Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Actinium (89)	Ac-223+D	1.73E+05	4.00E-06	0.00E+00	2.06E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.3E+05	.	.	.	.	.	.	.	1.3E+05	3.2E-10
Actinium (89)	Ac-224	2.18E+03	3.17E-04	1.0E-08 (S)	1.91E-05	2.07E-10	3.69E-10	1.36E+05	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	1.5E+05	4.4E+07	1.8E+02	4.2E+02	2.5E+04	2.1E+06	5.7E+06	.	.	.	1.2E+02	2.5E-11
Actinium (89)	Ac-225	2.53E+01	2.74E-02	7.7E-07 (S)	1.11E-06	7.34E-09	1.32E-08	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	4.8E+01	6.9E+03	3.5E+01	1.4E-01	8.1E+00	6.9E+02	1.9E+03	.	.	.	1.3E-01	2.3E-12
Actinium (89)	Ac-225+D	2.53E+01	2.74E-02	7.7E-07 (S)	3.98E-06	7.34E-09	1.32E-08	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	4.8E+01	6.9E+03	9.8E+00	1.4E-01	8.1E+00	6.9E+02	1.9E+03	.	.	.	1.3E-01	2.3E-12
Actinium (89)	Ac-226	2.07E+02	3.35E-03	1.2E-07 (S)	1.23E-05	2.77E-09	5.11E-09	1.36E+05	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	1.0E+03	3.6E+05	2.6E+01	3.0E+00	1.8E+02	1.5E+04	4.0E+04	.	.	.	2.6E+00	5.6E-12
Actinium (89)	Ac-227	3.18E-02	2.18E+01	4.0E-06 (S)	5.36E-09	6.63E-09	7.84E-09	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	1.4E-01	2.3E+00	1.3E+01	2.7E-04	1.6E-02	1.3E+00	3.6E+00	.	.	.	2.6E-04	5.6E-12
Actinium (89)	Ac-228	9.87E+02	7.02E-04	1.3E-09 (S)	1.09E-04	7.39E-11	1.33E-10	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	1.8E+05	1.6E+08	1.4E+01	5.3E+02	3.1E+04	2.7E+06	7.2E+06	.	.	.	1.4E+01	6.1E-12
Actinium (89)	Ac-230	1.79E+05	3.87E-06	0.00E+00	7.29E-05	0.00E+00	0.00E+00	1.36E+05	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	3.8E+03	.	.	.	.	.	.	.	3.8E+03	9.5E-12
Actinium (89)	Ac-231	4.86E+04	1.43E-05	0.00E+00	4.26E-05	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.8E+03	.	.	.	.	.	.	.	1.8E+03	1.6E-11
Actinium (89)	Ac-232	1.84E+05	3.77E-06	0.00E+00	1.58E-04	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.8E+03	.	.	.	.	.	.	.	1.8E+03	4.4E-12
Actinium (89)	Ac-233	1.51E+05	4.60E-06	0.00E+00	5.93E-05	0.00E+00	0.00E+00	1.36E+05	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	3.9E+03	.	.	.	.	.	.	.	3.9E+03	1.2E-11
Silver (47)	Ag-100m	1.63E+05	4.26E-06	0.00E+00	3.63E-04	0.00E+00	0.00E+00	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	6.9E+02	.	.	.	.	.	.	.	6.9E+02	8.3E-13
Silver (47)	Ag-101	3.28E+04	2.11E-05	6.4E-13 (S)	1.91E-04	2.23E-12	3.40E-12	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	2.4E+08	1.1E+13	2.7E+02	5.8E+05	1.1E+06	2.0E+07	2.6E+06	1.2E+07	2.4E+06	.	2.7E+02	1.6E-12
Silver (47)	Ag-102	2.82E+04	2.45E-05	7.4E-13 (S)	4.39E-04	2.75E-12	4.09E-12	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	1.7E+08	8.1E+12	1.0E+02	4.0E+05	7.3E+05	1.4E+07	1.8E+06	8.5E+06	1.7E+06	.	1.0E+02	7.0E-13
Silver (47)	Ag-102m	4.73E+04	1.46E-05	0.00E+00	2.71E-04	0.00E+00	0.00E+00	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	2.7E+02	.	.	.	.	.	.	.	2.7E+02	1.1E-12
Silver (47)	Ag-103	5.82E+04	1.25E-04	1.6E-12 (S)	9.97E-05	3.98E-12	6.57E-12	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	2.1E+07	7.4E+11	8.6E+01	5.5E+04	1.0E+05	1.9E+06	2.5E+05	1.1E+06	2.3E+05	.	8.6E+01	3.1E-12
Silver (47)	Ag-104	5.26E+03	1.32E-04	1.8E-12 (S)	3.41E-04	6.23E-12	9.84E-12	1.36E+05	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	1.3E+07	6.2E+11	2.4E+01	3.3E+04	6.0E+04	1.1E+06	1.5E+05	7.0E+05	1.4E+05	.	2.4E+01	9.2E-13
Silver (47)	Ag-104m	1.09E+04	6.37E-05	1.6E-12 (S)	2.30E-04	5.15E-12	8.08E-12	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	3.3E+07	1.4E+12	7.3E+01	8.3E+04	1.5E+05	2.8E+06	3.8E+05	1.7E+06	3.5E+05	.	7.3E+01	1.4E-12
Silver (47)	Ag-105	6.13E+00	1.13E-01	8.5E-11 (S)	5.68E-05	6.65E-11	1.12E-10	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	1.4E+03	1.5E+07	1.7E-01	3.6E+00	6.6E+00	1.2E+02	1.7E+01	7.6E+01	1.5E+01	.	1.5E-01	5.1E-12
Silver (47)	Ag-105m	5.04E+04	1.38E-05	0.00E+00	1.13E-07	0.00E+00	0.00E+00	1.36E+05	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	6.9E+05	.	.	.	.	.	.	.	6.9E+05	2.8E-09
Silver (47)	Ag-106	1.52E+04	4.56E-05	7.6E-13 (S)	8.23E-05	2.18E-12	3.35E-12	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	1.1E+08	4.2E+12	2.9E+02	2.7E+05	5.0E+05	9.3E+06	1.3E+06	5.8E+06	1.2E+06	.	2.9E+02	3.9E-12
Silver (47)	Ag-106m	3.05E+01	2.27E-02	9.5E-11 (S)	3.53E-04	1.80E-10	2.94E-10	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	2.6E+03	6.7E+07	1.3E-01	6.7E+00	1.2E+01	2.3E+02	3.1E+01	1.4E+02	2.8E+01	.	1.3E-01	8.6E-13
Silver (47)	Ag-108	1.54E+05	4.51E-06	0.00E+00	2.39E-06	0.00E+00	0.00E+00	1.36E+05	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	1.0E+05	.	.	.	.	.	.	.	1.0E+05	1.4E-10
Silver (47)	Ag-108m	1.66E-03	4.18E+02	2.8E-09 (S)	1.93E-04	3.01E-10	4.87E-10	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	1.3E+00	1.9E+03	2.1E-04	3.4E-03	6.1E-03	1.1E-01	1.5E-02	7.1E-02	1.4E-02	.	1.8E-04	2.3E-11
Silver (47)	Ag-108m+D	1.66E-03	4.18E+02	2.8E-09 (S)	1.94E-04	3.01E-10	4.87E-10	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	1.3E+00	1.9E+03	2.1E-04	3.4E-03	6.1E-03	1.1E-01	1.5E-02	7.1E-02	1.4E-02	.	1.8E-04	2.3E-11
Silver (47)	Ag-109m	5.52E+05	1.26E-06	0.00E+00	2.06E-07	0.00E+00	0.00E+00	1.36E+05	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	4.2E+06	.	.	.	.	.	.	.	4.2E+06	1.6E-09
Silver (47)	Ag-110	8.88E+05	7.80E-07	0.00E+00	4.61E-06	0.00E+00	0.00E+00	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	3.0E+05	.	.	.	.	.	.	.	3.0E+05	7.2E-11
Silver (47)	Ag-110m	1.01E+00	6.84E-01	1.2E-09 (S)	3.53E-04	3.76E-10	6.16E-10	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	4.1E+01	1.7E+05	4.4E-03	1.1E-01	1.9E-01	3.6E+00	4.8E-01	2.2E+00	4.4E-01	.	4.1E-03	8.6E-13
Silver (47)	Ag-110m+D	1.01E+00	6.84E-01	1.2E-09 (S)	3.53E-04	3.76E-10	6.16E-10	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	4.1E+01	1.7E+05	4.4E-03	1.1E-01	1.9E-01	3.6E+00	4.8E-01	2.2E+00	4.4E-01	.	4.1E-03	8.6E-13
Silver (47)	Ag-111	3.40E+01	2.04E-02	2.0E-10 (S)	2.97E-06	3.25E-10	6.03E-10	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	1.4E+03	3.6E+07	1.8E+01	4.1E+00	7.5E+00	1.4E+02	1.9E+01	8.6E+01	1.7E+01	.	1.8E+00	1.1E-11
Silver (47)	Ag-111m	3.37E+05	2.05E-06	0.00E+00	3.69E-07	0.00E+00	0.00E+00	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	1.4E+06	.	.	.	.	.	.	.	1.4E+06	9.0E-10
Silver (47)	Ag-112	1.94E+03	3.57E-04	2.1E-11 (S)	9.18E-05	7.72E-11	1.40E-10	1.36E+05	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	3.4E+05	2.0E+10	3.3E+01	1.9E+04	1.8E+03	3.3E+04	4.5E+03	2.1E+04	4.1E+03	.	3.1E+01	3.4E-12
Silver (47)	Ag-113	1.13E+03	6.13E-04	2.4E-11 (S)	8.65E-06	8.71E-11	1.60E-10	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	1.8E+05	9.8E+09	2.0E+02	5.1E+02	9.3E+02	1.7E+04	2.3E+03	1.1E+04	2.1E+03	.	1.1E+02	2.1E-11
Silver (47)	Ag-113m	3.18E+05	2.18E-06	0.00E+00	2.42E-05	0.00E+00	0.00E+00	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	2.0E+04	.	.	.	.	.	.	.	2.0E+04	1.4E-11
Silver (47)	Ag-114	4.75E+06	1.46E-07	0.00E+00	3.66E-05	0.00E+00	0.00E+00	1.36E+05	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	2.0E+05	.	.	.	.	.	.	.	2.0E+05	9.4E-12
Silver (47)	Ag-115	1.82E+04	3.81E-05	2.0E-12 (S)	6.41E-05	5.45E-12	9.00E-12	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	5.0E+07	1.9E+12	4.4E+02	1.3E+05	2.4E+05	4.4E+06	6.0E+05	2.8E+06	5.5E+05	.	4.4E+02	5.4E-12
Silver (47)	Ag-116	1.36E+05	5.10E-06	0.00E+00	2.96E-04	0.00E+00	0.00E+00	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	7.1E+02	.	.	.	.	.	.	.	7.1E+02	1.2E-12
Silver (47)	Ag-117	2.97E+05	2.33E-06	0.00E+00	1.80E-04	0.00E+00	0.00E+00	1.36E+05	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	2.6E+03	.	.	.	.	.	.	.	2.6E+03	2.0E-12
Silver (47)	Ag-99	1.76E+05	3.93E-06	0.00E+00	2.91E-04	0.00E+00	0.00E+00	1.36E+09	4.00E-03	1.00E-01	3.80E+02	1.10E+02	3.00E-03	6.00E-03	2.00E-02	2.00E+00	.	.	.	9.4E+02	.	.	.	.	.	.	.	9.4E+02	1.0E-12
Aluminum (13)	Al-26	9.67E-07	7.17E+05	7.9E-09 (S)	3.60E-04	6.71E-10	1.19E-09	1.36E+09	4.00E-03	1.00E-01	1.50E+03	5.10E+01	5.00E-04	2.00E-04	.	.	.	5.2E-01	6.7E+02	1.1E-04	1.5E-03	2.3E-02	3.0E-01	2.0E-01	.	.	.	1.0E-04	5.2E-09
Aluminum (13)	Al-28	1.63E+05	4.26E-06	0.00E+00	2.52E-04	0.00E+00	0.00E+00	1.36E+05	4.00E-03	1.00E-01	1.50E+03	5.10E+01	5.00E-04	2.00E-04	.	.	.	.	.	1.0E+03	.	.	.	.	.	.	.	1.0E+03	3.3E-13
Aluminum (13)	Al-29	5.55E+04	1.25E-05	0.00E+00	1.88E-04	0.00E+00	0.00E+00	1.36E+09	4.00E-03	1.00E-01	1.50E+03	5.10E+01	5.00E-04	2.00E-04	.	.	.	.	.	4.6E+02	.	.	.	.	.	.	.	4.6E+02	4.6E-13
Americium (95)	Am-237	4.99E+03	1.39E-04	1.7E-12 (S)	3.66E-05	2.00E-12	3.30E-12	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	3.8E+07	6.1E+11	2.1E+02	1.0E+05	8.6E+02	2.7E+07	8.7E+09	3.2E+08	1.8E+08	7.0E+08	1.7E+02	1.6E-11
Americium (95)	Am-238	3.72E+03	1.86E-04	3.1E-12 (S)	1.10E-04	3.61E-12	5.85E-12	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	1.6E+07	2.5E+11	5.2E+01	4.1E+04	3.6E+02	1.1E+07	3.6E+05	1.3E+08	7.2E+07	2.9E+08	4.6E+01	5.7E-12
Americium (95)	Am-239	5.10E+02	1.36E-03	2.5E-11 (S)	1.89E-05	5.61E-11	1.02E-10	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	1.2E+05	4.2E+09	4.2E+01	3.6E+02	3.1E+00	9.8E+04	3.2E+07	1.2E+06	6.4E+05	2.6E+06	2.9E+00	2.6E-12
Americium (95)	Am-240	1.20E+02	5.80E-03	4.2E-11 (S)	1.27E-04	1.02E-10	1.79E-10	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	1.7E+04	6.0E+08	1.5E+00	4.7E+01	4.0E-01	1.3E+04	4.1E+06	1.5E+05	8.2E+04	3.3E+05	3.1E-01	1.2E-12
Americium (95)	Am-241	1.60E-01	4.32E+02	1.0E-06 (F)	7.48E-07	3.61E-05	4.98E-05	1.36E+05	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	1.3E-01	5.3E+00	5.3E-02	2.9E-04	2.5E-06	7.7E-02	2.5E-01	9.1E-01	5.0E-01	2.0E+00	2.4E-06	7.1E-13
Americium (95)	Am-242	3.79E+02	1.83E-03	1.8E-09 (S)	9.40E-07	7.14E-11	1.31E-10	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	7.2E+04	4.4E+07	6.2E+02	2.1E+02	1.8E+00	5.7E+04	1.9E+07	6.7E+05	3.7E+05	1.5E+06	1.8E+00	2.2E-12
Americium (95)	Am-242m	4.91E-03	1.41E+02	9.3E-07 (F)	2.05E-08	2.36E-09	2.81E-09	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	2.4E-01	6.2E+00	2.1E+00	4.7E-04	4.0E-06	1.3E-01	4.1E+01	1.5E+00	8.2E-01	3.3E+00	4.0E-06	3.8E-13
Americium (95)	Am-242m+D	4.91E-03	1.41E+02	9.3E-07 (F)	1.29E-06	2.43E-05	2.94E-05	1.36E+05	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	2.3E-01	6.2E+00	3.3E-02	4.5E-04	3.9E-06	1.2E-01	4.0E+01	1.4E+00	8.0E-01	3.2E+00	3.9E-06	3.7E-13
Americium (95)	Am-243	5.40E+00	7.37E+03	1.0E-06 (F)	2.64E-06	3.62E-09	5.01E-09	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	1.2E-01	5.3E+00	7.5E-02	2.8E-04	2.4E-06	7.5E-02	2.4E+01	8.8E-01	4.9E-01	1.9E+00	2.4E-06	1.2E-11
Americium (95)	Am-243+D	9.40E-05	7.37E+03	1.0E-06 (F)	1.80E-05	3.83E-09	5.39E-09	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	1.2E-01	5.3E+00	2.2E-03	2.6E-04	2.3E-06	7.1E-02	2.3E+01	8.3E-01	4.6E-01	1.8E+00	2.2E-06	1.1E-11
Americium (95)	Am-244	6.01E+02	1.15E-03	1.0E-10 (S)	9.66E-05	9.70E-11	1.76E-10	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	8.5E+04	1.2E+09	9.6E+00	2.5E+02	2.1E+00	6.7E+04	2.2E+07	7.8E+05	4.4E+05	1.7E+06	1.7E+00	1.4E-12
Americium (95)	Am-244m	1.40E+04	4.95E-05	3.6E-12 (S)	1.96E-06	1.97E-12	3.06E-12	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	1.1E+08	8.2E+11	1.1E+04	2.8E+05	2.5E+03	7.7E+07	2.5E+10	9.0E+08	5.0E+08	2.0E+09	2.0E+03	6.7E-11
Americium (95)	Am-245	2.96E+03	2.34E-04	4.5E-12 (S)	2.81E-06	8.71E-12	1.55E-11	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	4.7E+06	1.4E+11	1.6E+03	1.4E+04	1.2E+02	3.7E+06	1.2E+09	4.3E+07	2.4E+07	9.6E+07	1.1E+02	1.7E-11
Americium (95)	Am-246	9.34E+03	7.42E-05	4.2E-12 (S)	8.49E-05	5.15E-12	8.24E-12	1.36E+05	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	2.8E+07	4.7E+11	1.7E+02	7.2E+04	6.3E+02	2.0E+07	6.4E+05	2.3E+08	1.3E+08	5.1E+08	1.3E+02	6.8E-12
Americium (95)	Am-246m	1.46E+04	4.76E-05	1.1E-12 (S)	1.26E-04	2.46E-12	3.77E-12	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	9.6E+07	2.7E+12	1.8E+02	2.4E+05	2.0E+03	6.4E+07	2.1E+10	7.5E+08	4.2E+08	1.7E+09	1.6E+02	5.4E-12
Americium (95)	Am-247	1.58E+04	4.38E-05	1.3E-12 (S)	1.22E-05	1.98E-12	3.05E-12	1.36E+09	1.91E-05	2.20E-05	4.00E+00	2.40E+02	5.00E-04	4.20E-07	1.70E-04	6.00E-03	3.00E-03	1.3E+08	2.5E+12	2.0E+03	3.2E+05	2.8E+03	8.6E+07	2.8E+10	1.0E+09	5.6E+08	2.3E+09	1.2E+03	3.5E-11
Argon (18)	Ar-37	7.22E+05	9.60E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+05	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Argon (18)	Ar-39	2.58E-03	2.69E+02	0.00E+00	1.61E-08	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	2.8E+00	.	.	.	.	.	.	.	2.8E+00	8.3E-08
Argon (18)	Ar-41	3.32E+03	2.09E-04	0.00E+00	1.73E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	3.0E+01	.	.	.	.	.	.	.	3.0E+01	7.1E-13
Argon (18)	Ar-42	2.11E-02	3.29E+01	0.00E+00	1.88E-08	0.00E+00	0.00E+00	1.36E+05	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	3.4E+00	.	.	.	.	.	.	.	3.4E+00	1.3E-08
Argon (18)	Ar-42+D	2.11E-02	3.29E+01	3.4E-11 (G)	3.98E-05	4.70E-11	7.79E-11	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	1.2E+01	2.3E+05	1.4E-03	.	.	.	.	.	.	.	1.4E-03	5.6E-12
Argon (18)	Ar-43	6.78E+04	1.02E-05	0.00E+00	2.10E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	5.0E+02	.	.	.	.	.	.	.	5.0E+02	6.1E-13
Argon (18)	Ar-44	3.07E+04	2.26E-05	0.00E+00	2.65E-04	0.00E+00	0.00E+00	1.36E+05	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.8E+02	.	.	.	.	.	.	.	1.8E+02	5.0E-13
Arsenic (33)	As-68	1.44E+05	4.81E-06	0.00E+00

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Gold (79)	Au-196	4.09E+01	1.69E-02	3.5E-11 (S)	4.89E-05	5.94E-11	1.04E-10	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	9.8E+03	2.5E+08	1.3E+00	2.0E+01	1.5E+00	3.1E+02	4.1E+04	.	.	.	6.7E-01	6.2E-12
Gold (79)	Au-196m	6.32E+02	1.10E-03	4.8E-11 (S)	1.93E-05	8.87E-11	1.63E-10	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	9.6E+04	2.7E+09	5.1E+01	2.1E+02	1.5E+01	3.2E+03	4.3E+05	.	.	.	1.1E+01	6.7E-12
Gold (79)	Au-198	9.39E+01	7.38E-03	1.1E-10 (S)	4.58E-05	2.48E-10	4.57E-10	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	5.1E+03	1.8E+08	3.2E+00	1.1E+01	8.2E-01	1.7E+02	2.3E+04	.	.	.	6.1E-01	2.5E-12
Gold (79)	Au-198m	1.11E+02	6.22E-03	2.0E-10 (S)	4.73E-05	2.81E-10	5.15E-10	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	5.4E+03	1.2E+08	3.6E+00	1.1E+01	8.6E-01	1.8E+02	2.4E+04	.	.	.	6.5E-01	2.2E-12
Gold (79)	Au-199	8.06E+01	8.60E-03	8.7E-11 (S)	8.14E-06	1.12E-10	2.06E-10	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	9.7E+03	2.0E+08	1.5E+01	2.1E+01	1.6E+00	3.2E+02	4.3E+04	.	.	.	1.3E+00	6.3E-12
Gold (79)	Au-200	7.53E+01	9.21E-05	2.3E-12 (S)	3.53E-05	5.87E-12	9.68E-12	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	1.9E+07	6.9E+11	3.3E+02	3.7E+04	2.8E+01	5.7E+05	7.7E+07	.	.	.	2.9E+02	1.5E-11
Gold (79)	Au-200m	3.25E+02	2.13E-03	7.0E-11 (S)	2.30E-04	1.97E-10	3.54E-10	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	2.3E+04	9.7E+08	2.2E+00	4.8E+01	3.6E+00	7.4E+02	9.9E+04	.	.	.	1.3E+00	1.6E-12
Gold (79)	Au-201	1.40E+04	4.95E-05	8.7E-13 (S)	4.01E-06	1.61E-12	2.51E-12	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	1.4E+08	3.4E+12	5.4E+03	2.5E+05	1.9E+04	3.9E+06	5.2E+08	.	.	.	4.1E+05	1.1E-10
Gold (79)	Au-202	7.59E+05	9.13E-07	0.00E+00	2.25E-05	0.00E+00	0.00E+00	1.36E+09	1.00E-01	4.00E-01	2.50E+01	2.40E+02	5.00E-03	1.00E-05	.	.	.	.	.	5.2E+04	.	.	.	.	.	.	.	5.2E+04	2.7E-11
Barium (56)	Ba-124	3.31E+04	2.09E-05	1.1E-12 (S)	6.56E-05	4.15E-12	6.17E-12	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	1.3E+08	6.4E+12	7.8E+02	3.2E+05	5.5E+04	3.1E+08	7.3E+07	.	1.8E+08	7.7E+06	7.7E+02	5.6E-12
Barium (56)	Ba-126	3.64E+03	1.90E-04	9.7E-12 (S)	6.78E-05	3.30E-11	5.75E-11	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	1.6E+06	7.9E+10	8.3E+01	4.4E+03	7.6E+02	4.2E+06	1.0E+06	.	2.4E+06	1.1E+05	7.4E+01	4.9E-12
Barium (56)	Ba-127	2.87E+04	2.42E-05	5.5E-13 (S)	8.55E-05	1.71E-12	2.63E-12	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	2.7E+08	1.1E+13	5.2E+02	6.7E+05	1.2E+05	6.4E+08	1.5E+08	.	3.7E+08	1.6E+07	5.2E+02	4.4E-12
Barium (56)	Ba-128	1.04E+02	6.66E-03	2.1E-10 (S)	4.64E-06	6.21E-10	1.16E-09	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	2.2E+03	1.0E+08	3.5E+01	6.7E+00	1.2E+00	6.4E+03	1.5E+03	.	3.7E+03	1.6E+02	9.5E-01	2.3E-12
Barium (56)	Ba-129	2.72E+03	2.55E-04	2.4E-12 (S)	3.76E-05	6.92E-12	1.21E-11	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	5.6E+06	2.4E+11	1.1E+02	1.6E+04	2.7E+03	1.5E+07	3.6E+06	.	8.7E+06	3.8E+05	1.1E+02	9.8E-12
Barium (56)	Ba-129m	2.81E+01	2.47E-04	2.8E-12 (S)	1.94E-04	8.43E-12	1.39E-11	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	5.0E+06	2.1E+11	2.2E+01	1.3E+04	2.3E+01	1.3E+07	3.1E+06	.	7.4E+06	3.2E+05	2.2E+01	2.0E-12
Barium (56)	Ba-131	2.20E+01	3.15E-02	8.8E-11 (S)	4.99E-05	7.85E-11	1.38E-10	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	4.0E+03	5.2E+07	6.8E-01	1.1E+01	1.9E+00	1.1E+04	2.6E+03	.	6.2E+03	2.7E+02	4.8E-01	5.6E-12
Barium (56)	Ba-131m	2.49E+04	2.78E-05	4.9E-13 (S)	4.51E-06	3.53E-13	5.48E-13	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	1.1E+09	1.1E+13	8.6E+03	2.8E+06	4.9E+05	2.7E+09	6.5E+08	.	1.6E+09	6.8E+07	8.4E+03	8.5E-11
Barium (56)	Ba-133	6.59E-01	1.05E+01	8.9E-10 (S)	3.88E-05	2.56E-10	3.54E-10	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	5.0E+00	1.7E+04	2.8E-03	1.1E-02	1.9E-03	1.1E+01	2.5E+00	.	6.1E+00	2.7E-01	1.0E-03	4.0E-12
Barium (56)	Ba-133m	1.56E+02	4.44E-03	6.1E-11 (S)	5.40E-06	1.29E-10	2.44E-10	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	1.6E+04	5.3E+08	4.5E+01	4.8E+01	8.3E+00	4.7E+04	1.1E+04	.	2.7E+04	1.2E+03	6.1E+00	1.0E-11
Barium (56)	Ba-135m	2.12E+02	3.28E-03	4.7E-11 (S)	4.58E-06	1.01E-10	1.91E-10	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	2.8E+04	9.4E+08	7.2E+01	8.3E+01	1.4E+01	8.0E+04	1.9E+04	.	4.6E+04	2.0E+03	1.0E+01	1.3E-11
Barium (56)	Ba-137m	1.43E+05	4.86E-06	0.00E+00	7.26E-05	0.00E+00	0.00E+00	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	.	.	3.0E+03	.	.	.	.	.	.	.	3.0E+03	5.7E-12
Barium (56)	Ba-139	4.39E+03	1.58E-04	5.1E-12 (S)	4.70E-06	1.45E-11	2.53E-11	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	4.3E+06	1.8E+11	1.4E+03	1.2E+04	2.1E+03	1.2E+07	2.8E+06	.	6.7E+06	2.9E+05	7.9E+02	4.9E-11
Barium (56)	Ba-140	1.98E+01	3.49E-02	6.2E-10 (S)	2.05E-05	5.92E-10	1.09E-09	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	4.5E+02	6.7E+06	1.5E+00	1.3E+00	2.3E-01	1.3E+03	3.1E+02	.	7.4E+02	3.2E+01	1.7E-01	2.4E-12
Barium (56)	Ba-141	1.99E+04	3.48E-05	2.9E-12 (S)	1.14E-04	8.71E-12	1.52E-11	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	3.3E+07	1.5E+12	2.7E+02	9.1E+04	1.6E+04	8.8E+07	2.1E+07	.	5.1E+07	2.2E+06	2.7E+02	3.7E-12
Barium (56)	Ba-142	3.44E+04	2.02E-05	1.2E-12 (S)	1.31E-04	3.45E-12	5.73E-12	1.36E+09	8.70E-04	1.00E-03	4.00E-01	1.20E+00	1.40E-04	1.60E-04	.	1.90E-02	8.70E-01	1.5E+08	5.8E+12	4.1E+02	4.0E+05	6.9E+04	3.8E+08	9.1E+07	.	2.2E+08	9.6E+06	4.0E+02	3.2E-12
Beryllium (4)	Be-10	4.59E-07	1.51E+06	2.5E-09 (S)	2.03E-08	2.78E-10	5.12E-10	1.36E+09	4.00E-03	1.00E-01	9.90E+02	1.00E+02	5.00E-03	8.30E-07	.	.	.	1.2E+00	2.1E+03	2.1E+00	3.5E-03	1.8E-02	7.2E-02	1.2E+02	.	.	.	2.8E-03	1.2E-07
Beryllium (4)	Be-7	4.75E+00	1.46E-01	5.8E-12 (S)	5.81E-06	3.28E-12	5.32E-12	1.36E+09	4.00E-03	1.00E-01	9.90E+02	1.00E+02	5.00E-03	8.30E-07	.	.	.	2.2E+04	1.7E+08	1.3E+00	5.7E+01	3.0E+02	1.2E+03	1.9E+06	.	.	.	1.2E+00	3.5E-12
Bismuth (83)	Bi-197	3.92E+04	1.77E-05	0.00E+00	2.14E-04	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	.	.	2.8E+02	.	.	.	.	.	.	.	2.8E+02	2.8E-12
Bismuth (83)	Bi-200	1.00E+04	6.93E-05	2.2E-12 (S)	2.91E-04	6.13E-12	1.00E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	2.5E+07	9.4E+11	5.3E+01	4.7E+04	1.1E+06	1.6E+06	8.5E+05	.	.	.	5.3E+01	2.1E-12
Bismuth (83)	Bi-201	3.37E+03	2.05E-04	5.4E-12 (S)	2.23E-04	1.60E-11	2.71E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	3.1E+06	1.3E+11	2.3E+01	6.1E+03	1.4E+05	2.1E+05	1.1E+05	.	.	.	2.3E+01	2.7E-12
Bismuth (83)	Bi-202	3.53E+03	1.96E-04	3.5E-12 (S)	3.41E-04	1.14E-11	1.86E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	4.7E+06	2.1E+11	1.6E+01	8.9E+03	2.1E+05	3.0E+05	1.6E+05	.	.	.	1.6E+01	1.8E-12
Bismuth (83)	Bi-203	5.16E+02	1.34E-03	2.3E-11 (S)	3.13E-04	7.42E-11	1.27E-10	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	1.0E+05	4.7E+09	2.6E+00	2.0E+02	4.6E+03	6.8E+03	3.6E+03	.	.	.	2.5E+00	1.9E-12
Bismuth (83)	Bi-204	5.41E+01	1.28E-02	2.4E-11 (S)	3.66E-04	8.08E-11	1.36E-10	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	9.9E+04	4.5E+09	2.3E+00	1.9E+02	4.4E+03	6.5E+01	3.5E+03	.	.	.	2.3E+00	1.7E-12
Bismuth (83)	Bi-205	1.65E+01	4.19E-02	1.0E-10 (S)	2.22E-04	1.28E-10	2.16E-10	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	1.9E+03	3.5E+07	1.2E-01	3.7E+00	8.5E+01	1.3E+02	6.7E+01	.	.	.	1.1E-01	2.7E-12
Bismuth (83)	Bi-206	4.05E+01	1.71E-02	1.7E-10 (S)	4.10E-04	3.00E-10	5.15E-10	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	2.0E+03	4.9E+07	1.5E-01	3.9E+00	8.9E+01	1.3E+02	7.0E+01	.	.	.	1.5E-01	1.4E-12
Bismuth (83)	Bi-207	2.11E-02	3.29E+01	3.0E-09 (S)	1.91E-04	2.23E-10	3.91E-10	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	2.4E+00	2.6E+03	3.0E-04	4.8E-03	1.1E-01	1.6E-01	8.7E-02	.	.	.	2.8E-04	5.3E-12
Bismuth (83)	Bi-208	1.88E-06	3.68E+05	2.7E-09 (S)	3.85E-04	1.46E-10	2.40E-10	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	2.6E+00	2.0E+03	1.0E-04	4.9E-03	1.1E-01	1.7E-01	8.9E-02	.	.	.	9.8E-05	2.1E-08
Bismuth (83)	Bi-210	5.05E+01	1.37E-02	1.2E-08 (S)	7.48E-08	3.52E-10	6.49E-10	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	1.9E+03	8.6E+05	1.0E+03	4.1E+00	9.5E+01	1.4E+02	7.5E+01	.	.	.	3.6E+00	2.9E-11
Bismuth (83)	Bi-210m	2.28E-07	3.04E+06	7.9E-07 (S)	2.77E-05	2.10E-05	3.66E-05	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	1.7E-01	6.7E+00	1.4E-03	3.4E-04	7.9E-03	1.2E-02	6.2E-03	.	.	.	2.5E-04	4.5E-07
Bismuth (83)	Bi-210m+D	2.28E-07	3.04E+06	7.9E-07 (S)	2.79E-05	2.10E-09	3.66E-09	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	1.7E-01	6.7E+00	1.4E-03	3.4E-04	7.9E-03	1.2E-02	6.2E-03	.	.	.	2.5E-04	4.5E-07
Bismuth (83)	Bi-211	1.70E+05	4.07E-06	0.00E+00	5.14E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	.	.	5.1E+04	.	.	.	.	.	.	.	5.1E+04	1.2E-10
Bismuth (83)	Bi-212	6.02E+03	1.15E-04	2.3E-09 (S)	1.34E-05	2.73E-11	4.54E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	3.3E+06	5.5E+08	6.9E+02	6.4E+03	1.5E+05	2.2E+05	1.1E+05	.	.	.	6.2E+02	4.2E-11
Bismuth (83)	Bi-212+D	6.02E+03	1.15E-04	2.3E-09 (S)	1.34E-05	2.73E-11	4.54E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	3.3E+06	5.5E+08	6.9E+02	6.4E+03	1.5E+05	2.2E+05	1.1E+05	.	.	.	6.2E+02	4.2E-11
Bismuth (83)	Bi-212n	5.20E+04	1.33E-05	0.00E+00	1.55E-07	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	.	.	5.8E+05	.	.	.	.	.	.	.	5.8E+05	4.6E-09
Bismuth (83)	Bi-213	7.99E+03	8.67E-05	2.0E-09 (S)	1.47E-05	1.94E-11	3.22E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	6.2E+06	8.4E+08	8.4E+02	1.2E+04	2.7E+05	4.0E+05	2.1E+05	.	.	.	7.8E+02	4.0E-11
Bismuth (83)	Bi-213+D	7.99E+03	8.67E-05	2.0E-09 (S)	1.47E-05	1.94E-11	3.22E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	6.2E+06	8.4E+08	8.4E+02	1.2E+04	2.7E+05	4.0E+05	2.1E+05	.	.	.	7.8E+02	4.0E-11
Bismuth (83)	Bi-214	1.83E+04	3.79E-05	8.4E-10 (S)	1.98E-04	7.17E-12	1.09E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	4.2E+07	4.6E+09	1.4E+02	7.4E+04	1.7E+06	2.5E+06	1.3E+06	.	.	.	1.4E+02	3.2E-12
Bismuth (83)	Bi-214+D	1.83E+04	3.79E-05	8.4E-10 (S)	1.98E-04	7.17E-12	1.09E-11	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	4.2E+07	4.6E+09	1.4E+02	7.4E+04	1.7E+06	2.5E+06	1.3E+06	.	.	.	1.4E+02	3.2E-12
Bismuth (83)	Bi-215	4.79E+04	1.45E-05	0.00E+00	2.93E-05	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	.	.	2.5E+03	.	.	.	.	.	.	.	2.5E+03	2.2E-11
Bismuth (83)	Bi-215+D	4.79E+04	1.45E-05	0.00E+00	2.93E-05	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	.	.	2.5E+03	.	.	.	.	.	.	.	2.5E+03	2.2E-11
Bismuth (83)	Bi-216	1.68E+03	8.26E-04	0.00E+00	8.77E-05	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	4.80E+02	1.50E+01	2.00E-03	1.00E-03	.	.	.	.	.	3.0E+05	.	.	.	.	.	.	.	3.0E+05	7.4E-12
Berkelium (97)	Bk-245	5.12E+01	1.35E-02	2.2E-10 (S)	1.92E-05	1.37E-10	2.51E-10	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	5.1E+03	4.9E+07	4.1E+00	1.5E+01	.	7.5E+04	2.0E+05	.	.	.	3.2E+00	3.0E-11
Berkelium (97)	Bk-246	1.41E+02	4.93E-03	2.6E-11 (S)	1.03E-04	7.59E-11	1.33E-10	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	2.6E+04	1.1E+09	2.1E+00	7.4E+01	.	3.7E+05	1.0E+06	.	.	.	2.1E+00	7.0E-12
Berkelium (97)	Bk-247	5.02E-04	1.38E+03	1.3E-06 (F)	1.26E-05	4.34E-05	5.76E-05	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	1.1E-01	4.1E+00	3.1E-03	2.3E-04	.	1.2E+00	3.1E+00	.	.	.	2.1E-04	2.1E-10
Berkelium (97)	Bk-248m	2.56E+02	2.71E-03	1.4E-09 (S)	5.02E-06	9.78E-11	1.80E-10	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	3.5E+04	3.8E+07	7.9E+01	1.0E+02	.	5.2E+05	1.4E+06	.	.	.	4.5E+01	8.4E-11
Berkelium (97)	Bk-249	7.67E-01	9.04E-01	3.2E-09 (F)	1.27E-10	4.22E-11	7.27E-11	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	2.6E+02	5.0E+04	9.4E+03	7.2E-01	.	3.6E+03	9.8E+03	.	.	.	7.2E-01	4.5E-10
Berkelium (97)	Bk-250	1.89E+03	3.67E-04	3.7E-11 (S)	1.16E-04	2.22E-11	3.93E-11	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	1.2E+06	1.1E+10	2.5E+01	3.4E+03	.	1.7E+07	4.6E+07	.	.	.	2.5E+01	6.5E-12
Berkelium (97)	Bk-251	6.55E+03	1.06E-04	2.5E-12 (S)	6.50E-06	3.59E-12	6.02E-12	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	2.7E+07	5.5E+11	1.6E+03	7.3E+04	.	3.6E+08	9.8E+08	.	.	.	1.5E+03	1.1E-10
Bromine (35)	Br-72	2.78E+05	2.49E-06	0.00E+00	3.82E-04	0.00E+00	0.00E+00	1.36E+09	4.00E-01	2.00E+00	5.50E+01	9.10E+01	5.00E-01	2.00E-01	.	.	.	.	.	1.1E+03	.	.	.	.	.	.	.	1.1E+03	5.7E-13
Bromine (35)	Br-73	1.07E+05	6.47E-06	0.00E+00	1.70E-04	0.00E+00	0.00E+00	1.36E+09	4.00E-01	2.00E+00	5.50E+01	9.10E+01	5.00E-01	2.00E-01	.	.	.	.	.	9.8E+02	.	.	.	.	.	.	.	9.8E+02	1.3E-12
Bromine (35)	Br-74	1.43E+04	4.83E-05	1.8E-12 (S)	6.41E-04	5.41E-12	7.97E-12	1.36E+09	4.00E-01	2.00E+00	5.50E+01	9.10E+01	5.00E-01	2.00E-01	.	.	.	4.5E+07	1.7E+12	3.5E+01	4.2E+04	3.3E+04	3.6E+03	2.4E+03	.	.	.	3.4E+01	3.4E-13
Bromine (35)	Br-74m	7.92E+03	8.75E-05	3.4E-12 (S)	5.52E-04	9.13E-12	1.36E-11	1.36E+09	4.00E-01	2.00E+00	5.50E+01	9.10E+01	5.00E-01	2.00E-01	.	.	.	1.4E+07	4.9E+11	2.2E+01	1.4E+04	1.1E+04	1.2E+03	7.7E+02	.	.	.	2.1E+01	3.8E-13
Bromine (35)	Br-75	3.77E+01	1.84E-04	3.2E-12 (S)	1.39E-04	5.72E-12	8.68E-12	1.36E+09	4.00E-01	2.00E+00	5.50E+01	9.10E+01	5.00E-01	2.00E-01	.	.	.	1.1E+07	2.4E+11	4.2E+01	1.0E+04	8.2E+03	8.8E+02	5.8E+02	.	.	.	3.7E+01	1.4E-12
Bromine (35)	Br-76	3.75E+02	1.85E-03	3.1E-11 (S)	3.72E-04	5.28E-11	8.47E-11	1.36E+09	4.00E-01	2.00E+00	5.50E+01	9.10E+01	5.00E-01	2.00E-01	.	.	.	1.1E+05	2.6E+09	1.6E+00	1.1E+02	8.9E+01	9.5E+00	6.3E+00	.	.	.	1.1E+00	4.2E-13
Bromine (35)	Br-76m	1.67E+07	4.15E-08	0.00E+00	1.42E-06	0.00E+00	0.00E+00	1.36E+09	4.00E-01	2.00E+00	5.50E+01	9.10E+01	5.00E-01	2.00E-01	.	.	.	.	.	1.8E+07	.	.	.	.	.	.	.	1.8E+07	1.6E-10
Bromine (35)	Br-77	1.06E+02	6.51E-03	6.0E-12 (S)	3.63E-05	1.11E-11	1.72E-11	1.36E+09	4.00E-01	2.00E+00	5.50E+01	9.10E+01	5.00E-01	2.00E-01	.	.	.	1.5E+05	3.7E+09	4.5E+00	1.5E+02	1.2E+02	1.3E+01	8.5E+00	.	.	.	2.3E+00	3.3E-12
Bromine (35)	Br-77m	8.51E+04	8.14E-

Radionuclides		Slope Factors and Isotope-specific Information																Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Cerium (58)	Ce-131	3.57E+04	1.94E-05	6.8E-13 (S)	1.99E-04	2.01E-12	3.10E-12	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	2.9E+08	1.1E+13	2.8E+02	7.0E+05	1.8E+07	4.7E+05	1.3E+05	3.8E+05	.	4.8E+05	2.8E+02	2.0E-12
Cerium (58)	Ce-132	1.73E+03	4.01E-04	1.8E-11 (S)	2.45E-05	7.08E-11	1.28E-10	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	3.4E+05	2.1E+10	1.1E+02	9.7E+02	2.4E+04	6.5E+06	1.8E+06	5.2E+06	.	6.6E+06	9.8E+01	1.4E-11
Cerium (58)	Ce-133	3.76E+03	1.85E-04	4.4E-12 (S)	5.65E-05	1.23E-11	2.16E-11	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	4.3E+06	1.8E+11	1.0E+02	1.2E+04	3.0E+05	8.2E+07	2.2E+07	6.5E+07	.	8.3E+07	1.0E+02	7.0E-12
Cerium (58)	Ce-133m	1.24E+03	5.59E-04	9.3E-12 (S)	2.16E-04	3.22E-11	5.54E-11	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	5.6E+05	2.8E+10	8.9E+00	1.5E+03	3.8E+04	1.0E+07	2.8E+06	8.2E+06	.	1.0E+07	8.8E+00	1.8E-12
Cerium (58)	Ce-134	8.00E+01	8.66E-03	2.1E-10 (S)	3.69E-07	6.63E-10	1.22E-09	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	1.6E+03	7.9E+07	3.4E+02	4.8E+00	1.2E+02	3.2E+04	8.8E+03	2.6E+04	.	3.3E+04	4.5E+00	1.5E-11
Cerium (58)	Ce-135	3.43E+02	2.02E-03	1.2E-11 (S)	9.40E-05	3.94E-11	6.74E-11	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	1.3E+05	6.2E+09	5.6E+00	3.4E+02	8.6E+03	2.3E+06	6.3E+05	1.9E+06	.	2.4E+06	5.5E+00	4.2E-12
Cerium (58)	Ce-137	6.75E+01	1.03E-01	1.2E-12 (S)	1.51E-06	5.29E-12	9.54E-12	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	1.8E+06	1.2E+11	6.9E+02	5.0E+01	1.3E+05	3.4E+07	9.3E+06	2.7E+07	.	3.4E+07	6.1E+02	2.4E-10
Cerium (58)	Ce-137m	1.76E+02	3.93E-03	5.8E-11 (S)	4.01E-06	1.40E-10	2.59E-10	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	1.7E+04	6.4E+08	6.8E+01	5.0E+01	1.3E+03	3.4E+05	9.2E+04	2.7E+05	.	3.4E+05	2.8E+01	4.2E-11
Cerium (58)	Ce-139	1.84E+00	3.77E-01	1.9E-10 (S)	1.22E-05	5.32E-11	9.55E-11	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	4.8E+02	2.1E+06	2.3E-01	1.4E+00	3.4E+01	9.2E+03	2.5E+03	7.4E+03	.	9.3E+03	2.0E-01	2.9E-11
Cerium (58)	Ce-141	7.78E+00	8.91E-02	3.7E-10 (S)	6.15E-06	1.84E-10	3.40E-10	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	5.7E+02	4.5E+06	2.0E+00	1.7E+00	4.2E+01	1.1E+04	3.1E+03	9.0E+03	.	1.1E+04	8.8E-01	3.1E-11
Cerium (58)	Ce-143	1.84E+02	3.77E-03	1.1E-10 (S)	2.91E-05	2.83E-10	5.23E-10	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	8.7E+03	3.5E+08	9.8E+00	2.6E+01	6.5E+02	1.7E+05	4.7E+04	1.4E+05	.	1.8E+05	7.0E+00	1.1E-11
Cerium (58)	Ce-144	8.88E-01	7.81E-01	4.9E-09 (S)	1.33E-06	1.40E-09	2.59E-09	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	8.5E+00	3.8E+04	1.0E+00	2.5E+02	6.3E-01	1.7E+02	4.6E+01	1.4E+02	.	1.7E+02	2.3E-02	7.4E-12
Cerium (58)	Ce-144+D	8.88E-01	7.81E-01	4.9E-09 (S)	6.15E-06	1.40E-09	2.59E-09	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	8.5E+00	3.8E+04	2.2E-01	2.5E-02	6.3E-01	1.7E+02	4.6E+01	1.4E+02	.	1.7E+02	2.2E-02	6.8E-12
Cerium (58)	Ce-145	1.21E+05	5.73E-06	0.00E+00	9.63E-05	0.00E+00	0.00E+00	1.36E+09	2.70E-03	3.10E-03	1.20E+03	2.50E+01	2.00E-05	2.00E-05	1.00E-04	.	3.10E-03	.	.	1.9E+03	.	.	.	.	.	.	.	1.9E+03	4.5E-12
Californium (98)	Cf-244	1.88E+04	3.69E-05	8.7E-10 (S)	1.64E-09	4.71E-12	7.42E-12	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	6.3E+07	4.5E+09	1.8E+07	1.6E+05	.	2.7E+08	2.2E+09	.	.	.	1.6E+05	4.0E-09
Californium (98)	Cf-246	1.70E+02	4.08E-03	4.5E-08 (S)	5.62E-05	8.34E-11	1.55E-05	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	2.7E+03	7.9E+05	4.7E+04	8.1E+00	.	1.4E+04	1.1E+05	.	.	.	8.1E+00	2.3E-11
Californium (98)	Cf-247	1.95E+03	3.55E-04	2.8E-12 (S)	6.78E-06	3.65E-12	6.51E-12	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	7.4E+06	1.4E+11	4.5E+02	2.1E+04	.	3.6E+07	2.9E+08	.	.	.	4.4E+02	1.1E-10
Californium (98)	Cf-248	7.57E-01	9.15E-01	6.9E-07 (S)	4.58E-08	1.69E-09	2.90E-09	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	6.5E+00	2.3E+02	2.6E+01	1.8E-02	.	3.0E+01	2.4E+02	.	.	.	1.8E-02	1.1E-11
Californium (98)	Cf-249	1.97E-03	3.51E+02	1.3E-06 (F)	3.60E-05	4.41E-05	5.85E-05	1.36E+05	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	1.1E-01	4.2E+00	1.1E-03	2.3E-04	.	3.9E-01	3.2E+00	.	.	.	1.9E-04	4.7E-11
Californium (98)	Cf-250	5.30E-02	1.31E+01	1.0E-06 (S)	1.32E-06	3.12E-09	4.46E-09	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	3.4E-01	1.3E+01	7.0E-02	7.7E-04	.	1.3E+00	1.0E+01	.	.	.	7.6E-04	6.9E-12
Californium (98)	Cf-251	7.70E-04	9.00E+02	1.3E-06 (F)	9.78E-06	4.56E-09	6.12E-09	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	1.0E-01	4.0E+00	4.0E-03	2.2E-04	.	3.7E-01	3.0E+00	.	.	.	2.1E-04	1.3E-10
Californium (98)	Cf-252	2.62E-01	2.65E+00	1.2E-06 (S)	6.15E-05	4.93E-05	8.13E-05	1.36E+05	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	8.0E-01	4.6E+01	6.6E-03	2.1E-03	.	3.5E+00	2.9E+01	.	.	.	1.6E-03	3.0E-12
Californium (98)	Cf-253	1.42E+01	4.88E-02	1.5E-07 (S)	1.06E-08	1.78E-10	3.21E-10	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	1.1E+03	2.0E+04	2.1E+03	3.2E+00	.	5.3E+03	4.3E+04	.	.	.	3.2E+01	1.1E-10
Californium (98)	Cf-254	4.18E+00	1.66E-01	4.1E-06 (S)	2.27E-03	8.27E-08	1.46E-07	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	7.1E-01	2.1E+02	2.8E-03	2.0E-03	.	3.4E+00	2.7E+01	.	.	.	1.2E-03	1.4E-13
Californium (98)	Cf-255	4.29E+01	1.62E-04	6.1E-10 (S)	1.88E-08	5.27E-12	9.36E-12	1.36E+09	1.00E-03	1.00E-01	.	2.50E+01	6.00E-05	2.00E-06	.	.	.	1.1E+07	1.5E+05	3.9E+05	3.2E+04	.	5.4E+07	4.4E+08	.	.	.	3.0E+04	3.4E-09
Chlorine (17)	Cl-34	1.43E+07	4.84E-08	0.00E+00	1.23E-04	0.00E+00	0.00E+00	1.36E+09	3.13E+01	3.60E+01	3.00E-01	4.70E+01	1.70E-02	2.00E-02	.	.	.	.	.	1.8E+05	.	.	.	.	.	.	.	1.8E+05	8.3E-13
Chlorine (17)	Cl-34m	1.14E+04	6.09E-05	2.4E-12 (S)	2.87E-04	6.55E-12	9.75E-12	1.36E+09	3.13E+01	3.60E+01	3.00E-01	4.70E+01	1.70E-02	2.00E-02	.	.	.	2.9E+07	1.0E+12	6.1E+01	5.7E+02	2.3E+02	4.3E+03	9.7E+02	.	.	.	4.2E+01	2.4E-13
Chlorine (17)	Cl-36	2.30E-06	3.01E+05	2.7E-09 (S)	4.58E-08	1.20E-10	1.96E-10	1.36E+09	3.13E+01	3.60E+01	3.00E-01	4.70E+01	1.70E-02	2.00E-02	.	.	.	3.2E+00	1.9E+03	8.5E-01	6.9E-05	2.8E-05	5.2E-04	1.2E-04	.	.	.	1.6E-05	4.9E-10
Chlorine (17)	Cl-38	9.78E+03	7.09E-05	2.7E-12 (S)	2.08E-04	7.20E-12	1.08E-11	1.36E+09	3.13E+01	3.60E+01	3.00E-01	4.70E+01	1.70E-02	2.00E-02	.	.	.	2.3E+07	7.6E+11	7.3E+01	4.5E+02	1.8E+02	3.4E+03	7.6E+02	.	.	.	4.3E+01	3.3E-13
Chlorine (17)	Cl-39	6.55E+03	1.06E-04	2.7E-12 (S)	1.93E-04	5.63E-12	8.46E-12	1.36E+09	3.13E+01	3.60E+01	3.00E-01	4.70E+01	1.70E-02	2.00E-02	.	.	.	1.9E+07	5.1E+11	5.2E+01	3.8E+02	1.5E+02	2.9E+03	6.5E+02	.	.	.	3.3E+01	3.8E-13
Chlorine (17)	Cl-40	2.70E+05	2.57E-06	0.00E+00	5.90E-04	0.00E+00	0.00E+00	1.36E+09	3.13E+01	3.60E+01	3.00E-01	4.70E+01	1.70E-02	2.00E-02	.	.	.	.	.	7.1E+02	.	.	.	.	.	.	.	7.1E+02	2.0E-13
Curium (96)	Cm-238	2.53E+03	2.74E-04	1.7E-10 (S)	5.49E-06	9.71E-12	1.68E-11	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	3.7E+06	3.1E+09	7.1E+02	1.0E+04	7.2E+02	7.0E+07	1.9E+08	.	.	.	3.5E+02	6.3E-11
Curium (96)	Cm-239	2.09E+03	3.31E-04	7.2E-12 (S)	2.16E-05	1.79E-11	3.23E-11	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	1.6E+06	6.1E+10	1.5E+02	4.7E+03	3.2E+02	3.2E+07	8.6E+07	.	.	.	1.0E+02	2.2E-11
Curium (96)	Cm-240	9.37E-01	7.40E-02	3.1E-07 (S)	2.65E-05	1.37E-05	2.50E-05	1.36E+05	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	9.3E+01	6.3E+03	5.5E+01	2.3E-05	1.9E-02	1.8E+01	5.0E+02	.	.	.	1.8E-02	8.8E-13
Curium (96)	Cm-241	7.71E+00	8.99E-02	3.3E-09 (S)	5.24E-05	1.94E-10	3.51E-10	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	5.5E+02	4.9E+05	2.3E-01	1.6E+00	1.1E-01	1.1E+04	2.9E+04	.	.	.	7.1E-02	4.3E-12
Curium (96)	Cm-242	1.55E+00	4.46E-01	5.4E-07 (S)	2.12E-09	1.48E-09	2.63E-09	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	1.5E+01	6.0E+02	1.1E+03	4.2E-02	2.9E-03	2.8E+02	7.7E+02	.	.	.	2.7E-03	8.2E-13
Curium (96)	Cm-243	2.38E-02	2.91E+01	9.9E-07 (S)	1.14E-05	3.34E-05	4.78E-05	1.36E+05	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	2.0E-01	8.2E+00	5.3E-03	4.6E-04	3.2E-05	3.1E+00	8.5E+00	.	.	.	3.0E-05	5.9E-13
Curium (96)	Cm-244	3.83E-02	1.81E+01	9.6E-07 (S)	3.79E-09	2.93E-09	4.22E-09	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	2.9E-01	1.1E+01	2.0E+01	6.7E-04	4.6E-05	4.5E+00	1.2E+01	.	.	.	4.3E-05	5.3E-13
Curium (96)	Cm-245	8.15E-05	8.50E+03	1.0E-06 (F)	7.42E-06	3.66E-09	5.06E-09	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	1.2E-01	5.1E+00	5.2E-03	2.7E-04	1.9E-05	1.8E+00	5.0E+00	.	.	.	1.8E-05	1.0E-10
Curium (96)	Cm-246	1.46E-04	4.76E+03	1.0E-06 (F)	4.86E-07	3.59E-05	4.93E-05	1.36E+05	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	1.3E-01	5.1E+00	8.0E-02	2.8E-04	1.9E-05	1.9E+00	5.1E+00	.	.	.	1.8E-05	5.9E-11
Curium (96)	Cm-247	4.44E-08	1.56E+07	9.4E-07 (F)	3.53E-05	3.49E-09	4.86E-09	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	1.3E-01	5.6E+00	1.1E-03	2.9E-04	2.0E-05	1.9E+00	5.3E+00	.	.	.	1.8E-05	2.0E-07
Curium (96)	Cm-247+D	4.44E-08	1.56E+07	9.4E-07 (F)	3.69E-05	3.51E-09	4.89E-09	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	1.3E-01	5.6E+00	1.0E-03	2.8E-04	2.0E-05	1.9E+00	5.2E+00	.	.	.	1.8E-05	1.9E-07
Curium (96)	Cm-248	1.99E-06	3.48E+05	3.9E-06 (F)	1.77E-04	1.61E-08	2.29E-08	1.36E+05	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	2.7E-02	1.3E+00	2.2E-04	6.2E-05	4.3E-06	4.2E-01	1.1E+00	.	.	.	3.9E-06	9.5E-10
Curium (96)	Cm-249	5.68E+03	1.22E-04	2.1E-12 (S)	2.30E-06	3.25E-12	5.52E-12	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	2.6E+07	5.6E+11	3.8E+03	7.0E+04	4.8E+03	4.7E+08	1.3E+09	.	.	.	2.1E+03	1.8E-10
Curium (96)	Cm-250	8.35E-05	8.30E+03	2.7E-05 (F)	1.80E-03	1.17E-07	1.69E-07	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	3.7E-03	2.0E-01	2.2E-05	8.5E-06	5.9E-07	5.8E-02	1.6E-01	.	.	.	5.4E-07	3.1E-12
Curium (96)	Cm-250+D	8.35E-05	8.30E+03	2.7E-05 (F)	1.83E-03	1.17E-07	1.69E-07	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	3.7E-03	2.0E-01	2.1E-05	8.5E-06	5.9E-07	5.8E-02	1.6E-01	.	.	.	5.4E-07	3.1E-12
Curium (96)	Cm-251	2.17E+04	3.20E-05	1.4E-12 (S)	1.28E-05	2.32E-12	3.75E-12	1.36E+09	2.00E-05	2.30E-05	4.00E+00	3.00E+01	2.00E-05	2.00E-06	.	.	.	1.4E+08	3.3E+12	2.6E+03	3.7E+05	2.6E+04	2.5E+09	6.9E+09	.	.	.	2.4E+03	5.3E-11
Cobalt (27)	Co-54m	2.46E+05	2.82E-06	0.00E+00	5.05E-04	0.00E+00	0.00E+00	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	.	.	7.5E+02	.	.	.	.	.	.	.	7.5E+02	3.2E-13
Cobalt (27)	Co-55	3.46E+02	2.00E-03	6.2E-11 (S)	2.50E-04	1.81E-10	3.25E-10	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	2.6E+04	1.2E+05	2.1E+00	7.4E+01	2.5E+02	2.3E+04	2.5E+04	2.0E+04	8.1E+02	4.8E+04	2.1E+00	6.4E-13
Cobalt (27)	Co-56	3.28E+00	2.12E-01	6.8E-10 (S)	4.95E-04	3.85E-10	6.56E-10	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	1.2E+02	1.0E+06	1.0E-02	3.3E-01	1.1E+00	1.0E+02	1.1E+02	8.9E+01	3.6E+00	2.1E+02	9.8E-03	3.3E-13
Cobalt (27)	Co-57	9.31E-01	7.44E-01	1.0E-10 (S)	9.59E-06	4.03E-11	7.13E-11	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	3.2E+02	2.8E+10	2.8E-01	9.0E-01	3.0E+00	2.8E+02	3.0E+02	2.4E+02	9.8E+00	5.8E+02	2.2E-01	1.4E-11
Cobalt (27)	Co-58	3.57E+00	1.94E-01	2.1E-10 (S)	1.21E-04	1.12E-10	1.92E-10	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	4.6E+02	3.5E+06	4.6E-02	1.2E+00	4.2E+00	3.9E+02	4.1E+02	3.3E+02	1.4E+01	8.0E+02	4.3E-02	1.4E-12
Cobalt (27)	Co-58m	6.72E+02	1.03E-03	2.2E-12 (S)	2.71E-11	4.90E-12	9.00E-12	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	1.9E+06	6.3E+10	3.8E+07	5.3E+03	1.8E+04	1.7E+06	1.8E+06	1.4E+06	5.8E+04	3.4E+06	3.8E+03	6.4E-10
Cobalt (27)	Co-60	1.31E-01	5.27E+00	2.7E-09 (S)	3.35E-04	6.03E-10	1.03E-09	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	3.2E+00	1.0E+04	6.1E-04	8.5E-03	2.9E-02	2.7E+00	2.8E+00	2.3E+00	9.3E-02	5.5E+00	5.6E-04	4.9E-13
Cobalt (27)	Co-60m	3.48E+04	1.99E-05	1.2E-13 (S)	4.83E-07	9.68E-14	1.45E-13	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	6.0E+05	6.3E+13	1.1E+05	1.4E+07	4.7E+07	4.4E+05	4.7E+05	3.8E+05	1.5E+08	9.0E+05	1.1E+05	3.7E-10
Cobalt (27)	Co-61	3.68E+03	1.88E-04	4.2E-12 (S)	7.57E-06	9.51E-12	1.67E-11	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	5.5E+06	1.9E+11	7.5E+02	1.5E+04	5.1E+04	4.7E+06	5.0E+06	4.1E+06	1.6E+05	9.7E+06	7.0E+02	2.3E-11
Cobalt (27)	Co-62	2.43E+05	2.85E-06	0.00E+00	2.21E-04	0.00E+00	0.00E+00	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	.	.	1.7E+03	.	.	.	.	.	.	.	1.7E+03	8.4E-13
Cobalt (27)	Co-62m	2.62E+04	2.65E-05	9.1E-13 (S)	3.66E-04	3.16E-12	4.71E-12	1.36E+09	7.40E-03	8.50E-03	4.80E+02	7.60E+01	4.30E-04	1.10E-04	2.00E-03	9.70E-01	3.30E-02	1.4E+08	6.0E+12	1.1E+02	3.2E+05	1.1E+06	1.0E+08	1.1E+08	8.7E+07	3.5E+06	2.1E+08	1.1E+02	5.1E-13
Chromium (24)	Cr-48	2.82E+02	2.46E-03	1.9E-11 (S)	4.39E-05	2.76E-11	4.65E-11	1.36E+09	1.74E-04	2.00E-04	0.00E+00	4.00E+01	3.00E-02	4.30E-04	.	.	.	1.5E+05	3.0E+09	9.9E+00	4.1E+02	.	1.8E+03	3.5E+04	.	.	.	9.6E+00	3.2E-12
Chromium (24)	Cr-49	8.61E+03	8.05E-05	2.0E-12 (S)	1.20E-04	5.14E-12	8.25E-12	1.36E+09	1.74E-04	2.00E-04	0.00E+00	4.00E+01	3.00E-02	4.30E-04	.	.	.	2.6E+07	9.0E+11	1.1E+02	6.7E+04	.	3.0E+05	5.7E+06	.	.	.	1.1E+04	1.2E-12
Chromium (24)	Cr-51	9.13E+00	7.59E-02	4.5E-12 (S)	3.50E-06	7.18E-12	1.27E-11	1.36E+09	1.74E-04	2.00E-04	0.00E+00	4.00E+01	3.00E-02	4.30E-04	.	.	.	1.8E+04	4.2E+08	4.0E+00	5.1E+01	.	2.3E+02	4.4E+03	.	.	.	3.7E+00	4.0E-11
Chromium (24)	Cr-55	1.04E+05	6.65E-06	0.00E+00	7.95E-07	0.00E+00	0.00E+00	1.36E+09	1.74E-04	2.00E-04	0.00E+00	4.00E+01	3.00E-02	4.30E-04	.	.	.	.	.	2.0E+05	.	.	.	.	.	.	.	2.0E+05	2.1E-10
Chromium (24)	Cr-56	6.13E+04	1.13E-05	0.00E+00	4.70E-06	0.00E+00	0.00E+00	1.36E+09	1.74E-04	2.00E-04	0.00E+00	4.00E+01	3.00E-02	4.30E-04	.	.	.	.	.	2.0E+04	.	.	.	.	.	.	.	2.0E+04	3.6E-11
Cesium (55)	Cs-121	1.41E+05	4.92E-06	0.00E+00	1.39E-04	0.00E+00	0.00E+00	1.36E+09	2.52E-02	2.90E-02	1.00E+01	2.50E+03	2.20E-02	4.60E-03	2.00E-01	2.70E+00	4.00E-01	.	.	1.6E+03	.	.	.	.	.	.	.	1.6E+03	2.6E-12
Cesium (55)	Cs-121

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCiL)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Dysprosium (66)	Dy-153	9.49E+02	7.31E-04	1.2E-11 (S)	9.94E-05	2.98E-11	5.22E-11	1.36E+09	2.00E-03	1.00E-01	1.50E+03	6.50E+02	2.00E-03	6.00E-05	.	.	.	4.5E+05	1.7E+10	1.5E+01	1.3E+03	1.5E+03	6.4E+04	5.7E+05	.	.	.	1.4E+01	4.5E-12
Dysprosium (66)	Dy-154	2.31E-07	3.00E+06	3.5E-07 (S)	0.00E+0C	1.14E-05	1.72E-05	1.36E+09	2.00E-03	1.00E-01	1.50E+03	6.50E+02	2.00E-03	6.00E-05	.	.	.	3.6E-01	1.5E+01	.	8.7E-04	1.0E-03	4.4E-02	3.9E-01	.	.	.	4.7E-04	6.1E-07
Dysprosium (66)	Dy-155	6.13E+02	1.13E-03	7.8E-12 (S)	7.70E-05	2.20E-11	3.78E-11	1.36E+09	2.00E-03	1.00E-01	1.50E+03	6.50E+02	2.00E-03	6.00E-05	.	.	.	4.0E+05	1.6E+10	1.2E+01	1.1E+03	1.3E+03	5.6E+04	5.0E+05	.	.	.	1.2E+01	5.9E-12
Dysprosium (66)	Dy-157	7.46E+02	9.29E-04	2.4E-12 (S)	3.44E-05	8.67E-12	1.47E-11	1.36E+09	2.00E-03	1.00E-01	1.50E+03	6.50E+02	2.00E-03	6.00E-05	.	.	.	1.3E+06	6.6E+10	3.4E+01	3.4E+03	4.1E+03	1.7E+05	1.5E+06	.	.	.	3.3E+01	1.3E-11
Dysprosium (66)	Dy-159	1.75E+0C	3.96E-01	4.7E-11 (S)	8.71E-07	2.14E-11	3.84E-11	1.36E+0S	2.00E-03	1.00E-01	1.50E+0:	6.50E+02	2.00E-03	6.00E-05	.	.	.	1.1E+03	7.8E+0E	3.1E+0C	3.2E+0C	3.9E+0C	1.6E+02	1.5E+03	.	.	.	1.1E+0C	2.0E-10
Dysprosium (66)	Dy-165	2.60E+03	2.66E-04	6.1E-12 (S)	2.65E-06	1.62E-11	2.92E-11	1.36E+09	2.00E-03	1.00E-01	1.50E+03	6.50E+02	2.00E-03	6.00E-05	.	.	.	2.2E+06	9.0E+10	1.5E+03	6.4E+03	7.7E+03	3.2E+05	2.9E+06	.	.	.	1.1E+03	1.3E-10
Dysprosium (66)	Dy-165m	2.90E+05	2.39E-06	0.00E+00	1.52E-06	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	1.50E+03	6.50E+02	2.00E-03	6.00E-05	.	.	.	.	.	3.0E+05	.	.	.	.	.	.	.	3.0E+05	3.3E-10
Dysprosium (66)	Dy-166	7.44E+01	2.5E-10 (S)	2.5E-10 (S)	1.75E-06	4.48E-1C	8.32E-1C	1.36E+0S	2.00E-03	1.00E-01	1.50E+0:	6.50E+02	2.00E-03	6.00E-05	.	.	.	2.2E+03	6.2E+07	6.6E+01	6.6E+0C	7.9E+0C	3.3E+02	3.0E+03	.	.	.	3.4E+04	1.5E-11
Dysprosium (66)	Dy-167	5.87E+04	1.18E-05	0.00E+00	6.06E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	1.50E+03	6.50E+02	2.00E-03	6.00E-05	.	.	.	.	.	1.5E+03	.	.	.	.	.	.	.	1.5E+03	8.3E-12
Dysprosium (66)	Dy-168	4.19E+04	1.66E-05	0.00E+00	4.29E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	1.50E+03	6.50E+02	2.00E-03	6.00E-05	.	.	.	.	.	1.5E+03	.	.	.	.	.	.	.	1.5E+03	1.2E-11
Erbium (68)	Er-154	9.77E+04	7.10E-0E	0.00E+0C	4.20E-0E	0.00E+0C	0.00E+0C	1.36E+0S	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	.	.	3.6E+04	.	.	.	.	.	.	.	3.6E+04	1.1E-10
Erbium (68)	Er-156	1.87E+04	3.71E-05	1.5E-12 (S)	2.41E-06	3.74E-12	6.27E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	7.4E+07	2.7E+12	1.2E+04	2.0E+05	.	1.0E+07	9.0E+07	.	.	.	1.1E+04	1.8E-10
Erbium (68)	Er-159	1.01E+04	6.85E-05	9.3E-13 (S)	1.17E-04	2.17E-12	3.43E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	7.3E+07	2.3E+12	1.3E+02	1.8E+05	.	9.3E+06	8.4E+07	.	.	.	1.3E+02	4.1E-12
Erbium (68)	Er-161	1.89E+03	3.66E-04	4.0E-12 (S)	1.20E-04	1.25E-11	2.15E-11	1.36E+0S	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	2.2E+0E	1.0E+11	2.4E+01	6.0E+03	.	3.0E+05	2.7E+0E	.	.	.	2.4E+01	4.0E-12
Erbium (68)	Er-163	4.86E+03	1.43E-04	8.1E-14 (S)	9.85E-07	2.82E-13	4.65E-13	1.36E+09	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	2.6E+08	1.3E+13	7.6E+03	6.8E+05	.	3.4E+07	3.1E+08	.	.	.	7.5E+03	4.9E-10
Erbium (68)	Er-165	5.86E+02	1.18E-03	9.0E-13 (S)	8.27E-07	3.53E-12	6.27E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	2.3E+06	1.4E+11	1.1E+03	6.6E+03	.	3.3E+05	3.0E+06	.	.	.	9.4E+02	5.1E-10
Erbium (68)	Er-167m	9.63E+0C	7.19E-08	0.00E+0C	8.84E-0E	0.00E+0C	0.00E+0C	1.36E+0S	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	.	.	1.7E+0E	.	.	.	.	.	.	.	1.7E+0E	5.7E-11
Erbium (68)	Er-169	2.69E+01	2.58E-02	1.2E-10 (S)	2.58E-09	1.00E-10	1.86E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	3.6E+03	4.8E+07	1.6E+04	1.1E+01	.	5.4E+02	4.8E+03	.	.	.	1.0E+01	1.3E-10
Erbium (68)	Er-171	8.08E+02	8.58E-04	2.7E-11 (S)	3.76E-05	7.95E-11	1.46E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	1.4E+05	6.3E+09	3.3E+01	4.0E+02	.	2.0E+04	1.8E+05	.	.	.	3.1E+01	1.3E-11
Erbium (68)	Er-172	1.23E+02	5.63E-03	1.4E-10 (S)	5.74E-05	2.44E-1C	4.47E-1C	1.36E+0S	2.00E-03	1.00E-01	6.50E+0:	.	2.00E-03	6.00E-05	.	.	.	6.8E+03	1.8E+08	3.3E+0C	2.0E+01	.	1.0E+03	9.1E+03	.	.	.	2.8E+00	7.7E-12
Erbium (68)	Er-173	2.54E+05	2.73E-06	0.00E+00	9.44E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	6.50E+02	.	2.00E-03	6.00E-05	.	.	.	.	.	4.2E+03	.	.	.	.	.	.	.	4.2E+03	5.5E-12
Einsteinium (99)	Es-249	3.56E+03	1.94E-04	1.9E-11 (S)	4.35E-05	2.53E-12	4.21E-12	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	2.1E+07	4.0E+10	1.3E+02	5.6E+04	.	2.8E+08	7.6E+08	.	.	.	1.3E+02	1.7E-11
Einsteinium (99)	Es-250	7.06E+02	9.82E-04	1.1E-10 (S)	1.35E-04	9.01E-11	1.62E-1C	1.36E+0S	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	1.1E+05	1.4E+09	8.1E+0C	3.1E+02	.	1.6E+0E	4.2E+0E	.	.	.	7.9E+0C	5.4E-12
Einsteinium (99)	Es-250m	2.73E+03	2.53E-04	2.1E-11 (S)	6.63E-05	3.47E-12	5.76E-12	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	1.2E+07	2.8E+10	6.4E+01	3.1E+04	.	1.6E+08	4.3E+08	.	.	.	6.4E+01	1.1E-11
Einsteinium (99)	Es-251	1.84E+02	3.77E-03	1.9E-10 (S)	6.72E-06	4.18E-11	7.67E-11	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	6.0E+04	2.0E+08	4.2E+01	1.8E+02	.	8.8E+05	2.4E+06	.	.	.	3.4E+01	9.0E-11
Einsteinium (99)	Es-253	1.24E+01	5.61E-02	2.9E-07 (S)	3.38E-08	1.38E-05	2.54E-05	1.36E+0S	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	1.2E+02	9.1E+03	5.7E+02	3.6E-01	.	1.8E+03	4.8E+03	.	.	.	3.5E-01	1.4E-11
Einsteinium (99)	Es-254	9.17E-01	7.55E-01	7.0E-07 (S)	2.21E-07	2.12E-09	3.71E-09	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	6.1E+00	2.8E+02	6.4E+00	1.7E-02	.	8.6E+01	2.3E+02	.	.	.	1.7E-02	9.2E-12
Einsteinium (99)	Es-254+D	9.17E-01	7.55E-01	7.0E-07 (S)	1.16E-04	2.14E-09	3.75E-09	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	6.1E+00	2.8E+02	1.2E-02	1.7E-02	.	8.6E+01	2.3E+02	.	.	.	7.1E-03	3.8E-12
Einsteinium (99)	Es-254m	1.54E+02	4.49E-03	4.7E-08 (S)	5.71E-05	1.12E-05	2.07E-05	1.36E+0S	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	1.9E+03	6.9E+05	4.2E+0C	5.5E+0C	.	2.8E+04	7.4E+04	.	.	.	2.4E+0C	7.6E-12
Einsteinium (99)	Es-255	6.36E+00	1.09E-01	4.1E-07 (S)	9.31E-08	1.12E-09	2.06E-09	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	7.7E+01	3.2E+03	1.1E+02	2.3E-01	.	1.1E+03	3.1E+03	.	.	.	2.2E-01	1.7E-11
Einsteinium (99)	Es-256	1.43E+04	4.83E-05	3.9E-09 (S)	1.87E-07	6.28E-10	1.09E-09	1.36E+09	1.00E-03	1.00E-01	.	.	2.00E-05	2.00E-06	.	.	.	3.3E+05	7.8E+08	1.2E+05	9.1E+02	.	4.6E+06	1.2E+07	.	.	.	9.0E+02	3.1E-11
Europium (63)	Eu-142	9.34E+0C	7.42E-08	0.00E+0C	1.51E-04	0.00E+0C	0.00E+0C	1.36E+0S	2.00E-03	1.00E-01	6.50E+0:	1.30E+02	2.00E-03	6.00E-05	.	.	.	.	.	9.6E+04	.	.	.	.	.	.	.	9.6E+04	2.8E-12
Europium (63)	Eu-142m	2.98E+05	2.33E-06	0.00E+00	4.26E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	.	.	1.1E+03	.	.	.	.	.	.	.	1.1E+03	1.0E-12
Europium (63)	Eu-143	1.41E+05	4.93E-06	0.00E+00	1.40E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	.	.	1.6E+03	.	.	.	.	.	.	.	1.6E+03	3.1E-12
Europium (63)	Eu-144	2.14E+0C	3.23E-07	0.00E+0C	1.36E-04	0.00E+0C	0.00E+0C	1.36E+0S	2.00E-03	1.00E-01	6.50E+0:	1.30E+02	2.00E-03	6.00E-05	.	.	.	.	.	2.4E+04	.	.	.	.	.	.	.	2.4E+04	3.2E-12
Europium (63)	Eu-145	4.27E+01	1.62E-02	4.7E-11 (S)	1.65E-04	9.21E-11	1.55E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	6.8E+03	1.9E+08	4.0E-01	1.8E+01	4.8E+01	9.2E+02	8.3E+03	.	.	.	3.9E-01	2.6E-12
Europium (63)	Eu-146	5.49E+01	1.26E-02	6.9E-11 (S)	3.04E-04	1.65E-10	2.77E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	4.9E+03	1.7E+08	2.8E-01	1.3E+01	3.4E+01	6.6E+02	6.0E+03	.	.	.	2.7E-01	1.4E-12
Europium (63)	Eu-147	1.05E+01	6.60E-02	1.2E-10 (S)	5.21E-05	7.80E-11	1.38E-1C	1.36E+0S	2.00E-03	1.00E-01	6.50E+0:	1.30E+02	2.00E-03	6.00E-05	.	.	.	1.9E+03	1.9E+07	3.1E-01	5.3E+0C	1.4E+01	2.7E+02	2.4E+03	.	.	.	2.9E-01	7.8E-12
Europium (63)	Eu-148	4.64E+00	1.49E-01	3.5E-10 (F)	2.73E-04	1.66E-10	2.76E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	4.2E+02	2.8E+06	2.6E-02	1.1E+00	2.9E+00	5.6E+01	5.0E+02	.	.	.	2.5E-02	1.6E-12
Europium (63)	Eu-149	2.72E+00	2.55E-01	4.7E-11 (S)	4.04E-06	3.46E-11	6.28E-11	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	1.1E+03	1.2E+07	1.0E+00	3.1E+00	8.1E+00	1.6E+02	1.4E+03	.	.	.	7.1E-01	7.5E-11
Europium (63)	Eu-150	1.88E-02	3.69E+01	7.3E-09 (F)	1.83E-04	1.52E-1C	2.48E-1C	1.36E+0S	2.00E-03	1.00E-01	6.50E+0:	1.30E+02	2.00E-03	6.00E-05	.	.	.	3.6E+0C	1.0E+03	3.0E-04	9.3E-03	2.4E-02	4.7E-01	4.2E+0C	.	.	.	2.9E-04	4.5E-12
Europium (63)	Eu-150m	4.74E+02	1.46E-03	3.0E-11 (S)	5.55E-06	9.57E-11	1.77E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	6.7E+04	3.3E+09	1.3E+02	2.0E+02	5.1E+02	9.9E+03	8.9E+04	.	.	.	6.8E+02	4.2E-11
Europium (63)	Eu-152	5.12E-02	1.54E+01	5.2E-09 (F)	1.46E-04	2.25E-10	3.94E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	3.7E+00	2.4E+03	6.2E-04	1.0E-02	2.7E-02	5.2E-01	4.7E+00	.	.	.	5.7E-04	3.3E-12
Europium (63)	Eu-152m	6.52E+02	1.06E-03	3.2E-11 (S)	3.63E-05	1.17E-1C	2.16E-1C	1.36E+0S	2.00E-03	1.00E-01	6.50E+0:	1.30E+02	2.00E-03	6.00E-05	.	.	.	7.5E+04	4.3E+09	2.8E+01	2.2E+02	5.8E+02	1.1E+04	1.0E+05	.	.	.	2.4E+01	1.1E-11
Europium (63)	Eu-152n	3.79E+03	1.83E-04	8.0E-13 (S)	4.07E-06	1.67E-12	2.89E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	3.3E+07	9.9E+11	1.4E+03	9.0E+04	2.4E+05	4.5E+06	4.1E+07	.	.	.	1.4E+03	1.1E-10
Europium (63)	Eu-154	8.06E-02	8.59E+00	5.6E-09 (F)	1.58E-04	3.83E-10	6.86E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	3.0E+00	3.2E+03	8.2E-04	8.7E-03	2.3E-02	4.4E-01	3.9E+00	.	.	.	7.3E-04	2.7E-12
Europium (63)	Eu-154m	7.92E+03	8.75E-05	3.0E-13 (S)	3.03E-06	6.92E-13	1.13E-12	1.36E+0S	2.00E-03	1.00E-01	6.50E+0:	1.30E+02	2.00E-03	6.00E-05	.	.	.	1.7E+08	5.5E+12	4.0E+03	4.5E+05	1.2E+0E	2.3E+07	2.1E+08	.	.	.	4.0E+03	1.5E-10
Europium (63)	Eu-155	1.46E-01	4.76E+00	5.2E-10 (S)	3.38E-06	7.64E-11	1.40E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	2.6E+01	5.9E+04	6.7E-02	7.6E-02	2.0E-01	3.8E+00	3.4E+01	.	.	.	3.0E-02	6.2E-11
Europium (63)	Eu-156	1.67E+01	4.16E-02	4.3E-10 (S)	1.66E-04	5.28E-10	9.64E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	4.3E+02	8.2E+06	1.6E-01	1.3E+00	3.3E+00	6.3E+01	5.7E+02	.	.	.	1.3E-01	2.4E-12
Europium (63)	Eu-157	4.00E+02	1.73E-03	4.6E-11 (S)	2.98E-05	1.48E-1C	2.72E-1C	1.36E+0S	2.00E-03	1.00E-01	6.50E+0:	1.30E+02	2.00E-03	6.00E-05	.	.	.	3.7E+04	1.8E+0S	2.1E+01	1.1E+02	2.8E+02	5.4E+01	4.9E+04	.	.	.	1.6E+01	1.2E-11
Europium (63)	Eu-158	7.94E+02	9.73E-05	3.5E-11 (S)	1.69E-04	7.90E-12	1.28E-11	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	1.5E+07	5.4E+11	7.1E+01	4.0E+04	1.0E+05	2.0E+06	1.8E+07	.	.	.	7.3E+01	2.8E-12
Europium (63)	Eu-159	2.01E+04	3.44E-05	1.7E-12 (S)	3.13E-05	4.62E-12	7.74E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.30E+02	2.00E-03	6.00E-05	.	.	.	6.5E+07	2.5E+12	9.9E+02	1.7E+05	4.5E+05	8.7E+06	7.8E+07	.	.	.	9.9E+02	1.5E-11
Fluorine (9)	F-17	3.39E+05	2.04E-06	0.00E+0C	1.21E-04	0.00E+0C	0.00E+0C	1.36E+0S	2.00E-02	1.00E-01	1.50E+0:	1.00E+01	2.00E-02	7.00E-03	.	.	.	.	.	4.4E+03	.	.	.	.	.	.	.	4.4E+03	4.2E-13
Fluorine (9)	F-18	3.32E+03	2.09E-04	3.2E-12 (S)	1.16E-04	3.38E-12	4.98E-12	1.36E+09	2.00E-02	1.00E-01	1.50E+02	1.00E+01	2.00E-02	7.00E-03	.	.	.	1.7E+07	2.2E+11	4.9E+01	3.6E+04	3.0E+05	2.0E+05	1.5E+05	.	.	.	4.9E+01	5.1E-13
Iron (26)	Fe-52	7.34E+02	9.45E-04	8.1E-11 (S)	8.30E-05	2.78E-10	5.10E-10	1.36E+09	1.74E-04	2.00E-04	8.80E+02	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+00	1.80E+00	3.6E+04	1.9E+09	1.4E+01	1.1E+02	2.8E+02	1.0E+03	1.1E+05	1.9E+04	1.1E+03	1.2E+03	1.1E+01	1.5E-12
Iron (26)	Fe-53	4.28E+04	1.62E-05	0.00E+0C	1.39E-04	0.00E+0C	0.00E+0C	1.36E+0S	1.74E-04	2.00E-04	8.80E+0:	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+0C	1.80E+0C	.	.	4.7E+02	.	.	.	.	.	.	.	4.7E+02	1.1E-12
Iron (26)	Fe-53m	1.44E+05	4.81E-06	0.00E+00	4.04E-04	0.00E+00	0.00E+00	1.36E+09	1.74E-04	2.00E-04	8.80E+02	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+00	1.80E+00	.	.	5.5E+02	.	.	.	.	.	.	.	5.5E+02	3.9E-13
Iron (26)	Fe-55	2.53E-01	2.74E+00	4.0E-11 (F)	1.29E-14	3.13E-11	5.12E-11	1.36E+09	1.74E-04	2.00E-04	8.80E+02	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+00	1.80E+00	1.2E+02	1.3E+06	3.0E+07	3.2E-01	8.7E-01	3.1E+00	3.4E+02	5.8E+01	3.4E+00	3.8E+00	1.9E-01	8.2E-11
Iron (26)	Fe-59	5.68E+00	1.22E-01	4.0E-10 (S)	1.57E-04	3.01E-1C	5.16E-1C	1.36E+0S	1.74E-04	2.00E-04	8.80E+0:	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+0C	1.80E+0C	2.7E+02	3.0E+0E	5.6E-02	7.5E-01	2.0E+0C	7.3E+0C	7.9E+02	1.4E+02	8.0E+0C	8.9E+0C	5.0E+02	1.0E-12
Iron (26)	Fe-60	4.62E-07	1.50E+06	1.0E-08 (F)	4.77E-10	6.74E-09	9.40E-09	1.36E+09	1.74E-04	2.00E-04	8.80E+02	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+00	1.80E+00	6.6E-02	5.0E+02	9.0E+01	1.5E-04	4.0E-04	1.4E-03	1.6E-01	2.7E-02	1.6E-03	1.7E-03	8.9E-05	2.2E-08
Iron (26)	Fe-60+D	4.62E-07	1.50E+06	1.3E-08 (F)	3.35E-04	7.34E-09	1.04E-08	1.36E+09	1.74E-04	2.00E-04	8.80E+02	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+00	1.80E+00	6.0E-02	4.0E+02	1.2E-04	1.4E-04	3.6E-04	1.3E-03	1.4E-01	2.4E-02	1.4E-03	1.6E-03	4.8E-05	1.2E-08
Iron (26)	Fe-61	6.09E+04	1.14E-05	0.00E+0C	1.84E-04	0.00E+0C	0.00E+0C	1.36E+0S	1.74E-04	2.00E-04	8.80E+0:	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+0C	1.80E+0C	.	.	5.1E+02	.	.	.	.	.	.	.	5.1E+02	9.9E-13
Iron (26)	Fe-62	3.21E+05	2.16E-06	0.00E+00	6.00E-05	0.00E+00	0.00E+00	1.36E+09	1.74E-04	2.00E-04	8.80E+02	1.70E+02	1.40E-02	3.50E-05	3.00E-03	1.00E+00	1.80E+00	.	.	8.3E+03	.	.	.	.	.	.	.	8.3E+03	3.1E-12
Fermium (100)	Fm-251	1.15E+03	6.05E-04	1.8E-10 (S)	1.42E-05	1.53E-11	2.77E-11	1.36E+09	2.00E-03	1.00E-01	.	.	2.00E-04	8.00E-06	.	.	.	1.0E+06	1.4E+09	1.2E+02	3.0E+03	.	1.5E+06	1.0E+07	.	.	.	1.2E+02	5.1E-11
Fermium (100)	Fm-252	2.39E+02	2.90E-03	3.5E-08 (S)	3.60E-08	7.22E-1C	1.34E-0S	1.36E+0S	2.00E-03	1.00E-01	.	.	2.00E-04	8.00E-06	.	.	.	4.4E+03	1.5E+0E	1.0E+04	1.3E+01	.	6.6E+03	4.5E+04	.	.	.	1.3E+01	2.7E-11
Fermium (100)	Fm-253	8.43E+01	8.22E-03	4.1E-08 (S)	4.51E-06	2.73E-10	5.05E-10	1.36E+09	2.00E-03	1.00E-01	.	.	2.00E-04	8.00E-06	.	.	.	4.1E+03	4.3E+05	2.9E+01	1.2E+01	.	6.2E+03	4.2E+04	.	.	.	8.6E+00	5.0E-11
Fermium (100)	Fm-254	1.87E+03	3.70E-04	5.9E-09 (S)	9.47E-07	8.77E-11	1.59E-10	1.36E+09	2.00E-03	1.00E-01	.	.	2.00E-04	8.00E-06	.	.	.	2.9E+05	6.7E+07	3.1E+03	8.5E+02	.	4.3E+05	2.9E+06	.	.	.	6.6E+02	1.7E-10
Fermium (100)	Fm-255	3.02E+02	2.29E-03	2.7E-08 (S)	1.06E-07	6.55E-1C	1.21E-0S	1.36E+0S	2.00E-03	1.00E-01	.	.	2.00E-04	8.00E-06	.	.	.	6.2E+01	2.4E+0E	4.4E+01	1.8E+01	.	9.2E+01	6.2E+04	.	.	.	1.8E+01	3.0E-11
Fermium (100)	Fm-256	2.31E+03	3.00E-04	2.4E-08 (S)	1.67E-03	3.68E-09	6.29E-09	1.36E+09	3.00E-02	1.00E-01	.	.	2.00E-04	8.00E-06	.	.	.	9.1E+03	2.0E+07	2.1E+00	2.5E+01	.	1.3E+04	8.5E+04	.	.	.	2.0E+00

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Gadolinium (64)	Gd-153	1.05E+00	6.59E-01	2.3E-10 (S)	4.35E-06	6.01E-11	1.09E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	2.4E+02	9.5E+05	3.7E-01	6.9E-01	9.4E+00	3.5E+01	3.1E+02	.	.	.	2.3E-01	6.6E-11
Gadolinium (64)	Gd-159	3.29E+02	2.11E-03	4.3E-11 (S)	5.14E-06	1.29E-10	2.38E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	3.4E+04	1.6E+09	9.9E+01	1.0E+02	1.4E+03	5.1E+03	4.6E+04	.	.	.	4.8E+01	4.5E-11
Gadolinium (64)	Gd-162	4.34E+04	1.60E-05	0.00E+00	4.73E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	6.50E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	.	.	1.4E+03	.	.	.	.	.	.	.	.	1.4E+03	1.0E-11
Germanium (32)	Ge-66	2.69E+03	2.58E-04	7.0E-12 (S)	7.64E-05	1.31E-11	2.04E-11	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	3.3E+06	8.0E+10	5.4E+01	3.2E+03	2.7E+01	3.7E+02	1.9E+03	.	.	.	1.7E+01	8.0E-13
Germanium (32)	Ge-67	1.93E+04	3.60E-05	1.2E-12 (S)	1.71E-04	3.63E-12	5.37E-12	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	8.9E+07	3.3E+12	1.7E+02	8.4E+04	6.9E+02	9.5E+03	5.0E+04	.	.	.	1.4E+02	9.2E-13
Germanium (32)	Ge-68	9.34E-01	7.42E-01	2.8E-09 (S)	1.10E-11	2.66E-16	4.70E-16	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	4.9E+01	7.0E+04	1.3E+05	5.5E-02	4.5E-04	6.3E-03	3.3E-02	.	.	.	4.1E-04	5.9E-14
Germanium (32)	Ge-68+D	9.34E-01	7.42E-01	2.8E-09 (S)	1.13E-04	2.77E-10	4.88E-10	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	4.8E+01	7.0E+04	1.3E-02	5.3E-02	4.4E-04	6.0E-03	3.2E-02	.	.	.	3.9E-04	5.5E-14
Germanium (32)	Ge-69	1.55E+02	4.46E-03	2.0E-11 (S)	1.20E-04	2.95E-11	4.80E-11	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	8.0E+04	1.7E+09	2.0E+00	8.3E+01	6.8E-01	9.4E+00	5.0E+01	.	.	.	4.8E-01	4.1E-13
Germanium (32)	Ge-71	2.21E+01	3.13E-02	1.5E-12 (S)	1.11E-11	2.50E-12	4.43E-12	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	1.2E+05	3.1E+09	3.1E+00	1.4E+02	1.1E+00	1.6E+01	8.4E+01	.	.	.	1.0E+00	6.5E-12
Germanium (32)	Ge-75	4.40E+03	1.57E-04	2.4E-12 (S)	3.82E-06	3.15E-12	4.70E-12	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	2.3E+07	3.8E+11	1.8E+03	2.2E+04	1.8E+02	2.5E+03	1.3E+04	.	.	.	1.5E+02	5.0E-12
Germanium (32)	Ge-77	5.37E+02	1.29E-03	3.3E-11 (S)	1.30E-04	4.45E-11	7.18E-11	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	1.9E+05	3.4E+09	6.4E+00	1.9E+02	1.6E+00	2.2E+01	1.1E+02	.	.	.	1.2E+00	3.2E-13
Germanium (32)	Ge-78	4.14E+01	1.67E-04	6.9E-12 (S)	2.98E-05	1.03E-11	1.52E-11	1.36E+09	4.00E-01	4.00E+00	2.50E+01	4.00E+03	2.00E-01	1.00E-02	.	.	.	6.8E+06	1.3E+11	2.1E+02	6.3E+03	5.2E+01	7.2E+02	3.8E+03	.	.	.	3.9E+01	1.4E-12
Hydrogen (1)	H-3	5.63E-02	1.23E+01	2.3E-11 (S)	0.00E+00	1.76E-12	2.43E-12	1.70E+01	4.80E+00	2.40E+01	0.00E+00	1.00E+00	1.20E-02	1.00E-02	.	.	.	6.4E+02	7.2E-03	.	7.3E-02	.	1.9E-01	5.9E-02	.	.	.	5.7E-03	5.9E-13
Hafnium (72)	Hf-167	1.78E+05	3.90E-06	0.00E+00	6.85E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	.	.	4.0E+03	.	.	.	.	.	.	.	4.0E+03	7.3E-12
Hafnium (72)	Hf-169	1.12E+05	6.16E-06	0.00E+00	7.07E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	.	.	2.5E+01	.	.	.	.	.	.	.	2.5E+01	7.2E-12
Hafnium (72)	Hf-170	3.79E+02	1.83E-03	2.8E-11 (S)	4.39E-05	6.85E-11	1.20E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	7.9E+04	2.8E+09	1.3E+01	2.2E+02	2.6E+02	5.5E+04	3.0E+05	.	.	.	1.2E+03	1.0E-11
Hafnium (72)	Hf-172	3.71E-01	1.87E+00	2.3E-09 (S)	4.07E-06	1.99E-10	3.54E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	2.6E+01	3.4E+04	1.4E-01	7.4E-02	8.8E-02	1.9E+01	1.0E+02	.	.	.	3.1E-02	2.8E-11
Hafnium (72)	Hf-172+D	3.71E-01	1.87E+00	2.3E-09 (S)	4.07E-06	1.99E-10	3.54E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	2.6E+01	3.4E+04	1.4E-01	7.4E-02	8.8E-02	1.9E+01	1.0E+02	.	.	.	3.1E-02	2.8E-11
Hafnium (72)	Hf-173	2.57E+02	2.69E-03	1.7E-11 (S)	3.50E-05	4.06E-11	7.18E-11	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	8.9E+04	3.1E+09	1.1E+01	2.5E+02	3.0E+02	6.3E+04	3.4E+05	.	.	.	1.0E+01	1.4E-11
Hafnium (72)	Hf-174	3.47E-16	2.00E+15	2.7E-07 (S)	0.00E+00	2.16E-09	2.77E-09	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	2.2E-01	1.9E+01	.	4.6E-04	5.4E-04	1.2E-01	6.2E-01	.	.	.	2.5E-04	2.4E+02
Hafnium (72)	Hf-175	3.61E+00	1.92E-01	1.4E-10 (S)	3.47E-05	7.49E-11	1.33E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	6.8E+02	5.3E+06	1.6E-01	1.9E+00	2.3E+00	4.8E+02	2.6E+03	.	.	.	1.4E-01	1.3E-11
Hafnium (72)	Hf-177m	7.09E+03	9.78E-05	5.3E-12 (S)	2.36E-04	7.72E-12	1.24E-11	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	1.4E+07	2.8E+11	4.7E+01	3.6E+04	4.3E+04	9.2E+06	5.0E+07	.	.	.	4.6E+01	2.2E-12
Hafnium (72)	Hf-178m	2.24E-02	3.10E+01	8.8E-09 (F)	2.46E-04	4.64E-10	7.73E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	1.2E+00	9.1E+02	2.4E-04	3.2E-03	3.8E-03	8.1E-01	4.4E+00	.	.	.	2.1E-04	3.2E-12
Hafnium (72)	Hf-179m	1.01E+01	6.86E-02	4.4E-10 (S)	9.44E-05	2.61E-10	4.70E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	5.3E+02	4.8E+08	1.7E-01	1.5E+00	1.8E+00	3.9E+02	2.1E+03	.	.	.	1.4E-01	4.7E-12
Hafnium (72)	Hf-180m	1.10E+03	6.28E-04	1.2E-11 (S)	1.05E-04	2.82E-11	4.94E-11	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	5.6E+05	1.9E+10	1.6E+01	1.5E+03	1.8E+03	3.9E+05	2.1E+06	.	.	.	1.6E+03	5.0E-12
Hafnium (72)	Hf-181	5.97E+00	1.16E-01	5.8E-10 (S)	5.78E-05	2.52E-10	4.59E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	3.2E+02	2.2E+06	1.6E-01	9.3E-01	1.1E+00	2.4E+02	1.3E+03	.	.	.	1.2E-01	7.2E-12
Hafnium (72)	Hf-182	7.70E-08	9.00E+06	8.9E-09 (F)	2.46E-05	1.72E-10	2.58E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	2.4E+00	5.9E+02	1.6E-03	5.7E-03	6.8E-03	1.5E+00	7.8E+00	.	.	.	1.0E-03	4.8E-06
Hafnium (72)	Hf-182+D	7.70E-08	9.00E+06	9.9E-09 (F)	1.87E-04	4.77E-10	8.05E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	7.7E-01	5.3E+02	2.1E-04	2.1E-03	2.5E-03	5.2E-01	2.8E+00	.	.	.	1.7E-04	8.0E-07
Hafnium (72)	Hf-182m	5.92E+03	1.17E-04	3.4E-12 (S)	1.00E-04	4.64E-12	7.62E-12	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	1.9E+07	3.7E+11	9.1E+01	5.0E+04	6.0E+04	1.3E+07	6.9E+07	.	.	.	9.1E+01	5.4E-12
Hafnium (72)	Hf-183	5.69E+01	1.22E-04	4.9E-12 (S)	9.21E-05	9.35E-12	1.61E-11	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	8.8E+06	2.4E+11	9.6E+01	2.4E+04	2.9E+04	6.1E+06	3.3E+07	.	.	.	9.5E+01	5.9E-12
Hafnium (72)	Hf-184	1.47E+03	4.70E-04	4.0E-11 (S)	2.18E-05	1.14E-10	2.08E-10	1.36E+09	3.00E-03	1.00E-01	2.50E+03	1.10E+03	4.00E-04	2.00E-05	.	.	.	1.8E+05	7.8E+09	1.0E+02	5.1E+02	6.1E+02	1.3E+05	7.0E+05	.	.	.	7.6E+01	1.8E-11
Mercury (80)	Hg-190	1.82E+04	3.81E-05	7.0E-12 (V)	1.43E-05	2.12E-12	3.39E-12	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	1.3E+08	5.5E+11	2.0E+03	1.6E+05	1.8E+05	1.0E+06	5.4E+06	.	3.2E+07	.	3.9E+03	3.9E-11
Mercury (80)	Hg-191m	1.17E+03	9.87E-05	2.9E-11 (V)	1.77E-04	6.70E-12	1.12E-11	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	1.6E+07	5.2E+11	6.3E+01	2.0E+04	2.3E+04	1.3E+05	6.8E+05	.	4.0E+06	.	6.2E+03	3.2E-11
Mercury (80)	Hg-192	1.25E+03	5.54E-04	9.1E-11 (V)	2.36E-05	3.71E-11	6.45E-11	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	4.8E+05	2.9E+09	8.2E+01	6.3E+02	7.2E+02	4.0E+03	2.1E+04	.	1.3E+05	.	6.5E+01	1.9E-11
Mercury (80)	Hg-193	1.60E+03	4.34E-04	7.9E-11 (V)	1.01E-04	1.78E-11	3.13E-11	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	1.3E+06	4.3E+09	2.4E+01	1.7E+03	1.9E+03	1.1E+04	5.7E+04	.	3.3E+05	.	2.4E+01	5.6E-12
Mercury (80)	Hg-193+D	1.60E+03	4.34E-04	7.9E-11 (V)	1.02E-04	1.78E-11	3.13E-11	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	1.3E+06	4.3E+09	2.4E+01	1.7E+03	1.9E+03	1.1E+04	5.7E+04	.	3.3E+05	.	2.4E+01	5.5E-12
Mercury (80)	Hg-193m	5.14E+02	1.35E-03	2.7E-10 (V)	1.25E-04	7.89E-11	1.40E-10	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	9.1E+04	4.0E+08	6.4E+00	1.2E+02	1.4E+02	7.8E+02	4.1E+03	.	2.4E+04	.	5.7E+00	4.2E-12
Mercury (80)	Hg-194	1.58E-03	4.40E+02	2.0E-09 (S)	9.75E-11	1.08E-10	1.69E-10	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	3.8E+00	2.7E+03	4.1E+02	4.4E-03	5.1E-03	2.8E-02	1.5E-01	.	8.9E-01	.	2.2E-03	5.1E-10
Mercury (80)	Hg-194+D	1.58E-03	4.40E+02	2.0E-09 (S)	1.29E-04	1.70E-10	2.75E-10	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	2.3E+00	2.7E+03	3.1E-04	2.8E-03	3.2E-03	1.8E-02	9.6E-02	.	5.6E-01	.	2.5E-04	6.0E-11
Mercury (80)	Hg-195	5.77E+02	1.20E-03	1.4E-10 (V)	1.94E-05	2.11E-11	3.81E-11	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	3.8E+05	9.0E+08	4.6E+01	5.1E+02	5.8E+02	3.3E+03	1.7E+04	.	1.0E+05	.	3.9E+01	2.5E-11
Mercury (80)	Hg-195m	1.46E+02	4.75E-03	7.3E-10 (V)	1.97E-05	1.31E-10	2.40E-10	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	1.5E+04	4.2E+07	1.1E+01	2.1E+01	2.4E+01	1.3E+02	7.1E+02	.	4.1E+03	.	5.4E+00	1.4E-11
Mercury (80)	Hg-197	9.35E+01	7.41E-03	4.2E-10 (V)	1.28E-06	6.03E-11	1.11E-10	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	2.6E+04	4.7E+07	4.4E+01	2.9E+01	3.3E+01	1.8E+02	9.8E+02	.	5.8E+03	.	1.1E+00	4.3E-11
Mercury (80)	Hg-197m	2.55E+02	2.72E-03	5.3E-10 (V)	7.04E-06	1.21E-10	2.23E-10	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	2.8E+04	1.0E+08	5.6E+01	3.9E+01	4.5E+01	2.5E+02	1.3E+03	.	7.8E+03	.	1.4E+01	2.1E-11
Mercury (80)	Hg-199m	8.54E+03	8.12E-05	1.6E-11 (V)	1.54E-05	2.53E-12	4.11E-12	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	5.2E+07	1.1E+11	8.6E+02	6.3E+04	7.2E+04	4.0E+05	2.1E+06	.	1.3E+07	.	8.4E+02	3.8E-11
Mercury (80)	Hg-203	5.43E+00	1.28E-01	6.6E-10 (V)	2.49E-05	1.21E-10	2.20E-10	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	6.1E+02	1.7E+06	3.4E-01	8.3E-01	9.6E-01	5.3E+00	2.8E+01	.	1.7E+02	.	1.8E-01	1.3E-11
Mercury (80)	Hg-205	7.00E+04	9.89E-06	0.00E+00	6.66E-07	0.00E+00	0.00E+00	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	.	.	1.6E+05	.	.	.	.	.	.	.	1.6E+05	9.2E-10
Mercury (80)	Hg-206	4.47E+04	1.55E-05	0.00E+00	1.31E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	.	.	5.3E+03	.	.	.	.	.	.	.	5.3E+03	4.7E-11
Mercury (80)	Hg-207	1.26E+05	5.52E-06	0.00E+00	3.57E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-01	1.00E+00	6.30E+03	6.10E+03	1.00E-02	5.00E-04	.	3.00E-02	.	.	.	5.5E+02	.	.	.	.	.	.	.	5.5E+02	1.7E-12
Holmium (67)	Ho-150	2.85E+05	2.44E-06	0.00E+00	2.32E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	.	.	1.9E+03	.	.	.	.	.	.	.	1.9E+03	1.9E-12
Holmium (67)	Ho-153	1.81E+05	3.82E-06	0.00E+00	1.20E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	.	.	2.3E+03	.	.	.	.	.	.	.	2.3E+03	3.8E-12
Holmium (67)	Ho-153m	1.92E+05	3.61E-06	0.00E+00	1.21E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	.	.	5.0E+01	.	.	.	.	.	.	.	5.0E+01	3.8E-12
Holmium (67)	Ho-154	3.10E+04	2.24E-05	6.8E-13 (S)	2.29E-04	2.53E-12	3.77E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	2.0E+08	9.5E+12	2.1E+02	4.9E+05	9.4E+06	2.4E+07	2.2E+08	.	.	.	2.1E+02	2.0E-12
Holmium (67)	Ho-154m	1.17E+05	5.90E-06	0.00E+00	2.87E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	.	.	6.3E+02	.	.	.	.	.	.	.	6.3E+02	1.6E-12
Holmium (67)	Ho-155	7.59E+03	9.13E-05	1.7E-12 (S)	6.94E-05	4.32E-12	7.16E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	2.6E+07	9.6E+11	1.7E+02	7.0E+04	1.4E+06	3.5E+06	3.2E+07	.	.	.	1.7E+02	6.7E-12
Holmium (67)	Ho-156	6.50E+03	1.07E-04	3.4E-12 (S)	2.63E-04	9.32E-12	1.52E-11	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	1.1E+07	4.1E+11	3.8E+01	2.8E+04	5.4E+05	1.4E+06	1.3E+07	.	.	.	3.8E+01	1.8E-12
Holmium (67)	Ho-157	2.89E+04	2.40E-05	2.3E-13 (S)	6.09E-05	6.30E-13	9.80E-13	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	7.3E+08	2.7E+13	7.3E+02	1.8E+06	3.5E+07	9.2E+07	8.3E+08	.	.	.	7.3E+02	7.7E-12
Holmium (67)	Ho-159	1.10E+04	6.29E-05	3.6E-13 (S)	3.38E-05	7.12E-13	1.10E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	2.5E+08	6.4E+12	5.1E+01	6.1E+05	1.2E+07	3.1E+07	2.8E+08	.	.	.	5.0E+02	1.4E-11
Holmium (67)	Ho-160	1.42E+04	4.87E-05	6.1E-13 (S)	2.07E-04	1.45E-12	2.18E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	1.6E+08	4.9E+12	1.1E+02	3.9E+05	7.6E+06	2.0E+07	1.8E+08	.	.	.	1.1E+02	2.3E-12
Holmium (67)	Ho-161	2.45E+03	2.83E-04	6.4E-13 (S)	1.46E-06	1.92E-12	3.38E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	1.8E+07	8.1E+11	2.6E+03	5.1E+04	9.8E+05	2.5E+06	2.3E+07	.	.	.	2.5E+00	3.1E-10
Holmium (67)	Ho-162	2.43E+04	2.85E-05	1.6E-13 (S)	1.58E-05	2.16E-13	3.24E-13	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	1.9E+05	3.3E+13	2.4E+03	4.5E+06	8.7E+07	2.2E+08	2.0E+09	.	.	.	2.4E+03	3.1E-11
Holmium (67)	Ho-162m	5.44E+03	1.27E-04	1.4E-12 (S)	6.50E-05	2.71E-12	4.45E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	3.0E+07	8.1E+11	1.3E+02	8.0E+04	1.5E+06	4.0E+06	3.6E+07	.	.	.	1.3E+02	7.5E-12
Holmium (67)	Ho-163	1.52E-04	4.57E+03	3.2E-11 (F)	0.00E+00	7.11E-13	1.28E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	4.9E+02	1.6E-05	.	1.4E+00	2.7E+01	7.0E+01	6.3E+02	.	.	.	1.3E+00	2.7E-06
Holmium (67)	Ho-164	1.26E+04	5.52E-05	4.7E-13 (S)	7.48E-07	6.58E-13	1.04E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	3.0E+08	5.6E+12	2.6E+04	7.6E+05	1.5E+07	3.8E+07	3.4E+08	.	.	.	2.5E+04	6.4E-10
Holmium (67)	Ho-164m	9.59E+03	7.23E-05	1.0E-12 (S)	9.75E-07	1.61E-12	2.71E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	8.8E+07	2.0E+12	1.5E+04	2.4E+05	4.6E+06	1.2E+07	1.1E+08	.	.	.	1.4E+04	4.7E-10
Holmium (67)	Ho-166	2.27E+02	3.06E-03	1.1E-10 (S)	3.25E-06	3.66E-10	6.79E-10	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	8.3E+03	4.4E+08	1.1E+02	2.5E+01	4.8E+02	1.2E+03	1.1E+04	.	.	.	1.9E+01	2.7E-11
Holmium (67)	Ho-166m	5.78E-04	1.20E+03	2.1E-08 (F)	1.93E-04	3.19E-10	5.40E-10	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	1.2E+00	2.6E+02	2.0E-04	3.1E-03	6.1E-02	1.6E-01	1.4E+00	.	.	.	1.9E-04	1.1E-10
Holmium (67)	Ho-167	1.96E+03	3.54E-04	6.8E-12 (S)

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCiL)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Indium (49)	In-110	1.24E+01	5.59E-04	7.5E-12 (S)	3.88E-04	2.89E-11	4.69E-11	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	6.6E+05	3.5E+10	4.9E+00	1.7E+03	4.3E+01	4.3E+04	2.3E+05	.	.	.	4.4E+00	7.6E-13
Indium (49)	In-110m	5.27E+03	1.31E-04	3.4E-12 (S)	1.96E-04	1.08E-11	1.81E-11	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	7.2E+06	3.3E+11	4.2E+01	1.9E+04	4.8E+02	4.9E+05	2.6E+06	.	.	.	3.8E+01	1.5E-12
Indium (49)	In-111	9.02E+01	7.68E-03	2.3E-11 (S)	3.85E-05	5.03E-11	8.83E-11	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	2.5E+04	8.1E+08	3.6E+00	7.1E+01	1.8E+00	1.8E+03	9.7E+03	.	.	.	1.2E+00	2.8E-12
Indium (49)	In-111m	4.73E+04	1.46E-05	0.00E+00	5.55E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	.	.	1.3E+03	.	.	.	.	.	.	.	.	1.3E+03	6.0E-12
Indium (49)	In-112	2.43E+04	2.85E-05	3.3E-13 (S)	3.11E-05	6.54E-13	9.85E-13	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	6.1E+08	1.6E+13	1.2E+03	1.5E+06	3.7E+04	3.7E+07	2.0E+08	.	.	.	1.2E+03	1.0E-11
Indium (49)	In-112m	1.77E+04	3.91E-05	1.0E-12 (S)	1.87E-06	1.23E-12	1.94E-12	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	2.3E+08	3.6E+12	1.5E+04	5.7E+05	1.4E+04	1.4E+07	7.8E+07	.	.	.	7.2E+03	8.8E-11
Indium (49)	In-113m	3.66E+03	1.89E-04	1.5E-12 (S)	2.88E-05	3.71E-12	6.41E-12	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	1.4E+07	5.1E+11	2.0E+02	3.9E+04	9.8E+02	9.8E+05	5.3E+06	.	.	.	1.6E+02	9.8E-12
Indium (49)	In-114	3.04E+05	2.28E-06	0.00E+00	6.34E-07	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	.	.	7.4E+05	.	.	.	.	.	.	.	7.4E+05	5.4E-10
Indium (49)	In-114m	5.11E+00	1.36E-01	1.4E-09 (S)	7.95E-06	9.85E-10	1.81E-09	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	7.0E+01	7.9E+05	9.9E-01	2.0E-01	5.2E-03	5.2E+00	2.8E+01	.	.	.	5.0E-03	2.2E-13
Indium (49)	In-114m+D	5.11E+00	1.36E-01	1.4E-09 (S)	8.55E-06	9.85E-10	1.81E-09	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	7.0E+01	7.9E+05	9.2E-01	2.0E-01	5.2E-03	5.2E+00	2.8E+01	.	.	.	5.0E-03	2.2E-13
Indium (49)	In-115	1.57E-15	4.41E+14	1.1E-08 (F)	7.42E-09	1.17E-09	1.51E-09	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	4.1E-01	4.8E+02	5.8E+00	8.4E-04	2.1E-05	2.1E-02	1.2E-01	.	.	.	2.1E-05	2.9E+00
Indium (49)	In-115m	1.35E+03	5.12E-04	6.3E-12 (S)	1.71E-05	1.76E-11	3.19E-11	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	1.1E+06	4.5E+10	1.2E+02	3.0E+03	7.6E+01	7.7E+04	4.1E+05	.	.	.	4.6E+01	7.6E-12
Indium (49)	In-116m	6.69E+03	1.04E-04	2.5E-12 (S)	3.31E-04	6.14E-12	9.81E-12	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	1.7E+07	5.6E+11	3.1E+01	4.3E+04	1.1E+03	1.1E+06	5.9E+06	.	.	.	3.0E+01	1.0E-12
Indium (49)	In-117	8.43E+03	8.22E-05	1.6E-12 (S)	7.86E-05	2.62E-12	4.19E-12	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	5.0E+07	1.1E+12	1.7E+02	1.3E+05	3.2E+03	3.2E+06	1.7E+07	.	.	.	1.6E+02	4.2E-12
Indium (49)	In-117m	3.13E+03	2.21E-04	6.7E-12 (S)	9.06E-06	1.73E-11	3.09E-11	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	2.5E+06	9.8E+10	5.4E+02	7.2E+03	1.8E+02	1.8E+05	9.8E+05	.	.	.	1.3E+02	9.6E-12
Indium (49)	In-118	4.37E+06	1.59E-07	0.00E+00	1.26E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	.	.	5.4E+05	.	.	.	.	.	.	.	5.4E+05	2.8E-11
Indium (49)	In-118m	8.35E+04	8.30E-06	0.00E+00	3.63E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	.	.	3.6E+02	.	.	.	.	.	.	.	3.6E+02	9.8E-13
Indium (49)	In-119	1.52E+05	4.57E-06	0.00E+00	9.56E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	.	.	2.5E+03	.	.	.	.	.	.	.	2.5E+03	3.7E-12
Indium (49)	In-119m	2.02E+04	3.42E-05	9.5E-13 (S)	8.93E-06	2.79E-12	4.26E-12	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	1.2E+08	4.5E+12	3.5E+03	2.9E+05	7.2E+03	7.2E+06	3.9E+07	.	.	.	2.3E+03	2.7E-11
Indium (49)	In-121	9.46E+05	7.32E-07	0.00E+00	1.18E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	.	.	1.2E+04	.	.	.	.	.	.	.	1.2E+04	3.1E-12
Indium (49)	In-121m	9.39E+04	7.38E-06	0.00E+00	7.45E-06	0.00E+00	0.00E+00	1.36E+09	3.00E-03	1.00E-01	4.80E+02	1.00E+04	4.00E-03	2.00E-04	.	.	.	.	.	2.0E+04	.	.	.	.	.	.	.	2.0E+04	4.9E-11
Iridium (77)	Ir-180	2.43E+05	2.85E-06	0.00E+00	1.88E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	.	.	2.0E+03	.	.	.	.	.	.	.	2.0E+03	2.9E-12
Iridium (77)	Ir-182	2.43E+04	2.85E-05	1.4E-12 (S)	1.66E-04	4.07E-12	6.42E-12	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	9.4E+07	3.5E+12	2.3E+02	2.1E+05	3.7E+04	9.4E+06	2.5E+09	.	.	.	2.2E+02	3.3E-12
Iridium (77)	Ir-183	6.28E+03	1.10E-04	2.7E-12 (S)	1.47E-04	6.47E-12	1.08E-11	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	1.4E+07	4.8E+11	6.6E+01	3.5E+04	6.0E+03	1.5E+06	4.1E+08	.	.	.	6.5E+01	3.7E-12
Iridium (77)	Ir-184	1.96E+03	3.53E-04	9.9E-12 (S)	2.41E-04	2.82E-11	4.88E-11	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	1.0E+06	4.2E+10	1.3E+01	2.5E+03	4.3E+02	1.1E+05	3.0E+07	.	.	.	1.2E+01	2.2E-12
Iridium (77)	Ir-185	4.22E+02	1.64E-03	2.3E-11 (S)	1.06E-04	6.14E-11	1.09E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	9.6E+04	3.8E+09	6.2E+00	2.5E+02	4.3E+01	1.1E+04	2.9E+06	.	.	.	5.3E+04	4.5E-12
Iridium (77)	Ir-186	3.65E+02	1.90E-03	3.3E-11 (S)	2.03E-04	9.64E-11	1.69E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	5.4E+04	2.3E+09	2.8E+00	1.4E+02	2.4E+01	6.0E+03	1.6E+06	.	.	.	2.4E+00	2.4E-12
Iridium (77)	Ir-186m	3.16E+03	2.19E-04	3.5E-12 (S)	1.58E-04	9.81E-12	1.66E-11	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	4.7E+06	1.9E+11	3.1E+01	1.2E+04	2.0E+03	5.1E+05	1.4E+08	.	.	.	3.0E+03	3.5E-12
Iridium (77)	Ir-187	5.78E+02	1.20E-03	7.6E-12 (S)	3.47E-05	2.14E-11	3.82E-11	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	3.8E+05	1.6E+10	2.6E+01	9.7E+02	1.7E+02	4.3E+04	1.2E+07	.	.	.	2.2E+01	1.4E-11
Iridium (77)	Ir-188	1.46E+02	4.74E-03	4.1E-11 (S)	2.82E-04	1.09E-10	1.85E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	2.0E+04	7.5E+08	8.0E-01	4.8E+01	8.3E+00	2.1E+03	5.7E+05	.	.	.	7.2E-01	1.8E-12
Iridium (77)	Ir-189	1.92E+01	3.62E-02	5.9E-11 (S)	4.32E-06	5.65E-11	1.04E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	4.6E+03	6.9E+07	6.9E+00	1.2E+01	2.1E+00	5.4E+02	1.4E+05	.	.	.	1.4E+00	2.7E-11
Iridium (77)	Ir-190	2.15E+01	3.23E-02	1.4E-10 (S)	1.68E-04	1.67E-10	2.89E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	1.8E+03	3.2E+07	2.0E-01	4.6E+00	8.0E-01	2.0E+02	5.5E+04	.	.	.	1.5E-01	2.6E-12
Iridium (77)	Ir-190m	5.42E+03	1.28E-04	6.2E-13 (S)	1.92E-11	9.60E-13	1.66E-12	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	8.1E+07	1.8E+12	4.4E+08	2.0E+05	3.5E+04	8.9E+06	2.4E+09	.	.	.	3.0E+04	2.0E-09
Iridium (77)	Ir-190n	1.97E+03	3.52E-04	6.2E-13 (S)	2.46E-06	1.67E-11	2.85E-11	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	1.7E+06	6.7E+11	1.4E+01	4.2E+03	7.3E+02	1.9E+05	5.0E+07	.	.	.	4.1E+02	7.8E-11
Iridium (77)	Ir-191m	4.42E+06	1.57E-07	0.00E+00	4.32E-06	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	.	.	1.6E+06	.	.	.	.	.	.	.	1.6E+06	1.3E-10
Iridium (77)	Ir-192	3.43E+00	2.02E-01	6.5E-10 (S)	9.15E-05	2.89E-10	5.22E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	1.6E+02	1.1E+06	5.8E-02	4.2E-01	7.4E-02	1.9E+01	5.0E+03	.	.	.	3.0E-02	3.3E-12
Iridium (77)	Ir-192m	2.51E+05	2.76E-06	0.00E+00	4.83E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	.	.	8.1E+07	.	.	.	.	.	.	.	8.1E+07	1.2E-07
Iridium (77)	Ir-192n	2.88E-03	2.41E+02	4.3E-09 (S)	3.16E-08	2.06E-10	3.72E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	1.8E+00	1.3E+03	1.3E+00	4.6E-03	8.0E-04	2.0E-01	5.5E+01	.	.	.	6.8E-04	8.8E-11
Iridium (77)	Ir-193m	2.40E+01	2.88E-02	1.2E-10 (S)	1.25E-08	7.75E-11	1.44E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	4.1E+03	4.2E+07	3.0E+03	1.1E+01	1.9E+00	4.9E+02	1.3E+05	.	.	.	1.6E+00	2.5E-11
Iridium (77)	Ir-194	3.15E+02	2.20E-03	9.2E-11 (S)	1.11E-05	3.42E-10	6.34E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	1.2E+04	7.2E+08	4.4E+01	3.3E+01	5.7E+00	1.5E+03	3.9E+05	.	.	.	4.4E+00	5.2E-12
Iridium (77)	Ir-194m	1.48E+00	4.68E-01	1.2E-09 (S)	2.73E-04	3.25E-10	5.60E-10	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	6.6E+01	2.6E+05	8.4E-03	1.6E-01	2.8E-02	7.2E+00	1.9E+03	.	.	.	6.2E-03	1.6E-12
Iridium (77)	Ir-195	2.43E+03	2.85E-04	6.5E-12 (S)	3.04E-05	1.56E-11	2.81E-11	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	2.1E+06	7.9E+10	1.2E+03	5.6E+03	9.7E+02	2.5E+05	6.6E+07	.	.	.	4.9E+02	7.7E-11
Iridium (77)	Ir-195m	1.60E+03	4.34E-04	1.2E-11 (S)	4.01E-05	1.65E-11	4.80E-11	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	8.3E+05	2.8E+10	6.2E+01	2.2E+03	3.7E+02	9.5E+04	2.6E+07	.	.	.	5.2E+01	1.2E-11
Iridium (77)	Ir-196	4.20E+05	1.65E-06	0.00E+00	2.89E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	.	.	2.3E+04	.	.	.	.	.	.	.	2.3E+04	2.0E-11
Iridium (77)	Ir-196m	4.34E+03	1.60E-04	5.7E-12 (S)	2.88E-04	1.24E-11	2.05E-11	1.36E+09	3.00E-02	2.00E-01	3.00E+00	1.00E+01	2.00E-03	2.00E-06	.	.	.	5.3E+06	1.6E+11	2.3E+01	1.3E+04	2.2E+03	5.5E+05	1.5E+08	.	.	.	2.3E+01	2.0E-12
Potassium (19)	K-38	4.77E+04	1.45E-05	0.00E+00	4.35E-04	0.00E+00	0.00E+00	1.36E+09	6.44E-01	7.40E-01	1.30E+01	3.20E+03	2.00E-02	7.00E-03	.	.	1.00E+00	.	.	1.7E+02	.	.	.	.	.	.	.	1.7E+02	2.6E-13
Potassium (19)	K-40	5.54E-10	1.25E+09	6.0E-09 (S)	2.16E-05	9.24E-10	1.58E-09	1.36E+09	6.44E-01	7.40E-01	1.30E+01	3.20E+03	2.00E-02	7.00E-03	.	.	1.00E+00	3.9E-01	8.7E+02	1.8E-03	3.1E-04	2.3E-06	2.0E-03	1.5E-03	.	.	7.5E-03	2.2E-06	3.2E-07
Potassium (19)	K-42	4.91E+02	1.41E-03	3.4E-11 (S)	3.98E-05	4.70E-11	7.79E-11	1.36E+09	6.44E-01	7.40E-01	1.30E+01	3.20E+03	2.00E-02	7.00E-03	.	.	1.00E+00	1.6E+05	3.1E+09	1.9E+01	1.2E+02	8.8E-01	7.8E+02	5.9E+02	.	.	2.9E+03	8.3E-01	1.4E-13
Potassium (19)	K-43	2.72E+02	2.55E-03	2.9E-11 (S)	1.14E-04	2.85E-11	4.57E-11	1.36E+09	6.44E-01	7.40E-01	1.30E+01	3.20E+03	2.00E-02	7.00E-03	.	.	1.00E+00	1.5E+05	2.0E+09	3.7E+00	1.1E+02	8.0E-01	7.1E+02	5.4E+02	.	.	2.6E+03	6.5E-01	2.0E-13
Potassium (19)	K-44	1.65E+04	4.21E-05	1.7E-12 (S)	3.35E-04	5.11E-12	7.58E-12	1.36E+09	6.44E-01	7.40E-01	1.30E+01	3.20E+03	2.00E-02	7.00E-03	.	.	1.00E+00	5.4E+07	2.1E+12	7.6E+01	3.7E+04	2.7E+02	2.4E+05	1.8E+05	.	.	8.9E+05	5.9E+01	3.1E-13
Potassium (19)	K-45	2.11E+04	3.29E-05	1.0E-12 (S)	2.52E-04	2.98E-12	4.41E-12	1.36E+09	6.44E-01	7.40E-01	1.30E+01	3.20E+03	2.00E-02	7.00E-03	.	.	1.00E+00	1.2E+08	4.3E+12	7.8E+01	8.1E+04	5.9E+02	5.3E+05	4.0E+05	.	.	2.0E+06	1.1E+02	4.4E-13
Potassium (19)	K-46	2.08E+05	3.33E-06	0.00E+00	4.13E-04	0.00E+00	0.00E+00	1.36E+09	6.44E-01	7.40E-01	1.30E+01	3.20E+03	2.00E-02	7.00E-03	.	.	1.00E+00	.	.	7.8E+02	.	.	.	.	.	.	.	7.8E+02	3.3E-13
Krypton (36)	Kr-74	3.17E+04	2.19E-05	0.00E+00	1.20E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	4.1E+02	.	.	.	.	.	.	.	4.1E+02	1.9E-12
Krypton (36)	Kr-75	8.49E+04	8.16E-06	0.00E+00	1.49E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	8.8E+02	.	.	.	.	.	.	.	8.8E+02	1.5E-12
Krypton (36)	Kr-76	4.10E+02	1.69E-03	0.00E+00	4.58E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.4E+01	.	.	.	.	.	.	.	1.4E+01	5.0E-12
Krypton (36)	Kr-76+D	4.10E+02	1.69E-03	0.00E+00	4.58E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.4E+01	.	.	.	.	.	.	.	1.4E+01	5.0E-12
Krypton (36)	Kr-77	4.90E+03	1.42E-04	0.00E+00	1.17E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	6.5E+01	.	.	.	.	.	.	.	6.5E+01	2.0E-12
Krypton (36)	Kr-79	1.73E+02	4.00E-03	0.00E+00	2.89E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	9.3E+00	.	.	.	.	.	.	.	9.3E+00	8.2E-12
Krypton (36)	Kr-81	3.03E-06	2.29E+05	0.00E+00	8.80E-08	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	4.4E-01	.	.	.	.	.	.	.	4.4E-01	2.3E-05
Krypton (36)	Kr-81m	1.67E+06	4.15E-07	0.00E+00	1.24E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	2.1E+05	.	.	.	.	.	.	.	2.1E+05	2.0E-11
Krypton (36)	Kr-83m	3.32E+03	2.09E-04	0.00E+00	3.38E-10	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.5E+07	.	.	.	.	.	.	.	1.5E+07	7.4E-07
Krypton (36)	Kr-85	6.44E-02	1.08E+01	0.00E+00	2.87E-07	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	3.8E-01	.	.	.	.	.	.	.	3.8E-01	9.6E-10
Krypton (36)	Kr-85m	1.36E+03	5.11E-04	0.00E+00	1.47E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.4E+02	.	.	.	.	.	.	.	1.4E+02	1.7E-11
Krypton (36)	Kr-87	4.77E+01	1.45E-04	0.00E+00	1.08E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	6.8E+01	.	.	.	.	.	.	.	6.8E+01	2.4E-12
Krypton (36)	Kr-88	2.14E+03	3.24E-04	0.00E+00	2.75E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.2E+01	.	.	.	.	.	.	.	1.2E+01	9.6E-13
Krypton (36)	Kr-89	1.16E+05	5.99E-06	0.00E+00	2.65E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	6.8E+02	.	.	.	.	.	.	.	6.8E+02	1.0E-12
Lanthanum (57)	La-128	7.03E+04	9.86E-06	0.00E+00	3.50E-04	0.00E+00	0.00E+00	1.36E+09	1.74E-05	2.00E-05	5.30E+03	3.70E+01	1.30E-04	6.00E-05	.	1.00E-01	9.00E-03	.	.	3.1E+02	.	.	.	.	.	.	.	3.1E+02	1.1E-12
Lanthanum (57)	La-129	3.14E+04	2.21E-05	6.4E-13 (S)	1.06E-04	2.05E-12	3.22E-12	1.36E+09	1.74E-05	2.00E-05	5.30E+03	3.70E+01	1.30E-04	6.00E-05	.	1.00E-01	9.00E-03	2.4E+08	1.0E+13	4.6E+02	6.1E+05	4.5E+07	6.4E+08	3.8E+08	.	6.5E+07	1.4E+09	4.6E+02	3.7E-12
Lanthanum (57)	La-130	4.19E+04	1.66E-05	0.00E+00	2.77E-04	0.00E+00	0.00E+00	1.36E+09	1.74E-05	2.00E-05	5.30E+03	3.70E+01	1.30E-04	6.00E-05	.	1.00E-01	9.00E-03	.	.	2.3E+02	.	.	.	.	.	.	.	2.3E+02	1.4E-12
Lanthanum (57)	La-131	6.17E+03	1.12E-04	1.6E-12 (S)	7.35E-05	3.43E-12	5.65E-12	1.36E+09	1.74E-05	2.00E-05	5.30E+03	3.70E+01	1.30E-04	6.00E-05	.	1.00E-01	9.00E-03	2.7E+07	8.3E+11	1.3E+02	7.2E+04	5.3E+06	7.5E+07	4.4E+07	.	7.6E+06	1.7E+08	1.3E+02	5.3E-12
Lanthanum (57)	La-132	1.26E+03	5.48E-04	1.9E-11 (S)	2.55E-04	7.43E-11	1.33E-10	1.36E+09	1.74E-05	2.00E-05	5.30E+03	3.70E+01	1.30E-04	6.00E-05	.	1.00E-01	9.00E-03	2.4E+05	1.4E+10	7.7E+00	6.8E+02	5.0E+04	7

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCiL)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Lutetium (71)	Lu-180	6.39E+04	1.08E-05	0.00E+00	1.93E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	5.10E+03	.	2.00E-03	6.00E-05	.	.	.	.	.	5.1E+02	.	.	.	.	.	.	.	.	5.1E+02	2.8E-12
Lutetium (71)	Lu-181	1.04E+05	6.66E-06	0.00E+00	6.56E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	5.10E+03	.	2.00E-03	6.00E-05	.	.	.	.	.	2.5E+03	.	.	.	.	.	.	.	.	2.5E+03	8.3E-12
Magnesium (12)	Mg-27	3.85E+04	1.80E-05	0.00E+00	1.14E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-02	1.00E-01	3.80E+00	3.70E+01	3.00E-03	8.00E-03	.	.	.	.	.	5.2E+02	.	.	.	.	.	.	.	.	5.2E+02	7.1E-13
Magnesium (12)	Mg-28	2.90E+02	2.39E-03	1.5E-10 (S)	1.77E-04	4.45E-10	8.29E-10	1.36E+09	3.00E-02	1.00E-01	3.80E+00	3.70E+01	3.00E-03	8.00E-03	.	.	.	8.7E+03	4.2E+08	2.5E+00	2.3E+01	1.4E+00	8.7E+02	8.8E+01	.	.	.	.	8.5E+01	1.6E-13
Magnesium (25)	Mn-50m	2.08E+05	3.33E-06	0.00E+00	6.00E-04	0.00E+00	0.00E+00	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	.	.	5.4E+02	.	.	.	.	.	.	.	.	5.4E+02	2.5E-13
Manganese (25)	Mn-51	7.88E+03	8.79E-05	2.7E-12 (S)	1.18E-04	7.96E-12	1.30E-11	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	1.5E+07	6.1E+11	1.0E+02	2.0E+04	1.0E+05	4.5E+06	1.8E+07	2.2E+06	1.2E+08	1.1E+07	1.0E+02	1.3E-12
Manganese (25)	Mn-52	4.52E+01	1.53E-02	1.3E-10 (S)	4.51E-04	2.45E-10	4.10E-10	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	2.7E+03	7.5E+07	9.6E+01	8.8E+00	3.3E+03	8.4E+02	3.3E+03	4.1E+02	2.3E+04	2.1E+03	1.5E+01	3.3E-13
Manganese (25)	Mn-52m	1.73E+04	4.01E-05	1.4E-12 (S)	3.11E-04	4.73E-12	7.20E-12	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	6.0E+07	7.2E+12	8.6E+01	7.5E+04	3.8E+05	1.7E+07	6.5E+03	8.0E+06	4.6E+08	4.1E+07	8.6E+01	5.0E-13
Manganese (25)	Mn-53	1.87E-07	3.70E+06	2.6E-11 (S)	0.00E+00	6.01E-12	1.10E-11	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	5.6E+01	2.0E+05	.	8.6E-02	4.3E-01	1.9E+01	7.4E+01	9.1E+00	5.2E+02	4.7E+01	7.0E-02	3.9E-05
Manganese (25)	Mn-54	8.10E-01	8.55E-01	3.3E-10 (S)	1.05E-04	8.39E-11	1.33E-10	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	1.5E+02	5.2E+05	1.2E-02	2.0E-01	1.0E+00	4.4E+01	1.7E+02	2.1E+01	1.2E+03	1.1E+02	1.1E-02	1.4E-12
Manganese (25)	Mn-56	2.35E+03	2.94E-04	1.2E-11 (S)	2.28E-04	4.01E-11	7.10E-11	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	8.2E+05	4.2E+10	1.6E+01	1.2E+03	6.1E+03	2.7E+05	1.0E+06	1.3E+05	7.3E+06	6.6E+05	1.6E+01	7.3E-13
Manganese (25)	Mn-57	2.56E+05	2.71E-06	0.00E+00	1.19E-05	0.00E+00	0.00E+00	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	.	.	3.3E+04	.	.	.	.	.	.	.	.	3.3E+04	1.4E-11
Manganese (25)	Mn-58m	3.35E+05	2.07E-06	0.00E+00	3.19E-04	0.00E+00	0.00E+00	1.36E+09	2.44E-01	2.80E-01	1.20E+03	2.40E+02	6.00E-04	4.10E-05	5.30E-03	1.90E-03	4.20E-02	.	.	1.6E+03	.	.	.	.	.	.	.	.	1.6E+03	5.5E-13
Molybdenum (42)	Mo-101	2.49E+04	2.78E-05	1.2E-12 (S)	1.92E-04	2.50E-12	3.69E-12	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	1.7E+08	4.3E+12	2.0E+02	1.1E+05	4.3E+06	1.4E+07	3.4E+06	.	7.3E+06	4.1E+06	2.0E+02	1.6E-12
Molybdenum (42)	Mo-102	3.22E+04	2.15E-05	1.2E-12 (S)	1.84E-06	3.86E-12	5.74E-12	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	1.4E+08	5.6E+12	2.7E+04	9.1E+04	3.6E+06	1.2E+07	2.9E+06	.	6.1E+06	3.4E+06	2.0E+04	1.3E-10
Molybdenum (42)	Mo-89	1.73E+05	4.01E-06	0.00E+00	1.49E-04	0.00E+00	0.00E+00	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	.	.	1.8E+03	.	.	.	.	.	.	.	.	1.8E+03	1.8E-12
Molybdenum (42)	Mo-90	1.09E+03	6.35E-04	3.7E-11 (S)	9.31E-05	2.33E-11	3.54E-11	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	7.7E+05	6.2E+09	1.8E+01	5.1E+02	2.0E+04	6.6E+04	1.6E+04	.	3.4E+04	1.9E+04	1.7E+01	2.8E-12
Molybdenum (42)	Mo-91	2.35E+04	2.95E-05	1.1E-12 (S)	1.17E-04	3.50E-12	5.20E-12	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	1.1E+08	4.7E+12	3.1E+02	7.3E+04	2.9E+06	9.5E+06	2.3E+06	.	4.9E+06	2.8E+06	3.1E+02	2.3E-12
Molybdenum (42)	Mo-91m	3.38E+05	2.05E-06	0.00E+00	1.76E-04	0.00E+00	0.00E+00	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	.	.	3.0E+03	.	.	.	.	.	.	.	.	3.0E+03	1.6E-12
Molybdenum (42)	Mo-93	1.73E-04	4.00E+03	1.5E-10 (S)	5.74E-05	1.05E-10	1.31E-10	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	4.8E+00	3.5E+04	6.8E+00	2.6E-03	1.0E-01	3.4E-01	8.2E-02	.	1.7E-01	9.8E-02	2.3E-03	2.4E-09
Molybdenum (42)	Mo-93m	8.86E+02	7.82E-04	1.3E-11 (S)	3.03E-04	1.20E-11	1.79E-11	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	1.2E+06	1.4E+10	4.5E+00	8.0E+02	3.2E+04	1.0E+05	2.5E+04	.	5.4E+04	3.0E+04	4.5E+00	9.2E-13
Molybdenum (42)	Mo-99	9.21E+01	7.53E-03	1.3E-10 (S)	1.78E-05	5.70E-11	8.96E-11	1.36E+09	6.96E-01	8.00E-01	4.00E+01	1.90E+00	1.00E-03	1.10E-03	.	1.80E-01	6.40E-01	2.6E+04	1.5E+08	8.0E+00	1.8E+01	7.0E+02	2.3E+03	5.5E+02	.	1.2E+03	6.6E+02	5.3E+00	1.1E-11
Nitrogen (7)	N-13	3.66E+04	1.90E-05	0.00E+00	1.20E-04	0.00E+00	0.00E+00	1.36E+09	7.50E+00	2.00E+01	5.00E-01	1.50E+05	1.00E-02	1.00E-02	.	.	.	.	.	5.2E+02	.	.	.	.	.	.	.	.	5.2E+02	3.6E-13
Nitrogen (7)	N-16	3.07E+06	2.26E-07	0.00E+00	7.04E-04	0.00E+00	0.00E+00	1.36E+09	7.50E+00	2.00E+01	5.00E-01	1.50E+05	1.00E-02	1.00E-02	.	.	.	.	.	6.7E+03	.	.	.	.	.	.	.	.	6.7E+03	6.8E-14
Sodium (11)	Na-22	2.66E-01	2.60E+00	2.6E-09 (S)	2.79E-04	3.41E-10	5.14E-10	1.36E+09	8.70E-03	1.00E-02	3.40E+00	7.60E+01	1.50E-02	1.30E-02	.	7.00E+00	4.00E+00	1.3E+01	2.1E+04	1.5E-03	3.0E-02	7.2E-04	2.7E-01	8.5E-02	.	4.6E-02	1.6E-01	4.7E-04	7.5E-14
Sodium (11)	Na-24	4.06E+02	1.71E-03	3.3E-11 (S)	5.93E-04	4.44E-11	6.82E-11	1.36E+09	8.70E-03	1.00E-02	3.40E+00	7.60E+01	1.50E-02	1.30E-02	.	7.00E+00	4.00E+00	1.5E+05	2.6E+09	1.1E+00	3.5E+02	8.5E+00	3.2E+03	1.0E+03	.	5.4E+02	1.9E+03	9.4E-01	1.1E-13
Niobium (41)	Nb-87	9.71E+04	7.13E-06	0.00E+00	1.40E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	.	.	1.1E+03	.	.	.	.	.	.	.	.	1.1E+03	1.9E-12
Niobium (41)	Nb-88	2.51E+04	2.76E-05	1.4E-12 (S)	5.27E-04	4.75E-12	7.09E-12	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	8.8E+07	3.8E+12	7.4E+01	2.0E+05	5.5E+05	1.0E+11	1.8E+10	5.5E+08	7.2E+09	4.3E+09	7.4E+01	5.0E-13
Niobium (41)	Nb-88m	4.68E+04	1.48E-05	0.00E+00	5.21E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	.	.	1.4E+02	.	.	.	.	.	.	.	.	1.4E+02	5.1E-13
Niobium (41)	Nb-89	2.99E+03	2.32E-04	1.1E-11 (S)	1.76E-04	3.97E-11	7.00E-11	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	1.1E+06	5.5E+10	2.6E+01	2.9E+03	7.8E+03	1.5E+09	2.6E+08	7.8E+06	1.0E+08	6.1E+07	2.6E+01	1.5E-12
Niobium (41)	Nb-89m	5.52E+03	1.26E-04	4.9E-12 (S)	1.55E-04	1.50E-11	2.52E-11	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	5.4E+06	2.4E+11	5.5E+01	1.4E+04	3.8E+04	7.3E+09	1.3E+09	3.8E+07	5.0E+08	3.0E+08	5.5E+01	1.7E-12
Niobium (41)	Nb-90	4.16E+02	1.67E-03	6.5E-11 (S)	5.74E-04	2.21E-10	3.90E-10	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	2.6E+04	1.4E+09	1.1E+00	7.2E+01	1.9E+02	3.7E+07	6.4E+06	1.9E+05	2.5E+06	1.5E+06	1.1E+04	4.6E-13
Niobium (41)	Nb-91	1.02E-03	6.80E+02	1.4E-10 (S)	1.93E-07	1.06E-11	1.95E-11	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	3.3E+01	4.0E+04	2.0E-01	9.2E-02	2.5E-01	4.8E+04	8.2E+03	2.5E+02	3.3E+03	2.0E+03	5.0E-02	8.7E-09
Niobium (41)	Nb-91m	4.16E+00	1.67E-01	3.9E-10 (S)	3.28E-06	1.06E-10	1.97E-10	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	5.2E+02	2.2E+06	2.0E+00	1.5E+00	4.1E+00	7.8E+05	1.3E+05	4.0E+03	5.3E+04	3.2E+04	7.0E+01	3.0E-11
Niobium (41)	Nb-92	2.00E-08	3.47E+07	2.0E-09 (S)	1.87E-04	1.24E-10	2.02E-10	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	3.1E+00	2.6E+03	2.1E-04	7.7E-03	2.1E-02	4.0E+03	6.9E+02	2.1E+01	2.7E+02	1.6E+02	2.0E-04	1.8E-06
Niobium (41)	Nb-92m	2.49E+01	2.78E-02	3.9E-11 (S)	1.23E-04	6.41E-11	1.06E-10	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	5.8E+03	1.4E+08	3.1E-01	1.5E+01	4.0E+01	7.7E+06	1.3E+06	4.0E+04	5.3E+05	3.2E+05	3.0E-01	2.2E-12
Niobium (41)	Nb-93m	4.30E-02	1.61E+01	1.6E-10 (S)	1.03E-09	3.29E-11	6.08E-11	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	2.1E+01	6.7E+04	7.9E+01	6.1E-02	1.6E-01	3.1E+04	5.4E+03	1.6E+02	2.2E+03	1.3E+03	4.4E-02	1.9E-10
Niobium (41)	Nb-94	3.41E-05	2.03E+04	3.6E-09 (S)	1.95E-04	3.00E-10	5.24E-10	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	1.2E+00	1.5E+03	2.0E-04	3.2E-03	8.6E-03	1.7E+03	2.8E+02	8.6E+00	1.1E+02	6.8E+01	1.8E-04	9.8E-10
Niobium (41)	Nb-94m	5.82E+04	1.19E-05	0.00E+00	5.62E-07	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	.	.	1.6E+05	.	.	.	.	.	.	.	.	1.6E+05	5.0E-10
Niobium (41)	Nb-95	7.23E+00	9.59E-02	1.7E-10 (S)	9.53E-05	9.46E-11	1.64E-10	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	1.1E+03	8.8E+06	1.2E-01	2.9E+00	7.9E+00	1.5E+06	2.6E+05	7.9E+03	1.0E+05	6.2E+04	1.1E-01	2.8E-12
Niobium (41)	Nb-95m	7.01E+01	9.89E-03	1.0E-10 (S)	6.44E-06	1.56E-11	2.88E-11	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	6.0E+03	1.5E+08	1.7E+01	1.7E+01	4.6E+01	8.9E+06	1.5E+06	4.6E+04	6.1E+05	3.7E+05	7.2E+00	1.9E-11
Niobium (41)	Nb-96	2.60E+02	2.67E-03	6.6E-11 (S)	3.10E-04	1.96E-10	3.46E-10	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	1.9E+04	8.3E+08	1.3E+00	5.1E+01	1.4E+02	2.6E+07	4.5E+06	1.4E+05	1.8E+06	1.1E+06	1.3E+04	9.0E-13
Niobium (41)	Nb-97	5.05E+03	1.37E-04	3.1E-12 (S)	8.14E-05	7.55E-12	1.28E-11	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	9.8E+06	3.4E+11	9.6E+01	2.6E+04	6.9E+04	1.3E+10	2.3E+09	6.9E+07	9.1E+08	5.4E+08	9.6E+01	3.6E-12
Niobium (41)	Nb-98m	7.10E+03	9.76E-05	3.4E-12 (S)	3.66E-04	1.01E-11	1.62E-11	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	1.1E+07	4.4E+11	3.0E+01	2.7E+04	7.3E+04	1.4E+10	2.4E+09	7.3E+07	9.5E+08	5.7E+08	3.0E+01	8.0E-13
Niobium (41)	Nb-99	1.46E+06	4.76E-07	0.00E+00	1.46E-05	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	.	.	1.5E+05	.	.	.	.	.	.	.	.	1.5E+05	2.0E-11
Niobium (41)	Nb-99m	1.40E+05	4.95E-06	0.00E+00	1.06E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	1.50E+03	3.00E+02	2.60E-07	4.10E-07	2.00E-04	3.00E-04	1.00E-03	.	.	2.0E+03	.	.	.	.	.	.	.	.	2.0E+03	2.8E-12
Neodymium (60)	Nd-134	4.29E+04	1.62E-05	0.00E+00	5.71E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	.	.	1.2E+03	.	.	.	.	.	.	.	.	1.2E+03	7.0E-12
Neodymium (60)	Nd-135	2.94E+04	2.36E-05	1.4E-12 (S)	1.45E-04	4.16E-12	6.44E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	1.1E+08	4.3E+12	3.1E+02	2.8E+05	9.5E+05	1.4E+07	1.3E+08	.	2.6E+07	1.6E+10	3.1E+02	2.8E-12
Neodymium (60)	Nd-136	7.19E+03	9.64E-05	3.6E-12 (S)	2.64E-05	1.03E-11	1.72E-11	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	1.0E+07	4.2E+11	4.2E+02	2.8E+04	9.4E+04	1.4E+06	1.3E+07	.	2.6E+06	1.5E+09	4.1E+02	1.5E-11
Neodymium (60)	Nd-137	9.46E+03	7.32E-05	1.9E-12 (S)	1.43E-04	5.73E-12	9.55E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	2.5E+07	1.1E+12	1.0E+02	6.5E+04	2.2E+05	3.3E+06	3.0E+07	.	6.1E+06	3.6E+05	1.0E+02	2.9E-12
Neodymium (60)	Nd-138	1.20E+03	5.75E-04	3.4E-11 (S)	1.85E-06	1.35E-10	2.47E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	1.2E+05	7.5E+09	1.0E+03	3.5E+02	1.2E+03	1.8E+04	1.6E+05	.	3.3E+04	2.0E+07	2.1E+02	4.7E-11
Neodymium (60)	Nd-139	1.23E+04	5.65E-05	6.7E-13 (S)	5.11E-05	1.98E-12	3.25E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	9.4E+07	3.9E+12	3.7E+02	2.5E+05	8.3E+05	1.2E+07	1.1E+08	.	2.3E+07	1.4E+10	3.7E+02	8.1E-12
Neodymium (60)	Nd-139m	1.10E+03	6.28E-04	1.3E-11 (S)	1.95E-04	3.89E-11	6.77E-11	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	4.1E+05	1.8E+10	8.8E+00	1.1E+03	3.8E+03	5.7E+04	5.1E+05	.	1.0E+05	6.3E+07	8.7E+00	2.1E-12
Neodymium (60)	Nd-140	7.51E+01	9.23E-03	1.6E-10 (S)	3.03E-07	4.91E-10	9.04E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	2.1E+03	9.7E+07	3.8E+02	6.1E+00	2.1E+01	3.1E+02	2.7E+03	.	5.6E+02	3.4E+05	4.5E+00	1.6E-11
Neodymium (60)	Nd-141	2.44E+03	2.84E-04	3.7E-13 (S)	6.25E-06	1.22E-12	2.10E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	2.9E+07	1.4E+12	6.0E+02	7.9E+04	2.7E+05	4.0E+06	3.6E+07	.	7.3E+06	4.4E+09	6.0E+02	6.7E-11
Neodymium (60)	Nd-141m	3.52E+05	1.97E-06	0.0E+00 (0	8.62E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	.	.	6.3E+03	.	.	.	.	.	.	.	.	6.3E+03	4.9E-12
Neodymium (60)	Nd-144	3.03E-16	2.29E+15	2.8E-07 (F)	0.00E+00	1.06E-09	1.45E-09	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	4.3E-01	1.9E+01	.	9.4E-04	3.2E-03	4.7E-02	4.2E-01	.	8.7E-02	5.2E+01	7.0E-04	6.5E+02
Neodymium (60)	Nd-147	2.30E+03	3.01E-02	2.5E-10 (S)	1.32E-05	2.76E-10	5.11E-10	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	1.1E+03	1.9E+07	2.7E+00	3.3E+00	1.1E+01	1.7E+02	1.5E+03	.	3.1E+02	1.8E+05	1.3E+00	1.6E-11
Neodymium (60)	Nd-149	3.51E+01	1.97E-02	8.6E-12 (S)	3.91E-05	2.13E-11	3.82E-11	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	2.3E+06	8.6E+10	1.6E+02	6.5E+01	2.2E+04	3.3E+05	3.0E+06	.	6.1E+05	3.6E+08	1.4E+02	1.1E-11
Neodymium (60)	Nd-151	2.93E+04	2.37E-05	1.0E-12 (S)	1.04E-04	2.73E-12	4.53E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	1.6E+08	5.9E+12	4.4E+02	4.3E+05	1.4E+06	2.1E+07	1.9E+08	.	3.9E+07	2.4E+10	4.4E+02	4.4E-12
Neodymium (60)	Nd-152	3.20E+04	2.17E-05	1.1E-12 (S)	1.74E-05	2.85E-12	4.29E-12	1.36E+09	2.00E-03	1.00E-01	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	9.00E-02	3.00E-04	1.9E+08	6.0E+12	2.8E+03	4.4E+05	1.5E+06	2.2E+07	2.0E+08	.

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Osmium (76)	Os-194+D	1.16E-01	6.00E+00	7.0E-09 (S)	1.12E-05	9.57E-10	1.76E-09	1.36E+09	3.00E-02	2.00E-01	4.50E+02	.	2.00E-03	1.00E-04	.	.	.	1.6E+00	3.5E+03	1.6E-02	4.4E-03	.	1.9E-01	1.0E+00	.	.	.	3.4E-03	1.1E-11
Osmium (76)	Os-196	1.04E+04	6.64E-05	3.4E-12 (S)	8.14E-06	8.22E-12	1.32E-11	1.36E+09	3.00E-02	2.00E-01	4.50E+02	.	2.00E-03	1.00E-04	.	.	.	2.0E+07	6.5E+11	2.0E+03	4.5E+04	.	2.0E+06	1.1E+07	.	.	.	1.9E+03	6.9E-11
Phosphorus (15)	P-30	1.46E+05	4.75E-06	0.00E+00	1.21E-04	0.00E+00	0.00E+00	1.36E+09	1.74E-01	2.00E-01	9.00E+01	1.40E+05	5.50E-02	2.00E-02	2.70E-02	.	6.40E-01	.	.	1.9E+03	.	.	.	.	.	.	.	1.9E+03	7.4E-13
Phosphorus (15)	P-32	1.77E+01	3.91E-02	3.8E-10 (S)	2.55E-07	3.32E-10	5.79E-10	1.36E+09	1.74E-01	2.00E-01	9.00E+01	1.40E+05	5.50E-02	2.00E-02	2.70E-02	.	6.40E-01	7.6E+02	9.9E+06	1.2E+02	1.3E+00	7.1E-04	3.1E+00	2.3E+00	2.6E+01	.	4.5E+01	7.1E-04	2.5E-15
Phosphorus (15)	P-33	9.98E+00	6.94E-02	1.7E-10 (S)	1.00E-09	3.67E-11	6.47E-11	1.36E+09	1.74E-01	2.00E-01	9.00E+01	1.40E+05	5.50E-02	2.00E-02	2.70E-02	.	6.40E-01	3.8E+03	1.3E+07	1.7E+04	6.5E+00	3.6E-03	1.6E+01	1.2E+01	1.3E+02	.	2.3E+02	3.6E-03	2.3E-14
Protactinium (91)	Pa-227	9.51E+01	7.29E-05	5.7E-09 (S)	1.13E-06	3.69E-11	6.00E-11	1.36E+09	1.00E-02	1.00E-01	2.00E+01	1.00E+01	5.00E-06	5.00E-06	.	.	.	3.9E+06	3.5E+08	1.3E+04	9.9E+01	1.1E+06	2.1E+08	5.6E+07	.	.	.	5.6E+03	2.6E-10
Protactinium (91)	Pa-228	2.76E+02	2.51E-03	6.5E-09 (S)	1.67E-04	1.38E-10	2.44E-10	1.36E+09	1.00E-02	1.00E-01	2.00E+03	1.00E+01	5.00E-06	5.00E-06	.	.	.	2.8E+04	9.0E+06	2.6E+00	7.7E+01	8.3E+03	1.6E+06	4.3E+05	.	.	.	2.5E+04	4.0E-12
Protactinium (91)	Pa-229	1.69E+02	4.11E-03	7.0E-09 (S)	3.91E-06	1.80E-11	3.26E-11	1.36E+09	1.00E-02	1.00E-01	2.00E+03	1.00E+01	5.00E-06	5.00E-06	.	.	.	1.3E+05	5.4E+07	6.7E+01	3.6E+02	3.9E+04	7.5E+06	2.0E+06	.	.	.	5.6E+01	1.5E-10
Protactinium (91)	Pa-230	1.45E+01	4.77E-02	6.2E-08 (S)	7.95E-05	1.44E-10	2.55E-10	1.36E+09	1.00E-02	1.00E-01	2.00E+01	1.00E+01	5.00E-06	5.00E-06	.	.	.	1.4E+03	4.9E+04	2.8E-01	3.9E+00	4.2E+02	8.1E+04	2.2E+04	.	.	.	2.6E-01	8.1E-12
Protactinium (91)	Pa-231	2.12E-05	3.28E+04	2.1E-06 (F)	3.44E-06	6.10E-09	8.05E-09	1.36E+09	1.00E-02	1.00E-01	2.00E+03	1.00E+01	5.00E-06	5.00E-06	.	.	.	7.7E-02	2.5E+00	1.1E-02	1.6E-04	1.7E-02	3.3E+00	8.8E-01	.	.	.	1.5E-04	3.3E-09
Protactinium (91)	Pa-232	1.93E+02	3.59E-03	1.9E-10 (S)	1.16E-04	1.36E-10	2.43E-10	1.36E+09	1.00E-02	1.00E-01	2.00E+03	1.00E+01	5.00E-06	5.00E-06	.	.	.	2.0E+04	2.1E+08	2.6E+00	5.5E+01	5.9E+03	1.1E+06	3.1E+05	.	.	.	2.5E+00	5.7E-12
Protactinium (91)	Pa-233	9.38E+00	7.39E-02	4.1E-10 (S)	2.17E-05	2.42E-10	4.45E-10	1.36E+09	1.00E-02	1.00E-01	2.00E+01	1.00E+01	5.00E-06	5.00E-06	.	.	.	5.2E+02	4.8E+06	6.7E-01	1.5E+00	1.6E+02	3.1E+04	8.4E+03	.	.	.	4.6E-01	2.2E-11
Protactinium (91)	Pa-234	9.06E+02	7.65E-04	3.2E-11 (S)	1.79E-04	8.11E-11	1.45E-10	1.36E+09	1.00E-02	1.00E-01	2.00E+03	1.00E+01	5.00E-06	5.00E-06	.	.	.	1.6E+05	5.9E+09	7.8E+00	4.3E+02	4.6E+04	8.9E+06	2.4E+06	.	.	.	7.7E+00	3.9E-12
Protactinium (91)	Pa-234m	3.11E+05	2.23E-06	0.00E+00	2.45E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-02	1.00E-01	2.00E+03	1.00E+01	5.00E-06	5.00E-06	.	.	.	.	.	2.0E+05	.	.	.	.	.	.	.	2.0E+05	2.9E-10
Protactinium (91)	Pa-235	1.49E+04	4.66E-05	8.6E-13 (S)	1.20E-07	1.73E-12	2.67E-12	1.36E+09	1.00E-02	1.00E-01	2.00E+01	1.00E+01	5.00E-06	5.00E-06	.	.	.	1.4E+08	3.6E+12	1.9E+05	3.3E+05	3.6E+07	6.9E+05	1.9E+05	.	.	.	1.2E+05	3.7E-09
Protactinium (91)	Pa-236	4.00E+04	1.73E-05	0.00E+00	1.20E-04	0.00E+00	0.00E+00	1.36E+09	1.00E-02	1.00E-01	2.00E+03	1.00E+01	5.00E-06	5.00E-06	.	.	.	.	.	5.2E+02	.	.	.	.	.	.	.	5.2E+02	5.9E-12
Protactinium (91)	Pa-237	4.19E+04	1.66E-05	0.00E+00	7.57E-05	0.00E+00	0.00E+00	1.36E+09	1.00E-02	1.00E-01	2.00E+03	1.00E+01	5.00E-06	5.00E-06	.	.	.	.	.	8.6E+02	.	.	.	.	.	.	.	8.6E+02	9.4E-12
Lead (82)	Pb-194	3.04E+04	2.28E-05	6.1E-13 (S)	1.32E-04	1.47E-12	2.20E-12	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	3.4E+08	1.1E+13	3.6E+02	8.0E+05	2.6E+06	1.5E+08	1.5E+08	.	.	.	3.6E+02	4.4E-12
Lead (82)	Pb-195m	2.43E+04	2.85E-05	1.1E-12 (S)	1.95E-04	1.96E-12	2.96E-12	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	2.0E+08	4.7E+12	1.9E+02	4.8E+05	1.5E+06	9.2E+07	9.2E+07	.	.	.	1.9E+02	3.0E-12
Lead (82)	Pb-196	9.84E+03	7.04E-05	1.3E-12 (S)	5.05E-05	2.63E-12	4.13E-12	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	5.9E+07	1.6E+12	3.0E+02	1.4E+05	4.6E+05	2.8E+07	2.8E+07	.	.	.	3.0E+02	1.2E-11
Lead (82)	Pb-197	4.55E+04	1.52E-05	0.00E+00	1.95E-04	0.00E+00	0.00E+00	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	.	.	3.6E+02	.	.	.	.	.	.	.	3.6E+02	3.0E-12
Lead (82)	Pb-197m	8.47E+03	8.18E-05	2.7E-12 (S)	1.35E-04	4.15E-12	6.57E-12	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	3.2E+07	6.7E+11	9.7E+01	7.9E+04	2.5E+05	1.5E+07	1.5E+07	.	.	.	9.7E+01	4.4E-12
Lead (82)	Pb-198	2.53E+03	2.74E-04	4.2E-12 (S)	4.39E-05	9.81E-12	1.61E-11	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	3.9E+06	1.3E+11	8.9E+01	9.9E+03	3.2E+04	1.9E+06	1.9E+06	.	.	.	8.8E+01	1.3E-11
Lead (82)	Pb-199	4.05E+01	1.71E-04	1.9E-12 (S)	1.29E-04	4.50E-12	7.32E-12	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	1.4E+07	4.4E+11	4.9E+01	3.5E+04	1.1E+05	6.7E+06	6.7E+06	.	.	.	4.8E+01	4.6E-12
Lead (82)	Pb-200	2.82E+02	2.45E-03	3.5E-11 (S)	1.61E-05	6.10E-11	1.06E-10	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	6.6E+04	1.7E+09	2.7E+01	1.8E+02	5.7E+02	3.4E+04	3.4E+04	.	.	.	2.3E+01	3.1E-11
Lead (82)	Pb-201	6.51E+02	1.07E-03	1.1E-11 (S)	8.55E-05	2.29E-11	3.92E-11	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	4.1E+05	1.3E+10	1.2E+01	1.1E+03	3.5E+03	2.1E+05	2.1E+05	.	.	.	1.2E+01	7.0E-12
Lead (82)	Pb-201m	3.58E+05	1.93E-06	0.00E+00	4.26E-05	0.00E+00	0.00E+00	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	.	.	1.3E+04	.	.	.	.	.	.	.	1.3E+04	1.4E-11
Lead (82)	Pb-202	1.32E-05	5.25E+04	3.7E-09 (S)	8.08E-11	1.22E-09	1.66E-09	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	3.7E-01	1.4E+03	4.8E+02	7.9E-04	2.5E-03	1.5E-01	1.5E-01	.	.	.	6.0E-04	1.8E-08
Lead (82)	Pb-202+D	1.32E-05	5.25E+04	3.8E-09 (S)	4.89E-05	1.27E-09	1.74E-09	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	3.6E-01	1.4E+03	7.9E-04	7.6E-04	2.4E-03	1.5E-01	1.5E-01	.	.	.	3.3E-04	9.9E-09
Lead (82)	Pb-202m	1.72E+01	4.03E-04	7.2E-12 (S)	2.45E-04	1.81E-11	3.01E-11	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	1.4E+06	5.0E+10	1.1E+01	3.7E+03	1.2E+04	7.1E+05	7.1E+05	.	.	.	1.1E+01	2.5E-12
Lead (82)	Pb-203	1.17E+02	5.92E-03	2.3E-11 (S)	2.96E-05	4.01E-11	7.03E-11	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	4.1E+04	1.1E+09	6.1E+00	1.1E+02	3.6E+02	2.2E+04	2.2E+04	.	.	.	5.7E+00	1.9E-11
Lead (82)	Pb-204m	5.42E+03	1.28E-04	1.5E-12 (S)	2.58E-04	4.76E-12	7.44E-12	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	1.8E+07	7.8E+11	3.3E+01	4.4E+04	1.4E+05	8.5E+06	8.5E+06	.	.	.	3.3E+01	2.4E-12
Lead (82)	Pb-205	4.53E-08	1.53E+07	6.2E-11 (S)	8.17E-11	2.17E-11	3.16E-11	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	2.0E+07	8.5E+04	4.2E-02	4.4E-02	1.4E-01	8.6E+00	8.6E+00	.	.	.	3.4E-02	2.9E-04
Lead (82)	Pb-209	1.87E+03	3.71E-04	5.6E-12 (S)	1.45E-08	9.42E-12	1.69E-11	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	2.7E+06	7.0E+10	2.2E+05	7.6E+03	2.5E+04	1.5E+06	1.5E+06	.	.	.	5.6E+03	1.2E-09
Lead (82)	Pb-210	3.12E-02	2.22E+01	4.3E-07 (S)	4.01E-08	3.18E-08	4.64E-08	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	2.3E-02	2.1E+01	1.7E+00	5.3E-05	1.7E-04	1.0E-02	1.0E-02	.	.	.	4.0E-05	5.2E-13
Lead (82)	Pb-211	1.01E+04	6.87E-05	1.1E-09 (S)	7.86E-06	1.57E-11	2.58E-11	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	9.7E+06	1.9E+09	2.0E+03	2.5E+04	8.0E+04	4.8E+06	4.8E+06	.	.	.	1.8E+03	7.3E-11
Lead (82)	Pb-212	5.71E+02	1.21E-03	1.7E-08 (S)	1.34E-05	9.64E-10	1.71E-09	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	8.3E+03	6.9E+06	6.6E+01	2.3E+01	7.4E+01	4.4E+03	4.4E+03	.	.	.	1.4E+01	9.8E-12
Lead (82)	Pb-214	1.36E+04	5.10E-05	1.1E-09 (S)	2.69E-05	1.31E-11	2.14E-11	1.36E+09	9.57E-03	1.10E-02	1.50E+02	2.50E+01	7.00E-04	1.90E-04	.	.	.	1.6E+07	2.6E+09	7.8E+02	4.0E+04	1.3E+05	7.7E+06	7.7E+06	.	.	.	7.6E+02	2.3E-11
Palladium (46)	Pd-100	6.97E+01	9.95E-03	7.8E-11 (S)	5.46E-06	1.47E-10	2.55E-10	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	6.8E+03	1.9E+08	2.0E+01	1.4E+01	1.8E+02	4.6E+03	2.5E+03	.	.	.	7.7E+00	2.1E-11
Palladium (46)	Pd-101	7.17E+02	9.67E-04	5.1E-12 (S)	3.91E-05	1.59E-11	2.79E-11	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	6.4E+05	3.0E+10	2.8E+01	1.3E+03	1.7E+04	4.4E+05	2.4E+05	.	.	.	2.8E+01	7.6E-12
Palladium (46)	Pd-103	1.49E+01	4.66E-02	4.8E-11 (S)	3.06E-08	4.94E-11	9.15E-11	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	4.0E+03	6.6E+07	7.5E+02	8.7E+00	1.1E+02	2.9E+03	1.6E+03	.	.	.	7.9E+00	1.1E-10
Palladium (46)	Pd-107	1.27E-01	6.50E+00	4.7E-13 (S)	0.00E+00	1.03E-11	1.91E-11	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	3.3E+01	1.1E+05	.	7.0E-02	9.0E-01	2.4E+01	1.3E+01	.	.	.	6.4E-02	1.3E-04
Palladium (46)	Pd-109	4.43E+02	1.56E-03	5.1E-11 (S)	3.44E-07	1.41E-10	2.62E-10	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	4.2E+04	1.8E+09	2.0E+03	9.1E+01	1.2E+03	3.1E+04	1.6E+04	.	.	.	8.0E+01	3.8E-11
Palladium (46)	Pd-109m	7.77E+04	8.92E-06	0.00E+00	1.02E-05	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	.	.	1.2E+04	.	.	.	.	.	.	.	1.2E+04	3.2E-11
Palladium (46)	Pd-111	1.56E+04	4.45E-05	1.8E-12 (S)	6.41E-06	3.76E-12	6.05E-12	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	6.4E+07	1.9E+12	3.8E+03	1.2E+05	1.5E+06	4.0E+07	2.2E+07	.	.	.	3.6E+03	5.0E-11
Palladium (46)	Pd-112	2.89E+02	2.40E-03	1.8E-10 (S)	5.11E-09	6.82E-10	1.26E-09	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	5.7E+03	3.3E+08	8.7E+04	1.2E+01	1.6E+02	4.1E+03	2.2E+03	.	.	.	1.1E+01	8.4E-12
Palladium (46)	Pd-114	1.51E+05	4.60E-06	0.00E+00	2.69E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	.	.	8.7E+04	.	.	.	.	.	.	.	8.7E+04	1.3E-10
Palladium (46)	Pd-96	1.79E+05	3.87E-06	0.00E+00	1.74E-04	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	.	.	1.6E+03	.	.	.	.	.	.	.	1.6E+03	1.7E-12
Palladium (46)	Pd-97	1.17E+05	5.90E-06	0.00E+00	3.07E-04	0.00E+00	0.00E+00	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	.	.	5.9E+02	.	.	.	.	.	.	.	5.9E+02	9.5E-13
Palladium (46)	Pd-98	2.06E+04	3.37E-05	1.5E-12 (S)	4.45E-05	4.38E-12	6.77E-12	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	7.6E+07	2.9E+12	7.2E+02	1.4E+05	1.8E+06	4.6E+07	2.5E+07	.	.	.	7.1E+02	6.6E-12
Palladium (46)	Pd-99	1.26E+01	9.4E-13 (S)	1.5E-04	1.57E-04	2.84E-12	4.46E-12	1.36E+09	1.00E-01	5.00E-01	1.80E+02	1.00E+01	2.00E-04	1.00E-04	.	.	.	9.5E+07	3.8E+12	1.2E+03	1.7E+05	2.2E+06	5.9E+07	3.1E+07	.	.	.	1.7E+02	1.9E-12
Promethium (61)	Pm-136	2.04E+05	3.39E-06	0.00E+00	3.31E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	.	.	9.5E+02	.	.	.	.	.	.	.	9.5E+02	1.2E-12
Promethium (61)	Pm-137m	1.52E+05	4.57E-06	0.00E+00	2.07E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	.	.	1.1E+03	.	.	.	.	.	.	.	1.1E+03	2.0E-12
Promethium (61)	Pm-139	8.78E+04	7.90E-06	0.00E+00	1.12E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	.	.	1.2E+03	.	.	.	.	.	.	.	1.2E+03	3.7E-12
Promethium (61)	Pm-140	2.38E+06	2.92E-07	0.00E+00	1.28E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	.	.	2.9E+04	.	.	.	.	.	.	.	2.9E+04	3.3E-12
Promethium (61)	Pm-140m	6.12E+04	1.13E-05	0.00E+00	3.76E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	.	.	2.5E+02	.	.	.	.	.	.	.	2.5E+02	1.1E-12
Promethium (61)	Pm-141	1.74E+04	3.98E-05	7.5E-13 (S)	8.90E-05	2.42E-12	3.73E-12	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	1.2E+08	4.9E+12	3.0E+02	2.7E+05	2.2E+06	1.9E+07	1.7E+08	.	1.5E+05	2.9E+08	3.0E+02	4.8E-12
Promethium (61)	Pm-142	5.40E+05	1.28E-06	0.00E+00	1.03E-04	0.00E+00	0.00E+00	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	.	.	8.1E+03	.	.	.	.	.	.	.	8.1E+03	4.1E-12
Promethium (61)	Pm-143	9.55E-01	7.26E+01	2.5E-10 (F)	3.60E-05	3.35E-11	5.68E-11	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	4.2E+02	8.2E+05	1.1E+02	1.1E+00	8.8E+00	7.3E+01	6.7E+02	.	5.8E+03	1.2E+03	3.9E+02	1.1E-11
Promethium (61)	Pm-144	6.97E-01	9.95E-01	1.5E-09 (F)	1.87E-04	1.27E-10	2.10E-10	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	8.2E+01	9.8E+04	5.8E-03	2.1E-01	1.7E+00	1.4E+01	1.3E+02	.	1.1E+03	2.2E+02	5.6E-03	2.2E-12
Promethium (61)	Pm-145	3.92E-02	1.77E+01	3.4E-10 (F)	4.26E-07	2.05E-11	3.67E-11	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	3.4E+01	3.1E+04	1.8E-01	9.2E-02	7.5E-01	6.2E+00	5.6E+01	.	4.9E+02	9.8E+01	5.6E-02	4.0E-10
Promethium (61)	Pm-146	1.25E-01	5.53E+00	2.8E-09 (F)	8.84E-05	1.59E-10	2.79E-10	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	1.1E+01	9.6E+03	2.2E-03	3.0E-02	2.5E-01	2.0E+00	1.9E+01	.	1.6E+02	3.2E+01	2.0E-03	4.6E-12
Promethium (61)	Pm-147	2.64E-01	2.62E+00	4.3E-10 (S)	8.71E-10	6.70E-11	1.24E-10	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	5.3E+01	1.3E+05	4.7E+02	1.5E-01	1.2E+00	1.0E+01	9.2E+01	.	8.0E+02	1.6E+02	1.3E-01	1.4E-10
Promethium (61)	Pm-148	4.71E+01	1.47E-02	2.9E-10 (S)	7.57E-05	6.84E-10	1.26E-09	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	9.3E+02	3.5E+07	9.6E-01	2.6E+00	2.1E+01	1.8E+02	1.6E+03	.	1.4E+04	2.8E+03	6.8E-01	4.1E-12
Promethium (61)	Pm-148m	6.13E+00	1.13E-01	5.7E-10 (S)	2.42E-04	3.10E-10	5.45E-10	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	2.8E+02	2.3E+06	3.9E-02	7.5E-01	6.1E+00	5.1E+01	4.6E+02	.	4.0E+03	8.0E+02	3.7E-02	1.7E-12
Promethium (61)	Pm-149	1.14E+02	6.06E-03	9.9E-11 (S)	1.38E-06	2.63E-10	4.88E-10	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	5.8E+03	2.4E+08	1.3E+02	1.7E+01	1.4E+02	1.1E+03	1.0E+04	.	8.8E+04	1.8E+04	1.3E+01	3.3E-11
Promethium (61)	Pm-150	2.27E+03	3.06E-04	1.2E-11 (S)	1.91E-04	4.25E-11	7.54E-11	1.36E+09	1.22E-02	1.40E-02	4.50E+02	3.00E+01	2.00E-03	6.00E-05	.	2.00E-03	2.00E-02	7.5E+05	3.8E+10	1

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Praseodymium (59)	Pr-144	2.11E+04	3.29E-05	9.7E-13 (S)	4.83E-06	3.03E-12	4.61E-12	1.36E+05	1.74E-02	2.00E-02	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	3.00E-02	5.00E-03	1.1E+08	4.6E+12	6.8E+03	2.6E+05	9.4E+05	1.8E+07	1.6E+08	.	9.3E+07	1.1E+05	6.5E+03	8.7E-11
Praseodymium (59)	Pr-144m	5.06E+04	1.37E-05	0.00E+00	3.35E-07	0.00E+00	0.00E+00	1.36E+09	1.74E-02	2.00E-02	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	3.00E-02	5.00E-03	.	.	2.3E+05	.	.	.	.	.	.	.	.	2.3E+05	1.3E-09
Praseodymium (59)	Pr-145	1.01E+03	6.83E-04	2.5E-11 (S)	2.56E-06	9.07E-11	1.67E-10	1.36E+09	1.74E-02	2.00E-02	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	3.00E-02	5.00E-03	1.5E+05	8.5E+09	6.1E+02	4.2E+02	1.5E+03	2.8E+04	2.6E+05	.	1.5E+05	1.8E+06	2.1E+02	5.9E-11
Praseodymium (59)	Pr-146	1.51E+04	4.59E-05	1.6E-12 (S)	1.34E-04	5.18E-12	8.01E-12	1.36E+05	1.74E-02	2.00E-02	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	3.00E-02	5.00E-03	4.7E+07	1.9E+12	1.7E+02	1.1E+05	3.9E+05	7.3E+06	6.7E+07	.	3.9E+07	4.7E+08	1.7E+02	3.3E-12
Praseodymium (59)	Pr-147	2.72E+04	2.55E-05	9.6E-13 (S)	5.52E-05	2.19E-12	3.38E-12	1.36E+09	1.74E-02	2.00E-02	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	3.00E-02	5.00E-03	2.0E+08	5.9E+12	7.6E+02	4.6E+05	1.7E+06	3.1E+07	2.8E+08	.	1.7E+08	2.0E+09	7.6E+02	8.0E-12
Praseodymium (59)	Pr-148	1.59E+05	4.36E-06	0.00E+00	1.30E-04	0.00E+00	0.00E+00	1.36E+09	1.74E-02	2.00E-02	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	3.00E-02	5.00E-03	.	.	1.9E+03	.	.	.	.	.	.	.	.	1.9E+03	3.4E-12
Praseodymium (59)	Pr-148m	1.81E+05	3.82E-06	0.00E+00	1.12E-04	0.00E+00	0.00E+00	1.36E+09	1.74E-02	2.00E-02	6.50E+02	1.00E+02	2.00E-03	6.00E-05	.	3.00E-02	5.00E-03	.	.	2.5E+03	.	.	.	.	.	.	.	.	2.5E+03	4.0E-12
Platinum (78)	Pr-184	2.11E+04	3.29E-05	1.7E-12 (S)	7.07E-05	3.62E-12	6.11E-12	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	8.6E+07	2.6E+12	4.6E+02	1.7E+05	.	5.7E+07	3.0E+07	.	.	.	4.6E+02	7.8E-12
Platinum (78)	Pr-186	2.92E+03	2.37E-04	5.7E-12 (S)	7.70E-05	1.67E-11	2.89E-11	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	2.5E+06	1.1E+11	5.9E+01	5.0E+03	.	1.7E+06	9.1E+05	.	.	.	5.8E+01	7.2E-12
Platinum (78)	Pr-187	2.58E+03	2.68E-04	5.8E-12 (S)	6.56E-05	1.36E-11	2.39E-11	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	2.7E+06	9.3E+10	6.1E+01	5.5E+03	.	1.9E+06	9.9E+05	.	.	.	6.0E+01	8.5E-12
Platinum (78)	Pr-188	2.48E+01	2.79E-02	2.1E-10 (S)	1.66E-05	1.57E-10	2.79E-10	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	2.2E+03	2.5E+07	2.3E+00	4.6E+00	.	1.5E+03	8.2E+02	.	.	.	1.5E+00	2.2E-11
Platinum (78)	Pr-189	5.58E+02	1.24E-03	1.7E-11 (S)	5.05E-05	3.80E-11	6.80E-11	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	2.0E+05	6.8E+09	1.7E+01	4.2E+02	.	1.4E+05	7.7E+04	.	.	.	1.6E+01	1.1E-11
Platinum (78)	Pr-190	1.07E-12	6.50E+11	4.1E-07 (S)	0.00E+00	1.14E-05	1.94E-05	1.36E+05	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	3.2E-01	1.3E+01	.	6.3E-04	.	2.1E-01	1.1E-01	.	.	.	6.3E-04	2.2E-01
Platinum (78)	Pr-191	9.03E+01	7.68E-03	4.1E-11 (S)	2.62E-05	7.70E-11	1.39E-10	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	1.6E+04	4.6E+08	5.3E+00	3.4E+01	.	1.1E+04	6.1E+03	.	.	.	4.6E+04	1.9E-11
Platinum (78)	Pr-193	1.39E-02	5.00E+01	5.3E-11 (S)	5.18E-11	9.59E-12	1.78E-11	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	4.5E+01	1.3E+05	9.7E+02	9.8E-02	.	3.3E+01	1.8E+01	.	.	.	9.7E-02	2.6E-09
Platinum (78)	Pr-193m	5.84E+01	1.19E-02	1.0E-10 (S)	4.48E-07	1.21E-10	2.25E-10	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	6.5E+03	1.2E+08	2.0E+02	1.4E+01	.	4.7E+01	2.5E+01	.	.	.	1.3E+01	8.3E-11
Platinum (78)	Pr-195m	6.29E+01	1.10E-02	1.3E-10 (S)	3.44E-06	1.66E-10	3.06E-10	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	5.1E+03	1.1E+08	2.8E+01	1.1E+01	.	3.7E+03	2.0E+03	.	.	.	7.8E+00	4.7E-11
Platinum (78)	Pr-197	3.05E+02	2.27E-03	4.7E-11 (S)	1.55E-06	1.11E-10	2.05E-10	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	3.7E+04	1.4E+09	3.0E+02	7.9E+01	.	2.7E+04	1.4E+04	.	.	.	6.2E+01	7.8E-11
Platinum (78)	Pr-197m	3.82E+03	1.82E-04	7.4E-12 (S)	6.44E-06	1.57E-11	2.85E-11	1.36E+05	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	3.3E+06	1.1E+11	9.2E+02	7.0E+03	.	2.4E+06	1.3E+06	.	.	.	8.1E+02	8.1E-11
Platinum (78)	Pr-199	1.18E+04	5.86E-05	1.9E-12 (S)	2.32E-05	3.43E-12	5.64E-12	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	5.2E+07	1.3E+12	7.9E+02	9.9E+04	.	3.4E+07	1.8E+07	.	.	.	7.8E+02	2.6E-11
Platinum (78)	Pt-200	4.86E+02	1.43E-03	9.0E-11 (S)	4.26E-06	3.00E-10	5.54E-10	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	2.2E+04	1.1E+09	1.8E+02	4.7E+01	.	1.6E+04	8.4E+03	.	.	.	3.7E+01	2.9E-11
Platinum (78)	Pt-202	1.38E+02	5.02E-03	3.4E-10 (S)	2.40E-07	1.16E-05	2.15E-05	1.36E+05	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	1.6E+03	8.4E+07	9.9E+02	3.4E+00	.	1.2E+03	6.2E+02	.	.	.	3.4E+00	9.6E-12
Platinum (78)	Pt-202+D	1.38E+02	5.02E-03	3.4E-10 (S)	2.27E-05	1.16E-09	2.15E-09	1.36E+09	1.00E-01	5.00E-01	2.40E+01	.	2.00E-04	1.00E-04	.	.	.	1.6E+03	8.4E+07	9.4E+00	3.4E+00	.	1.2E+03	6.2E+02	.	.	.	2.5E+00	7.1E-12
Plutonium (94)	Pu-232	1.08E+04	6.41E-05	1.7E-09 (S)	4.04E-06	1.13E-11	1.83E-11	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.5E+07	1.3E+09	4.1E+03	3.8E+04	4.7E+00	4.7E+09	1.4E+08	2.6E+08	1.3E+08	6.7E+08	4.7E+00	2.0E-13
Plutonium (94)	Pu-234	6.90E+02	1.00E-03	2.2E-09 (S)	4.39E-06	3.25E-11	5.88E-11	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	2.9E+05	6.7E+07	2.4E+02	8.5E+02	1.0E-01	1.0E+08	3.1E+06	5.7E+06	3.0E+06	1.5E+07	1.0E-01	6.9E-14
Plutonium (94)	Pu-235	1.44E+04	4.81E-05	7.4E-14 (S)	6.44E-06	1.73E-13	2.64E-13	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.4E+09	4.1E+13	3.5E+03	3.3E+06	4.1E+02	4.1E+11	1.2E+10	2.2E+10	1.2E+10	5.9E+10	3.7E+02	1.2E-11
Plutonium (94)	Pu-236	2.42E-01	2.86E+00	8.0E-07 (S)	3.09E-09	2.71E-09	4.01E-09	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.5E+00	6.4E+01	1.2E+02	3.6E-03	4.4E-07	4.4E+02	1.3E+01	2.4E+01	1.3E+01	6.3E+01	4.4E-07	8.3E-16
Plutonium (94)	Pu-237	5.60E+00	1.24E-01	4.0E-11 (S)	3.09E-06	2.53E-11	4.60E-11	1.36E+05	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	3.0E+03	2.9E+07	2.8E+00	8.8E+00	1.1E-03	1.1E+06	3.3E+04	6.0E+04	3.1E+04	1.6E+05	1.1E-03	9.0E-14
Plutonium (94)	Pu-238	7.90E-03	8.77E+01	1.4E-06 (F)	1.87E-09	4.58E-09	6.07E-09	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.2E-01	4.3E+00	2.4E+01	2.5E-04	3.1E-08	3.1E+01	9.4E-01	1.7E+00	9.0E-01	4.5E+00	3.1E-08	1.8E-15
Plutonium (94)	Pu-239	2.87E-05	2.41E+04	1.5E-06 (F)	5.65E-09	4.71E-09	6.16E-09	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.0E-01	3.5E+00	6.9E+00	2.1E-04	2.6E-08	2.6E+01	7.8E-01	1.4E+00	7.5E-01	3.7E+00	2.6E-08	4.2E-13
Plutonium (94)	Pu-239+D	2.87E-05	2.41E+04	1.5E-06 (F)	5.65E-05	4.71E-05	6.16E-05	1.36E+05	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.0E-01	3.5E+00	6.9E+00	2.1E-04	2.6E-08	2.6E+01	7.8E-01	1.4E+00	7.5E-01	3.7E+00	2.6E-08	4.2E-13
Plutonium (94)	Pu-240	1.06E-04	6.56E+03	1.5E-06 (F)	1.93E-09	4.71E-09	6.17E-09	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.0E-01	3.5E+00	2.0E+01	2.1E-04	2.6E-08	2.6E+01	7.8E-01	1.4E+00	7.5E-01	3.7E+00	2.6E-08	1.2E-13
Plutonium (94)	Pu-241	4.83E-02	1.44E+01	2.3E-08 (F)	1.10E-10	6.17E-11	7.35E-11	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.9E+01	5.1E+02	8.0E+02	3.7E-02	4.5E-06	4.5E+03	1.3E+02	2.5E+02	1.3E+02	6.4E+02	4.5E-06	4.4E-14
Plutonium (94)	Pu-242	1.85E-06	3.75E+05	1.4E-06 (F)	1.18E-08	4.48E-05	5.86E-05	1.36E+05	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	1.1E+01	3.7E+00	3.3E+00	2.2E-04	2.8E-08	2.7E+01	8.2E-01	1.5E+00	7.8E-01	3.9E+00	2.8E-08	7.0E-12
Plutonium (94)	Pu-243	1.22E+03	5.66E-04	8.6E-12 (S)	1.49E-06	1.87E-11	3.43E-11	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	8.9E+05	3.0E+10	1.3E+03	2.6E+03	3.2E-01	3.2E+08	9.6E+06	1.8E+07	9.2E+06	4.6E+07	3.2E-01	1.2E-13
Plutonium (94)	Pu-244	8.66E-09	8.00E+07	1.4E-06 (F)	2.67E-06	5.08E-09	6.98E-09	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	8.9E-02	3.7E+00	1.5E-02	2.0E-04	2.4E-08	2.4E+01	7.2E-01	1.3E+00	6.9E-01	3.5E+00	2.4E-08	1.3E-09
Plutonium (94)	Pu-244+D	8.66E-05	8.00E+07	1.4E-06 (F)	4.26E-05	5.35E-05	7.48E-05	1.36E+05	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	8.3E-02	3.7E+00	9.1E-04	1.9E-04	2.3E-08	2.3E+01	6.9E-01	1.3E+00	6.6E-01	3.3E+00	2.3E-08	1.3E-09
Plutonium (94)	Pu-245	5.78E+02	1.20E-03	5.8E-11 (S)	4.67E-05	1.69E-10	3.10E-10	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	4.6E+04	2.1E+09	1.9E+01	1.4E+02	1.7E-02	1.7E+07	5.0E+05	9.2E+05	4.8E+05	2.4E+06	1.7E-02	1.4E-14
Plutonium (94)	Pu-246	2.33E+01	2.97E-02	5.1E-10 (S)	1.10E-05	6.80E-10	1.24E-09	1.36E+09	8.27E-06	9.50E-06	5.00E+00	2.10E+04	1.10E-06	1.00E-05	8.00E-05	3.00E-03	1.20E-03	4.7E+02	9.6E+06	3.3E+00	1.4E+00	1.7E-04	1.7E+05	5.1E+03	9.2E+03	4.8E+03	2.4E+04	1.7E-04	3.5E-15
Radium (88)	Ra-219	2.19E+05	3.17E-10	0.00E+00	1.78E-05	0.00E+00	0.00E+00	1.36E+05	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	.	.	1.9E+08	.	.	.	.	.	.	.	.	1.9E+08	3.7E-11
Radium (88)	Ra-219+D	2.19E+09	3.17E-10	0.00E+00	1.78E-05	0.00E+00	0.00E+00	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	.	.	1.9E+08	.	.	.	.	.	.	.	.	1.9E+08	3.7E-11
Radium (88)	Ra-220	1.22E+09	5.68E-10	0.00E+00	5.40E-07	0.00E+00	0.00E+00	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	.	.	3.5E+09	.	.	.	.	.	.	.	.	3.5E+09	1.2E-09
Radium (88)	Ra-221	7.81E+05	8.88E-07	0.00E+00	2.86E-06	0.00E+00	0.00E+00	1.36E+05	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	.	.	4.2E+05	.	.	.	.	.	.	.	.	4.2E+05	2.3E-10
Radium (88)	Ra-221+D	7.81E+05	8.88E-07	0.00E+00	2.87E-06	0.00E+00	0.00E+00	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	.	.	4.2E+05	.	.	.	.	.	.	.	.	4.2E+05	2.3E-10
Radium (88)	Ra-222	5.75E+05	1.20E-06	0.00E+00	1.00E-06	0.00E+00	0.00E+00	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	.	.	8.9E+05	.	.	.	.	.	.	.	.	8.9E+05	6.6E-10
Radium (88)	Ra-223	2.21E+01	3.13E-02	7.9E-07 (S)	1.23E-05	9.15E-05	1.62E-08	1.36E+05	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	3.4E+01	5.9E+03	2.8E+00	9.1E-02	1.3E-02	7.2E+00	8.8E+00	.	.	.	1.1E-02	2.1E-13
Radium (88)	Ra-223+D	2.21E+01	3.13E-02	7.9E-07 (S)	1.87E-05	9.15E-09	1.62E-08	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	3.4E+01	5.9E+03	1.8E+00	9.1E-02	1.3E-02	7.2E+00	8.8E+00	.	.	.	1.1E-02	2.1E-13
Radium (88)	Ra-224	6.91E+01	1.00E-02	3.1E-07 (S)	1.06E-06	6.44E-09	1.15E-08	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	1.5E+02	4.7E+04	1.0E+02	4.1E-01	5.6E-02	3.2E+01	3.9E+01	.	.	.	4.9E-02	3.1E-13
Radium (88)	Ra-224+D	6.91E+01	1.00E-02	3.1E-07 (S)	1.13E-06	6.44E-05	1.15E-08	1.36E+05	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	1.5E+02	4.7E+04	9.4E+01	4.1E-01	5.6E-02	3.2E+01	3.9E+01	.	.	.	4.9E-02	3.1E-13
Radium (88)	Ra-225	1.70E+01	4.08E-02	7.1E-07 (S)	1.65E-07	4.15E-09	6.55E-09	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	6.4E+01	5.0E+03	1.6E+02	1.5E-01	2.1E-02	1.2E+01	1.5E+01	.	.	.	1.9E-02	4.8E-13
Radium (88)	Ra-226	3.33E-04	1.60E+03	7.6E-07 (S)	6.75E-07	1.39E-08	1.83E-08	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	3.4E-02	7.0E+02	6.9E-05	9.4E-06	5.4E-03	9.6E-01	6.6E-03	.	.	.	8.2E-06	8.3E-13
Radium (88)	Ra-226+D	4.33E-04	1.60E+03	7.6E-07 (S)	2.26E-04	1.39E-08	1.83E-08	1.36E+05	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	3.4E-02	6.9E+00	1.7E-04	6.9E-05	9.4E-06	5.4E-03	6.6E-03	.	.	.	7.9E-06	8.0E-12
Radium (88)	Ra-227	8.63E+03	8.03E-05	1.7E-11 (S)	1.51E-05	4.01E-12	6.33E-12	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	3.4E+07	1.1E+11	8.8E+02	8.1E+04	1.1E+04	6.5E+06	7.9E+06	.	.	.	8.1E+02	4.1E-11
Radium (88)	Ra-228	1.21E-01	5.75E+00	1.2E-06 (S)	9.28E-10	3.85E-08	5.35E-08	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	5.6E-02	2.2E+01	2.0E+02	1.2E-04	1.6E-05	9.5E-03	1.2E-02	.	.	.	1.4E-05	5.3E-14
Radium (88)	Ra-228+D	1.21E-01	5.75E+00	1.2E-06 (S)	1.09E-04	3.86E-08	5.36E-08	1.36E+05	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	5.6E-02	2.2E+01	1.7E-03	1.2E-04	1.6E-05	9.4E-03	1.1E-02	.	.	.	1.4E-05	5.2E-14
Radium (88)	Ra-230	3.92E+03	1.77E-04	9.5E-12 (S)	7.32E-06	2.31E-11	4.07E-11	1.36E+09	1.48E-02	1.70E-02	1.00E+00	4.00E+00	1.70E-03	3.80E-04	.	.	.	2.4E+06	8.7E+10	8.3E+02	6.4E+03	8.8E+02	5.1E+05	6.2E+05	.	.	.	4.0E+02	4.5E-11
Rubidium (37)	Rb-77	9.66E+04	7.17E-06	0.00E+00	1.84E-04	0.00E+00	0.00E+00	1.36E+09	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	.	.	8.1E+02	.	.	.	.	.	.	.	.	8.1E+02	1.3E-12
Rubidium (37)	Rb-78	2.06E+04	3.36E-05	1.3E-12 (S)	5.65E-04	4.47E-12	6.59E-12	1.36E+05	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	7.8E+07	3.3E+12	5.7E+01	4.6E+04	4.1E+03	2.0E+05	1.6E+05	.	.	.	5.6E+01	4.1E-13
Rubidium (37)	Rb-78m	6.35E+04	1.09E-05	0.00E+00	4.13E-04	0.00E+00	0.00E+00	1.36E+09	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	.	.	2.4E+02	.	.	.	.	.	.	.	.	2.4E+02	5.7E-13
Rubidium (37)	Rb-79	1.59E+04	4.36E-05	1.3E-12 (S)	1.70E-04	3.10E-12	4.59E-12	1.36E+09	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	8.6E+07	2.5E+12	1.4E+02	5.1E+04	4.6E+03	2.2E+05	1.8E+05	.	.	.	1.4E+02	1.3E-12
Rubidium (37)	Rb-80	6.54E+05	1.06E-06	0.00E+00	1.44E-04	0.00E+00	0.00E+00	1.36E+05	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	.	.	7.1E+03	.	.	.	.	.	.	.	.	7.1E+03	1.7E-12
Rubidium (37)	Rb-81	1.33E+03	5.22E-04	4.3E-12 (S)	5.93E-05	4.28E-12	6.60E-12	1.36E+09	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	5.0E+06	6.5E+10	3.5E+01	3.1E+03	2.7E+02	1.3E+04	1.1E+04	.	.	.	3.0E+01	3.6E-12
Rubidium (37)	Rb-81m	1.19E+04	5.80E-05	1.1E-12 (S)	2.66E-06	7.16E-13	1.10E-12	1.36E+09	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	2.7E+08	2.4E+12	7.0E+03	1.7E+05	1.5E+04	7.2E+05	5.7E+05	.	.	.	4.5E+03	6.0E-11
Rubidium (37)	Rb-82	2.86E+05	2.42E-06	0.00E+00	1.33E-04	0.00E+00	0.00E+00	1.36E+05	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	.	.	3.3E+03	.	.	.	.	.	.	.	.	3.3E+03	1.9E-12
Rubidium (37)	Rb-82m	9.38E+02	7.39E-04	6.8E-12 (S)	3.69E-04	1.31E-11	1.96E-11	1.36E+09	7.83E-01	9.00E-01	2.10E+02	4.90E+03	3.00E-02	1.00E-02	.	.	.	1.2E+06	2.9E+10	3.9E+00	7.1E+02	6.4E+01	3.1E+03	2.5E+03	.	.

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Rhodium (45)	Rh-104m	8.39E+04	8.26E-06	0.00E+00	1.04E-06	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	1.3E+05	.	.	.	.	.	.	.	.	1.3E+05	3.0E-10
Rhodium (45)	Rh-105	1.72E+02	4.04E-03	4.3E-11 (S)	8.46E-06	9.26E-11	1.71E-10	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	2.5E+04	8.4E+08	3.1E+01	6.6E+01	1.5E+01	2.9E+03	3.2E+03	.	.	.	.	8.9E+00	1.1E-11
Rhodium (45)	Rh-106	7.33E+05	9.45E-07	0.00E+00	2.63E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	4.3E+04	.	.	.	.	.	.	.	.	4.3E+04	1.2E-11
Rhodium (45)	Rh-106m	2.78E+03	2.49E-04	7.5E-12 (S)	3.60E-04	2.16E-11	3.66E-11	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	1.9E+06	7.8E+10	1.2E+01	4.6E+03	1.1E+03	2.0E+05	2.2E+05	.	.	.	.	1.2E+01	8.7E-13
Rhodium (45)	Rh-107	1.68E+04	4.13E-05	7.8E-13 (S)	3.47E-05	1.56E-12	2.39E-12	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	1.7E+08	4.5E+12	7.5E+02	3.9E+05	8.9E+04	1.7E+07	1.8E+07	.	.	.	.	7.4E+02	9.2E-12
Rhodium (45)	Rh-108	1.30E+06	5.33E-07	0.00E+00	3.94E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	5.1E+04	.	.	.	.	.	.	.	.	5.1E+04	8.2E-12
Rhodium (45)	Rh-109	2.73E+05	2.54E-06	0.00E+00	3.28E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	1.3E+04	.	.	.	.	.	.	.	.	1.3E+04	1.0E-11
Rhodium (45)	Rh-94	3.10E+05	2.24E-06	0.00E+00	4.95E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	9.7E+02	.	.	.	.	.	.	.	.	9.7E+02	5.7E-13
Rhodium (45)	Rh-95	7.26E+04	9.55E-06	0.00E+00	3.31E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	3.4E+02	.	.	.	.	.	.	.	.	3.4E+02	8.6E-13
Rhodium (45)	Rh-95m	1.86E+05	3.73E-06	0.00E+00	1.17E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	2.5E+03	.	.	.	.	.	.	.	.	2.5E+03	2.4E-12
Rhodium (45)	Rh-96	3.68E+04	1.88E-05	0.00E+00	4.95E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	1.1E+02	.	.	.	.	.	.	.	.	1.1E+02	5.8E-13
Rhodium (45)	Rh-96m	2.41E+05	2.87E-06	0.00E+00	1.65E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	2.3E+03	.	.	.	.	.	.	.	.	2.3E+03	1.7E-12
Rhodium (45)	Rh-97	1.19E+04	5.84E-05	1.2E-12 (S)	1.77E-04	3.69E-12	5.78E-12	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	5.1E+07	2.0E+12	1.0E+02	1.2E+05	2.7E+04	5.1E+06	5.5E+06	.	.	.	.	1.0E+02	1.6E-12
Rhodium (45)	Rh-97m	7.88E+03	8.79E-05	1.4E-12 (S)	2.97E-04	4.50E-12	7.15E-12	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	2.7E+07	1.2E+12	4.1E+01	6.3E+04	1.5E+04	2.8E+06	3.0E+06	.	.	.	.	4.1E+01	9.8E-13
Rhodium (45)	Rh-98	4.19E+04	1.66E-05	0.00E+00	2.23E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	.	.	2.9E+02	.	.	.	.	.	.	.	.	2.9E+02	1.3E-12
Rhodium (45)	Rh-99	1.57E+01	4.41E-02	1.3E-10 (S)	6.25E-05	1.02E-10	1.81E-10	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	2.2E+03	2.6E+07	3.9E-01	5.5E+00	1.1E+00	2.4E+02	2.6E+02	.	.	.	.	2.8E-01	3.5E-12
Rhodium (45)	Rh-99m	1.29E+03	5.37E-04	2.8E-12 (S)	7.67E-05	9.43E-12	1.60E-11	1.36E+09	3.00E-02	2.00E-01	4.00E+00	1.00E+01	2.00E-03	5.00E-04	.	.	.	2.0E+06	9.8E+10	2.6E+01	4.9E+03	1.1E+03	2.2E+05	2.3E+05	.	.	.	.	2.5E+01	3.8E-12
Radon (86)	Rn-207	3.94E+04	1.76E-05	0.00E+00	1.16E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	5.3E+02	.	.	.	.	.	.	.	.	5.3E+02	5.4E-12
Radon (86)	Rn-209	1.28E+04	5.42E-05	0.00E+00	1.46E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.4E+02	.	.	.	.	.	.	.	.	1.4E+02	4.3E-12
Radon (86)	Rn-210	2.53E+03	2.74E-04	0.00E+00	7.07E-06	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	5.5E+02	.	.	.	.	.	.	.	.	5.5E+02	8.9E-11
Radon (86)	Rn-211	4.16E+02	1.67E-03	0.00E+00	2.35E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	2.7E+00	.	.	.	.	.	.	.	.	2.7E+00	2.7E-12
Radon (86)	Rn-212	1.52E+04	4.55E-05	0.00E+00	4.17E-08	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	5.7E+05	.	.	.	.	.	.	.	.	5.7E+05	1.5E-08
Radon (86)	Rn-215	9.50E+12	7.29E-14	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Radon (86)	Rn-216	4.86E+11	1.43E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Radon (86)	Rn-217	4.05E+10	1.71E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Radon (86)	Rn-218	6.24E+08	1.11E-05	0.00E+00	9.15E-08	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.1E+10	.	.	.	.	.	.	.	.	1.1E+10	7.2E-09
Radon (86)	Rn-219	5.52E+06	1.26E-07	0.00E+00	6.34E-06	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.3E+06	.	.	.	.	.	.	.	.	1.3E+06	1.0E-10
Radon (86)	Rn-219+D	5.52E+06	1.26E-07	0.00E+00	6.37E-06	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	1.3E+06	.	.	.	.	.	.	.	.	1.3E+06	1.0E-10
Radon (86)	Rn-220	3.93E+05	1.76E-06	0.00E+00	7.48E-08	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	8.1E+06	.	.	.	.	.	.	.	.	8.1E+06	8.8E-09
Radon (86)	Rn-222	6.62E+01	1.05E-02	8.60E-10	4.58E-08	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	1.6E+07	2.2E+03	.	.	.	.	.	.	.	.	2.2E+03	1.5E-08
Radon (86)	Rn-222+D	6.62E+01	1.05E-02	8.60E-10	4.58E-08	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	1.6E+07	2.2E+03	.	.	.	.	.	.	.	.	2.2E+03	1.5E-08
Radon (86)	Rn-223	1.50E+04	4.62E-05	0.00E+00	4.01E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	5.8E+02	.	.	.	.	.	.	.	.	5.8E+02	1.7E-11
Ruthenium (44)	Ru-103	6.44E+00	1.08E-01	2.8E-10 (S)	5.81E-05	1.42E-10	2.55E-10	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	6.3E+02	4.8E+06	1.7E-01	1.8E+00	4.6E+00	7.3E+01	7.0E+03	3.2E+02	2.4E+00	9.5E+03	1.4E-01	4.4E-12
Ruthenium (44)	Ru-105	1.37E+03	5.06E-04	2.7E-11 (V)	9.03E-05	5.63E-11	1.02E-10	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	3.3E+05	1.1E+10	2.3E+01	9.6E+02	2.5E+03	3.9E+04	3.8E+06	1.7E+05	1.3E+03	5.1E+06	2.2E+01	3.3E-12
Ruthenium (44)	Ru-106	6.77E-01	1.02E+00	6.1E-09 (S)	0.00E+00	1.65E-05	3.02E-05	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	5.6E+06	2.3E+04	.	1.6E-02	4.2E-02	6.6E-01	6.4E+01	2.9E+00	2.1E-02	8.6E+01	7.4E-03	2.3E-12
Ruthenium (44)	Ru-106+D	6.77E-01	1.02E+00	6.1E-09 (S)	2.63E-05	1.65E-09	3.02E-09	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	5.6E+00	2.3E+04	4.0E-02	1.6E-02	4.2E-02	6.6E-01	6.4E+01	2.9E+00	2.1E-02	8.6E+01	6.3E-03	1.9E-12
Ruthenium (44)	Ru-107	9.71E+04	7.13E-06	0.00E+00	4.39E-05	0.00E+00	0.00E+00	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	.	.	3.4E+03	.	.	.	.	.	.	.	.	3.4E+03	7.3E-12
Ruthenium (44)	Ru-108	8.01E+04	8.66E-06	0.00E+00	5.55E-06	0.00E+00	0.00E+00	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	.	.	2.2E+04	.	.	.	.	.	.	.	.	2.2E+04	5.8E-11
Ruthenium (44)	Ru-92	9.98E+04	6.94E-06	0.00E+00	2.46E-04	0.00E+00	0.00E+00	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	.	.	6.3E+02	.	.	.	.	.	.	.	.	6.3E+02	1.1E-12
Ruthenium (44)	Ru-94	7.03E+03	9.86E-05	6.0E-12 (V)	6.03E-05	1.19E-11	2.07E-11	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	8.4E+06	2.5E+11	1.8E+02	2.3E+04	6.0E+04	9.6E+05	9.2E+07	4.2E+06	3.1E+04	1.2E+08	1.8E+02	4.6E-12
Ruthenium (44)	Ru-95	3.69E+01	1.88E-04	3.9E-12 (V)	1.54E-04	7.27E-12	1.20E-11	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	7.6E+06	2.0E+11	3.7E+01	2.0E+04	5.2E+04	8.2E+05	7.9E+07	3.6E+06	2.7E+04	1.1E+08	3.7E+01	1.8E-12
Ruthenium (44)	Ru-97	8.72E+01	7.95E-03	1.5E-11 (V)	2.34E-05	2.45E-11	4.27E-11	1.36E+09	2.61E-03	3.00E-03	2.70E+02	5.50E+01	3.30E-03	9.40E-06	3.00E-03	8.00E+00	4.00E-03	5.5E+04	1.2E+09	5.8E+00	1.4E+02	3.6E+02	5.8E+03	5.5E+05	2.5E+04	1.9E+02	7.5E+05	5.3E+00	1.1E-11
Sulfur (16)	S-35	2.89E+00	2.40E-01	1.8E-10 (S)	2.36E-10	1.89E-11	3.18E-11	1.36E+09	6.00E-01	2.00E+00	7.50E+00	1.00E+03	2.00E-01	7.90E-03	.	.	.	2.3E+03	3.4E+06	2.1E+04	1.8E+00	2.4E-02	5.2E-01	3.4E+00	.	.	.	.	2.2E-02	5.2E-13
Sulphur (16)	S-37	7.21E+04	9.61E-06	0.00E+00	4.39E-04	0.00E+00	0.00E+00	1.36E+09	6.00E-01	2.00E+00	7.50E+00	1.00E+03	2.00E-01	7.90E-03	.	.	.	.	.	2.5E+02	.	.	.	.	.	.	.	.	2.5E+02	2.5E-13
Sulphur (16)	S-38	2.14E+03	3.24E-04	3.3E-11 (S)	2.42E-04	3.40E-11	5.01E-11	1.36E+09	6.00E-01	2.00E+00	7.50E+00	1.00E+03	2.00E-01	7.90E-03	.	.	.	1.1E+06	1.4E+10	1.4E+01	7.6E+02	9.8E+00	2.1E+02	1.4E+03	.	.	.	.	5.5E+00	1.9E-13
Antimony (51)	Sb-111	2.91E+05	2.38E-06	0.00E+00	1.75E-04	0.00E+00	0.00E+00	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	.	.	2.6E+03	.	.	.	.	.	.	.	.	2.6E+03	1.9E-12
Antimony (51)	Sb-113	5.46E+04	1.27E-05	0.00E+00	1.50E-04	0.00E+00	0.00E+00	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	.	.	5.6E+02	.	.	.	.	.	.	.	.	5.6E+02	2.3E-12
Antimony (51)	Sb-114	1.04E+05	6.64E-06	0.00E+00	3.47E-04	0.00E+00	0.00E+00	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	.	.	4.7E+02	.	.	.	.	.	.	.	.	4.7E+02	9.9E-13
Antimony (51)	Sb-115	1.13E+04	6.11E-05	6.6E-13 (S)	1.04E-04	1.91E-12	2.97E-12	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	9.5E+07	3.6E+12	1.7E+02	2.4E+05	2.1E+05	2.7E+07	2.3E+08	.	.	.	.	1.7E+02	3.3E-12
Antimony (51)	Sb-116	2.31E+04	3.01E-05	6.0E-13 (S)	2.99E-04	2.10E-12	3.13E-12	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	1.8E+08	8.1E+12	1.2E+02	4.4E+05	3.8E+05	4.9E+07	4.2E+08	.	.	.	.	1.2E+02	1.2E-12
Antimony (51)	Sb-116m	6.04E+03	1.15E-04	2.4E-12 (S)	3.94E-04	6.42E-12	1.01E-11	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	1.5E+07	5.3E+11	1.5E+02	3.7E+04	3.3E+04	4.2E+06	3.6E+07	.	.	.	.	2.4E+01	8.8E-13
Antimony (51)	Sb-117	2.17E+03	3.20E-04	1.2E-12 (S)	1.58E-05	2.59E-12	4.46E-12	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	1.2E+07	3.8E+11	2.1E+02	3.3E+04	2.9E+04	3.7E+06	3.2E+07	.	.	.	.	2.1E+02	2.2E-11
Antimony (51)	Sb-118	1.01E+05	6.85E-06	0.00E+00	9.53E-05	0.00E+00	0.00E+00	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	.	.	1.6E+03	.	.	.	.	.	.	.	.	1.6E+03	3.7E-12
Antimony (51)	Sb-118m	1.21E+03	5.71E-04	7.4E-12 (S)	3.31E-04	2.65E-11	4.35E-11	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	6.9E+05	3.4E+10	5.7E+00	1.8E+03	1.6E+03	2.0E+05	1.8E+06	.	.	.	.	5.6E+00	1.1E-12
Antimony (51)	Sb-119	1.59E+02	4.36E-03	5.0E-12 (S)	6.94E-08	1.91E-11	3.51E-11	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	1.1E+05	6.7E+09	3.5E+03	3.3E+02	2.9E+02	3.7E+04	3.2E+05	.	.	.	.	1.5E+02	2.1E-10
Antimony (51)	Sb-120	2.29E+04	3.02E-05	3.2E-13 (S)	5.24E-05	9.23E-13	1.39E-12	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	4.1E+08	1.5E+13	6.8E+02	9.9E+05	8.6E+05	1.1E+08	9.6E+08	.	.	.	.	6.8E+02	6.9E-12
Antimony (51)	Sb-120m	4.39E+01	1.58E-02	9.6E-11 (S)	3.10E-04	1.68E-10	2.81E-10	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	3.9E+03	9.6E+07	2.2E-01	1.0E+01	9.1E+00	1.2E+03	1.0E+04	.	.	.	.	2.1E-01	1.1E-12
Antimony (51)	Sb-122	9.29E+01	7.46E-03	1.6E-10 (S)	5.36E-05	4.19E-10	7.74E-10	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	3.0E+03	1.2E+08	2.7E+00	8.8E+00	7.7E+00	9.9E+02	8.5E+03	.	.	.	.	1.6E+00	4.1E-12
Antimony (51)	Sb-122m	8.69E+00	7.97E-06	0.00E+00	2.07E-06	0.00E+00	0.00E+00	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	.	.	6.5E+04	.	.	.	.	.	.	.	.	6.5E+04	1.8E-10
Antimony (51)	Sb-124	4.20E+00	1.65E-01	8.6E-10 (S)	2.45E-04	5.00E-10	8.96E-10	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	1.2E+02	1.0E+06	2.7E-02	3.3E-01	2.9E-01	3.8E+01	3.2E+02	.	.	.	.	2.3E-02	1.3E-12
Antimony (51)	Sb-124m	2.35E+05	2.95E-06	0.00E+00	5.30E-05	0.00E+00	0.00E+00	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	.	.	6.9E+03	.	.	.	.	.	.	.	.	6.9E+03	7.0E-12
Antimony (51)	Sb-124n	1.80E+04	3.84E-05	4.0E-13 (S)	2.60E-12	7.39E-13	1.15E-12	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	3.9E+08	9.5E+12	1.1E+10	9.7E+05	8.5E+05	1.1E+08	9.4E+08	.	.	.	.	4.5E+05	6.0E-09
Antimony (51)	Sb-125	2.51E-01	2.76E+00	1.1E-09 (S)	4.95E-05	1.68E-10	2.90E-10	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	2.2E+01	4.8E+04	7.8E-03	5.9E-02	5.2E-02	6.7E+00	5.8E+01	.	.	.	.	6.1E-03	5.9E-12
Antimony (51)	Sb-126	2.05E+01	3.38E-02	3.8E-10 (S)	3.38E-04	4.91E-10	8.71E-10	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	5.8E+02	1.1E+07	9.4E-02	1.7E+00	1.4E+00	1.9E+02	1.6E+03	.	.	.	.	8.4E-02	1.0E-12
Antimony (51)	Sb-126m	1.90E+04	3.64E-05	9.3E-13 (S)	1.87E-04	2.63E-12	3.99E-12	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	1.2E+08	4.3E+12	1.6E+02	2.9E+05	2.5E+05	3.2E+07	2.8E+08	.	.	.	.	1.6E+02	2.0E-12
Antimony (51)	Sb-127	6.57E+01	1.05E-02	2.2E-10 (S)	8.36E-05	3.98E-10	7.32E-10	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	2.2E+03	6.2E+07	1.2E+00	6.6E+00	5.7E+00	7.4E+02	6.4E+03	.	.	.	.	8.7E-01	3.3E-12
Antimony (51)	Sb-128	6.74E+02	1.03E-03	4.4E-11 (S)	3.82E-04	1.47E-10	2.60E-10	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	6.4E+04	3.2E+09	2.7E+00	1.8E+02	1.6E+02	2.0E+04	1.8E+05	.	.	.	.	2.6E+00	9.8E-13
Antimony (51)	Sb-128m	3.50E+04	1.98E-05	6.2E-13 (S)	2.34E-04	2.16E-12	3.23E-12	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	2.7E+08	1.2E+13	2.3E+02	6.4E+05	5.6E+05	7.3E+07	6.2E+08	.	.	.	.	2.3E+02	1.6E-12
Antimony (51)	Sb-129	1.38E+03	5.02E-04	2.8E-11 (S)	1.88E-04	8.72E-11	1.58E-10	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	2.2E+05	1.0E+10	1.1E+01	6.3E+02	5.5E+02	7.1E+04	6.1E+05	.	.	.	.	1.1E+01	2.0E-12
Antimony (51)	Sb-130	9.22E+03	7.52E-05	2.8E-12 (S)	4.07E-04	7.89E-12	1.24E-11	1.36E+09	1.57E-03	1.80E-03	6.20E+01	3.70E+01	1.20E-03	3.80E-05	.	.	.	1.8E+07	7.0E+11	3.5E+01	4.6E+04	4.1E+04	5.2E+06	4.5E+07	.	.	.	.	3.5E+01	9.6E-13
Antimony (51)	Sb-130m	5.78E

Radionuclides		Slope Factors and Isotope-specific Information																Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Samarium (62)	Sm-141	3.57E+04	1.94E-05	7.8E-13 (S)	1.73E-04	2.63E-12	4.01E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	2.2E+08	9.6E+12	3.2E+02	5.4E+05	1.0E+07	2.7E+07	2.4E+08	.	.	.	3.2E+02	2.4E-12
Samarium (62)	Sm-141m	1.61E+04	4.30E-05	1.7E-12 (S)	2.40E-04	5.06E-12	7.99E-12	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	5.0E+07	2.0E+12	1.0E+02	1.3E+05	2.5E+06	6.4E+06	5.7E+07	.	.	.	1.0E+02	1.8E-12
Samarium (62)	Sm-142	5.02E+01	1.38E-04	6.0E-12 (S)	1.00E-05	2.02E-11	3.46E-11	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	3.6E+06	1.8E+11	7.7E+02	9.9E+03	1.9E+05	5.0E+05	4.5E+06	.	.	.	7.1E+02	3.9E-11
Samarium (62)	Sm-143	4.16E+04	1.66E-05	0.00E+00	6.15E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	.	.	1.0E+03	.	.	.	.	.	.	.	1.0E+03	7.0E-12
Samarium (62)	Sm-143m	3.31E+05	2.09E-06	0.00E+00	8.49E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	.	.	6.0E+03	.	.	.	.	.	.	.	6.0E+03	5.1E-12
Samarium (62)	Sm-145	7.44E-01	9.32E-01	1.6E-10 (F)	1.01E-06	4.49E-11	8.13E-11	1.36E+05	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	2.3E+02	9.9E+05	1.1E+00	6.6E-01	1.3E+01	3.3E+01	3.0E+02	.	.	.	4.0E-01	1.5E-10
Samarium (62)	Sm-146	6.73E-09	1.03E+08	3.7E-07 (F)	0.00E+00	1.41E-09	1.93E-09	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	3.2E-01	1.4E+01	.	7.0E-04	1.4E-02	3.5E-02	3.2E-01	.	.	.	6.5E-04	2.8E-05
Samarium (62)	Sm-147	6.54E-12	1.06E+11	3.4E-07 (F)	0.00E+00	1.29E-09	1.76E-09	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	3.5E-01	1.5E+01	.	7.7E-04	1.5E-02	3.9E-02	3.5E-01	.	.	.	7.1E-04	3.1E-02
Samarium (62)	Sm-148	9.90E-17	7.00E+15	2.9E-07 (F)	0.00E+00	1.11E-05	1.51E-05	1.36E+05	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	4.1E-01	1.8E+01	.	8.8E-04	1.7E-02	4.5E-02	4.0E-01	.	.	.	8.2E-04	2.4E+01
Samarium (62)	Sm-151	7.70E-03	9.00E+01	2.5E-10 (F)	1.04E-11	2.20E-11	4.05E-11	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	1.8E+01	2.4E+04	4.3E+03	5.2E-02	1.0E+00	2.6E+00	2.4E+01	.	.	.	4.9E-02	1.8E-09
Samarium (62)	Sm-153	1.31E+02	5.31E-03	8.6E-11 (S)	3.00E-06	1.90E-10	3.51E-10	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	9.2E+03	3.2E+08	6.7E+01	2.7E+01	5.3E+02	1.4E+03	1.2E+04	.	.	.	1.8E+01	4.2E-11
Samarium (62)	Sm-155	1.63E+04	4.24E-05	9.1E-13 (S)	7.57E-06	1.88E-12	2.90E-12	1.36E+05	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	1.4E+08	3.8E+12	3.3E+03	3.4E+05	6.7E+06	1.7E+07	1.6E+08	.	.	.	3.3E+03	6.1E-11
Samarium (62)	Sm-156	6.46E+02	1.07E-03	2.9E-11 (S)	9.78E-06	6.01E-11	1.10E-10	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	1.5E+05	4.7E+09	1.0E+02	4.3E+02	8.3E+03	2.1E+04	1.9E+05	.	.	.	8.1E+01	3.8E-11
Samarium (62)	Sm-157	4.54E+04	1.53E-05	0.00E+00	4.67E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	9.30E+02	2.50E+01	2.00E-03	6.00E-05	.	.	.	.	.	1.5E+03	.	.	.	.	.	.	.	1.5E+03	1.0E-11
Tin (50)	Sn-106	1.90E+05	3.65E-06	0.00E+00	1.43E-04	0.00E+00	0.00E+00	1.36E+05	3.00E-01	1.00E+00	1.60E+01	3.00E+03	1.00E-02	1.00E-03	.	.	.	.	.	2.0E+01	.	.	.	.	.	.	.	2.0E+03	2.2E-12
Tin (50)	Sn-108	3.54E+04	1.96E-05	6.4E-13 (S)	7.54E-05	2.01E-12	3.22E-12	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	2.7E+08	1.2E+13	7.3E+02	3.3E+05	1.9E+05	2.1E+06	5.6E+06	.	.	.	7.2E+02	4.3E-12
Tin (50)	Sn-109	2.02E+04	3.42E-05	5.0E-13 (S)	2.95E-04	1.84E-12	2.85E-12	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	1.8E+08	8.4E+12	1.1E+02	2.0E+05	1.2E+05	1.3E+06	3.5E+06	.	.	.	1.1E+02	1.1E-12
Tin (50)	Sn-110	1.48E+03	4.69E-04	2.0E-11 (S)	2.94E-05	7.61E-11	1.38E-10	1.36E+05	3.00E-01	1.00E+00	1.60E+01	3.00E+03	1.00E-02	1.00E-03	.	.	.	2.7E+05	1.6E+10	7.8E+01	3.6E+02	2.1E+02	2.3E+03	6.2E+03	.	.	.	4.8E+01	6.9E-12
Tin (50)	Sn-111	1.03E+04	6.72E-05	7.5E-13 (S)	5.96E-05	1.92E-12	3.11E-12	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	8.2E+07	2.9E+12	2.7E+02	1.0E+05	5.9E+04	6.4E+05	1.7E+06	.	.	.	2.7E+02	5.5E-12
Tin (50)	Sn-113	2.20E+00	3.15E-01	4.0E-10 (S)	6.15E-07	1.74E-10	3.17E-10	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	1.7E+02	1.2E+06	5.5E+00	2.3E-01	1.4E-01	1.5E+00	4.0E+00	.	.	.	8.0E-02	8.0E-12
Tin (50)	Sn-113m	1.70E+04	4.07E-05	3.2E-13 (S)	6.06E-08	2.24E-13	3.52E-13	1.36E+05	3.00E-01	1.00E+00	1.60E+01	3.00E+03	1.00E-02	1.00E-03	.	.	.	1.2E+05	1.1E+13	4.3E+05	1.4E+06	8.4E+05	9.1E+06	2.4E+07	.	.	.	2.3E+05	3.0E-09
Tin (50)	Sn-117m	1.84E+01	3.77E-02	2.8E-10 (S)	1.27E-05	1.74E-10	3.20E-10	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	1.4E+03	1.4E+07	2.2E+00	2.0E+00	1.2E+00	1.3E+01	3.3E+01	.	.	.	5.2E-01	6.4E-12
Tin (50)	Sn-119m	8.63E-01	8.03E-01	3.3E-10 (S)	4.23E-08	8.91E-11	1.65E-10	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	1.3E+02	5.5E+05	3.2E+01	1.8E-01	1.1E-01	1.2E+00	3.1E+00	.	.	.	6.2E-02	1.7E-11
Tin (50)	Sn-121	2.25E+02	3.09E-03	3.0E-11 (S)	3.60E-09	6.01E-11	1.11E-10	1.36E+05	3.00E-01	1.00E+00	1.60E+01	3.00E+03	1.00E-02	1.00E-03	.	.	.	5.0E+04	1.6E+09	1.1E+05	6.9E+01	4.1E+01	4.5E+02	1.2E+03	.	.	.	2.4E+02	2.5E-11
Tin (50)	Sn-121m	1.58E-02	4.39E+01	1.2E-09 (S)	2.41E-08	9.30E-11	1.71E-10	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	4.9E+00	6.1E+03	2.2E+00	6.7E-03	4.0E-03	4.3E-02	1.1E-01	.	.	.	2.3E-03	3.5E-11
Tin (50)	Sn-121m+D	1.58E-02	4.39E+01	1.2E-09 (S)	2.69E-08	1.40E-10	2.57E-10	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	3.3E+00	5.9E+03	1.9E+00	4.5E-03	2.7E-03	2.9E-02	7.6E-02	.	.	.	1.5E-03	2.3E-11
Tin (50)	Sn-123	1.96E+00	3.54E-01	1.3E-09 (S)	1.05E-06	5.56E-10	1.03E-09	1.36E+05	3.00E-01	1.00E+00	1.60E+01	3.00E+03	1.00E-02	1.00E-03	.	.	.	4.7E+01	3.3E+05	2.9E+00	6.5E-02	3.9E-02	4.2E-01	1.1E+00	.	.	.	2.2E-02	2.7E-12
Tin (50)	Sn-123m	9.09E+03	7.62E-05	1.6E-12 (S)	1.26E-05	3.05E-12	4.94E-12	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	4.6E+07	1.2E+12	1.1E+03	5.5E+04	3.3E+04	3.6E+05	9.4E+05	.	.	.	1.1E+03	2.8E-11
Tin (50)	Sn-125	2.62E+01	2.64E-02	4.2E-10 (S)	4.42E-05	7.90E-10	1.46E-09	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	4.5E+02	1.3E+07	9.2E-01	6.2E-01	3.7E-01	4.0E+00	1.1E+01	.	.	.	1.7E-01	1.6E-12
Tin (50)	Sn-125m	3.83E+04	1.81E-05	0.00E+00	3.91E-05	0.00E+00	0.00E+00	1.36E+05	3.00E-01	1.00E+00	1.60E+01	3.00E+03	1.00E-02	1.00E-03	.	.	.	.	.	1.5E+03	.	.	.	.	.	.	.	1.5E+03	9.6E-12
Tin (50)	Sn-126	3.01E-06	2.30E+05	1.1E-08 (S)	2.69E-06	1.01E-09	1.81E-09	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	3.4E-01	4.6E+02	1.4E-02	4.6E-04	2.7E-04	2.9E-03	7.8E-03	.	.	.	1.6E-04	1.3E-08
Tin (50)	Sn-126+D	3.01E-06	2.30E+05	1.2E-08 (S)	2.37E-04	1.08E-09	1.94E-09	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	3.2E-01	4.6E+02	1.6E-04	4.3E-04	2.6E-04	2.8E-03	7.3E-03	.	.	.	7.8E-05	6.3E-09
Tin (50)	Sn-127	2.89E+01	2.40E-04	1.3E-11 (S)	2.50E-04	1.71E-11	5.59E-11	1.36E+05	3.00E-01	1.00E+00	1.60E+01	3.00E+03	1.00E-02	1.00E-03	.	.	.	1.3E+06	4.9E+10	1.8E+01	1.7E+03	1.0E+03	1.1E+04	2.9E+04	.	.	.	1.7E+03	1.5E-12
Tin (50)	Sn-127m	8.82E+04	7.86E-06	0.00E+00	6.97E-05	0.00E+00	0.00E+00	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	.	.	2.0E+03	.	.	.	.	.	.	.	2.0E+03	5.5E-12
Tin (50)	Sn-128	6.17E+03	1.12E-04	6.6E-12 (S)	6.44E-05	1.71E-11	2.88E-11	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	5.3E+06	2.0E+11	1.5E+02	6.7E+03	4.0E+03	4.3E+04	1.1E+05	.	.	.	1.4E+02	5.6E-12
Tin (50)	Sn-129	1.63E+05	4.24E-06	0.00E+00	1.28E-04	0.00E+00	0.00E+00	1.36E+05	3.00E-01	1.00E+00	1.60E+01	3.00E+03	1.00E-02	1.00E-03	.	.	.	.	.	2.0E+03	.	.	.	.	.	.	.	2.0E+03	3.0E-12
Tin (50)	Sn-130	9.79E+04	7.08E-06	0.00E+00	1.08E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	.	.	1.4E+03	.	.	.	.	.	.	.	1.4E+03	3.6E-12
Tin (50)	Sn-130m	2.14E+05	3.23E-06	0.00E+00	1.12E-04	0.00E+00	0.00E+00	1.36E+09	3.00E-01	1.00E+00	1.60E+03	3.00E+03	1.00E-02	1.00E-03	.	.	.	.	.	3.0E+03	.	.	.	.	.	.	.	3.0E+03	3.5E-12
Strontium (38)	Sr-79	1.62E+05	4.28E-06	0.00E+00	1.37E-04	0.00E+00	0.00E+00	1.36E+05	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	.	.	1.8E+03	.	.	.	.	.	.	.	1.8E+03	1.7E-12
Strontium (38)	Sr-80	3.43E+03	2.02E-04	1.5E-11 (S)	5.05E-05	4.82E-11	8.36E-11	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	1.0E+06	4.8E+10	1.1E+02	2.1E+03	5.1E+02	2.1E+05	5.7E+04	4.6E+05	1.1E+06	1.3E+05	8.3E+01	3.8E-12
Strontium (38)	Sr-81	1.63E+04	4.24E-05	1.9E-12 (S)	1.62E-04	5.38E-12	8.54E-12	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	4.8E+07	1.8E+12	1.6E+02	8.9E+04	2.2E+04	9.1E+06	2.5E+06	2.0E+07	4.9E+07	5.6E+06	1.5E+02	1.5E-12
Strontium (38)	Sr-82	9.97E+05	6.95E-02	1.2E-09 (S)	1.29E-05	1.22E-05	2.21E-05	1.36E+05	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	1.1E+02	1.7E+06	1.2E+04	2.4E-01	5.8E-02	2.4E+01	6.6E+00	5.3E+01	1.3E+02	1.5E+01	4.6E+02	7.4E-13
Strontium (38)	Sr-82+D	9.97E+00	6.95E-02	1.2E-09 (S)	1.33E-04	1.22E-09	2.21E-09	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	1.1E+02	1.7E+06	1.2E-01	2.4E-01	5.8E-02	2.4E+01	6.6E+00	5.3E+01	1.3E+02	1.5E+01	3.3E-02	5.3E-13
Strontium (38)	Sr-83	1.87E+02	3.70E-03	4.0E-11 (S)	9.97E-05	9.07E-11	1.62E-10	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	2.9E+04	9.8E+08	2.9E+00	6.0E+01	1.5E+01	6.2E+03	1.7E+03	1.3E+04	3.3E+04	3.8E+03	2.3E+00	2.0E-12
Strontium (38)	Sr-85	3.90E+00	1.78E-01	8.6E-11 (S)	5.81E-05	8.24E-11	1.24E-10	1.36E+05	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	7.8E+02	9.6E+06	1.0E-01	1.4E+00	3.4E-01	1.4E+02	3.8E+01	3.1E+02	7.6E+02	8.8E+01	7.5E-02	3.2E-12
Strontium (38)	Sr-85m	5.39E+03	1.29E-04	2.5E-13 (S)	2.20E-05	6.10E-13	9.51E-13	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	1.4E+08	4.6E+12	3.8E+02	2.6E+05	6.3E+04	2.6E+07	7.1E+06	5.7E+07	1.4E+08	1.6E+07	3.8E+02	1.2E-11
Strontium (38)	Sr-87m	2.16E+03	3.21E-04	1.7E-12 (S)	3.60E-05	4.12E-12	7.05E-12	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	7.6E+06	2.7E+11	9.3E+01	1.5E+04	3.7E+03	1.6E+06	4.2E+05	3.4E+06	8.5E+06	9.7E+05	9.0E+01	7.0E-12
Strontium (38)	Sr-89	5.01E+01	1.38E-01	8.2E-10 (S)	1.96E-07	4.97E-10	9.00E-10	1.36E+05	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	1.4E+02	1.3E+06	4.0E+01	2.9E-01	7.2E-02	3.0E+01	8.1E+00	6.5E+01	1.6E+02	1.9E+01	5.7E-02	2.0E-12
Strontium (38)	Sr-90	2.41E-02	2.88E+01	1.2E-08 (S)	1.31E-08	1.86E-09	2.33E-09	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	4.2E-01	7.1E+02	5.1E+00	6.1E-04	1.5E-04	6.3E-02	1.7E-02	1.4E-01	3.4E-01	3.9E-02	1.2E-04	8.6E-13
Strontium (38)	Sr-90+D	2.41E-02	2.88E+01	1.2E-08 (S)	5.27E-07	2.57E-09	3.66E-09	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	2.6E-01	7.0E+02	1.1E-01	4.4E-04	1.1E-04	4.5E-02	1.2E-02	9.8E-02	2.4E-01	2.8E-02	8.6E-05	6.2E-13
Strontium (38)	Sr-91	6.30E+02	1.10E-03	5.3E-11 (S)	9.03E-05	1.28E-10	2.13E-10	1.36E+05	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	6.7E+04	2.5E+05	1.1E+01	1.4E+02	3.5E+01	1.5E+04	4.0E+03	3.2E+04	8.0E+04	9.1E+03	7.8E+00	2.2E-12
Strontium (38)	Sr-92	2.28E+03	3.04E-04	3.0E-11 (S)	1.81E-04	8.67E-11	1.58E-10	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	3.6E+05	1.6E+10	2.0E+01	7.7E+02	1.9E+02	7.9E+04	2.1E+04	1.7E+05	4.3E+05	4.9E+04	1.7E+01	1.4E-12
Strontium (38)	Sr-93	4.91E+04	1.41E-05	0.00E+00	2.94E-04	0.00E+00	0.00E+00	1.36E+09	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	.	.	2.6E+02	.	.	.	.	.	.	.	2.6E+02	9.5E-13
Strontium (38)	Sr-94	2.90E+05	2.39E-06	0.00E+00	1.94E-04	0.00E+00	0.00E+00	1.36E+05	9.57E-02	1.10E-01	1.00E+00	2.90E+00	1.30E-03	1.30E-03	2.50E-03	2.00E-02	3.50E-01	.	.	2.3E+03	.	.	.	.	.	.	.	2.3E+03	1.5E-12
Tantalum (73)	Ta-170	5.39E+04	1.29E-05	0.00E+00	1.26E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	.	.	6.6E+02	.	.	.	.	.	.	.	6.6E+02	4.1E-12
Tantalum (73)	Ta-172	9.90E+03	7.00E-05	2.0E-12 (S)	2.10E-04	4.68E-12	7.37E-12	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	3.3E+07	1.0E+12	7.3E+01	8.4E+04	3.4E+05	1.7E+09	4.6E+08	.	.	.	7.3E+01	2.5E-12
Tantalum (73)	Ta-173	1.93E+03	3.58E-04	7.4E-12 (S)	6.56E-05	1.84E-11	3.26E-11	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	1.5E+06	5.5E+10	4.6E+01	4.2E+03	1.7E+04	8.4E+07	2.3E+07	.	.	.	4.5E+01	7.8E-12
Tantalum (73)	Ta-174	5.33E+03	1.30E-04	3.3E-12 (S)	1.17E-04	7.61E-12	1.28E-11	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	1.0E+07	3.4E+11	7.1E+01	2.8E+04	1.1E+05	5.6E+08	1.5E+08	.	.	.	7.0E+01	4.5E-12
Tantalum (73)	Ta-175	5.78E+02	1.20E-03	1.3E-11 (S)	1.36E-04	3.73E-11	6.44E-11	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	2.2E+05	9.3E+09	1.6E+00	6.1E+02	2.5E+03	1.2E+07	3.3E+06	.	.	.	6.5E+00	3.8E-12
Tantalum (73)	Ta-176	7.50E+02	9.24E-04	1.6E-11 (S)	2.99E-04	4.57E-11	7.76E-11	1.36E+05	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	2.4E+05	1.0E+10	3.9E+00	6.5E+02	2.7E+03	1.3E+07	3.5E+06	.	.	.	3.9E+00	1.8E-12
Tantalum (73)	Ta-177	1.07E+02	6.46E-03	1.2E-11 (S)	3.28E-06	2.35E-11	4.27E-11	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	6.2E+04	1.8E+09	5.1E+01	1.8E+02	7.4E+02	3.6E+06	9.9E+05	.	.	.	3.8E+01	1.2E-10
Tantalum (73)	Ta-178	3.91E+04	1.77E-05	0.00E+00	1.05E-05	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	.	.	5.8E+03	.	.	.	.	.	.	.	5.8E+03	5.1E-11
Tantalum (73)	Ta-178m	2.57E+01	2.69E-04	5.5E-12 (S)	1.17E-04	1.13E-11	1.92E-11	1.36E+05	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	3.3E+06	9.8E+10	3.4E+01	9.0E+03	3.7E+04	1.8E+08	4.9E+07	.	.	.	3.4E+01	4.5E-12
Tantalum (73)	Ta-179	3.81E-01	1.82E+00	4.8E-11 (S)	7.57E-07	1.27E-11	2.31E-11	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	4.1E+02	1.7E+06	7.8E-01	1.2E+00	4.8E+00	2.4E+04	6.5E+03	.	.	.	4.3E-01	3.9E-10
Tantalum (73)	Ta-180	7.45E+02	9.31E-04	5.2E-12 (S)	1.64E-06	1.23E-11	2.25E-11	1.36E+09	2.00E-03	1.00E-01	7.80E+02	1.00E+02	5.00E-06	5.00E-06	.	.	.	8.2E+05	3.0E+10	7.0E+02	2.4E+03	9.8E+03	4.8E+07	1.3E+07	.	.	.	5.1E+02	2.4E-10
Tantalum (73)	Ta-182	2.21E+00	3.14E-01	1.0E-09 (S)	1.63E-04	3.05E-10	5.47E-10	1.36E+05	2.00E-03	1.00E-01

Radionuclides		Slope Factors and Isotope-specific Information																Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Technetium (43)	Tc-104	1.99E+04	3.48E-05	1.5E-12 (S)	3.02E-04	5.26E-12	8.01E-12	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	6.2E+07	2.8E+12	1.0E+02	2.8E+04	.	3.7E+07	9.7E+05	1.1E+08	1.2E+07	2.3E+05	1.0E+02	1.0E-02
Technetium (43)	Tc-105	4.79E+04	1.45E-05	0.00E+00	9.81E-05	0.00E+00	0.00E+00	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	.	.	7.6E+02	.	.	.	.	.	.	.	7.6E+02	3.2E-12
Technetium (43)	Tc-91	1.16E+05	5.97E-06	0.00E+00	3.31E-04	0.00E+00	0.00E+00	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	.	.	5.4E+02	.	.	.	.	.	.	.	5.4E+02	8.2E-13
Technetium (43)	Tc-91m	1.10E+05	6.28E-06	0.00E+00	1.73E-04	0.00E+00	0.00E+00	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	.	.	9.9E+02	.	.	.	.	.	.	.	9.9E+02	1.6E-12
Technetium (43)	Tc-92	8.57E+04	8.09E-06	0.00E+00	4.86E-04	0.00E+00	0.00E+00	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	.	.	2.7E+02	.	.	.	.	.	.	.	2.7E+02	5.7E-13
Technetium (43)	Tc-93	2.21E+03	3.14E-04	2.6E-12 (S)	2.10E-04	7.99E-12	1.31E-11	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	4.2E+06	1.8E+11	1.6E+01	2.1E+03	.	2.7E+06	7.1E+04	8.0E+06	8.4E+05	1.7E+04	1.6E+01	1.3E-12
Technetium (43)	Tc-93m	8.37E+01	8.28E-05	1.1E-12 (S)	1.30E-04	3.29E-12	5.37E-12	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	3.9E+07	1.5E+12	1.0E+01	1.9E+04	.	2.5E+07	6.5E+05	7.4E+07	7.8E+06	1.6E+05	9.9E+01	2.1E-12
Technetium (43)	Tc-94	1.24E+03	5.57E-04	7.8E-12 (S)	3.31E-04	2.38E-11	3.93E-11	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	7.9E+05	3.3E+10	5.8E+00	3.9E+02	.	5.0E+05	1.3E+04	1.5E+06	1.6E+05	3.2E+03	5.7E+00	8.4E-13
Technetium (43)	Tc-94m	7.00E+03	9.89E-05	2.8E-12 (S)	2.48E-04	9.09E-12	1.49E-11	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	1.2E+07	5.2E+11	4.4E+01	5.8E+03	.	7.4E+06	2.0E+05	2.2E+07	2.3E+06	4.7E+04	4.3E+01	1.1E-12
Technetium (43)	Tc-95	3.04E+02	2.28E-03	7.4E-12 (S)	9.81E-05	2.17E-11	3.60E-11	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	2.1E+05	8.6E+09	4.8E+00	1.0E+02	.	1.4E+05	3.6E+03	4.1E+05	4.3E+04	8.5E+02	4.5E+00	2.8E-12
Technetium (43)	Tc-95m	4.15E+00	1.67E-01	1.3E-10 (S)	8.08E-05	6.87E-11	1.13E-10	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	9.1E+02	7.0E+06	7.9E-02	4.5E-01	.	5.8E+02	1.5E+01	1.7E+03	1.8E+02	3.7E+00	6.6E-02	2.9E-12
Technetium (43)	Tc-96	5.91E+01	1.17E-02	5.7E-11 (S)	3.14E-04	1.27E-10	2.06E-10	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	7.1E+03	2.2E+08	2.9E-01	3.5E+00	.	4.5E+03	1.2E+02	1.3E+04	1.4E+03	2.8E+01	2.7E-01	8.4E-13
Technetium (43)	Tc-96m	7.07E+03	9.80E-05	5.8E-13 (S)	5.33E-06	1.34E-12	2.18E-12	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	8.1E+07	2.6E+12	2.1E+03	3.9E+04	.	5.1E+07	1.4E+06	1.5E+08	1.6E+07	3.2E+05	1.9E+03	5.1E-11
Technetium (43)	Tc-97	2.67E-07	2.60E+06	1.3E-10 (S)	7.73E-09	1.06E-11	1.90E-11	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	3.3E+01	4.0E+04	5.0E+00	1.8E-02	.	2.3E+01	6.1E-01	6.8E+01	7.2E+00	1.4E-01	2.7E-01	1.1E-05
Technetium (43)	Tc-97m	2.81E+00	2.47E-01	3.9E-10 (S)	2.79E-08	9.33E-11	1.70E-10	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	4.1E+02	1.5E+06	1.6E+02	2.2E-01	.	2.9E+02	7.7E+00	8.7E+02	9.2E+01	1.8E+00	1.9E-01	1.3E-11
Technetium (43)	Tc-98	1.65E-07	4.20E+06	3.2E-09 (S)	1.74E-04	2.54E-10	4.38E-10	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	1.4E+00	1.6E+03	2.2E-04	7.3E-04	.	9.5E-01	2.5E-02	2.9E+00	3.0E-01	6.0E-03	1.6E-04	1.9E-07
Technetium (43)	Tc-99	3.28E-06	2.11E+05	1.0E-09 (S)	2.24E-09	1.08E-10	1.96E-10	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	3.2E+00	5.1E+03	1.7E+01	1.7E-03	.	2.2E+00	5.9E-02	6.7E+00	7.1E-01	1.4E-02	1.5E-03	8.8E-08
Technetium (43)	Tc-99m	1.01E+03	6.87E-04	1.6E-12 (S)	1.07E-05	3.06E-12	5.37E-12	1.36E+09	1.13E+00	1.30E+00	0.00E+00	2.00E+01	1.00E-04	1.00E-03	1.50E-04	3.00E-02	3.00E+00	4.7E+06	1.3E+11	1.5E+02	2.5E+03	.	3.2E+06	8.5E+04	9.6E+06	1.0E+06	2.0E+04	1.4E+02	2.6E-11
Tellurium (52)	Te-113	2.14E+05	3.23E-06	0.00E+00	2.86E-04	0.00E+00	0.00E+00	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	.	.	1.2E+03	.	.	.	.	.	.	.	.	1.2E+03	1.2E-12
Tellurium (52)	Te-114	2.40E+04	2.89E-05	2.3E-12 (V)	1.63E-04	4.48E-12	6.75E-12	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	8.8E+07	2.2E+12	2.3E+02	1.6E+05	3.5E+05	3.0E+06	1.7E+07	.	2.9E+06	6.9E+05	2.3E+02	2.1E-12
Tellurium (52)	Te-115	6.28E+04	1.10E-05	0.00E+00	2.86E-04	0.00E+00	0.00E+00	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	.	.	3.4E+02	.	.	.	.	.	.	.	3.4E+02	1.2E-12
Tellurium (52)	Te-115m	5.44E+04	1.27E-05	0.00E+00	3.38E-04	0.00E+00	0.00E+00	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	.	.	2.5E+02	.	.	.	.	.	.	.	2.5E+02	1.0E-12
Tellurium (52)	Te-116	2.44E+03	2.84E-04	1.1E-11 (S)	7.98E-06	3.03E-11	5.34E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.1E+06	4.7E+10	4.7E+02	2.4E+03	5.3E+03	4.6E+04	2.6E+05	.	4.4E+04	1.0E+04	3.5E+02	3.2E-11
Tellurium (52)	Te-117	5.87E+03	1.18E-04	2.0E-12 (V)	2.00E-04	5.58E-12	9.17E-12	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.6E+07	6.1E+11	4.5E+01	3.2E+04	7.0E+04	6.0E+05	3.3E+06	.	5.8E+05	1.4E+05	4.5E+01	1.7E-12
Tellurium (52)	Te-118	4.22E+01	1.64E-02	3.4E-10 (S)	7.35E-08	6.95E-10	1.30E-09	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	8.1E+02	2.6E+07	8.9E+02	1.8E+00	4.0E+00	3.5E+01	1.9E+02	.	3.3E+01	7.9E+00	1.0E+00	5.5E-12
Tellurium (52)	Te-118+D	4.22E+01	1.64E-02	3.4E-10 (S)	9.53E-05	6.95E-10	1.30E-09	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	8.1E+02	2.6E+07	6.8E+01	1.8E+00	4.0E+00	3.5E+01	1.9E+02	.	3.3E+01	7.9E+00	4.1E-01	2.2E-12
Tellurium (52)	Te-119	3.78E+02	1.83E-03	8.7E-12 (S)	9.31E-05	2.59E-11	4.46E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	2.1E+05	9.1E+09	6.3E+00	4.4E+02	9.7E+02	8.3E+03	4.6E+04	.	8.0E+03	1.9E+03	6.1E+00	3.7E-12
Tellurium (52)	Te-119m	5.38E+01	1.29E-02	5.4E-11 (V)	1.91E-04	9.51E-11	1.59E-10	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	8.4E+03	2.1E+08	4.4E-01	1.7E+01	3.7E+01	3.2E+02	1.8E+03	.	3.1E+02	7.3E+01	4.2E-01	1.8E-12
Tellurium (52)	Te-121	1.32E+01	5.25E-02	5.3E-11 (V)	6.66E-05	5.61E-11	9.13E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	3.6E+03	5.2E+07	3.1E-01	7.0E+00	1.6E+01	1.3E+02	7.5E+02	.	1.3E+02	3.1E+01	2.8E-01	5.1E-12
Tellurium (52)	Te-121m	1.64E+00	4.22E-01	5.6E-10 (S)	2.12E-05	2.32E-10	3.67E-10	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.1E+02	6.2E+05	1.2E-01	2.1E-01	4.7E-01	4.0E+00	2.2E+01	.	3.9E+00	9.2E-01	5.9E-02	8.5E-12
Tellurium (52)	Te-123	1.16E-15	6.00E+14	8.3E-11 (V)	1.27E-10	3.56E-11	4.29E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.4E+01	6.3E+04	3.0E+02	2.1E-02	4.7E-02	4.0E-01	2.2E+00	.	3.9E-01	9.1E-02	1.2E-02	2.4E+02
Tellurium (52)	Te-123m	2.12E+00	3.27E-01	4.8E-10 (S)	1.21E-05	1.52E-10	2.61E-10	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	2.0E+02	9.3E+05	2.7E-01	4.2E-01	9.2E-01	8.0E+00	4.4E+01	.	7.7E+00	1.8E+00	1.3E-01	1.4E-11
Tellurium (52)	Te-125m	4.41E+00	1.57E-01	3.9E-10 (S)	1.87E-07	1.27E-10	2.30E-10	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	4.8E+02	2.4E+06	3.7E+01	1.0E+00	2.3E+00	2.0E+01	1.1E+02	.	1.9E+01	4.5E+00	5.7E-01	3.1E-11
Tellurium (52)	Te-127	6.49E+01	1.07E-02	1.8E-11 (S)	5.68E-07	4.02E-11	7.58E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	2.1E+05	7.4E+09	1.8E+01	4.8E+02	1.1E+01	9.2E+01	5.1E+04	.	8.9E+03	2.1E+03	2.3E+02	8.8E-11
Tellurium (52)	Te-127m	2.32E+00	2.99E-01	9.4E-10 (S)	7.23E-08	3.24E-10	5.77E-10	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.0E+02	5.2E+05	5.0E+01	2.1E-01	4.7E-01	4.1E+00	2.3E+01	.	3.9E+00	9.3E-01	1.2E-01	1.3E-11
Tellurium (52)	Te-129	5.23E+03	1.32E-04	3.1E-12 (V)	6.94E-06	6.60E-12	1.13E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.2E+07	3.6E+11	1.2E+03	2.4E+04	5.3E+04	4.5E+05	2.5E+06	.	4.4E+05	1.0E+05	1.1E+03	5.1E-11
Tellurium (52)	Te-129m	7.53E+00	9.21E-02	8.1E-10 (S)	3.76E-06	5.94E-10	1.10E-09	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.7E+02	2.0E+06	3.1E+00	3.8E-01	8.4E-01	7.2E+00	4.0E+01	.	7.0E+00	1.6E+00	2.0E-01	6.6E-12
Tellurium (52)	Te-131	1.46E+04	4.76E-05	6.6E-12 (V)	4.80E-05	8.23E-12	1.46E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	2.5E+07	4.6E+11	4.7E+02	5.3E+04	1.2E+05	1.0E+06	5.6E+06	.	9.7E+05	2.3E+05	4.6E+02	8.1E-12
Tellurium (52)	Te-131m	2.02E+02	3.42E-03	2.6E-10 (V)	1.82E-04	3.14E-10	5.79E-10	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	8.7E+03	1.6E+08	1.7E+00	1.9E+01	4.3E+01	3.7E+02	2.0E+03	.	3.5E+02	8.4E+01	1.5E+00	1.9E-12
Tellurium (52)	Te-132	7.89E+01	8.78E-03	5.7E-10 (V)	2.11E-05	6.57E-10	1.22E-09	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.6E+03	2.9E+07	5.8E+00	3.6E+00	8.0E+00	6.9E+01	3.8E+02	.	6.6E+01	1.6E+01	1.5E+00	4.8E-12
Tellurium (52)	Te-133	2.91E+04	2.38E-05	5.8E-12 (V)	1.54E-04	7.28E-12	1.35E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	5.4E+07	1.0E+12	2.9E+02	1.2E+05	2.7E+05	2.3E+06	1.3E+07	.	2.2E+06	5.2E+05	2.9E+02	2.6E-12
Tellurium (52)	Te-133m	6.57E+03	1.05E-04	2.3E-11 (V)	2.37E-04	3.06E-11	5.76E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	2.8E+06	6.0E+10	4.3E+01	6.4E+03	1.4E+04	1.2E+05	6.8E+05	.	1.2E+05	2.8E+04	4.2E+01	1.7E-12
Tellurium (52)	Te-134	8.71E+01	7.95E-03	8.0E-12 (V)	1.01E-04	5.04E-11	1.77E-11	1.36E+09	8.70E-02	1.00E-01	4.80E+02	1.50E+02	7.00E-03	3.40E-04	.	6.00E-01	5.10E+00	1.2E+07	2.3E+11	1.3E+02	2.5E+04	5.5E+04	4.8E+05	2.7E+06	.	4.6E+05	1.1E+05	1.3E+02	4.0E-12
Thorium (90)	Th-223	3.64E+07	1.90E-08	0.00E+00	4.99E-06	0.00E+00	0.00E+00	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	.	.	1.1E+07	.	.	.	.	.	.	.	1.1E+07	1.3E-10
Thorium (90)	Th-224	2.08E+07	3.33E-08	0.00E+00	2.17E-06	0.00E+00	0.00E+00	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	.	.	1.5E+07	.	.	.	.	.	.	.	1.5E+07	3.1E-10
Thorium (90)	Th-226	1.19E+04	5.82E-05	4.2E-09 (S)	6.37E-07	2.50E-11	3.94E-11	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	7.5E+06	6.0E+08	2.9E+04	1.9E+04	3.3E+04	1.1E+07	1.4E+08	.	.	.	8.5E+03	3.1E-10
Thorium (90)	Th-227	1.35E+01	5.12E-02	9.5E-07 (S)	1.20E-05	1.90E-09	3.48E-09	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	9.7E+01	3.0E+03	1.7E+00	2.8E-01	4.9E-01	1.7E+02	2.1E+03	.	.	.	1.6E-01	5.3E-12
Thorium (90)	Th-228	3.63E-01	1.91E+00	3.6E-06 (S)	1.52E-07	4.00E-09	6.57E-09	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	1.4E+00	2.1E+01	3.7E+00	3.6E-03	6.3E-03	2.1E+00	2.6E+01	.	.	.	2.3E-03	2.8E-12
Thorium (90)	Th-229	9.44E-05	7.34E+03	4.7E-06 (S)	6.06E-06	7.85E-05	1.04E-08	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	6.0E-02	1.1E+00	6.4E-03	1.3E-04	2.2E-04	7.4E-02	9.3E-01	.	.	.	7.9E-05	3.7E-10
Thorium (90)	Th-229+D	9.44E-05	7.34E+03	5.4E-06 (S)	6.22E-06	1.20E-08	1.69E-08	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	3.7E-02	9.7E-01	6.2E-03	8.3E-05	1.4E-04	4.9E-02	6.1E-01	.	.	.	5.2E-05	2.4E-10
Thorium (90)	Th-230	9.19E-06	7.54E+04	9.2E-07 (F)	2.28E-08	3.22E-09	4.49E-09	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	1.4E-01	5.7E+00	3.1E-04	5.4E-04	1.8E-01	2.3E+00	3.6E+00	.	.	.	2.0E-04	9.5E-09
Thorium (90)	Th-231	2.38E+02	2.91E-03	4.1E-11 (S)	6.72E-07	8.69E-11	1.61E-10	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	3.7E+04	1.2E+09	5.5E+02	1.1E+02	1.9E+02	6.4E+04	8.0E+05	.	.	.	6.1E+01	1.2E-10
Thorium (90)	Th-232	4.93E-11	1.41E+10	1.2E-06 (S)	9.69E-09	3.60E-09	4.97E-09	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	1.2E-01	4.5E+00	4.0E+00	2.8E-04	4.8E-04	1.6E-01	2.0E+00	.	.	.	1.7E-04	1.6E-03
Thorium (90)	Th-232+D	4.93E-11	1.41E+10	2.4E-06 (S)	1.09E-04	4.22E-08	5.86E-08	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	1.1E-02	2.2E+00	3.5E-04	2.3E-05	4.1E-05	1.4E-02	1.7E-01	.	.	.	1.4E-05	1.3E-04
Thorium (90)	Th-233	1.63E+04	4.24E-05	1.0E-12 (S)	3.88E-06	1.50E-12	2.34E-12	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	1.7E+08	3.4E+12	6.5E+03	4.3E+05	7.5E+05	2.5E+08	3.2E+05	.	.	.	6.4E+03	1.8E-10
Thorium (90)	Th-234	1.05E+01	6.60E-02	8.3E-10 (S)	4.80E-07	9.17E-10	1.69E-09	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	1.5E+02	2.6E+06	3.4E+01	4.5E-01	7.9E-01	2.7E+02	3.3E+03	.	.	.	2.8E-01	1.2E-11
Thorium (90)	Th-234+D	1.05E+01	6.60E-02	8.3E-10 (S)	2.93E-06	9.17E-10	1.69E-09	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	1.5E+02	2.6E+06	5.5E+00	4.5E-01	7.9E-01	2.7E+02	3.3E+03	.	.	.	2.7E-01	1.2E-11
Thorium (90)	Th-235	5.13E+01	1.35E-05	0.00E+00	6.69E-06	0.00E+00	0.00E+00	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	.	.	1.2E+04	.	.	.	.	.	.	.	1.2E+04	1.1E-10
Thorium (90)	Th-236	9.71E+03	7.13E-05	3.5E-12 (S)	3.57E-06	7.44E-12	1.21E-11	1.36E+09	1.83E-03	2.10E-03	2.00E+01	6.00E+00	2.30E-04	5.00E-06	.	.	.	2.0E+07	5.8E+11	4.2E+03	5.2E+04	9.0E+04	3.0E+07	3.8E+08	.	.	.	3.7E+03	1.8E-10
Thorium (90)	Ti-44	1.16E-02	6.00E+01	9.3E-09 (S)	6.69E-06	9.81E-10	1.71E-09	1.36E+09	1.00E-03	1.00E-01	1.90E+02	2.00E-02	2.00E-02	1.00E-02	.	.	.	4.5E-01	7.0E+02	7.2E-03	1.3E-03	3.5E-03	6.3E-03	3.4E-03	.	.	.	6.0E-04	4.4E-12
Thorium (90)	Ti-44+D	1.16E-02	6.00E+01	9.3E-09 (S)	2.75E-04	1.04E-05	1.82E-05	1.36E+09	1.00E-03	1.00E-01	1.90E+02	2.00E-02	2.00E-02	1.00E-02	.	.	.	4.3E-01	7.0E+02	1.8E-04	1.2E-03	3.3E-03	6.0E-03	3.2E-03	.	.	.	1.4E-04	1.0E-12
Titanium (22)	Ti-45	1.97E+03	3.52E-04	8.3E-12 (S)	1.03E-04	2.52E-11	4.47E-11	1.36E+09	1.00E-03	1.00E-01	1.00E+03	1.90E+02	2.00E-02	1.00E-02	.	.	.	1.1E+06	5.0E+10	3.0E+01	3.1E+03	8.5E+03	1.6E+04

Radionuclides		Slope Factors and Isotope-specific Information																	Carcinogenic Target Risk (TR) = 1E-06											
Element (Atomic Number)	Isotope	Lambda (yr^{-1})	Halflife (years)	Inhalation Slope Factor (Lungtype) (risk/Bq)	External Exposure Slope Factor (risk/yr per Bq/g)	Food Ingestion Slope Factor (risk/Bq)	Soil Ingestion Slope Factor (risk/Bq)	Particulate Emission or Volatilization factor (m^3/kg)	Wet Soil-to-plant transfer factor (L/kg)	Dry Soil-to-plant transfer factor (L/kg)	Distribution coefficient (L/kg)	Bioconcentration Factor (pCi/kg per pCi/L)	Plant to Beef Transfer Factor (pCi/kg per pCi/d)	Plant to Milk Transfer Factor (pCi/kg per pCi/d)	Plant to Swine Transfer Factor (pCi/kg per pCi/d)	Plant to Poultry Transfer Factor (pCi/kg per pCi/d)	Plant to Egg Transfer Factor (pCi/kg per pCi/d)	Ingestion PRG (Bq/g)	Inhalation PRG (Bq/g)	External Exposure PRG (Bq/g)	Produce Consumption PRG (Bq/g)	Fish Consumption PRG (Bq/g)	Beef Consumption PRG (Bq/g)	Dairy Consumption PRG (Bq/g)	Swine Consumption PRG (Bq/g)	Poultry Consumption PRG (Bq/g)	Egg Consumption PRG (Bq/g)	Total PRG (Bq/g)	Total PRG (mg/kg)
Actinium (89)	Ac-223	1.73E+05	4.00E-06	0.00E+00	1.65E-06	0.00E+00	0.00E+00	1.36E+09	1.00E-03	1.00E-01	1.70E+03	1.50E+01	2.00E-05	2.00E-06	.	.	.	.	.	1.6E+05	.	.	.	.	.	.	.	.	1.6E+05	4.0E-10
Uranium (92)	U-230	1.22E+01	5.70E-02	1.5E-06 (S)	8.30E-08	8.05E-09	1.43E-08	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	2.1E+01	1.7E+03	2.3E+02	5.9E-02	1.3E-02	2.0E+01	1.2E+00	7.3E-01	8.4E-01	1.0E-02	1.3E+00	3.7E-13
Uranium (92)	U-231	6.02E+01	1.15E-02	5.7E-11 (S)	4.48E-06	8.40E-11	1.54E-10	1.36E+05	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	9.7E+03	2.2E+08	2.1E+01	2.8E+01	6.2E+00	9.7E+03	5.7E+02	3.4E+02	4.0E+02	5.4E+02	3.9E+00	2.9E-11
Uranium (92)	U-232	1.01E-02	6.89E+01	2.5E-06 (S)	1.47E-08	1.04E-08	1.45E-08	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	5.2E-02	2.5E+00	3.2E+00	1.1E-04	2.5E-05	4.0E-02	2.3E-03	1.4E-03	1.6E-03	2.2E-03	2.0E-05	8.8E-13
Uranium (92)	U-233	4.35E-06	1.59E+05	7.7E-07 (S)	1.92E-08	2.62E-09	4.06E-09	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	1.5E-01	6.9E+00	2.0E+00	3.7E-04	8.2E-05	1.3E-01	7.6E-03	4.6E-03	5.3E-03	7.2E-03	6.4E-05	6.7E-09
Uranium (92)	U-234	2.82E-06	2.46E+05	7.5E-07 (S)	6.85E-05	2.58E-05	4.01E-05	1.36E+05	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	1.5E-01	7.0E+00	5.7E+00	3.8E-04	8.4E-05	1.3E-01	7.8E-03	4.7E-03	5.4E-03	7.3E-03	6.5E-05	1.1E-08
Uranium (92)	U-235	9.84E-10	7.04E+08	6.8E-07 (S)	1.49E-05	2.55E-09	3.99E-09	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	1.6E-01	7.8E+00	2.6E-03	3.8E-04	8.5E-05	1.3E-01	7.8E-03	4.7E-03	5.4E-03	7.4E-03	6.5E-05	3.0E-05
Uranium (92)	U-235+D	9.84E-10	7.04E+08	6.8E-07 (S)	1.56E-05	2.64E-09	4.15E-09	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	1.5E-01	7.8E+00	2.5E-03	3.7E-04	8.2E-05	1.3E-01	7.6E-03	4.5E-03	5.2E-03	7.2E-03	6.2E-05	2.9E-05
Uranium (92)	U-235m	1.40E+04	4.95E-05	5.1E-17 (M)	0.00E+00	2.87E-16	4.46E-16	1.36E+05	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	7.8E+11	5.8E+16	.	1.9E+05	4.2E+08	6.6E+11	3.9E+10	2.3E+10	2.7E+10	3.7E+10	3.3E+08	1.1E-05
Uranium (92)	U-236	2.96E-08	2.34E+07	6.9E-07 (S)	3.35E-09	2.43E-09	3.77E-09	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	1.6E-01	7.6E+00	1.2E+01	4.0E-04	8.9E-05	1.4E-01	8.2E-03	4.9E-03	5.7E-03	7.8E-03	6.9E-05	1.1E-06
Uranium (92)	U-237	3.75E+01	1.85E-02	2.0E-10 (S)	1.01E-05	1.97E-10	3.62E-10	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	2.6E+03	4.0E+07	5.8E+00	7.8E-04	1.6E+00	2.6E+03	1.5E+02	9.1E+01	1.1E+02	1.4E+02	1.1E+00	1.3E-11
Uranium (92)	U-238	1.55E-10	4.47E+09	6.4E-07 (S)	3.35E-05	2.34E-05	3.63E-05	1.36E+05	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	1.7E-01	8.2E+00	1.2E+01	4.2E-04	9.2E-05	1.4E-01	8.5E-03	5.1E-03	5.9E-03	8.1E-03	7.2E-05	2.1E-04
Uranium (92)	U-238+D	1.55E-10	4.47E+09	6.4E-07 (S)	3.22E-06	3.26E-09	5.32E-09	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	1.2E-01	8.2E+00	1.2E+02	3.0E-04	6.6E-05	1.0E-01	6.1E-03	3.7E-03	4.2E-03	5.8E-03	5.2E-05	5.2E-05
Uranium (92)	U-239	1.55E+04	4.46E-05	1.7E-12 (S)	3.22E-06	2.86E-12	4.84E-12	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	8.0E+07	2.0E+12	7.5E+03	2.1E+05	4.7E+04	7.4E+07	4.3E+06	2.6E+06	3.0E+06	4.1E+06	6.2E+03	1.9E-10
Uranium (92)	U-240	4.31E+02	1.61E-03	8.4E-11 (S)	3.12E-07	2.74E-10	5.04E-10	1.36E+05	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	2.1E+04	1.1E+05	2.1E+03	6.1E+01	1.4E+01	2.1E+04	1.3E+03	7.5E+02	8.7E+02	1.2E+03	1.1E+01	1.1E-11
Uranium (92)	U-242	2.17E+04	3.20E-05	1.4E-12 (S)	4.10E-06	3.23E-12	4.91E-12	1.36E+09	5.39E-03	6.20E-03	4.00E-01	9.60E-01	3.90E-04	1.80E-03	4.40E-02	7.50E-01	1.10E+00	1.1E+08	3.3E+12	8.2E+03	2.6E+05	5.8E+04	9.1E+07	5.4E+06	3.2E+06	3.7E+06	5.1E+06	6.9E+03	1.5E-10
Vanadium (23)	V-47	1.12E+04	6.20E-05	1.7E-12 (S)	1.18E-04	4.71E-12	7.43E-12	1.36E+09	2.00E-03	1.00E-01	3.00E+02	9.70E+01	1.00E-02	5.00E-04	.	.	.	3.7E+07	1.4E+12	1.5E+02	9.4E+04	1.5E+05	9.5E+05	5.1E+06	.	.	.	1.5E+02	1.2E-12
Vanadium (23)	V-48	1.58E+01	4.38E-02	2.8E-10 (S)	3.79E-04	3.19E-10	5.54E-10	1.36E+05	2.00E-03	1.00E-01	3.00E+02	9.70E+01	1.00E-02	5.00E-04	.	.	.	7.1E+02	1.2E+07	6.5E-02	2.0E+00	3.2E+00	2.0E+01	1.1E+02	.	.	.	6.1E-02	3.6E-13
Vanadium (23)	V-49	7.67E-01	9.04E-01	7.6E-12 (S)	0.00E+00	4.79E-12	8.88E-12	1.36E+09	2.00E-03	1.00E-01	3.00E+02	9.70E+01	1.00E-02	5.00E-04	.	.	.	2.1E+03	2.1E+07	.	6.3E+00	1.0E+01	6.4E+01	3.5E+02	.	.	.	3.6E+00	4.5E-10
Vanadium (23)	V-50	4.62E-18	1.50E+17	2.6E-09 (F)	1.95E-04	2.15E-10	3.19E-10	1.36E+09	2.00E-03	1.00E-01	3.00E+02	9.70E+01	1.00E-02	5.00E-04	.	.	.	1.6E+00	1.7E+03	1.7E-04	3.8E-03	6.2E-03	3.9E-02	2.1E-01	.	.	.	1.5E-04	3.2E+03
Vanadium (23)	V-52	9.73E+04	7.12E-06	0.00E+00	1.98E-04	0.00E+00	0.00E+00	1.36E+05	2.00E-03	1.00E-01	3.00E+02	9.70E+01	1.00E-02	5.00E-04	.	.	.	.	.	7.6E+02	.	.	.	.	.	.	.	.	7.6E+02	7.9E-13
Vanadium (23)	V-53	2.26E+05	3.06E-06	0.00E+00	1.35E-04	0.00E+00	0.00E+00	1.36E+09	2.00E-03	1.00E-01	3.00E+02	9.70E+01	1.00E-02	5.00E-04	.	.	.	.	.	2.6E+03	.	.	.	.	.	.	.	.	2.6E+03	1.2E-12
Tungsten (74)	W-177	2.76E+03	2.51E-04	3.2E-12 (S)	1.00E-04	7.37E-12	1.25E-11	1.36E+09	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	5.5E+06	1.8E+11	4.3E+01	3.7E+03	9.7E+02	4.4E+03	2.4E+05	.	.	.	4.0E+01	5.0E-12
Tungsten (74)	W-178	1.17E+01	5.92E-02	8.4E-11 (S)	4.86E-07	5.39E-11	9.83E-11	1.36E+05	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	3.0E+03	2.9E+07	3.7E+01	2.1E+00	5.6E-01	2.5E+00	1.4E+02	.	.	.	3.7E-01	1.1E-11
Tungsten (74)	W-178+D	1.17E+01	5.92E-02	8.4E-11 (S)	1.10E-05	5.39E-11	9.83E-11	1.36E+09	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	3.0E+03	2.9E+07	1.7E+00	2.1E+00	5.6E-01	2.5E+00	1.4E+02	.	.	.	3.1E-01	9.1E-12
Tungsten (74)	W-179	9.83E+03	7.05E-05	8.0E-14 (S)	1.59E-06	2.87E-13	4.55E-13	1.36E+09	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	5.4E+08	2.6E+13	9.5E+03	3.4E+05	8.9E+04	4.0E+05	2.2E+07	.	.	.	8.2E+03	2.9E-10
Tungsten (74)	W-179m	5.69E+04	1.22E-05	0.00E+00	3.28E-04	0.00E+00	0.00E+00	1.36E+05	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	.	.	2.7E+04	.	.	.	.	.	.	.	.	2.7E+04	1.6E-10
Tungsten (74)	W-181	2.09E+00	3.32E-01	3.1E-11 (S)	1.29E-06	1.76E-11	3.19E-11	1.36E+09	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	1.6E+03	1.4E+07	2.5E+00	1.2E+00	3.1E-01	1.4E+00	7.7E+01	.	.	.	1.9E-01	3.2E-11
Tungsten (74)	W-185	3.37E+00	2.06E-01	3.7E-10 (S)	7.61E-09	1.16E-10	2.16E-10	1.36E+09	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	3.9E+02	1.9E+06	6.9E+02	2.8E-01	7.5E-02	3.4E-01	1.9E+01	.	.	.	5.0E-02	5.4E-12
Tungsten (74)	W-185m	2.28E+05	3.04E-06	0.00E+00	1.63E-06	0.00E+00	0.00E+00	1.36E+05	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	.	.	2.2E+05	.	.	.	.	.	.	.	.	2.2E+05	3.4E-10
Tungsten (74)	W-187	2.56E+02	2.71E-03	5.3E-11 (S)	5.18E-05	1.37E-10	2.53E-10	1.36E+09	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	2.5E+04	1.0E+09	7.7E+00	1.8E+01	4.8E+00	2.2E+01	1.2E+03	.	.	.	2.3E+00	3.2E-12
Tungsten (74)	W-188	3.62E+00	1.91E-01	1.5E-09 (S)	1.90E-07	5.52E-10	1.03E-09	1.36E+09	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	8.7E+01	5.0E+05	3.0E+01	6.4E-02	1.7E-02	7.6E-02	4.3E+00	.	.	.	1.1E-02	1.1E-12
Tungsten (74)	W-190	1.21E+04	5.71E-05	3.9E-12 (S)	9.75E-06	6.19E-12	9.72E-12	1.36E+05	8.00E-01	3.00E+00	1.50E+02	1.20E+03	4.00E-02	1.90E-04	.	.	.	3.1E+07	6.6E+11	1.9E+03	1.9E+04	5.1E+03	2.3E+04	1.3E+06	.	.	.	1.2E+03	3.7E-11
Xenon (54)	Xe-120	9.11E+03	7.61E-05	0.00E+00	4.23E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	3.3E+02	.	.	.	.	.	.	.	.	3.3E+02	8.5E-12
Xenon (54)	Xe-121	9.08E+03	7.63E-05	0.00E+00	1.89E-04	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	7.4E+01	.	.	.	.	.	.	.	.	7.4E+01	1.9E-12
Xenon (54)	Xe-122	3.02E+02	2.29E-03	0.00E+00	4.95E-06	0.00E+00	0.00E+00	1.36E+05	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	9.4E+01	.	.	.	.	.	.	.	.	9.4E+01	7.4E-11
Xenon (54)	Xe-123	2.92E+03	2.37E-04	0.00E+00	7.45E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	6.1E+01	.	.	.	.	.	.	.	.	6.1E+01	5.0E-12
Xenon (54)	Xe-125	3.59E+02	1.93E-03	0.00E+00	2.53E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	2.2E+01	.	.	.	.	.	.	.	.	2.2E+01	1.5E-11
Xenon (54)	Xe-127	6.95E+00	9.97E-02	0.00E+00	2.57E-05	0.00E+00	0.00E+00	1.36E+05	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	4.2E-01	.	.	.	.	.	.	.	.	4.2E-01	1.5E-11
Xenon (54)	Xe-127m	3.16E+05	2.19E-06	0.00E+00	1.30E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	3.8E+04	.	.	.	.	.	.	.	.	3.8E+04	2.9E-11
Xenon (54)	Xe-129m	2.85E+01	2.43E-02	0.00E+00	1.15E-06	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	3.8E+01	.	.	.	.	.	.	.	.	3.8E+01	3.4E-10
Xenon (54)	Xe-131m	2.14E+01	3.24E-02	0.00E+00	3.91E-07	0.00E+00	0.00E+00	1.36E+05	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	8.4E+01	.	.	.	.	.	.	.	.	8.4E+01	1.0E-09
Xenon (54)	Xe-133	4.82E+01	1.44E-02	0.00E+00	1.82E-06	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	4.1E+01	.	.	.	.	.	.	.	.	4.1E+01	2.2E-10
Xenon (54)	Xe-133m	1.16E+02	6.00E-03	0.00E+00	2.50E-06	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	7.1E+01	.	.	.	.	.	.	.	.	7.1E+01	1.6E-10
Xenon (54)	Xe-135	6.64E+02	1.04E-03	0.00E+00	2.62E-05	0.00E+00	0.00E+00	1.36E+05	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	3.9E+01	.	.	.	.	.	.	.	.	3.9E+01	1.5E-11
Xenon (54)	Xe-135m	2.38E+04	2.91E-05	0.00E+00	4.99E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	7.4E+02	.	.	.	.	.	.	.	.	7.4E+02	8.1E-12
Xenon (54)	Xe-137	9.54E+04	7.26E-06	0.00E+00	2.49E-05	0.00E+00	0.00E+00	1.36E+09	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	5.9E+03	.	.	.	.	.	.	.	.	5.9E+03	1.7E-11
Xenon (54)	Xe-138	2.59E+04	2.68E-05	0.00E+00	1.51E-04	0.00E+00	0.00E+00	1.36E+05	0.00E+00	0.00E+00	.	0.00E+00	0.00E+00	0.00E+00	.	.	.	.	.	2.6E+02	.	.	.	.	.	.	.	.	2.6E+02	2.7E-12
Yttrium (39)	Y-81	3.10E+05	2.23E-06	0.00E+00	1.35E-04	0.00E+00	0.00E+00	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	.	.	3.6E+03	.	.	.	.	.	.	.	.	3.6E+03	1.8E-12
Yttrium (39)	Y-83	5.14E+04	1.35E-05	0.00E+00	1.63E-04	0.00E+00	0.00E+00	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	.	.	4.9E+02	.	.	.	.	.	.	.	.	4.9E+02	1.5E-12
Yttrium (39)	Y-83m	1.28E+03	5.42E-06	0.00E+00	9.69E-05	0.00E+00	0.00E+00	1.36E+05	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	.	.	2.0E+03	.	.	.	.	.	.	.	.	2.0E+03	2.6E-12
Yttrium (39)	Y-84m	9.12E+03	7.62E-05	3.4E-12 (S)	5.05E-04	1.14E-11	1.81E-11	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	1.3E+07	5.7E+11	2.8E+02	3.2E+04	2.0E+04	2.2E+06	2.0E+07	.	3.4E+07	3.4E+08	2.8E+02	1.2E-11
Yttrium (39)	Y-85	2.27E+03	3.06E-04	8.6E-12 (S)	1.28E-04	2.89E-11	5.10E-11	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	1.1E+06	5.5E+10	2.7E+01	3.1E+03	1.9E+03	2.1E+05	1.9E+06	.	3.3E+06	3.3E+07	2.7E+01	2.0E-12
Yttrium (39)	Y-85m	1.25E+03	5.55E-04	1.9E-11 (S)	1.68E-04	7.08E-11	1.28E-10	1.36E+05	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	2.4E+05	1.4E+10	1.2E+01	7.0E+02	4.3E+02	4.8E+04	4.3E+05	.	7.4E+05	7.4E+06	1.1E+01	1.5E-12
Yttrium (39)	Y-86	4.12E+02	1.68E-03	4.2E-11 (S)	4.67E-04	1.53E-10	2.66E-10	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	3.8E+04	2.1E+09	1.4E+00	1.1E+02	6.5E+01	7.3E+03	6.6E+04	.	1.1E+05	1.1E+06	1.3E+00	5.3E-13
Yttrium (39)	Y-86m	7.59E+03	9.13E-05	2.5E-12 (S)	2.25E-05	8.88E-12	1.54E-11	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	1.2E+07	6.4E+11	5.2E+02	3.4E+04	2.1E+04	2.3E+06	2.1E+07	.	3.6E+07	3.6E+08	5.0E+02	1.1E-11
Yttrium (39)	Y-87	7.61E+03	9.11E-03	4.0E-11 (S)	5.11E-05	9.99E-11	1.77E-10	1.36E+05	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	1.1E+04	4.0E+08	2.3E+00	3.0E+01	1.9E+01	2.1E+03	1.9E+04	.	3.2E+04	3.2E+05	1.9E+00	4.3E-12
Yttrium (39)	Y-87m	4.54E+02	1.53E-03	1.5E-11 (S)	3.44E-05	4.34E-11	7.78E-11	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	1.4E+05	6.3E+09	2.0E+01	4.2E+02	2.5E+02	2.8E+04	2.6E+05	.	4.4E+05	4.4E+06	1.8E+01	6.7E-12
Yttrium (39)	Y-88	2.37E+00	2.92E-01	5.5E-10 (F)	3.69E-04	1.59E-10	2.60E-10	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	2.3E+02	9.0E+05	9.9E-03	5.9E-01	3.6E-01	4.0E+01	3.7E+02	.	6.3E+02	6.3E+03	9.5E-03	6.9E-13
Yttrium (39)	Y-89m	1.40E+04	4.97E-05	0.00E+00	1.15E-04	0.00E+00	0.00E+00	1.36E+05	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	.	.	1.9E+04	.	.	.	.	.	.	.	.	1.9E+04	2.3E-12
Yttrium (39)	Y-90	9.47E+01	7.32E-03	2.3E-10 (S)	5.14E-07	7.15E-10	1.33E-09	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	1.8E+03	8.8E+07	2.8E+02	5.3E+00	3.2E+00	3.6E+02	3.2E+03	.	5.6E+03	5.6E+04	2.0E+00	3.6E-12
Yttrium (39)	Y-90m	1.90E+03	3.64E-04	1.3E-11 (S)	7.04E-05	4.11E-11	7.53E-11	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	6.3E+05	3.1E+10	4.2E+01	1.8E+03	1.1E+03	1.2E+05	1.1E+06	.	2.0E+06	2.0E+07	3.9E+01	3.6E-12
Yttrium (39)	Y-91	4.32E+00	1.60E-01	9.1E-10 (S)	6.15E-07	6.37E-10	1.18E-09	1.36E+05	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	9.1E+01	1.0E+06	1.1E+01	2.7E-01	1.7E-01	1.8E+01	1.7E+02	.	2.9E+02	2.9E+03	1.0E-01	4.1E-12
Yttrium (39)	Y-91m	7.33E+03	9.46E-05	8.2E-13 (S)	6.31E-05	1.34E-12	2.20E-12	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	8.3E+07	1.9E+12	1.8E+02	2.2E+05	1.3E+05	1.5E+07	1.3E+08	.	2.3E+08	2.3E+09	1.8E+02	4.3E-12
Yttrium (39)	Y-92	1.71E+03	4.04E-04	2.5E-11 (S)	3.41E-05	9.79E-11	1.78E-10	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	2.4E+05	1.4E+10	7.8E+01	7.0E+02	4.3E+02	4.7E+04	4.3E+05	.	7.4E+05	7.4E+06	6.0E+01	6.3E-12
Yttrium (39)	Y-93	5.96E+02	1.16E-03	7.2E-11 (S)	1.34E-05	2.87E-10	5.30E-10	1.36E+05	4.35E-04	5.00E-04	4.70E+01	4.00E+01	2.00E-03	6.00E-05	.	1.00E-02	2.00E-03	2.8E+04	1.7E+05	6.9E+01	8.3E+01	5.1E+01	5.6E+03	5.1E+04	.	8.8E+04	8.8E+05	2.1E+01	6.5E-12
Yttrium (39)	Y-94	1.95E+04	3.56E-05	1.5E-12 (S)	1.03E-04	5.24E-12	7.99E-12	1.36E+09	4.35E-04	5.00E-04	4.70E+01	4.00E+01