	2.26E-07	6.30E-07	9.32E-07	2.23E-12	1.02E-03
Pd-100	8.73E-08	2.02E-07	7.37E-08	1.69E-07	2.02E-07	7.26E-13	3.24E-04
Pd-101	2.98E-07	1.45E-06	2.97E-07	8.42E-07	1.30E-06	3.02E-12	1.39E-03
Pd-103	4.82E-09	1.14E-09	7.84E-10	9.65E-10	1.11E-09	9.18E-15	3.94E-06
Pd-107	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-109	1.02E-08	1.27E-08	4.38E-09	9.76E-09	1.24E-08	4.30E-14	2.08E-05
Pd-109m	9.28E-08	3.76E-07	9.33E-08	2.58E-07	3.66E-07	9.26E-13	4.21E-04
Pd-111	5.70E-08	2.37E-07	4.81E-08	1.33E-07	2.08E-07	4.80E-13	2.26E-04
Pd-112	1.37E-09	1.89E-10	1.68E-10	1.84E-10	1.89E-10	2.22E-15	1.05E-06

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Pd-114	3.06E-08	9.95E-08	2.47E-08	6.70E-08	9.54E-08	2.38E-13	1.11E-04
Pd-96	1.27E-06	6.44E-06	1.31E-06	3.68E-06	5.70E-06	1.32E-11	6.10E-03
Pd-97	2.08E-06	1.14E-05	2.13E-06	6.12E-06	9.69E-06	2.29E-11	1.06E-02
Pd-98	3.55E-07	1.65E-06	3.57E-07	9.88E-07	1.48E-06	3.59E-12	1.65E-03
Pd-99	1.13E-06	5.80E-06	1.15E-06	3.25E-06	5.07E-06	1.19E-11	5.52E-03
Pm-136	2.48E-06	1.23E-05	2.53E-06	7.13E-06	1.10E-05	2.51E-11	1.16E-02
Pm-137m	1.60E-06	7.68E-06	1.62E-06	4.55E-06	6.92E-06	1.61E-11	7.45E-03
Pm-139	8.57E-07	4.15E-06	8.64E-07	2.43E-06	3.74E-06	8.60E-12	3.97E-03
Pm-140	9.84E-07	4.75E-06	9.91E-07	2.79E-06	4.28E-06	9.75E-12	4.51E-03
Pm-140m	2.72E-06	1.39E-05	2.79E-06	7.86E-06	1.23E-05	2.82E-11	1.30E-02
Pm-141	6.62E-07	3.30E-06	6.66E-07	1.89E-06	2.91E-06	6.76E-12	3.11E-03
Pm-142	7.91E-07	3.81E-06	7.95E-07	2.24E-06	3.44E-06	7.87E-12	3.64E-03
Pm-143	2.77E-07	1.33E-06	2.73E-07	7.58E-07	1.17E-06	2.75E-12	1.26E-03
Pm-144	1.40E-06	6.91E-06	1.42E-06	4.00E-06	6.18E-06	1.41E-11	6.52E-03
Pm-145	2.14E-08	1.58E-08	1.09E-08	1.55E-08	1.58E-08	1.04E-13	4.48E-05
Pm-146	6.71E-07	3.27E-06	6.79E-07	1.91E-06	2.93E-06	6.77E-12	3.12E-03
Pm-147	2.26E-11	3.23E-11	1.39E-11	2.75E-11	3.21E-11	1.99E-16	1.44E-07
Pm-148	5.14E-07	2.81E-06	5.24E-07	1.50E-06	2.38E-06	5.56E-12	2.57E-03
Pm-148m	1.79E-06	8.95E-06	1.83E-06	5.16E-06	8.00E-06	1.84E-11	8.44E-03
Pm-149	1.46E-08	5.11E-08	1.16E-08	3.20E-08	4.76E-08	1.13E-13	5.35E-05
Pm-150	1.30E-06	7.07E-06	1.33E-06	3.82E-06	6.04E-06	1.41E-11	6.53E-03
Pm-151	2.91E-07	1.31E-06	2.92E-07	8.10E-07	1.22E-06	2.89E-12	1.32E-03
Pm-152	2.74E-07	1.37E-06	2.67E-07	7.52E-07	1.18E-06	2.78E-12	1.29E-03
Pm-152m	1.33E-06	7.00E-06	1.37E-06	3.87E-06	6.07E-06	1.44E-11	6.60E-03
Pm-153	7.38E-08	2.21E-07	6.19E-08	1.58E-07	2.15E-07	6.01E-13	2.75E-04
Pm-154	1.53E-06	9.05E-06	1.59E-06	4.58E-06	7.43E-06	1.78E-11	8.24E-03
Pm-154m	1.57E-06	8.59E-06	1.61E-06	4.60E-06	7.31E-06	1.73E-11	7.97E-03
Po-203	1.43E-06	7.60E-06	1.47E-06	4.15E-06	6.53E-06	1.54E-11	7.11E-03
Po-204	1.02E-06	4.96E-06	1.03E-06	2.88E-06	4.40E-06	1.05E-11	4.83E-03
Po-205	1.39E-06	7.38E-06	1.42E-06	4.04E-06	6.35E-06	1.50E-11	6.89E-03
Po-206	1.05E-06	5.21E-06	1.07E-06	2.99E-06	4.62E-06	1.09E-11	5.00E-03
Po-207	1.13E-06	5.87E-06	1.16E-06	3.25E-06	5.10E-06	1.19E-11	5.52E-03
Po-208	1.88E-11	8.92E-11	1.91E-11	5.31E-11	8.05E-11	1.91E-16	8.74E-08

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Po-209	5.42E-09	2.65E-08	5.54E-09	1.55E-08	2.36E-08	5.61E-14	2.58E-05
Po-210	8.71E-12	4.51E-11	8.96E-12	2.54E-11	3.96E-11	9.08E-17	4.19E-08
Po-211	7.32E-09	3.76E-08	7.50E-09	2.11E-08	3.32E-08	7.60E-14	3.51E-05
Po-212	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-212m	6.44E-08	4.21E-07	6.77E-08	1.98E-07	3.31E-07	8.24E-13	3.80E-04
Po-213	3.37E-11	1.73E-10	3.46E-11	9.74E-11	1.52E-10	3.50E-16	1.61E-07
Po-214	7.43E-11	3.86E-10	7.63E-11	2.15E-10	3.38E-10	7.75E-16	3.58E-07
Po-215	1.59E-10	7.49E-10	1.62E-10	4.55E-10	6.90E-10	1.59E-15	7.29E-07
Po-216	1.37E-11	7.11E-11	1.41E-11	3.98E-11	6.24E-11	1.43E-16	6.59E-08
Po-218	5.31E-15	6.85E-15	3.16E-15	5.99E-15	6.83E-15	5.06E-20	3.95E-11
Pr-134	2.82E-06	1.43E-05	2.88E-06	8.14E-06	1.26E-05	2.92E-11	1.34E-02
Pr-134m	2.06E-06	1.08E-05	2.09E-06	5.99E-06	9.40E-06	2.20E-11	1.01E-02
Pr-135	7.82E-07	3.74E-06	7.84E-07	2.19E-06	3.37E-06	7.86E-12	3.61E-03
Pr-136	1.89E-06	9.99E-06	1.95E-06	5.52E-06	8.67E-06	2.02E-11	9.33E-03
Pr-137	3.28E-07	1.57E-06	3.25E-07	9.11E-07	1.40E-06	3.27E-12	1.51E-03
Pr-138	7.54E-07	3.59E-06	7.58E-07	2.13E-06	3.25E-06	7.43E-12	3.44E-03
Pr-138m	2.20E-06	1.14E-05	2.24E-06	6.38E-06	9.96E-06	2.30E-11	1.06E-02
Pr-139	1.10E-07	4.76E-07	1.02E-07	2.79E-07	4.26E-07	1.03E-12	4.71E-04
Pr-140	4.99E-07	2.35E-06	4.98E-07	1.40E-06	2.13E-06	4.90E-12	2.26E-03
Pr-142	6.37E-08	3.13E-07	5.63E-08	1.60E-07	2.58E-07	6.11E-13	2.88E-04
Pr-142m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-143	2.91E-09	1.64E-09	5.61E-10	1.23E-09	1.60E-09	5.33E-15	3.72E-06
Pr-144	4.68E-08	1.79E-07	3.55E-08	9.60E-08	1.51E-07	3.48E-13	1.68E-04
Pr-144m	8.88E-09	1.24E-08	4.92E-09	8.68E-09	1.12E-08	4.84E-14	2.13E-05
Pr-145	2.81E-08	9.48E-08	2.00E-08	5.42E-08	8.35E-08	1.93E-13	9.26E-05
Pr-146	8.99E-07	4.98E-06	9.18E-07	2.64E-06	4.20E-06	9.90E-12	4.58E-03
Pr-147	4.37E-07	2.05E-06	4.25E-07	1.18E-06	1.81E-06	4.34E-12	2.00E-03
Pr-148	8.91E-07	4.80E-06	9.07E-07	2.60E-06	4.10E-06	9.64E-12	4.47E-03
Pr-148m	8.63E-07	4.16E-06	8.70E-07	2.45E-06	3.75E-06	8.66E-12	4.00E-03
Pt-184	6.24E-07	2.62E-06	6.21E-07	1.67E-06	2.43E-06	6.13E-12	2.79E-03
Pt-186	6.04E-07	2.85E-06	6.10E-07	1.68E-06	2.56E-06	6.08E-12	2.79E-03
Pt-187	5.37E-07	2.43E-06	5.37E-07	1.46E-06	2.20E-06	5.40E-12	2.48E-03
Pt-188	1.71E-07	6.16E-07	1.65E-07	4.26E-07	5.89E-07	1.62E-12	7.34E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Pt-189	4.20E-07	1.87E-06	4.17E-07	1.13E-06	1.68E-06	4.19E-12	1.92E-03
Pt-190	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt-191	2.50E-07	9.69E-07	2.43E-07	6.34E-07	9.04E-07	2.38E-12	1.09E-03
Pt-193	5.27E-11	1.92E-12	1.93E-12	1.93E-12	1.92E-12	4.31E-17	1.87E-08
Pt-193m	8.17E-09	1.66E-08	7.03E-09	1.47E-08	1.65E-08	6.86E-14	3.05E-05
Pt-195m	5.62E-08	1.27E-07	4.98E-08	1.09E-07	1.27E-07	4.86E-13	2.16E-04
Pt-197	1.99E-08	5.74E-08	1.84E-08	4.45E-08	5.66E-08	1.81E-13	8.19E-05
Pt-197m	6.71E-08	2.38E-07	6.43E-08	1.64E-07	2.27E-07	6.30E-13	2.86E-04
Pt-199	1.86E-07	8.58E-07	1.84E-07	5.14E-07	7.81E-07	1.81E-12	8.37E-04
Pt-200	4.86E-08	1.58E-07	4.62E-08	1.16E-07	1.53E-07	4.55E-13	2.06E-04
Pt-202	1.11E-08	8.88E-09	2.99E-09	6.32E-09	8.49E-09	1.96E-14	1.25E-05
Pt-202+D	1.82E-07	8.42E-07	1.68E-07	4.69E-07	7.33E-07	1.70E-12	7.91E-04
Pt-202+E	1.82E-07	8.42E-07	1.68E-07	4.69E-07	7.33E-07	1.70E-12	7.91E-04
Pu-232	4.86E-08	1.50E-07	4.71E-08	1.18E-07	1.50E-07	4.65E-13	2.09E-04
Pu-234	5.27E-08	1.62E-07	5.09E-08	1.28E-07	1.61E-07	5.04E-13	2.26E-04
Pu-235	7.29E-08	2.38E-07	7.03E-08	1.78E-07	2.33E-07	6.98E-13	3.14E-04
Pu-236	4.17E-10	1.14E-10	6.64E-11	9.91E-11	1.13E-10	7.83E-16	3.39E-07
Pu-237	3.86E-08	1.14E-07	3.65E-08	9.03E-08	1.14E-07	3.60E-13	1.61E-04
Pu-238	3.68E-10	6.92E-11	4.81E-11	6.30E-11	6.87E-11	5.96E-16	2.56E-07
Pu-239	2.06E-10	2.09E-10	6.88E-11	1.51E-10	2.01E-10	7.26E-16	3.23E-07
Pu-239+D	2.06E-10	2.09E-10	6.88E-11	1.51E-10	2.01E-10	7.26E-16	3.23E-07
Pu-239+E	2.06E-10	2.09E-10	6.88E-11	1.51E-10	2.01E-10	7.26E-16	3.23E-07
Pu-240	3.51E-10	7.13E-11	4.79E-11	6.43E-11	7.05E-11	5.87E-16	2.53E-07
Pu-241	1.30E-12	4.07E-12	1.25E-12	3.16E-12	4.04E-12	1.24E-17	5.56E-09
Pu-242	3.64E-10	4.36E-10	1.06E-10	2.43E-10	3.68E-10	1.24E-15	5.56E-07
Pu-243	2.00E-08	5.53E-08	1.84E-08	4.38E-08	5.45E-08	1.81E-13	8.14E-05
Pu-244	1.72E-08	9.88E-08	1.75E-08	5.05E-08	8.14E-08	1.98E-13	9.11E-05
Pu-244+D	3.17E-07	1.58E-06	3.16E-07	8.90E-07	1.38E-06	3.21E-12	1.47E-03
Pu-244+E	3.17E-07	1.58E-06	3.16E-07	8.90E-07	1.38E-06	3.21E-12	1.47E-03
Pu-245	3.58E-07	1.73E-06	3.65E-07	1.02E-06	1.55E-06	3.65E-12	1.68E-03
Pu-246	1.15E-07	4.09E-07	1.11E-07	2.92E-07	4.00E-07	1.09E-12	4.94E-04
Ra-219	1.48E-07	6.60E-07	1.52E-07	4.21E-07	6.20E-07	1.50E-12	6.83E-04
Ra-219+D	1.48E-07	6.60E-07	1.52E-07	4.21E-07	6.20E-07	1.50E-12	6.83E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Ra-219+E	1.48E-07	6.60E-07	1.52E-07	4.21E-07	6.20E-07	1.50E-12	6.83E-04
Ra-220	4.21E-09	2.00E-08	4.28E-09	1.21E-08	1.84E-08	4.22E-14	1.94E-05
Ra-221	3.02E-08	1.06E-07	2.97E-08	7.78E-08	1.04E-07	2.95E-13	1.33E-04
Ra-221+D	3.02E-08	1.06E-07	2.97E-08	7.80E-08	1.04E-07	2.95E-13	1.33E-04
Ra-221+E	3.02E-08	1.06E-07	2.97E-08	7.80E-08	1.04E-07	2.95E-13	1.33E-04
Ra-222	8.15E-09	3.72E-08	8.34E-09	2.36E-08	3.50E-08	8.19E-14	3.75E-05
Ra-223	1.18E-07	4.56E-07	1.18E-07	3.12E-07	4.37E-07	1.16E-12	5.26E-04
Ra-223+D	1.70E-07	6.92E-07	1.71E-07	4.62E-07	6.59E-07	1.68E-12	7.66E-04
Ra-223+E	1.70E-07	6.92E-07	1.71E-07	4.62E-07	6.59E-07	1.68E-12	7.66E-04
Ra-224	9.02E-09	3.92E-08	9.24E-09	2.58E-08	3.74E-08	9.13E-14	4.17E-05
Ra-224+D	9.61E-09	4.20E-08	9.84E-09	2.75E-08	4.00E-08	9.71E-14	4.44E-05
Ra-224+E	9.61E-09	4.20E-08	9.84E-09	2.75E-08	4.00E-08	9.71E-14	4.44E-05
Ra-225	8.85E-09	6.11E-09	4.45E-09	6.08E-09	6.10E-09	4.24E-14	1.85E-05
Ra-226	6.25E-09	2.50E-08	6.34E-09	1.73E-08	2.43E-08	6.28E-14	2.85E-05
Ra-226+D	1.52E-06	8.38E-06	1.56E-06	4.47E-06	7.11E-06	1.68E-11	7.75E-03
Ra-226+E	1.52E-06	8.38E-06	1.56E-06	4.47E-06	7.11E-06	1.68E-11	7.75E-03
Ra-227	1.31E-07	5.61E-07	1.27E-07	3.52E-07	5.21E-07	1.25E-12	5.73E-04
Ra-228	4.44E-10	3.44E-11	3.46E-11	3.44E-11	3.44E-11	5.03E-16	2.15E-07
Ra-228+D	7.66E-07	4.04E-06	7.84E-07	2.23E-06	3.51E-06	8.16E-12	3.76E-03
Ra-228+E	7.66E-07	4.04E-06	7.84E-07	2.23E-06	3.51E-06	8.16E-12	3.76E-03
Ra-230	6.77E-08	2.71E-07	6.68E-08	1.79E-07	2.56E-07	6.58E-13	3.00E-04
Rb-77	1.40E-06	6.83E-06	1.42E-06	3.98E-06	6.11E-06	1.43E-11	6.56E-03
Rb-78	3.39E-06	2.09E-05	3.54E-06	1.02E-05	1.67E-05	4.19E-11	1.93E-02
Rb-78m	2.83E-06	1.53E-05	2.92E-06	8.30E-06	1.31E-05	3.09E-11	1.43E-02
Rb-79	1.31E-06	6.29E-06	1.33E-06	3.72E-06	5.69E-06	1.32E-11	6.07E-03
Rb-80	1.11E-06	5.32E-06	1.12E-06	3.14E-06	4.82E-06	1.10E-11	5.07E-03
Rb-81	4.54E-07	2.20E-06	4.62E-07	1.30E-06	2.00E-06	4.58E-12	2.10E-03
Rb-81m	2.20E-08	9.84E-08	2.13E-08	5.85E-08	8.81E-08	2.16E-13	9.92E-05
Rb-82	1.02E-06	4.92E-06	1.03E-06	2.90E-06	4.45E-06	1.02E-11	4.70E-03
Rb-82m	2.60E-06	1.37E-05	2.67E-06	7.58E-06	1.19E-05	2.75E-11	1.26E-02
Rb-83	4.37E-07	2.13E-06	4.45E-07	1.26E-06	1.93E-06	4.40E-12	2.02E-03
Rb-84	8.10E-07	4.16E-06	8.29E-07	2.34E-06	3.66E-06	8.42E-12	3.88E-03
Rb-84m	3.37E-07	1.53E-06	3.46E-07	9.71E-07	1.44E-06	3.40E-12	1.55E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Rb-86	9.34E-08	4.59E-07	8.81E-08	2.49E-07	3.94E-07	9.12E-13	4.24E-04
Rb-86m	4.92E-07	2.42E-06	5.03E-07	1.42E-06	2.19E-06	4.98E-12	2.29E-03
Rb-87	6.46E-11	1.01E-10	4.26E-11	8.60E-11	1.01E-10	6.93E-16	5.40E-07
Rb-88	5.77E-07	3.41E-06	5.89E-07	1.70E-06	2.77E-06	6.63E-12	3.09E-03
Rb-89	1.93E-06	1.14E-05	2.00E-06	5.76E-06	9.35E-06	2.23E-11	1.03E-02
Rb-90	1.62E-06	1.11E-05	1.72E-06	4.99E-06	8.43E-06	2.20E-11	1.02E-02
Rb-90m	2.70E-06	1.68E-05	2.82E-06	8.17E-06	1.34E-05	3.33E-11	1.54E-02
Re-178	1.45E-06	8.21E-06	1.49E-06	4.26E-06	6.82E-06	1.67E-11	7.69E-03
Re-179	9.41E-07	4.77E-06	9.60E-07	2.69E-06	4.19E-06	9.99E-12	4.59E-03
Re-180	1.06E-06	5.41E-06	1.08E-06	3.03E-06	4.72E-06	1.11E-11	5.11E-03
Re-181	7.05E-07	3.32E-06	7.11E-07	1.96E-06	2.99E-06	7.14E-12	3.27E-03
Re-182	1.55E-06	7.84E-06	1.58E-06	4.41E-06	6.83E-06	1.65E-11	7.60E-03
Re-182m	1.05E-06	5.59E-06	1.08E-06	3.01E-06	4.76E-06	1.14E-11	5.26E-03
Re-183	1.25E-07	3.55E-07	1.14E-07	2.69E-07	3.47E-07	1.11E-12	4.97E-04
Re-184	7.87E-07	3.94E-06	8.01E-07	2.23E-06	3.46E-06	8.14E-12	3.74E-03
Re-184m	3.30E-07	1.48E-06	3.29E-07	8.98E-07	1.34E-06	3.32E-12	1.52E-03
Re-186	2.02E-08	5.48E-08	1.68E-08	4.15E-08	5.41E-08	1.65E-13	7.54E-05
Re-186m	1.14E-08	1.81E-08	8.75E-09	1.66E-08	1.81E-08	8.41E-14	3.69E-05
Re-186m+D	3.17E-08	7.29E-08	2.54E-08	5.82E-08	7.22E-08	2.49E-13	1.12E-04
Re-186m+E	3.17E-08	7.29E-08	2.54E-08	5.82E-08	7.22E-08	2.49E-13	1.12E-04
Re-187	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-188	6.63E-08	2.53E-07	5.80E-08	1.57E-07	2.31E-07	5.69E-13	2.64E-04
Re-188m	5.37E-08	1.15E-07	4.64E-08	9.91E-08	1.14E-07	4.51E-13	2.00E-04
Re-189	5.07E-08	2.05E-07	4.90E-08	1.35E-07	1.94E-07	4.83E-13	2.22E-04
Re-190	1.20E-06	5.85E-06	1.22E-06	3.44E-06	5.26E-06	1.23E-11	5.62E-03
Re-190m	8.28E-07	3.94E-06	8.38E-07	2.34E-06	3.57E-06	8.35E-12	3.83E-03
Rh-100	2.34E-06	1.37E-05	2.41E-06	7.00E-06	1.13E-05	2.70E-11	1.25E-02
Rh-100m	4.49E-08	1.87E-07	3.93E-08	1.07E-07	1.64E-07	4.10E-13	1.88E-04
Rh-101	2.38E-07	9.52E-07	2.39E-07	6.55E-07	9.22E-07	2.37E-12	1.08E-03
Rh-101m	2.47E-07	1.11E-06	2.51E-07	7.03E-07	1.05E-06	2.45E-12	1.13E-03
Rh-102	4.51E-07	2.20E-06	4.58E-07	1.29E-06	1.98E-06	4.55E-12	2.09E-03
Rh-102m	1.92E-06	9.78E-06	1.96E-06	5.56E-06	8.65E-06	1.99E-11	9.16E-03
Rh-103m	5.21E-10	8.66E-11	8.29E-11	8.66E-11	8.66E-11	9.64E-16	4.11E-07

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Rh-104	2.90E-08	7.60E-08	1.80E-08	4.64E-08	6.92E-08	1.54E-13	7.69E-05
Rh-104m	2.83E-08	3.83E-08	1.86E-08	3.40E-08	3.80E-08	1.79E-13	7.84E-05
Rh-105	6.87E-08	3.13E-07	7.03E-08	1.98E-07	2.95E-07	6.92E-13	3.18E-04
Rh-106	2.12E-07	9.73E-07	2.02E-07	5.65E-07	8.70E-07	1.98E-12	9.21E-04
Rh-106m	2.53E-06	1.33E-05	2.60E-06	7.41E-06	1.16E-05	2.69E-11	1.24E-02
Rh-107	2.84E-07	1.29E-06	2.86E-07	8.06E-07	1.20E-06	2.82E-12	1.29E-03
Rh-108	3.20E-07	1.46E-06	3.12E-07	8.72E-07	1.33E-06	3.02E-12	1.40E-03
Rh-109	2.81E-07	1.22E-06	2.75E-07	7.69E-07	1.14E-06	2.69E-12	1.24E-03
Rh-94	3.34E-06	1.84E-05	3.44E-06	9.84E-06	1.57E-05	3.65E-11	1.68E-02
Rh-95	2.24E-06	1.23E-05	2.30E-06	6.60E-06	1.05E-05	2.47E-11	1.14E-02
Rh-95m	7.66E-07	4.34E-06	7.91E-07	2.26E-06	3.62E-06	8.78E-12	4.04E-03
Rh-96	3.50E-06	1.84E-05	3.59E-06	1.02E-05	1.60E-05	3.69E-11	1.71E-02
Rh-96m	1.13E-06	6.13E-06	1.16E-06	3.31E-06	5.24E-06	1.23E-11	5.66E-03
Rh-97	1.29E-06	6.55E-06	1.32E-06	3.72E-06	5.79E-06	1.34E-11	6.18E-03
Rh-97m	1.86E-06	1.10E-05	1.93E-06	5.57E-06	9.04E-06	2.19E-11	1.01E-02
Rh-98	1.64E-06	8.25E-06	1.67E-06	4.71E-06	7.32E-06	1.68E-11	7.77E-03
Rh-99	4.90E-07	2.31E-06	4.94E-07	1.39E-06	2.10E-06	4.93E-12	2.27E-03
Rh-99m	5.72E-07	2.84E-06	5.84E-07	1.65E-06	2.54E-06	5.89E-12	2.71E-03
Rn-207	8.77E-07	4.28E-06	8.94E-07	2.51E-06	3.83E-06	8.97E-12	4.13E-03
Rn-209	1.04E-06	5.41E-06	1.07E-06	3.03E-06	4.71E-06	1.12E-11	5.13E-03
Rn-210	5.38E-08	2.62E-07	5.48E-08	1.53E-07	2.34E-07	5.51E-13	2.54E-04
Rn-211	1.65E-06	8.72E-06	1.69E-06	4.81E-06	7.55E-06	1.77E-11	8.12E-03
Rn-212	3.04E-10	1.54E-09	3.12E-10	8.81E-10	1.37E-09	3.12E-15	1.44E-06
Rn-215	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-216	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-217	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-218	6.82E-10	3.39E-09	6.98E-10	1.96E-09	3.04E-09	6.93E-15	3.19E-06
Rn-219	5.18E-08	2.35E-07	5.29E-08	1.49E-07	2.21E-07	5.20E-13	2.38E-04
Rn-219+D	5.19E-08	2.36E-07	5.31E-08	1.49E-07	2.22E-07	5.21E-13	2.40E-04
Rn-219+E	5.19E-08	2.36E-07	5.31E-08	1.49E-07	2.22E-07	5.21E-13	2.40E-04
Rn-220	5.66E-10	2.77E-09	5.78E-10	1.63E-09	2.50E-09	5.72E-15	2.63E-06
Rn-222	3.51E-10	1.70E-09	3.57E-10	1.01E-09	1.54E-09	3.52E-15	1.62E-06
Rn-222+D	3.51E-10	1.70E-09	3.57E-10	1.01E-09	1.54E-09	3.52E-15	1.62E-06

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Rn-222+E	3.51E-10	1.70E-09	3.57E-10	1.01E-09	1.54E-09	3.52E-15	1.62E-06
Rn-223	3.10E-07	1.48E-06	3.09E-07	8.62E-07	1.32E-06	3.11E-12	1.44E-03
Ru-103	4.47E-07	2.15E-06	4.56E-07	1.28E-06	1.96E-06	4.50E-12	2.07E-03
Ru-105	6.75E-07	3.34E-06	6.86E-07	1.93E-06	2.98E-06	6.86E-12	3.17E-03
Ru-106	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-106+D	2.12E-07	9.73E-07	2.02E-07	5.65E-07	8.70E-07	1.98E-12	9.21E-04
Ru-106+E	2.12E-07	9.73E-07	2.02E-07	5.65E-07	8.70E-07	1.98E-12	9.21E-04
Ru-107	3.24E-07	1.62E-06	3.22E-07	9.07E-07	1.41E-06	3.30E-12	1.53E-03
Ru-108	5.92E-08	2.06E-07	5.42E-08	1.46E-07	2.01E-07	5.34E-13	2.44E-04
Ru-92	1.82E-06	9.13E-06	1.85E-06	5.24E-06	8.08E-06	1.92E-11	8.83E-03
Ru-94	4.56E-07	2.23E-06	4.66E-07	1.31E-06	2.01E-06	4.65E-12	2.14E-03
Ru-95	1.09E-06	5.72E-06	1.12E-06	3.18E-06	4.98E-06	1.16E-11	5.34E-03
Ru-97	2.02E-07	8.66E-07	2.04E-07	5.70E-07	8.29E-07	2.02E-12	9.22E-04
S-35	1.01E-11	8.73E-12	4.88E-12	8.10E-12	8.73E-12	6.59E-17	4.94E-08
S-37	2.29E-06	1.62E-05	2.43E-06	7.18E-06	1.23E-05	3.18E-11	1.46E-02
S-38	1.41E-06	8.97E-06	1.48E-06	4.32E-06	7.17E-06	1.74E-11	8.05E-03
Sb-111	1.36E-06	6.50E-06	1.37E-06	3.83E-06	5.87E-06	1.36E-11	6.25E-03
Sb-113	1.15E-06	5.56E-06	1.16E-06	3.27E-06	5.03E-06	1.15E-11	5.32E-03
Sb-114	2.38E-06	1.29E-05	2.45E-06	6.98E-06	1.11E-05	2.57E-11	1.19E-02
Sb-115	7.98E-07	3.85E-06	8.08E-07	2.28E-06	3.48E-06	8.00E-12	3.68E-03
Sb-116	1.99E-06	1.11E-05	2.04E-06	5.87E-06	9.36E-06	2.20E-11	1.02E-02
Sb-116m	2.72E-06	1.46E-05	2.81E-06	7.95E-06	1.25E-05	2.93E-11	1.34E-02
Sb-117	1.52E-07	5.85E-07	1.47E-07	3.98E-07	5.62E-07	1.46E-12	6.64E-04
Sb-118	7.36E-07	3.53E-06	7.41E-07	2.09E-06	3.20E-06	7.32E-12	3.38E-03
Sb-118m	2.28E-06	1.23E-05	2.34E-06	6.66E-06	1.05E-05	2.47E-11	1.14E-02
Sb-119	1.06E-08	2.57E-09	2.51E-09	2.58E-09	2.57E-09	2.60E-14	1.11E-05
Sb-120	4.08E-07	1.94E-06	4.08E-07	1.15E-06	1.75E-06	4.03E-12	1.86E-03
Sb-120m	2.15E-06	1.15E-05	2.21E-06	6.27E-06	9.87E-06	2.31E-11	1.07E-02
Sb-122	4.09E-07	1.99E-06	4.11E-07	1.16E-06	1.79E-06	4.09E-12	1.88E-03
Sb-122m	5.00E-08	7.67E-08	3.59E-08	6.98E-08	7.67E-08	3.48E-13	1.53E-04
Sb-124	1.61E-06	9.07E-06	1.67E-06	4.79E-06	7.67E-06	1.80E-11	8.31E-03
Sb-124m	3.97E-07	1.96E-06	4.06E-07	1.14E-06	1.77E-06	4.02E-12	1.86E-03
Sb-124n	3.90E-13	9.64E-14	9.45E-14	9.67E-14	9.64E-14	9.70E-19	4.13E-10

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Sb-125	3.87E-07	1.84E-06	3.89E-07	1.09E-06	1.67E-06	3.86E-12	1.78E-03
Sb-126	2.48E-06	1.25E-05	2.54E-06	7.16E-06	1.11E-05	2.54E-11	1.17E-02
Sb-126m	1.40E-06	6.94E-06	1.43E-06	4.02E-06	6.22E-06	1.43E-11	6.56E-03
Sb-127	6.25E-07	3.10E-06	6.38E-07	1.80E-06	2.77E-06	6.36E-12	2.93E-03
Sb-128	2.77E-06	1.41E-05	2.84E-06	8.04E-06	1.25E-05	2.86E-11	1.32E-02
Sb-128m	1.73E-06	8.66E-06	1.76E-06	4.96E-06	7.70E-06	1.77E-11	8.16E-03
Sb-129	1.29E-06	6.98E-06	1.33E-06	3.78E-06	6.00E-06	1.39E-11	6.43E-03
Sb-130	2.91E-06	1.51E-05	2.99E-06	8.47E-06	1.32E-05	3.06E-11	1.41E-02
Sb-130m	2.42E-06	1.27E-05	2.49E-06	7.03E-06	1.11E-05	2.56E-11	1.18E-02
Sb-131	1.81E-06	1.01E-05	1.87E-06	5.37E-06	8.57E-06	2.01E-11	9.28E-03
Sb-133	2.36E-06	1.38E-05	2.43E-06	7.05E-06	1.14E-05	2.72E-11	1.26E-02
Sc-42m	3.71E-06	2.02E-05	3.82E-06	1.09E-05	1.73E-05	4.03E-11	1.86E-02
Sc-43	8.92E-07	4.28E-06	9.07E-07	2.56E-06	3.89E-06	8.92E-12	4.10E-03
Sc-44	1.91E-06	9.96E-06	1.95E-06	5.56E-06	8.70E-06	2.01E-11	9.27E-03
Sc-44m	2.42E-07	1.12E-06	2.49E-07	7.01E-07	1.04E-06	2.47E-12	1.13E-03
Sc-46	1.78E-06	9.64E-06	1.84E-06	5.22E-06	8.29E-06	1.92E-11	8.84E-03
Sc-47	9.31E-08	3.64E-07	9.48E-08	2.58E-07	3.57E-07	9.40E-13	4.27E-04
Sc-48	2.95E-06	1.64E-05	3.05E-06	8.70E-06	1.39E-05	3.23E-11	1.48E-02
Sc-49	1.55E-08	1.91E-08	5.41E-09	1.22E-08	1.73E-08	3.89E-14	2.26E-05
Sc-50	2.81E-06	1.59E-05	2.90E-06	8.32E-06	1.33E-05	3.12E-11	1.45E-02
Se-70	6.39E-07	2.99E-06	6.45E-07	1.81E-06	2.74E-06	6.37E-12	2.92E-03
Se-71	1.46E-06	7.24E-06	1.48E-06	4.17E-06	6.44E-06	1.48E-11	6.87E-03
Se-72	2.02E-08	1.93E-08	1.25E-08	1.91E-08	1.93E-08	1.18E-13	5.11E-05
Se-73	9.81E-07	4.56E-06	9.89E-07	2.77E-06	4.17E-06	9.75E-12	4.48E-03
Se-73m	2.37E-07	1.14E-06	2.41E-07	6.77E-07	1.03E-06	2.37E-12	1.10E-03
Se-75	3.34E-07	1.43E-06	3.42E-07	9.45E-07	1.37E-06	3.37E-12	1.53E-03
Se-77m	7.36E-08	2.90E-07	7.52E-08	2.04E-07	2.84E-07	7.43E-13	3.38E-04
Se-79	1.10E-11	9.09E-12	5.22E-12	8.49E-12	9.09E-12	6.75E-17	5.00E-08
Se-79m	7.69E-09	2.21E-08	7.26E-09	1.78E-08	2.21E-08	7.18E-14	3.21E-05
Se-81	1.73E-08	4.19E-08	9.82E-09	2.60E-08	3.85E-08	8.98E-14	4.44E-05
Se-81m	1.15E-08	3.58E-08	1.12E-08	2.81E-08	3.57E-08	1.11E-13	4.97E-05
Se-83	2.29E-06	1.26E-05	2.36E-06	6.77E-06	1.07E-05	2.53E-11	1.16E-02
Se-83m	8.80E-07	4.84E-06	8.98E-07	2.56E-06	4.10E-06	9.61E-12	4.44E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Se-84	3.86E-07	1.78E-06	3.87E-07	1.09E-06	1.65E-06	3.79E-12	1.74E-03
Si-31	1.05E-08	1.11E-08	3.09E-09	7.11E-09	1.01E-08	2.44E-14	1.43E-05
Si-32	2.27E-11	2.64E-11	1.28E-11	2.36E-11	2.64E-11	2.03E-16	1.58E-07
Si-32+D	1.20E-08	9.46E-09	3.20E-09	6.75E-09	9.04E-09	2.12E-14	1.34E-05
Si-32+E	1.20E-08	9.46E-09	3.20E-09	6.75E-09	9.04E-09	2.12E-14	1.34E-05
Sm-139	1.31E-06	6.46E-06	1.33E-06	3.76E-06	5.77E-06	1.34E-11	6.17E-03
Sm-140	4.98E-07	2.47E-06	4.99E-07	1.40E-06	2.17E-06	5.13E-12	2.36E-03
Sm-141	1.25E-06	6.41E-06	1.28E-06	3.63E-06	5.65E-06	1.31E-11	6.04E-03
Sm-141m	1.72E-06	8.88E-06	1.76E-06	4.98E-06	7.76E-06	1.81E-11	8.37E-03
Sm-142	9.35E-08	3.72E-07	8.49E-08	2.24E-07	3.37E-07	8.38E-13	3.82E-04
Sm-143	4.80E-07	2.28E-06	4.79E-07	1.34E-06	2.06E-06	4.75E-12	2.19E-03
Sm-143m	6.15E-07	3.14E-06	6.28E-07	1.78E-06	2.77E-06	6.35E-12	2.92E-03
Sm-145	4.48E-08	3.73E-08	2.47E-08	3.65E-08	3.73E-08	2.35E-13	1.01E-04
Sm-146	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-151	2.41E-12	3.86E-13	3.83E-13	3.85E-13	3.86E-13	4.47E-18	1.91E-09
Sm-153	5.07E-08	1.11E-07	4.10E-08	9.05E-08	1.11E-07	4.01E-13	1.79E-04
Sm-155	9.36E-08	2.81E-07	8.40E-08	2.11E-07	2.76E-07	8.25E-13	3.74E-04
Sm-156	9.69E-08	3.62E-07	9.52E-08	2.54E-07	3.52E-07	9.41E-13	4.27E-04
Sm-157	3.75E-07	1.73E-06	3.72E-07	1.04E-06	1.57E-06	3.78E-12	1.73E-03
Sn-106	1.07E-06	5.31E-06	1.09E-06	3.07E-06	4.73E-06	1.10E-11	5.07E-03
Sn-108	6.00E-07	2.79E-06	6.06E-07	1.70E-06	2.56E-06	6.02E-12	2.76E-03
Sn-109	1.88E-06	1.09E-05	1.95E-06	5.63E-06	9.09E-06	2.16E-11	9.96E-03
Sn-110	2.49E-07	1.09E-06	2.49E-07	7.00E-07	1.03E-06	2.45E-12	1.12E-03
Sn-111	4.31E-07	2.21E-06	4.36E-07	1.24E-06	1.93E-06	4.49E-12	2.07E-03
Sn-113	1.27E-08	2.28E-08	6.62E-09	1.55E-08	2.19E-08	6.66E-14	2.99E-05
Sn-113m	6.44E-09	2.24E-09	1.75E-09	2.15E-09	2.24E-09	1.80E-14	7.68E-06
Sn-117m	1.27E-07	4.70E-07	1.24E-07	3.33E-07	4.61E-07	1.23E-12	5.58E-04
Sn-119m	6.64E-09	1.57E-09	1.52E-09	1.57E-09	1.57E-09	1.59E-14	6.76E-06
Sn-121	7.52E-11	1.33E-10	5.24E-11	1.10E-10	1.33E-10	8.04E-16	6.17E-07
Sn-121m	2.61E-09	8.92E-10	7.87E-10	8.85E-10	8.92E-10	7.87E-15	3.43E-06
Sn-121m+D	2.67E-09	9.95E-10	8.29E-10	9.71E-10	9.95E-10	8.49E-15	3.90E-06

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Sn-121m+E	2.67E-09	9.95E-10	8.29E-10	9.71E-10	9.95E-10	8.49E-15	3.90E-06
Sn-123	1.43E-08	3.89E-08	8.15E-09	2.19E-08	3.38E-08	7.93E-14	3.92E-05
Sn-123m	1.25E-07	4.66E-07	1.22E-07	3.29E-07	4.56E-07	1.20E-12	5.47E-04
Sn-125	3.07E-07	1.64E-06	3.09E-07	8.77E-07	1.39E-06	3.25E-12	1.51E-03
Sn-125m	3.21E-07	1.45E-06	3.20E-07	9.00E-07	1.34E-06	3.14E-12	1.45E-03
Sn-126	4.27E-08	9.96E-08	3.67E-08	8.36E-08	9.98E-08	3.61E-13	1.60E-04
Sn-126+D	1.79E-06	8.79E-06	1.82E-06	5.11E-06	7.88E-06	1.81E-11	8.36E-03
Sn-126+E	1.79E-06	8.79E-06	1.82E-06	5.11E-06	7.88E-06	1.81E-11	8.36E-03
Sn-127	1.67E-06	9.25E-06	1.72E-06	4.92E-06	7.84E-06	1.85E-11	8.51E-03
Sn-127m	5.27E-07	2.58E-06	5.27E-07	1.49E-06	2.30E-06	5.31E-12	2.45E-03
Sn-128	5.25E-07	2.38E-06	5.18E-07	1.43E-06	2.17E-06	5.11E-12	2.35E-03
Sn-129	9.18E-07	4.76E-06	9.31E-07	2.64E-06	4.15E-06	9.55E-12	4.42E-03
Sn-130	8.32E-07	3.99E-06	8.40E-07	2.36E-06	3.59E-06	8.43E-12	3.87E-03
Sn-130m	7.98E-07	4.15E-06	8.04E-07	2.28E-06	3.58E-06	8.38E-12	3.88E-03
Sr-79	1.09E-06	5.09E-06	1.09E-06	3.07E-06	4.64E-06	1.07E-11	4.93E-03
Sr-80	3.87E-07	1.87E-06	3.95E-07	1.11E-06	1.70E-06	3.90E-12	1.80E-03
Sr-81	1.26E-06	6.00E-06	1.27E-06	3.57E-06	5.45E-06	1.26E-11	5.81E-03
Sr-82	8.90E-10	4.79E-11	4.79E-11	4.79E-11	4.79E-11	8.24E-16	3.53E-07
Sr-82+D	1.03E-06	4.92E-06	1.03E-06	2.90E-06	4.45E-06	1.02E-11	4.70E-03
Sr-82+E	1.03E-06	4.92E-06	1.03E-06	2.90E-06	4.45E-06	1.02E-11	4.70E-03
Sr-83	7.26E-07	3.69E-06	7.43E-07	2.09E-06	3.26E-06	7.53E-12	3.47E-03
Sr-85	4.44E-07	2.15E-06	4.53E-07	1.28E-06	1.95E-06	4.47E-12	2.06E-03
Sr-85m	1.88E-07	8.14E-07	1.93E-07	5.41E-07	7.81E-07	1.91E-12	8.72E-04
Sr-87m	2.85E-07	1.33E-06	2.92E-07	8.23E-07	1.24E-06	2.86E-12	1.31E-03
Sr-89	9.68E-09	7.25E-09	2.41E-09	5.14E-09	6.92E-09	1.67E-14	1.06E-05
Sr-90	3.74E-10	4.84E-10	1.67E-10	3.78E-10	4.77E-10	2.22E-15	1.64E-06
Sr-90+D	1.71E-08	1.95E-08	6.27E-09	1.35E-08	1.85E-08	3.97E-14	2.45E-05
Sr-90+E	1.71E-08	1.95E-08	6.27E-09	1.35E-08	1.85E-08	3.97E-14	2.45E-05
Sr-91	6.39E-07	3.34E-06	6.51E-07	1.85E-06	2.91E-06	6.70E-12	3.10E-03
Sr-92	1.16E-06	6.70E-06	1.20E-06	3.46E-06	5.59E-06	1.31E-11	6.07E-03
Sr-93	1.99E-06	1.09E-05	2.04E-06	5.84E-06	9.29E-06	2.17E-11	1.01E-02
Sr-94	1.24E-06	7.20E-06	1.28E-06	3.70E-06	5.99E-06	1.41E-11	6.52E-03
Ta-170	9.76E-07	4.65E-06	9.82E-07	2.75E-06	4.19E-06	9.71E-12	4.48E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Ta-172	1.48E-06	7.79E-06	1.52E-06	4.30E-06	6.75E-06	1.59E-11	7.33E-03
Ta-173	5.00E-07	2.43E-06	4.99E-07	1.38E-06	2.12E-06	5.21E-12	2.40E-03
Ta-174	8.51E-07	4.33E-06	8.64E-07	2.43E-06	3.76E-06	9.06E-12	4.17E-03
Ta-175	9.55E-07	5.04E-06	9.71E-07	2.73E-06	4.30E-06	1.04E-11	4.79E-03
Ta-176	1.89E-06	1.11E-05	1.96E-06	5.63E-06	9.12E-06	2.19E-11	1.01E-02
Ta-177	5.30E-08	1.22E-07	4.45E-08	9.52E-08	1.17E-07	4.33E-13	1.92E-04
Ta-178	9.97E-08	3.88E-07	9.28E-08	2.34E-07	3.40E-07	9.54E-13	4.34E-04
Ta-178m	1.01E-06	4.34E-06	1.02E-06	2.79E-06	4.07E-06	9.96E-12	4.55E-03
Ta-179	1.87E-08	2.81E-08	1.44E-08	2.64E-08	2.81E-08	1.38E-13	6.03E-05
Ta-180	3.67E-08	6.08E-08	2.90E-08	5.56E-08	6.09E-08	2.78E-13	1.23E-04
Ta-182	1.12E-06	6.03E-06	1.15E-06	3.25E-06	5.14E-06	1.22E-11	5.63E-03
Ta-182m	2.20E-07	7.76E-07	2.13E-07	5.54E-07	7.56E-07	2.10E-12	9.50E-04
Ta-183	2.49E-07	9.45E-07	2.45E-07	6.43E-07	9.05E-07	2.40E-12	1.09E-03
Ta-184	1.40E-06	6.85E-06	1.43E-06	4.02E-06	6.15E-06	1.44E-11	6.60E-03
Ta-185	1.40E-07	4.94E-07	1.30E-07	3.40E-07	4.75E-07	1.27E-12	5.80E-04
Ta-186	1.27E-06	6.14E-06	1.30E-06	3.65E-06	5.54E-06	1.30E-11	5.96E-03
Tb-146	3.14E-06	1.80E-05	3.25E-06	9.35E-06	1.50E-05	3.55E-11	1.65E-02
Tb-147	1.92E-06	1.03E-05	1.96E-06	5.57E-06	8.84E-06	2.08E-11	9.57E-03
Tb-147m	1.65E-06	9.42E-06	1.70E-06	4.88E-06	7.86E-06	1.87E-11	8.62E-03
Tb-148	2.07E-06	1.13E-05	2.13E-06	6.06E-06	9.61E-06	2.27E-11	1.04E-02
Tb-148m	2.81E-06	1.43E-05	2.88E-06	8.10E-06	1.26E-05	2.90E-11	1.33E-02
Tb-149	1.18E-06	6.30E-06	1.21E-06	3.44E-06	5.41E-06	1.29E-11	5.92E-03
Tb-149m	1.23E-06	6.18E-06	1.25E-06	3.52E-06	5.47E-06	1.26E-11	5.81E-03
Tb-150	2.07E-06	1.20E-05	2.15E-06	6.17E-06	9.95E-06	2.41E-11	1.11E-02
Tb-150m	2.26E-06	1.11E-05	2.30E-06	6.47E-06	9.97E-06	2.29E-11	1.05E-02
Tb-151	8.73E-07	4.14E-06	8.79E-07	2.45E-06	3.73E-06	8.84E-12	4.06E-03
Tb-151m	6.77E-08	2.93E-07	6.53E-08	1.76E-07	2.65E-07	6.48E-13	2.97E-04
Tb-152	1.29E-06	7.04E-06	1.32E-06	3.78E-06	5.99E-06	1.43E-11	6.57E-03
Tb-152m	6.69E-07	3.05E-06	6.70E-07	1.86E-06	2.79E-06	6.66E-12	3.05E-03
Tb-153	2.83E-07	1.19E-06	2.75E-07	7.39E-07	1.09E-06	2.74E-12	1.25E-03
Tb-154	1.92E-06	1.15E-05	1.98E-06	5.72E-06	9.34E-06	2.27E-11	1.05E-02
Tb-155	1.44E-07	4.31E-07	1.29E-07	3.16E-07	4.20E-07	1.26E-12	5.68E-04
Tb-156	1.68E-06	8.92E-06	1.73E-06	4.90E-06	7.69E-06	1.81E-11	8.36E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Tb-156m	2.81E-08	3.18E-08	1.91E-08	3.10E-08	3.18E-08	1.80E-13	7.83E-05
Tb-156n	2.77E-09	4.17E-09	2.00E-09	3.74E-09	4.17E-09	1.92E-14	8.44E-06
Tb-157	3.38E-09	3.00E-09	2.00E-09	2.97E-09	3.00E-09	1.89E-14	8.17E-06
Tb-158	7.07E-07	3.60E-06	7.14E-07	2.00E-06	3.13E-06	7.35E-12	3.39E-03
Tb-160	9.95E-07	5.25E-06	1.02E-06	2.90E-06	4.55E-06	1.06E-11	4.89E-03
Tb-161	2.54E-08	3.51E-08	1.73E-08	3.16E-08	3.48E-08	1.67E-13	7.36E-05
Tb-162	9.89E-07	4.94E-06	1.01E-06	2.84E-06	4.40E-06	1.02E-11	4.71E-03
Tb-163	7.10E-07	3.34E-06	7.22E-07	2.02E-06	3.07E-06	7.10E-12	3.26E-03
Tb-164	2.15E-06	1.15E-05	2.21E-06	6.28E-06	9.89E-06	2.31E-11	1.07E-02
Tb-165	7.41E-07	4.13E-06	7.58E-07	2.17E-06	3.47E-06	8.16E-12	3.78E-03
Tc-101	3.05E-07	1.38E-06	3.09E-07	8.66E-07	1.29E-06	3.03E-12	1.39E-03
Tc-102	1.09E-07	4.65E-07	9.74E-08	2.66E-07	4.09E-07	9.13E-13	4.38E-04
Tc-102m	2.15E-06	1.22E-05	2.23E-06	6.38E-06	1.02E-05	2.42E-11	1.12E-02
Tc-104	1.94E-06	1.12E-05	2.00E-06	5.76E-06	9.29E-06	2.23E-11	1.03E-02
Tc-105	7.15E-07	3.64E-06	7.24E-07	2.04E-06	3.17E-06	7.54E-12	3.47E-03
Tc-91	2.16E-06	1.23E-05	2.23E-06	6.40E-06	1.03E-05	2.44E-11	1.13E-02
Tc-91m	1.31E-06	6.41E-06	1.33E-06	3.74E-06	5.75E-06	1.32E-11	6.08E-03
Tc-92	3.38E-06	1.80E-05	3.48E-06	9.89E-06	1.55E-05	3.65E-11	1.68E-02
Tc-93	1.34E-06	7.80E-06	1.40E-06	4.02E-06	6.50E-06	1.53E-11	7.07E-03
Tc-93m	7.87E-07	4.82E-06	8.21E-07	2.39E-06	3.89E-06	9.59E-12	4.42E-03
Tc-94	2.37E-06	1.23E-05	2.43E-06	6.90E-06	1.08E-05	2.48E-11	1.14E-02
Tc-94m	1.74E-06	9.19E-06	1.78E-06	5.05E-06	7.96E-06	1.86E-11	8.55E-03
Tc-95	7.06E-07	3.64E-06	7.22E-07	2.04E-06	3.20E-06	7.32E-12	3.38E-03
Tc-95m	6.06E-07	2.99E-06	6.19E-07	1.75E-06	2.68E-06	6.23E-12	2.86E-03
Tc-96	2.23E-06	1.16E-05	2.28E-06	6.49E-06	1.02E-05	2.34E-11	1.08E-02
Tc-96m	3.85E-08	1.98E-07	3.82E-08	1.08E-07	1.71E-07	3.96E-13	1.82E-04
Tc-97	2.78E-09	2.86E-10	2.88E-10	2.86E-10	2.86E-10	3.82E-15	1.62E-06
Tc-97m	2.77E-09	1.03E-09	5.35E-10	8.88E-10	1.03E-09	6.17E-15	2.69E-06
Tc-98	1.27E-06	6.45E-06	1.30E-06	3.68E-06	5.72E-06	1.31E-11	6.02E-03
Tc-99	5.34E-11	8.29E-11	3.50E-11	7.03E-11	8.25E-11	5.62E-16	4.36E-07
Tc-99m	1.06E-07	3.95E-07	1.08E-07	2.88E-07	3.89E-07	1.07E-12	4.83E-04
Te-113	1.98E-06	1.06E-05	2.02E-06	5.78E-06	9.12E-06	2.13E-11	9.82E-03
Te-114	1.10E-06	6.02E-06	1.13E-06	3.24E-06	5.13E-06	1.22E-11	5.59E-03

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Te-115	1.99E-06	1.06E-05	2.04E-06	5.80E-06	9.15E-06	2.13E-11	9.82E-03
Te-115m	2.28E-06	1.25E-05	2.36E-06	6.71E-06	1.07E-05	2.50E-11	1.15E-02
Te-116	8.53E-08	2.96E-07	7.37E-08	1.91E-07	2.72E-07	7.36E-13	3.34E-04
Te-117	1.34E-06	7.42E-06	1.38E-06	3.97E-06	6.31E-06	1.48E-11	6.84E-03
Te-118	9.92E-09	2.72E-09	2.62E-09	2.73E-09	2.72E-09	2.63E-14	1.12E-05
Te-118+D	7.46E-07	3.53E-06	7.43E-07	2.09E-06	3.20E-06	7.34E-12	3.39E-03
Te-118+E	7.46E-07	3.53E-06	7.43E-07	2.09E-06	3.20E-06	7.34E-12	3.39E-03
Te-119	6.78E-07	3.45E-06	6.88E-07	1.95E-06	3.04E-06	6.99E-12	3.23E-03
Te-119m	1.31E-06	7.07E-06	1.34E-06	3.82E-06	6.04E-06	1.43E-11	6.57E-03
Te-121	5.12E-07	2.47E-06	5.16E-07	1.45E-06	2.22E-06	5.11E-12	2.35E-03
Te-121m	1.84E-07	7.87E-07	1.83E-07	5.09E-07	7.42E-07	1.82E-12	8.35E-04
Te-123	1.73E-11	4.72E-12	4.55E-12	4.73E-12	4.72E-12	4.57E-17	1.95E-08
Te-123m	1.22E-07	4.48E-07	1.18E-07	3.18E-07	4.40E-07	1.17E-12	5.31E-04
Te-125m	1.93E-08	6.92E-09	5.91E-09	6.75E-09	6.92E-09	5.83E-14	2.50E-05
Te-127	5.30E-09	2.10E-08	4.68E-09	1.30E-08	1.95E-08	4.65E-14	2.21E-05
Te-127m	6.03E-09	2.68E-09	1.95E-09	2.45E-09	2.63E-09	1.93E-14	8.30E-06
Te-129	6.21E-08	2.57E-07	5.52E-08	1.54E-07	2.34E-07	5.44E-13	2.53E-04
Te-129m	3.41E-08	1.39E-07	2.94E-08	8.01E-08	1.24E-07	2.91E-13	1.34E-04
Te-131	3.80E-07	1.78E-06	3.80E-07	1.06E-06	1.60E-06	3.82E-12	1.77E-03
Te-131m	1.29E-06	6.76E-06	1.32E-06	3.74E-06	5.88E-06	1.37E-11	6.30E-03
Te-132	1.96E-07	7.83E-07	1.91E-07	5.24E-07	7.53E-07	1.88E-12	8.58E-04
Te-133	1.06E-06	5.70E-06	1.08E-06	3.10E-06	4.90E-06	1.15E-11	5.32E-03
Te-133m	1.64E-06	8.77E-06	1.69E-06	4.79E-06	7.58E-06	1.77E-11	8.12E-03
Te-134	7.74E-07	3.73E-06	7.87E-07	2.21E-06	3.37E-06	7.87E-12	3.61E-03
Th-223	5.85E-08	1.85E-07	5.67E-08	1.42E-07	1.82E-07	5.59E-13	2.51E-04
Th-224	1.96E-08	8.03E-08	1.98E-08	5.46E-08	7.74E-08	1.98E-13	8.97E-05
Th-226	6.63E-09	2.36E-08	6.51E-09	1.71E-08	2.31E-08	6.44E-14	2.91E-05
Th-227	1.07E-07	4.45E-07	1.07E-07	2.94E-07	4.24E-07	1.06E-12	4.82E-04
Th-228	1.89E-09	5.65E-09	1.67E-09	4.23E-09	5.55E-09	1.66E-14	7.46E-06
Th-229	7.08E-08	2.24E-07	6.77E-08	1.71E-07	2.22E-07	6.69E-13	3.00E-04
Th-229+D	7.97E-08	2.30E-07	7.22E-08	1.77E-07	2.28E-07	7.11E-13	3.19E-04
Th-229+E	7.97E-08	2.30E-07	7.22E-08	1.77E-07	2.28E-07	7.11E-13	3.19E-04
Th-230	4.92E-10	8.46E-10	3.01E-10	6.79E-10	8.36E-10	3.02E-15	1.34E-06

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Th-231	1.24E-08	2.49E-08	8.94E-09	2.04E-08	2.49E-08	8.90E-14	3.97E-05
Th-232	3.26E-10	3.59E-10	1.53E-10	3.10E-10	3.58E-10	1.54E-15	6.82E-07
Th-232+D	7.67E-07	4.04E-06	7.84E-07	2.23E-06	3.51E-06	8.16E-12	3.76E-03
Th-232+E	7.67E-07	4.04E-06	7.84E-07	2.23E-06	3.51E-06	8.16E-12	3.76E-03
Th-233	3.62E-08	1.44E-07	3.22E-08	8.79E-08	1.31E-07	3.18E-13	1.47E-04
Th-234	7.34E-09	1.78E-08	6.51E-09	1.49E-08	1.78E-08	6.39E-14	2.85E-05
Th-234+D	3.60E-08	1.08E-07	2.58E-08	6.66E-08	9.71E-08	2.47E-13	1.17E-04
Th-234+E	3.60E-08	1.08E-07	2.58E-08	6.66E-08	9.71E-08	2.47E-13	1.17E-04
Th-235	5.93E-08	2.48E-07	5.24E-08	1.45E-07	2.22E-07	5.12E-13	2.40E-04
Th-236	3.33E-08	1.32E-07	3.05E-08	8.34E-08	1.23E-07	3.02E-13	1.39E-04
Ti-44	1.12E-07	2.48E-07	1.00E-07	2.17E-07	2.48E-07	9.76E-13	4.33E-04
Ti-44+D	2.02E-06	1.02E-05	2.04E-06	5.78E-06	8.94E-06	2.10E-11	9.70E-03
Ti-44+E	2.02E-06	1.02E-05	2.04E-06	5.78E-06	8.94E-06	2.10E-11	9.70E-03
Ti-45	7.89E-07	3.80E-06	8.02E-07	2.26E-06	3.46E-06	7.90E-12	3.64E-03
Ti-51	3.44E-07	1.57E-06	3.42E-07	9.61E-07	1.45E-06	3.37E-12	1.55E-03
Ti-52	1.18E-07	3.79E-07	1.09E-07	2.84E-07	3.75E-07	1.07E-12	4.86E-04
Tl-190	1.19E-06	5.72E-06	1.20E-06	3.37E-06	5.17E-06	1.19E-11	5.48E-03
Tl-190m	2.21E-06	1.09E-05	2.24E-06	6.34E-06	9.77E-06	2.26E-11	1.04E-02
Tl-194	8.28E-07	3.92E-06	8.36E-07	2.34E-06	3.55E-06	8.26E-12	3.80E-03
Tl-194m	2.26E-06	1.11E-05	2.30E-06	6.45E-06	9.92E-06	2.30E-11	1.06E-02
Tl-195	1.04E-06	5.83E-06	1.08E-06	3.07E-06	4.90E-06	1.18E-11	5.42E-03
Tl-196	1.61E-06	8.93E-06	1.67E-06	4.77E-06	7.56E-06	1.80E-11	8.30E-03
Tl-197	3.95E-07	1.89E-06	3.98E-07	1.10E-06	1.67E-06	4.10E-12	1.88E-03
Tl-198	1.73E-06	9.70E-06	1.78E-06	5.11E-06	8.15E-06	1.95E-11	8.98E-03
Tl-198m	1.08E-06	5.14E-06	1.10E-06	3.09E-06	4.68E-06	1.09E-11	5.02E-03
Tl-199	2.14E-07	8.65E-07	2.11E-07	5.63E-07	8.07E-07	2.09E-12	9.54E-04
Tl-200	1.15E-06	5.94E-06	1.18E-06	3.33E-06	5.18E-06	1.22E-11	5.62E-03
Tl-201	7.26E-08	1.88E-07	6.66E-08	1.54E-07	1.87E-07	6.52E-13	2.91E-04
Tl-202	4.10E-07	1.84E-06	4.13E-07	1.14E-06	1.70E-06	4.06E-12	1.86E-03
Tl-204	2.40E-09	2.99E-09	1.16E-09	2.53E-09	2.97E-09	1.16E-14	6.07E-06
Tl-206	8.58E-09	6.11E-09	2.08E-09	4.41E-09	5.87E-09	1.47E-14	9.41E-06
Tl-206m	2.15E-06	1.07E-05	2.21E-06	6.23E-06	9.56E-06	2.22E-11	1.02E-02
Tl-207	9.54E-09	1.59E-08	3.82E-09	9.61E-09	1.43E-08	3.41E-14	1.81E-05

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)			(L per pCi yr)	(cm ³ per pCi yr)
Tl-208	2.77E-06	1.75E-05	2.90E-06	8.45E-06	1.39E-05	3.46E-11	1.59E-02
Tl-209	1.86E-06	1.03E-05	1.91E-06	5.48E-06	8.72E-06	2.08E-11	9.59E-03
Tl-210	2.41E-06	1.34E-05	2.49E-06	7.13E-06	1.14E-05	2.69E-11	1.24E-02
Tm-161	1.11E-06	5.80E-06	1.11E-06	3.12E-06	4.91E-06	1.20E-11	5.53E-03
Tm-162	1.65E-06	9.32E-06	1.69E-06	4.84E-06	7.76E-06	1.87E-11	8.60E-03
Tm-163	1.14E-06	6.04E-06	1.15E-06	3.25E-06	5.14E-06	1.23E-11	5.68E-03
Tm-164	6.90E-07	3.51E-06	6.98E-07	1.96E-06	3.06E-06	7.20E-12	3.32E-03
Tm-165	4.89E-07	2.21E-06	4.86E-07	1.33E-06	2.00E-06	4.86E-12	2.22E-03
Tm-166	1.70E-06	9.53E-06	1.75E-06	4.99E-06	7.98E-06	1.91E-11	8.79E-03
Tm-167	1.22E-07	4.03E-07	1.12E-07	2.82E-07	3.88E-07	1.09E-12	4.94E-04
Tm-168	1.10E-06	5.35E-06	1.11E-06	3.10E-06	4.78E-06	1.12E-11	5.17E-03
Tm-170	6.09E-09	8.00E-09	3.20E-09	6.77E-09	7.96E-09	3.09E-14	1.51E-05
Tm-171	4.66E-10	6.66E-10	3.50E-10	6.30E-10	6.66E-10	3.34E-15	1.46E-06
Tm-172	4.15E-07	2.34E-06	4.25E-07	1.21E-06	1.95E-06	4.63E-12	2.14E-03
Tm-173	3.50E-07	1.62E-06	3.54E-07	9.95E-07	1.50E-06	3.47E-12	1.60E-03
Tm-174	1.58E-06	7.81E-06	1.61E-06	4.55E-06	6.97E-06	1.64E-11	7.52E-03
Tm-175	9.71E-07	4.94E-06	9.91E-07	2.81E-06	4.36E-06	1.01E-11	4.64E-03
Tm-176	1.70E-06	9.48E-06	1.75E-06	4.99E-06	7.97E-06	1.92E-11	8.81E-03
U-227	9.88E-08	3.89E-07	9.89E-08	2.67E-07	3.75E-07	9.77E-13	4.44E-04
U-228	3.50E-09	1.14E-08	3.24E-09	8.38E-09	1.12E-08	3.20E-14	1.45E-05
U-230	1.24E-09	3.07E-09	9.15E-10	2.28E-09	3.00E-09	9.12E-15	4.10E-06
U-231	5.95E-08	1.66E-07	5.41E-08	1.32E-07	1.65E-07	5.35E-13	2.40E-04
U-232	5.05E-10	5.45E-10	2.02E-10	4.34E-10	5.38E-10	2.09E-15	9.26E-07
U-233	3.58E-10	7.12E-10	2.08E-10	5.07E-10	6.89E-10	2.09E-15	9.39E-07
U-234	3.82E-10	2.54E-10	1.09E-10	2.11E-10	2.53E-10	1.17E-15	5.13E-07
U-235	1.39E-07	5.52E-07	1.41E-07	3.83E-07	5.37E-07	1.39E-12	6.32E-04
U-235+D	1.52E-07	5.76E-07	1.50E-07	4.04E-07	5.61E-07	1.48E-12	6.72E-04
U-235+E	1.52E-07	5.76E-07	1.50E-07	4.04E-07	5.61E-07	1.48E-12	6.72E-04
U-235m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-236	3.06E-10	1.24E-10	6.25E-11	1.07E-10	1.23E-10	7.01E-16	3.06E-07
U-237	1.13E-07	3.73E-07	1.07E-07	2.73E-07	3.66E-07	1.06E-12	4.77E-04
U-238	2.48E-10	1.24E-10	5.26E-11	9.43E-11	1.16E-10	5.99E-16	2.62E-07
U-238+D	3.83E-08	1.19E-07	2.79E-08	7.26E-08	1.07E-07	2.69E-13	1.27E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
U-238+E	3.83E-08	1.19E-07	2.79E-08	7.26E-08	1.07E-07	2.69E-13	1.27E-04
U-239	4.61E-08	1.19E-07	3.83E-08	8.94E-08	1.14E-07	3.76E-13	1.71E-04
U-240	4.65E-09	1.16E-08	3.63E-09	8.88E-09	1.15E-08	3.62E-14	1.65E-05
U-242	4.03E-08	1.52E-07	3.61E-08	9.58E-08	1.40E-07	3.53E-13	1.62E-04
V-47	9.11E-07	4.36E-06	9.20E-07	2.58E-06	3.96E-06	9.07E-12	4.17E-03
V-48	2.56E-06	1.40E-05	2.64E-06	7.56E-06	1.20E-05	2.78E-11	1.29E-02
V-49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
V-50	1.22E-06	7.22E-06	1.27E-06	3.67E-06	5.96E-06	1.41E-11	6.52E-03
V-52	1.26E-06	7.34E-06	1.30E-06	3.76E-06	6.08E-06	1.43E-11	6.63E-03
V-53	9.36E-07	5.02E-06	9.54E-07	2.71E-06	4.30E-06	9.96E-12	4.59E-03
W-177	7.97E-07	3.71E-06	8.01E-07	2.19E-06	3.31E-06	8.11E-12	3.72E-03
W-178	1.14E-08	1.80E-08	8.94E-09	1.68E-08	1.80E-08	8.58E-14	3.75E-05
W-178+D	1.11E-07	4.06E-07	1.02E-07	2.51E-07	3.58E-07	1.04E-12	4.71E-04
W-178+E	1.11E-07	4.06E-07	1.02E-07	2.51E-07	3.58E-07	1.04E-12	4.71E-04
W-179	3.97E-08	5.90E-08	2.97E-08	5.52E-08	5.90E-08	2.86E-13	1.25E-04
W-179m	4.44E-08	1.22E-07	3.98E-08	9.26E-08	1.19E-07	3.88E-13	1.74E-04
W-181	3.02E-08	4.79E-08	2.38E-08	4.47E-08	4.79E-08	2.28E-13	1.00E-04
W-185	1.34E-10	2.82E-10	1.04E-10	2.28E-10	2.81E-10	1.36E-15	9.15E-07
W-185m	1.98E-08	6.06E-08	1.87E-08	4.58E-08	5.96E-08	1.84E-13	8.25E-05
W-187	4.02E-07	1.92E-06	4.06E-07	1.13E-06	1.73E-06	4.03E-12	1.86E-03
W-188	1.70E-09	7.03E-09	1.69E-09	4.62E-09	6.69E-09	1.68E-14	7.87E-06
W-190	1.25E-07	3.61E-07	1.14E-07	2.77E-07	3.55E-07	1.12E-12	5.03E-04
Xe-120	3.43E-07	1.57E-06	3.35E-07	9.26E-07	1.41E-06	3.36E-12	1.54E-03
Xe-121	1.27E-06	7.00E-06	1.30E-06	3.72E-06	5.92E-06	1.41E-11	6.53E-03
Xe-122	5.27E-08	1.84E-07	4.47E-08	1.18E-07	1.73E-07	4.38E-13	2.00E-04
Xe-123	5.56E-07	2.76E-06	5.61E-07	1.58E-06	2.44E-06	5.80E-12	2.67E-03
Xe-125	2.28E-07	9.38E-07	2.21E-07	6.04E-07	8.81E-07	2.19E-12	9.98E-04
Xe-127	2.36E-07	9.53E-07	2.32E-07	6.34E-07	9.13E-07	2.28E-12	1.04E-03
Xe-127m	1.38E-07	4.83E-07	1.33E-07	3.52E-07	4.76E-07	1.32E-12	5.97E-04
Xe-129m	3.27E-08	4.26E-08	1.66E-08	3.20E-08	4.15E-08	1.64E-13	7.24E-05
Xe-131m	1.26E-08	1.45E-08	6.10E-09	1.13E-08	1.43E-08	6.01E-14	2.67E-05
Xe-133	3.51E-08	6.75E-08	2.71E-08	5.78E-08	6.76E-08	2.65E-13	1.17E-04
Xe-133m	3.05E-08	9.27E-08	2.43E-08	6.23E-08	8.90E-08	2.40E-13	1.09E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Xe-135	2.20E-07	9.70E-07	2.24E-07	6.27E-07	9.21E-07	2.21E-12	1.01E-03
Xe-135m	3.82E-07	1.85E-06	3.89E-07	1.09E-06	1.67E-06	3.83E-12	1.77E-03
Xe-137	2.01E-07	9.24E-07	1.93E-07	5.35E-07	8.23E-07	1.88E-12	8.81E-04
Xe-138	9.59E-07	5.61E-06	9.91E-07	2.86E-06	4.64E-06	1.12E-11	5.16E-03
Y-81	1.08E-06	5.00E-06	1.08E-06	3.03E-06	4.57E-06	1.06E-11	4.90E-03
Y-83	1.22E-06	6.03E-06	1.23E-06	3.48E-06	5.38E-06	1.24E-11	5.72E-03
Y-83m	7.63E-07	3.59E-06	7.71E-07	2.17E-06	3.28E-06	7.58E-12	3.48E-03
Y-84m	3.55E-06	1.87E-05	3.65E-06	1.03E-05	1.62E-05	3.74E-11	1.73E-02
Y-85	9.77E-07	4.73E-06	9.93E-07	2.81E-06	4.29E-06	9.81E-12	4.52E-03
Y-85m	1.17E-06	6.22E-06	1.19E-06	3.40E-06	5.37E-06	1.26E-11	5.80E-03
Y-86	3.12E-06	1.73E-05	3.22E-06	9.22E-06	1.47E-05	3.44E-11	1.59E-02
Y-86m	1.91E-07	8.35E-07	1.96E-07	5.48E-07	7.94E-07	1.94E-12	8.88E-04
Y-87	3.95E-07	1.89E-06	4.02E-07	1.13E-06	1.73E-06	3.95E-12	1.82E-03
Y-87m	2.74E-07	1.27E-06	2.79E-07	7.87E-07	1.18E-06	2.75E-12	1.26E-03
Y-88	2.29E-06	1.37E-05	2.39E-06	6.92E-06	1.12E-05	2.68E-11	1.24E-02
Y-89m	8.03E-07	4.26E-06	8.27E-07	2.34E-06	3.69E-06	8.50E-12	3.93E-03
Y-90	1.67E-08	1.91E-08	6.10E-09	1.31E-08	1.80E-08	3.75E-14	2.29E-05
Y-90m	5.65E-07	2.61E-06	5.76E-07	1.62E-06	2.42E-06	5.68E-12	2.61E-03
Y-91	1.27E-08	2.28E-08	5.35E-09	1.34E-08	2.01E-08	4.72E-14	2.48E-05
Y-91m	4.76E-07	2.34E-06	4.86E-07	1.37E-06	2.10E-06	4.80E-12	2.22E-03
Y-92	2.49E-07	1.26E-06	2.43E-07	6.86E-07	1.08E-06	2.49E-12	1.16E-03
Y-93	1.04E-07	4.96E-07	9.54E-08	2.67E-07	4.22E-07	9.91E-13	4.65E-04
Y-94	7.14E-07	3.81E-06	7.24E-07	2.06E-06	3.26E-06	7.55E-12	3.50E-03
Y-95	9.33E-07	5.92E-06	9.71E-07	2.82E-06	4.68E-06	1.16E-11	5.35E-03
Yb-162	2.13E-07	8.08E-07	2.06E-07	5.37E-07	7.61E-07	2.03E-12	9.20E-04
Yb-163	6.39E-07	3.24E-06	6.45E-07	1.81E-06	2.82E-06	6.69E-12	3.07E-03
Yb-164	4.22E-08	9.04E-08	3.33E-08	6.83E-08	8.56E-08	3.20E-13	1.41E-04
Yb-165	2.85E-07	1.20E-06	2.73E-07	7.20E-07	1.07E-06	2.78E-12	1.27E-03
Yb-166	6.56E-08	9.53E-08	4.88E-08	8.87E-08	9.53E-08	4.66E-13	2.05E-04
Yb-167	2.16E-07	6.24E-07	1.95E-07	4.64E-07	6.04E-07	1.92E-12	8.59E-04
Yb-169	2.69E-07	8.05E-07	2.43E-07	5.91E-07	7.84E-07	2.38E-12	1.07E-03
Yb-175	3.45E-08	1.52E-07	3.48E-08	9.61E-08	1.41E-07	3.41E-13	1.57E-04
Yb-177	1.75E-07	8.59E-07	1.74E-07	4.84E-07	7.49E-07	1.81E-12	8.35E-04

Continued on next page

Table 2.4: Risk coefficients for external exposure

Nuclide	Grd Plane	Soil Volume	1cm	5cm	15cm	Immersion	Submersion
	(cm ² per pCi yr)		(g per pCi yr)				
Yb-178	3.45E-08	1.57E-07	3.48E-08	9.74E-08	1.46E-07	3.41E-13	1.58E-04
Yb-179	8.86E-07	4.29E-06	8.96E-07	2.53E-06	3.87E-06	8.88E-12	4.09E-03
Zn-60	1.39E-06	6.70E-06	1.41E-06	3.97E-06	6.07E-06	1.39E-11	6.42E-03
Zn-61	1.39E-06	7.13E-06	1.41E-06	4.00E-06	6.25E-06	1.45E-11	6.71E-03
Zn-62	3.94E-07	1.89E-06	3.98E-07	1.12E-06	1.72E-06	3.94E-12	1.81E-03
Zn-63	1.00E-06	4.86E-06	1.01E-06	2.86E-06	4.38E-06	1.01E-11	4.63E-03
Zn-65	5.10E-07	2.81E-06	5.27E-07	1.50E-06	2.40E-06	5.55E-12	2.56E-03
Zn-69	2.93E-09	1.68E-09	5.70E-10	1.26E-09	1.64E-09	5.48E-15	3.80E-06
Zn-69m	3.74E-07	1.77E-06	3.82E-07	1.08E-06	1.62E-06	3.75E-12	1.72E-03
Zn-71	3.00E-07	1.45E-06	2.96E-07	8.32E-07	1.29E-06	2.96E-12	1.37E-03
Zn-71m	1.40E-06	6.89E-06	1.43E-06	4.04E-06	6.21E-06	1.43E-11	6.58E-03
Zn-72	1.24E-07	4.68E-07	1.26E-07	3.39E-07	4.61E-07	1.25E-12	5.65E-04
Zr-85	1.34E-06	6.57E-06	1.36E-06	3.83E-06	5.90E-06	1.36E-11	6.25E-03
Zr-86	2.45E-07	1.07E-06	2.47E-07	6.90E-07	1.01E-06	2.43E-12	1.11E-03
Zr-87	8.46E-07	4.10E-06	8.55E-07	2.41E-06	3.71E-06	8.50E-12	3.92E-03
Zr-88	3.44E-07	1.60E-06	3.50E-07	9.86E-07	1.48E-06	3.44E-12	1.58E-03
Zr-89	1.03E-06	5.37E-06	1.06E-06	2.99E-06	4.69E-06	1.08E-11	4.97E-03
Zr-89m	5.67E-07	2.88E-06	5.82E-07	1.65E-06	2.56E-06	5.87E-12	2.70E-03
Zr-93	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.87E-21	7.53E-12
Zr-95	6.58E-07	3.37E-06	6.75E-07	1.91E-06	2.98E-06	6.80E-12	3.13E-03
Zr-97	7.98E-07	4.08E-06	8.10E-07	2.30E-06	3.59E-06	8.23E-12	3.80E-03

2.5 Morbidity risk coefficients for ingestion

Explanation of Entries:

Table 2.5 contains the morbidity risk coefficients, also known as slope factors, for internal exposure due to ingestion of a radionuclide. Four ingestion scenarios are provided: tap water, diet, soil for population, soil for worker.

Tap water risk coefficients include drinking water, water added to beverages, and water added to foods during preparation, but not water intrinsic in food.

Soil population refers to morbidity coefficients for ingestion of soil averaged over all ages in a population. Examples of soil ingestion include a child consuming soil, touching a soil covered surface and then ingesting food without washing hands, and dust ingestion.

Soil worker refers to adult-specific morbidity coefficients for soil ingestion. The calculation associated with these values uses a different ingestion rate compared to that used for the general population. Soil worker slope factors should not be applied to minors.

Type: Separate dose rate coefficients are given for ^3H as tritiated water and organically bound tritium, and for inorganic and organic forms of radioisotopes of sulfur, mercury, and polonium.

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population		Soil Worker
				(pCi ⁻¹)		
Ac-223		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-223+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-224		5.33E-12	7.66E-12	1.37E-11	2.64E-12	2.64E-12
Ac-225		1.89E-10	2.72E-10	4.88E-10	9.03E-11	9.03E-11
Ac-225+D		1.89E-10	2.72E-10	4.88E-10	9.03E-11	9.03E-11
Ac-225+E		1.89E-10	2.72E-10	4.88E-10	9.03E-11	9.03E-11
Ac-226		6.96E-11	1.02E-10	1.89E-10	2.87E-11	2.87E-11
Ac-227		2.01E-10	2.45E-10	2.90E-10	2.01E-10	2.01E-10
Ac-228		1.88E-12	2.73E-12	4.92E-12	8.58E-13	8.58E-13
Ac-230		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-231		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-232		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ac-233		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-100m		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-101		5.96E-14	8.25E-14	1.26E-13	4.51E-14	4.51E-14
Ag-102		7.44E-14	1.02E-13	1.51E-13	5.92E-14	5.92E-14
Ag-102m		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-103		1.05E-13	1.47E-13	2.43E-13	6.44E-14	6.44E-14
Ag-104		1.67E-13	2.31E-13	3.64E-13	1.10E-13	1.10E-13
Ag-104m		1.37E-13	1.91E-13	2.99E-13	9.69E-14	9.69E-14
Ag-105		1.75E-12	2.46E-12	4.14E-12	9.66E-13	9.66E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Ag-105m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-106		5.81E-14	8.07E-14	1.24E-13	4.37E-14
Ag-106m		4.77E-12	6.66E-12	1.09E-11	2.80E-12
Ag-108		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-108m		8.10E-12	1.11E-11	1.80E-11	5.03E-12
Ag-108m+D		8.10E-12	1.11E-11	1.80E-11	5.03E-12
Ag-108m+E		8.10E-12	1.11E-11	1.80E-11	5.03E-12
Ag-109m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-110		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-110m		1.00E-11	1.39E-11	2.28E-11	6.03E-12
Ag-110m+D		1.00E-11	1.39E-11	2.28E-11	6.03E-12
Ag-110m+E		1.00E-11	1.39E-11	2.28E-11	6.03E-12
Ag-111		8.21E-12	1.20E-11	2.23E-11	3.36E-12
Ag-111m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-112		1.96E-12	2.86E-12	5.18E-12	8.99E-13
Ag-113		2.20E-12	3.22E-12	5.92E-12	9.40E-13
Ag-113m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-114		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-115		1.42E-13	2.02E-13	3.33E-13	9.07E-14
Ag-116		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-117		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ag-99		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Al-26		1.73E-11	2.48E-11	4.40E-11	8.18E-12
Al-28		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Al-29		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Am-237		5.25E-14	7.40E-14	1.22E-13	3.21E-14
Am-238		9.55E-14	1.34E-13	2.16E-13	5.96E-14
Am-239		1.42E-12	2.08E-12	3.77E-12	6.18E-13
Am-240		2.64E-12	3.77E-12	6.62E-12	1.30E-12
Am-241		1.04E-10	1.34E-10	1.84E-10	9.10E-11
Am-242		1.81E-12	2.64E-12	4.85E-12	7.59E-13
Am-242m		7.07E-11	8.73E-11	1.04E-10	7.33E-11
Am-242m+D		7.25E-11	8.99E-11	1.09E-10	7.40E-11

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Am-242m+E		7.25E-11	8.99E-11	1.09E-10	7.40E-11
Am-243		1.04E-10	1.34E-10	1.85E-10	9.03E-11
Am-243+D		1.09E-10	1.42E-10	1.99E-10	9.25E-11
Am-243+E		1.09E-10	1.42E-10	1.99E-10	9.25E-11
Am-244		2.47E-12	3.59E-12	6.51E-12	1.10E-12
Am-244m		5.22E-14	7.29E-14	1.13E-13	3.89E-14
Am-245		2.22E-13	3.22E-13	5.74E-13	1.10E-13
Am-246		1.36E-13	1.91E-13	3.05E-13	9.32E-14
Am-246m		6.59E-14	9.10E-14	1.39E-13	4.92E-14
Am-247		5.29E-14	7.33E-14	1.13E-13	4.03E-14
Ar-37		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-39		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-41		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-42		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-42+D		1.26E-12	1.74E-12	2.88E-12	8.40E-13
Ar-42+E		1.26E-12	1.74E-12	2.88E-12	8.40E-13
Ar-43		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ar-44		0.00E+00	0.00E+00	0.00E+00	0.00E+00
As-68		0.00E+00	0.00E+00	0.00E+00	0.00E+00
As-69		9.92E-14	1.38E-13	2.13E-13	7.40E-14
As-70		3.29E-13	4.59E-13	7.44E-13	2.22E-13
As-71		2.25E-12	3.25E-12	5.88E-12	1.08E-12
As-72		1.03E-11	1.50E-11	2.80E-11	4.59E-12
As-73		1.57E-12	2.29E-12	4.26E-12	6.88E-13
As-74		6.66E-12	9.62E-12	1.75E-11	3.16E-12
As-76		9.58E-12	1.40E-11	2.65E-11	4.11E-12
As-77		2.47E-12	3.63E-12	6.88E-12	1.04E-12
As-78		5.88E-13	8.44E-13	1.47E-12	3.36E-13
As-79		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-204		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-205		1.44E-13	1.96E-13	3.10E-13	1.05E-13
At-206		1.65E-13	2.25E-13	3.54E-13	1.21E-13
At-207		6.51E-13	8.92E-13	1.45E-12	4.51E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
At-208		2.38E-13	3.23E-13	5.00E-13	1.78E-13
At-209		1.13E-12	1.54E-12	2.52E-12	7.77E-13
At-210		2.70E-12	3.69E-12	6.11E-12	1.83E-12
At-211		3.37E-11	4.63E-11	7.73E-11	2.23E-11
At-211+D		3.37E-11	4.63E-11	7.73E-11	2.23E-11
At-211+E		3.37E-11	4.63E-11	7.73E-11	2.23E-11
At-215		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-216		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-217		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-218		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-219		0.00E+00	0.00E+00	0.00E+00	0.00E+00
At-220		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Au-186		9.47E-14	1.32E-13	2.09E-13	6.59E-14
Au-187		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Au-190		1.02E-13	1.41E-13	2.19E-13	7.10E-14
Au-191		3.00E-13	4.29E-13	7.55E-13	1.52E-13
Au-192		6.29E-13	8.92E-13	1.51E-12	3.46E-13
Au-193		6.85E-13	9.95E-13	1.81E-12	3.06E-13
Au-193m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Au-194		1.61E-12	2.28E-12	3.92E-12	8.40E-13
Au-195		1.55E-12	2.26E-12	4.14E-12	6.66E-13
Au-195m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Au-196		1.54E-12	2.20E-12	3.85E-12	7.59E-13
Au-196m		2.25E-12	3.28E-12	6.03E-12	9.62E-13
Au-198		6.29E-12	9.18E-12	1.69E-11	2.66E-12
Au-198m		7.10E-12	1.04E-11	1.91E-11	3.05E-12
Au-199		2.82E-12	4.14E-12	7.62E-12	1.18E-12
Au-200		1.54E-13	2.17E-13	3.58E-13	9.81E-14
Au-200m		5.07E-12	7.29E-12	1.31E-11	2.33E-12
Au-201		4.26E-14	5.96E-14	9.29E-14	3.15E-14
Au-202		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ba-124		1.12E-13	1.54E-13	2.28E-13	9.03E-14
Ba-126		8.51E-13	1.22E-12	2.13E-12	4.70E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Ba-127		4.59E-14	6.33E-14	9.73E-14	3.48E-14
Ba-128		1.57E-11	2.30E-11	4.29E-11	7.10E-12
Ba-129		1.79E-13	2.56E-13	4.48E-13	9.62E-14
Ba-129m		2.23E-13	3.12E-13	5.14E-13	1.38E-13
Ba-131		2.03E-12	2.90E-12	5.11E-12	1.04E-12
Ba-131m		9.40E-15	1.31E-14	2.03E-14	6.99E-15
Ba-133		6.88E-12	9.47E-12	1.31E-11	4.40E-12
Ba-133m		3.26E-12	4.77E-12	9.03E-12	1.45E-12
Ba-135m		2.56E-12	3.74E-12	7.07E-12	1.14E-12
Ba-137m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ba-139		3.74E-13	5.37E-13	9.36E-13	2.08E-13
Ba-140		1.50E-11	2.19E-11	4.03E-11	6.85E-12
Ba-141		2.25E-13	3.22E-13	5.62E-13	1.29E-13
Ba-142		9.03E-14	1.28E-13	2.12E-13	5.66E-14
Be-10		7.03E-12	1.03E-11	1.89E-11	2.96E-12
Be-7		8.73E-14	1.21E-13	1.97E-13	5.11E-14
Bi-197		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-200		1.61E-13	2.27E-13	3.70E-13	9.99E-14
Bi-201		4.18E-13	5.92E-13	1.00E-12	2.28E-13
Bi-202		3.02E-13	4.22E-13	6.88E-13	1.85E-13
Bi-203		1.94E-12	2.75E-12	4.70E-12	1.01E-12
Bi-204		2.12E-12	2.99E-12	5.03E-12	1.14E-12
Bi-205		3.36E-12	4.74E-12	7.99E-12	1.81E-12
Bi-206		7.81E-12	1.11E-11	1.91E-11	4.00E-12
Bi-207		5.74E-12	8.25E-12	1.45E-11	2.80E-12
Bi-208		3.89E-12	5.40E-12	8.88E-12	2.22E-12
Bi-210		8.92E-12	1.30E-11	2.40E-11	3.74E-12
Bi-210m		5.55E-11	7.77E-11	1.35E-10	2.92E-11
Bi-210m+D		5.55E-11	7.77E-11	1.35E-10	2.92E-11
Bi-210m+E		5.55E-11	7.77E-11	1.35E-10	2.92E-11
Bi-211		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-212		7.18E-13	1.01E-12	1.68E-12	4.44E-13
Bi-212+D		7.18E-13	1.01E-12	1.68E-12	4.44E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Bi-212+E		7.18E-13	1.01E-12	1.68E-12	4.44E-13
Bi-212n		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-213		5.07E-13	7.18E-13	1.19E-12	3.17E-13
Bi-213+D		5.07E-13	7.18E-13	1.19E-12	3.17E-13
Bi-213+E		5.07E-13	7.18E-13	1.19E-12	3.17E-13
Bi-214		1.92E-13	2.65E-13	4.03E-13	1.47E-13
Bi-214+D		1.92E-13	2.65E-13	4.03E-13	1.47E-13
Bi-214+E		1.92E-13	2.65E-13	4.03E-13	1.47E-13
Bi-215		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-215+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-215+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi-216		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bk-245		3.47E-12	5.07E-12	9.29E-12	1.46E-12
Bk-246		1.96E-12	2.81E-12	4.92E-12	9.55E-13
Bk-247		1.25E-10	1.61E-10	2.13E-10	1.12E-10
Bk-248m		2.47E-12	3.62E-12	6.66E-12	1.02E-12
Bk-249		1.10E-12	1.56E-12	2.69E-12	5.99E-13
Bk-250		5.70E-13	8.21E-13	1.45E-12	2.79E-13
Bk-251		9.32E-14	1.33E-13	2.23E-13	5.66E-14
Br-72		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-73		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-74		1.47E-13	2.00E-13	2.95E-13	1.19E-13
Br-74m		2.48E-13	3.38E-13	5.03E-13	1.99E-13
Br-75		1.55E-13	2.12E-13	3.21E-13	1.21E-13
Br-76		1.44E-12	1.95E-12	3.13E-12	9.95E-13
Br-76m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-77		3.07E-13	4.11E-13	6.36E-13	2.24E-13
Br-77m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-78		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-80		4.77E-14	6.55E-14	9.77E-14	3.89E-14
Br-80m		2.83E-13	3.89E-13	6.33E-13	1.97E-13
Br-82		1.72E-12	2.32E-12	3.61E-12	1.25E-12
Br-82m		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Br-83		8.55E-14	1.18E-13	1.84E-13	6.40E-14
Br-84		1.48E-13	2.03E-13	3.03E-13	1.19E-13
Br-84m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Br-85		0.00E+00	0.00E+00	0.00E+00	0.00E+00
C-10		0.00E+00	0.00E+00	0.00E+00	0.00E+00
C-11		4.07E-14	5.59E-14	8.21E-14	3.33E-14
C-14		1.55E-12	2.00E-12	2.77E-12	1.38E-12
Ca-41		4.14E-13	5.11E-13	6.44E-13	3.81E-13
Ca-45		2.47E-12	3.36E-12	5.74E-12	1.52E-12
Ca-47		7.62E-12	1.10E-11	1.98E-11	3.89E-12
Ca-49		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-101		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-102		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-103		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-104		3.07E-13	4.40E-13	7.55E-13	1.66E-13
Cd-105		1.08E-13	1.52E-13	2.45E-13	6.99E-14
Cd-107		3.53E-13	5.14E-13	9.47E-13	1.50E-13
Cd-109		5.00E-12	6.70E-12	1.07E-11	3.36E-12
Cd-111m		3.27E-14	4.59E-14	7.40E-14	2.15E-14
Cd-113		2.27E-11	2.88E-11	3.66E-11	2.17E-11
Cd-113m		2.90E-11	3.67E-11	4.88E-11	2.66E-11
Cd-115		8.88E-12	1.30E-11	2.41E-11	3.70E-12
Cd-115m		1.70E-11	2.45E-11	4.44E-11	7.70E-12
Cd-117		1.37E-12	1.98E-12	3.58E-12	6.22E-13
Cd-117m		1.22E-12	1.76E-12	3.09E-12	6.03E-13
Cd-118		4.29E-13	6.07E-13	1.01E-12	2.67E-13
Cd-119		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cd-119m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce-130		1.44E-13	2.00E-13	3.12E-13	1.03E-13
Ce-131		5.37E-14	7.44E-14	1.15E-13	4.00E-14
Ce-132		1.80E-12	2.62E-12	4.74E-12	7.96E-13
Ce-133		3.18E-13	4.55E-13	7.99E-13	1.64E-13
Ce-133m		8.36E-13	1.19E-12	2.05E-12	4.33E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Ce-134		1.68E-11	2.45E-11	4.51E-11	6.96E-12
Ce-135		1.02E-12	1.46E-12	2.49E-12	5.29E-13
Ce-137		1.35E-13	1.96E-13	3.53E-13	5.99E-14
Ce-137m		3.53E-12	5.18E-12	9.58E-12	1.45E-12
Ce-139		1.36E-12	1.97E-12	3.53E-12	6.11E-13
Ce-141		4.66E-12	6.81E-12	1.26E-11	1.90E-12
Ce-143		7.18E-12	1.05E-11	1.94E-11	2.96E-12
Ce-144		3.52E-11	5.18E-11	9.58E-11	1.42E-11
Ce-144+D		3.53E-11	5.18E-11	9.58E-11	1.43E-11
Ce-144+E		3.53E-11	5.18E-11	9.58E-11	1.43E-11
Ce-145		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cf-244		1.25E-13	1.74E-13	2.75E-13	9.03E-14
Cf-246		2.11E-11	3.09E-11	5.74E-11	8.58E-12
Cf-247		9.32E-14	1.35E-13	2.41E-13	4.44E-14
Cf-248		4.44E-11	6.25E-11	1.07E-10	2.42E-11
Cf-249		1.27E-10	1.63E-10	2.16E-10	1.14E-10
Cf-250		8.92E-11	1.15E-10	1.65E-10	7.33E-11
Cf-251		1.31E-10	1.69E-10	2.26E-10	1.17E-10
Cf-252		1.33E-10	1.82E-10	3.01E-10	7.99E-11
Cf-253		4.59E-12	6.59E-12	1.19E-11	2.11E-12
Cf-254		2.13E-09	3.06E-09	5.40E-09	1.01E-09
Cf-255		1.35E-13	1.95E-13	3.46E-13	6.73E-14
Cl-34		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cl-34m		1.77E-13	2.42E-13	3.61E-13	1.43E-13
Cl-36		3.30E-12	4.44E-12	7.25E-12	2.29E-12
Cl-38		1.94E-13	2.66E-13	4.00E-13	1.56E-13
Cl-39		1.52E-13	2.08E-13	3.13E-13	1.21E-13
Cl-40		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cm-238		2.51E-13	3.59E-13	6.22E-13	1.30E-13
Cm-239		4.55E-13	6.62E-13	1.20E-12	2.02E-13
Cm-240		3.49E-11	5.07E-11	9.25E-11	1.54E-11
Cm-241		4.96E-12	7.18E-12	1.30E-11	2.19E-12
Cm-242		3.85E-11	5.48E-11	9.73E-11	1.87E-11

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Cm-243		9.51E-11	1.24E-10	1.77E-10	7.88E-11
Cm-244		8.36E-11	1.08E-10	1.56E-10	6.88E-11
Cm-245		1.05E-10	1.35E-10	1.87E-10	9.18E-11
Cm-246		1.03E-10	1.33E-10	1.82E-10	9.10E-11
Cm-247		9.95E-11	1.29E-10	1.80E-10	8.58E-11
Cm-247+D		9.99E-11	1.30E-10	1.81E-10	8.62E-11
Cm-247+E		9.99E-11	1.30E-10	1.81E-10	8.62E-11
Cm-248		4.55E-10	5.96E-10	8.47E-10	3.77E-10
Cm-249		8.44E-14	1.20E-13	2.04E-13	4.92E-14
Cm-250		3.29E-09	4.33E-09	6.25E-09	2.66E-09
Cm-250+D		3.30E-09	4.33E-09	6.25E-09	2.66E-09
Cm-250+E		3.30E-09	4.33E-09	6.25E-09	2.66E-09
Cm-251		6.11E-14	8.58E-14	1.39E-13	4.11E-14
Co-54m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-55		4.66E-12	6.70E-12	1.20E-11	2.39E-12
Co-56		1.01E-11	1.42E-11	2.43E-11	5.29E-12
Co-57		1.04E-12	1.49E-12	2.64E-12	4.88E-13
Co-58		2.94E-12	4.14E-12	7.10E-12	1.56E-12
Co-58m		1.25E-13	1.81E-13	3.33E-13	5.92E-14
Co-60		1.58E-11	2.23E-11	3.81E-11	7.33E-12
Co-60m		2.60E-15	3.58E-15	5.37E-15	2.08E-15
Co-61		2.45E-13	3.52E-13	6.18E-13	1.33E-13
Co-62		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co-62m		8.51E-14	1.17E-13	1.74E-13	6.73E-14
Cr-48		7.25E-13	1.02E-12	1.72E-12	3.96E-13
Cr-49		1.36E-13	1.90E-13	3.05E-13	9.14E-14
Cr-51		1.85E-13	2.66E-13	4.70E-13	8.88E-14
Cr-55		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cr-56		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-121		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-121m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-123		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-124		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Cs-125		6.22E-14	8.47E-14	1.27E-13	4.96E-14
Cs-126		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-127		6.66E-14	8.95E-14	1.36E-13	5.11E-14
Cs-128		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-129		1.84E-13	2.46E-13	3.81E-13	1.38E-13
Cs-130		4.51E-14	6.14E-14	9.18E-14	3.64E-14
Cs-130m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-131		1.86E-13	2.49E-13	3.89E-13	1.37E-13
Cs-132		1.48E-12	1.94E-12	2.84E-12	1.20E-12
Cs-134		4.22E-11	5.18E-11	5.74E-11	4.48E-11
Cs-134m		4.14E-14	5.59E-14	8.44E-14	3.30E-14
Cs-135		6.29E-12	7.81E-12	9.29E-12	6.29E-12
Cs-135m		4.51E-14	6.11E-14	8.84E-14	3.67E-14
Cs-136		8.62E-12	1.12E-11	1.59E-11	7.18E-12
Cs-137		3.05E-11	3.74E-11	4.26E-11	3.18E-11
Cs-137+D		3.05E-11	3.74E-11	4.26E-11	3.18E-11
Cs-137+E		3.05E-11	3.74E-11	4.26E-11	3.18E-11
Cs-138		1.66E-13	2.27E-13	3.38E-13	1.34E-13
Cs-138m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-139		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-140		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-57		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-59		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-60		1.40E-13	1.93E-13	2.96E-13	1.06E-13
Cu-61		4.48E-13	6.48E-13	1.17E-12	2.32E-13
Cu-62		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-64		6.48E-13	9.44E-13	1.76E-12	2.95E-13
Cu-66		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cu-67		1.88E-12	2.75E-12	5.14E-12	8.62E-13
Cu-69		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-148		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-149		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-150		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Dy-151		5.40E-14	7.55E-14	1.22E-13	3.44E-14
Dy-152		5.37E-13	7.73E-13	1.38E-12	2.48E-13
Dy-153		7.70E-13	1.10E-12	1.93E-12	3.81E-13
Dy-154		3.20E-11	4.22E-11	6.36E-11	2.40E-11
Dy-155		5.74E-13	8.14E-13	1.40E-12	2.96E-13
Dy-157		2.26E-13	3.21E-13	5.44E-13	1.21E-13
Dy-159		5.44E-13	7.92E-13	1.42E-12	2.43E-13
Dy-165		4.14E-13	5.99E-13	1.08E-12	1.95E-13
Dy-165m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-166		1.13E-11	1.66E-11	3.08E-11	4.55E-12
Dy-167		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dy-168		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Er-154		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Er-156		9.77E-14	1.38E-13	2.32E-13	5.77E-14
Er-159		5.81E-14	8.03E-14	1.27E-13	3.92E-14
Er-161		3.26E-13	4.63E-13	7.96E-13	1.71E-13
Er-163		7.40E-15	1.04E-14	1.72E-14	4.48E-15
Er-165		9.07E-14	1.31E-13	2.32E-13	4.22E-14
Er-167m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Er-169		2.53E-12	3.70E-12	6.88E-12	1.02E-12
Er-171		2.01E-12	2.94E-12	5.40E-12	8.66E-13
Er-172		6.18E-12	9.03E-12	1.65E-11	2.63E-12
Er-173		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Es-249		6.62E-14	9.36E-14	1.56E-13	3.85E-14
Es-250		2.30E-12	3.33E-12	5.99E-12	1.04E-12
Es-250m		9.14E-14	1.28E-13	2.13E-13	5.33E-14
Es-251		1.06E-12	1.55E-12	2.84E-12	4.48E-13
Es-253		3.48E-11	5.11E-11	9.40E-11	1.43E-11
Es-254		5.55E-11	7.84E-11	1.37E-10	2.83E-11
Es-254+D		5.62E-11	7.92E-11	1.39E-10	2.86E-11
Es-254+E		5.62E-11	7.92E-11	1.39E-10	2.86E-11
Es-254m		2.82E-11	4.14E-11	7.66E-11	1.15E-11
Es-255		2.85E-11	4.14E-11	7.62E-11	1.20E-11

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Es-256		1.62E-11	2.32E-11	4.03E-11	8.29E-12
Eu-142		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-142m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-143		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-144		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Eu-145		2.41E-12	3.41E-12	5.74E-12	1.29E-12
Eu-146		4.33E-12	6.11E-12	1.02E-11	2.33E-12
Eu-147		2.01E-12	2.89E-12	5.11E-12	9.58E-13
Eu-148		4.40E-12	6.14E-12	1.02E-11	2.43E-12
Eu-149		8.81E-13	1.28E-12	2.32E-12	3.85E-13
Eu-150		4.03E-12	5.62E-12	9.18E-12	2.33E-12
Eu-150m		2.42E-12	3.54E-12	6.55E-12	9.92E-13
Eu-152		5.85E-12	8.33E-12	1.46E-11	2.87E-12
Eu-152m		2.97E-12	4.33E-12	7.99E-12	1.25E-12
Eu-152n		4.29E-14	6.18E-14	1.07E-13	2.31E-14
Eu-154		9.84E-12	1.42E-11	2.54E-11	4.51E-12
Eu-154m		1.82E-14	2.56E-14	4.18E-14	1.18E-14
Eu-155		1.94E-12	2.83E-12	5.18E-12	8.29E-13
Eu-156		1.34E-11	1.95E-11	3.57E-11	5.70E-12
Eu-157		3.74E-12	5.48E-12	1.01E-11	1.56E-12
Eu-158		2.08E-13	2.92E-13	4.74E-13	1.36E-13
Eu-159		1.20E-13	1.71E-13	2.86E-13	7.36E-14
F-17		0.00E+00	0.00E+00	0.00E+00	0.00E+00
F-18		9.40E-14	1.25E-13	1.84E-13	7.62E-14
Fe-52		7.07E-12	1.03E-11	1.89E-11	3.29E-12
Fe-53		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-53m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fe-55		8.58E-13	1.16E-12	1.89E-12	5.14E-13
Fe-59		7.88E-12	1.11E-11	1.91E-11	4.07E-12
Fe-60		1.87E-10	2.49E-10	3.48E-10	1.34E-10
Fe-60+D		2.03E-10	2.72E-10	3.85E-10	1.41E-10
Fe-60+E		2.03E-10	2.72E-10	3.85E-10	1.41E-10
Fe-61		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Fe-62		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fm-251		3.89E-13	5.66E-13	1.02E-12	1.71E-13
Fm-252		1.82E-11	2.67E-11	4.96E-11	7.40E-12
Fm-253		6.92E-12	1.01E-11	1.87E-11	2.85E-12
Fm-254		2.23E-12	3.24E-12	5.88E-12	9.95E-13
Fm-255		1.65E-11	2.42E-11	4.48E-11	6.73E-12
Fm-256		9.55E-11	1.36E-10	2.33E-10	5.11E-11
Fm-257		4.85E-11	6.96E-11	1.24E-10	2.28E-11
Fr-212		1.78E-12	2.42E-12	3.92E-12	1.25E-12
Fr-219		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-220		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-220+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-220+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-221		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-221+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-221+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-222		1.45E-12	1.99E-12	3.19E-12	1.05E-12
Fr-223		7.36E-12	1.01E-11	1.69E-11	4.88E-12
Fr-224		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Fr-227		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ga-64		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ga-65		6.22E-14	8.58E-14	1.29E-13	4.88E-14
Ga-66		6.44E-12	9.36E-12	1.70E-11	2.82E-12
Ga-67		1.06E-12	1.54E-12	2.78E-12	4.66E-13
Ga-68		2.80E-13	4.00E-13	6.73E-13	1.65E-13
Ga-70		5.18E-14	7.22E-14	1.11E-13	3.96E-14
Ga-72		5.66E-12	8.18E-12	1.47E-11	2.57E-12
Ga-73		1.39E-12	2.04E-12	3.70E-12	6.14E-13
Ga-74		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-142		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-143m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-144		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-145		7.25E-14	9.99E-14	1.53E-13	5.33E-14

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Gd-145m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Gd-146		4.96E-12	7.18E-12	1.29E-11	2.22E-12
Gd-147		2.56E-12	3.64E-12	6.25E-12	1.31E-12
Gd-148		4.18E-11	5.44E-11	7.84E-11	3.33E-11
Gd-149		2.63E-12	3.81E-12	6.77E-12	1.22E-12
Gd-150		3.77E-11	4.88E-11	6.96E-11	3.06E-11
Gd-151		1.31E-12	1.91E-12	3.49E-12	5.59E-13
Gd-152		2.97E-11	3.85E-11	5.48E-11	2.40E-11
Gd-153		1.53E-12	2.22E-12	4.03E-12	6.66E-13
Gd-159		3.24E-12	4.77E-12	8.81E-12	1.33E-12
Gd-162		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ge-66		3.65E-13	4.85E-13	7.55E-13	2.55E-13
Ge-67		9.81E-14	1.34E-13	1.99E-13	7.96E-14
Ge-68		6.96E-12	9.84E-12	1.74E-11	3.47E-12
Ge-68+D		7.25E-12	1.02E-11	1.81E-11	3.64E-12
Ge-68+E		7.25E-12	1.02E-11	1.81E-11	3.64E-12
Ge-69		7.99E-13	1.09E-12	1.78E-12	5.03E-13
Ge-71		6.51E-14	9.25E-14	1.64E-13	3.21E-14
Ge-75		8.70E-14	1.17E-13	1.74E-13	6.96E-14
Ge-77		1.22E-12	1.65E-12	2.66E-12	7.92E-13
Ge-78		2.93E-13	3.81E-13	5.62E-13	2.32E-13
H-3	Tritiated Water	5.07E-14	6.51E-14	8.99E-14	4.51E-14
H-3	Organically Bound	1.12E-13	1.44E-13	0.00E+00	0.00E+00
Hf-167		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-169		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hf-170		1.77E-12	2.53E-12	4.44E-12	8.70E-13
Hf-172		5.14E-12	7.36E-12	1.31E-11	2.42E-12
Hf-172+D		5.14E-12	7.36E-12	1.31E-11	2.42E-12
Hf-172+E		5.14E-12	7.36E-12	1.31E-11	2.42E-12
Hf-173		1.04E-12	1.50E-12	2.66E-12	4.92E-13
Hf-174		6.36E-11	7.99E-11	1.02E-10	6.03E-11
Hf-175		1.92E-12	2.77E-12	4.92E-12	8.99E-13
Hf-177m		2.04E-13	2.86E-13	4.59E-13	1.35E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Hf-178m		1.22E-11	1.72E-11	2.86E-11	6.96E-12
Hf-179m		6.66E-12	9.66E-12	1.74E-11	2.99E-12
Hf-180m		7.25E-13	1.04E-12	1.83E-12	3.59E-13
Hf-181		6.40E-12	9.32E-12	1.70E-11	2.76E-12
Hf-182		4.74E-12	6.36E-12	9.55E-12	3.42E-12
Hf-182+D		1.25E-11	1.76E-11	2.98E-11	6.96E-12
Hf-182+E		1.25E-11	1.76E-11	2.98E-11	6.96E-12
Hf-182m		1.22E-13	1.72E-13	2.82E-13	7.55E-14
Hf-183		2.42E-13	3.46E-13	5.96E-13	1.32E-13
Hf-184		2.89E-12	4.22E-12	7.70E-12	1.25E-12
Hg-190	Inorganic	5.62E-14	7.84E-14	1.25E-13	3.69E-14
Hg-190	Methyl	3.40E-14	4.63E-14	0.00E+00	0.00E+00
Hg-190	Organic	5.37E-14	7.47E-14	0.00E+00	0.00E+00
Hg-191m	Inorganic	1.75E-13	2.48E-13	4.14E-13	1.01E-13
Hg-191m	Methyl	7.66E-14	1.04E-13	0.00E+00	0.00E+00
Hg-191m	Organic	1.51E-13	2.13E-13	0.00E+00	0.00E+00
Hg-192	Inorganic	9.62E-13	1.37E-12	2.39E-12	4.77E-13
Hg-192	Methyl	9.62E-13	1.37E-12	0.00E+00	0.00E+00
Hg-192	Organic	1.99E-13	2.67E-13	0.00E+00	0.00E+00
Hg-193	Inorganic	4.59E-13	6.59E-13	1.16E-12	2.28E-13
Hg-193	Methyl	1.09E-13	1.47E-13	0.00E+00	0.00E+00
Hg-193	Organic	3.50E-13	5.03E-13	0.00E+00	0.00E+00
Hg-193+D	Inorganic	4.59E-13	6.59E-13	1.16E-12	2.28E-13
Hg-193+E	Inorganic	4.59E-13	6.59E-13	1.16E-12	2.28E-13
Hg-193m	Inorganic	2.03E-12	2.92E-12	5.18E-12	9.58E-13
Hg-193m	Methyl	3.96E-13	5.29E-13	0.00E+00	0.00E+00
Hg-193m	Organic	1.45E-12	2.09E-12	0.00E+00	0.00E+00
Hg-194	Inorganic	2.91E-12	4.00E-12	6.25E-12	2.00E-12
Hg-194	Methyl	7.96E-11	1.05E-10	0.00E+00	0.00E+00
Hg-194	Organic	3.32E-11	4.37E-11	0.00E+00	0.00E+00
Hg-194+D	Inorganic	4.51E-12	6.29E-12	1.02E-11	2.84E-12
Hg-194+E	Inorganic	4.51E-12	6.29E-12	1.02E-11	2.84E-12
Hg-195	Inorganic	5.37E-13	7.81E-13	1.41E-12	2.40E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Hg-195	Methyl	9.69E-14	1.31E-13	0.00E+00	0.00E+00
Hg-195	Organic	3.89E-13	5.66E-13	0.00E+00	0.00E+00
Hg-195m	Inorganic	3.32E-12	4.85E-12	8.88E-12	1.40E-12
Hg-195m	Methyl	6.40E-13	8.62E-13	0.00E+00	0.00E+00
Hg-195m	Organic	2.31E-12	3.36E-12	0.00E+00	0.00E+00
Hg-197	Inorganic	1.53E-12	2.23E-12	4.11E-12	6.40E-13
Hg-197	Methyl	3.16E-13	4.26E-13	0.00E+00	0.00E+00
Hg-197	Organic	1.07E-12	1.56E-12	0.00E+00	0.00E+00
Hg-197m	Inorganic	3.05E-12	4.48E-12	8.25E-12	1.26E-12
Hg-197m	Methyl	4.26E-13	5.74E-13	0.00E+00	0.00E+00
Hg-197m	Organic	2.08E-12	3.06E-12	0.00E+00	0.00E+00
Hg-199m	Inorganic	6.62E-14	9.36E-14	1.52E-13	4.40E-14
Hg-199m	Methyl	4.70E-14	6.40E-14	0.00E+00	0.00E+00
Hg-199m	Organic	6.44E-14	9.07E-14	0.00E+00	0.00E+00
Hg-203	Inorganic	3.09E-12	4.48E-12	8.14E-12	1.35E-12
Hg-203	Methyl	5.70E-12	7.62E-12	0.00E+00	0.00E+00
Hg-203	Organic	4.14E-12	5.77E-12	0.00E+00	0.00E+00
Hg-205	Inorganic	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hg-206	Inorganic	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hg-207	Inorganic	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-150		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-153		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-153m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-154		6.81E-14	9.36E-14	1.39E-13	5.44E-14
Ho-154m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-155		1.13E-13	1.60E-13	2.65E-13	6.73E-14
Ho-156		2.45E-13	3.45E-13	5.62E-13	1.56E-13
Ho-157		1.68E-14	2.33E-14	3.63E-14	1.18E-14
Ho-159		1.91E-14	2.63E-14	4.07E-14	1.37E-14
Ho-160		3.92E-14	5.37E-14	8.07E-14	2.94E-14
Ho-161		4.92E-14	7.10E-14	1.25E-13	2.44E-14
Ho-162		5.81E-15	7.99E-15	1.20E-14	4.55E-15
Ho-162m		7.14E-14	1.00E-13	1.65E-13	4.37E-14

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Ho-163		1.81E-14	2.63E-14	4.74E-14	7.96E-15
Ho-164		1.75E-14	2.43E-14	3.85E-14	1.25E-14
Ho-164m		4.18E-14	5.96E-14	1.00E-13	2.53E-14
Ho-166		9.21E-12	1.35E-11	2.51E-11	3.74E-12
Ho-166m		8.29E-12	1.18E-11	2.00E-11	4.37E-12
Ho-167		3.85E-13	5.55E-13	9.92E-13	1.82E-13
Ho-168		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-168m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ho-170		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-118		5.03E-13	7.10E-13	1.29E-12	2.98E-13
I-118m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-119		9.18E-14	1.27E-13	2.13E-13	6.36E-14
I-120		7.66E-13	1.06E-12	1.88E-12	4.85E-13
I-120m		3.61E-13	4.96E-13	8.21E-13	2.53E-13
I-121		2.05E-13	2.81E-13	4.81E-13	1.31E-13
I-122		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-123		7.07E-13	1.00E-12	1.91E-12	3.85E-13
I-124		4.14E-11	5.88E-11	1.12E-10	2.19E-11
I-125		2.56E-11	3.46E-11	5.55E-11	1.71E-11
I-126		8.81E-11	1.24E-10	2.28E-10	4.88E-11
I-128		8.10E-14	1.11E-13	1.77E-13	6.11E-14
I-129		1.51E-10	1.97E-10	2.78E-10	1.17E-10
I-130		6.03E-12	8.55E-12	1.64E-11	3.24E-12
I-130m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-131		4.55E-11	6.48E-11	1.22E-10	2.42E-11
I-132		8.36E-13	1.16E-12	2.11E-12	5.03E-13
I-132m		1.91E-13	2.61E-13	4.37E-13	1.31E-13
I-133		1.45E-11	2.08E-11	4.11E-11	7.33E-12
I-134		2.36E-13	3.24E-13	5.33E-13	1.67E-13
I-134m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
I-135		2.87E-12	4.07E-12	7.81E-12	1.55E-12
In-103		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-105		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
In-106		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-106m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-107		1.07E-13	1.50E-13	2.46E-13	6.70E-14
In-108		2.04E-13	2.82E-13	4.44E-13	1.38E-13
In-108m		1.80E-13	2.51E-13	3.96E-13	1.24E-13
In-109		2.12E-13	3.00E-13	5.07E-13	1.15E-13
In-109m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-110		7.70E-13	1.07E-12	1.74E-12	4.59E-13
In-110m		2.83E-13	4.00E-13	6.70E-13	1.69E-13
In-111		1.30E-12	1.86E-12	3.27E-12	6.29E-13
In-111m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-112		1.76E-14	2.42E-14	3.64E-14	1.38E-14
In-112m		3.27E-14	4.55E-14	7.18E-14	2.33E-14
In-113m		9.58E-14	1.37E-13	2.37E-13	5.18E-14
In-114		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-114m		2.51E-11	3.64E-11	6.70E-11	1.08E-11
In-114m+D		2.51E-11	3.64E-11	6.70E-11	1.08E-11
In-114m+E		2.51E-11	3.64E-11	6.70E-11	1.08E-11
In-115		3.39E-11	4.33E-11	5.59E-11	3.20E-11
In-115m		4.48E-13	6.51E-13	1.18E-12	1.99E-13
In-116m		1.63E-13	2.27E-13	3.63E-13	1.08E-13
In-117		6.92E-14	9.69E-14	1.55E-13	4.66E-14
In-117m		4.44E-13	6.40E-13	1.14E-12	2.16E-13
In-118		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-118m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-119		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-119m		7.47E-14	1.03E-13	1.58E-13	5.77E-14
In-121		0.00E+00	0.00E+00	0.00E+00	0.00E+00
In-121m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-180		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-182		1.08E-13	1.51E-13	2.38E-13	7.55E-14
Ir-183		1.69E-13	2.39E-13	4.00E-13	9.77E-14
Ir-184		7.29E-13	1.04E-12	1.81E-12	3.77E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Ir-185		1.58E-12	2.27E-12	4.03E-12	7.33E-13
Ir-186		2.49E-12	3.57E-12	6.25E-12	1.21E-12
Ir-186m		2.56E-13	3.63E-13	6.14E-13	1.42E-13
Ir-187		5.51E-13	7.92E-13	1.41E-12	2.57E-13
Ir-188		2.86E-12	4.03E-12	6.85E-12	1.52E-12
Ir-189		1.43E-12	2.09E-12	3.85E-12	6.11E-13
Ir-190		4.33E-12	6.18E-12	1.07E-11	2.19E-12
Ir-190m		2.49E-14	3.55E-14	6.14E-14	1.31E-14
Ir-190n		4.37E-13	6.18E-13	1.05E-12	2.33E-13
Ir-191m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-192		7.36E-12	1.07E-11	1.93E-11	3.30E-12
Ir-192m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-192n		5.25E-12	7.62E-12	1.38E-11	2.39E-12
Ir-193m		1.95E-12	2.87E-12	5.33E-12	7.88E-13
Ir-194		8.62E-12	1.27E-11	2.35E-11	3.53E-12
Ir-194m		8.47E-12	1.20E-11	2.07E-11	4.40E-12
Ir-195		3.96E-13	5.77E-13	1.04E-12	1.85E-13
Ir-195m		6.77E-13	9.81E-13	1.78E-12	3.05E-13
Ir-196		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ir-196m		3.26E-13	4.59E-13	7.59E-13	1.96E-13
K-38		0.00E+00	0.00E+00	0.00E+00	0.00E+00
K-40		2.47E-11	3.42E-11	5.85E-11	1.51E-11
K-42		1.26E-12	1.74E-12	2.88E-12	8.40E-13
K-43		7.77E-13	1.05E-12	1.69E-12	5.40E-13
K-44		1.38E-13	1.89E-13	2.80E-13	1.12E-13
K-45		8.07E-14	1.10E-13	1.63E-13	6.59E-14
K-46		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-74		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-75		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-76+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-77		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Kr-79		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-81		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-81m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-83m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-85m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-87		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-88		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Kr-89		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-128		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-129		5.44E-14	7.59E-14	1.19E-13	3.85E-14
La-130		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-131		8.99E-14	1.27E-13	2.09E-13	5.55E-14
La-132		1.90E-12	2.75E-12	4.92E-12	8.92E-13
La-132m		1.50E-13	2.16E-13	3.81E-13	7.51E-14
La-133		1.39E-13	2.02E-13	3.58E-13	6.70E-14
La-134		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-135		1.46E-13	2.11E-13	3.74E-13	6.70E-14
La-136		0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-137		3.52E-13	5.07E-13	8.88E-13	1.69E-13
La-138		3.54E-12	4.96E-12	8.14E-12	2.03E-12
La-140		1.09E-11	1.59E-11	2.87E-11	4.81E-12
La-141		1.95E-12	2.84E-12	5.22E-12	8.47E-13
La-142		5.55E-13	7.92E-13	1.35E-12	3.09E-13
La-143		1.27E-13	1.79E-13	2.95E-13	8.03E-14
Lu-165		4.44E-14	6.18E-14	9.62E-14	3.21E-14
Lu-167		1.34E-13	1.88E-13	3.06E-13	8.47E-14
Lu-169		2.12E-12	3.01E-12	5.14E-12	1.09E-12
Lu-169m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-170		3.60E-12	5.11E-12	8.62E-12	1.91E-12
Lu-171		3.42E-12	4.96E-12	8.84E-12	1.57E-12
Lu-171m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-172		5.62E-12	8.03E-12	1.40E-11	2.78E-12

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Lu-172m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-173		1.93E-12	2.80E-12	5.07E-12	8.58E-13
Lu-174		1.57E-12	2.27E-12	4.14E-12	6.85E-13
Lu-174m		3.47E-12	5.11E-12	9.40E-12	1.43E-12
Lu-176		9.44E-12	1.37E-11	2.49E-11	4.18E-12
Lu-176m		8.40E-13	1.23E-12	2.25E-12	3.69E-13
Lu-177		3.53E-12	5.18E-12	9.58E-12	1.44E-12
Lu-177m		9.29E-12	1.35E-11	2.44E-11	4.11E-12
Lu-178		8.40E-14	1.17E-13	1.85E-13	6.11E-14
Lu-178m		6.25E-14	8.66E-14	1.32E-13	4.70E-14
Lu-179		1.18E-12	1.72E-12	3.16E-12	5.07E-13
Lu-180		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lu-181		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mg-27		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mg-28		1.13E-11	1.65E-11	3.07E-11	5.18E-12
Mn-50m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn-51		2.09E-13	2.95E-13	4.81E-13	1.37E-13
Mn-52		6.48E-12	9.07E-12	1.52E-11	3.60E-12
Mn-52m		1.27E-13	1.75E-13	2.66E-13	9.66E-14
Mn-53		1.54E-13	2.22E-13	4.07E-13	6.92E-14
Mn-54		2.28E-12	3.10E-12	4.92E-12	1.48E-12
Mn-56		1.03E-12	1.48E-12	2.63E-12	5.11E-13
Mn-57		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn-58m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mo-101		6.73E-14	9.25E-14	1.37E-13	5.48E-14
Mo-102		1.04E-13	1.43E-13	2.12E-13	8.51E-14
Mo-89		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mo-90		6.48E-13	8.62E-13	1.31E-12	4.96E-13
Mo-91		9.44E-14	1.30E-13	1.92E-13	7.70E-14
Mo-91m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mo-93		3.12E-12	3.89E-12	4.85E-12	3.12E-12
Mo-93m		3.33E-13	4.44E-13	6.62E-13	2.60E-13
Mo-99		1.60E-12	2.11E-12	3.32E-12	1.18E-12

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
N-13		0.00E+00	0.00E+00	0.00E+00	0.00E+00
N-16		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Na-22		9.62E-12	1.26E-11	1.90E-11	7.47E-12
Na-24		1.23E-12	1.64E-12	2.52E-12	9.29E-13
Nb-87		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-88		1.28E-13	1.76E-13	2.62E-13	1.01E-13
Nb-88m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-89		1.02E-12	1.47E-12	2.59E-12	5.11E-13
Nb-89m		3.92E-13	5.55E-13	9.32E-13	2.31E-13
Nb-90		5.70E-12	8.18E-12	1.44E-11	2.74E-12
Nb-91		2.68E-13	3.92E-13	7.22E-13	1.11E-13
Nb-91m		2.69E-12	3.92E-12	7.29E-12	1.10E-12
Nb-92		3.32E-12	4.59E-12	7.47E-12	1.99E-12
Nb-92m		1.69E-12	2.37E-12	3.92E-12	9.44E-13
Nb-93m		8.33E-13	1.22E-12	2.25E-12	3.44E-13
Nb-94		7.77E-12	1.11E-11	1.94E-11	3.89E-12
Nb-94m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-95		2.45E-12	3.50E-12	6.07E-12	1.23E-12
Nb-95m		3.92E-12	5.77E-12	1.07E-11	1.61E-12
Nb-96		5.03E-12	7.25E-12	1.28E-11	2.41E-12
Nb-97		1.96E-13	2.79E-13	4.74E-13	1.14E-13
Nb-98m		2.65E-13	3.74E-13	5.99E-13	1.73E-13
Nb-99		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nb-99m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-134		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-135		1.11E-13	1.54E-13	2.38E-13	8.10E-14
Nd-136		2.71E-13	3.81E-13	6.36E-13	1.65E-13
Nd-137		1.50E-13	2.12E-13	3.53E-13	8.99E-14
Nd-138		3.43E-12	5.00E-12	9.14E-12	1.49E-12
Nd-139		5.18E-14	7.33E-14	1.20E-13	3.27E-14
Nd-139m		1.01E-12	1.44E-12	2.50E-12	5.03E-13
Nd-140		1.24E-11	1.82E-11	3.34E-11	5.14E-12
Nd-141		3.14E-14	4.51E-14	7.77E-14	1.64E-14

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Nd-141m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-144		3.07E-11	3.92E-11	5.37E-11	2.61E-11
Nd-147		6.99E-12	1.02E-11	1.89E-11	2.86E-12
Nd-149		5.44E-13	7.88E-13	1.41E-12	2.56E-13
Nd-151		7.14E-14	1.01E-13	1.68E-13	4.44E-14
Nd-152		7.66E-14	1.05E-13	1.59E-13	6.07E-14
Ne-19		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ne-24		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-56		2.83E-12	3.96E-12	6.48E-12	1.64E-12
Ni-57		4.07E-12	5.85E-12	1.03E-11	1.98E-12
Ni-59		2.72E-13	3.85E-13	6.77E-13	1.43E-13
Ni-63		6.81E-13	9.69E-13	1.71E-12	3.56E-13
Ni-65		6.92E-13	1.00E-12	1.79E-12	3.33E-13
Ni-66		2.01E-11	2.95E-11	5.48E-11	8.21E-12
Np-232		1.98E-14	2.71E-14	4.00E-14	1.57E-14
Np-233		5.18E-15	7.22E-15	1.12E-14	3.69E-15
Np-234		2.76E-12	3.92E-12	6.81E-12	1.38E-12
Np-235		3.74E-13	5.48E-13	1.01E-12	1.53E-13
Np-235+D		3.74E-13	5.48E-13	1.01E-12	1.53E-13
Np-235+E		3.74E-13	5.48E-13	1.01E-12	1.53E-13
Np-236		1.33E-11	1.82E-11	2.81E-11	9.62E-12
Np-236m		1.13E-12	1.65E-12	3.03E-12	4.77E-13
Np-237		6.22E-11	8.29E-11	1.25E-10	4.70E-11
Np-237+D		6.85E-11	9.18E-11	1.41E-10	4.96E-11
Np-237+E		6.85E-11	9.18E-11	1.41E-10	4.96E-11
Np-238		5.22E-12	7.62E-12	1.39E-11	2.27E-12
Np-239		5.22E-12	7.62E-12	1.41E-11	2.19E-12
Np-240		1.93E-13	2.72E-13	4.51E-13	1.19E-13
Np-240m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Np-241		2.45E-14	3.39E-14	5.07E-14	1.96E-14
Np-242		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Np-242m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
O-14		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
O-15		0.00E+00	0.00E+00	0.00E+00	0.00E+00
O-19		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Os-180		3.81E-14	5.25E-14	7.96E-14	2.87E-14
Os-181		3.59E-13	5.11E-13	8.81E-13	1.87E-13
Os-182		2.68E-12	3.85E-12	6.81E-12	1.27E-12
Os-183		1.04E-12	1.49E-12	2.64E-12	4.96E-13
Os-183m		8.25E-13	1.17E-12	2.01E-12	4.26E-13
Os-185		1.86E-12	2.62E-12	4.40E-12	1.01E-12
Os-186		7.84E-11	1.05E-10	1.65E-10	5.44E-11
Os-189m		9.88E-14	1.45E-13	2.66E-13	4.18E-14
Os-190m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Os-191		3.70E-12	5.44E-12	1.00E-11	1.54E-12
Os-191m		6.29E-13	9.21E-13	1.70E-12	2.58E-13
Os-193		5.40E-12	7.92E-12	1.47E-11	2.20E-12
Os-194		1.56E-11	2.28E-11	4.18E-11	6.66E-12
Os-194+D		2.42E-11	3.54E-11	6.51E-11	1.02E-11
Os-194+E		2.42E-11	3.54E-11	6.51E-11	1.02E-11
Os-196		2.17E-13	3.04E-13	4.88E-13	1.49E-13
P-30		0.00E+00	0.00E+00	0.00E+00	0.00E+00
P-32		8.95E-12	1.23E-11	2.14E-11	5.33E-12
P-33		9.77E-13	1.36E-12	2.39E-12	5.62E-13
Pa-227		9.69E-13	1.37E-12	2.22E-12	6.48E-13
Pa-228		3.54E-12	5.11E-12	9.03E-12	1.69E-12
Pa-229		4.59E-13	6.66E-13	1.21E-12	2.03E-13
Pa-230		3.70E-12	5.33E-12	9.44E-12	1.77E-12
Pa-231		1.72E-10	2.26E-10	2.98E-10	1.54E-10
Pa-232		3.47E-12	5.03E-12	8.99E-12	1.59E-12
Pa-233		6.14E-12	8.95E-12	1.65E-11	2.58E-12
Pa-234		2.07E-12	3.00E-12	5.37E-12	9.66E-13
Pa-234m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pa-235		4.59E-14	6.40E-14	9.88E-14	3.45E-14
Pa-236		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pa-237		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Pb-194		3.96E-14	5.44E-14	8.14E-14	3.11E-14
Pb-195m		5.29E-14	7.25E-14	1.10E-13	4.03E-14
Pb-196		7.03E-14	9.73E-14	1.53E-13	4.96E-14
Pb-197		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb-197m		1.11E-13	1.54E-13	2.43E-13	7.62E-14
Pb-198		2.60E-13	3.63E-13	5.96E-13	1.62E-13
Pb-199		1.19E-13	1.67E-13	2.71E-13	7.59E-14
Pb-200		1.59E-12	2.26E-12	3.92E-12	8.77E-13
Pb-201		5.99E-13	8.47E-13	1.45E-12	3.44E-13
Pb-201m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pb-202		3.37E-11	4.51E-11	6.14E-11	2.46E-11
Pb-202+D		3.52E-11	4.70E-11	6.44E-11	2.57E-11
Pb-202+E		3.52E-11	4.70E-11	6.44E-11	2.57E-11
Pb-202m		4.77E-13	6.70E-13	1.11E-12	2.92E-13
Pb-203		1.04E-12	1.48E-12	2.60E-12	5.66E-13
Pb-204m		1.27E-13	1.76E-13	2.75E-13	8.81E-14
Pb-205		6.18E-13	8.03E-13	1.17E-12	4.81E-13
Pb-209		2.41E-13	3.49E-13	6.25E-13	1.22E-13
Pb-210		8.84E-10	1.18E-09	1.72E-09	5.99E-10
Pb-211		4.11E-13	5.81E-13	9.55E-13	2.63E-13
Pb-212		2.52E-11	3.57E-11	6.33E-11	1.31E-11
Pb-214		3.44E-13	4.85E-13	7.92E-13	2.21E-13
Pd-100		3.81E-12	5.44E-12	9.44E-12	1.89E-12
Pd-101		4.11E-13	5.88E-13	1.03E-12	1.99E-13
Pd-103		1.25E-12	1.83E-12	3.39E-12	5.07E-13
Pd-107		2.59E-13	3.81E-13	7.07E-13	1.05E-13
Pd-109		3.57E-12	5.22E-12	9.69E-12	1.46E-12
Pd-109m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-111		9.92E-14	1.39E-13	2.24E-13	6.77E-14
Pd-112		1.72E-11	2.52E-11	4.66E-11	6.99E-12
Pd-114		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-96		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pd-97		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Pd-98		1.17E-13	1.62E-13	2.50E-13	8.66E-14
Pd-99		7.55E-14	1.05E-13	1.65E-13	5.29E-14
Pm-136		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-137m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-139		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-140		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-140m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-141		6.44E-14	8.95E-14	1.38E-13	4.77E-14
Pm-142		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-143		8.77E-13	1.24E-12	2.10E-12	4.59E-13
Pm-144		3.34E-12	4.70E-12	7.77E-12	1.86E-12
Pm-145		5.25E-13	7.59E-13	1.36E-12	2.41E-13
Pm-146		4.11E-12	5.88E-12	1.03E-11	1.97E-12
Pm-147		1.69E-12	2.48E-12	4.59E-12	6.92E-13
Pm-148		1.73E-11	2.53E-11	4.66E-11	7.10E-12
Pm-148m		7.99E-12	1.15E-11	2.02E-11	3.81E-12
Pm-149		6.62E-12	9.73E-12	1.81E-11	2.69E-12
Pm-150		1.09E-12	1.57E-12	2.79E-12	5.29E-13
Pm-151		4.48E-12	6.55E-12	1.21E-11	1.88E-12
Pm-152		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-152m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-153		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-154		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pm-154m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-203	Organic	1.36E-13	1.89E-13	3.09E-13	8.77E-14
Po-203	Inorganic	1.64E-13	2.30E-13	0.00E+00	0.00E+00
Po-204	Organic	8.77E-13	1.24E-12	2.12E-12	5.00E-13
Po-204	Inorganic	1.15E-12	1.64E-12	0.00E+00	0.00E+00
Po-205	Organic	1.62E-13	2.24E-13	3.60E-13	1.08E-13
Po-205	Inorganic	1.69E-13	2.36E-13	0.00E+00	0.00E+00
Po-206	Organic	3.22E-11	4.22E-11	6.40E-11	2.41E-11
Po-206	Inorganic	1.31E-11	1.81E-11	0.00E+00	0.00E+00
Po-207	Organic	3.81E-13	5.33E-13	9.03E-13	2.25E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Po-207	Inorganic	5.00E-13	7.03E-13	0.00E+00	0.00E+00
Po-208	Organic	2.22E-09	2.81E-09	4.07E-09	1.80E-09
Po-208	Inorganic	4.66E-10	5.96E-10	0.00E+00	0.00E+00
Po-209	Organic	2.20E-09	2.79E-09	4.03E-09	1.79E-09
Po-209	Inorganic	4.63E-10	5.88E-10	0.00E+00	0.00E+00
Po-210	Organic	1.78E-09	2.25E-09	3.27E-09	1.44E-09
Po-210	Inorganic	3.77E-10	4.85E-10	0.00E+00	0.00E+00
Po-211		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-212		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-212m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-213		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-214		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-215		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-216		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Po-218		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-134		1.15E-13	1.61E-13	2.60E-13	7.59E-14
Pr-134m		1.91E-13	2.69E-13	4.37E-13	1.26E-13
Pr-135		9.25E-14	1.29E-13	2.04E-13	6.36E-14
Pr-136		5.96E-14	8.21E-14	1.22E-13	4.74E-14
Pr-137		1.17E-13	1.67E-13	2.87E-13	6.44E-14
Pr-138		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-138m		4.22E-13	5.96E-13	9.92E-13	2.42E-13
Pr-139		1.50E-13	2.17E-13	3.89E-13	6.99E-14
Pr-140		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-142		8.62E-12	1.26E-11	2.34E-11	3.51E-12
Pr-142m		1.11E-13	1.62E-13	3.01E-13	4.48E-14
Pr-143		7.92E-12	1.17E-11	2.16E-11	3.20E-12
Pr-144		8.10E-14	1.12E-13	1.71E-13	6.33E-14
Pr-144m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-145		2.29E-12	3.36E-12	6.18E-12	9.66E-13
Pr-146		1.38E-13	1.92E-13	2.96E-13	1.03E-13
Pr-147		5.85E-14	8.10E-14	1.25E-13	4.44E-14
Pr-148		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Pr-148m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pt-184		9.44E-14	1.34E-13	2.26E-13	5.37E-14
Pt-186		4.33E-13	6.18E-13	1.07E-12	2.24E-13
Pt-187		3.51E-13	5.03E-13	8.84E-13	1.75E-13
Pt-188		4.03E-12	5.81E-12	1.03E-11	1.89E-12
Pt-189		9.73E-13	1.41E-12	2.52E-12	4.48E-13
Pt-190		3.01E-11	4.22E-11	7.18E-11	1.70E-11
Pt-191		1.96E-12	2.85E-12	5.14E-12	8.73E-13
Pt-193		2.42E-13	3.55E-13	6.59E-13	9.77E-14
Pt-193m		3.06E-12	4.48E-12	8.33E-12	1.24E-12
Pt-195m		4.18E-12	6.14E-12	1.13E-11	1.71E-12
Pt-197		2.80E-12	4.11E-12	7.59E-12	1.14E-12
Pt-197m		4.00E-13	5.81E-13	1.05E-12	1.82E-13
Pt-199		8.99E-14	1.27E-13	2.09E-13	5.74E-14
Pt-200		7.55E-12	1.11E-11	2.05E-11	3.09E-12
Pt-202		2.92E-11	4.29E-11	7.96E-11	1.18E-11
Pt-202+D		2.92E-11	4.29E-11	7.96E-11	1.18E-11
Pt-202+E		2.92E-11	4.29E-11	7.96E-11	1.18E-11
Pu-232		2.96E-13	4.18E-13	6.77E-13	1.97E-13
Pu-234		8.25E-13	1.20E-12	2.18E-12	3.66E-13
Pu-235		4.63E-15	6.40E-15	9.77E-15	3.43E-15
Pu-236		7.55E-11	1.00E-10	1.48E-10	5.66E-11
Pu-237		6.44E-13	9.36E-13	1.70E-12	2.80E-13
Pu-238		1.31E-10	1.69E-10	2.25E-10	1.17E-10
Pu-239		1.35E-10	1.74E-10	2.28E-10	1.21E-10
Pu-239+D		1.35E-10	1.74E-10	2.28E-10	1.21E-10
Pu-239+E		1.35E-10	1.74E-10	2.28E-10	1.21E-10
Pu-240		1.35E-10	1.74E-10	2.28E-10	1.21E-10
Pu-241		1.76E-12	2.28E-12	2.72E-12	1.73E-12
Pu-242		1.28E-10	1.66E-10	2.17E-10	1.15E-10
Pu-243		4.74E-13	6.92E-13	1.27E-12	2.07E-13
Pu-244		1.44E-10	1.88E-10	2.58E-10	1.21E-10
Pu-244+D		1.51E-10	1.98E-10	2.77E-10	1.24E-10

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Pu-244+E		1.51E-10	1.98E-10	2.77E-10	1.24E-10
Pu-245		4.26E-12	6.25E-12	1.15E-11	1.80E-12
Pu-246		1.72E-11	2.52E-11	4.59E-11	7.36E-12
Ra-219		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-219+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-219+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-220		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-221+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-222		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ra-223		2.38E-10	3.39E-10	5.99E-10	1.23E-10
Ra-223+D		2.38E-10	3.39E-10	5.99E-10	1.23E-10
Ra-223+E		2.38E-10	3.39E-10	5.99E-10	1.23E-10
Ra-224		1.67E-10	2.38E-10	4.26E-10	8.47E-11
Ra-224+D		1.67E-10	2.38E-10	4.26E-10	8.47E-11
Ra-224+E		1.67E-10	2.38E-10	4.26E-10	8.47E-11
Ra-225		1.14E-10	1.54E-10	2.42E-10	7.44E-11
Ra-226		3.85E-10	5.14E-10	6.77E-10	2.95E-10
Ra-226+D		3.85E-10	5.14E-10	6.77E-10	2.95E-10
Ra-226+E		3.85E-10	5.14E-10	6.77E-10	2.95E-10
Ra-227		1.07E-13	1.48E-13	2.34E-13	7.55E-14
Ra-228		1.04E-09	1.42E-09	1.98E-09	6.70E-10
Ra-228+D		1.04E-09	1.43E-09	1.98E-09	6.70E-10
Ra-228+E		1.04E-09	1.43E-09	1.98E-09	6.70E-10
Ra-230		5.96E-13	8.55E-13	1.51E-12	3.24E-13
Rb-77		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-78		1.21E-13	1.65E-13	2.44E-13	9.88E-14
Rb-78m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-79		8.36E-14	1.15E-13	1.70E-13	6.81E-14
Rb-80		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-81		1.17E-13	1.58E-13	2.44E-13	8.84E-14
Rb-81m		1.95E-14	2.65E-14	4.07E-14	1.49E-14

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Rb-82		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-82m		3.64E-13	4.85E-13	7.25E-13	2.85E-13
Rb-83		5.37E-12	7.07E-12	1.07E-11	4.14E-12
Rb-84		8.92E-12	1.19E-11	1.86E-11	6.59E-12
Rb-84m		1.46E-14	1.98E-14	2.95E-14	1.17E-14
Rb-86		9.88E-12	1.34E-11	2.24E-11	6.55E-12
Rb-86m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-87		5.37E-12	7.33E-12	1.22E-11	3.55E-12
Rb-88		1.40E-13	1.92E-13	2.87E-13	1.14E-13
Rb-89		7.70E-14	1.05E-13	1.55E-13	6.25E-14
Rb-90		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rb-90m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-178		4.88E-14	6.70E-14	1.01E-13	3.89E-14
Re-179		2.78E-14	3.81E-14	5.85E-14	2.10E-14
Re-180		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-181		1.42E-12	2.01E-12	3.54E-12	8.03E-13
Re-182		4.77E-12	6.73E-12	1.16E-11	2.75E-12
Re-182m		9.10E-13	1.28E-12	2.19E-12	5.44E-13
Re-183		3.33E-12	4.74E-12	8.36E-12	1.81E-12
Re-184		3.17E-12	4.40E-12	7.36E-12	1.95E-12
Re-184m		4.92E-12	6.99E-12	1.21E-11	2.79E-12
Re-186		5.40E-12	7.77E-12	1.41E-11	2.75E-12
Re-186m		7.36E-12	1.05E-11	1.84E-11	4.03E-12
Re-186m+D		1.28E-11	1.83E-11	3.25E-11	6.77E-12
Re-186m+E		1.28E-11	1.83E-11	3.25E-11	6.77E-12
Re-187		1.67E-14	2.39E-14	4.26E-14	8.88E-15
Re-188		4.92E-12	7.07E-12	1.30E-11	2.52E-12
Re-188m		9.88E-14	1.42E-13	2.57E-13	5.25E-14
Re-189		2.72E-12	3.92E-12	7.14E-12	1.39E-12
Re-190		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Re-190m		1.08E-12	1.54E-12	2.73E-12	6.25E-13
Rh-100		2.42E-12	3.42E-12	5.74E-12	1.33E-12
Rh-100m		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Rh-101		2.05E-12	2.86E-12	4.77E-12	1.19E-12
Rh-101m		9.14E-13	1.31E-12	2.29E-12	4.48E-13
Rh-102		6.18E-12	8.92E-12	1.59E-11	2.90E-12
Rh-102m		8.14E-12	1.10E-11	1.71E-11	5.59E-12
Rh-103m		9.32E-15	1.32E-14	2.23E-14	5.59E-15
Rh-104		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-104m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-105		2.34E-12	3.43E-12	6.33E-12	9.66E-13
Rh-106		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-106m		5.66E-13	7.99E-13	1.35E-12	3.17E-13
Rh-107		4.14E-14	5.77E-14	8.84E-14	3.16E-14
Rh-108		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-109		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-94		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-95		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-95m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-96		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-96m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-97		9.84E-14	1.37E-13	2.14E-13	6.99E-14
Rh-97m		1.20E-13	1.67E-13	2.65E-13	7.96E-14
Rh-98		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rh-99		2.63E-12	3.77E-12	6.70E-12	1.26E-12
Rh-99m		2.46E-13	3.49E-13	5.92E-13	1.32E-13
Rn-207		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-209		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-210		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-211		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-212		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-215		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-216		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-217		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-218		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-219		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Rn-219+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-219+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-220		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-222		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-222+D		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-222+E		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Rn-223		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-103		3.64E-12	5.25E-12	9.44E-12	1.69E-12
Ru-105		1.43E-12	2.08E-12	3.77E-12	6.40E-13
Ru-106		4.22E-11	6.11E-11	1.12E-10	1.84E-11
Ru-106+D		4.22E-11	6.11E-11	1.12E-10	1.84E-11
Ru-106+E		4.22E-11	6.11E-11	1.12E-10	1.84E-11
Ru-107		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-108		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-92		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ru-94		3.09E-13	4.40E-13	7.66E-13	1.63E-13
Ru-95		1.92E-13	2.69E-13	4.44E-13	1.14E-13
Ru-97		6.36E-13	9.07E-13	1.58E-12	3.15E-13
S-35	Inorganic	5.14E-13	6.99E-13	1.18E-12	3.26E-13
S-35	Organic	2.72E-12	3.70E-12	0.00E+00	0.00E+00
S-37		0.00E+00	0.00E+00	0.00E+00	0.00E+00
S-38	Inorganic	9.69E-13	1.26E-12	1.85E-12	7.47E-13
S-38	Organic	6.18E-13	8.44E-13	0.00E+00	0.00E+00
Sb-111		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-113		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-114		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-115		5.11E-14	7.07E-14	1.10E-13	3.66E-14
Sb-116		5.66E-14	7.77E-14	1.16E-13	4.40E-14
Sb-116m		1.71E-13	2.38E-13	3.74E-13	1.15E-13
Sb-117		6.70E-14	9.58E-14	1.65E-13	3.55E-14
Sb-118		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-118m		6.99E-13	9.81E-13	1.61E-12	4.11E-13
Sb-119		4.85E-13	7.07E-13	1.30E-12	2.04E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Sb-120		2.48E-14	3.42E-14	5.14E-14	1.94E-14
Sb-120m		4.40E-12	6.22E-12	1.04E-11	2.45E-12
Sb-122		1.06E-11	1.55E-11	2.86E-11	4.44E-12
Sb-122m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-124		1.28E-11	1.85E-11	3.32E-11	6.03E-12
Sb-124m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-124n		1.97E-14	2.73E-14	4.26E-14	1.44E-14
Sb-125		4.44E-12	6.22E-12	1.07E-11	2.41E-12
Sb-126		1.27E-11	1.82E-11	3.22E-11	6.03E-12
Sb-126m		7.03E-14	9.73E-14	1.48E-13	5.37E-14
Sb-127		1.01E-11	1.47E-11	2.71E-11	4.29E-12
Sb-128		3.77E-12	5.44E-12	9.62E-12	1.80E-12
Sb-128m		5.81E-14	7.99E-14	1.20E-13	4.59E-14
Sb-129		2.22E-12	3.23E-12	5.85E-12	9.92E-13
Sb-130		2.10E-13	2.92E-13	4.59E-13	1.46E-13
Sb-130m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb-131		2.66E-13	3.74E-13	6.44E-13	1.66E-13
Sb-133		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sc-42m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sc-43		9.99E-13	1.45E-12	2.59E-12	4.70E-13
Sc-44		1.58E-12	2.28E-12	4.03E-12	7.59E-13
Sc-44m		1.38E-11	2.01E-11	3.65E-11	6.03E-12
Sc-46		6.22E-12	8.84E-12	1.54E-11	3.07E-12
Sc-47		3.49E-12	5.11E-12	9.44E-12	1.44E-12
Sc-48		7.18E-12	1.03E-11	1.80E-11	3.53E-12
Sc-49		2.03E-13	2.89E-13	4.88E-13	1.21E-13
Sc-50		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-70		2.58E-13	3.60E-13	5.96E-13	1.68E-13
Se-71		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-72		1.65E-11	2.24E-11	3.65E-11	1.11E-11
Se-73		7.99E-13	1.14E-12	1.99E-12	4.51E-13
Se-73m		8.33E-14	1.17E-13	2.00E-13	5.07E-14
Se-75		8.03E-12	1.06E-11	1.58E-11	6.18E-12

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Se-77m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-79		6.92E-12	9.18E-12	1.44E-11	5.03E-12
Se-79m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-81		4.26E-14	5.88E-14	8.99E-14	3.34E-14
Se-81m		1.31E-13	1.85E-13	3.17E-13	8.10E-14
Se-83		1.00E-13	1.39E-13	2.21E-13	7.14E-14
Se-83m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se-84		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Si-31		6.48E-13	9.40E-13	1.70E-12	2.97E-13
Si-32		3.56E-12	5.18E-12	9.47E-12	1.55E-12
Si-32+D		1.25E-11	1.75E-11	3.09E-11	6.88E-12
Si-32+E		1.25E-11	1.75E-11	3.09E-11	6.88E-12
Sm-139		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-140		1.86E-13	2.60E-13	4.11E-13	1.32E-13
Sm-141		7.03E-14	9.73E-14	1.48E-13	5.33E-14
Sm-141m		1.34E-13	1.87E-13	2.96E-13	9.40E-14
Sm-142		5.25E-13	7.47E-13	1.28E-12	2.97E-13
Sm-143		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-143m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sm-145		1.14E-12	1.66E-12	3.01E-12	5.00E-13
Sm-146		4.07E-11	5.22E-11	7.14E-11	3.46E-11
Sm-147		3.74E-11	4.77E-11	6.51E-11	3.17E-11
Sm-148		3.20E-11	4.11E-11	5.59E-11	2.72E-11
Sm-151		5.59E-13	8.14E-13	1.50E-12	2.37E-13
Sm-153		4.77E-12	7.03E-12	1.30E-11	1.95E-12
Sm-155		5.03E-14	6.96E-14	1.07E-13	3.81E-14
Sm-156		1.52E-12	2.22E-12	4.07E-12	6.40E-13
Sm-157		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-106		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-108		5.33E-14	7.44E-14	1.19E-13	3.56E-14
Sn-109		4.92E-14	6.81E-14	1.05E-13	3.43E-14
Sn-110		1.94E-12	2.82E-12	5.11E-12	8.66E-13
Sn-111		5.07E-14	7.10E-14	1.15E-13	3.30E-14

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Sn-113		4.40E-12	6.44E-12	1.17E-11	1.89E-12
Sn-113m		5.96E-15	8.29E-15	1.30E-14	4.29E-15
Sn-117m		4.40E-12	6.44E-12	1.18E-11	1.84E-12
Sn-119m		2.25E-12	3.30E-12	6.11E-12	9.32E-13
Sn-121		1.51E-12	2.22E-12	4.11E-12	6.18E-13
Sn-121m		2.36E-12	3.44E-12	6.33E-12	1.01E-12
Sn-121m+D		3.53E-12	5.18E-12	9.51E-12	1.49E-12
Sn-121m+E		3.53E-12	5.18E-12	9.51E-12	1.49E-12
Sn-123		1.41E-11	2.06E-11	3.81E-11	5.70E-12
Sn-123m		8.03E-14	1.13E-13	1.83E-13	5.37E-14
Sn-125		1.99E-11	2.92E-11	5.40E-11	8.18E-12
Sn-125m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-126		2.58E-11	3.74E-11	6.70E-11	1.18E-11
Sn-126+D		2.76E-11	4.00E-11	7.18E-11	1.27E-11
Sn-126+E		2.76E-11	4.00E-11	7.18E-11	1.27E-11
Sn-127		8.18E-13	1.17E-12	2.07E-12	4.07E-13
Sn-127m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-128		4.48E-13	6.33E-13	1.07E-12	2.62E-13
Sn-129		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-130		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sn-130m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-79		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-80		1.25E-12	1.78E-12	3.09E-12	6.96E-13
Sr-81		1.43E-13	1.99E-13	3.16E-13	1.00E-13
Sr-82		3.15E-11	4.51E-11	8.18E-11	1.58E-11
Sr-82+D		3.15E-11	4.51E-11	8.18E-11	1.58E-11
Sr-82+E		3.15E-11	4.51E-11	8.18E-11	1.58E-11
Sr-83		2.34E-12	3.36E-12	5.99E-12	1.20E-12
Sr-85		2.22E-12	3.05E-12	4.59E-12	1.39E-12
Sr-85m		1.63E-14	2.26E-14	3.52E-14	1.12E-14
Sr-87m		1.07E-13	1.52E-13	2.61E-13	6.11E-14
Sr-89		1.28E-11	1.84E-11	3.33E-11	6.51E-12
Sr-90		5.59E-11	6.88E-11	8.62E-11	5.14E-11

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Sr-90+D		7.40E-11	9.51E-11	1.35E-10	5.88E-11
Sr-90+E		7.40E-11	9.51E-11	1.35E-10	5.88E-11
Sr-91		3.27E-12	4.74E-12	8.62E-12	1.59E-12
Sr-92		2.21E-12	3.21E-12	5.85E-12	1.05E-12
Sr-93		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-94		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-170		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-172		1.24E-13	1.73E-13	2.73E-13	8.70E-14
Ta-173		4.74E-13	6.81E-13	1.21E-12	2.30E-13
Ta-174		1.99E-13	2.82E-13	4.74E-13	1.18E-13
Ta-175		9.69E-13	1.38E-12	2.38E-12	4.92E-13
Ta-176		1.20E-12	1.69E-12	2.87E-12	6.36E-13
Ta-177		5.99E-13	8.70E-13	1.58E-12	2.62E-13
Ta-178		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ta-178m		2.95E-13	4.18E-13	7.10E-13	1.62E-13
Ta-179		3.24E-13	4.70E-13	8.55E-13	1.42E-13
Ta-180		3.12E-13	4.55E-13	8.33E-13	1.34E-13
Ta-182		7.81E-12	1.13E-11	2.02E-11	3.52E-12
Ta-182m		2.12E-14	2.92E-14	4.44E-14	1.64E-14
Ta-183		8.55E-12	1.25E-11	2.31E-11	3.53E-12
Ta-184		3.49E-12	5.07E-12	9.18E-12	1.57E-12
Ta-185		1.60E-13	2.27E-13	3.77E-13	1.01E-13
Ta-186		5.74E-14	7.88E-14	1.17E-13	4.63E-14
Tb-146		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-147		4.18E-13	5.92E-13	9.95E-13	2.36E-13
Tb-147m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-148		3.23E-13	4.55E-13	7.51E-13	2.01E-13
Tb-148m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-149		7.73E-13	1.11E-12	1.94E-12	3.85E-13
Tb-149m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-150		8.44E-13	1.21E-12	2.09E-12	4.40E-13
Tb-150m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-151		1.56E-12	2.23E-12	3.89E-12	7.66E-13

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Tb-151m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-152		3.48E-12	5.03E-12	8.99E-12	1.59E-12
Tb-152m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-153		1.40E-12	2.02E-12	3.61E-12	6.48E-13
Tb-154		2.39E-12	3.39E-12	5.77E-12	1.26E-12
Tb-155		1.38E-12	2.00E-12	3.60E-12	6.18E-13
Tb-156		4.66E-12	6.66E-12	1.15E-11	2.38E-12
Tb-156m		7.40E-13	1.06E-12	1.87E-12	3.53E-13
Tb-156n		4.29E-13	6.22E-13	1.11E-12	1.95E-13
Tb-157		2.08E-13	3.03E-13	5.51E-13	9.07E-14
Tb-158		4.81E-12	6.88E-12	1.21E-11	2.34E-12
Tb-160		8.77E-12	1.27E-11	2.31E-11	3.89E-12
Tb-161		4.92E-12	7.22E-12	1.34E-11	2.00E-12
Tb-162		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-163		3.89E-14	5.33E-14	8.10E-14	2.98E-14
Tb-164		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tb-165		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-101		3.03E-14	4.18E-14	6.29E-14	2.40E-14
Tc-102		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-102m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-104		1.41E-13	1.95E-13	2.96E-13	1.09E-13
Tc-105		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-91		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-91m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-92		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tc-93		2.12E-13	2.96E-13	4.85E-13	1.33E-13
Tc-93m		8.73E-14	1.22E-13	1.99E-13	5.66E-14
Tc-94		6.29E-13	8.81E-13	1.45E-12	3.92E-13
Tc-94m		2.39E-13	3.36E-13	5.51E-13	1.57E-13
Tc-95		5.77E-13	8.03E-13	1.33E-12	3.51E-13
Tc-95m		1.82E-12	2.54E-12	4.18E-12	1.11E-12
Tc-96		3.42E-12	4.70E-12	7.62E-12	2.15E-12
Tc-96m		3.57E-14	4.96E-14	8.07E-14	2.25E-14

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Tc-97		2.71E-13	3.92E-13	7.03E-13	1.35E-13
Tc-97m		2.38E-12	3.45E-12	6.29E-12	1.14E-12
Tc-98		6.62E-12	9.40E-12	1.62E-11	3.69E-12
Tc-99		2.75E-12	4.00E-12	7.25E-12	1.32E-12
Tc-99m		7.96E-14	1.13E-13	1.99E-13	4.37E-14
Te-113		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te-114		1.21E-13	1.66E-13	2.50E-13	9.36E-14
Te-115		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te-115m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Te-116		7.81E-13	1.12E-12	1.98E-12	4.00E-13
Te-117		1.47E-13	2.06E-13	3.39E-13	9.21E-14
Te-118		1.76E-11	2.57E-11	4.81E-11	7.73E-12
Te-118+D		1.76E-11	2.57E-11	4.81E-11	7.73E-12
Te-118+E		1.76E-11	2.57E-11	4.81E-11	7.73E-12
Te-119		6.77E-13	9.58E-13	1.65E-12	3.64E-13
Te-119m		2.52E-12	3.52E-12	5.88E-12	1.46E-12
Te-121		1.51E-12	2.08E-12	3.38E-12	9.47E-13
Te-121m		6.48E-12	8.58E-12	1.36E-11	4.55E-12
Te-123		1.08E-12	1.32E-12	1.59E-12	1.13E-12
Te-123m		4.11E-12	5.62E-12	9.66E-12	2.45E-12
Te-125m		3.33E-12	4.70E-12	8.51E-12	1.70E-12
Te-127		1.01E-12	1.49E-12	2.80E-12	4.26E-13
Te-127m		8.66E-12	1.20E-11	2.13E-11	4.77E-12
Te-129		1.71E-13	2.44E-13	4.18E-13	9.88E-14
Te-129m		1.53E-11	2.20E-11	4.07E-11	7.18E-12
Te-131		2.16E-13	3.05E-13	5.40E-13	1.31E-13
Te-131m		8.10E-12	1.16E-11	2.14E-11	3.92E-12
Te-132		1.69E-11	2.43E-11	4.51E-11	8.18E-12
Te-133		1.90E-13	2.69E-13	5.00E-13	1.09E-13
Te-133m		7.96E-13	1.13E-12	2.13E-12	4.26E-13
Te-134		2.76E-13	3.85E-13	6.55E-13	1.74E-13
Th-223		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th-224		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Th-226		6.59E-13	9.25E-13	1.46E-12	4.74E-13
Th-227		4.81E-11	7.03E-11	1.29E-10	2.06E-11
Th-228		1.08E-10	1.48E-10	2.43E-10	6.40E-11
Th-229		2.23E-10	2.90E-10	3.85E-10	1.97E-10
Th-229+D		3.38E-10	4.44E-10	6.25E-10	2.71E-10
Th-229+E		3.38E-10	4.44E-10	6.25E-10	2.71E-10
Th-230		9.14E-11	1.19E-10	1.66E-10	7.73E-11
Th-231		2.19E-12	3.22E-12	5.96E-12	9.07E-13
Th-232		1.01E-10	1.33E-10	1.84E-10	8.47E-11
Th-232+D		1.14E-09	1.56E-09	2.17E-09	7.55E-10
Th-232+E		1.14E-09	1.56E-09	2.17E-09	7.55E-10
Th-233		3.96E-14	5.55E-14	8.66E-14	2.90E-14
Th-234		2.31E-11	3.39E-11	6.25E-11	9.51E-12
Th-234+D		2.31E-11	3.39E-11	6.25E-11	9.51E-12
Th-234+E		2.31E-11	3.39E-11	6.25E-11	9.51E-12
Th-235		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Th-236		1.95E-13	2.75E-13	4.48E-13	1.30E-13
Ti-44		2.56E-11	3.63E-11	6.33E-11	1.34E-11
Ti-44+D		2.72E-11	3.85E-11	6.73E-11	1.42E-11
Ti-44+E		2.72E-11	3.85E-11	6.73E-11	1.42E-11
Ti-45		6.44E-13	9.32E-13	1.65E-12	3.12E-13
Ti-51		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ti-52		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-190		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-190m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-194		7.84E-14	1.07E-13	1.60E-13	6.33E-14
Tl-194m		7.77E-14	1.05E-13	1.54E-13	6.33E-14
Tl-195		5.92E-14	7.99E-14	1.20E-13	4.63E-14
Tl-196		1.17E-13	1.58E-13	2.35E-13	9.25E-14
Tl-197		6.44E-14	8.81E-14	1.38E-13	4.63E-14
Tl-198		2.07E-13	2.76E-13	4.11E-13	1.61E-13
Tl-198m		1.31E-13	1.76E-13	2.65E-13	1.02E-13
Tl-199		7.66E-14	1.04E-13	1.63E-13	5.51E-14

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Tl-200		6.18E-13	8.25E-13	1.27E-12	4.59E-13
Tl-201		3.70E-13	5.11E-13	8.58E-13	2.28E-13
Tl-202		1.49E-12	2.01E-12	3.16E-12	1.05E-12
Tl-204		5.81E-12	8.21E-12	1.44E-11	3.15E-12
Tl-206		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-206m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-207		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-208		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-209		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl-210		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-161		1.09E-13	1.53E-13	2.50E-13	6.73E-14
Tm-162		7.47E-14	1.03E-13	1.57E-13	5.66E-14
Tm-163		1.69E-13	2.37E-13	3.89E-13	1.01E-13
Tm-164		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-165		1.67E-12	2.41E-12	4.26E-12	7.84E-13
Tm-166		1.09E-12	1.55E-12	2.64E-12	5.77E-13
Tm-167		3.59E-12	5.25E-12	9.66E-12	1.50E-12
Tm-168		4.48E-12	6.44E-12	1.12E-11	2.20E-12
Tm-170		8.84E-12	1.30E-11	2.41E-11	3.57E-12
Tm-171		6.96E-13	1.02E-12	1.89E-12	2.84E-13
Tm-172		1.08E-11	1.58E-11	2.92E-11	4.48E-12
Tm-173		1.68E-12	2.46E-12	4.48E-12	7.25E-13
Tm-174		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tm-175		5.03E-14	6.99E-14	1.09E-13	3.69E-14
Tm-176		0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-227		0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-228		0.00E+00	0.00E+00	0.00E+00	0.00E+00
U-230		2.09E-10	2.98E-10	5.29E-10	1.04E-10
U-231		2.12E-12	3.11E-12	5.70E-12	8.95E-13
U-232		2.90E-10	3.85E-10	5.37E-10	2.43E-10
U-233		7.18E-11	9.69E-11	1.50E-10	5.22E-11
U-234		7.07E-11	9.55E-11	1.48E-10	5.11E-11
U-235		6.96E-11	9.44E-11	1.48E-10	4.92E-11

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
U-235+D		7.18E-11	9.77E-11	1.54E-10	5.00E-11
U-235+E		7.18E-11	9.77E-11	1.54E-10	5.00E-11
U-235m		7.62E-18	1.06E-17	1.65E-17	5.66E-18
U-236		6.66E-11	8.99E-11	1.39E-10	4.81E-11
U-237		5.00E-12	7.29E-12	1.34E-11	2.09E-12
U-238		6.40E-11	8.66E-11	1.34E-10	4.66E-11
U-238+D		8.70E-11	1.21E-10	1.97E-10	5.62E-11
U-238+E		8.70E-11	1.21E-10	1.97E-10	5.62E-11
U-239		7.44E-14	1.06E-13	1.79E-13	4.40E-14
U-240		6.92E-12	1.01E-11	1.86E-11	2.90E-12
U-242		8.66E-14	1.20E-13	1.82E-13	6.77E-14
V-47		1.25E-13	1.74E-13	2.75E-13	8.88E-14
V-48		8.29E-12	1.18E-11	2.05E-11	4.14E-12
V-49		1.21E-13	1.77E-13	3.29E-13	4.96E-14
V-50		5.92E-12	7.96E-12	1.18E-11	4.55E-12
V-52		0.00E+00	0.00E+00	0.00E+00	0.00E+00
V-53		0.00E+00	0.00E+00	0.00E+00	0.00E+00
W-177		1.93E-13	2.73E-13	4.63E-13	1.09E-13
W-178		1.37E-12	1.99E-12	3.64E-12	6.11E-13
W-178+D		1.37E-12	1.99E-12	3.64E-12	6.11E-13
W-178+E		1.37E-12	1.99E-12	3.64E-12	6.11E-13
W-179		7.59E-15	1.06E-14	1.68E-14	5.25E-15
W-179m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
W-181		4.51E-13	6.51E-13	1.18E-12	2.07E-13
W-185		2.93E-12	4.29E-12	7.99E-12	1.21E-12
W-185m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
W-187		3.49E-12	5.07E-12	9.36E-12	1.51E-12
W-188		1.39E-11	2.04E-11	3.81E-11	5.77E-12
W-190		1.64E-13	2.29E-13	3.60E-13	1.18E-13
Xe-120		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-121		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-122		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-123		0.00E+00	0.00E+00	0.00E+00	0.00E+00

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Xe-125		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-127		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-127m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-129m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-131m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-133		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-133m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-135		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-135m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-137		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xe-138		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-81		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-83		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-83m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-84m		3.03E-13	4.22E-13	6.70E-13	2.09E-13
Y-85		7.44E-13	1.07E-12	1.89E-12	3.68E-13
Y-85m		1.81E-12	2.62E-12	4.74E-12	8.29E-13
Y-86		3.96E-12	5.66E-12	9.84E-12	2.00E-12
Y-86m		2.30E-13	3.29E-13	5.70E-13	1.17E-13
Y-87		2.57E-12	3.70E-12	6.55E-12	1.21E-12
Y-87m		1.11E-12	1.61E-12	2.88E-12	5.03E-13
Y-88		4.22E-12	5.88E-12	9.62E-12	2.40E-12
Y-89m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Y-90		1.80E-11	2.65E-11	4.92E-11	7.29E-12
Y-90m		1.04E-12	1.52E-12	2.79E-12	4.44E-13
Y-91		1.61E-11	2.36E-11	4.37E-11	6.48E-12
Y-91m		3.52E-14	4.96E-14	8.14E-14	2.16E-14
Y-92		2.48E-12	3.62E-12	6.59E-12	1.10E-12
Y-93		7.25E-12	1.06E-11	1.96E-11	2.99E-12
Y-94		1.40E-13	1.94E-13	2.96E-13	1.08E-13
Y-95		6.73E-14	9.29E-14	1.38E-13	5.40E-14
Yb-162		6.96E-14	9.69E-14	1.53E-13	4.77E-14
Yb-163		3.57E-14	4.96E-14	7.81E-14	2.48E-14

Continued on next page

Table 2.5: Risk coefficients for ingestion

Nuclide	Type	Tap Water	Diet	Soil Population	Soil Worker
		(pCi ⁻¹)			
Yb-164		2.74E-13	3.92E-13	6.66E-13	1.55E-13
Yb-165		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Yb-166		4.26E-12	6.11E-12	1.07E-11	2.05E-12
Yb-167		1.61E-14	2.25E-14	3.61E-14	1.08E-14
Yb-169		4.70E-12	6.81E-12	1.24E-11	2.02E-12
Yb-175		2.89E-12	4.26E-12	7.84E-12	1.18E-12
Yb-177		3.55E-13	5.14E-13	9.14E-13	1.73E-13
Yb-178		3.81E-13	5.51E-13	9.77E-13	1.88E-13
Yb-179		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-60		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-61		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-62		4.92E-12	7.22E-12	1.35E-11	2.23E-12
Zn-63		1.63E-13	2.29E-13	3.68E-13	1.14E-13
Zn-65		1.16E-11	1.53E-11	2.28E-11	8.92E-12
Zn-69		7.14E-14	1.02E-13	1.73E-13	4.48E-14
Zn-69m		1.87E-12	2.73E-12	5.14E-12	8.33E-13
Zn-71		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zn-71m		9.73E-13	1.40E-12	2.54E-12	4.96E-13
Zn-72		6.66E-12	9.55E-12	1.73E-11	3.37E-12
Zr-85		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-86		3.81E-12	5.48E-12	9.58E-12	1.84E-12
Zr-87		6.73E-13	9.69E-13	1.70E-12	3.43E-13
Zr-88		1.55E-12	2.15E-12	3.53E-12	9.21E-13
Zr-89		3.60E-12	5.18E-12	9.14E-12	1.72E-12
Zr-89m		0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr-93		1.08E-12	1.41E-12	1.98E-12	9.47E-13
Zr-95		4.63E-12	6.66E-12	1.18E-11	2.18E-12
Zr-97		1.25E-11	1.83E-11	3.36E-11	5.25E-12

2.6 Morbidity risk coefficients for inhalation

Explanation of Entries:

Table 2.6 contains the morbidity risk coefficients used for internal exposure due to inhalation of a radionuclide.

Type (F, M, S, V, G): Type F, Type M, and Type S are particulate aerosols that represent, respectively, fast, medium, and slow absorption to the blood. There are a few specific elements that have a vapor (Type V) or gaseous (Type G) form- see **Special**.

Special: Cases where Type V and Type G are present include: tritium as a vapor (HTO) or gas (HT), carbon in gaseous form as carbon monoxide (CO) or carbon dioxide (CO₂), sulfur as a vapor (SO₂ or CS₂), nickel as a vapor, ruthenium as a vapor (RuO₄), iodine as a vapor or a gas (methyl iodide or CH₃I), tellurium as a vapor, and mercury as a vapor. Designations of elemental, inorganic or organic also are included for certain vapor or gaseous forms.

Special note on Radon- Radon dose rate coefficients are based on epidemiological data and encompass dose from both radon and its progeny products. These are per capita values and should not be applied to specific age groups.

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ac-223			0.00E+00
Ac-223+D			0.00E+00
Ac-223+E			0.00E+00
Ac-224	F		1.00E-11
Ac-224	M		3.42E-10
Ac-224	S		3.85E-10
Ac-225	F		8.44E-10
Ac-225	M		2.46E-08
Ac-225	S		2.86E-08
Ac-225+D	S		2.86E-08
Ac-225+E	S		2.86E-08
Ac-226	F		1.14E-10
Ac-226	M		3.96E-09
Ac-226	S		4.40E-09
Ac-227	F		1.01E-07
Ac-227	M		7.99E-08
Ac-227	S		1.49E-07
Ac-228	F		1.13E-11
Ac-228	M		3.05E-11
Ac-228	S		4.92E-11
Ac-230			0.00E+00
Ac-231			0.00E+00
Ac-232			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ac-233			0.00E+00
Ag-100m			0.00E+00
Ag-101	F		1.45E-14
Ag-101	M		2.26E-14
Ag-101	S		2.35E-14
Ag-102	F		1.77E-14
Ag-102	M		2.62E-14
Ag-102	S		2.72E-14
Ag-102m			0.00E+00
Ag-103	F		2.44E-14
Ag-103	M		5.48E-14
Ag-103	S		5.85E-14
Ag-104	F		3.89E-14
Ag-104	M		6.29E-14
Ag-104	S		6.59E-14
Ag-104m	F		3.09E-14
Ag-104m	M		5.66E-14
Ag-104m	S		5.92E-14
Ag-105	F		2.02E-12
Ag-105	M		2.81E-12
Ag-105	S		3.15E-12
Ag-105m			0.00E+00
Ag-106	F		1.44E-14
Ag-106	M		2.67E-14
Ag-106	S		2.80E-14
Ag-106m	F		3.20E-12
Ag-106m	M		3.50E-12
Ag-106m	S		3.53E-12
Ag-108			0.00E+00
Ag-108m	F		2.09E-11
Ag-108m	M		2.65E-11
Ag-108m	S		1.05E-10
Ag-108m+D	S		1.05E-10
Ag-108m+E	S		1.05E-10
Ag-109m			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ag-110			0.00E+00
Ag-110m	F		2.04E-11
Ag-110m	M		2.86E-11
Ag-110m	S		4.55E-11
Ag-110m+D	S		4.55E-11
Ag-110m+E	S		4.55E-11
Ag-111	F		2.08E-12
Ag-111	M		6.66E-12
Ag-111	S		7.40E-12
Ag-111m			0.00E+00
Ag-112	F		3.29E-13
Ag-112	M		7.18E-13
Ag-112	S		7.70E-13
Ag-113	F		3.53E-13
Ag-113	M		8.33E-13
Ag-113	S		8.99E-13
Ag-113m			0.00E+00
Ag-114			0.00E+00
Ag-115	F		3.23E-14
Ag-115	M		6.88E-14
Ag-115	S		7.36E-14
Ag-116			0.00E+00
Ag-117			0.00E+00
Ag-99			0.00E+00
Al-26	F		4.00E-11
Al-26	M		6.92E-11
Al-26	S		2.90E-10
Al-28			0.00E+00
Al-29			0.00E+00
Am-237	F		1.78E-14
Am-237	M		5.92E-14
Am-237	S		6.36E-14
Am-238	F		9.58E-14
Am-238	M		9.51E-14
Am-238	S		1.14E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Am-239	F		2.47E-13
Am-239	M		8.62E-13
Am-239	S		9.32E-13
Am-240	F		6.77E-13
Am-240	M		1.44E-12
Am-240	S		1.54E-12
Am-241	F		3.77E-08
Am-241	M		2.81E-08
Am-241	S		3.54E-08
Am-242	F		8.77E-12
Am-242	M		5.03E-11
Am-242	S		6.70E-11
Am-242m	F		3.43E-08
Am-242m	M		1.55E-08
Am-242m	S		1.88E-08
Am-242m+D	F		3.43E-08
Am-242m+E	F		3.43E-08
Am-243	F		3.70E-08
Am-243	M		2.70E-08
Am-243	S		3.37E-08
Am-243+D	F		3.70E-08
Am-243+E	F		3.70E-08
Am-244	F		2.11E-12
Am-244	M		3.04E-12
Am-244	S		3.81E-12
Am-244m	F		8.77E-14
Am-244m	M		1.02E-13
Am-244m	S		1.32E-13
Am-245	F		4.85E-14
Am-245	M		1.56E-13
Am-245	S		1.68E-13
Am-246	F		5.22E-14
Am-246	M		1.44E-13
Am-246	S		1.55E-13
Am-246m	F		2.02E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Am-246m	M		3.96E-14
Am-246m	S		4.18E-14
Am-247	F		2.06E-14
Am-247	M		4.59E-14
Am-247	S		4.88E-14
Ar-37			0.00E+00
Ar-39			0.00E+00
Ar-41			0.00E+00
Ar-42			0.00E+00
Ar-42+D	G		1.24E-12
Ar-42+E	G		1.24E-12
Ar-43			0.00E+00
Ar-44			0.00E+00
As-68			0.00E+00
As-69	F		2.52E-14
As-69	M		4.03E-14
As-69	S		4.22E-14
As-70	F		8.18E-14
As-70	M		1.40E-13
As-70	S		1.46E-13
As-71	F		6.99E-13
As-71	M		1.49E-12
As-71	S		1.59E-12
As-72	F		2.82E-12
As-72	M		4.37E-12
As-72	S		4.51E-12
As-73	F		5.70E-13
As-73	M		3.89E-12
As-73	S		5.00E-12
As-74	F		2.39E-12
As-74	M		8.40E-12
As-74	S		9.62E-12
As-76	F		2.58E-12
As-76	M		4.07E-12
As-76	S		4.26E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
As-77	F		6.96E-13
As-77	M		1.75E-12
As-77	S		1.87E-12
As-78	F		1.39E-13
As-78	M		2.55E-13
As-78	S		2.68E-13
As-79			0.00E+00
At-204			0.00E+00
At-205	F		7.36E-13
At-205	M		2.23E-12
At-205	S		2.39E-12
At-206	F		1.17E-13
At-206	M		7.10E-13
At-206	S		7.99E-13
At-207	F		9.81E-13
At-207	M		6.73E-12
At-207	S		7.36E-12
At-208	F		1.32E-13
At-208	M		1.26E-12
At-208	S		1.98E-12
At-209	F		8.14E-13
At-209	M		8.36E-12
At-209	S		9.29E-12
At-210	F		1.13E-12
At-210	M		2.67E-11
At-210	S		3.63E-11
At-211	F		2.69E-11
At-211	M		3.57E-10
At-211	S		3.96E-10
At-211+D	S		3.96E-10
At-211+E	S		3.96E-10
At-215			0.00E+00
At-216			0.00E+00
At-217			0.00E+00
At-218			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
At-219			0.00E+00
At-220			0.00E+00
Au-186	F		2.23E-14
Au-186	M		3.89E-14
Au-186	S		4.07E-14
Au-187			0.00E+00
Au-190	F		2.47E-14
Au-190	M		4.07E-14
Au-190	S		4.26E-14
Au-191	F		6.11E-14
Au-191	M		1.85E-13
Au-191	S		1.99E-13
Au-192	F		1.31E-13
Au-192	M		2.37E-13
Au-192	S		2.49E-13
Au-193	F		1.20E-13
Au-193	M		3.74E-13
Au-193	S		4.03E-13
Au-193m			0.00E+00
Au-194	F		3.43E-13
Au-194	M		7.18E-13
Au-194	S		7.59E-13
Au-195	F		3.03E-13
Au-195	M		4.18E-12
Au-195	S		6.62E-12
Au-195m			0.00E+00
Au-196	F		3.41E-13
Au-196	M		1.17E-12
Au-196	S		1.28E-12
Au-196m	F		3.96E-13
Au-196m	M		1.65E-12
Au-196m	S		1.79E-12
Au-198	F		1.08E-12
Au-198	M		3.66E-12
Au-198	S		4.00E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Au-198m	F		1.30E-12
Au-198m	M		6.70E-12
Au-198m	S		7.40E-12
Au-199	F		4.88E-13
Au-199	M		2.90E-12
Au-199	S		3.20E-12
Au-200	F		3.63E-14
Au-200	M		7.99E-14
Au-200	S		8.47E-14
Au-200m	F		9.10E-13
Au-200m	M		2.42E-12
Au-200m	S		2.59E-12
Au-201	F		1.39E-14
Au-201	M		3.05E-14
Au-201	S		3.23E-14
Au-202			0.00E+00
Ba-124	F		3.15E-14
Ba-124	M		3.96E-14
Ba-124	S		4.03E-14
Ba-126	F		2.71E-13
Ba-126	M		3.48E-13
Ba-126	S		3.58E-13
Ba-127	F		1.43E-14
Ba-127	M		1.98E-14
Ba-127	S		2.05E-14
Ba-128	F		4.74E-12
Ba-128	M		7.40E-12
Ba-128	S		7.88E-12
Ba-129	F		5.51E-14
Ba-129	M		8.44E-14
Ba-129	S		8.84E-14
Ba-129m	F		6.66E-14
Ba-129m	M		9.77E-14
Ba-129m	S		1.02E-13
Ba-131	F		8.10E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ba-131	M		2.89E-12
Ba-131	S		3.26E-12
Ba-131m	F		8.14E-15
Ba-131m	M		1.71E-14
Ba-131m	S		1.82E-14
Ba-133	F		6.29E-12
Ba-133	M		1.18E-11
Ba-133	S		3.29E-11
Ba-133m	F		9.51E-13
Ba-133m	M		2.09E-12
Ba-133m	S		2.27E-12
Ba-135m	F		7.29E-13
Ba-135m	M		1.61E-12
Ba-135m	S		1.74E-12
Ba-137m			0.00E+00
Ba-139	F		1.27E-13
Ba-139	M		1.81E-13
Ba-139	S		1.87E-13
Ba-140	F		6.33E-12
Ba-140	M		2.04E-11
Ba-140	S		2.31E-11
Ba-141	F		6.85E-14
Ba-141	M		1.00E-13
Ba-141	S		1.05E-13
Ba-142	F		3.14E-14
Ba-142	M		4.44E-14
Ba-142	S		4.59E-14
Be-10	F		1.33E-11
Be-10	M		2.98E-11
Be-10	S		9.40E-11
Be-7	F		1.16E-13
Be-7	M		1.76E-13
Be-7	S		2.15E-13
Bi-197			0.00E+00
Bi-200	F		5.18E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Bi-200	M		7.99E-14
Bi-200	S		8.29E-14
Bi-201	F		1.27E-13
Bi-201	M		1.92E-13
Bi-201	S		2.00E-13
Bi-202	F		9.69E-14
Bi-202	M		1.26E-13
Bi-202	S		1.29E-13
Bi-203	F		5.55E-13
Bi-203	M		8.29E-13
Bi-203	S		8.62E-13
Bi-204	F		6.07E-13
Bi-204	M		8.51E-13
Bi-204	S		8.77E-13
Bi-205	F		1.24E-12
Bi-205	M		3.29E-12
Bi-205	S		3.70E-12
Bi-206	F		2.61E-12
Bi-206	M		5.92E-12
Bi-206	S		6.40E-12
Bi-207	F		2.10E-12
Bi-207	M		2.12E-11
Bi-207	S		1.10E-10
Bi-208	F		1.63E-12
Bi-208	M		1.69E-11
Bi-208	S		9.95E-11
Bi-210	F		3.67E-12
Bi-210	M		3.17E-10
Bi-210	S		4.55E-10
Bi-210m	F		8.99E-11
Bi-210m	M		1.17E-08
Bi-210m	S		2.92E-08
Bi-210m+D	S		2.92E-08
Bi-210m+E	S		2.92E-08
Bi-211			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Bi-212	F		1.50E-11
Bi-212	M		7.77E-11
Bi-212	S		8.44E-11
Bi-212+D	S		8.44E-11
Bi-212+E	S		8.44E-11
Bi-212n			0.00E+00
Bi-213	F		1.58E-11
Bi-213	M		6.85E-11
Bi-213	S		7.40E-11
Bi-213+D	S		7.40E-11
Bi-213+E	S		7.40E-11
Bi-214	F		1.13E-11
Bi-214	M		2.90E-11
Bi-214	S		3.10E-11
Bi-214+D	S		3.10E-11
Bi-214+E	S		3.10E-11
Bi-215			0.00E+00
Bi-215+D			0.00E+00
Bi-215+E			0.00E+00
Bi-216			0.00E+00
Bk-245	F		9.69E-13
Bk-245	M		7.22E-12
Bk-245	S		8.10E-12
Bk-246	F		5.18E-13
Bk-246	M		8.99E-13
Bk-246	S		9.51E-13
Bk-247	F		4.81E-08
Bk-247	M		3.26E-08
Bk-247	S		3.70E-08
Bk-248m	F		1.12E-11
Bk-248m	M		3.69E-11
Bk-248m	S		5.25E-11
Bk-249	F		1.19E-10
Bk-249	M		5.25E-11
Bk-249	S		5.11E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Bk-250	F		8.92E-13
Bk-250	M		1.04E-12
Bk-250	S		1.35E-12
Bk-251	F		3.29E-14
Bk-251	M		8.58E-14
Bk-251	S		9.25E-14
Br-72			0.00E+00
Br-73			0.00E+00
Br-74	F		3.74E-14
Br-74	M		6.33E-14
Br-74	S		6.62E-14
Br-74m	F		6.44E-14
Br-74m	M		1.20E-13
Br-74m	S		1.26E-13
Br-75	F		4.59E-14
Br-75	M		1.12E-13
Br-75	S		1.20E-13
Br-76	F		5.55E-13
Br-76	M		1.08E-12
Br-76	S		1.14E-12
Br-76m			0.00E+00
Br-77	F		1.27E-13
Br-77	M		2.10E-13
Br-77	S		2.21E-13
Br-77m			0.00E+00
Br-78			0.00E+00
Br-80	F		1.33E-14
Br-80	M		2.48E-14
Br-80	S		2.60E-14
Br-80m	F		9.03E-14
Br-80m	M		3.23E-13
Br-80m	S		3.49E-13
Br-82	F		7.10E-13
Br-82	M		1.67E-12
Br-82	S		1.78E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Br-82m			0.00E+00
Br-83	F		2.88E-14
Br-83	M		1.22E-13
Br-83	S		1.32E-13
Br-84	F		3.74E-14
Br-84	M		7.18E-14
Br-84	S		7.55E-14
Br-84m			0.00E+00
Br-85			0.00E+00
C-10			0.00E+00
C-11	F		1.38E-14
C-11	M		2.78E-14
C-11	S		2.93E-14
C-11	G	Monoxide	4.51E-15
C-11	G	Dioxide	8.25E-15
C-14	F		6.22E-13
C-14	M		7.07E-12
C-14	S		1.69E-11
C-14	G	Monoxide	3.36E-15
C-14	G	Dioxide	1.99E-14
Ca-41	F		3.22E-13
Ca-41	M		2.45E-13
Ca-41	S		5.92E-13
Ca-45	F		1.19E-12
Ca-45	M		9.40E-12
Ca-45	S		1.28E-11
Ca-47	F		2.01E-12
Ca-47	M		7.96E-12
Ca-47	S		8.95E-12
Ca-49			0.00E+00
Cd-101			0.00E+00
Cd-102			0.00E+00
Cd-103			0.00E+00
Cd-104	F		6.18E-14
Cd-104	M		1.32E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Cd-104	S		1.40E-13
Cd-105	F		2.74E-14
Cd-105	M		4.77E-14
Cd-105	S		5.00E-14
Cd-107	F		6.36E-14
Cd-107	M		2.88E-13
Cd-107	S		3.13E-13
Cd-109	F		1.47E-11
Cd-109	M		1.77E-11
Cd-109	S		2.19E-11
Cd-111m	F		1.27E-14
Cd-111m	M		4.07E-14
Cd-111m	S		4.40E-14
Cd-113	F		1.11E-10
Cd-113	M		5.88E-11
Cd-113	S		4.59E-11
Cd-113m	F		1.32E-10
Cd-113m	M		7.36E-11
Cd-113m	S		7.25E-11
Cd-115	F		1.69E-12
Cd-115	M		4.88E-12
Cd-115	S		5.25E-12
Cd-115m	F		1.15E-11
Cd-115m	M		2.45E-11
Cd-115m	S		2.92E-11
Cd-117	F		2.39E-13
Cd-117	M		6.11E-13
Cd-117	S		6.51E-13
Cd-117m	F		2.38E-13
Cd-117m	M		6.14E-13
Cd-117m	S		6.55E-13
Cd-118	F		9.03E-14
Cd-118	M		2.02E-13
Cd-118	S		2.15E-13
Cd-119			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Cd-119m			0.00E+00
Ce-130	F		3.47E-14
Ce-130	M		6.77E-14
Ce-130	S		7.14E-14
Ce-131	F		1.36E-14
Ce-131	M		2.39E-14
Ce-131	S		2.51E-14
Ce-132	F		3.03E-13
Ce-132	M		6.14E-13
Ce-132	S		6.51E-13
Ce-133	F		6.33E-14
Ce-133	M		1.54E-13
Ce-133	S		1.64E-13
Ce-133m	F		1.70E-13
Ce-133m	M		3.25E-13
Ce-133m	S		3.42E-13
Ce-134	F		3.15E-12
Ce-134	M		7.40E-12
Ce-134	S		7.92E-12
Ce-135	F		2.25E-13
Ce-135	M		4.11E-13
Ce-135	S		4.29E-13
Ce-137	F		2.23E-14
Ce-137	M		4.22E-14
Ce-137	S		4.44E-14
Ce-137m	F		5.85E-13
Ce-137m	M		1.98E-12
Ce-137m	S		2.14E-12
Ce-139	F		4.22E-12
Ce-139	M		5.70E-12
Ce-139	S		6.92E-12
Ce-141	F		2.38E-12
Ce-141	M		1.14E-11
Ce-141	S		1.35E-11
Ce-143	F		1.27E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ce-143	M		3.74E-12
Ce-143	S		4.07E-12
Ce-144	F		8.36E-11
Ce-144	M		1.10E-10
Ce-144	S		1.80E-10
Ce-144+D	F		1.80E-10
Ce-144+E	F		1.80E-10
Ce-145			0.00E+00
Cf-244	F		1.01E-11
Cf-244	M		2.96E-11
Cf-244	S		3.23E-11
Cf-246	F		5.92E-11
Cf-246	M		1.47E-09
Cf-246	S		1.67E-09
Cf-247	F		3.45E-14
Cf-247	M		9.66E-14
Cf-247	S		1.05E-13
Cf-248	F		5.25E-09
Cf-248	M		1.81E-08
Cf-248	S		2.56E-08
Cf-249	F		4.85E-08
Cf-249	M		3.40E-08
Cf-249	S		3.92E-08
Cf-250	F		2.78E-08
Cf-250	M		2.70E-08
Cf-250	S		3.74E-08
Cf-251	F		4.92E-08
Cf-251	M		3.40E-08
Cf-251	S		3.92E-08
Cf-252	F		1.88E-08
Cf-252	M		2.85E-08
Cf-252	S		4.44E-08
Cf-253	F		2.41E-10
Cf-253	M		4.22E-09
Cf-253	S		5.40E-09

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Cf-254	F		2.48E-08
Cf-254	M		1.20E-07
Cf-254	S		1.52E-07
Cf-255	F		8.55E-13
Cf-255	M		1.83E-11
Cf-255	S		2.26E-11
Cl-34			0.00E+00
Cl-34m	F		4.44E-14
Cl-34m	M		8.33E-14
Cl-34m	S		8.73E-14
Cl-36	F		1.32E-12
Cl-36	M		2.50E-11
Cl-36	S		1.01E-10
Cl-38	F		4.77E-14
Cl-38	M		9.47E-14
Cl-38	S		9.99E-14
Cl-39	F		4.22E-14
Cl-39	M		9.36E-14
Cl-39	S		9.95E-14
Cl-40			0.00E+00
Cm-238	F		6.85E-13
Cm-238	M		5.74E-12
Cm-238	S		6.36E-12
Cm-239	F		7.84E-14
Cm-239	M		2.48E-13
Cm-239	S		2.67E-13
Cm-240	F		8.81E-10
Cm-240	M		9.55E-09
Cm-240	S		1.16E-08
Cm-241	F		1.65E-11
Cm-241	M		1.01E-10
Cm-241	S		1.22E-10
Cm-242	F		2.52E-09
Cm-242	M		1.51E-08
Cm-242	S		2.01E-08

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Cm-243	F		3.05E-08
Cm-243	M		2.70E-08
Cm-243	S		3.68E-08
Cm-244	F		2.63E-08
Cm-244	M		2.53E-08
Cm-244	S		3.56E-08
Cm-245	F		3.81E-08
Cm-245	M		2.77E-08
Cm-245	S		3.45E-08
Cm-246	F		3.81E-08
Cm-246	M		2.79E-08
Cm-246	S		3.48E-08
Cm-247	F		3.49E-08
Cm-247	M		2.50E-08
Cm-247	S		3.08E-08
Cm-247+D	F		3.49E-08
Cm-247+E	F		3.49E-08
Cm-248	F		1.44E-07
Cm-248	M		8.18E-08
Cm-248	S		9.62E-08
Cm-249	F		3.52E-14
Cm-249	M		7.25E-14
Cm-249	S		7.81E-14
Cm-250	F		9.88E-07
Cm-250	M		5.18E-07
Cm-250	S		5.99E-07
Cm-250+D	F		9.88E-07
Cm-250+E	F		9.88E-07
Cm-251	F		1.95E-14
Cm-251	M		4.77E-14
Cm-251	S		5.14E-14
Co-54m			0.00E+00
Co-55	F		9.18E-13
Co-55	M		2.08E-12
Co-55	S		2.30E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Co-56	F		6.14E-12
Co-56	M		1.83E-11
Co-56	S		2.52E-11
Co-57	F		6.96E-13
Co-57	M		2.09E-12
Co-57	S		3.74E-12
Co-58	F		1.74E-12
Co-58	M		5.96E-12
Co-58	S		7.92E-12
Co-58m	F		2.83E-14
Co-58m	M		6.81E-14
Co-58m	S		8.25E-14
Co-60	F		1.71E-11
Co-60	M		3.59E-11
Co-60	S		1.01E-10
Co-60m	F		2.12E-15
Co-60m	M		3.85E-15
Co-60m	S		4.29E-15
Co-61	F		5.37E-14
Co-61	M		1.43E-13
Co-61	S		1.54E-13
Co-62			0.00E+00
Co-62m	F		2.10E-14
Co-62m	M		3.24E-14
Co-62m	S		3.36E-14
Cr-48	F		2.86E-13
Cr-48	M		6.48E-13
Cr-48	S		7.18E-13
Cr-49	F		3.37E-14
Cr-49	M		7.03E-14
Cr-49	S		7.40E-14
Cr-51	F		8.21E-14
Cr-51	M		1.48E-13
Cr-51	S		1.67E-13
Cr-55			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Cr-56			0.00E+00
Cs-121			0.00E+00
Cs-121m			0.00E+00
Cs-123			0.00E+00
Cs-124			0.00E+00
Cs-125	F		1.71E-14
Cs-125	M		4.18E-14
Cs-125	S		4.44E-14
Cs-126			0.00E+00
Cs-127	F		2.53E-14
Cs-127	M		1.02E-13
Cs-127	S		1.11E-13
Cs-128			0.00E+00
Cs-129	F		7.40E-14
Cs-129	M		2.37E-13
Cs-129	S		2.60E-13
Cs-130	F		1.19E-14
Cs-130	M		2.53E-14
Cs-130	S		2.66E-14
Cs-130m			0.00E+00
Cs-131	F		7.51E-14
Cs-131	M		1.70E-13
Cs-131	S		1.86E-13
Cs-132	F		6.03E-13
Cs-132	M		9.69E-13
Cs-132	S		1.02E-12
Cs-134	F		1.65E-11
Cs-134	M		3.10E-11
Cs-134	S		6.99E-11
Cs-134m	F		2.00E-14
Cs-134m	M		1.57E-13
Cs-134m	S		1.78E-13
Cs-135	F		2.47E-12
Cs-135	M		1.33E-11
Cs-135	S		3.36E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Cs-135m	F		1.32E-14
Cs-135m	M		2.44E-14
Cs-135m	S		2.54E-14
Cs-136	F		3.47E-12
Cs-136	M		9.21E-12
Cs-136	S		1.03E-11
Cs-137	F		1.19E-11
Cs-137	M		3.31E-11
Cs-137	S		1.12E-10
Cs-137+D	S		1.12E-10
Cs-137+E	S		1.12E-10
Cs-138	F		4.22E-14
Cs-138	M		8.84E-14
Cs-138	S		9.32E-14
Cs-138m			0.00E+00
Cs-139			0.00E+00
Cs-140			0.00E+00
Cu-57			0.00E+00
Cu-59			0.00E+00
Cu-60	F		3.39E-14
Cu-60	M		5.70E-14
Cu-60	S		5.96E-14
Cu-61	F		9.14E-14
Cu-61	M		2.20E-13
Cu-61	S		2.34E-13
Cu-62			0.00E+00
Cu-64	F		1.27E-13
Cu-64	M		4.11E-13
Cu-64	S		4.40E-13
Cu-66			0.00E+00
Cu-67	F		4.51E-13
Cu-67	M		2.10E-12
Cu-67	S		2.31E-12
Cu-69			0.00E+00
Dy-148			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Dy-149			0.00E+00
Dy-150			0.00E+00
Dy-151	F		1.82E-13
Dy-151	M		4.37E-13
Dy-151	S		4.66E-13
Dy-152	F		1.17E-13
Dy-152	M		2.36E-13
Dy-152	S		2.49E-13
Dy-153	F		1.75E-13
Dy-153	M		4.00E-13
Dy-153	S		4.29E-13
Dy-154	F		8.29E-09
Dy-154	M		6.96E-09
Dy-154	S		1.31E-08
Dy-155	F		1.35E-13
Dy-155	M		2.72E-13
Dy-155	S		2.90E-13
Dy-157	F		5.03E-14
Dy-157	M		8.40E-14
Dy-157	S		8.77E-14
Dy-159	F		1.02E-12
Dy-159	M		1.32E-12
Dy-159	S		1.74E-12
Dy-165	F		8.66E-14
Dy-165	M		2.10E-13
Dy-165	S		2.24E-13
Dy-165m			0.00E+00
Dy-166	F		2.59E-12
Dy-166	M		8.51E-12
Dy-166	S		9.32E-12
Dy-167			0.00E+00
Dy-168			0.00E+00
Er-154			0.00E+00
Er-156	F		2.36E-14
Er-156	M		5.07E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Er-156	S		5.37E-14
Er-159	F		1.52E-14
Er-159	M		3.23E-14
Er-159	S		3.42E-14
Er-161	F		7.07E-14
Er-161	M		1.40E-13
Er-161	S		1.47E-13
Er-163	F		1.62E-15
Er-163	M		2.85E-15
Er-163	S		2.99E-15
Er-165	F		1.79E-14
Er-165	M		3.18E-14
Er-165	S		3.33E-14
Er-167m			0.00E+00
Er-169	F		6.55E-13
Er-169	M		3.85E-12
Er-169	S		4.37E-12
Er-171	F		3.89E-13
Er-171	M		9.36E-13
Er-171	S		9.99E-13
Er-172	F		1.49E-12
Er-172	M		4.81E-12
Er-172	S		5.25E-12
Er-173			0.00E+00
Es-249	F		1.18E-13
Es-249	M		6.29E-13
Es-249	S		6.88E-13
Es-250	F		2.48E-12
Es-250	M		3.16E-12
Es-250	S		4.00E-12
Es-250m	F		5.59E-13
Es-250m	M		5.55E-13
Es-250m	S		7.59E-13
Es-251	F		5.66E-13
Es-251	M		6.44E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Es-251	S		7.14E-12
Es-253	F		2.99E-10
Es-253	M		8.84E-09
Es-253	S		1.05E-08
Es-254	F		4.85E-09
Es-254	M		1.85E-08
Es-254	S		2.59E-08
Es-254+D	F		2.59E-08
Es-254+E	F		2.59E-08
Es-254m	F		4.22E-11
Es-254m	M		1.54E-09
Es-254m	S		1.73E-09
Es-255	F		5.62E-10
Es-255	M		1.23E-08
Es-255	S		1.52E-08
Es-256	F		1.83E-11
Es-256	M		1.31E-10
Es-256	S		1.44E-10
Eu-142			0.00E+00
Eu-142m			0.00E+00
Eu-143			0.00E+00
Eu-144			0.00E+00
Eu-145	F		1.27E-12
Eu-145	M		1.64E-12
Eu-145	S		1.72E-12
Eu-146	F		1.87E-12
Eu-146	M		2.46E-12
Eu-146	S		2.55E-12
Eu-147	F		1.74E-12
Eu-147	M		3.89E-12
Eu-147	S		4.37E-12
Eu-148	F		1.28E-11
Eu-148	M		1.01E-11
Eu-148	S		1.07E-11
Eu-149	F		1.33E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Eu-149	M		1.45E-12
Eu-149	S		1.73E-12
Eu-150	F		2.72E-10
Eu-150	M		1.14E-10
Eu-150	S		8.66E-11
Eu-150m	F		4.18E-13
Eu-150m	M		1.04E-12
Eu-150m	S		1.11E-12
Eu-152	F		1.91E-10
Eu-152	M		9.18E-11
Eu-152	S		9.29E-11
Eu-152m	F		5.18E-13
Eu-152m	M		1.12E-12
Eu-152m	S		1.19E-12
Eu-152n	F		1.22E-14
Eu-152n	M		2.78E-14
Eu-152n	S		2.97E-14
Eu-154	F		2.06E-10
Eu-154	M		1.12E-10
Eu-154	S		1.35E-10
Eu-154m	F		6.36E-15
Eu-154m	M		1.04E-14
Eu-154m	S		1.11E-14
Eu-155	F		1.90E-11
Eu-155	M		1.51E-11
Eu-155	S		1.92E-11
Eu-156	F		5.25E-12
Eu-156	M		1.41E-11
Eu-156	S		1.58E-11
Eu-157	F		6.62E-13
Eu-157	M		1.58E-12
Eu-157	S		1.69E-12
Eu-158	F		5.03E-14
Eu-158	M		1.07E-13
Eu-158	S		1.14E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Eu-159	F		2.77E-14
Eu-159	M		5.77E-14
Eu-159	S		6.14E-14
F-17			0.00E+00
F-18	F		3.26E-14
F-18	M		1.09E-13
F-18	S		1.17E-13
Fe-52	F		1.38E-12
Fe-52	M		2.72E-12
Fe-52	S		2.99E-12
Fe-53			0.00E+00
Fe-53m			0.00E+00
Fe-55	F		1.48E-12
Fe-55	M		7.99E-13
Fe-55	S		6.48E-13
Fe-59	F		7.96E-12
Fe-59	M		1.33E-11
Fe-59	S		1.47E-11
Fe-60	F		3.85E-10
Fe-60	M		1.94E-10
Fe-60	S		1.05E-10
Fe-60+D	F		4.85E-10
Fe-60+E	F		4.85E-10
Fe-61			0.00E+00
Fe-62			0.00E+00
Fm-251	F		4.37E-13
Fm-251	M		5.96E-12
Fm-251	S		6.59E-12
Fm-252	F		5.18E-11
Fm-252	M		1.13E-09
Fm-252	S		1.28E-09
Fm-253	F		4.40E-11
Fm-253	M		1.28E-09
Fm-253	S		1.53E-09
Fm-254	F		1.83E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Fm-254	M		1.98E-10
Fm-254	S		2.18E-10
Fm-255	F		3.18E-11
Fm-255	M		8.81E-10
Fm-255	S		9.81E-10
Fm-256	F		1.51E-10
Fm-256	M		8.21E-10
Fm-256	S		8.95E-10
Fm-257	F		2.70E-09
Fm-257	M		2.07E-08
Fm-257	S		2.82E-08
Fr-212	F		5.14E-12
Fr-212	M		1.94E-11
Fr-212	S		2.11E-11
Fr-219			0.00E+00
Fr-220			0.00E+00
Fr-220+D			0.00E+00
Fr-220+E			0.00E+00
Fr-221			0.00E+00
Fr-221+D			0.00E+00
Fr-221+E			0.00E+00
Fr-222	F		2.41E-11
Fr-222	M		5.48E-11
Fr-222	S		5.81E-11
Fr-223	F		3.08E-12
Fr-223	M		3.53E-11
Fr-223	S		4.07E-11
Fr-224			0.00E+00
Fr-227			0.00E+00
Ga-64			0.00E+00
Ga-65	F		1.67E-14
Ga-65	M		2.82E-14
Ga-65	S		2.96E-14
Ga-66	F		1.13E-12
Ga-66	M		2.19E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ga-66	S		2.31E-12
Ga-67	F		2.57E-13
Ga-67	M		9.77E-13
Ga-67	S		1.07E-12
Ga-68	F		5.81E-14
Ga-68	M		1.27E-13
Ga-68	S		1.34E-13
Ga-70	F		1.45E-14
Ga-70	M		2.91E-14
Ga-70	S		3.07E-14
Ga-72	F		1.07E-12
Ga-72	M		2.19E-12
Ga-72	S		2.32E-12
Ga-73	F		2.41E-13
Ga-73	M		6.14E-13
Ga-73	S		6.55E-13
Ga-74			0.00E+00
Gd-142			0.00E+00
Gd-143m			0.00E+00
Gd-144			0.00E+00
Gd-145	F		1.92E-14
Gd-145	M		2.93E-14
Gd-145	S		3.05E-14
Gd-145m			0.00E+00
Gd-146	F		1.33E-11
Gd-146	M		2.20E-11
Gd-146	S		2.57E-11
Gd-147	F		7.40E-13
Gd-147	M		1.38E-12
Gd-147	S		1.48E-12
Gd-148	F		1.24E-08
Gd-148	M		9.58E-09
Gd-148	S		1.52E-08
Gd-149	F		1.15E-12
Gd-149	M		3.23E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Gd-149	S		3.60E-12
Gd-150	F		1.16E-08
Gd-150	M		7.73E-09
Gd-150	S		1.22E-08
Gd-151	F		2.04E-12
Gd-151	M		3.43E-12
Gd-151	S		4.37E-12
Gd-152	F		9.10E-09
Gd-152	M		5.33E-09
Gd-152	S		8.58E-09
Gd-153	F		4.63E-12
Gd-153	M		6.55E-12
Gd-153	S		8.58E-12
Gd-159	F		5.96E-13
Gd-159	M		1.48E-12
Gd-159	S		1.58E-12
Gd-162			0.00E+00
Ge-66	F		1.39E-13
Ge-66	M		2.47E-13
Ge-66	S		2.59E-13
Ge-67	F		2.47E-14
Ge-67	M		4.37E-14
Ge-67	S		4.59E-14
Ge-68	F		2.88E-12
Ge-68	M		4.81E-11
Ge-68	S		1.04E-10
Ge-68+D	S		1.04E-10
Ge-68+E	S		1.04E-10
Ge-69	F		3.24E-13
Ge-69	M		6.85E-13
Ge-69	S		7.29E-13
Ge-71	F		2.65E-14
Ge-71	M		5.07E-14
Ge-71	S		5.51E-14
Ge-75	F		2.86E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ge-75	M		8.44E-14
Ge-75	S		9.03E-14
Ge-77	F		4.63E-13
Ge-77	M		1.15E-12
Ge-77	S		1.24E-12
Ge-78	F		1.02E-13
Ge-78	M		2.41E-13
Ge-78	S		2.57E-13
H-3	F		1.95E-14
H-3	M		1.99E-13
H-3	S		8.47E-13
H-3	V		5.62E-14
H-3	G	Elemental	5.62E-18
H-3	G	Organic	1.28E-13
Hf-167			0.00E+00
Hf-169			0.00E+00
Hf-170	F		4.44E-13
Hf-170	M		9.84E-13
Hf-170	S		1.05E-12
Hf-172	F		7.07E-11
Hf-172	M		5.66E-11
Hf-172	S		8.55E-11
Hf-172+D	F		8.55E-11
Hf-172+E	F		8.55E-11
Hf-173	F		2.21E-13
Hf-173	M		5.92E-13
Hf-173	S		6.44E-13
Hf-174	F		6.51E-09
Hf-174	M		5.00E-09
Hf-174	S		1.01E-08
Hf-175	F		2.11E-12
Hf-175	M		4.22E-12
Hf-175	S		5.25E-12
Hf-177m	F		6.44E-14
Hf-177m	M		1.83E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Hf-177m	S		1.96E-13
Hf-178m	F		3.24E-10
Hf-178m	M		1.62E-10
Hf-178m	S		1.81E-10
Hf-179m	F		3.48E-12
Hf-179m	M		1.39E-11
Hf-179m	S		1.62E-11
Hf-180m	F		1.41E-13
Hf-180m	M		4.22E-13
Hf-180m	S		4.51E-13
Hf-181	F		3.92E-12
Hf-181	M		1.76E-11
Hf-181	S		2.13E-11
Hf-182	F		3.29E-10
Hf-182	M		1.44E-10
Hf-182	S		1.43E-10
Hf-182+D	F		3.66E-10
Hf-182+E	F		3.66E-10
Hf-182m	F		3.74E-14
Hf-182m	M		1.15E-13
Hf-182m	S		1.25E-13
Hf-183	F		5.59E-14
Hf-183	M		1.67E-13
Hf-183	S		1.81E-13
Hf-184	F		4.92E-13
Hf-184	M		1.37E-12
Hf-184	S		1.47E-12
Hg-190	F	Inorganic	1.39E-14
Hg-190	M	Inorganic	2.65E-14
Hg-190	S	Inorganic	2.79E-14
Hg-190	F	Organic	1.36E-14
Hg-190	M	Organic	2.59E-14
Hg-190	S	Organic	2.73E-14
Hg-190	V		2.59E-13
Hg-191m	F	Inorganic	3.96E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Hg-191m	M	Inorganic	9.66E-14
Hg-191m	S	Inorganic	1.03E-13
Hg-191m	F	Organic	3.60E-14
Hg-191m	M	Organic	9.07E-14
Hg-191m	S	Organic	9.69E-14
Hg-191m	V		1.07E-12
Hg-192	F	Inorganic	1.87E-13
Hg-192	M	Inorganic	3.85E-13
Hg-192	S	Inorganic	4.07E-13
Hg-192	F	Organic	1.49E-13
Hg-192	M	Organic	3.19E-13
Hg-192	S	Organic	3.38E-13
Hg-192	V		3.35E-12
Hg-193	F	Inorganic	8.92E-14
Hg-193	M	Inorganic	2.26E-13
Hg-193	S	Inorganic	2.41E-13
Hg-193	F	Organic	7.33E-14
Hg-193	M	Organic	1.98E-13
Hg-193	S	Organic	2.12E-13
Hg-193	V		2.91E-12
Hg-193+D	V		2.91E-12
Hg-193+E	V		2.91E-12
Hg-193m	F	Inorganic	3.85E-13
Hg-193m	M	Inorganic	9.32E-13
Hg-193m	S	Inorganic	9.95E-13
Hg-193m	F	Organic	2.98E-13
Hg-193m	M	Organic	7.81E-13
Hg-193m	S	Organic	8.36E-13
Hg-193m	V		1.01E-11
Hg-194	F	Inorganic	2.22E-11
Hg-194	M	Inorganic	1.92E-11
Hg-194	S	Inorganic	6.29E-11
Hg-194	F	Organic	2.66E-11
Hg-194	M	Organic	2.84E-11
Hg-194	S	Organic	7.44E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Hg-194	V		7.22E-11
Hg-194+D	V		7.51E-11
Hg-194+E	V		7.51E-11
Hg-195	F	Inorganic	9.81E-14
Hg-195	M	Inorganic	2.99E-13
Hg-195	S	Inorganic	3.25E-13
Hg-195	F	Organic	7.77E-14
Hg-195	M	Organic	2.60E-13
Hg-195	S	Organic	2.85E-13
Hg-195	V		5.00E-12
Hg-195m	F	Inorganic	6.44E-13
Hg-195m	M	Inorganic	2.30E-12
Hg-195m	S	Inorganic	2.51E-12
Hg-195m	F	Organic	4.85E-13
Hg-195m	M	Organic	2.02E-12
Hg-195m	S	Organic	2.22E-12
Hg-195m	V		2.71E-11
Hg-197	F	Inorganic	3.08E-13
Hg-197	M	Inorganic	1.34E-12
Hg-197	S	Inorganic	1.47E-12
Hg-197	F	Organic	2.30E-13
Hg-197	M	Organic	1.21E-12
Hg-197	S	Organic	1.34E-12
Hg-197	V		1.56E-11
Hg-197m	F	Inorganic	5.44E-13
Hg-197m	M	Inorganic	2.31E-12
Hg-197m	S	Inorganic	2.52E-12
Hg-197m	F	Organic	3.96E-13
Hg-197m	M	Organic	2.05E-12
Hg-197m	S	Organic	2.25E-12
Hg-197m	V		1.96E-11
Hg-199m	F	Inorganic	2.18E-14
Hg-199m	M	Inorganic	6.25E-14
Hg-199m	S	Inorganic	6.73E-14
Hg-199m	F	Organic	2.14E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Hg-199m	M	Organic	6.22E-14
Hg-199m	S	Organic	6.70E-14
Hg-199m	V		5.88E-13
Hg-203	F	Inorganic	1.94E-12
Hg-203	M	Inorganic	8.66E-12
Hg-203	S	Inorganic	1.05E-11
Hg-203	F	Organic	2.15E-12
Hg-203	M	Organic	8.95E-12
Hg-203	S	Organic	1.08E-11
Hg-203	V		2.45E-11
Hg-205			0.00E+00
Hg-206			0.00E+00
Hg-207			0.00E+00
Ho-150			0.00E+00
Ho-153			0.00E+00
Ho-153m			0.00E+00
Ho-154	F		1.65E-14
Ho-154	M		2.44E-14
Ho-154	S		2.53E-14
Ho-154m			0.00E+00
Ho-155	F		3.16E-14
Ho-155	M		5.81E-14
Ho-155	S		6.14E-14
Ho-156	F		6.11E-14
Ho-156	M		1.18E-13
Ho-156	S		1.24E-13
Ho-157	F		5.14E-15
Ho-157	M		8.14E-15
Ho-157	S		8.47E-15
Ho-159	F		6.51E-15
Ho-159	M		1.27E-14
Ho-159	S		1.34E-14
Ho-160	F		1.20E-14
Ho-160	M		2.15E-14
Ho-160	S		2.25E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ho-161	F		1.10E-14
Ho-161	M		2.23E-14
Ho-161	S		2.36E-14
Ho-162	F		2.83E-15
Ho-162	M		5.44E-15
Ho-162	S		5.74E-15
Ho-162m	F		1.94E-14
Ho-162m	M		4.88E-14
Ho-162m	S		5.22E-14
Ho-163	F		1.20E-12
Ho-163	M		4.51E-13
Ho-163	S		1.46E-13
Ho-164	F		6.77E-15
Ho-164	M		1.65E-14
Ho-164	S		1.75E-14
Ho-164m	F		1.17E-14
Ho-164m	M		3.53E-14
Ho-164m	S		3.77E-14
Ho-166	F		2.25E-12
Ho-166	M		3.85E-12
Ho-166	S		4.03E-12
Ho-166m	F		7.66E-10
Ho-166m	M		3.10E-10
Ho-166m	S		1.55E-10
Ho-167	F		8.95E-14
Ho-167	M		2.35E-13
Ho-167	S		2.51E-13
Ho-168			0.00E+00
Ho-168m			0.00E+00
Ho-170			0.00E+00
I-118	F		1.96E-13
I-118	M		8.40E-14
I-118	S		6.59E-14
I-118	V	Vapor	5.81E-13
I-118	V	Methyl Iodide	3.77E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
I-118m			0.00E+00
I-119	F		3.42E-14
I-119	M		3.03E-14
I-119	S		2.97E-14
I-119	V	Vapor	1.62E-13
I-119	V	Methyl Iodide	6.07E-14
I-120	F		3.30E-13
I-120	M		2.59E-13
I-120	S		2.52E-13
I-120	V	Vapor	9.44E-13
I-120	V	Methyl Iodide	7.03E-13
I-120m	F		1.43E-13
I-120m	M		1.40E-13
I-120m	S		1.40E-13
I-120m	V	Vapor	4.66E-13
I-120m	V	Methyl Iodide	2.91E-13
I-121	F		8.81E-14
I-121	M		6.14E-14
I-121	S		5.66E-14
I-121	V	Vapor	2.68E-13
I-121	V	Methyl Iodide	1.79E-13
I-122			0.00E+00
I-123	F		3.07E-13
I-123	M		2.19E-13
I-123	S		2.07E-13
I-123	V	Vapor	8.33E-13
I-123	V	Methyl Iodide	6.18E-13
I-124	F		1.77E-11
I-124	M		5.18E-12
I-124	S		3.26E-12
I-124	V	Vapor	4.55E-11
I-124	V	Methyl Iodide	3.55E-11
I-125	F		1.07E-11
I-125	M		3.24E-12
I-125	S		1.51E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
I-125	V	Vapor	2.78E-11
I-125	V	Methyl Iodide	2.17E-11
I-126	F		3.74E-11
I-126	M		1.05E-11
I-126	S		5.77E-12
I-126	V	Vapor	9.66E-11
I-126	V	Methyl Iodide	7.55E-11
I-128	F		3.02E-14
I-128	M		3.81E-14
I-128	S		3.89E-14
I-128	V	Vapor	2.08E-13
I-128	V	Methyl Iodide	5.33E-14
I-129	F		6.22E-11
I-129	M		2.90E-11
I-129	S		2.63E-11
I-129	V	Vapor	1.64E-10
I-129	V	Methyl Iodide	1.27E-10
I-130	F		2.62E-12
I-130	M		1.60E-12
I-130	S		1.47E-12
I-130	V	Vapor	6.92E-12
I-130	V	Methyl Iodide	5.29E-12
I-130m			0.00E+00
I-131	F		1.95E-11
I-131	M		8.14E-12
I-131	S		6.25E-12
I-131	V	Vapor	5.03E-11
I-131	V	Methyl Iodide	3.89E-11
I-132	F		3.70E-13
I-132	M		3.20E-13
I-132	S		3.15E-13
I-132	V	Vapor	1.15E-12
I-132	V	Methyl Iodide	7.66E-13
I-132m	F		8.44E-14
I-132m	M		1.79E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
I-132m	S		1.89E-13
I-132m	V	Vapor	4.03E-13
I-132m	V	Methyl Iodide	1.52E-13
I-133	F		6.29E-12
I-133	M		2.79E-12
I-133	S		2.31E-12
I-133	V	Vapor	1.64E-11
I-133	V	Methyl Iodide	1.27E-11
I-134	F		9.66E-14
I-134	M		1.11E-13
I-134	S		1.13E-13
I-134	V	Vapor	4.26E-13
I-134	V	Methyl Iodide	1.88E-13
I-134m			0.00E+00
I-135	F		1.27E-12
I-135	M		8.44E-13
I-135	S		7.92E-13
I-135	V	Vapor	3.45E-12
I-135	V	Methyl Iodide	2.59E-12
In-103			0.00E+00
In-105			0.00E+00
In-106			0.00E+00
In-106m			0.00E+00
In-107	F		2.32E-14
In-107	M		5.59E-14
In-107	S		5.96E-14
In-108	F		4.81E-14
In-108	M		7.77E-14
In-108	S		8.10E-14
In-108m	F		4.03E-14
In-108m	M		7.18E-14
In-108m	S		7.51E-14
In-109	F		5.18E-14
In-109	M		9.25E-14
In-109	S		9.81E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
In-109m			0.00E+00
In-110	F		1.78E-13
In-110	M		2.68E-13
In-110	S		2.78E-13
In-110m	F		5.92E-14
In-110m	M		1.18E-13
In-110m	S		1.24E-13
In-111	F		3.69E-13
In-111	M		8.07E-13
In-111	S		8.62E-13
In-111m			0.00E+00
In-112	F		6.25E-15
In-112	M		1.15E-14
In-112	S		1.21E-14
In-112m	F		1.38E-14
In-112m	M		3.60E-14
In-112m	S		3.85E-14
In-113m	F		2.05E-14
In-113m	M		5.25E-14
In-113m	S		5.62E-14
In-114			0.00E+00
In-114m	F		2.49E-11
In-114m	M		4.29E-11
In-114m	S		5.03E-11
In-114m+D	F		5.03E-11
In-114m+E	F		5.03E-11
In-115	F		4.07E-10
In-115	M		1.76E-10
In-115	S		8.29E-11
In-115m	F		7.96E-14
In-115m	M		2.18E-13
In-115m	S		2.33E-13
In-116m	F		4.14E-14
In-116m	M		8.81E-14
In-116m	S		9.32E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
In-117	F		2.13E-14
In-117	M		5.51E-14
In-117	S		5.88E-14
In-117m	F		8.47E-14
In-117m	M		2.32E-13
In-117m	S		2.49E-13
In-118			0.00E+00
In-118m			0.00E+00
In-119			0.00E+00
In-119m	F		1.86E-14
In-119m	M		3.35E-14
In-119m	S		3.52E-14
In-121			0.00E+00
In-121m			0.00E+00
Ir-180			0.00E+00
Ir-182	F		2.79E-14
Ir-182	M		5.07E-14
Ir-182	S		5.33E-14
Ir-183	F		4.22E-14
Ir-183	M		9.44E-14
Ir-183	S		1.01E-13
Ir-184	F		1.57E-13
Ir-184	M		3.44E-13
Ir-184	S		3.64E-13
Ir-185	F		3.52E-13
Ir-185	M		8.07E-13
Ir-185	S		8.66E-13
Ir-186	F		5.44E-13
Ir-186	M		1.16E-12
Ir-186	S		1.23E-12
Ir-186m	F		5.92E-14
Ir-186m	M		1.23E-13
Ir-186m	S		1.30E-13
Ir-187	F		1.12E-13
Ir-187	M		2.64E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ir-187	S		2.81E-13
Ir-188	F		8.03E-13
Ir-188	M		1.44E-12
Ir-188	S		1.51E-12
Ir-189	F		4.96E-13
Ir-189	M		1.92E-12
Ir-189	S		2.17E-12
Ir-190	F		2.36E-12
Ir-190	M		4.77E-12
Ir-190	S		5.22E-12
Ir-190m	F		1.08E-14
Ir-190m	M		2.12E-14
Ir-190m	S		2.30E-14
Ir-190n	F		9.77E-14
Ir-190n	M		2.15E-13
Ir-190n	S		2.28E-13
Ir-191m			0.00E+00
Ir-192	F		7.14E-12
Ir-192	M		1.92E-11
Ir-192	S		2.41E-11
Ir-192m			0.00E+00
Ir-192n	F		2.13E-11
Ir-192n	M		4.22E-11
Ir-192n	S		1.57E-10
Ir-193m	F		5.25E-13
Ir-193m	M		3.92E-12
Ir-193m	S		4.48E-12
Ir-194	F		1.59E-12
Ir-194	M		3.23E-12
Ir-194	S		3.41E-12
Ir-194m	F		2.05E-11
Ir-194m	M		3.14E-11
Ir-194m	S		4.37E-11
Ir-195	F		8.18E-14
Ir-195	M		2.23E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ir-195	S		2.39E-13
Ir-195m	F		1.38E-13
Ir-195m	M		4.14E-13
Ir-195m	S		4.48E-13
Ir-196			0.00E+00
Ir-196m	F		8.25E-14
Ir-196m	M		1.98E-13
Ir-196m	S		2.10E-13
K-38			0.00E+00
K-40	F		1.03E-11
K-40	M		5.00E-11
K-40	S		2.22E-10
K-42	F		4.33E-13
K-42	M		1.16E-12
K-42	S		1.24E-12
K-43	F		3.04E-13
K-43	M		9.99E-13
K-43	S		1.08E-12
K-44	F		3.38E-14
K-44	M		5.85E-14
K-44	S		6.14E-14
K-45	F		2.09E-14
K-45	M		3.58E-14
K-45	S		3.77E-14
K-46			0.00E+00
Kr-74			0.00E+00
Kr-75			0.00E+00
Kr-76			0.00E+00
Kr-76+D			0.00E+00
Kr-76+E			0.00E+00
Kr-77			0.00E+00
Kr-79			0.00E+00
Kr-81			0.00E+00
Kr-81m			0.00E+00
Kr-83m			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Kr-85			0.00E+00
Kr-85m			0.00E+00
Kr-87			0.00E+00
Kr-88			0.00E+00
Kr-89			0.00E+00
La-128			0.00E+00
La-129	F		1.31E-14
La-129	M		2.25E-14
La-129	S		2.36E-14
La-130			0.00E+00
La-131	F		2.38E-14
La-131	M		5.40E-14
La-131	S		5.77E-14
La-132	F		3.33E-13
La-132	M		6.66E-13
La-132	S		7.03E-13
La-132m	F		3.00E-14
La-132m	M		6.11E-14
La-132m	S		6.44E-14
La-133	F		2.88E-14
La-133	M		5.48E-14
La-133	S		5.74E-14
La-134			0.00E+00
La-135	F		2.68E-14
La-135	M		5.03E-14
La-135	S		5.29E-14
La-136			0.00E+00
La-137	F		1.42E-11
La-137	M		6.11E-12
La-137	S		5.33E-12
La-138	F		3.04E-10
La-138	M		1.25E-10
La-138	S		7.77E-11
La-140	F		2.15E-12
La-140	M		4.74E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
La-140	S		5.03E-12
La-141	F		3.17E-13
La-141	M		7.66E-13
La-141	S		8.21E-13
La-142	F		1.11E-13
La-142	M		2.34E-13
La-142	S		2.48E-13
La-143	F		2.70E-14
La-143	M		5.66E-14
La-143	S		6.03E-14
Lu-165	F		1.41E-14
Lu-165	M		2.64E-14
Lu-165	S		2.78E-14
Lu-167	F		3.52E-14
Lu-167	M		8.73E-14
Lu-167	S		9.40E-14
Lu-169	F		5.96E-13
Lu-169	M		1.35E-12
Lu-169	S		1.48E-12
Lu-169m			0.00E+00
Lu-170	F		9.88E-13
Lu-170	M		1.93E-12
Lu-170	S		2.04E-12
Lu-171	F		1.12E-12
Lu-171	M		3.53E-12
Lu-171	S		3.89E-12
Lu-171m			0.00E+00
Lu-172	F		1.97E-12
Lu-172	M		5.51E-12
Lu-172	S		6.03E-12
Lu-172m			0.00E+00
Lu-173	F		8.88E-12
Lu-173	M		8.77E-12
Lu-173	S		1.26E-11
Lu-174	F		1.18E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Lu-174	M		1.07E-11
Lu-174	S		1.50E-11
Lu-174m	F		5.37E-12
Lu-174m	M		1.21E-11
Lu-174m	S		1.57E-11
Lu-176	F		1.77E-10
Lu-176	M		1.06E-10
Lu-176	S		1.42E-10
Lu-176m	F		1.77E-13
Lu-176m	M		4.22E-13
Lu-176m	S		4.48E-13
Lu-177	F		8.77E-13
Lu-177	M		4.14E-12
Lu-177	S		4.63E-12
Lu-177m	F		1.85E-11
Lu-177m	M		4.29E-11
Lu-177m	S		5.66E-11
Lu-178	F		2.39E-14
Lu-178	M		4.92E-14
Lu-178	S		5.18E-14
Lu-178m	F		2.44E-14
Lu-178m	M		5.22E-14
Lu-178m	S		5.55E-14
Lu-179	F		2.41E-13
Lu-179	M		5.03E-13
Lu-179	S		5.33E-13
Lu-180			0.00E+00
Lu-181			0.00E+00
Mg-27			0.00E+00
Mg-28	F		2.57E-12
Mg-28	M		5.14E-12
Mg-28	S		5.40E-12
Mn-50m			0.00E+00
Mn-51	F		4.59E-14
Mn-51	M		9.55E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Mn-51	S		1.01E-13
Mn-52	F		2.68E-12
Mn-52	M		4.40E-12
Mn-52	S		4.66E-12
Mn-52m	F		2.98E-14
Mn-52m	M		5.07E-14
Mn-52m	S		5.33E-14
Mn-53	F		8.55E-14
Mn-53	M		2.15E-13
Mn-53	S		9.62E-13
Mn-54	F		2.79E-12
Mn-54	M		5.88E-12
Mn-54	S		1.21E-11
Mn-56	F		1.88E-13
Mn-56	M		4.14E-13
Mn-56	S		4.40E-13
Mn-57			0.00E+00
Mn-58m			0.00E+00
Mo-101	F		2.12E-14
Mo-101	M		4.29E-14
Mo-101	S		4.51E-14
Mo-102	F		2.68E-14
Mo-102	M		4.29E-14
Mo-102	S		4.48E-14
Mo-89			0.00E+00
Mo-90	F		3.29E-13
Mo-90	M		1.23E-12
Mo-90	S		1.36E-12
Mo-91	F		2.26E-14
Mo-91	M		3.70E-14
Mo-91	S		3.89E-14
Mo-91m			0.00E+00
Mo-93	F		1.14E-12
Mo-93	M		1.24E-12
Mo-93	S		5.55E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Mo-93m	F		1.58E-13
Mo-93m	M		4.55E-13
Mo-93m	S		4.96E-13
Mo-99	F		7.92E-13
Mo-99	M		4.29E-12
Mo-99	S		4.81E-12
N-13			0.00E+00
N-16			0.00E+00
Na-22	F		3.89E-12
Na-22	M		3.50E-11
Na-22	S		9.73E-11
Na-24	F		4.74E-13
Na-24	M		1.12E-12
Na-24	S		1.20E-12
Nb-87			0.00E+00
Nb-88	F		3.18E-14
Nb-88	M		4.92E-14
Nb-88	S		5.18E-14
Nb-88m			0.00E+00
Nb-89	F		1.91E-13
Nb-89	M		3.96E-13
Nb-89	S		4.22E-13
Nb-89m	F		8.40E-14
Nb-89m	M		1.72E-13
Nb-89m	S		1.81E-13
Nb-90	F		1.10E-12
Nb-90	M		2.26E-12
Nb-90	S		2.39E-12
Nb-91	F		3.47E-13
Nb-91	M		9.81E-13
Nb-91	S		5.00E-12
Nb-91m	F		1.05E-12
Nb-91m	M		1.17E-11
Nb-91m	S		1.46E-11
Nb-92	F		1.55E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Nb-92	M		1.78E-11
Nb-92	S		7.44E-11
Nb-92m	F		9.62E-13
Nb-92m	M		1.35E-12
Nb-92m	S		1.42E-12
Nb-93m	F		7.36E-13
Nb-93m	M		2.01E-12
Nb-93m	S		6.03E-12
Nb-94	F		1.99E-11
Nb-94	M		3.77E-11
Nb-94	S		1.34E-10
Nb-94m			0.00E+00
Nb-95	F		1.89E-12
Nb-95	M		5.44E-12
Nb-95	S		6.40E-12
Nb-95m	F		8.99E-13
Nb-95m	M		3.37E-12
Nb-95m	S		3.74E-12
Nb-96	F		1.01E-12
Nb-96	M		2.28E-12
Nb-96	S		2.42E-12
Nb-97	F		4.29E-14
Nb-97	M		1.07E-13
Nb-97	S		1.14E-13
Nb-98m	F		5.99E-14
Nb-98m	M		1.19E-13
Nb-98m	S		1.25E-13
Nb-99			0.00E+00
Nb-99m			0.00E+00
Nd-134			0.00E+00
Nd-135	F		2.81E-14
Nd-135	M		5.00E-14
Nd-135	S		5.25E-14
Nd-136	F		6.03E-14
Nd-136	M		1.25E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Nd-136	S		1.32E-13
Nd-137	F		3.25E-14
Nd-137	M		6.48E-14
Nd-137	S		6.85E-14
Nd-138	F		5.85E-13
Nd-138	M		1.18E-12
Nd-138	S		1.25E-12
Nd-139	F		1.21E-14
Nd-139	M		2.33E-14
Nd-139	S		2.47E-14
Nd-139m	F		2.11E-13
Nd-139m	M		4.40E-13
Nd-139m	S		4.70E-13
Nd-140	F		2.47E-12
Nd-140	M		5.66E-12
Nd-140	S		6.03E-12
Nd-141	F		6.29E-15
Nd-141	M		1.29E-14
Nd-141	S		1.36E-14
Nd-141m			0.00E+00
Nd-144	F		1.04E-08
Nd-144	M		5.29E-09
Nd-144	S		7.18E-09
Nd-147	F		1.94E-12
Nd-147	M		8.29E-12
Nd-147	S		9.40E-12
Nd-149	F		1.07E-13
Nd-149	M		2.96E-13
Nd-149	S		3.17E-13
Nd-151	F		1.79E-14
Nd-151	M		3.63E-14
Nd-151	S		3.85E-14
Nd-152	F		2.22E-14
Nd-152	M		3.96E-14
Nd-152	S		4.14E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ne-19			0.00E+00
Ne-24			0.00E+00
Ni-56	F		1.34E-12
Ni-56	M		2.88E-12
Ni-56	S		3.52E-12
Ni-56	V		4.22E-12
Ni-57	F		7.81E-13
Ni-57	M		1.86E-12
Ni-57	S		2.04E-12
Ni-57	V		1.52E-12
Ni-59	F		5.66E-13
Ni-59	M		4.63E-13
Ni-59	S		1.25E-12
Ni-59	V		2.39E-12
Ni-63	F		1.40E-12
Ni-63	M		1.69E-12
Ni-63	S		3.81E-12
Ni-63	V		5.88E-12
Ni-65	F		1.42E-13
Ni-65	M		3.02E-13
Ni-65	S		3.22E-13
Ni-65	V		7.07E-13
Ni-66	F		3.36E-12
Ni-66	M		9.07E-12
Ni-66	S		9.95E-12
Ni-66	V		4.63E-12
Np-232	F		4.63E-14
Np-232	M		3.27E-14
Np-232	S		5.11E-14
Np-233	F		1.44E-15
Np-233	M		2.94E-15
Np-233	S		3.11E-15
Np-234	F		7.84E-13
Np-234	M		1.52E-12
Np-234	S		1.62E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Np-235	F		1.01E-12
Np-235	M		1.24E-12
Np-235	S		2.05E-12
Np-235+D	F		2.05E-12
Np-235+E	F		2.05E-12
Np-236	F		3.36E-09
Np-236	M		1.41E-09
Np-236	S		1.75E-09
Np-236m	F		3.89E-12
Np-236m	M		8.07E-12
Np-236m	S		1.30E-11
Np-237	F		1.75E-08
Np-237	M		1.77E-08
Np-237	S		2.87E-08
Np-237+D	F		2.87E-08
Np-237+E	F		2.87E-08
Np-238	F		2.14E-12
Np-238	M		4.11E-12
Np-238	S		5.22E-12
Np-239	F		9.21E-13
Np-239	M		4.07E-12
Np-239	S		4.48E-12
Np-240	F		5.48E-14
Np-240	M		1.58E-13
Np-240	S		1.70E-13
Np-240m			0.00E+00
Np-241	F		1.01E-14
Np-241	M		1.81E-14
Np-241	S		1.91E-14
Np-242			0.00E+00
Np-242m			0.00E+00
O-14			0.00E+00
O-15			0.00E+00
O-19			0.00E+00
Os-180	F		1.22E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Os-180	M		2.53E-14
Os-180	S		2.68E-14
Os-181	F		8.14E-14
Os-181	M		1.77E-13
Os-181	S		1.88E-13
Os-182	F		6.25E-13
Os-182	M		1.41E-12
Os-182	S		1.51E-12
Os-183	F		2.35E-13
Os-183	M		6.07E-13
Os-183	S		6.59E-13
Os-183m	F		1.96E-13
Os-183m	M		4.22E-13
Os-183m	S		4.55E-13
Os-185	F		4.03E-12
Os-185	M		4.70E-12
Os-185	S		5.92E-12
Os-186	F		1.76E-09
Os-186	M		4.11E-09
Os-186	S		1.20E-08
Os-189m	F		1.77E-14
Os-189m	M		3.15E-14
Os-189m	S		3.30E-14
Os-190m			0.00E+00
Os-191	F		1.21E-12
Os-191	M		6.48E-12
Os-191	S		7.44E-12
Os-191m	F		1.38E-13
Os-191m	M		5.96E-13
Os-191m	S		6.62E-13
Os-193	F		1.02E-12
Os-193	M		2.61E-12
Os-193	S		2.79E-12
Os-194	F		3.29E-11
Os-194	M		7.51E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Os-194	S		2.56E-10
Os-194+D	S		2.59E-10
Os-194+E	S		2.59E-10
Os-196	F		5.51E-14
Os-196	M		1.18E-13
Os-196	S		1.25E-13
P-30			0.00E+00
P-32	F		2.96E-12
P-32	M		1.21E-11
P-32	S		1.39E-11
P-33	F		3.29E-13
P-33	M		5.07E-12
P-33	S		6.11E-12
Pa-227	F		4.07E-11
Pa-227	M		1.93E-10
Pa-227	S		2.11E-10
Pa-228	F		2.97E-11
Pa-228	M		1.64E-10
Pa-228	S		2.39E-10
Pa-229	F		7.73E-13
Pa-229	M		2.08E-11
Pa-229	S		2.42E-11
Pa-230	F		5.81E-11
Pa-230	M		1.77E-09
Pa-230	S		2.28E-09
Pa-231	F		7.62E-08
Pa-231	M		4.07E-08
Pa-231	S		4.55E-08
Pa-232	F		1.35E-12
Pa-232	M		3.08E-12
Pa-232	S		6.99E-12
Pa-233	F		2.96E-12
Pa-233	M		1.31E-11
Pa-233	S		1.53E-11
Pa-234	F		3.74E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pa-234	M		1.12E-12
Pa-234	S		1.20E-12
Pa-234m			0.00E+00
Pa-235	F		1.38E-14
Pa-235	M		3.02E-14
Pa-235	S		3.19E-14
Pa-236			0.00E+00
Pa-237			0.00E+00
Pb-194	F		1.15E-14
Pb-194	M		2.13E-14
Pb-194	S		2.24E-14
Pb-195m	F		1.94E-14
Pb-195m	M		3.81E-14
Pb-195m	S		4.03E-14
Pb-196	F		2.18E-14
Pb-196	M		4.48E-14
Pb-196	S		4.74E-14
Pb-197			0.00E+00
Pb-197m	F		3.40E-14
Pb-197m	M		9.14E-14
Pb-197m	S		9.81E-14
Pb-198	F		6.81E-14
Pb-198	M		1.44E-13
Pb-198	S		1.54E-13
Pb-199	F		2.86E-14
Pb-199	M		6.62E-14
Pb-199	S		7.10E-14
Pb-200	F		3.96E-13
Pb-200	M		1.17E-12
Pb-200	S		1.29E-12
Pb-201	F		1.32E-13
Pb-201	M		3.56E-13
Pb-201	S		3.92E-13
Pb-201m			0.00E+00
Pb-202	F		3.52E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pb-202	M		4.74E-11
Pb-202	S		1.38E-10
Pb-202+D	S		1.39E-10
Pb-202+E	S		1.39E-10
Pb-202m	F		1.09E-13
Pb-202m	M		2.47E-13
Pb-202m	S		2.66E-13
Pb-203	F		2.50E-13
Pb-203	M		7.66E-13
Pb-203	S		8.47E-13
Pb-204m	F		3.07E-14
Pb-204m	M		5.11E-14
Pb-204m	S		5.37E-14
Pb-205	F		5.51E-13
Pb-205	M		6.25E-13
Pb-205	S		2.28E-12
Pb-209	F		4.85E-14
Pb-209	M		1.90E-13
Pb-209	S		2.08E-13
Pb-210	F		9.14E-10
Pb-210	M		2.77E-09
Pb-210	S		1.59E-08
Pb-211	F		8.29E-12
Pb-211	M		3.70E-11
Pb-211	S		4.03E-11
Pb-212	F		2.01E-11
Pb-212	M		5.77E-10
Pb-212	S		6.40E-10
Pb-214	F		4.59E-12
Pb-214	M		3.63E-11
Pb-214	S		4.00E-11
Pd-100	F		1.68E-12
Pd-100	M		2.75E-12
Pd-100	S		2.89E-12
Pd-101	F		1.01E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pd-101	M		1.78E-13
Pd-101	S		1.88E-13
Pd-103	F		3.85E-13
Pd-103	M		1.55E-12
Pd-103	S		1.76E-12
Pd-107	F		1.01E-13
Pd-107	M		3.92E-13
Pd-107	S		1.75E-12
Pd-109	F		7.07E-13
Pd-109	M		1.77E-12
Pd-109	S		1.89E-12
Pd-109m			0.00E+00
Pd-111	F		2.78E-14
Pd-111	M		6.07E-14
Pd-111	S		6.48E-14
Pd-112	F		3.47E-12
Pd-112	M		6.48E-12
Pd-112	S		6.81E-12
Pd-114			0.00E+00
Pd-96			0.00E+00
Pd-97			0.00E+00
Pd-98	F		2.92E-14
Pd-98	M		5.33E-14
Pd-98	S		5.59E-14
Pd-99	F		1.94E-14
Pd-99	M		3.34E-14
Pd-99	S		3.49E-14
Pm-136			0.00E+00
Pm-137m			0.00E+00
Pm-139			0.00E+00
Pm-140			0.00E+00
Pm-140m			0.00E+00
Pm-141	F		1.51E-14
Pm-141	M		2.64E-14
Pm-141	S		2.76E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pm-142			0.00E+00
Pm-143	F		9.07E-12
Pm-143	M		5.00E-12
Pm-143	S		5.37E-12
Pm-144	F		5.51E-11
Pm-144	M		2.76E-11
Pm-144	S		2.77E-11
Pm-145	F		1.24E-11
Pm-145	M		6.03E-12
Pm-145	S		6.29E-12
Pm-146	F		1.02E-10
Pm-146	M		5.07E-11
Pm-146	S		5.33E-11
Pm-147	F		9.10E-12
Pm-147	M		1.15E-11
Pm-147	S		1.61E-11
Pm-148	F		3.69E-12
Pm-148	M		9.73E-12
Pm-148	S		1.05E-11
Pm-148m	F		1.20E-11
Pm-148m	M		1.85E-11
Pm-148m	S		2.10E-11
Pm-149	F		1.17E-12
Pm-149	M		3.39E-12
Pm-149	S		3.65E-12
Pm-150	F		2.05E-13
Pm-150	M		4.33E-13
Pm-150	S		4.59E-13
Pm-151	F		7.99E-13
Pm-151	M		2.20E-12
Pm-151	S		2.36E-12
Pm-152			0.00E+00
Pm-152m			0.00E+00
Pm-153			0.00E+00
Pm-154			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pm-154m			0.00E+00
Po-203	F		4.81E-14
Po-203	M		1.05E-13
Po-203	S		1.13E-13
Po-204	F		3.25E-13
Po-204	M		1.32E-12
Po-204	S		1.45E-12
Po-205	F		5.29E-14
Po-205	M		1.02E-13
Po-205	S		1.08E-13
Po-206	F		1.74E-11
Po-206	M		1.92E-10
Po-206	S		2.19E-10
Po-207	F		1.12E-13
Po-207	M		2.26E-13
Po-207	S		2.47E-13
Po-208	F		1.24E-09
Po-208	M		1.24E-08
Po-208	S		2.26E-08
Po-209	F		1.23E-09
Po-209	M		1.20E-08
Po-209	S		2.82E-08
Po-210	F		9.95E-10
Po-210	M		1.09E-08
Po-210	S		1.45E-08
Po-211			0.00E+00
Po-212			0.00E+00
Po-212m			0.00E+00
Po-213			0.00E+00
Po-214			0.00E+00
Po-215			0.00E+00
Po-216			0.00E+00
Po-218			0.00E+00
Pr-134	F		2.55E-14
Pr-134	M		4.29E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pr-134	S		4.51E-14
Pr-134m	F		4.14E-14
Pr-134m	M		7.40E-14
Pr-134m	S		7.77E-14
Pr-135	F		2.28E-14
Pr-135	M		4.11E-14
Pr-135	S		4.33E-14
Pr-136	F		1.41E-14
Pr-136	M		2.11E-14
Pr-136	S		2.18E-14
Pr-137	F		2.41E-14
Pr-137	M		4.96E-14
Pr-137	S		5.22E-14
Pr-138			0.00E+00
Pr-138m	F		9.29E-14
Pr-138m	M		1.69E-13
Pr-138m	S		1.77E-13
Pr-139	F		3.28E-14
Pr-139	M		6.59E-14
Pr-139	S		7.10E-14
Pr-140			0.00E+00
Pr-142	F		1.44E-12
Pr-142	M		3.19E-12
Pr-142	S		3.38E-12
Pr-142m	F		1.84E-14
Pr-142m	M		4.07E-14
Pr-142m	S		4.33E-14
Pr-143	F		2.03E-12
Pr-143	M		8.58E-12
Pr-143	S		9.77E-12
Pr-144	F		1.96E-14
Pr-144	M		3.42E-14
Pr-144	S		3.58E-14
Pr-144m			0.00E+00
Pr-145	F		3.85E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pr-145	M		8.70E-13
Pr-145	S		9.25E-13
Pr-146	F		3.22E-14
Pr-146	M		5.81E-14
Pr-146	S		6.07E-14
Pr-147	F		1.72E-14
Pr-147	M		3.34E-14
Pr-147	S		3.56E-14
Pr-148			0.00E+00
Pr-148m			0.00E+00
Pt-184	F		2.73E-14
Pt-184	M		5.85E-14
Pt-184	S		6.18E-14
Pt-186	F		9.69E-14
Pt-186	M		1.99E-13
Pt-186	S		2.10E-13
Pt-187	F		7.84E-14
Pt-187	M		2.02E-13
Pt-187	S		2.16E-13
Pt-188	F		2.12E-12
Pt-188	M		6.88E-12
Pt-188	S		7.73E-12
Pt-189	F		2.12E-13
Pt-189	M		5.92E-13
Pt-189	S		6.36E-13
Pt-190	F		3.69E-10
Pt-190	M		5.03E-09
Pt-190	S		1.50E-08
Pt-191	F		5.07E-13
Pt-191	M		1.41E-12
Pt-191	S		1.53E-12
Pt-193	F		1.25E-13
Pt-193	M		4.22E-13
Pt-193	S		1.97E-12
Pt-193m	F		7.81E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pt-193m	M		3.46E-12
Pt-193m	S		3.81E-12
Pt-195m	F		1.07E-12
Pt-195m	M		4.22E-12
Pt-195m	S		4.63E-12
Pt-197	F		5.62E-13
Pt-197	M		1.63E-12
Pt-197	S		1.75E-12
Pt-197m	F		8.73E-14
Pt-197m	M		2.56E-13
Pt-197m	S		2.75E-13
Pt-199	F		2.51E-14
Pt-199	M		6.44E-14
Pt-199	S		6.88E-14
Pt-200	F		1.45E-12
Pt-200	M		3.15E-12
Pt-200	S		3.34E-12
Pt-202	F		6.33E-12
Pt-202	M		1.21E-11
Pt-202	S		1.27E-11
Pt-202+D	S		1.27E-11
Pt-202+E	S		1.27E-11
Pu-232	F		1.04E-11
Pu-232	M		5.81E-11
Pu-232	S		6.33E-11
Pu-234	F		3.65E-12
Pu-234	M		6.85E-11
Pu-234	S		7.99E-11
Pu-235	F		1.38E-15
Pu-235	M		2.58E-15
Pu-235	S		2.74E-15
Pu-236	F		2.23E-08
Pu-236	M		2.30E-08
Pu-236	S		2.96E-08
Pu-237	F		6.29E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Pu-237	M		1.28E-12
Pu-237	S		1.49E-12
Pu-238	F		5.22E-08
Pu-238	M		3.36E-08
Pu-238	S		3.55E-08
Pu-239	F		5.55E-08
Pu-239	M		3.33E-08
Pu-239	S		3.32E-08
Pu-239+D	F		5.55E-08
Pu-239+E	F		5.55E-08
Pu-240	F		5.55E-08
Pu-240	M		3.33E-08
Pu-240	S		3.32E-08
Pu-241	F		8.66E-10
Pu-241	M		3.33E-10
Pu-241	S		1.41E-10
Pu-242	F		5.25E-08
Pu-242	M		3.13E-08
Pu-242	S		3.09E-08
Pu-243	F		8.66E-14
Pu-243	M		2.95E-13
Pu-243	S		3.18E-13
Pu-244	F		5.22E-08
Pu-244	M		3.04E-08
Pu-244	S		2.96E-08
Pu-244+D	F		5.22E-08
Pu-244+E	F		5.22E-08
Pu-245	F		6.96E-13
Pu-245	M		2.00E-12
Pu-245	S		2.15E-12
Pu-246	F		5.77E-12
Pu-246	M		1.69E-11
Pu-246	S		1.88E-11
Ra-219			0.00E+00
Ra-219+D			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ra-219+E			0.00E+00
Ra-220			0.00E+00
Ra-221			0.00E+00
Ra-221+D			0.00E+00
Ra-221+E			0.00E+00
Ra-222			0.00E+00
Ra-223	F		2.00E-10
Ra-223	M		2.50E-08
Ra-223	S		2.92E-08
Ra-223+D	S		2.92E-08
Ra-223+E	S		2.92E-08
Ra-224	F		1.34E-10
Ra-224	M		9.99E-09
Ra-224	S		1.13E-08
Ra-224+D	S		1.13E-08
Ra-224+E	S		1.13E-08
Ra-225	F		1.23E-10
Ra-225	M		2.11E-08
Ra-225	S		2.62E-08
Ra-226	F		4.22E-10
Ra-226	M		1.15E-08
Ra-226	S		2.82E-08
Ra-226+D	S		2.82E-08
Ra-226+E	S		2.82E-08
Ra-227	F		2.57E-13
Ra-227	M		3.15E-13
Ra-227	S		6.11E-13
Ra-228	F		1.21E-09
Ra-228	M		5.18E-09
Ra-228	S		4.37E-08
Ra-228+D	S		4.37E-08
Ra-228+E	S		4.37E-08
Ra-230	F		2.06E-13
Ra-230	M		3.36E-13
Ra-230	S		3.51E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Rb-77			0.00E+00
Rb-78	F		2.95E-14
Rb-78	M		4.66E-14
Rb-78	S		4.85E-14
Rb-78m			0.00E+00
Rb-79	F		2.41E-14
Rb-79	M		4.59E-14
Rb-79	S		4.85E-14
Rb-80			0.00E+00
Rb-81	F		4.22E-14
Rb-81	M		1.48E-13
Rb-81	S		1.59E-13
Rb-81m	F		1.07E-14
Rb-81m	M		3.61E-14
Rb-81m	S		3.89E-14
Rb-82			0.00E+00
Rb-82m	F		1.40E-13
Rb-82m	M		2.39E-13
Rb-82m	S		2.50E-13
Rb-83	F		2.18E-12
Rb-83	M		4.03E-12
Rb-83	S		5.18E-12
Rb-84	F		3.63E-12
Rb-84	M		8.92E-12
Rb-84	S		1.04E-11
Rb-84m	F		6.25E-15
Rb-84m	M		1.35E-14
Rb-84m	S		1.47E-14
Rb-86	F		4.00E-12
Rb-86	M		1.44E-11
Rb-86	S		1.67E-11
Rb-86m			0.00E+00
Rb-87	F		2.22E-12
Rb-87	M		1.68E-11
Rb-87	S		4.48E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Rb-88	F		3.18E-14
Rb-88	M		5.40E-14
Rb-88	S		5.62E-14
Rb-89	F		2.05E-14
Rb-89	M		3.61E-14
Rb-89	S		3.89E-14
Rb-90			0.00E+00
Rb-90m			0.00E+00
Re-178	F		1.79E-14
Re-178	M		2.53E-14
Re-178	S		2.62E-14
Re-179	F		1.13E-14
Re-179	M		1.79E-14
Re-179	S		1.86E-14
Re-180			0.00E+00
Re-181	F		5.44E-13
Re-181	M		8.03E-13
Re-181	S		8.33E-13
Re-182	F		1.91E-12
Re-182	M		4.33E-12
Re-182	S		4.63E-12
Re-182m	F		3.46E-13
Re-182m	M		5.81E-13
Re-182m	S		6.07E-13
Re-183	F		1.41E-12
Re-183	M		9.77E-12
Re-183	S		1.24E-11
Re-184	F		1.34E-12
Re-184	M		6.77E-12
Re-184	S		8.29E-12
Re-184m	F		2.10E-12
Re-184m	M		2.28E-11
Re-184m	S		3.56E-11
Re-186	F		2.16E-12
Re-186	M		4.11E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Re-186	S		4.37E-12
Re-186m	F		3.24E-12
Re-186m	M		4.14E-11
Re-186m	S		1.64E-10
Re-186m+D	S		1.68E-10
Re-186m+E	S		1.68E-10
Re-187	F		7.03E-15
Re-187	M		2.35E-14
Re-187	S		1.10E-13
Re-188	F		1.85E-12
Re-188	M		2.23E-12
Re-188	S		2.27E-12
Re-188m	F		3.96E-14
Re-188m	M		5.18E-14
Re-188m	S		5.29E-14
Re-189	F		1.04E-12
Re-189	M		1.62E-12
Re-189	S		1.69E-12
Re-190			0.00E+00
Re-190m	F		4.29E-13
Re-190m	M		5.74E-13
Re-190m	S		5.92E-13
Rh-100	F		5.85E-13
Rh-100	M		9.18E-13
Rh-100	S		9.55E-13
Rh-100m			0.00E+00
Rh-101	F		4.63E-12
Rh-101	M		7.55E-12
Rh-101	S		1.72E-11
Rh-101m	F		2.78E-13
Rh-101m	M		6.51E-13
Rh-101m	S		7.03E-13
Rh-102	F		5.92E-12
Rh-102	M		1.57E-11
Rh-102	S		2.60E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Rh-102m	F		2.51E-11
Rh-102m	M		2.58E-11
Rh-102m	S		6.66E-11
Rh-103m	F		2.70E-15
Rh-103m	M		8.47E-15
Rh-103m	S		9.10E-15
Rh-104			0.00E+00
Rh-104m			0.00E+00
Rh-105	F		4.59E-13
Rh-105	M		1.47E-12
Rh-105	S		1.59E-12
Rh-106			0.00E+00
Rh-106m	F		1.25E-13
Rh-106m	M		2.61E-13
Rh-106m	S		2.76E-13
Rh-107	F		1.33E-14
Rh-107	M		2.72E-14
Rh-107	S		2.87E-14
Rh-108			0.00E+00
Rh-109			0.00E+00
Rh-94			0.00E+00
Rh-95			0.00E+00
Rh-95m			0.00E+00
Rh-96			0.00E+00
Rh-96m			0.00E+00
Rh-97	F		2.39E-14
Rh-97	M		4.33E-14
Rh-97	S		4.55E-14
Rh-97m	F		2.86E-14
Rh-97m	M		4.96E-14
Rh-97m	S		5.18E-14
Rh-98			0.00E+00
Rh-99	F		1.18E-12
Rh-99	M		4.18E-12
Rh-99	S		4.74E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Rh-99m	F		5.25E-14
Rh-99m	M		9.81E-14
Rh-99m	S		1.03E-13
Rn-207			0.00E+00
Rn-209			0.00E+00
Rn-210			0.00E+00
Rn-211			0.00E+00
Rn-212			0.00E+00
Rn-215			0.00E+00
Rn-216			0.00E+00
Rn-217			0.00E+00
Rn-218			0.00E+00
Rn-219			0.00E+00
Rn-219+D			0.00E+00
Rn-219+E			0.00E+00
Rn-220			0.00E+00
Rn-222			3.19E-11
Rn-222+D			3.19E-11
Rn-222+E			3.19E-11
Rn-223			0.00E+00
Ru-103	F		1.86E-12
Ru-103	M		8.66E-12
Ru-103	S		1.04E-11
Ru-103	V		5.07E-12
Ru-105	F		2.60E-13
Ru-105	M		7.10E-13
Ru-105	S		7.73E-13
Ru-105	V		9.88E-13
Ru-106	F		3.50E-11
Ru-106	M		1.02E-10
Ru-106	S		2.24E-10
Ru-106	V		8.66E-11
Ru-106+D	S		2.24E-10
Ru-106+E	S		2.24E-10
Ru-107			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ru-108			0.00E+00
Ru-92			0.00E+00
Ru-94	F		6.14E-14
Ru-94	M		1.24E-13
Ru-94	S		1.31E-13
Ru-94	V		2.22E-13
Ru-95	F		4.37E-14
Ru-95	M		7.55E-14
Ru-95	S		7.99E-14
Ru-95	V		1.44E-13
Ru-97	F		1.62E-13
Ru-97	M		3.36E-13
Ru-97	S		3.62E-13
Ru-97	V		5.44E-13
S-35	F		2.32E-13
S-35	M		5.03E-12
S-35	S		6.51E-12
S-35	V	Dioxide	4.92E-13
S-35	V	Carbon Disulfide	2.90E-12
S-37			0.00E+00
S-38	F		4.33E-13
S-38	M		1.14E-12
S-38	S		1.23E-12
S-38	V	Dioxide	8.25E-13
S-38	V	Carbon Disulfide	5.96E-13
Sb-111			0.00E+00
Sb-113			0.00E+00
Sb-114			0.00E+00
Sb-115	F		1.27E-14
Sb-115	M		2.32E-14
Sb-115	S		2.44E-14
Sb-116	F		1.39E-14
Sb-116	M		2.13E-14
Sb-116	S		2.22E-14
Sb-116m	F		4.37E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Sb-116m	M		8.40E-14
Sb-116m	S		8.84E-14
Sb-117	F		1.48E-14
Sb-117	M		4.14E-14
Sb-117	S		4.40E-14
Sb-118			0.00E+00
Sb-118m	F		1.58E-13
Sb-118m	M		2.64E-13
Sb-118m	S		2.75E-13
Sb-119	F		9.03E-14
Sb-119	M		1.76E-13
Sb-119	S		1.85E-13
Sb-120	F		6.66E-15
Sb-120	M		1.12E-14
Sb-120	S		1.18E-14
Sb-120m	F		1.41E-12
Sb-120m	M		3.29E-12
Sb-120m	S		3.56E-12
Sb-122	F		2.09E-12
Sb-122	M		5.48E-12
Sb-122	S		5.88E-12
Sb-122m			0.00E+00
Sb-124	F		4.85E-12
Sb-124	M		2.43E-11
Sb-124	S		3.20E-11
Sb-124m			0.00E+00
Sb-124n	F		5.59E-15
Sb-124n	M		1.30E-14
Sb-124n	S		1.47E-14
Sb-125	F		3.89E-12
Sb-125	M		1.68E-11
Sb-125	S		4.03E-11
Sb-126	F		3.74E-12
Sb-126	M		1.26E-11
Sb-126	S		1.41E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Sb-126m	F		1.86E-14
Sb-126m	M		3.29E-14
Sb-126m	S		3.45E-14
Sb-127	F		2.16E-12
Sb-127	M		7.55E-12
Sb-127	S		8.25E-12
Sb-128	F		7.25E-13
Sb-128	M		1.54E-12
Sb-128	S		1.62E-12
Sb-128m	F		1.47E-14
Sb-128m	M		2.20E-14
Sb-128m	S		2.28E-14
Sb-129	F		4.03E-13
Sb-129	M		9.73E-13
Sb-129	S		1.04E-12
Sb-130	F		5.18E-14
Sb-130	M		9.77E-14
Sb-130	S		1.03E-13
Sb-130m			0.00E+00
Sb-131	F		9.21E-14
Sb-131	M		1.01E-13
Sb-131	S		9.95E-14
Sb-133			0.00E+00
Sc-42m			0.00E+00
Sc-43	F		1.77E-13
Sc-43	M		4.22E-13
Sc-43	S		4.48E-13
Sc-44	F		2.85E-13
Sc-44	M		6.14E-13
Sc-44	S		6.51E-13
Sc-44m	F		2.94E-12
Sc-44m	M		6.55E-12
Sc-44m	S		6.96E-12
Sc-46	F		1.89E-11
Sc-46	M		2.15E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Sc-46	S		2.47E-11
Sc-47	F		6.62E-13
Sc-47	M		2.78E-12
Sc-47	S		3.05E-12
Sc-48	F		1.77E-12
Sc-48	M		3.68E-12
Sc-48	S		3.92E-12
Sc-49	F		4.22E-14
Sc-49	M		9.99E-14
Sc-49	S		1.06E-13
Sc-50			0.00E+00
Se-70	F		6.48E-14
Se-70	M		1.59E-13
Se-70	S		1.69E-13
Se-71			0.00E+00
Se-72	F		6.88E-12
Se-72	M		1.42E-11
Se-72	S		1.55E-11
Se-73	F		1.99E-13
Se-73	M		7.73E-13
Se-73	S		8.55E-13
Se-73m	F		2.07E-14
Se-73m	M		7.03E-14
Se-73m	S		7.70E-14
Se-75	F		3.70E-12
Se-75	M		3.96E-12
Se-75	S		4.92E-12
Se-77m			0.00E+00
Se-79	F		3.15E-12
Se-79	M		8.66E-12
Se-79	S		1.86E-11
Se-79m			0.00E+00
Se-81	F		1.27E-14
Se-81	M		2.47E-14
Se-81	S		2.60E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Se-81m	F		3.56E-14
Se-81m	M		1.33E-13
Se-81m	S		1.44E-13
Se-83	F		2.68E-14
Se-83	M		6.70E-14
Se-83	S		7.14E-14
Se-83m			0.00E+00
Se-84			0.00E+00
Si-31	F		1.12E-13
Si-31	M		2.85E-13
Si-31	S		3.04E-13
Si-32	F		1.42E-11
Si-32	M		5.81E-11
Si-32	S		2.90E-10
Si-32+D	S		3.04E-10
Si-32+E	S		3.04E-10
Sm-139			0.00E+00
Sm-140	F		4.11E-14
Sm-140	M		7.03E-14
Sm-140	S		7.36E-14
Sm-141	F		1.64E-14
Sm-141	M		2.76E-14
Sm-141	S		2.88E-14
Sm-141m	F		3.19E-14
Sm-141m	M		6.07E-14
Sm-141m	S		6.36E-14
Sm-142	F		1.04E-13
Sm-142	M		2.09E-13
Sm-142	S		2.21E-13
Sm-143			0.00E+00
Sm-143m			0.00E+00
Sm-145	F		5.81E-12
Sm-145	M		4.40E-12
Sm-145	S		5.59E-12
Sm-146	F		1.38E-08

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Sm-146	M		7.81E-09
Sm-146	S		1.06E-08
Sm-147	F		1.26E-08
Sm-147	M		6.88E-09
Sm-147	S		9.29E-09
Sm-148	F		1.08E-08
Sm-148	M		5.59E-09
Sm-148	S		7.59E-09
Sm-151	F		9.25E-12
Sm-151	M		4.96E-12
Sm-151	S		4.92E-12
Sm-153	F		8.55E-13
Sm-153	M		2.94E-12
Sm-153	S		3.19E-12
Sm-155	F		1.55E-14
Sm-155	M		3.18E-14
Sm-155	S		3.36E-14
Sm-156	F		3.41E-13
Sm-156	M		9.81E-13
Sm-156	S		1.07E-12
Sm-157			0.00E+00
Sn-106			0.00E+00
Sn-108	F		1.34E-14
Sn-108	M		2.25E-14
Sn-108	S		2.35E-14
Sn-109	F		1.20E-14
Sn-109	M		1.78E-14
Sn-109	S		1.86E-14
Sn-110	F		4.29E-13
Sn-110	M		6.96E-13
Sn-110	S		7.25E-13
Sn-111	F		1.35E-14
Sn-111	M		2.63E-14
Sn-111	S		2.78E-14
Sn-113	F		2.39E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Sn-113	M		1.02E-11
Sn-113	S		1.47E-11
Sn-113m	F		4.22E-15
Sn-113m	M		1.07E-14
Sn-113m	S		1.18E-14
Sn-117m	F		1.36E-12
Sn-117m	M		8.92E-12
Sn-117m	S		1.02E-11
Sn-119m	F		1.25E-12
Sn-119m	M		7.96E-12
Sn-119m	S		1.22E-11
Sn-121	F		3.47E-13
Sn-121	M		1.02E-12
Sn-121	S		1.11E-12
Sn-121m	F		2.72E-12
Sn-121m	M		1.55E-11
Sn-121m	S		4.33E-11
Sn-121m+D	S		4.40E-11
Sn-121m+E	S		4.40E-11
Sn-123	F		5.88E-12
Sn-123	M		3.05E-11
Sn-123	S		4.66E-11
Sn-123m	F		2.45E-14
Sn-123m	M		5.66E-14
Sn-123m	S		5.99E-14
Sn-125	F		5.55E-12
Sn-125	M		1.40E-11
Sn-125	S		1.56E-11
Sn-125m			0.00E+00
Sn-126	F		3.81E-11
Sn-126	M		9.99E-11
Sn-126	S		4.22E-10
Sn-126+D	S		4.26E-10
Sn-126+E	S		4.26E-10
Sn-127	F		2.00E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Sn-127	M		4.33E-13
Sn-127	S		4.63E-13
Sn-127m			0.00E+00
Sn-128	F		1.14E-13
Sn-128	M		2.32E-13
Sn-128	S		2.45E-13
Sn-129			0.00E+00
Sn-130			0.00E+00
Sn-130m			0.00E+00
Sr-79			0.00E+00
Sr-80	F		2.55E-13
Sr-80	M		5.18E-13
Sr-80	S		5.55E-13
Sr-81	F		3.40E-14
Sr-81	M		6.70E-14
Sr-81	S		7.14E-14
Sr-82	F		9.44E-12
Sr-82	M		3.74E-11
Sr-82	S		4.48E-11
Sr-82+D	S		4.48E-11
Sr-82+E	S		4.48E-11
Sr-83	F		5.14E-13
Sr-83	M		1.33E-12
Sr-83	S		1.49E-12
Sr-85	F		1.44E-12
Sr-85	M		2.52E-12
Sr-85	S		3.17E-12
Sr-85m	F		4.63E-15
Sr-85m	M		8.33E-15
Sr-85m	S		9.10E-15
Sr-87m	F		2.35E-14
Sr-87m	M		5.66E-14
Sr-87m	S		6.11E-14
Sr-89	F		4.00E-12
Sr-89	M		2.35E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Sr-89	S		3.03E-11
Sr-90	F		4.29E-11
Sr-90	M		1.05E-10
Sr-90	S		4.26E-10
Sr-90+D	S		4.33E-10
Sr-90+E	S		4.33E-10
Sr-91	F		6.18E-13
Sr-91	M		1.72E-12
Sr-91	S		1.95E-12
Sr-92	F		4.03E-13
Sr-92	M		1.02E-12
Sr-92	S		1.12E-12
Sr-93			0.00E+00
Sr-94			0.00E+00
Ta-170			0.00E+00
Ta-172	F		3.28E-14
Ta-172	M		6.96E-14
Ta-172	S		7.55E-14
Ta-173	F		9.32E-14
Ta-173	M		2.55E-13
Ta-173	S		2.74E-13
Ta-174	F		4.59E-14
Ta-174	M		1.15E-13
Ta-174	S		1.23E-13
Ta-175	F		2.05E-13
Ta-175	M		4.48E-13
Ta-175	S		4.81E-13
Ta-176	F		2.50E-13
Ta-176	M		5.48E-13
Ta-176	S		5.81E-13
Ta-177	F		1.29E-13
Ta-177	M		4.18E-13
Ta-177	S		4.51E-13
Ta-178			0.00E+00
Ta-178m	F		6.59E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Ta-178m	M		1.90E-13
Ta-178m	S		2.04E-13
Ta-179	F		3.74E-13
Ta-179	M		7.55E-13
Ta-179	S		1.78E-12
Ta-180	F		5.37E-14
Ta-180	M		1.77E-13
Ta-180	S		1.91E-13
Ta-182	F		7.51E-12
Ta-182	M		2.75E-11
Ta-182	S		3.70E-11
Ta-182m	F		1.52E-14
Ta-182m	M		3.32E-14
Ta-182m	S		3.59E-14
Ta-183	F		2.04E-12
Ta-183	M		8.21E-12
Ta-183	S		9.07E-12
Ta-184	F		6.14E-13
Ta-184	M		1.60E-12
Ta-184	S		1.71E-12
Ta-185	F		4.14E-14
Ta-185	M		1.14E-13
Ta-185	S		1.23E-13
Ta-186	F		1.68E-14
Ta-186	M		2.63E-14
Ta-186	S		2.73E-14
Tb-146			0.00E+00
Tb-147	F		1.01E-13
Tb-147	M		1.84E-13
Tb-147	S		1.94E-13
Tb-147m			0.00E+00
Tb-148	F		8.84E-14
Tb-148	M		1.41E-13
Tb-148	S		1.56E-13
Tb-148m			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Tb-149	F		1.28E-12
Tb-149	M		1.37E-11
Tb-149	S		1.50E-11
Tb-149m			0.00E+00
Tb-150	F		1.77E-13
Tb-150	M		3.03E-13
Tb-150	S		3.16E-13
Tb-150m			0.00E+00
Tb-151	F		3.55E-13
Tb-151	M		8.03E-13
Tb-151	S		8.58E-13
Tb-151m			0.00E+00
Tb-152	F		7.07E-13
Tb-152	M		1.27E-12
Tb-152	S		1.34E-12
Tb-152m			0.00E+00
Tb-153	F		3.77E-13
Tb-153	M		8.77E-13
Tb-153	S		9.58E-13
Tb-154	F		5.81E-13
Tb-154	M		1.05E-12
Tb-154	S		1.11E-12
Tb-155	F		3.85E-13
Tb-155	M		1.15E-12
Tb-155	S		1.26E-12
Tb-156	F		1.80E-12
Tb-156	M		4.00E-12
Tb-156	S		4.29E-12
Tb-156m	F		3.24E-13
Tb-156m	M		7.47E-13
Tb-156m	S		8.10E-13
Tb-156n	F		1.24E-13
Tb-156n	M		4.00E-13
Tb-156n	S		4.33E-13
Tb-157	F		3.70E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Tb-157	M		1.71E-12
Tb-157	S		1.77E-12
Tb-158	F		1.72E-10
Tb-158	M		8.29E-11
Tb-158	S		8.29E-11
Tb-160	F		1.14E-11
Tb-160	M		2.47E-11
Tb-160	S		3.02E-11
Tb-161	F		1.16E-12
Tb-161	M		5.14E-12
Tb-161	S		5.74E-12
Tb-162			0.00E+00
Tb-163	F		1.36E-14
Tb-163	M		2.66E-14
Tb-163	S		2.80E-14
Tb-164			0.00E+00
Tb-165			0.00E+00
Tc-101	F		1.28E-14
Tc-101	M		1.84E-14
Tc-101	S		1.90E-14
Tc-102			0.00E+00
Tc-102m			0.00E+00
Tc-104	F		4.74E-14
Tc-104	M		5.44E-14
Tc-104	S		5.51E-14
Tc-105			0.00E+00
Tc-91			0.00E+00
Tc-91m			0.00E+00
Tc-92			0.00E+00
Tc-93	F		6.62E-14
Tc-93	M		9.32E-14
Tc-93	S		9.66E-14
Tc-93m	F		2.95E-14
Tc-93m	M		4.07E-14
Tc-93m	S		4.22E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Tc-94	F		1.89E-13
Tc-94	M		2.78E-13
Tc-94	S		2.90E-13
Tc-94m	F		9.36E-14
Tc-94m	M		1.04E-13
Tc-94m	S		1.05E-13
Tc-95	F		1.85E-13
Tc-95	M		2.63E-13
Tc-95	S		2.75E-13
Tc-95m	F		8.10E-13
Tc-95m	M		3.44E-12
Tc-95m	S		4.63E-12
Tc-96	F		1.32E-12
Tc-96	M		2.00E-12
Tc-96	S		2.10E-12
Tc-96m	F		1.41E-14
Tc-96m	M		2.04E-14
Tc-96m	S		2.13E-14
Tc-97	F		1.17E-13
Tc-97	M		8.51E-13
Tc-97	S		4.81E-12
Tc-97m	F		9.92E-13
Tc-97m	M		1.13E-11
Tc-97m	S		1.45E-11
Tc-98	F		2.92E-12
Tc-98	M		2.85E-11
Tc-98	S		1.18E-10
Tc-99	F		1.16E-12
Tc-99	M		1.41E-11
Tc-99	S		3.81E-11
Tc-99m	F		2.55E-14
Tc-99m	M		5.70E-14
Tc-99m	S		6.07E-14
Te-113			0.00E+00
Te-114	F		2.92E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Te-114	M		4.77E-14
Te-114	S		5.00E-14
Te-114	V		8.62E-14
Te-115			0.00E+00
Te-115m			0.00E+00
Te-116	F		1.63E-13
Te-116	M		3.70E-13
Te-116	S		4.00E-13
Te-116	V		3.18E-13
Te-117	F		3.36E-14
Te-117	M		6.73E-14
Te-117	S		7.18E-14
Te-117	V		7.47E-14
Te-118	F		4.48E-12
Te-118	M		1.13E-11
Te-118	S		1.26E-11
Te-118	V		9.18E-12
Te-118+D	V		1.26E-11
Te-118+E	V		1.26E-11
Te-119	F		1.61E-13
Te-119	M		2.95E-13
Te-119	S		3.22E-13
Te-119	V		3.10E-13
Te-119m	F		8.55E-13
Te-119m	M		1.64E-12
Te-119m	S		1.77E-12
Te-119m	V		2.01E-12
Te-121	F		7.36E-13
Te-121	M		1.40E-12
Te-121	S		1.55E-12
Te-121	V		1.96E-12
Te-121m	F		4.88E-12
Te-121m	M		1.46E-11
Te-121m	S		2.06E-11
Te-121m	V		1.44E-11

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Te-123	F		1.01E-12
Te-123	M		5.37E-13
Te-123	S		6.03E-13
Te-123	V		3.08E-12
Te-123m	F		2.30E-12
Te-123m	M		1.36E-11
Te-123m	S		1.77E-11
Te-123m	V		6.44E-12
Te-125m	F		1.43E-12
Te-125m	M		1.17E-11
Te-125m	S		1.45E-11
Te-125m	V		3.74E-12
Te-127	F		1.89E-13
Te-127	M		6.11E-13
Te-127	S		6.77E-13
Te-127	V		3.44E-13
Te-127m	F		4.48E-12
Te-127m	M		2.59E-11
Te-127m	S		3.47E-11
Te-127m	V		1.22E-11
Te-129	F		3.92E-14
Te-129	M		9.95E-14
Te-129	S		1.07E-13
Te-129	V		1.14E-13
Te-129m	F		5.51E-12
Te-129m	M		2.47E-11
Te-129m	S		2.99E-11
Te-129m	V		1.35E-11
Te-131	F		8.33E-14
Te-131	M		6.36E-14
Te-131	S		5.92E-14
Te-131	V		2.45E-13
Te-131m	F		3.66E-12
Te-131m	M		4.14E-12
Te-131m	S		4.11E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Te-131m	V		9.55E-12
Te-132	F		7.99E-12
Te-132	M		9.36E-12
Te-132	S		9.47E-12
Te-132	V		2.10E-11
Te-133	F		7.59E-14
Te-133	M		4.85E-14
Te-133	S		4.44E-14
Te-133	V		2.16E-13
Te-133m	F		3.20E-13
Te-133m	M		2.34E-13
Te-133m	S		2.20E-13
Te-133m	V		8.47E-13
Te-134	F		1.01E-13
Te-134	M		1.51E-13
Te-134	S		1.57E-13
Te-134	V		2.95E-13
Th-223			0.00E+00
Th-224			0.00E+00
Th-226	F		4.07E-11
Th-226	M		1.43E-10
Th-226	S		1.54E-10
Th-227	F		6.03E-10
Th-227	M		2.81E-08
Th-227	S		3.50E-08
Th-228	F		2.16E-08
Th-228	M		8.07E-08
Th-228	S		1.32E-07
Th-229	F		9.99E-08
Th-229	M		8.84E-08
Th-229	S		1.75E-07
Th-229+D	F		2.01E-07
Th-229+E	F		2.01E-07
Th-230	F		3.41E-08
Th-230	M		2.36E-08

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Th-230	S		2.85E-08
Th-231	F		3.66E-13
Th-231	M		1.38E-12
Th-231	S		1.50E-12
Th-232	F		4.14E-08
Th-232	M		2.39E-08
Th-232	S		4.33E-08
Th-232+D	F		8.70E-08
Th-232+E	F		8.70E-08
Th-233	F		1.41E-14
Th-233	M		3.46E-14
Th-233	S		3.74E-14
Th-234	F		8.33E-12
Th-234	M		2.65E-11
Th-234	S		3.08E-11
Th-234+D	S		3.08E-11
Th-234+E	S		3.08E-11
Th-235			0.00E+00
Th-236	F		4.88E-14
Th-236	M		1.23E-13
Th-236	S		1.31E-13
Ti-44	F		2.02E-10
Ti-44	M		1.41E-10
Ti-44	S		3.44E-10
Ti-44+D	S		3.45E-10
Ti-44+E	S		3.45E-10
Ti-45	F		1.18E-13
Ti-45	M		2.90E-13
Ti-45	S		3.09E-13
Ti-51			0.00E+00
Ti-52			0.00E+00
Tl-190			0.00E+00
Tl-190m			0.00E+00
Tl-194	F		1.94E-14
Tl-194	M		3.54E-14

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Tl-194	S		3.74E-14
Tl-194m	F		2.43E-14
Tl-194m	M		4.70E-14
Tl-194m	S		4.96E-14
Tl-195	F		1.95E-14
Tl-195	M		4.70E-14
Tl-195	S		5.07E-14
Tl-196	F		3.74E-14
Tl-196	M		6.48E-14
Tl-196	S		6.77E-14
Tl-197	F		2.47E-14
Tl-197	M		9.32E-14
Tl-197	S		1.02E-13
Tl-198	F		7.96E-14
Tl-198	M		1.18E-13
Tl-198	S		1.23E-13
Tl-198m	F		4.92E-14
Tl-198m	M		1.27E-13
Tl-198m	S		1.36E-13
Tl-199	F		3.01E-14
Tl-199	M		1.17E-13
Tl-199	S		1.26E-13
Tl-200	F		2.53E-13
Tl-200	M		3.92E-13
Tl-200	S		4.11E-13
Tl-201	F		1.52E-13
Tl-201	M		6.33E-13
Tl-201	S		6.96E-13
Tl-202	F		6.14E-13
Tl-202	M		1.24E-12
Tl-202	S		1.36E-12
Tl-204	F		2.44E-12
Tl-204	M		2.26E-11
Tl-204	S		6.03E-11
Tl-206			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Tl-206m			0.00E+00
Tl-207			0.00E+00
Tl-208			0.00E+00
Tl-209			0.00E+00
Tl-210			0.00E+00
Tm-161	F		2.73E-14
Tm-161	M		5.51E-14
Tm-161	S		5.81E-14
Tm-162	F		1.97E-14
Tm-162	M		3.42E-14
Tm-162	S		3.58E-14
Tm-163	F		4.03E-14
Tm-163	M		8.40E-14
Tm-163	S		8.88E-14
Tm-164			0.00E+00
Tm-165	F		3.61E-13
Tm-165	M		8.29E-13
Tm-165	S		8.84E-13
Tm-166	F		2.40E-13
Tm-166	M		5.07E-13
Tm-166	S		5.37E-13
Tm-167	F		9.99E-13
Tm-167	M		4.55E-12
Tm-167	S		5.11E-12
Tm-168	F		1.08E-11
Tm-168	M		1.54E-11
Tm-168	S		1.85E-11
Tm-170	F		9.25E-12
Tm-170	M		2.39E-11
Tm-170	S		3.27E-11
Tm-171	F		3.15E-12
Tm-171	M		3.31E-12
Tm-171	S		4.33E-12
Tm-172	F		2.18E-12
Tm-172	M		5.66E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Tm-172	S		6.07E-12
Tm-173	F		3.16E-13
Tm-173	M		7.62E-13
Tm-173	S		8.10E-13
Tm-174			0.00E+00
Tm-175	F		1.58E-14
Tm-175	M		3.20E-14
Tm-175	S		3.39E-14
Tm-176			0.00E+00
U-227			0.00E+00
U-228			0.00E+00
U-230	F		5.40E-10
U-230	M		4.55E-08
U-230	S		5.48E-08
U-231	F		3.74E-13
U-231	M		1.88E-12
U-231	S		2.12E-12
U-232	F		3.67E-09
U-232	M		1.95E-08
U-232	S		9.25E-08
U-233	F		6.44E-10
U-233	M		1.16E-08
U-233	S		2.83E-08
U-234	F		6.29E-10
U-234	M		1.14E-08
U-234	S		2.78E-08
U-235	F		5.88E-10
U-235	M		1.01E-08
U-235	S		2.50E-08
U-235+D	S		2.50E-08
U-235+E	S		2.50E-08
U-235m	F		1.86E-18
U-235m	M		1.87E-18
U-235m	S		1.87E-18
U-236	F		5.92E-10

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
U-236	M		1.04E-08
U-236	S		2.57E-08
U-237	F		8.81E-13
U-237	M		6.51E-12
U-237	S		7.36E-12
U-238	F		5.70E-10
U-238	M		9.32E-09
U-238	S		2.36E-08
U-238+D	S		2.37E-08
U-238+E	S		2.37E-08
U-239	F		2.19E-14
U-239	M		5.70E-14
U-239	S		6.11E-14
U-240	F		1.12E-12
U-240	M		2.86E-12
U-240	S		3.09E-12
U-242	F		3.01E-14
U-242	M		4.92E-14
U-242	S		5.14E-14
V-47	F		3.37E-14
V-47	M		5.96E-14
V-47	S		6.25E-14
V-48	F		3.16E-12
V-48	M		9.25E-12
V-48	S		1.05E-11
V-49	F		7.25E-14
V-49	M		1.45E-13
V-49	S		2.80E-13
V-50	F		9.51E-11
V-50	M		4.74E-11
V-50	S		6.77E-11
V-52			0.00E+00
V-53			0.00E+00
W-177	F		5.74E-14
W-177	M		1.14E-13

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
W-177	S		1.20E-13
W-178	F		4.40E-13
W-178	M		2.64E-12
W-178	S		3.10E-12
W-178+D	S		3.10E-12
W-178+E	S		3.10E-12
W-179	F		1.92E-15
W-179	M		2.83E-15
W-179	S		2.97E-15
W-179m			0.00E+00
W-181	F		1.53E-13
W-181	M		7.40E-13
W-181	S		1.13E-12
W-185	F		9.40E-13
W-185	M		1.05E-11
W-185	S		1.37E-11
W-185m			0.00E+00
W-187	F		1.05E-12
W-187	M		1.85E-12
W-187	S		1.94E-12
W-188	F		4.63E-12
W-188	M		4.07E-11
W-188	S		5.59E-11
W-190	F		6.14E-14
W-190	M		1.35E-13
W-190	S		1.44E-13
Xe-120			0.00E+00
Xe-121			0.00E+00
Xe-122			0.00E+00
Xe-123			0.00E+00
Xe-125			0.00E+00
Xe-127			0.00E+00
Xe-127m			0.00E+00
Xe-129m			0.00E+00
Xe-131m			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Xe-133			0.00E+00
Xe-133m			0.00E+00
Xe-135			0.00E+00
Xe-135m			0.00E+00
Xe-137			0.00E+00
Xe-138			0.00E+00
Y-81			0.00E+00
Y-83			0.00E+00
Y-83m			0.00E+00
Y-84m	F		7.03E-14
Y-84m	M		1.21E-13
Y-84m	S		1.26E-13
Y-85	F		1.57E-13
Y-85	M		3.02E-13
Y-85	S		3.19E-13
Y-85m	F		3.61E-13
Y-85m	M		6.62E-13
Y-85m	S		6.96E-13
Y-86	F		8.77E-13
Y-86	M		1.48E-12
Y-86	S		1.55E-12
Y-86m	F		5.11E-14
Y-86m	M		8.73E-14
Y-86m	S		9.14E-14
Y-87	F		6.96E-13
Y-87	M		1.39E-12
Y-87	S		1.48E-12
Y-87m	F		2.56E-13
Y-87m	M		5.29E-13
Y-87m	S		5.62E-13
Y-88	F		2.04E-11
Y-88	M		1.50E-11
Y-88	S		1.71E-11
Y-89m			0.00E+00
Y-90	F		3.57E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Y-90	M		7.88E-12
Y-90	S		8.40E-12
Y-90m	F		2.11E-13
Y-90m	M		4.55E-13
Y-90m	S		4.81E-13
Y-91	F		9.07E-12
Y-91	M		2.65E-11
Y-91	S		3.36E-11
Y-91m	F		1.16E-14
Y-91m	M		2.56E-14
Y-91m	S		3.02E-14
Y-92	F		4.66E-13
Y-92	M		8.88E-13
Y-92	S		9.32E-13
Y-93	F		1.33E-12
Y-93	M		2.53E-12
Y-93	S		2.66E-12
Y-94	F		3.22E-14
Y-94	M		5.33E-14
Y-94	S		5.59E-14
Y-95	F		1.73E-14
Y-95	M		2.60E-14
Y-95	S		2.73E-14
Yb-162	F		1.84E-14
Yb-162	M		3.63E-14
Yb-162	S		3.85E-14
Yb-163	F		9.10E-15
Yb-163	M		1.58E-14
Yb-163	S		1.66E-14
Yb-164	F		6.44E-14
Yb-164	M		1.21E-13
Yb-164	S		1.28E-13
Yb-165			0.00E+00
Yb-166	F		1.17E-12
Yb-166	M		2.66E-12

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Yb-166	S		2.85E-12
Yb-167	F		6.44E-15
Yb-167	M		1.62E-14
Yb-167	S		1.75E-14
Yb-169	F		2.30E-12
Yb-169	M		1.05E-11
Yb-169	S		1.24E-11
Yb-175	F		6.88E-13
Yb-175	M		2.69E-12
Yb-175	S		2.96E-12
Yb-177	F		8.51E-14
Yb-177	M		2.22E-13
Yb-177	S		2.39E-13
Yb-178	F		9.10E-14
Yb-178	M		2.21E-13
Yb-178	S		2.35E-13
Yb-179			0.00E+00
Zn-60			0.00E+00
Zn-61			0.00E+00
Zn-62	F		8.88E-13
Zn-62	M		2.62E-12
Zn-62	S		2.92E-12
Zn-63	F		3.74E-14
Zn-63	M		7.66E-14
Zn-63	S		8.10E-14
Zn-65	F		7.55E-12
Zn-65	M		5.77E-12
Zn-65	S		7.44E-12
Zn-69	F		1.96E-14
Zn-69	M		6.03E-14
Zn-69	S		6.51E-14
Zn-69m	F		3.43E-13
Zn-69m	M		1.28E-12
Zn-69m	S		1.43E-12
Zn-71			0.00E+00

Continued on next page

Table 2.6: Risk coefficients for inhalation

Nuclide	Type	Chemical Form	pCi ⁻¹
Zn-71m	F		1.93E-13
Zn-71m	M		5.37E-13
Zn-71m	S		5.85E-13
Zn-72	F		1.81E-12
Zn-72	M		5.55E-12
Zn-72	S		6.14E-12
Zr-85			0.00E+00
Zr-86	F		8.07E-13
Zr-86	M		1.54E-12
Zr-86	S		1.62E-12
Zr-87	F		1.28E-13
Zr-87	M		2.84E-13
Zr-87	S		3.01E-13
Zr-88	F		9.69E-12
Zr-88	M		8.92E-12
Zr-88	S		1.34E-11
Zr-89	F		8.99E-13
Zr-89	M		1.92E-12
Zr-89	S		2.05E-12
Zr-89m			0.00E+00
Zr-93	F		1.46E-11
Zr-93	M		7.03E-12
Zr-93	S		5.88E-12
Zr-95	F		6.59E-12
Zr-95	M		1.67E-11
Zr-95	S		2.12E-11
Zr-97	F		2.06E-12
Zr-97	M		4.81E-12
Zr-97	S		5.11E-12