ICRP60 Dose Conversion Factors and Dose Cleanup Concentrations in Activity (Bq) for Superfund

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Actinium	Ac-223			1.06E-19	3.11E+07	4.14E+07	4.22E+07	9.51E+07		
Actinium	Ac-223+D			1.60E-18	2.06E+06	2.74E+06	2.80E+06	6.30E+06		
Actinium	Ac-223+E			1.60E-18	2.06E+06	2.74E+06	2.80E+06	6.30E+06		
Actinium	Ac-224	7.00E-10	1.10E-07	4.14E-18	1.00E+04	1.34E+04	1.37E+04	3.08E+04	2.04E+01	7.56E-01
Actinium	Ac-224+D	6.50E-08	3.00E-06	5.55E-17	7.46E+02	9.92E+02	1.02E+03	2.29E+03	2.20E-01	8.14E-03
Actinium	Ac-224+E	6.50E-08	3.00E-06	5.55E-17	7.46E+02	9.92E+02	1.02E+03	2.29E+03	2.20E-01	8.14E-03
Actinium	Ac-225	2.40E-08	7.40E-06	3.09E-19	1.17E+03	1.39E+03	1.85E+03	4.00E+03	5.95E-01	2.20E-02
Actinium	Ac-225+D	2.40E-08	7.40E-06	6.33E-18	7.80E+01	1.03E+02	1.07E+02	2.40E+02	5.95E-01	2.20E-02
Actinium	Ac-225+E	2.40E-08	7.40E-06	6.33E-18	7.80E+01	1.03E+02	1.07E+02	2.40E+02	5.95E-01	2.20E-02
Actinium	Ac-226	1.00E-08	1.20E-06	3.04E-18	1.35E+03	1.78E+03	1.85E+03	4.15E+03	1.43E+00	5.29E-02
Actinium	Ac-226+D	1.00E-08	1.20E-06	3.40E-18	1.21E+03	1.60E+03	1.65E+03	3.71E+03	1.43E+00	5.29E-02
Actinium	Ac-226+E	1.00E-08	1.20E-06	3.40E-18	1.21E+03	1.60E+03	1.65E+03	3.71E+03	1.43E+00	5.29E-02
Actinium	Ac-227	1.10E-06	2.20E-04	2.39E-21	1.87E-01	1.46E-01	5.69E-01	1.03E+00	1.30E-02	4.81E-04
Actinium	Ac-227+D	1.10E-06	2.20E-04	1.00E-17	6.64E-02	6.51E-02	1.23E-01	2.63E-01	1.30E-02	4.81E-04
Actinium	Ac-227+E	1.10E-06	2.20E-04	1.00E-17	6.64E-02	6.51E-02	1.23E-01	2.63E-01	1.30E-02	4.81E-04
Actinium	Ac-228	4.30E-10	1.70E-08	3.03E-17	6.50E+02	8.67E+02	8.84E+02	1.99E+03	3.32E+01	1.23E+00
Actinium	Ac-228+D	1.40E-07	4.30E-05	8.21E-17	2.38E+02	3.16E+02	3.25E+02	7.30E+02	1.02E-01	3.78E-03
Actinium	Ac-228+E	1.40E-07	4.30E-05	8.21E-17	2.38E+02	3.16E+02	3.25E+02	7.30E+02	1.02E-01	3.78E-03
Aluminum	Al-26	3.50E-09	2.00E-08	8.84E-17	7.50E-03	7.50E-03	1.22E-02	2.75E-02	4.08E+00	1.51E-01
Aluminum	Al-28			6.20E-17	5.22E+04	6.95E+04	7.09E+04	1.60E+05		
Americium	Am-237	1.80E-11	2.50E-11	9.17E-18	1.08E+04	1.44E+04	1.47E+04	3.31E+04	7.94E+02	2.94E+01
Americium	Am-237+D	1.20E-10	3.80E-10	9.17E-18	1.08E+04	1.42E+04	1.47E+04	3.31E+04	1.19E+02	4.41E+00
Americium	Am-237+E	1.20E-10	3.80E-10	9.17E-18	1.08E+04	1.42E+04	1.47E+04	3.31E+04	1.19E+02	4.41E+00
Americium	Am-238	3.20E-11	9.00E-11	2.69E-17	2.75E+03	3.66E+03	3.74E+03	8.41E+03	4.46E+02	1.65E+01
Americium	Am-238+E	2.30E-07	4.60E-05	2.69E-17	2.66E+03	3.97E+02	3.66E+03	8.19E+03	6.21E-02	2.30E-03
Americium	Am-239	2.40E-10	2.20E-10	4.73E-18	2.14E+03	2.73E+03	2.92E+03	6.56E+03	5.95E+01	2.20E+00
Americium	Am-240	5.80E-10	4.30E-10	3.13E-17	7.59E+01	9.95E+01	1.03E+02	2.32E+02	2.46E+01	9.12E-01
Americium	Am-241	2.00E-07	4.20E-05	1.99E-19	7.25E-01	3.55E-03	1.58E+00	3.02E+00	7.14E-02	2.65E-03
Americium	Am-242	3.00E-10	1.70E-08	2.40E-19	3.13E+04	1.90E+04	4.26E+04	9.57E+04	4.76E+01	1.76E+00
Americium	Am-242+D	1.00E-08	4.30E-06	2.40E-19	2.72E+04	1.02E+03	3.86E+04	8.48E+04	1.43E+00	5.29E-02
Americium	Am-242+E	2.00E-07	4.20E-05	8.80E-21	1.01E+04	5.22E+01	2.01E+04	3.65E+04	7.14E-02	2.65E-03
Americium	Am-242m	1.90E-07	3.70E-05	7.71E-21	1.00E+00	3.97E-03	2.37E+00	4.30E+00	7.52E-02	2.78E-03
Americium	Am-242m+D	1.90E-07	3.70E-05	3.29E-19	6.89E-01	3.96E-03	1.42E+00	2.80E+00	7.52E-02	2.78E-03
Americium	Am-242m+E	1.90E-07	4.10E-05	3.30E-19	6.88E-01	3.96E-03	1.42E+00	2.79E+00	7.52E-02	2.78E-03
Americium	Am-243	2.00E-07	4.10E-05	6.65E-19	4.73E-01	3.44E-03	9.29E-01	1.89E+00	7.14E-02	2.65E-03
Americium	Am-243+D	2.00E-07	4.10E-05	4.36E-18	1.30E-01	3.37E-03	2.23E-01	4.89E-01	7.14E-02	2.65E-03
Americium	Am-243+E	2.00E-07	4.10E-05	4.36E-18	1.30E-01	3.37E-03	2.23E-01	4.89E-01	7.14E-02	2.65E-03
Americium	Am-244	4.60E-10	2.00E-09	2.40E-17	4.98E+02	6.52E+02	6.77E+02	1.52E+03	3.11E+01	1.15E+00
Americium	Am-244+E	1.20E-07	2.70E-05	2.40E-17	4.89E+02	1.14E+02	6.69E+02	1.50E+03	1.19E-01	4.41E-03
Americium	Am-244m	2.90E-11	8.40E-11	5.75E-20	4.84E+06	4.35E+06	6.58E+06	1.48E+07	4.93E+02	1.82E+01
Americium	Am-244m+E	1.20E-07	2.70E-05	5.75E-20	5.57E+05	3.21E+03	1.05E+06	1.97E+06	1.19E-01	4.41E-03
Americium	Am-245	6.20E-11	5.30E-11	7.13E-19	8.26E+04	1.02E+05	1.12E+05	2.53E+05	2.30E+02	8.53E+00
Americium	Am-246	5.80E-11	6.60E-11	1.97E-17	9.43E+03	1.25E+04	1.28E+04	2.89E+04	2.46E+02	9.12E+00
Americium	Am-246m	3.40E-11	2.20E-11	3.22E-17	9.00E+03	1.20E+04	1.22E+04	2.75E+04	4.20E+02	1.56E+01
Antimony	Sb-115	2.40E-11	1.30E-11	2.65E-17	8.60E+03	1.15E+04	1.17E+04	2.63E+04	5.95E+02	2.20E+01
Antimony	Sb-116	2.60E-11	1.30E-11	6.99E-17	6.56E+03	8.75E+03	8.92E+03	2.01E+04	5.49E+02	2.04E+01
Antimony	Sb-116m	6.70E-11	4.70E-11	9.83E-17	1.22E+03	1.63E+03	1.66E+03	3.74E+03	2.13E+02	7.90E+00
Antimony	Sb-117	1.80E-11	1.60E-11	3.94E-18	1.09E+04	1.46E+04	1.49E+04	3.35E+04	7.94E+02	2.94E+01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Antimony	Sb-118m	2.10E-10	1.20E-10	8.11E-17	2.98E+02	3.97E+02	4.05E+02	9.11E+02	6.80E+01	2.52E+00
Antimony	Sb-119	8.00E-11	3.50E-11	2.40E-20	1.27E+05	1.65E+05	1.78E+05	4.00E+05	1.79E+02	6.61E+00
Antimony	Sb-120a	1.40E-11	7.00E-12	1.31E-17	3.48E+04	4.64E+04	4.73E+04	1.06E+05	1.02E+03	3.78E+01
Antimony	Sb-120b	1.20E-09	1.00E-09	7.65E-17	1.14E+01	1.52E+01	1.55E+01	3.49E+01	1.19E+01	4.41E-01
Antimony	Sb-122	1.70E-09	1.00E-09	1.33E-17	1.40E+02	1.86E+02	1.90E+02	4.28E+02	8.40E+00	3.11E-01
Antimony	Sb-124	2.50E-09	6.40E-09	5.93E-17	1.41E+00	1.88E+00	1.92E+00	4.31E+00	5.71E+00	2.12E-01
Antimony	Sb-124m			1.06E-17	4.41E+05	5.88E+05	6.00E+05	1.35E+06		
Antimony	Sb-124m+D			5.80E-17	8.06E+04	1.07E+05	1.10E+05	2.47E+05		
Antimony	Sb-124m+E			5.80E-17	8.06E+04	1.07E+05	1.10E+05	2.47E+05		
Antimony	Sb-124n	8.00E-12	5.40E-12	7.35E-23	2.16E+09	1.98E+09	5.25E+09	1.12E+10	1.79E+03	6.61E+01
Antimony	Sb-124n+D	8.00E-12	5.10E-09	5.80E-17	6.18E+03	8.24E+03	8.41E+03	1.89E+04	1.79E+03	6.61E+01
Antimony	Sb-124n+E	8.00E-12	5.10E-09	5.80E-17	6.18E+03	8.24E+03	8.41E+03	1.89E+04	1.79E+03	6.61E+01
Antimony	Sb-125	1.10E-09	4.80E-09	1.22E-17	4.08E-01	5.43E-01	5.56E-01	1.25E+00	1.30E+01	4.81E-01
Antimony	Sb-125+D	1.30E-09	5.60E-09	1.22E-17	4.08E-01	5.43E-01	5.56E-01	1.25E+00	1.10E+01	4.07E-01
Antimony	Sb-125+E	1.30E-09	5.60E-09	1.22E-17	4.08E-01	5.43E-01	5.56E-01	1.25E+00	1.10E+01	4.07E-01
Antimony	Sb-126	2.40E-09	2.80E-09	8.60E-17	4.72E+00	6.29E+00	6.41E+00	1.44E+01	5.95E+00	2.20E-01
Antimony	Sb-126m	3.60E-11	1.90E-11	4.67E-17	8.16E+03	1.09E+04	1.11E+04	2.50E+04	3.97E+02	1.47E+01
Antimony	Sb-126m+D	3.70E-10	4.10E-10	5.87E-17	6.49E+03	8.66E+03	8.83E+03	1.99E+04	3.86E+01	1.43E+00
Antimony	Sb-126m+E	3.70E-10	4.10E-10	5.87E-17	6.49E+03	8.66E+03	8.83E+03	1.99E+04	3.86E+01	1.43E+00
Antimony	Sb-127	1.70E-09	1.70E-09	2.07E-17	6.31E+01	8.40E+01	8.58E+01	1.93E+02	8.40E+00	3.11E-01
Antimony	Sb-127+D	2.30E-09	3.10E-09	2.07E-17	6.30E+01	8.40E+01	8.58E+01	1.93E+02	6.21E+00	2.30E-01
Antimony	Sb-127+E	2.30E-09	3.10E-09	2.07E-17	6.30E+01	8.40E+01	8.58E+01	1.93E+02	6.21E+00	2.30E-01
Antimony	Sb-128a	3.30E-11	1.40E-11	6.06E-17	1.15E+04	1.53E+04	1.56E+04	3.52E+04	4.33E+02	1.60E+01
Antimony	Sb-128b	7.60E-10	4.00E-10	9.45E-17	1.42E+02	1.89E+02	1.93E+02	4.34E+02	1.88E+01	6.96E-01
Antimony	Sb-129	4.20E-10	2.30E-10	4.58E-17	6.10E+02	8.13E+02	8.30E+02	1.87E+03	3.40E+01	1.26E+00
Antimony	Sb-129+D	1.20E-09	1.80E-09	4.58E-17	6.10E+02	8.13E+02	8.30E+02	1.87E+03	1.19E+01	4.41E-01
Antimony	Sb-129+E	1.20E-09	1.80E-09	4.58E-17	6.10E+02	8.13E+02	8.30E+02	1.87E+03	1.19E+01	4.41E-01
Antimony	Sb-130	9.10E-11	5.10E-11	1.01E-16	1.79E+03	2.39E+03	2.44E+03	5.49E+03	1.57E+02	5.81E+00
Antimony	Sb-131	1.00E-10	4.40E-11	6.06E-17	5.20E+03	6.93E+03	7.07E+03	1.59E+04	1.43E+02	5.29E+00
Antimony	Sb-131+D	2.20E-08	7.40E-09	8.64E-17	3.63E+03	4.83E+03	4.95E+03	1.11E+04	6.49E-01	2.41E-02
Antimony	Sb-131+E	2.20E-08	7.40E-09	8.64E-17	3.63E+03	4.83E+03	4.95E+03	1.11E+04	6.49E-01	2.41E-02
Argon	Ar-37			0.00E+00						
Argon	Ar-39			4.30E-21	1.60E+02	1.62E+02	2.60E+02	5.85E+02		
Argon	Ar-41			4.25E-17	1.55E+03	2.07E+03	2.11E+03	4.76E+03		
Arsenic	As-69	5.70E-11	2.10E-11	3.00E-17	1.59E+04	2.12E+04	2.16E+04	4.86E+04	2.51E+02	9.28E+00
Arsenic	As-69+D	3.00E-10	3.10E-10	5.69E-17	8.37E+03	1.12E+04	1.14E+04	2.56E+04	4.76E+01	1.76E+00
Arsenic	As-69+E	3.00E-10	3.10E-10	5.69E-17	8.37E+03	1.12E+04	1.14E+04	2.56E+04	4.76E+01	1.76E+00
Arsenic	As-70	1.30E-10	6.70E-11	1.31E-16	1.05E+03	1.40E+03	1.43E+03	3.22E+03	1.10E+02	4.07E+00
Arsenic	As-71	4.60E-10	4.00E-10	1.60E-17	1.16E+02	1.55E+02	1.58E+02	3.56E+02	3.11E+01	1.15E+00
Arsenic	As-72	1.80E-09	9.00E-10	5.53E-17	8.38E+01	1.11E+02	1.14E+02	2.57E+02	7.94E+00	2.94E-01
Arsenic	As-73	2.60E-10	1.00E-09	4.20E-20	1.03E+03	1.03E+03	2.00E+03	4.48E+03	5.49E+01	2.04E+00
Arsenic	As-74	1.30E-09	2.10E-09	2.26E-17	1.25E+01	1.66E+01	1.70E+01	3.83E+01	1.10E+01	4.07E-01
Arsenic	As-76	1.60E-09	7.40E-10	1.36E-17	3.34E+02	4.42E+02	4.59E+02	1.03E+03	8.93E+00	3.31E-01
Arsenic	As-77	4.00E-10	3.90E-10	2.43E-19	1.14E+04	1.37E+04	1.73E+04	3.90E+04	3.57E+01	1.32E+00
Arsenic	As-78	2.10E-10	8.90E-11	4.09E-17	1.95E+03	2.60E+03	2.66E+03	5.98E+03	6.80E+01	2.52E+00
Astatine	At-207	2.40E-10	2.30E-09	4.08E-17	1.64E+03	2.19E+03	2.24E+03	5.03E+03	5.95E+01	2.20E+00
Astatine	At-207+D	4.10E-10	2.30E-09	8.59E-17	7.81E+02	1.04E+03	1.06E+03	2.39E+03	3.48E+01	1.29E+00
Astatine	At-207+E	1.60E-09	7.50E-09	1.28E-16	5.24E+02	6.99E+02	7.13E+02	1.60E+03	8.93E+00	3.31E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Astatine	At-211	1.10E-08	1.10E-07	5.52E-19	2.87E+04	3.84E+04	3.93E+04	8.75E+04	1.30E+00	4.81E-02
Astatine	At-211+D	1.10E-08	1.10E-07	6.92E-19	2.32E+04	3.09E+04	3.17E+04	7.06E+04	1.30E+00	4.81E-02
Astatine	At-211+E	1.10E-08	1.10E-07	2.04E-17	8.19E+02	1.09E+03	1.11E+03	2.51E+03	1.30E+00	4.81E-02
Astatine	At-215			5.48E-21	7.93E+14	1.06E+15	1.08E+15	2.43E+15		
Astatine	At-215+D			1.40E-18	3.10E+12	4.14E+12	4.22E+12	9.50E+12		
Astatine	At-215+E			1.40E-18	3.10E+12	4.14E+12	4.22E+12	9.50E+12		
Astatine	At-216			2.14E-20	6.77E+13	9.03E+13	9.21E+13	2.07E+14		
Astatine	At-216+D			4.80E-17	3.02E+10	4.02E+10	4.10E+10	9.24E+10		
Astatine	At-216+E			4.80E-17	3.02E+10	4.02E+10	4.10E+10	9.24E+10		
Astatine	At-217			8.86E-21	1.52E+12	2.03E+12	2.07E+12	4.65E+12		
Astatine	At-217+D			5.27E-18	2.55E+09	3.40E+09	3.47E+09	7.81E+09		
Astatine	At-217+E			5.27E-18	2.55E+09	3.40E+09	3.47E+09	7.81E+09		
Astatine	At-218			2.61E-20	8.33E+09	1.11E+10	1.13E+10	2.55E+10		
Astatine	At-218+D			5.01E-17	4.34E+06	5.78E+06	5.90E+06	1.33E+07		
Astatine	At-218+E			5.01E-17	4.34E+06	5.78E+06	5.90E+06	1.33E+07		
Barium	Ba-126	2.60E-10	1.00E-10	3.95E-18	1.90E+04	2.53E+04	2.58E+04	5.81E+04	5.49E+01	2.04E+00
Barium	Ba-126+D	2.60E-10	1.00E-10	3.61E-17	2.08E+03	2.77E+03	2.83E+03	6.36E+03	5.49E+01	2.04E+00
Barium	Ba-126+E	2.60E-10	1.00E-10	3.61E-17	2.08E+03	2.77E+03	2.83E+03	6.36E+03	5.49E+01	2.04E+00
Barium	Ba-128	2.70E-09	1.30E-09	1.43E-18	1.43E+03	1.83E+03	1.96E+03	4.40E+03	5.29E+00	1.96E-01
Barium	Ba-128+D	2.70E-09	1.30E-09	2.80E-17	7.39E+01	9.83E+01	1.01E+02	2.26E+02	5.29E+00	1.96E-01
Barium	Ba-128+E	2.70E-09	1.30E-09	2.80E-17	7.39E+01	9.83E+01	1.01E+02	2.26E+02	5.29E+00	1.96E-01
Barium	Ba-131	4.50E-10	7.60E-10	1.20E-17	3.55E+01	4.73E+01	4.83E+01	1.09E+02	3.17E+01	1.18E+00
Barium	Ba-131+D	5.10E-10	7.60E-10	1.20E-17	3.55E+01	4.73E+01	4.83E+01	1.09E+02	2.80E+01	1.04E+00
Barium	Ba-131+E	5.10E-10	7.60E-10	1.20E-17	3.55E+01	4.73E+01	4.83E+01	1.09E+02	2.80E+01	1.04E+00
Barium	Ba-131m	4.90E-12	7.40E-12	1.16E-18	4.28E+05	5.70E+05	5.82E+05	1.31E+06	2.92E+03	1.08E+02
Barium	Ba-131m+D	5.10E-10	7.90E-10	1.32E-17	3.76E+04	5.01E+04	5.11E+04	1.15E+05	2.80E+01	1.04E+00
Barium	Ba-131m+E	5.10E-10	7.90E-10	1.32E-17	3.76E+04	5.01E+04	5.11E+04	1.15E+05	2.80E+01	1.04E+00
Barium	Ba-133	1.50E-09	3.10E-09	9.75E-18	1.54E-01	1.89E-01	2.23E-01	5.03E-01	9.52E+00	3.53E-01
Barium	Ba-133m	5.40E-10	4.20E-10	1.34E-18	2.31E+03	3.05E+03	3.15E+03	7.08E+03	2.65E+01	9.80E-01
Barium	Ba-133m+E	2.00E-09	3.50E-09	1.11E-17	2.79E+02	3.71E+02	3.80E+02	8.55E+02	7.14E+00	2.65E-01
Barium	Ba-135m	4.30E-10	3.30E-10	1.16E-18	3.62E+03	4.78E+03	4.93E+03	1.11E+04	3.32E+01	1.23E+00
Barium	Ba-137m			1.81E-17	1.57E+05	2.09E+05	2.13E+05	4.80E+05		
Barium	Ba-139	1.20E-10	5.60E-11	1.20E-18	7.29E+04	9.70E+04	9.92E+04	2.23E+05	1.19E+02	4.41E+00
Barium	Ba-140	2.60E-09	5.10E-09	5.15E-18	7.64E+01	1.01E+02	1.04E+02	2.34E+02	5.49E+00	2.04E-01
Barium	Ba-140+D	4.60E-09	6.20E-09	8.17E-17	4.83E+00	6.43E+00	6.57E+00	1.48E+01	3.11E+00	1.15E-01
Barium	Ba-140+E	4.60E-09	6.20E-09	8.17E-17	4.83E+00	6.43E+00	6.57E+00	1.48E+01	3.11E+00	1.15E-01
Barium	Ba-141	7.00E-11	3.20E-11	2.55E-17	1.55E+04	2.07E+04	2.11E+04	4.76E+04	2.04E+02	7.56E+00
Barium	Ba-141+D	1.10E-09	3.40E-09	2.87E-17	1.38E+04	1.84E+04	1.88E+04	4.23E+04	1.30E+01	4.81E-01
Barium	Ba-141+E	1.10E-09	3.40E-09	2.87E-17	1.38E+04	1.84E+04	1.88E+04	4.23E+04	1.30E+01	4.81E-01
Barium	Ba-142	3.50E-11	2.10E-11	3.24E-17	2.11E+04	2.81E+04	2.87E+04	6.45E+04	4.08E+02	1.51E+01
Barium	Ba-142+D	2.20E-10	1.10E-10	1.28E-16	5.34E+03	7.12E+03	7.26E+03	1.63E+04	6.49E+01	2.41E+00
Barium	Ba-142+E	2.20E-10	1.10E-10	1.28E-16	5.34E+03	7.12E+03	7.26E+03	1.63E+04	6.49E+01	2.41E+00
Berkelium	Bk-245	5.70E-10	2.10E-09	4.84E-18	2.10E+02	2.80E+02	2.86E+02	6.44E+02	2.51E+01	9.28E-01
Berkelium	Bk-246	4.80E-10	3.30E-10	2.85E-17	9.65E+01	1.29E+02	1.31E+02	2.95E+02	2.98E+01	1.10E+00
Berkelium	Bk-247	3.50E-07	6.90E-05	2.12E-18	2.15E-01	2.19E-01	3.63E-01	7.63E-01	4.08E-02	1.51E-03
Berkelium	Bk-249	9.70E-10	1.60E-07	2.01E-23	5.74E+03	7.98E+03	8.77E+03	1.59E+04	1.47E+01	5.45E-01
Berkelium	Bk-249+D	9.70E-10	1.60E-07	3.04E-23	5.72E+03	7.95E+03	8.73E+03	1.58E+04	1.47E+01	5.45E-01
Berkelium	Bk-249+E	9.70E-10	1.60E-07	3.04E-23	5.72E+03	7.95E+03	8.73E+03	1.58E+04	1.47E+01	5.45E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Berkelium	Bk-250	1.40E-10	1.00E-09	2.81E-17	1.33E+03	1.78E+03	1.81E+03	4.08E+03	1.02E+02	3.78E+00
Berkelium	Bk-250+E	1.60E-07	3.40E-05	2.81E-17	1.31E+03	1.75E+03	1.79E+03	4.01E+03	8.93E-02	3.31E-03
Beryllium	Be-10	1.10E-09	9.60E-09	5.38E-21	5.38E+01	4.05E+01	1.34E+02	2.79E+02	1.30E+01	4.81E-01
Beryllium	Be-7	2.80E-11	5.00E-11	1.44E-18	6.55E+01	8.74E+01	8.91E+01	2.01E+02	5.10E+02	1.89E+01
Bismuth	Bi-200	5.10E-11	3.30E-11	7.11E-17	2.80E+03	3.73E+03	3.81E+03	8.56E+03	2.80E+02	1.04E+01
Bismuth	Bi-200+D	6.50E-10	4.90E-10	1.15E-16	1.73E+03	2.31E+03	2.35E+03	5.30E+03	2.20E+01	8.14E-01
Bismuth	Bi-200+E	6.50E-10	4.90E-10	1.15E-16	1.73E+03	2.31E+03	2.35E+03	5.30E+03	2.20E+01	8.14E-01
Bismuth	Bi-201	1.20E-10	6.60E-11	4.05E-17	1.66E+03	2.21E+03	2.25E+03	5.07E+03	1.19E+02	4.41E+00
Bismuth	Bi-201+D	3.80E-10	2.20E-10	6.32E-17	1.06E+03	1.41E+03	1.44E+03	3.25E+03	3.76E+01	1.39E+00
Bismuth	Bi-201+E	3.80E-10	2.20E-10	6.32E-17	1.06E+03	1.41E+03	1.44E+03	3.25E+03	3.76E+01	1.39E+00
Bismuth	Bi-202	8.90E-11	5.50E-11	8.32E-17	8.69E+02	1.16E+03	1.18E+03	2.66E+03	1.61E+02	5.94E+00
Bismuth	Bi-203	4.80E-10	2.60E-10	7.72E-17	1.33E+02	1.77E+02	1.81E+02	4.07E+02	2.98E+01	1.10E+00
Bismuth	Bi-203+D	7.20E-10	4.60E-10	7.72E-17	1.33E+02	1.77E+02	1.81E+02	4.07E+02	1.98E+01	7.35E-01
Bismuth	Bi-203+E	7.20E-10	4.60E-10	7.72E-17	1.33E+02	1.77E+02	1.81E+02	4.07E+02	1.98E+01	7.35E-01
Bismuth	Bi-205	9.00E-10	9.30E-10	5.46E-17	6.01E+00	8.00E+00	8.18E+00	1.84E+01	1.59E+01	5.88E-01
Bismuth	Bi-206	1.90E-09	1.70E-09	1.02E-16	7.89E+00	1.05E+01	1.07E+01	2.42E+01	7.52E+00	2.78E-01
Bismuth	Bi-207	1.30E-09	5.60E-09	4.73E-17	1.82E-02	1.96E-02	2.85E-02	6.41E-02	1.10E+01	4.07E-01
Bismuth	Bi-210	1.30E-09	9.30E-08	2.92E-20	6.82E+03	4.94E+03	4.21E+04	9.25E+04	1.10E+01	4.07E-01
Bismuth	Bi-210+D	1.20E-06	3.40E-06	2.92E-20	9.21E+00	6.00E+00	4.62E+02	8.34E+02	1.19E-02	4.41E-04
Bismuth	Bi-210+E	1.20E-06	3.40E-06	2.92E-20	9.21E+00	6.00E+00	4.62E+02	8.34E+02	1.19E-02	4.41E-04
Bismuth	Bi-210m	1.50E-08	3.40E-06	6.82E-18	8.10E-02	6.90E-02	1.58E-01	3.54E-01	9.52E-01	3.53E-02
Bismuth	Bi-211			1.27E-18	2.67E+06	3.55E+06	3.62E+06	8.16E+06		
Bismuth	Bi-212	2.60E-10	3.10E-08	5.96E-18	2.00E+04	2.65E+04	2.73E+04	6.14E+04	5.49E+01	2.04E+00
Bismuth	Bi-212+D	2.60E-10	3.10E-08	4.80E-17	2.49E+03	3.32E+03	3.39E+03	7.63E+03	5.49E+01	2.04E+00
Bismuth	Bi-212+E	2.60E-10	3.10E-08	4.80E-17	2.49E+03	3.32E+03	3.39E+03	7.63E+03	5.49E+01	2.04E+00
Bismuth	Bi-213	2.00E-10	3.00E-08	3.84E-18	4.11E+04	5.46E+04	5.62E+04	1.26E+05	7.14E+01	2.65E+00
Bismuth	Bi-213+D	2.60E-10	3.00E-08	5.26E-18	3.00E+04	3.99E+04	4.10E+04	9.23E+04	5.49E+01	2.04E+00
Bismuth	Bi-213+E	2.60E-10	3.00E-08	5.26E-18	3.00E+04	3.99E+04	4.10E+04	9.23E+04	5.49E+01	2.04E+00
Bismuth	Bi-214	1.10E-10	1.40E-08	5.00E-17	7.28E+03	9.70E+03	9.90E+03	2.23E+04	1.30E+02	4.81E+00
Bismuth	Bi-214+E	1.90E-06	4.50E-06	5.00E-17	1.64E+03	1.20E+03	9.06E+03	2.00E+04	7.52E-03	2.78E-04
Bromine	Br-74	8.40E-11	3.80E-11	1.55E-16	1.85E+03	2.46E+03	2.51E+03	5.65E+03	1.70E+02	6.30E+00
Bromine	Br-74m	1.40E-10	6.20E-11	1.34E-16	1.30E+03	1.73E+03	1.77E+03	3.99E+03	1.02E+02	3.78E+00
Bromine	Br-75	7.90E-11	5.30E-11	3.52E-17	2.10E+03	2.79E+03	2.86E+03	6.43E+03	1.81E+02	6.70E+00
Bromine	Br-75+D	2.70E-09	1.00E-09	4.50E-17	1.58E+03	2.02E+03	2.23E+03	5.03E+03	5.29E+00	1.96E-01
Bromine	Br-75+E	2.70E-09	1.00E-09	4.50E-17	1.58E+03	2.02E+03	2.23E+03	5.03E+03	5.29E+00	1.96E-01
Bromine	Br-76	4.60E-10	4.10E-10	8.64E-17	8.60E+01	1.14E+02	1.17E+02	2.64E+02	3.11E+01	1.15E+00
Bromine	Br-77	9.60E-11	8.40E-11	9.04E-18	2.37E+02	3.13E+02	3.24E+02	7.30E+02	1.49E+02	5.51E+00
Bromine	Br-80	3.10E-11	9.40E-12	2.40E-18	1.72E+05	2.27E+05	2.36E+05	5.31E+05	4.61E+02	1.71E+01
Bromine	Br-80m	1.10E-10	7.60E-11	4.76E-20	2.25E+05	1.81E+05	7.76E+05	1.74E+06	1.30E+02	4.81E+00
Bromine	Br-80m+D	1.40E-10	8.50E-11	2.45E-18	1.07E+04	1.38E+04	1.52E+04	3.41E+04	1.02E+02	3.78E+00
Bromine	Br-80m+E	1.40E-10	8.50E-11	2.45E-18	1.07E+04	1.38E+04	1.52E+04	3.41E+04	1.02E+02	3.78E+00
Bromine	Br-82	5.40E-10	6.30E-10	8.28E-17	4.11E+01	5.46E+01	5.62E+01	1.26E+02	2.65E+01	9.80E-01
Bromine	Br-83	4.30E-11	4.80E-11	2.38E-19	1.89E+05	2.26E+05	2.89E+05	6.49E+05	3.32E+02	1.23E+01
Bromine	Br-84	8.80E-11	3.70E-11	6.23E-17	3.65E+03	4.87E+03	4.97E+03	1.12E+04	1.62E+02	6.01E+00
Cadmium	Cd-104	5.40E-11	3.40E-11	6.55E-18	1.91E+04	2.19E+04	2.61E+04	5.86E+04	2.65E+02	9.80E+00
Cadmium	Cd-104+D	1.10E-10	7.00E-11	9.04E-17	1.39E+03	1.81E+03	1.89E+03	4.25E+03	1.30E+02	4.81E+00
Cadmium	Cd-104+E	1.10E-10	7.00E-11	9.04E-17	1.39E+03	1.81E+03	1.89E+03	4.25E+03	1.30E+02	4.81E+00
Cadmium	Cd-107	6.20E-11	8.30E-11	2.41E-19	7.22E+04	1.66E+04	1.05E+05	2.36E+05	2.30E+02	8.53E+00

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Cadmium	Cd-109	2.00E-09	6.60E-09	6.54E-20	1.81E+01	3.56E-01	2.10E+02	4.64E+02	7.14E+00	2.65E-01
Cadmium	Cd-113	2.50E-08	5.50E-08	5.24E-22	1.00E-01	1.30E-03	1.74E+01	3.14E+01	5.71E-01	2.12E-02
Cadmium	Cd-113m	2.30E-08	5.20E-08	3.22E-21	2.11E-01	3.33E-03	3.23E+01	5.88E+01	6.21E-01	2.30E-02
Cadmium	Cd-115	1.40E-09	9.80E-10	6.83E-18	3.14E+02	8.55E+01	4.49E+02	1.01E+03	1.02E+01	3.78E-01
Cadmium	Cd-115+D	1.40E-09	9.80E-10	5.04E-18	4.17E+02	9.01E+01	6.09E+02	1.37E+03	1.02E+01	3.78E-01
Cadmium	Cd-115+E	1.40E-09	9.80E-10	5.04E-18	4.17E+02	9.01E+01	6.09E+02	1.37E+03	1.02E+01	3.78E-01
Cadmium	Cd-115m	3.30E-09	6.20E-09	7.89E-19	6.76E+01	2.22E+00	1.92E+02	4.32E+02	4.33E+00	1.60E-01
Cadmium	Cd-117	2.80E-10	1.60E-10	3.49E-17	1.39E+03	1.59E+03	1.89E+03	4.25E+03	5.10E+01	1.89E+00
Cadmium	Cd-117+D	4.10E-10	2.40E-10	8.07E-17	6.00E+02	7.26E+02	8.17E+02	1.84E+03	3.48E+01	1.29E+00
Cadmium	Cd-117+E	4.10E-10	2.40E-10	8.07E-17	6.00E+02	7.26E+02	8.17E+02	1.84E+03	3.48E+01	1.29E+00
Cadmium	Cd-117m	2.80E-10	2.00E-10	6.86E-17	5.23E+02	6.45E+02	7.12E+02	1.60E+03	5.10E+01	1.89E+00
Cadmium	Cd-117m+D	3.10E-10	2.40E-10	8.80E-17	4.08E+02	5.08E+02	5.55E+02	1.25E+03	4.61E+01	1.71E+00
Cadmium	Cd-117m+E	3.10E-10	2.40E-10	8.80E-17	4.08E+02	5.08E+02	5.55E+02	1.25E+03	4.61E+01	1.71E+00
Calcium	Ca-41	1.90E-10	9.50E-11	0.00E+00	7.88E+00	3.59E+00	2.34E+03	4.21E+03	7.52E+01	2.78E+00
Calcium	Ca-45	7.10E-10	2.70E-09	2.85E-22	9.80E+01	5.97E+01	2.08E+04	3.86E+04	2.01E+01	7.45E-01
Calcium	Ca-47	1.60E-09	1.90E-09	3.49E-17	3.12E+01	4.06E+01	4.33E+01	9.74E+01	8.93E+00	3.31E-01
Calcium	Ca-47+D	2.10E-09	2.60E-09	3.49E-17	3.10E+01	4.01E+01	4.33E+01	9.73E+01	6.80E+00	2.52E-01
Calcium	Ca-47+E	2.10E-09	2.60E-09	3.49E-17	3.10E+01	4.01E+01	4.33E+01	9.73E+01	6.80E+00	2.52E-01
Calcium	Ca-49			1.16E-16	7.16E+03	9.55E+03	9.74E+03	2.19E+04		
Californium	Cf-244	7.00E-11	1.40E-08	6.80E-22	3.98E+08	5.00E+08	5.94E+08	1.27E+09	2.04E+02	7.56E+00
Californium	Cf-244+D	9.50E-08	2.30E-05	2.25E-21	1.06E+06	1.15E+06	2.10E+06	3.82E+06	1.50E-01	5.57E-03
Californium	Cf-244+E	5.70E-07	7.40E-05	5.18E-17	6.93E+03	9.16E+03	9.54E+03	2.13E+04	2.51E-02	9.28E-04
Californium	Cf-246	3.30E-09	4.50E-07	7.79E-22	2.62E+05	2.88E+05	5.13E+05	9.42E+05	4.33E+00	1.60E-01
Californium	Cf-246+D	1.50E-08	5.60E-06	1.47E-21	5.93E+04	6.48E+04	1.15E+05	2.11E+05	9.52E-01	3.53E-02
Californium	Cf-246+E	2.40E-07	5.20E-05	2.09E-21	3.81E+03	4.14E+03	7.61E+03	1.38E+04	5.95E-02	2.20E-03
Californium	Cf-248	2.80E-08	8.80E-06	4.69E-22	1.45E+02	1.58E+02	2.86E+02	5.20E+02	5.10E-01	1.89E-02
Californium	Cf-248+E	1.50E-07	3.60E-05	9.48E-22	2.72E+01	2.96E+01	5.41E+01	9.82E+01	9.52E-02	3.53E-03
Californium	Cf-249	3.50E-07	7.00E-05	9.22E-18	6.50E-02	6.38E-02	1.10E-01	2.42E-01	4.08E-02	1.51E-03
Californium	Cf-250	1.60E-07	3.40E-05	4.45E-22	2.24E+00	2.20E+00	4.86E+00	8.80E+00	8.93E-02	3.31E-03
Californium	Cf-251	3.60E-07	7.10E-05	2.57E-18	1.72E-01	1.60E-01	3.15E-01	6.66E-01	3.97E-02	1.47E-03
Californium	Cf-252	9.00E-08	2.00E-05	7.28E-22	1.57E+01	1.71E+01	3.14E+01	5.68E+01	1.59E-01	5.88E-03
Californium	Cf-253	1.40E-09	1.30E-06	3.50E-22	5.03E+04	5.54E+04	9.11E+04	1.70E+05	1.02E+01	3.78E-01
Californium	Cf-253+D	8.40E-09	4.20E-06	1.08E-20	6.72E+03	7.68E+03	1.17E+04	2.28E+04	1.70E+00	6.30E-02
Californium	Cf-253+E	8.40E-09	4.20E-06	1.08E-20	6.72E+03	7.68E+03	1.17E+04	2.28E+04	1.70E+00	6.30E-02
Californium	Cf-254	4.00E-07	4.10E-05	1.45E-24	5.66E+01	6.14E+01	1.14E+02	2.07E+02	3.57E-02	1.32E-03
Carbon	C-11	2.40E-11	2.20E-12	3.00E-17	1.18E+04	1.23E+03	1.61E+04	3.63E+04	5.95E+02	2.20E+01
Carbon	C-14	5.80E-10	6.20E-12	5.88E-23	2.36E-01	7.77E-05	7.37E+02	1.34E+03	2.34E+01	9.12E-01
Cerium	Ce-134	2.50E-09	1.30E-09	6.75E-20	2.13E+04	3.43E+03	3.10E+04	6.83E+04	5.71E+00	2.12E-01
Cerium	Ce-134+D	2.50E-09	1.30E-09	2.07E-17	8.10E+01	1.05E+02	1.10E+02	2.48E+02	5.71E+00	2.12E-01
Cerium	Ce-134+E	2.50E-09	1.30E-09	2.07E-17	8.10E+01	1.05E+02	1.10E+02	2.48E+02	5.71E+00	2.12E-01
Cerium	Ce-135	7.90E-10	4.80E-10	5.22E-17	1.31E+02	1.75E+02	1.79E+02	4.02E+02	1.81E+01	6.70E-01
Cerium	Ce-137	2.50E-11	9.80E-12	3.13E-19	4.28E+04	5.61E+04	5.83E+04	1.31E+05	5.71E+02	2.12E+01
Cerium	Ce-137m	5.40E-10	4.10E-10	9.45E-19	3.70E+03	4.37E+03	5.04E+03	1.13E+04	2.65E+01	9.80E-01
Cerium	Ce-137m+D	5.40E-10	4.10E-10	1.26E-18	2.78E+03	3.38E+03	3.78E+03	8.51E+03	2.65E+01	9.80E-01
Cerium	Ce-137m+E	5.40E-10	4.10E-10	1.26E-18	2.78E+03	3.38E+03	3.78E+03	8.51E+03	2.65E+01	9.80E-01
Cerium	Ce-139	2.60E-10	1.70E-09	3.10E-18	1.18E+01	1.54E+01	1.60E+01	3.61E+01	5.49E+01	2.04E+00
Cerium	Ce-143	1.10E-09	7.50E-10	7.39E-18	4.95E+02	6.38E+02	6.73E+02	1.51E+03	1.30E+01	4.81E-01
Cerium	Ce-143+D	2.30E-09	3.00E-09	7.39E-18	4.94E+02	6.15E+02	6.73E+02	1.51E+03	6.21E+00	2.30E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Cerium	Ce-143+E	2.30E-09	3.00E-09	7.39E-18	4.94E+02	6.15E+02	6.73E+02	1.51E+03	6.21E+00	2.30E-01
Cerium	Ce-141	7.10E-10	3.20E-09	1.55E-18	9.97E+01	1.20E+02	1.36E+02	3.05E+02	2.01E+01	7.45E-01
Cerium	Ce-144	5.20E-09	3.60E-08	3.46E-19	4.79E+01	1.51E+01	6.71E+01	1.50E+02	2.75E+00	1.02E-01
Cerium	Ce-144+D	5.20E-09	3.60E-08	1.78E-18	9.81E+00	7.87E+00	1.34E+01	3.01E+01	2.75E+00	1.02E-01
Cerium	Ce-144+E	5.20E-09	3.60E-08	1.78E-18	9.81E+00	7.87E+00	1.34E+01	3.01E+01	2.75E+00	1.02E-01
Cesium	Cs-125	3.50E-11	1.20E-11	1.97E-17	8.17E+03	9.92E+03	1.11E+04	2.50E+04	4.08E+02	1.51E+01
Cesium	Cs-125+D	1.50E-08	5.10E-09	2.61E-17	6.04E+03	2.51E+02	8.38E+03	1.88E+04	9.52E-01	3.53E-02
Cesium	Cs-125+E	1.50E-08	5.10E-09	2.61E-17	6.04E+03	2.51E+02	8.38E+03	1.88E+04	9.52E-01	3.53E-02
Cesium	Cs-126			3.22E-17	1.37E+05	1.83E+05	1.87E+05	4.20E+05		
Cesium	Cs-127	2.40E-11	2.00E-11	1.14E-17	1.69E+03	2.02E+03	2.30E+03	5.19E+03	5.95E+02	2.20E+01
Cesium	Cs-127+D	2.40E-11	2.00E-11	1.79E-17	1.08E+03	1.34E+03	1.47E+03	3.30E+03	5.95E+02	2.20E+01
Cesium	Cs-127+E	2.40E-11	2.00E-11	1.79E-17	1.08E+03	1.34E+03	1.47E+03	3.30E+03	5.95E+02	2.20E+01
Cesium	Cs-128			2.66E-17	6.98E+04	9.31E+04	9.50E+04	2.14E+05		
Cesium	Cs-129	6.00E-11	4.20E-11	7.11E-18	5.30E+02	4.81E+02	7.20E+02	1.62E+03	2.38E+02	8.82E+00
Cesium	Cs-130	2.80E-11	7.80E-12	1.50E-17	1.62E+04	1.95E+04	2.20E+04	4.94E+04	5.10E+02	1.89E+01
Cesium	Cs-131	5.80E-11	2.70E-11	4.20E-20	1.17E+04	2.13E+02	1.68E+04	3.77E+04	2.46E+02	9.12E+00
Cesium	Cs-132	5.00E-10	2.30E-10	2.08E-17	3.73E+01	2.14E+01	5.08E+01	1.14E+02	2.86E+01	1.06E+00
Cesium	Cs-134	1.90E-08	6.60E-09	4.77E-17	1.38E-01	8.11E-03	1.90E-01	4.28E-01	7.52E-01	2.78E-02
Cesium	Cs-134m	2.00E-11	1.40E-11	3.48E-19	1.19E+05	3.81E+04	1.63E+05	3.66E+05	7.14E+02	2.65E+01
Cesium	Cs-134m+D	1.90E-08	6.60E-09	4.80E-17	8.55E+02	5.05E+01	1.18E+03	2.65E+03	7.52E-01	2.78E-02
Cesium	Cs-134m+E	1.90E-08	6.60E-09	4.80E-17	8.55E+02	5.05E+01	1.18E+03	2.65E+03	7.52E-01	2.78E-02
Cesium	Cs-135	2.00E-09	6.90E-10	1.72E-22	8.70E+00	5.99E-03	2.15E+02	3.89E+02	7.14E+00	2.65E-01
Cesium	Cs-135m	1.90E-11	1.20E-11	4.93E-17	2.77E+03	3.62E+03	3.77E+03	8.48E+03	7.52E+02	2.78E+01
Cesium	Cs-136	3.00E-09	1.20E-09	6.71E-17	5.71E+00	2.20E+00	7.78E+00	1.75E+01	4.76E+00	1.76E-01
Cesium	Cs-137	1.30E-08	4.60E-09	4.47E-21	1.84E+00	1.41E-03	3.94E+01	7.28E+01	1.10E+00	4.07E-02
Cesium	Cs-137+D	1.30E-08	4.60E-09	1.71E-17	5.22E-02	1.38E-03	8.31E-02	1.87E-01	1.10E+00	4.07E-02
Cesium	Cs-137+E	1.30E-08	4.60E-09	1.71E-17	5.22E-02	1.38E-03	8.31E-02	1.87E-01	1.10E+00	4.07E-02
Cesium	Cs-138	9.20E-11	2.40E-11	7.92E-17	2.84E+03	3.56E+03	3.86E+03	8.69E+03	1.55E+02	5.75E+00
Chlorine	Cl-36	9.30E-10	7.30E-09	1.33E-20	4.04E-02	1.94E-02	6.95E+01	1.51E+02	1.54E+01	5.69E-01
Chlorine	Cl-38	1.20E-10	4.50E-11	5.28E-17	3.55E+03	4.54E+03	5.01E+03	1.13E+04	1.19E+02	4.41E+00
Chlorine	Cl-39	8.50E-11	4.60E-11	4.73E-17	2.67E+03	3.45E+03	3.75E+03	8.43E+03	1.68E+02	6.22E+00
Chromium	Cr-48	2.00E-10	2.00E-10	1.10E-17	4.78E+02	6.37E+02	6.50E+02	1.46E+03	7.14E+01	2.65E+00
Chromium	Cr-48+D	2.20E-09	2.60E-09	1.04E-16	5.06E+01	6.74E+01	6.88E+01	1.55E+02	6.49E+00	2.41E-01
Chromium	Cr-48+E	2.20E-09	2.60E-09	1.04E-16	5.06E+01	6.74E+01	6.88E+01	1.55E+02	6.49E+00	2.41E-01
Chromium	Cr-49	6.10E-11	3.30E-11	2.99E-17	5.76E+03	7.67E+03	7.83E+03	1.76E+04	2.34E+02	8.67E+00
Chromium	Cr-49+D	7.90E-11	6.70E-11	2.99E-17	5.76E+03	7.67E+03	7.83E+03	1.76E+04	1.81E+02	6.70E+00
Chromium	Cr-49+E	7.90E-11	6.70E-11	2.99E-17	5.76E+03	7.67E+03	7.83E+03	1.76E+04	1.81E+02	6.70E+00
Chromium	Cr-51	3.80E-11	3.20E-11	8.66E-19	2.10E+02	2.80E+02	2.85E+02	6.42E+02	3.76E+02	1.39E+01
Cobalt	Co-55	1.00E-09	5.00E-10	6.18E-17	1.11E+02	1.89E+01	1.51E+02	3.41E+02	1.43E+01	5.29E-01
Cobalt	Co-55+D	1.30E-09	8.80E-10	6.18E-17	1.11E+02	1.49E+01	1.51E+02	3.41E+02	1.10E+01	4.07E-01
Cobalt	Co-55+E	1.30E-09	8.80E-10	6.18E-17	1.11E+02	1.49E+01	1.51E+02	3.41E+02	1.10E+01	4.07E-01
Cobalt	Co-56	2.50E-09	4.80E-09	1.20E-16	5.31E-01	7.20E-02	7.24E-01	1.63E+00	5.71E+00	2.12E-01
Cobalt	Co-57	2.10E-10	5.50E-10	2.44E-18	7.56E+00	2.70E-01	1.03E+01	2.33E+01	6.80E+01	2.52E+00
Cobalt	Co-58	7.40E-10	1.60E-09	3.00E-17	2.36E+00	2.75E-01	3.22E+00	7.25E+00	1.93E+01	7.15E-01
Cobalt	Co-58m	2.40E-11	1.30E-11	9.52E-24	7.47E+06	1.72E+03	2.64E+08	4.89E+08	5.95E+02	2.20E+01
Cobalt	Co-58m+D	7.60E-10	1.60E-09	3.00E-17	4.39E+02	4.98E+01	5.98E+02	1.35E+03	1.88E+01	6.96E-01
Cobalt	Co-58m+E	7.60E-10	1.60E-09	3.00E-17	4.39E+02	4.98E+01	5.98E+02	1.35E+03	1.88E+01	6.96E-01
Cobalt	Co-60	3.40E-09	1.00E-08	8.25E-17	3.22E-02	2.29E-03	4.48E-02	1.01E-01	4.20E+00	1.56E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Cobalt	Co-60m	1.70E-12	1.20E-12	1.24E-19	5.57E+06	1.09E+06	7.59E+06	1.71E+07	8.40E+03	3.11E+02
Cobalt	Co-60m+D	3.40E-09	1.00E-08	8.24E-17	8.37E+03	6.04E+02	1.14E+04	2.57E+04	4.20E+00	1.56E-01
Cobalt	Co-60m+E	3.40E-09	1.00E-08	8.24E-17	8.37E+03	6.04E+02	1.14E+04	2.57E+04	4.20E+00	1.56E-01
Cobalt	Co-61	7.40E-11	4.70E-11	1.70E-18	4.29E+04	2.94E+03	5.85E+04	1.32E+05	1.93E+02	7.15E+00
Cobalt	Co-62m	4.70E-11	2.00E-11	9.00E-17	5.79E+03	6.31E+03	7.87E+03	1.77E+04	3.04E+02	1.13E+01
Copper	Cu-60	7.00E-11	3.30E-11	1.28E-16	2.44E+03	3.25E+03	3.32E+03	7.46E+03	2.04E+02	7.56E+00
Copper	Cu-61	1.20E-10	7.40E-11	2.45E-17	1.45E+03	1.93E+03	1.97E+03	4.42E+03	1.19E+02	4.41E+00
Copper	Cu-62			3.00E-17	2.48E+04	3.31E+04	3.37E+04	7.59E+04		
Copper	Cu-64	1.20E-10	1.10E-10	5.60E-18	1.69E+03	2.25E+03	2.31E+03	5.19E+03	1.19E+02	4.41E+00
Copper	Cu-66			2.99E-18	4.75E+05	6.33E+05	6.46E+05	1.45E+06		
Copper	Cu-67	3.40E-10	5.50E-10	2.61E-18	7.37E+02	9.58E+02	1.02E+03	2.29E+03	4.20E+01	1.56E+00
Curium	Cm-238	8.00E-11	4.50E-09	1.31E-18	3.84E+04	5.09E+04	5.22E+04	1.17E+05	1.79E+02	6.61E+00
Curium	Cm-238+D	2.00E-10	6.70E-09	3.00E-17	1.68E+03	2.23E+03	2.28E+03	5.13E+03	7.14E+01	2.65E+00
Curium	Cm-238+E	2.10E-07	4.10E-05	3.00E-17	1.63E+03	1.33E+03	2.24E+03	5.02E+03	6.80E-02	2.52E-03
Curium	Cm-240	7.60E-09	3.20E-06	6.02E-22	6.47E+03	3.37E+02	1.25E+04	2.29E+04	1.88E+00	6.96E-02
Curium	Cm-240+D	9.50E-08	2.30E-05	1.57E-21	5.29E+02	2.70E+01	1.05E+03	1.91E+03	1.50E-01	5.57E-03
Curium	Cm-240+E	5.70E-07	7.40E-05	5.18E-17	3.46E+00	2.32E+00	4.76E+00	1.06E+01	2.51E-02	9.28E-04
Curium	Cm-241	9.10E-10	3.70E-08	1.31E-17	1.17E+01	1.55E+01	1.59E+01	3.58E+01	1.57E+01	5.81E-01
Curium	Cm-242	1.20E-08	5.20E-06	6.88E-22	6.83E+02	3.55E+01	1.32E+03	2.42E+03	1.19E+00	4.41E-02
Curium	Cm-242+E	2.40E-07	5.10E-05	1.31E-21	3.49E+01	1.77E+00	6.96E+01	1.26E+02	5.95E-02	2.20E-03
Curium	Cm-243	1.50E-07	3.10E-05	2.86E-18	2.74E-01	5.97E-02	4.46E-01	9.76E-01	9.52E-02	3.53E-03
Curium	Cm-244	1.20E-07	2.70E-05	4.79E-22	2.52E+00	1.12E-01	5.56E+00	1.01E+01	1.19E-01	4.41E-03
Curium	Cm-245	2.10E-07	4.20E-05	1.64E-18	2.75E-01	3.02E-02	5.00E-01	1.06E+00	6.80E-02	2.52E-03
Curium	Cm-246	2.10E-07	4.20E-05	4.44E-22	8.58E-01	3.27E-02	2.06E+00	3.73E+00	6.80E-02	2.52E-03
Curium	Cm-247	1.90E-07	3.90E-05	8.86E-18	6.93E-02	2.43E-02	1.16E-01	2.58E-01	7.52E-02	2.78E-03
Curium	Cm-248	7.70E-07	1.50E-04	3.35E-22	2.34E-01	8.90E-03	5.61E-01	1.02E+00	1.86E-02	6.87E-04
Curium	Cm-249	3.10E-11	3.30E-11	5.76E-19	1.96E+05	2.60E+05	2.67E+05	6.00E+05	4.61E+02	1.71E+01
Curium	Cm-249+D	1.00E-09	1.60E-07	5.76E-19	1.95E+05	2.24E+05	2.65E+05	5.97E+05	1.43E+01	5.29E-01
Curium	Cm-249+E	1.00E-09	1.60E-07	5.76E-19	1.95E+05	2.24E+05	2.65E+05	5.97E+05	1.43E+01	5.29E-01
Curium	Cm-250	4.40E-06	8.40E-04	0.00E+00	4.09E-02	1.56E-03	9.84E-02	1.78E-01	3.25E-03	1.20E-04
Curium	Cm-250+D	4.40E-06	8.40E-04	8.74E-18	2.66E-02	1.53E-03	5.48E-02	1.09E-01	3.25E-03	1.20E-04
Curium	Cm-250+E	4.40E-06	8.40E-04	8.74E-18	2.66E-02	1.53E-03	5.48E-02	1.09E-01	3.25E-03	1.20E-04
Dysprosium	Dy-155	1.30E-10	7.70E-11	1.64E-17	7.36E+02	9.82E+02	1.00E+03	2.25E+03	1.10E+02	4.07E+00
Dysprosium	Dy-155+D	3.40E-10	3.00E-10	1.86E-17	6.49E+02	8.65E+02	8.83E+02	1.99E+03	4.20E+01	1.56E+00
Dysprosium	Dy-155+E	3.40E-10	3.00E-10	1.86E-17	6.49E+02	8.65E+02	8.83E+02	1.99E+03	4.20E+01	1.56E+00
Dysprosium	Dy-157	6.10E-11	3.00E-11	8.96E-18	1.66E+03	2.22E+03	2.26E+03	5.09E+03	2.34E+02	8.67E+00
Dysprosium	Dy-159	1.00E-10	3.70E-10	2.39E-19	1.46E+02	1.94E+02	1.98E+02	4.45E+02	1.43E+02	5.29E+00
Dysprosium	Dy-165	1.10E-10	6.00E-11	6.59E-19	7.85E+04	1.05E+05	1.07E+05	2.40E+05	1.30E+02	4.81E+00
Dysprosium	Dy-166	1.60E-09	1.90E-09	4.25E-19	3.45E+03	4.60E+03	4.69E+03	1.05E+04	8.93E+00	3.31E-01
Dysprosium	Dy-166+D	3.00E-09	2.60E-09	1.26E-18	1.17E+03	1.56E+03	1.59E+03	3.57E+03	4.76E+00	1.76E-01
Dysprosium	Dy-166+E	3.00E-09	2.60E-09	1.26E-18	1.17E+03	1.56E+03	1.59E+03	3.57E+03	4.76E+00	1.76E-01
Einsteinium	Es-250	2.10E-11	6.30E-10	1.13E-17	5.09E+03	6.78E+03	6.92E+03	1.56E+04	6.80E+02	2.52E+01
Einsteinium	Es-250+E	1.60E-07	3.40E-05	1.13E-17	4.89E+03	6.53E+03	6.68E+03	1.49E+04	8.93E-02	3.31E-03
Einsteinium	Es-251	1.70E-10	2.10E-09	1.75E-18	2.09E+03	2.79E+03	2.84E+03	6.40E+03	8.40E+01	3.11E+00
Einsteinium	Es-253	6.10E-09	2.70E-06	8.62E-21	9.49E+03	1.30E+04	1.37E+04	2.67E+04	2.34E+00	8.67E-02
Einsteinium	Es-253+D	7.10E-09	2.70E-06	8.62E-21	8.57E+03	1.18E+04	1.24E+04	2.41E+04	2.01E+00	7.45E-02
Einsteinium	Es-253+E	7.10E-09	2.70E-06	8.62E-21	8.57E+03	1.18E+04	1.24E+04	2.41E+04	2.01E+00	7.45E-02
Einsteinium	Es-254	2.80E-08	8.60E-06	6.07E-20	1.31E+02	1.78E+02	1.88E+02	3.75E+02	5.10E-01	1.89E-02

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Einsteinium	Es-254+D	2.80E-08	8.60E-06	4.22E-17	4.32E-01	5.75E-01	5.87E-01	1.32E+00	5.10E-01	1.89E-02
Einsteinium	Es-254+E	1.90E-07	4.30E-05	4.22E-17	4.27E-01	5.70E-01	5.81E-01	1.30E+00	7.52E-02	2.78E-03
Einsteinium	Es-254m	4.20E-09	4.70E-07	1.41E-17	2.18E+02	2.90E+02	2.96E+02	6.66E+02	3.40E+00	1.26E-01
Einsteinium	Es-254m+D	4.60E-09	5.30E-07	1.41E-17	2.18E+02	2.90E+02	2.96E+02	6.66E+02	3.11E+00	1.15E-01
Einsteinium	Es-254m+E	1.60E-07	3.40E-05	1.41E-17	2.11E+02	2.82E+02	2.88E+02	6.44E+02	8.93E-02	3.31E-03
Erbium	Er-161	8.00E-11	4.80E-11	2.74E-17	1.36E+03	1.81E+03	1.85E+03	4.16E+03	1.79E+02	6.61E+00
Erbium	Er-161+D	9.30E-11	5.40E-11	2.74E-17	1.36E+03	1.81E+03	1.85E+03	4.16E+03	1.54E+02	5.69E+00
Erbium	Er-161+E	9.30E-11	5.40E-11	2.74E-17	1.36E+03	1.81E+03	1.85E+03	4.16E+03	1.54E+02	5.69E+00
Erbium	Er-165	1.90E-11	7.90E-12	2.26E-19	5.16E+04	6.87E+04	7.01E+04	1.58E+05	7.52E+02	2.78E+01
Erbium	Er-169	3.70E-10	1.00E-09	6.46E-22	3.23E+05	4.42E+05	4.76E+05	9.34E+05	3.86E+01	1.43E+00
Erbium	Er-171	3.60E-10	2.20E-10	9.69E-18	1.66E+03	2.21E+03	2.25E+03	5.07E+03	3.97E+01	1.47E+00
Erbium	Er-171+D	4.70E-10	1.60E-09	9.69E-18	1.66E+03	2.21E+03	2.25E+03	5.07E+03	3.04E+01	1.13E+00
Erbium	Er-171+E	4.70E-10	1.60E-09	9.69E-18	1.66E+03	2.21E+03	2.25E+03	5.07E+03	3.04E+01	1.13E+00
Erbium	Er-172	1.00E-09	1.10E-09	1.48E-17	1.65E+02	2.21E+02	2.25E+02	5.06E+02	1.43E+01	5.29E-01
Erbium	Er-172+D	2.70E-09	2.20E-09	3.04E-17	8.05E+01	1.07E+02	1.10E+02	2.46E+02	5.29E+00	1.96E-01
Erbium	Er-172+E	2.70E-09	2.20E-09	3.04E-17	8.05E+01	1.07E+02	1.10E+02	2.46E+02	5.29E+00	1.96E-01
Europium	Eu-145	7.50E-10	5.50E-10	4.64E-17	1.83E+01	2.43E+01	2.48E+01	5.58E+01	1.90E+01	7.05E-01
Europium	Eu-145+D	9.60E-10	2.20E-09	4.64E-17	1.83E+01	2.43E+01	2.48E+01	5.58E+01	1.49E+01	5.51E-01
Europium	Eu-145+E	1.10E-09	5.80E-09	4.64E-17	1.83E+01	2.43E+01	2.48E+01	5.58E+01	1.30E+01	4.81E-01
Europium	Eu-146	1.30E-09	8.00E-10	7.78E-17	1.40E+01	1.87E+01	1.91E+01	4.29E+01	1.10E+01	4.07E-01
Europium	Eu-147	4.40E-10	1.10E-09	1.37E-17	1.53E+01	2.04E+01	2.08E+01	4.68E+01	3.25E+01	1.20E+00
Europium	Eu-148	1.30E-09	2.60E-09	6.61E-17	1.40E+00	1.86E+00	1.90E+00	4.27E+00	1.10E+01	4.07E-01
Europium	Eu-149	1.00E-10	2.90E-10	9.82E-19	5.50E+01	7.33E+01	7.48E+01	1.68E+02	1.43E+02	5.29E+00
Europium	Eu-150a	3.80E-10	1.90E-10	1.32E-18	7.24E+03	9.64E+03	9.85E+03	2.22E+04	3.76E+01	1.39E+00
Europium	Eu-150b	1.30E-09	5.30E-08	4.37E-17	2.02E-02	2.21E-02	3.16E-02	7.10E-02	1.10E+01	4.07E-01
Europium	Eu-152	1.40E-09	4.20E-08	3.54E-17	3.70E-02	4.45E-02	5.46E-02	1.23E-01	1.02E+01	3.78E-01
Europium	Eu-152m	5.00E-10	2.20E-10	8.90E-18	1.46E+03	1.94E+03	1.98E+03	4.45E+03	2.86E+01	1.06E+00
Europium	Eu-154	2.00E-09	5.30E-08	3.89E-17	4.44E-02	5.61E-02	6.36E-02	1.43E-01	7.14E+00	2.65E-01
Europium	Eu-155	3.20E-10	6.90E-09	8.66E-19	3.25E+00	4.28E+00	4.50E+00	1.01E+01	4.46E+01	1.65E+00
Europium	Eu-156	2.20E-09	3.40E-09	4.40E-17	7.53E+00	1.00E+01	1.02E+01	2.30E+01	6.49E+00	2.41E-01
Europium	Eu-157	6.00E-10	2.80E-10	6.52E-18	1.22E+03	1.63E+03	1.66E+03	3.74E+03	2.38E+01	8.82E-01
Europium	Eu-158	9.40E-11	4.70E-11	3.38E-17	4.67E+03	6.23E+03	6.35E+03	1.43E+04	1.52E+02	5.63E+00
Fermium	Fm-252	2.70E-09	3.20E-07	5.05E-22	6.60E+05	9.16E+05	1.01E+06	1.84E+06	5.29E+00	1.96E-01
Fermium	Fm-252+D	3.10E-08	9.10E-06	9.74E-22	6.03E+04	8.37E+04	9.08E+04	1.65E+05	4.61E-01	1.71E-02
Fermium	Fm-252+E	1.50E-07	3.60E-05	1.45E-21	1.26E+04	1.75E+04	1.91E+04	3.46E+04	9.52E-02	3.53E-03
Fermium	Fm-253	9.10E-10	4.00E-07	1.54E-18	1.09E+03	1.45E+03	1.48E+03	3.33E+03	1.57E+01	5.81E-01
Fermium	Fm-253+D	7.10E-09	2.90E-06	1.54E-18	1.07E+03	1.43E+03	1.46E+03	3.28E+03	2.01E+00	7.45E-02
Fermium	Fm-253+E	7.10E-09	2.90E-06	1.54E-18	1.07E+03	1.43E+03	1.46E+03	3.28E+03	2.01E+00	7.45E-02
Fermium	Fm-254	4.40E-10	6.10E-08	1.01E-21	1.66E+07	2.27E+07	2.41E+07	4.81E+07	3.25E+01	1.20E+00
Fermium	Fm-254+E	1.60E-07	3.40E-05	1.45E-21	8.27E+04	1.15E+05	1.26E+05	2.28E+05	8.93E-02	3.31E-03
Fermium	Fm-255	2.50E-09	2.70E-07	2.80E-20	1.72E+05	2.31E+05	2.39E+05	5.16E+05	5.71E+00	2.12E-01
Fermium	Fm-257	1.50E-08	7.10E-06	2.09E-18	2.35E+01	3.13E+01	3.20E+01	7.16E+01	9.52E-01	3.53E-02
Fermium	Fm-257+D	2.40E-08	1.10E-05	2.09E-18	2.32E+01	3.10E+01	3.16E+01	7.07E+01	5.95E-01	2.20E-02
Fermium	Fm-257+E	2.40E-08	1.10E-05	2.09E-18	2.32E+01	3.10E+01	3.16E+01	7.07E+01	5.95E-01	2.20E-02
Fluorine	F-18	4.90E-11	5.60E-11	3.01E-17	2.19E+03	2.92E+03	2.98E+03	6.71E+03	2.92E+02	1.08E+01
Francium	Fr-219			9.69E-20	2.14E+11	2.85E+11	2.90E+11	6.54E+11		
Francium	Fr-219+D			1.49E-18	1.39E+10	1.85E+10	1.89E+10	4.25E+10		
Francium	Fr-219+E			1.49E-18	1.39E+10	1.85E+10	1.89E+10	4.25E+10		

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Francium	Fr-220			2.22E-19	7.15E+07	9.53E+07	9.72E+07	2.19E+08		
Francium	Fr-220+D			4.82E-17	3.29E+05	4.39E+05	4.48E+05	1.01E+06		
Francium	Fr-220+E			4.82E-17	3.29E+05	4.39E+05	4.48E+05	1.01E+06		
Francium	Fr-221			7.56E-19	2.00E+06	2.66E+06	2.71E+06	6.11E+06		
Francium	Fr-221+D			6.03E-18	2.50E+05	3.34E+05	3.40E+05	7.66E+05		
Francium	Fr-221+E			6.03E-18	2.50E+05	3.34E+05	3.40E+05	7.66E+05		
Francium	Fr-222	7.20E-10	1.40E-08	1.31E-19	3.78E+06	5.05E+06	5.15E+06	1.16E+07	1.98E+01	7.35E-01
Francium	Fr-222+D	7.20E-10	1.40E-08	4.08E-19	1.23E+06	1.64E+06	1.67E+06	3.75E+06	1.98E+01	7.35E-01
Francium	Fr-222+E	1.90E-06	4.50E-06	4.48E-19	8.77E+04	1.22E+05	1.35E+05	2.47E+05	7.52E-03	2.78E-04
Francium	Fr-223	2.40E-09	8.90E-10	9.70E-19	3.40E+05	4.54E+05	4.63E+05	1.04E+06	5.95E+00	2.20E-01
Francium	Fr-223+D	1.00E-07	7.40E-06	8.42E-18	3.82E+04	5.10E+04	5.21E+04	1.17E+05	1.43E-01	5.29E-03
Francium	Fr-223+E	1.00E-07	7.40E-06	8.42E-18	3.82E+04	5.10E+04	5.21E+04	1.17E+05	1.43E-01	5.29E-03
Gadolinium	Gd-145	4.40E-11	2.00E-11	7.51E-17	4.21E+03	5.62E+03	5.73E+03	1.29E+04	3.25E+02	1.20E+01
Gadolinium	Gd-145+D	1.00E-09	2.20E-09	1.22E-16	2.59E+03	3.46E+03	3.53E+03	7.93E+03	1.43E+01	5.29E-01
Gadolinium	Gd-145+E	1.10E-09	5.80E-09	1.22E-16	2.59E+03	3.46E+03	3.53E+03	7.93E+03	1.30E+01	4.81E-01
Gadolinium	Gd-146	9.60E-10	6.40E-09	3.85E-18	2.70E+01	3.60E+01	3.68E+01	8.27E+01	1.49E+01	5.51E-01
Gadolinium	Gd-146+D	2.30E-09	7.20E-09	8.17E-17	1.27E+00	1.70E+00	1.73E+00	3.90E+00	6.21E+00	2.30E-01
Gadolinium	Gd-146+E	2.30E-09	7.20E-09	8.17E-17	1.27E+00	1.70E+00	1.73E+00	3.90E+00	6.21E+00	2.30E-01
Gadolinium	Gd-147	6.10E-10	4.00E-10	3.95E-17	8.02E+01	1.07E+02	1.09E+02	2.45E+02	2.34E+01	8.67E-01
Gadolinium	Gd-147+D	1.00E-09	1.50E-09	5.32E-17	5.96E+01	7.94E+01	8.10E+01	1.82E+02	1.43E+01	5.29E-01
Gadolinium	Gd-147+E	1.00E-09	1.50E-09	5.32E-17	5.96E+01	7.94E+01	8.10E+01	1.82E+02	1.43E+01	5.29E-01
Gadolinium	Gd-148	5.60E-08	1.10E-05	0.00E+00	2.64E+00	1.88E+00	8.46E+00	1.53E+01	2.55E-01	9.45E-03
Gadolinium	Gd-149	4.50E-10	7.30E-10	1.07E-17	5.00E+01	6.67E+01	6.80E+01	1.53E+02	3.17E+01	1.18E+00
Gadolinium	Gd-149+D	5.50E-10	1.00E-09	1.07E-17	5.00E+01	6.67E+01	6.80E+01	1.53E+02	2.60E+01	9.62E-01
Gadolinium	Gd-149+E	5.50E-10	1.00E-09	1.07E-17	5.00E+01	6.67E+01	6.80E+01	1.53E+02	2.60E+01	9.62E-01
Gadolinium	Gd-151	2.00E-10	8.60E-10	8.32E-19	5.03E+01	6.71E+01	6.85E+01	1.54E+02	7.14E+01	2.65E+00
Gadolinium	Gd-152	4.10E-08	8.00E-06	0.00E+00	3.23E+00	2.22E+00	1.05E+01	1.91E+01	3.48E-01	1.29E-02
Gadolinium	Gd-153	2.70E-10	2.10E-09	1.14E-18	1.82E+01	2.43E+01	2.48E+01	5.58E+01	5.29E+01	1.96E+00
Gadolinium	Gd-159	4.90E-10	2.70E-10	1.18E-18	5.50E+03	7.33E+03	7.49E+03	1.68E+04	2.92E+01	1.08E+00
Gallium	Ga-65	3.70E-11	1.70E-11	3.42E-17	1.39E+04	1.86E+04	1.90E+04	4.26E+04	3.86E+02	1.43E+01
Gallium	Ga-65+D	3.90E-09	1.60E-09	5.30E-17	8.99E+03	1.20E+04	1.22E+04	2.75E+04	3.66E+00	1.36E-01
Gallium	Ga-65+E	3.90E-09	1.60E-09	5.30E-17	8.99E+03	1.20E+04	1.22E+04	2.75E+04	3.66E+00	1.36E-01
Gallium	Ga-66	1.20E-09	4.40E-10	8.43E-17	1.52E+02	2.03E+02	2.07E+02	4.66E+02	1.19E+01	4.41E-01
Gallium	Ga-67	1.90E-10	2.40E-10	3.65E-18	4.23E+02	5.63E+02	5.75E+02	1.29E+03	7.52E+01	2.78E+00
Gallium	Ga-68	1.00E-10	4.90E-11	2.82E-17	3.78E+03	5.04E+03	5.14E+03	1.16E+04	1.43E+02	5.29E+00
Gallium	Ga-70	3.10E-11	1.60E-11	3.33E-19	1.03E+06	1.37E+06	1.40E+06	3.15E+06	4.61E+02	1.71E+01
Gallium	Ga-72	1.10E-09	5.30E-10	9.07E-17	9.44E+01	1.26E+02	1.28E+02	2.89E+02	1.30E+01	4.81E-01
Gallium	Ga-73	2.60E-10	1.40E-10	8.49E-18	2.90E+03	3.86E+03	3.94E+03	8.86E+03	5.49E+01	2.04E+00
Germanium	Ge-66	1.00E-10	9.10E-11	1.93E-17	2.75E+03	3.66E+03	3.75E+03	8.43E+03	1.43E+02	5.29E+00
Germanium	Ge-66+D	1.30E-09	5.30E-10	1.04E-16	5.09E+02	6.76E+02	6.95E+02	1.56E+03	1.10E+01	4.07E-01
Germanium	Ge-66+E	1.30E-09	5.30E-10	1.04E-16	5.09E+02	6.76E+02	6.95E+02	1.56E+03	1.10E+01	4.07E-01
Germanium	Ge-67	6.50E-11	2.50E-11	4.21E-17	9.20E+03	1.23E+04	1.25E+04	2.82E+04	2.20E+02	8.14E+00
Germanium	Ge-67+D	2.60E-10	2.60E-10	4.21E-17	9.18E+03	1.22E+04	1.25E+04	2.82E+04	5.49E+01	2.04E+00
Germanium	Ge-67+E	2.60E-10	2.60E-10	4.21E-17	9.18E+03	1.22E+04	1.25E+04	2.82E+04	5.49E+01	2.04E+00
Germanium	Ge-68	1.30E-09	1.40E-08	6.94E-24	3.79E+01	2.43E+01	7.48E+03	1.35E+04	1.10E+01	4.07E-01
Germanium	Ge-68+D	1.30E-09	1.40E-08	2.82E-17	6.09E-01	7.99E-01	8.42E-01	1.90E+00	1.10E+01	4.07E-01
Germanium	Ge-68+E	1.30E-09	1.40E-08	2.82E-17	6.09E-01	7.99E-01	8.42E-01	1.90E+00	1.10E+01	4.07E-01
Germanium	Ge-69	2.40E-10	2.90E-10	2.69E-17	1.15E+02	1.52E+02	1.56E+02	3.52E+02	5.95E+01	2.20E+00

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Germanium	Ge-71	1.20E-11	1.10E-11	7.02E-24	9.99E+04	6.43E+04	1.60E+07	3.00E+07	1.19E+03	4.41E+01
Germanium	Ge-75	4.60E-11	3.60E-11	9.44E-19	9.11E+04	1.19E+05	1.26E+05	2.84E+05	3.11E+02	1.15E+01
Germanium	Ge-77	3.30E-10	3.70E-10	3.25E-17	3.28E+02	4.35E+02	4.47E+02	1.01E+03	4.33E+01	1.60E+00
Germanium	Ge-77+D	7.30E-10	7.60E-10	3.25E-17	3.26E+02	4.31E+02	4.47E+02	1.01E+03	1.96E+01	7.25E-01
Germanium	Ge-77+E	7.30E-10	7.60E-10	3.25E-17	3.26E+02	4.31E+02	4.47E+02	1.01E+03	1.96E+01	7.25E-01
Germanium	Ge-78	1.20E-10	9.50E-11	7.48E-18	1.11E+04	1.47E+04	1.51E+04	3.41E+04	1.19E+02	4.41E+00
Germanium	Ge-78+D	3.30E-10	1.80E-10	4.84E-17	1.72E+03	2.28E+03	2.34E+03	5.26E+03	4.33E+01	1.60E+00
Germanium	Ge-78+E	3.30E-10	1.80E-10	4.84E-17	1.72E+03	2.28E+03	2.34E+03	5.26E+03	4.33E+01	1.60E+00
Gold	Au-193	1.30E-10	1.10E-10	2.94E-18	2.32E+03	3.08E+03	3.16E+03	7.12E+03	1.10E+02	4.07E+00
Gold	Au-193+E	1.60E-10	1.30E-10	2.94E-18	2.32E+03	3.07E+03	3.16E+03	7.12E+03	8.93E+01	3.31E+00
Gold	Au-194	4.20E-10	2.30E-10	3.30E-17	9.25E+01	1.23E+02	1.26E+02	2.83E+02	3.40E+01	1.26E+00
Gold	Au-195	2.50E-10	1.10E-09	9.71E-19	2.77E+01	3.60E+01	3.85E+01	8.66E+01	5.71E+01	2.12E+00
Gold	Au-195m			5.00E-18	2.85E+06	3.80E+06	3.88E+06	8.72E+06		
Gold	Au-195m+D			5.97E-18	2.39E+06	3.18E+06	3.25E+06	7.30E+06		
Gold	Au-195m+E			5.97E-18	2.39E+06	3.18E+06	3.25E+06	7.30E+06		
Gold	Au-198	1.00E-09	7.80E-10	1.16E-17	1.60E+02	2.11E+02	2.19E+02	4.92E+02	1.43E+01	5.29E-01
Gold	Au-198m	1.30E-09	1.80E-09	1.29E-17	1.68E+02	2.22E+02	2.31E+02	5.19E+02	1.10E+01	4.07E-01
Gold	Au-198m+D	2.30E-09	2.60E-09	2.45E-17	8.85E+01	1.17E+02	1.21E+02	2.73E+02	6.21E+00	2.30E-01
Gold	Au-198m+E	2.30E-09	2.60E-09	2.45E-17	8.85E+01	1.17E+02	1.21E+02	2.73E+02	6.21E+00	2.30E-01
Gold	Au-199	4.40E-10	7.10E-10	1.90E-18	8.26E+02	1.08E+03	1.15E+03	2.58E+03	3.25E+01	1.20E+00
Gold	Au-200	6.80E-11	3.30E-11	8.74E-18	1.71E+04	2.28E+04	2.33E+04	5.24E+04	2.10E+02	7.78E+00
Gold	Au-200m	1.10E-09	6.80E-10	6.08E-17	1.06E+02	1.41E+02	1.44E+02	3.25E+02	1.30E+01	4.81E-01
Gold	Au-200m+D									
Gold	Au-200m+E									
Gold	Au-201	2.40E-11	1.70E-11	1.55E-18	1.77E+05	2.35E+05	2.41E+05	5.42E+05	5.95E+02	2.20E+01
Hafnium	Hf-170	4.80E-10	3.20E-10	1.38E-17	5.46E+02	7.29E+02	7.43E+02	1.67E+03	2.98E+01	1.10E+00
Hafnium	Hf-170+D	1.50E-09	9.50E-10	9.75E-17	7.73E+01	1.03E+02	1.05E+02	2.37E+02	9.52E+00	3.53E-01
Hafnium	Hf-170+E	1.50E-09	9.50E-10	9.75E-17	7.73E+01	1.03E+02	1.05E+02	2.37E+02	9.52E+00	3.53E-01
Hafnium	Hf-172	1.00E-09	2.00E-08	1.15E-18	6.39E+00	8.53E+00	8.70E+00	1.96E+01	1.43E+01	5.29E-01
Hafnium	Hf-172+D	2.30E-09	2.00E-08	5.93E-17	1.24E-01	1.66E-01	1.69E-01	3.80E-01	6.21E+00	2.30E-01
Hafnium	Hf-172+E	2.30E-09	2.00E-08	5.93E-17	1.24E-01	1.66E-01	1.69E-01	3.80E-01	6.21E+00	2.30E-01
Hafnium	Hf-173	2.30E-10	1.60E-10	9.15E-18	5.50E+02	7.33E+02	7.48E+02	1.68E+03	6.21E+01	2.30E+00
Hafnium	Hf-173+D	4.90E-10	2.40E-09	1.12E-17	4.49E+02	5.99E+02	6.11E+02	1.37E+03	2.92E+01	1.08E+00
Hafnium	Hf-173+E	4.90E-10	2.40E-09	1.12E-17	4.49E+02	5.99E+02	6.11E+02	1.37E+03	2.92E+01	1.08E+00
Hafnium	Hf-175	4.10E-10	1.20E-09	9.21E-18	7.80E+00	1.04E+01	1.06E+01	2.39E+01	3.48E+01	1.29E+00
Hafnium	Hf-177m	8.10E-11	9.00E-11	5.82E-17	2.42E+03	3.23E+03	3.29E+03	7.41E+03	1.76E+02	6.53E+00
Hafnium	Hf-178m	4.70E-09	1.20E-07	6.48E-17	1.40E-02	1.55E-02	2.18E-02	4.90E-02	3.04E+00	1.13E-01
Hafnium	Hf-179m	1.20E-09	3.80E-09	2.32E-17	8.64E+00	1.15E+01	1.17E+01	2.64E+01	1.19E+01	4.41E-01
Hafnium	Hf-180m	1.70E-10	1.30E-10	2.67E-17	8.22E+02	1.10E+03	1.12E+03	2.52E+03	8.40E+01	3.11E+00
Hafnium	Hf-181	1.10E-09	5.00E-09	1.51E-17	7.86E+00	1.05E+01	1.07E+01	2.40E+01	1.30E+01	4.81E-01
Hafnium	Hf-182	3.00E-09	1.30E-07	6.17E-18	1.07E-01	1.07E-01	1.75E-01	3.94E-01	4.76E+00	1.76E-01
Hafnium	Hf-182+E	4.50E-09	1.30E-07	6.60E-17	1.00E-02	1.00E-02	1.64E-02	3.69E-02	3.17E+00	1.18E-01
Hafnium	Hf-182m	4.20E-11	4.60E-11	2.58E-17	4.57E+03	6.09E+03	6.21E+03	1.40E+04	3.40E+02	1.26E+01
Hafnium	Hf-183	7.30E-11	5.70E-11	2.22E-17	5.10E+03	6.80E+03	6.93E+03	1.56E+04	1.96E+02	7.25E+00
Hafnium	Hf-183+D	1.40E-09	2.00E-09	2.86E-17	3.96E+03	5.28E+03	5.38E+03	1.21E+04	1.02E+01	3.78E-01
Hafnium	Hf-183+E	1.40E-09	2.00E-09	2.86E-17	3.96E+03	5.28E+03	5.38E+03	1.21E+04	1.02E+01	3.78E-01
Hafnium	Hf-184	5.20E-10	3.30E-10	5.89E-18	4.97E+03	6.63E+03	6.76E+03	1.52E+04	2.75E+01	1.02E+00
Hafnium	Hf-184+D	1.20E-09	7.40E-10	5.31E-17	5.52E+02	7.36E+02	7.50E+02	1.69E+03	1.19E+01	4.41E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Hafnium	Hf-184+E	1.20E-09	7.40E-10	5.31E-17	5.52E+02	7.36E+02	7.50E+02	1.69E+03	1.19E+01	4.41E-01
Holmium	Ho-155	3.70E-11	2.00E-11	1.03E-17	1.47E+04	1.95E+04	1.99E+04	4.48E+04	3.86E+02	1.43E+01
Holmium	Ho-155+D	3.80E-10	3.20E-10	2.90E-17	5.20E+03	6.94E+03	7.08E+03	1.59E+04	3.76E+01	1.39E+00
Holmium	Ho-155+E	3.80E-10	3.20E-10	2.90E-17	5.20E+03	6.94E+03	7.08E+03	1.59E+04	3.76E+01	1.39E+00
Holmium	Ho-157	6.50E-12	4.20E-12	1.25E-17	4.60E+04	6.13E+04	6.25E+04	1.41E+05	2.20E+03	8.14E+01
Holmium	Ho-157+D	6.80E-11	3.40E-11	2.15E-17	2.67E+04	3.57E+04	3.64E+04	8.18E+04	2.10E+02	7.78E+00
Holmium	Ho-157+E	6.80E-11	3.40E-11	2.15E-17	2.67E+04	3.57E+04	3.64E+04	8.18E+04	2.10E+02	7.78E+00
Holmium	Ho-159	7.90E-12	6.10E-12	7.87E-18	2.79E+04	3.72E+04	3.79E+04	8.53E+04	1.81E+03	6.70E+01
Holmium	Ho-159+D	1.10E-10	3.80E-10	7.87E-18	2.79E+04	3.72E+04	3.79E+04	8.53E+04	1.30E+02	4.81E+00
Holmium	Ho-159+E	1.10E-10	3.80E-10	7.87E-18	2.79E+04	3.72E+04	3.79E+04	8.53E+04	1.30E+02	4.81E+00
Holmium	Ho-161	1.30E-11	6.00E-12	4.02E-19	1.20E+05	1.60E+05	1.63E+05	3.68E+05	1.10E+03	4.07E+01
Holmium	Ho-162	3.30E-12	2.80E-12	4.06E-18	1.19E+05	1.59E+05	1.62E+05	3.64E+05	4.33E+03	1.60E+02
Holmium	Ho-162m	2.60E-11	2.10E-11	1.65E-17	6.46E+03	8.61E+03	8.78E+03	1.98E+04	5.49E+02	2.04E+01
Holmium	Ho-162m+D	2.60E-11	2.10E-11	1.90E-17	5.61E+03	7.48E+03	7.63E+03	1.72E+04	5.49E+02	2.04E+01
Holmium	Ho-162m+E	2.60E-11	2.10E-11	1.90E-17	5.61E+03	7.48E+03	7.63E+03	1.72E+04	5.49E+02	2.04E+01
Holmium	Ho-164	9.50E-12	8.40E-12	2.04E-19	1.22E+06	1.63E+06	1.67E+06	3.75E+06	1.50E+03	5.57E+01
Holmium	Ho-164m	1.60E-11	1.20E-11	2.69E-19	7.18E+05	9.57E+05	9.76E+05	2.20E+06	8.93E+02	3.31E+01
Holmium	Ho-164m+D	2.60E-11	2.00E-11	4.73E-19	4.08E+05	5.44E+05	5.55E+05	1.25E+06	5.49E+02	2.04E+01
Holmium	Ho-164m+E	2.60E-11	2.00E-11	4.73E-19	4.08E+05	5.44E+05	5.55E+05	1.25E+06	5.49E+02	2.04E+01
Holmium	Ho-166	1.40E-09	6.50E-10	8.36E-19	5.34E+03	7.10E+03	7.30E+03	1.64E+04	1.02E+01	3.78E-01
Holmium	Ho-166m	2.00E-09	1.20E-07	5.17E-17	1.29E-02	1.30E-02	2.11E-02	4.74E-02	7.14E+00	2.65E-01
Holmium	Ho-167	8.30E-11	7.10E-11	9.83E-18	3.96E+03	5.28E+03	5.39E+03	1.21E+04	1.72E+02	6.37E+00
Hydrogen	H-3	4.20E-11	4.10E-11	0.00E+00	2.60E+00	2.24E-01	1.73E+00	3.90E+00	5.78E+01	1.26E+01
Indium	In-109	6.60E-11	4.20E-11	1.94E-17	1.48E+03	1.98E+03	2.02E+03	4.53E+03	2.16E+02	8.02E+00
Indium	In-109+D	2.10E-09	6.60E-09	1.94E-17	1.48E+03	1.97E+03	2.01E+03	4.53E+03	6.80E+00	2.52E-01
Indium	In-109+E	2.10E-09	6.60E-09	1.94E-17	1.48E+03	1.97E+03	2.01E+03	4.53E+03	6.80E+00	2.52E-01
Indium	In-110a	1.00E-10	4.70E-11	4.80E-17	2.18E+03	2.91E+03	2.97E+03	6.68E+03	1.43E+02	5.29E+00
Indium	In-110b	2.40E-10	1.30E-10	9.44E-17	2.61E+02	3.48E+02	3.55E+02	7.99E+02	5.95E+01	2.20E+00
Indium	In-111	2.90E-10	2.30E-10	9.69E-18	1.83E+02	2.45E+02	2.49E+02	5.61E+02	4.93E+01	1.82E+00
Indium	In-112	1.00E-11	7.40E-12	7.77E-18	6.47E+04	8.63E+04	8.80E+04	1.98E+05	1.43E+03	5.29E+01
Indium	In-113m	2.80E-11	2.00E-11	7.14E-18	1.02E+04	1.36E+04	1.39E+04	3.12E+04	5.10E+02	1.89E+01
Indium	In-114			9.01E-20	6.71E+07	8.95E+07	9.12E+07	2.05E+08		
Indium	In-114m	4.10E-09	6.10E-09	2.42E-18	4.16E+01	5.52E+01	5.69E+01	1.28E+02	3.48E+00	1.29E-01
Indium	In-114m+D	4.10E-09	1.20E-08	2.42E-18	4.16E+01	5.52E+01	5.69E+01	1.28E+02	3.48E+00	1.29E-01
Indium	In-114m+E	4.10E-09	1.20E-08	2.42E-18	4.16E+01	5.52E+01	5.69E+01	1.28E+02	3.48E+00	1.29E-01
Indium	In-115	3.20E-08	1.60E-07	1.90E-21	3.75E+00	2.52E+00	1.34E+01	2.42E+01	4.46E-01	1.65E-02
Indium	In-115m	8.60E-11	5.90E-11	4.25E-18	6.33E+03	8.44E+03	8.61E+03	1.94E+04	1.66E+02	6.15E+00
Indium	In-116m	6.40E-11	4.50E-11	8.14E-17	1.64E+03	2.19E+03	2.24E+03	5.03E+03	2.23E+02	8.27E+00
Indium	In-117	3.10E-11	2.90E-11	1.95E-17	8.48E+03	1.13E+04	1.15E+04	2.60E+04	4.61E+02	1.71E+01
Indium	In-117+D	3.10E-11	3.70E-11	1.95E-17	8.48E+03	1.13E+04	1.15E+04	2.60E+04	4.61E+02	1.71E+01
Indium	In-117+E	3.10E-11	3.70E-11	1.95E-17	8.48E+03	1.13E+04	1.15E+04	2.60E+04	4.61E+02	1.71E+01
Indium	In-117m	1.20E-10	7.20E-11	2.30E-18	2.70E+04	3.60E+04	3.68E+04	8.27E+04	1.19E+02	4.41E+00
Indium	In-117m+D	1.40E-10	8.90E-11	1.15E-17	5.41E+03	7.21E+03	7.35E+03	1.65E+04	1.02E+02	3.78E+00
Indium	In-117m+E	1.40E-10	8.90E-11	1.15E-17	5.41E+03	7.21E+03	7.35E+03	1.65E+04	1.02E+02	3.78E+00
Indium	In-119			2.37E-17	1.27E+05	1.70E+05	1.73E+05	3.90E+05		
Indium	In-119+D	8.40E-11	2.60E-10	2.37E-17	1.27E+05	1.70E+05	1.73E+05	3.90E+05	1.70E+02	6.30E+00
Indium	In-119+E	8.40E-11	2.60E-10	2.37E-17	1.27E+05	1.70E+05	1.73E+05	3.90E+05	1.70E+02	6.30E+00
Indium	In-119m	4.70E-11	1.70E-11	4.84E-19	8.31E+05	1.11E+06	1.13E+06	2.54E+06	3.04E+02	1.13E+01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Indium	In-119m+D	4.70E-11	2.30E-11	1.08E-18	3.73E+05	4.97E+05	5.07E+05	1.14E+06	3.04E+02	1.13E+01
Indium	In-119m+E	4.70E-11	2.30E-11	1.08E-18	3.73E+05	4.97E+05	5.07E+05	1.14E+06	3.04E+02	1.13E+01
Iodine	I-120	3.40E-10	2.00E-10	8.89E-17	1.01E+03	7.83E+02	1.37E+03	3.08E+03	4.20E+01	1.56E+00
Iodine	I-120m	2.10E-10	1.00E-10	1.70E-16	8.04E+02	8.71E+02	1.09E+03	2.46E+03	6.80E+01	2.52E+00
Iodine	I-121	8.20E-11	5.60E-11	1.11E-17	5.13E+03	2.88E+03	6.98E+03	1.57E+04	1.74E+02	6.45E+00
Iodine	I-121+D	5.10E-10	4.10E-10	2.77E-17	2.06E+03	6.18E+02	2.80E+03	6.29E+03	2.80E+01	1.04E+00
Iodine	I-121+E	5.10E-10	4.10E-10	2.77E-17	2.06E+03	6.18E+02	2.80E+03	6.29E+03	2.80E+01	1.04E+00
Iodine	I-122			2.83E-17	7.07E+04	9.43E+04	9.62E+04	2.16E+05		
Iodine	I-123	2.10E-10	1.50E-10	3.49E-18	2.62E+03	2.86E+02	3.56E+03	8.02E+03	6.80E+01	2.52E+00
Iodine	I-124	1.30E-08	9.20E-09	3.42E-17	3.49E+01	6.52E-01	4.78E+01	1.08E+02	1.10E+00	4.07E-02
Iodine	I-125	1.50E-08	1.10E-08	6.36E-20	2.26E+02	3.99E-02	1.14E+03	2.34E+03	9.52E-01	3.53E-02
Iodine	I-126	2.90E-08	2.00E-08	1.32E-17	2.80E+01	9.50E-02	3.96E+01	8.90E+01	4.93E-01	1.82E-02
Iodine	I-128	4.60E-11	1.30E-11	2.58E-18	1.12E+05	3.46E+04	1.53E+05	3.44E+05	3.11E+02	1.15E+01
Iodine	I-129	1.10E-07	7.40E-08	5.11E-20	2.89E-01	3.23E-05	3.39E+00	6.31E+00	1.30E-01	4.81E-03
Iodine	I-130	2.00E-09	1.40E-09	6.50E-17	1.50E+02	2.97E+01	2.04E+02	4.60E+02	7.14E+00	2.65E-01
Iodine	I-131	2.20E-08	1.50E-08	1.08E-17	5.56E+01	2.03E-01	7.84E+01	1.76E+02	6.49E-01	2.41E-02
Iodine	I-132	2.90E-10	1.90E-10	7.10E-17	7.39E+02	5.59E+02	1.01E+03	2.26E+03	4.93E+01	1.82E+00
Iodine	I-132m	2.20E-10	1.60E-10	9.39E-18	9.22E+03	2.29E+03	1.25E+04	2.82E+04	6.49E+01	2.41E+00
Iodine	I-132m+D	4.70E-10	1.60E-10	7.05E-17	1.23E+03	7.30E+02	1.67E+03	3.76E+03	3.04E+01	1.13E+00
Iodine	I-132m+E	4.70E-10	1.60E-10	7.05E-17	1.23E+03	7.30E+02	1.67E+03	3.76E+03	3.04E+01	1.13E+00
Iodine	I-133	4.30E-09	3.10E-09	1.83E-17	3.16E+02	9.43E+00	4.31E+02	9.70E+02	3.32E+00	1.23E-01
Iodine	I-134	1.10E-10	5.00E-11	8.31E-17	1.66E+03	1.77E+03	2.25E+03	5.07E+03	1.30E+02	4.81E+00
Iodine	I-135	9.30E-10	6.80E-10	5.21E-17	3.50E+02	1.08E+02	4.77E+02	1.07E+03	1.54E+01	5.69E-01
Iodine	I-135+D	9.30E-10	6.80E-10	6.06E-17	3.01E+02	1.04E+02	4.10E+02	9.22E+02	1.54E+01	5.69E-01
Iodine	I-135+E	9.30E-10	6.80E-10	6.06E-17	3.01E+02	1.04E+02	4.10E+02	9.22E+02	1.54E+01	5.69E-01
Iridium	Ir-182	4.80E-11	2.30E-11	3.94E-17	1.23E+04	1.63E+04	1.67E+04	3.75E+04	2.98E+02	1.10E+01
Iridium	Ir-182+D	6.10E-10	3.80E-10	8.64E-17	5.59E+03	7.45E+03	7.60E+03	1.71E+04	2.34E+01	8.67E-01
Iridium	Ir-182+E	6.10E-10	3.80E-10	8.64E-17	5.59E+03	7.45E+03	7.60E+03	1.71E+04	2.34E+01	8.67E-01
Iridium	Ir-184	1.70E-10	1.10E-10	5.80E-17	6.89E+02	9.19E+02	9.37E+02	2.11E+03	8.40E+01	3.11E+00
Iridium	Ir-185	2.60E-10	1.80E-10	1.79E-17	4.82E+02	6.42E+02	6.55E+02	1.47E+03	5.49E+01	2.04E+00
Iridium	Ir-185+D	7.70E-10	1.50E-09	3.88E-17	2.22E+02	2.96E+02	3.02E+02	6.80E+02	1.86E+01	6.87E-01
Iridium	Ir-185+E	7.70E-10	1.50E-09	3.88E-17	2.22E+02	2.96E+02	3.02E+02	6.80E+02	1.86E+01	6.87E-01
Iridium	Ir-186a	4.90E-10	3.10E-10	4.96E-17	1.54E+02	2.05E+02	2.10E+02	4.71E+02	2.92E+01	1.08E+00
Iridium	Ir-186b	6.10E-11	4.20E-11	2.83E-17	2.44E+03	3.25E+03	3.32E+03	7.46E+03	2.34E+02	8.67E+00
Iridium	Ir-187	1.20E-10	7.40E-11	9.59E-18	1.20E+03	1.60E+03	1.63E+03	3.67E+03	1.19E+02	4.41E+00
Iridium	Ir-188	6.30E-10	4.00E-10	5.12E-17	5.68E+01	7.57E+01	7.73E+01	1.74E+02	2.27E+01	8.40E-01
Iridium	Ir-189	2.40E-10	5.20E-10	1.17E-18	3.21E+02	4.26E+02	4.39E+02	9.89E+02	5.95E+01	2.20E+00
Iridium	Ir-190	1.20E-09	2.10E-09	4.04E-17	1.03E+01	1.37E+01	1.40E+01	3.15E+01	1.19E+01	4.41E-01
Iridium	Ir-190m			1.10E-23	9.15E+09	1.22E+10	1.24E+10	2.80E+10		
Iridium	Ir-190m+D	1.30E-09	2.20E-09	4.04E-17	2.49E+03	3.31E+03	3.39E+03	7.62E+03	1.10E+01	4.07E-01
Iridium	Ir-190m+E	1.30E-09	2.20E-09	4.04E-17	2.49E+03	3.31E+03	3.39E+03	7.62E+03	1.10E+01	4.07E-01
Iridium	Ir-190n			4.37E-17	8.91E+02	1.19E+03	1.21E+03	2.73E+03		
Iridium	Ir-191m			1.10E-18	8.00E+07	1.07E+08	1.09E+08	2.45E+08		
Iridium	Ir-192	1.40E-09	5.20E-09	2.29E-17	2.96E+00	3.94E+00	4.04E+00	9.08E+00	1.02E+01	3.78E-01
Iridium	Ir-192m	3.10E-10	5.80E-09	3.68E-18	1.88E-01	1.90E-01	3.05E-01	6.85E-01	4.61E+01	1.71E+00
Iridium	Ir-192m+E	1.70E-09	1.10E-08	2.66E-17	2.60E-02	2.63E-02	4.21E-02	9.48E-02	8.40E+00	3.11E-01
Iridium	Ir-194	1.30E-09	5.20E-10	2.81E-18	2.21E+03	2.91E+03	3.05E+03	6.86E+03	1.10E+01	4.07E-01
Iridium	Ir-194m	2.10E-09	9.00E-09	6.82E-17	4.31E-01	5.74E-01	5.87E-01	1.32E+00	6.80E+00	2.52E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Iridium	Ir-195	1.00E-10	6.70E-11	7.84E-19	6.14E+04	8.15E+04	8.37E+04	1.88E+05	1.43E+02	5.29E+00
Iridium	Ir-195m	2.10E-10	1.60E-10	1.07E-17	2.97E+03	3.95E+03	4.04E+03	9.09E+03	6.80E+01	2.52E+00
Iron	Fe-52	1.40E-09	6.00E-10	2.07E-17	7.05E+02	4.26E+02	9.58E+02	2.16E+03	1.02E+01	3.78E-01
Iron	Fe-52+D	1.40E-09	6.00E-10	9.97E-17	1.46E+02	1.56E+02	1.99E+02	4.48E+02	1.02E+01	3.78E-01
Iron	Fe-52+E	1.40E-09	6.00E-10	9.97E-17	1.46E+02	1.56E+02	1.99E+02	4.48E+02	1.02E+01	3.78E-01
Iron	Fe-55	3.30E-10	3.80E-10	0.00E+00	4.22E+03	1.16E+00	8.65E+03	1.56E+04	4.33E+01	1.60E+00
Iron	Fe-59	1.80E-09	3.70E-09	3.88E-17	2.91E+00	2.12E+00	3.96E+00	8.91E+00	7.94E+00	2.94E-01
Iron	Fe-60	1.10E-07	1.40E-07	4.84E-23	1.64E+00	3.38E-04	4.04E+00	7.27E+00	1.30E-01	4.81E-03
Iron	Fe-60+D	1.10E-07	1.40E-07	1.24E-19	1.26E+00	3.38E-04	2.76E+00	5.31E+00	1.30E-01	4.81E-03
Iron	Fe-60+E	1.10E-07	1.40E-07	1.24E-19	1.26E+00	3.38E-04	2.76E+00	5.31E+00	1.30E-01	4.81E-03
Krypton	Kr-74			3.32E-17	1.90E+04	2.53E+04	2.58E+04	5.81E+04		
Krypton	Kr-74+D			1.88E-16	3.35E+03	4.47E+03	4.56E+03	1.03E+04		
Krypton	Kr-74+E			1.88E-16	3.35E+03	4.47E+03	4.56E+03	1.03E+04		
Krypton	Kr-76			1.17E-17	6.97E+02	9.30E+02	9.48E+02	2.13E+03		
Krypton	Kr-76+D			9.81E-17	8.32E+01	1.11E+02	1.13E+02	2.54E+02		
Krypton	Kr-76+E			9.81E-17	8.32E+01	1.11E+02	1.13E+02	2.54E+02		
Krypton	Kr-77			2.85E-17	3.40E+03	4.54E+03	4.63E+03	1.04E+04		
Krypton	Kr-77+D			3.75E-17	2.59E+03	3.45E+03	3.52E+03	7.91E+03		
Krypton	Kr-77+E			3.75E-17	2.59E+03	3.45E+03	3.52E+03	7.91E+03		
Krypton	Kr-79			7.28E-18	4.73E+02	6.31E+02	6.44E+02	1.45E+03		
Krypton	Kr-81			1.48E-19	4.48E+00	4.48E+00	7.31E+00	1.64E+01		
Krypton	Kr-81m			3.13E-18	1.07E+07	1.42E+07	1.45E+07	3.27E+07		
Krypton	Kr-83m			1.35E-22	4.89E+08	6.52E+08	6.65E+08	1.50E+09		
Krypton	Kr-85			7.23E-20	2.08E+01	2.56E+01	3.02E+01	6.79E+01		
Krypton	Kr-85m			3.73E-18	7.23E+03	9.63E+03	9.83E+03	2.21E+04		
Krypton	Kr-87			2.69E-17	3.53E+03	4.71E+03	4.80E+03	1.08E+04		
Krypton	Kr-88			6.76E-17	6.29E+02	8.39E+02	8.55E+02	1.92E+03		
Krypton	Kr-88+D			9.02E-17	4.71E+02	6.28E+02	6.41E+02	1.44E+03		
Krypton	Kr-88+E			9.02E-17	4.71E+02	6.28E+02	6.41E+02	1.44E+03		
Lanthanum	La-131	3.50E-11	2.30E-11	1.86E-17	6.60E+03	8.80E+03	8.98E+03	2.02E+04	4.08E+02	1.51E+01
Lanthanum	La-131+D	5.40E-10	8.10E-10	3.06E-17	4.01E+03	5.35E+03	5.46E+03	1.23E+04	2.65E+01	9.80E-01
Lanthanum	La-131+E	5.40E-10	8.10E-10	3.06E-17	4.01E+03	5.35E+03	5.46E+03	1.23E+04	2.65E+01	9.80E-01
Lanthanum	La-132	3.90E-10	1.60E-10	6.38E-17	3.94E+02	5.26E+02	5.36E+02	1.21E+03	3.66E+01	1.36E+00
Lanthanum	La-134			2.06E-17	5.27E+04	7.03E+04	7.17E+04	1.61E+05		
Lanthanum	La-135	3.00E-11	1.40E-11	3.63E-19	1.70E+04	2.27E+04	2.32E+04	5.22E+04	4.76E+02	1.76E+01
Lanthanum	La-137	8.10E-11	3.60E-09	5.59E-20	1.18E+01	1.17E+01	1.93E+01	4.34E+01	1.76E+02	6.53E+00
Lanthanum	La-138	1.10E-09	6.40E-08	4.04E-17	1.64E-02	1.64E-02	2.68E-02	6.02E-02	1.30E+01	4.81E-01
Lanthanum	La-140	2.00E-09	1.10E-09	7.65E-17	3.92E+01	5.22E+01	5.33E+01	1.20E+02	7.14E+00	2.65E-01
Lanthanum	La-141	3.60E-10	1.50E-10	1.66E-18	1.85E+04	2.46E+04	2.52E+04	5.66E+04	3.97E+01	1.47E+00
Lanthanum	La-141+D	1.10E-09	3.40E-09	3.21E-18	9.55E+03	1.27E+04	1.30E+04	2.93E+04	1.30E+01	4.81E-01
Lanthanum	La-141+E	1.10E-09	3.40E-09	3.21E-18	9.55E+03	1.27E+04	1.30E+04	2.93E+04	1.30E+01	4.81E-01
Lanthanum	La-142	1.80E-10	8.90E-11	9.56E-17	8.19E+02	1.09E+03	1.11E+03	2.51E+03	7.94E+01	2.94E+00
Lanthanum	La-143	5.60E-11	2.10E-11	3.56E-18	1.43E+05	1.91E+05	1.94E+05	4.38E+05	2.55E+02	9.45E+00
Lanthanum	La-143+D	2.40E-09	3.00E-09	1.10E-17	4.62E+04	6.15E+04	6.29E+04	1.42E+05	5.95E+00	2.20E-01
Lanthanum	La-143+E	2.40E-09	3.00E-09	1.10E-17	4.62E+04	6.15E+04	6.29E+04	1.42E+05	5.95E+00	2.20E-01
Lead	Pb-195m	2.90E-11	2.50E-11	4.65E-17	9.86E+03	1.30E+04	1.34E+04	3.02E+04	4.93E+02	1.82E+01
Lead	Pb-195m+D	4.00E-10	1.20E-09	9.26E-17	4.95E+03	6.25E+03	6.73E+03	1.52E+04	3.57E+01	1.32E+00
Lead	Pb-195m+E	4.00E-10	1.20E-09	9.26E-17	4.95E+03	6.25E+03	6.73E+03	1.52E+04	3.57E+01	1.32E+00

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Lead	Pb-198	1.00E-10	6.60E-11	1.10E-17	4.57E+03	5.45E+03	6.22E+03	1.40E+04	1.43E+02	5.29E+00
Lead	Pb-198+D	1.70E-10	1.30E-10	7.55E-17	6.66E+02	8.63E+02	9.06E+02	2.04E+03	8.40E+01	3.11E+00
Lead	Pb-198+E	1.70E-10	1.30E-10	7.55E-17	6.66E+02	8.63E+02	9.06E+02	2.04E+03	8.40E+01	3.11E+00
Lead	Pb-199	5.40E-11	3.60E-11	4.59E-17	1.75E+03	2.30E+03	2.38E+03	5.37E+03	2.65E+02	9.80E+00
Lead	Pb-199+D	8.00E-11	5.50E-11	5.17E-17	1.56E+03	2.03E+03	2.12E+03	4.76E+03	1.79E+02	6.61E+00
Lead	Pb-199+E	8.00E-11	5.50E-11	5.17E-17	1.56E+03	2.03E+03	2.12E+03	4.76E+03	1.79E+02	6.61E+00
Lead	Pb-200	4.00E-10	3.30E-10	4.09E-18	1.37E+03	8.02E+02	1.87E+03	4.20E+03	3.57E+01	1.32E+00
Lead	Pb-200+D	6.00E-10	4.60E-10	4.39E-17	1.28E+02	1.45E+02	1.74E+02	3.91E+02	2.38E+01	8.82E-01
Lead	Pb-200+E	6.00E-10	4.60E-10	4.39E-17	1.28E+02	1.45E+02	1.74E+02	3.91E+02	2.38E+01	8.82E-01
Lead	Pb-201	1.60E-10	1.10E-10	2.14E-17	6.00E+02	7.29E+02	8.16E+02	1.84E+03	8.93E+01	3.31E+00
Lead	Pb-201+D	2.60E-10	1.50E-10	2.14E-17	6.00E+02	6.90E+02	8.16E+02	1.84E+03	5.49E+01	2.04E+00
Lead	Pb-201+E	2.60E-10	1.50E-10	2.14E-17	6.00E+02	6.90E+02	8.16E+02	1.84E+03	5.49E+01	2.04E+00
Lead	Pb-202	8.80E-09	6.30E-09	3.93E-23	6.50E+00	5.75E-03	5.04E+01	9.08E+01	1.62E+00	6.01E-02
Lead	Pb-202+D	8.80E-09	6.30E-09	7.50E-17	8.83E-03	3.48E-03	1.44E-02	3.24E-02	1.62E+00	6.01E-02
Lead	Pb-202+E	8.80E-09	6.30E-09	7.50E-17	8.83E-03	3.48E-03	1.44E-02	3.24E-02	1.62E+00	6.01E-02
Lead	Pb-202m	1.30E-10	9.50E-11	6.25E-17	5.34E+02	6.93E+02	7.26E+02	1.63E+03	1.10E+02	4.07E+00
Lead	Pb-203	2.40E-10	2.00E-10	7.39E-18	3.14E+02	2.94E+02	4.27E+02	9.60E+02	5.95E+01	2.20E+00
Lead	Pb-205	2.80E-10	2.50E-10	4.39E-23	2.02E+02	1.81E-01	1.49E+03	2.72E+03	5.10E+01	1.89E+00
Lead	Pb-209	5.70E-11	5.60E-11	4.03E-21	7.91E+06	6.59E+04	1.21E+07	2.70E+07	2.51E+02	9.28E+00
Lead	Pb-210	6.90E-07	1.10E-06	1.06E-20	1.27E-01	1.28E-04	9.20E-01	1.66E+00	2.07E-02	7.67E-04
Lead	Pb-210+D	1.90E-06	4.50E-06	4.01E-20	4.62E-02	4.65E-05	3.33E-01	6.01E-01	7.52E-03	2.78E-04
Lead	Pb-210+E	1.90E-06	4.50E-06	4.01E-20	4.62E-02	4.65E-05	3.33E-01	6.01E-01	7.52E-03	2.78E-04
Lead	Pb-211	1.80E-10	1.10E-08	1.56E-18	1.28E+05	6.83E+04	1.75E+05	3.93E+05	7.94E+01	2.94E+00
Lead	Pb-211+D	1.80E-10	1.10E-08	2.95E-18	6.80E+04	5.04E+04	9.25E+04	2.08E+05	7.94E+01	2.94E+00
Lead	Pb-211+E	1.80E-10	1.10E-08	2.95E-18	6.80E+04	5.04E+04	9.25E+04	2.08E+05	7.94E+01	2.94E+00
Lead	Pb-212	6.00E-09	1.70E-07	3.46E-18	3.21E+03	1.84E+02	4.44E+03	9.98E+03	2.38E+00	8.82E-02
Lead	Pb-212+D	6.00E-09	2.00E-07	5.15E-17	2.20E+02	1.16E+02	3.00E+02	6.74E+02	2.38E+00	8.82E-02
Lead	Pb-212+E	6.00E-09	2.00E-07	5.15E-17	2.20E+02	1.16E+02	3.00E+02	6.74E+02	2.38E+00	8.82E-02
Lead	Pb-214	1.40E-10	1.40E-08	6.65E-18	4.06E+04	4.25E+04	5.53E+04	1.24E+05	1.02E+02	3.78E+00
Lead	Pb-214+D	2.50E-10	2.80E-08	5.67E-17	4.77E+03	6.01E+03	6.48E+03	1.46E+04	5.71E+01	2.12E+00
Lead	Pb-214+E	1.90E-06	4.50E-06	5.67E-17	3.43E+03	1.44E+01	5.99E+03	1.32E+04	7.52E-03	2.78E-04
Lutetium	Lu-169	4.60E-10	3.50E-10	3.16E-17	1.12E+02	1.50E+02	1.53E+02	3.43E+02	3.11E+01	1.15E+00
Lutetium	Lu-169+D	1.20E-09	2.80E-09	3.69E-17	9.61E+01	1.28E+02	1.31E+02	2.94E+02	1.19E+01	4.41E-01
Lutetium	Lu-169+E	1.20E-09	2.80E-09	3.69E-17	9.61E+01	1.28E+02	1.31E+02	2.94E+02	1.19E+01	4.41E-01
Lutetium	Lu-170	9.90E-10	6.30E-10	8.37E-17	3.01E+01	4.01E+01	4.09E+01	9.20E+01	1.44E+01	5.34E-01
Lutetium	Lu-171	6.70E-10	8.00E-10	1.94E-17	3.15E+01	4.21E+01	4.29E+01	9.65E+01	2.13E+01	7.90E-01
Lutetium	Lu-172	1.30E-09	1.40E-09	5.81E-17	1.29E+01	1.72E+01	1.76E+01	3.95E+01	1.10E+01	4.07E-01
Lutetium	Lu-173	2.60E-10	2.20E-09	2.01E-18	5.00E+00	6.67E+00	6.80E+00	1.53E+01	5.49E+01	2.04E+00
Lutetium	Lu-174	2.70E-10	4.20E-09	2.87E-18	1.45E+00	1.93E+00	1.98E+00	4.46E+00	5.29E+01	1.96E+00
Lutetium	Lu-174m	5.30E-10	3.70E-09	6.90E-19	5.12E+01	6.83E+01	6.97E+01	1.57E+02	2.70E+01	9.98E-01
Lutetium	Lu-174m+D	8.00E-10	7.90E-09	3.54E-18	1.00E+01	1.33E+01	1.36E+01	3.06E+01	1.79E+01	6.61E-01
Lutetium	Lu-174m+E	8.00E-10	7.90E-09	3.54E-18	1.00E+01	1.33E+01	1.36E+01	3.06E+01	1.79E+01	6.61E-01
Lutetium	Lu-176	1.80E-09	7.00E-08	1.25E-17	5.30E-02	5.30E-02	8.65E-02	1.95E-01	7.94E+00	2.94E-01
Lutetium	Lu-176m	1.70E-10	1.10E-10	2.09E-19	1.57E+05	2.09E+05	2.13E+05	4.79E+05	8.40E+01	3.11E+00
Lutetium	Lu-177	5.30E-10	1.10E-09	7.77E-19	9.63E+02	1.28E+03	1.31E+03	2.95E+03	2.70E+01	9.98E-01
Lutetium	Lu-177m	1.70E-09	1.30E-08	2.47E-17	1.27E+00	1.69E+00	1.72E+00	3.87E+00	8.40E+00	3.11E-01
Lutetium	Lu-177m+D									
Lutetium	Lu-177m+E									

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Lutetium	Lu-178	4.70E-11	2.40E-11	4.56E-18	5.59E+04	7.46E+04	7.61E+04	1.71E+05	3.04E+02	1.13E+01
Lutetium	Lu-178m	3.80E-11	3.20E-11	2.89E-17	1.10E+04	1.47E+04	1.50E+04	3.38E+04	3.76E+02	1.39E+01
Lutetium	Lu-179	2.10E-10	1.10E-10	8.25E-19	3.19E+04	4.25E+04	4.33E+04	9.75E+04	6.80E+01	2.52E+00
Magnesium	Mg-28	2.20E-09	1.20E-09	4.37E-17	1.32E+02	1.76E+02	1.80E+02	4.04E+02	6.49E+00	2.41E-01
Magnesium	Mg-28+D	2.20E-09	1.20E-09	1.06E-16	5.45E+01	7.26E+01	7.41E+01	1.67E+02	6.49E+00	2.41E-01
Magnesium	Mg-28+E	2.20E-09	1.20E-09	1.06E-16	5.45E+01	7.26E+01	7.41E+01	1.67E+02	6.49E+00	2.41E-01
Manganese	Mn-51	9.30E-11	4.10E-11	2.96E-17	5.29E+03	6.61E+03	7.20E+03	1.62E+04	1.54E+02	5.69E+00
Manganese	Mn-51+D	1.30E-10	7.30E-11	2.96E-17	5.29E+03	6.44E+03	7.20E+03	1.62E+04	1.10E+02	4.07E+00
Manganese	Mn-51+E	1.30E-10	7.30E-11	2.96E-17	5.29E+03	6.44E+03	7.20E+03	1.62E+04	1.10E+02	4.07E+00
Manganese	Mn-52	1.80E-09	1.40E-09	1.11E-16	8.07E+00	7.98E+00	1.10E+01	2.48E+01	7.94E+00	2.94E-01
Manganese	Mn-52m	6.90E-11	2.90E-11	7.71E-17	4.45E+03	5.82E+03	6.06E+03	1.36E+04	2.07E+02	7.67E+00
Manganese	Mn-52m+D	1.00E-10	5.40E-11	7.71E-17	4.45E+03	5.77E+03	6.06E+03	1.36E+04	1.43E+02	5.29E+00
Manganese	Mn-52m+E	1.00E-10	5.40E-11	7.71E-17	4.45E+03	5.77E+03	6.06E+03	1.36E+04	1.43E+02	5.29E+00
Manganese	Mn-53	3.00E-11	5.40E-11	0.00E+00	8.28E+01	1.01E+00	1.48E+04	2.67E+04	4.76E+02	1.76E+01
Manganese	Mn-54	7.10E-10	1.50E-09	2.60E-17	6.15E-01	5.17E-01	8.42E-01	1.89E+00	2.01E+01	7.45E-01
Manganese	Mn-56	2.50E-10	1.20E-10	5.63E-17	8.31E+02	1.01E+03	1.13E+03	2.54E+03	5.71E+01	2.12E+00
Mendelevium	Md-257	1.20E-10	2.50E-08	2.47E-18	9.40E+03	1.25E+04	1.28E+04	2.88E+04	1.19E+02	4.41E+00
Mendelevium	Md-257+D	2.20E-08	1.00E-05	4.36E-18	5.25E+03	7.00E+03	7.15E+03	1.60E+04	6.49E-01	2.41E-02
Mendelevium	Md-257+E	2.20E-08	1.00E-05	4.36E-18	5.25E+03	7.00E+03	7.15E+03	1.60E+04	6.49E-01	2.41E-02
Mendelevium	Md-258	1.30E-08	5.90E-06	9.96E-21	1.96E+03	2.69E+03	2.85E+03	5.42E+03	1.10E+00	4.07E-02
Mendelevium	Md-258+D	4.10E-08	5.90E-06	2.82E-17	3.23E+00	4.31E+00	4.40E+00	9.88E+00	3.48E-01	1.29E-02
Mendelevium	Md-258+E	2.00E-07	5.90E-06	2.82E-17	3.18E+00	4.24E+00	4.34E+00	9.71E+00	7.14E-02	2.65E-03
Mercury	Hg-193	8.20E-11	7.50E-11	3.80E-18	9.01E+03	1.19E+04	1.23E+04	2.78E+04	1.74E+02	6.45E+00
Mercury	Hg-193+D	2.10E-10	1.80E-10	3.80E-18	8.91E+03	1.16E+04	1.23E+04	2.78E+04	6.80E+01	2.52E+00
Mercury	Hg-193+E	2.40E-10	2.10E-10	3.80E-18	8.89E+03	1.16E+04	1.23E+04	2.78E+04	5.95E+01	2.20E+00
Mercury	Hg-193m	4.00E-10	2.60E-10	3.04E-17	3.56E+02	4.73E+02	4.87E+02	1.09E+03	3.57E+01	1.32E+00
Mercury	Hg-193m+D	5.40E-10	3.80E-10	3.36E-17	3.22E+02	4.27E+02	4.40E+02	9.91E+02	2.65E+01	9.80E-01
Mercury	Hg-193m+E	5.70E-10	4.00E-10	3.36E-17	3.22E+02	4.27E+02	4.40E+02	9.90E+02	2.51E+01	9.28E-01
Mercury	Hg-194	1.40E-09	8.30E-09	5.71E-23	1.46E+00	7.08E-01	3.22E+02	5.82E+02	1.02E+01	3.78E-01
Mercury	Hg-194+D	1.80E-09	8.30E-09	3.30E-17	2.05E-02	2.04E-02	3.39E-02	7.62E-02	7.94E+00	2.94E-01
Mercury	Hg-194+E	1.80E-09	8.30E-09	3.30E-17	2.05E-02	2.04E-02	3.39E-02	7.62E-02	7.94E+00	2.94E-01
Mercury	Hg-195	9.70E-11	7.30E-11	4.95E-18	2.45E+03	3.24E+03	3.35E+03	7.54E+03	1.47E+02	5.45E+00
Mercury	Hg-195+D	3.50E-10	1.20E-09	6.17E-18	1.94E+03	2.53E+03	2.69E+03	6.05E+03	4.08E+01	1.51E+00
Mercury	Hg-195+E	3.50E-10	1.20E-09	6.17E-18	1.94E+03	2.53E+03	2.69E+03	6.05E+03	4.08E+01	1.51E+00
Mercury	Hg-195m	5.60E-10	5.30E-10	5.20E-18	5.39E+02	6.92E+02	7.59E+02	1.71E+03	2.55E+01	9.45E-01
Mercury	Hg-195m+D	8.60E-10	1.70E-09	8.85E-18	3.18E+02	4.09E+02	4.46E+02	1.00E+03	1.66E+01	6.15E-01
Mercury	Hg-195m+E	8.60E-10	1.70E-09	8.85E-18	3.18E+02	4.09E+02	4.46E+02	1.00E+03	1.66E+01	6.15E-01
Mercury	Hg-197	2.30E-10	3.00E-10	8.03E-19	2.14E+03	2.60E+03	3.19E+03	7.17E+03	6.21E+01	2.30E+00
Mercury	Hg-197m	4.70E-10	5.30E-10	1.71E-18	2.71E+03	3.31E+03	4.03E+03	9.07E+03	3.04E+01	1.13E+00
Mercury	Hg-197m+D	6.80E-10	8.10E-10	2.46E-18	1.89E+03	2.30E+03	2.80E+03	6.30E+03	2.10E+01	7.78E-01
Mercury	Hg-197m+E	6.80E-10	8.10E-10	2.46E-18	1.89E+03	2.30E+03	2.80E+03	6.30E+03	2.10E+01	7.78E-01
Mercury	Hg-199m	3.10E-11	3.20E-11	3.94E-18	4.30E+04	5.72E+04	5.87E+04	1.32E+05	4.61E+02	1.71E+01
Mercury	Hg-203	5.40E-10	2.40E-09	6.25E-18	1.68E+01	2.17E+01	2.35E+01	5.28E+01	2.65E+01	9.80E-01
Molybdenum	Mo-101	4.10E-11	2.50E-11	4.42E-17	1.12E+04	1.49E+04	1.52E+04	3.43E+04	3.48E+02	1.29E+01
Molybdenum	Mo-101+D	6.00E-11	3.70E-11	5.35E-17	9.26E+03	1.23E+04	1.26E+04	2.83E+04	2.38E+02	8.82E+00
Molybdenum	Mo-101+E	6.00E-11	3.70E-11	5.35E-17	9.26E+03	1.23E+04	1.26E+04	2.83E+04	2.38E+02	8.82E+00
Molybdenum	Mo-90	2.20E-10	3.40E-10	2.30E-17	9.25E+02	1.23E+03	1.26E+03	2.83E+03	6.49E+01	2.41E+00
Molybdenum	Mo-90+D	1.40E-09	9.70E-10	1.65E-16	1.29E+02	1.72E+02	1.76E+02	3.95E+02	1.02E+01	3.78E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Molybdenum	Mo-90+E	1.40E-09	9.70E-10	1.65E-16	1.29E+02	1.72E+02	1.76E+02	3.95E+02	1.02E+01	3.78E-01
Molybdenum	Mo-93	3.10E-09	5.90E-10	2.23E-21	1.82E+00	5.68E-01	1.11E+02	2.09E+02	4.61E+00	1.71E-01
Molybdenum	Mo-93m	1.10E-10	1.60E-10	7.27E-17	2.42E+02	3.23E+02	3.30E+02	7.42E+02	1.30E+02	4.81E+00
Molybdenum	Mo-99	6.00E-10	8.90E-10	4.47E-18	4.03E+02	5.19E+02	5.56E+02	1.25E+03	2.38E+01	8.82E-01
Molybdenum	Mo-99+D	6.00E-10	8.90E-10	6.83E-18	2.65E+02	3.46E+02	3.64E+02	8.19E+02	2.38E+01	8.82E-01
Molybdenum	Mo-99+E	6.00E-10	8.90E-10	6.83E-18	2.65E+02	3.46E+02	3.64E+02	8.19E+02	2.38E+01	8.82E-01
Neodymium	Nd-136	9.90E-11	5.10E-11	6.86E-18	2.08E+04	2.78E+04	2.84E+04	6.38E+04	1.44E+02	5.34E+00
Neodymium	Nd-136+D	1.30E-10	6.40E-11	7.23E-17	1.98E+03	2.64E+03	2.69E+03	6.05E+03	1.10E+02	4.07E+00
Neodymium	Nd-136+E	1.30E-10	6.40E-11	7.23E-17	1.98E+03	2.64E+03	2.69E+03	6.05E+03	1.10E+02	4.07E+00
Neodymium	Nd-138	6.40E-10	2.30E-10	4.70E-19	5.06E+04	6.69E+04	6.91E+04	1.55E+05	2.23E+01	8.27E-01
Neodymium	Nd-138+D	6.40E-10	3.00E-10	2.48E-17	9.66E+02	1.29E+03	1.31E+03	2.96E+03	2.23E+01	8.27E-01
Neodymium	Nd-138+E	6.40E-10	3.00E-10	2.48E-17	9.66E+02	1.29E+03	1.31E+03	2.96E+03	2.23E+01	8.27E-01
Neodymium	Nd-139	2.00E-11	9.90E-12	1.16E-17	2.10E+04	2.80E+04	2.86E+04	6.43E+04	7.14E+02	2.65E+01
Neodymium	Nd-139+D	3.10E-10	1.70E-09	5.38E-17	4.53E+03	6.04E+03	6.17E+03	1.39E+04	4.61E+01	1.71E+00
Neodymium	Nd-139+E	3.10E-10	1.70E-09	5.38E-17	4.53E+03	6.04E+03	6.17E+03	1.39E+04	4.61E+01	1.71E+00
Neodymium	Nd-139m	2.50E-10	1.50E-10	4.77E-17	4.60E+02	6.14E+02	6.26E+02	1.41E+03	5.71E+01	2.12E+00
Neodymium	Nd-139m+D	5.40E-10	1.90E-09	5.52E-17	3.98E+02	5.30E+02	5.41E+02	1.22E+03	2.65E+01	9.80E-01
Neodymium	Nd-139m+E	5.40E-10	1.90E-09	5.52E-17	3.98E+02	5.30E+02	5.41E+02	1.22E+03	2.65E+01	9.80E-01
Neodymium	Nd-141	8.30E-12	4.80E-12	1.54E-18	3.15E+04	4.20E+04	4.28E+04	9.63E+04	1.72E+03	6.37E+01
Neodymium	Nd-141m			2.34E-17	2.98E+05	3.97E+05	4.05E+05	9.11E+05		
Neodymium	Nd-147	1.10E-09	2.10E-09	3.31E-18	1.38E+02	1.84E+02	1.88E+02	4.23E+02	1.30E+01	4.81E-01
Neodymium	Nd-147+D	1.40E-09	7.10E-09	3.31E-18	1.38E+02	1.84E+02	1.88E+02	4.23E+02	1.02E+01	3.78E-01
Neodymium	Nd-147+E	1.40E-09	7.10E-09	3.31E-18	1.38E+02	1.84E+02	1.88E+02	4.23E+02	1.02E+01	3.78E-01
Neodymium	Nd-149	1.20E-10	8.40E-11	1.02E-17	6.84E+03	9.12E+03	9.30E+03	2.09E+04	1.19E+02	4.41E+00
Neodymium	Nd-149+D	1.10E-09	7.50E-10	1.02E-17	6.84E+03	9.11E+03	9.30E+03	2.09E+04	1.30E+01	4.81E-01
Neodymium	Nd-149+E	1.10E-09	7.50E-10	1.02E-17	6.84E+03	9.11E+03	9.30E+03	2.09E+04	1.30E+01	4.81E-01
Neodymium	Nd-151	3.00E-11	1.70E-11	2.75E-17	2.12E+04	2.82E+04	2.88E+04	6.48E+04	4.76E+02	1.76E+01
Neodymium	Nd-151+D	7.60E-10	4.50E-10	3.61E-17	1.61E+04	2.15E+04	2.19E+04	4.94E+04	1.88E+01	6.96E-01
Neodymium	Nd-151+E	8.60E-10	4.40E-09	3.61E-17	1.61E+04	2.15E+04	2.19E+04	4.94E+04	1.66E+01	6.15E-01
Neon	Ne-19			3.03E-17	8.33E+05	1.11E+06	1.13E+06	2.55E+06		
Neptunium	Np-232	9.70E-12	5.00E-11	3.53E-17	1.40E+04	1.84E+04	1.90E+04	4.27E+04	1.47E+03	5.45E+01
Neptunium	Np-232+E	4.70E-07	5.10E-05	8.71E-17	5.10E+03	3.44E+01	7.59E+03	1.70E+04	3.04E-02	1.13E-03
Neptunium	Np-233	2.20E-12	1.60E-12	1.58E-18	1.27E+05	1.60E+05	1.72E+05	3.88E+05	6.49E+03	2.41E+02
Neptunium	Np-234	8.10E-10	5.30E-10	4.70E-17	2.43E+01	1.91E+01	3.31E+01	7.44E+01	1.76E+01	6.53E-01
Neptunium	Np-235	5.30E-11	4.20E-10	1.51E-20	7.85E+02	7.83E+00	1.13E+03	2.55E+03	2.70E+02	9.98E+00
Neptunium	Np-236a	1.70E-08	3.20E-06	2.23E-18	2.57E-01	9.60E-04	4.76E-01	1.07E+00	8.40E-01	3.11E-02
Neptunium	Np-236b			9.20E-19	5.83E+03	7.78E+03	7.93E+03	1.78E+04		
Neptunium	Np-236b+D									
Neptunium	Np-236b+E									
Neptunium	Np-237	1.10E-07	2.30E-05	3.72E-19	2.53E-01	1.49E-04	1.67E+00	3.41E+00	1.30E-01	4.81E-03
Neptunium	Np-237+E	1.10E-07	2.30E-05	5.41E-18	8.66E-02	1.49E-04	1.90E-01	4.23E-01	1.30E-01	4.81E-03
Neptunium	Np-238	9.10E-10	2.10E-09	1.74E-17	1.36E+02	5.84E+01	1.86E+02	4.18E+02	1.57E+01	5.81E-01
Neptunium	Np-238+E	2.30E-07	4.60E-05	1.74E-17	1.08E+02	3.39E-01	1.80E+02	4.01E+02	6.21E-02	2.30E-03
Neptunium	Np-239	8.00E-10	9.30E-10	3.69E-18	5.76E+02	7.89E+01	7.87E+02	1.77E+03	1.79E+01	6.61E-01
Neptunium	Np-240	8.20E-11	8.50E-11	3.89E-17	2.86E+03	3.52E+03	3.90E+03	8.77E+03	1.74E+02	6.45E+00
Neptunium	Np-240m			1.02E-17	9.60E+04	1.28E+05	1.31E+05	2.94E+05		
Nickel	Ni-56	8.60E-10	8.70E-10	5.19E-17	1.59E+01	2.05E+01	2.16E+01	4.86E+01	1.66E+01	6.15E-01
Nickel	Ni-56+D	3.40E-09	5.70E-09	1.72E-16	4.79E+00	6.15E+00	6.52E+00	1.47E+01	4.20E+00	1.56E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Nickel	Ni-56+E	3.40E-09	5.70E-09	1.72E-16	4.79E+00	6.15E+00	6.52E+00	1.47E+01	4.20E+00	1.56E-01
Nickel	Ni-57	8.70E-10	5.00E-10	6.29E-17	5.32E+01	6.90E+01	7.23E+01	1.63E+02	1.64E+01	6.08E-01
Nickel	Ni-57+D	1.10E-09	1.00E-09	6.29E-17	5.32E+01	6.86E+01	7.23E+01	1.63E+02	1.30E+01	4.81E-01
Nickel	Ni-57+E	1.10E-09	1.00E-09	6.29E-17	5.32E+01	6.86E+01	7.23E+01	1.63E+02	1.30E+01	4.81E-01
Nickel	Ni-59	6.30E-11	1.30E-10	0.00E+00	2.25E+02	5.31E+00	7.05E+03	1.27E+04	2.27E+02	8.40E+00
Nickel	Ni-63	1.50E-10	4.80E-10	0.00E+00	1.05E+02	2.57E+00	3.24E+03	5.83E+03	9.52E+01	3.53E+00
Nickel	Ni-65	1.80E-10	8.50E-11	1.83E-17	2.62E+03	3.42E+03	3.56E+03	8.01E+03	7.94E+01	2.94E+00
Nickel	Ni-66	3.00E-09	1.60E-09	1.95E-22	1.57E+04	4.96E+02	4.01E+05	7.26E+05	4.76E+00	1.76E-01
Nickel	Ni-66+D	3.00E-09	1.60E-09	2.99E-18	7.06E+02	3.30E+02	1.00E+03	2.26E+03	4.76E+00	1.76E-01
Nickel	Ni-66+E	3.00E-09	1.60E-09	2.99E-18	7.06E+02	3.30E+02	1.00E+03	2.26E+03	4.76E+00	1.76E-01
Niobium	Nb-88	6.30E-11	2.70E-11	1.27E-16	3.99E+03	5.32E+03	5.42E+03	1.22E+04	2.27E+02	8.40E+00
Niobium	Nb-88+D	1.80E-09	6.70E-09	2.29E-16	2.21E+03	2.95E+03	3.01E+03	6.77E+03	7.94E+00	2.94E-01
Niobium	Nb-88+E	1.80E-09	6.70E-09	2.29E-16	2.21E+03	2.95E+03	3.01E+03	6.77E+03	7.94E+00	2.94E-01
Niobium	Nb-89a	1.40E-10	6.80E-11	5.72E-17	1.92E+03	2.56E+03	2.61E+03	5.87E+03	1.02E+02	3.78E+00
Niobium	Nb-89a+D	1.40E-10	6.80E-11	9.33E-17	1.18E+03	1.57E+03	1.60E+03	3.60E+03	1.02E+02	3.78E+00
Niobium	Nb-89a+E	1.40E-10	6.80E-11	9.33E-17	1.18E+03	1.57E+03	1.60E+03	3.60E+03	1.02E+02	3.78E+00
Niobium	Nb-89b	2.70E-10	1.10E-10	4.46E-17	1.33E+03	1.77E+03	1.81E+03	4.07E+03	5.29E+01	1.96E+00
Niobium	Nb-89b+D	2.70E-10	1.10E-10	8.07E-17	7.36E+02	9.81E+02	1.00E+03	2.25E+03	5.29E+01	1.96E+00
Niobium	Nb-89b+E	2.70E-10	1.10E-10	8.07E-17	7.36E+02	9.81E+02	1.00E+03	2.25E+03	5.29E+01	1.96E+00
Niobium	Nb-90	1.20E-09	6.30E-10	1.42E-16	5.82E+01	7.76E+01	7.92E+01	1.78E+02	1.19E+01	4.41E-01
Niobium	Nb-93m	1.20E-10	5.10E-10	3.94E-22	7.25E+02	5.32E+02	2.79E+03	5.67E+03	1.19E+02	4.41E+00
Niobium	Nb-94	1.70E-09	1.10E-08	4.88E-17	1.36E-02	1.36E-02	2.22E-02	4.99E-02	8.40E+00	3.11E-01
Niobium	Nb-95	5.80E-10	1.50E-09	2.37E-17	6.04E+00	8.05E+00	8.21E+00	1.85E+01	2.46E+01	9.12E-01
Niobium	Nb-95m	5.60E-10	7.90E-10	1.57E-18	8.84E+02	1.18E+03	1.21E+03	2.71E+03	2.55E+01	9.45E-01
Niobium	Nb-95m+D	1.10E-09	2.30E-09	2.53E-17	5.51E+01	7.34E+01	7.49E+01	1.69E+02	1.30E+01	4.81E-01
Niobium	Nb-95m+E	1.10E-09	2.30E-09	2.53E-17	5.51E+01	7.34E+01	7.49E+01	1.69E+02	1.30E+01	4.81E-01
Niobium	Nb-96	1.10E-09	6.30E-10	7.70E-17	6.71E+01	8.95E+01	9.13E+01	2.05E+02	1.30E+01	4.81E-01
Niobium	Nb-97	6.80E-11	4.30E-11	2.00E-17	5.02E+03	6.70E+03	6.83E+03	1.54E+04	2.10E+02	7.78E+00
Niobium	Nb-97m			2.24E-17	3.23E+05	4.31E+05	4.40E+05	9.90E+05		
Niobium	Nb-97m+D			4.24E-17	1.71E+05	2.28E+05	2.32E+05	5.23E+05		
Niobium	Nb-97m+E			4.24E-17	1.71E+05	2.28E+05	2.32E+05	5.23E+05		
Niobium	Nb-98	1.10E-10	5.60E-11	7.74E-17	1.82E+03	2.42E+03	2.47E+03	5.56E+03	1.30E+02	4.81E+00
Nitrogen	N-13			3.01E-17	2.42E+04	3.22E+04	3.28E+04	7.39E+04		
Osmium	Os-180	1.70E-11	1.40E-11	7.56E-19	4.36E+05	5.81E+05	5.92E+05	1.33E+06	8.40E+02	3.11E+01
Osmium	Os-180+D	1.70E-11	1.40E-11	3.62E-17	9.10E+03	1.21E+04	1.24E+04	2.78E+04	8.40E+02	3.11E+01
Osmium	Os-180+E	1.70E-11	1.40E-11	3.62E-17	9.10E+03	1.21E+04	1.24E+04	2.78E+04	8.40E+02	3.11E+01
Osmium	Os-181	8.90E-11	6.20E-11	3.62E-17	1.91E+03	2.54E+03	2.59E+03	5.83E+03	1.61E+02	5.94E+00
Osmium	Os-181+D	5.80E-10	3.40E-10	5.79E-17	1.19E+03	1.59E+03	1.62E+03	3.65E+03	2.46E+01	9.12E-01
Osmium	Os-181+E	5.80E-10	3.40E-10	5.79E-17	1.19E+03	1.59E+03	1.62E+03	3.65E+03	2.46E+01	9.12E-01
Osmium	Os-182	5.60E-10	3.60E-10	1.11E-17	4.94E+02	6.59E+02	6.72E+02	1.51E+03	2.55E+01	9.45E-01
Osmium	Os-182+D	5.60E-10	3.60E-10	4.70E-17	1.17E+02	1.56E+02	1.59E+02	3.57E+02	2.55E+01	9.45E-01
Osmium	Os-182+E	5.60E-10	3.60E-10	4.70E-17	1.17E+02	1.56E+02	1.59E+02	3.57E+02	2.55E+01	9.45E-01
Osmium	Os-185	5.10E-10	1.30E-09	2.09E-17	2.56E+00	3.41E+00	3.48E+00	7.83E+00	2.80E+01	1.04E+00
Osmium	Os-189m	1.80E-11	5.00E-12	9.45E-24	3.38E+08	4.67E+08	5.14E+08	9.59E+08	7.94E+02	2.94E+01
Osmium	Os-190m			4.56E-17	1.60E+04	2.14E+04	2.18E+04	4.91E+04		
Osmium	Os-191	5.70E-10	1.70E-09	1.15E-18	2.84E+02	3.78E+02	3.86E+02	8.68E+02	2.51E+01	9.28E-01
Osmium	Os-191m	9.60E-11	1.40E-10	7.41E-20	1.25E+05	1.66E+05	1.70E+05	3.81E+05	1.49E+02	5.51E+00
Osmium	Os-191m+D	6.70E-10	1.80E-09	1.22E-18	7.58E+03	1.01E+04	1.03E+04	2.32E+04	2.13E+01	7.90E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Osmium	Os-191m+E	6.70E-10	1.80E-09	1.22E-18	7.58E+03	1.01E+04	1.03E+04	2.32E+04	2.13E+01	7.90E-01
Osmium	Os-193	8.10E-10	4.80E-10	1.83E-18	2.20E+03	2.93E+03	2.99E+03	6.72E+03	1.76E+01	6.53E-01
Osmium	Os-194	2.40E-09	2.10E-08	4.99E-21	2.03E+02	2.71E+02	3.05E+02	6.05E+02	5.95E+00	2.20E-01
Osmium	Os-194+D	3.70E-09	2.10E-08	2.81E-18	8.41E-01	1.10E+00	1.17E+00	2.64E+00	3.86E+00	1.43E-01
Osmium	Os-194+E	3.70E-09	2.10E-08	2.81E-18	8.41E-01	1.10E+00	1.17E+00	2.64E+00	3.86E+00	1.43E-01
Oxygen	O-15			3.01E-17	1.18E+05	1.58E+05	1.61E+05	3.61E+05		
Palladium	Pd-100	9.40E-10	8.00E-10	1.55E-18	8.47E+02	1.07E+03	1.21E+03	2.73E+03	1.52E+01	5.63E-01
Palladium	Pd-100+D	1.60E-09	1.10E-09	9.35E-17	1.48E+01	1.97E+01	2.02E+01	4.54E+01	8.93E+00	3.31E-01
Palladium	Pd-100+E	1.60E-09	1.10E-09	9.35E-17	1.48E+01	1.97E+01	2.02E+01	4.54E+01	8.93E+00	3.31E-01
Palladium	Pd-101	9.40E-11	5.90E-11	9.31E-18	1.57E+03	2.09E+03	2.13E+03	4.80E+03	1.52E+02	5.63E+00
Palladium	Pd-101+D	3.50E-10	4.20E-10	1.78E-17	8.19E+02	1.09E+03	1.12E+03	2.51E+03	4.08E+01	1.51E+00
Palladium	Pd-101+E	3.50E-10	4.20E-10	1.78E-17	8.19E+02	1.09E+03	1.12E+03	2.51E+03	4.08E+01	1.51E+00
Palladium	Pd-103	1.90E-10	3.80E-10	1.01E-20	1.08E+04	8.71E+03	3.82E+04	8.50E+04	7.52E+01	2.78E+00
Palladium	Pd-107	3.70E-11	8.50E-11	0.00E+00	1.97E+02	9.64E+01	1.20E+04	2.16E+04	3.86E+02	1.43E+01
Palladium	Pd-109	5.50E-10	3.40E-10	9.64E-20	6.14E+04	6.03E+04	1.25E+05	2.81E+05	2.60E+01	9.62E-01
Phosphorus	P-30			3.05E-17	9.50E+04	1.27E+05	1.29E+05	2.91E+05		
Phosphorus	P-32	2.40E-09	3.40E-09	1.09E-19	1.58E+02	1.04E+02	4.17E+03	9.26E+03	5.95E+00	2.20E-01
Phosphorus	P-33	2.40E-10	1.50E-09	2.69E-22	9.33E+02	5.99E+02	3.15E+05	6.06E+05	5.95E+01	2.20E+00
Platinum	Pt-186	9.30E-11	3.30E-11	2.15E-17	2.81E+03	3.74E+03	3.82E+03	8.59E+03	1.54E+02	5.69E+00
Platinum	Pt-186+D	9.30E-11	3.30E-11	4.98E-17	1.21E+03	1.62E+03	1.65E+03	3.71E+03	1.54E+02	5.69E+00
Platinum	Pt-186+E	9.30E-11	3.30E-11	4.98E-17	1.21E+03	1.62E+03	1.65E+03	3.71E+03	1.54E+02	5.69E+00
Platinum	Pt-188	7.60E-10	4.20E-10	4.12E-18	1.20E+02	1.60E+02	1.63E+02	3.66E+02	1.88E+01	6.96E-01
Platinum	Pt-188+D	1.40E-09	8.20E-10	5.53E-17	8.92E+00	1.19E+01	1.21E+01	2.73E+01	1.02E+01	3.78E-01
Platinum	Pt-188+E	1.40E-09	8.20E-10	5.53E-17	8.92E+00	1.19E+01	1.21E+01	2.73E+01	1.02E+01	3.78E-01
Platinum	Pt-189	1.20E-10	3.80E-11	7.88E-18	1.41E+03	1.88E+03	1.92E+03	4.31E+03	1.19E+02	4.41E+00
Platinum	Pt-189+D	3.60E-10	5.60E-10	9.05E-18	1.23E+03	1.64E+03	1.67E+03	3.75E+03	3.97E+01	1.47E+00
Platinum	Pt-189+E	3.60E-10	5.60E-10	9.05E-18	1.23E+03	1.64E+03	1.67E+03	3.75E+03	3.97E+01	1.47E+00
Platinum	Pt-191	3.40E-10	1.10E-10	6.67E-18	2.69E+02	3.59E+02	3.66E+02	8.24E+02	4.20E+01	1.56E+00
Platinum	Pt-193	3.10E-11	2.10E-11	3.38E-23	6.75E+03	7.41E+03	1.17E+04	2.25E+04	4.61E+02	1.71E+01
Platinum	Pt-193m	4.50E-10	1.20E-10	1.19E-19	9.66E+03	1.29E+04	1.32E+04	2.95E+04	3.17E+01	1.18E+00
Platinum	Pt-193m+E	4.50E-10	1.40E-10	1.19E-19	9.66E+03	1.29E+04	1.32E+04	2.95E+04	3.17E+01	1.18E+00
Platinum	Pt-195m	6.30E-10	1.80E-10	8.86E-19	1.41E+03	1.88E+03	1.92E+03	4.31E+03	2.27E+01	8.40E-01
Platinum	Pt-197	4.00E-10	8.50E-11	3.89E-19	1.69E+04	2.26E+04	2.30E+04	5.17E+04	3.57E+01	1.32E+00
Platinum	Pt-197m	8.40E-11	2.40E-11	1.63E-18	4.71E+04	6.28E+04	6.40E+04	1.44E+05	1.70E+02	6.30E+00
Platinum	Pt-197m+D	4.70E-10	1.10E-10	2.01E-18	3.82E+04	5.09E+04	5.19E+04	1.17E+05	3.04E+01	1.13E+00
Platinum	Pt-197m+E	4.70E-10	1.10E-10	2.01E-18	3.82E+04	5.09E+04	5.19E+04	1.17E+05	3.04E+01	1.13E+00
Platinum	Pt-199	3.90E-11	1.20E-11	5.88E-18	4.00E+04	5.33E+04	5.44E+04	1.22E+05	3.66E+02	1.36E+01
Platinum	Pt-199+D	4.80E-10	7.20E-10	7.78E-18	3.02E+04	4.03E+04	4.11E+04	9.25E+04	2.98E+01	1.10E+00
Platinum	Pt-199+E	4.80E-10	7.20E-10	7.78E-18	3.02E+04	4.03E+04	4.11E+04	9.25E+04	2.98E+01	1.10E+00
Platinum	Pt-200	1.20E-09	2.20E-10	1.08E-18	8.92E+03	1.19E+04	1.21E+04	2.73E+04	1.19E+01	4.41E-01
Platinum	Pt-200+D	1.20E-09	2.50E-10	9.82E-18	9.83E+02	1.31E+03	1.34E+03	3.01E+03	1.19E+01	4.41E-01
Platinum	Pt-200+E	1.20E-09	2.50E-10	9.82E-18	9.83E+02	1.31E+03	1.34E+03	3.01E+03	1.19E+01	4.41E-01
Plutonium	Pu-234	1.60E-10	2.10E-08	1.11E-18	1.24E+04	1.34E+04	1.68E+04	3.78E+04	8.93E+01	3.31E+00
Plutonium	Pu-234+D	4.30E-09	8.00E-07	4.53E-17	3.03E+02	3.52E+02	4.12E+02	9.26E+02	3.32E+00	1.23E-01
Plutonium	Pu-234+E	4.30E-09	8.00E-07	4.53E-17	3.03E+02	3.52E+02	4.12E+02	9.26E+02	3.32E+00	1.23E-01
Plutonium	Pu-235	2.10E-12	1.40E-12	1.63E-18	1.76E+05	2.34E+05	2.39E+05	5.38E+05	6.80E+03	2.52E+02
Plutonium	Pu-235+D	5.50E-11	4.20E-10	1.63E-18	1.76E+05	2.22E+05	2.39E+05	5.37E+05	2.60E+02	9.62E+00
Plutonium	Pu-235+E	5.50E-11	4.20E-10	1.63E-18	1.76E+05	2.22E+05	2.39E+05	5.37E+05	2.60E+02	9.62E+00

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Plutonium	Pu-236	8.70E-08	2.00E-05	9.70E-22	1.50E+01	4.74E-02	3.00E+01	5.44E+01	1.64E-01	6.08E-03
Plutonium	Pu-236+E	5.60E-07	7.10E-05	5.18E-17	8.98E-02	6.95E-03	1.24E-01	2.77E-01	2.55E-02	9.45E-04
Plutonium	Pu-237	1.00E-10	3.50E-10	7.77E-19	1.43E+02	1.59E+02	1.94E+02	4.37E+02	1.43E+02	5.29E+00
Plutonium	Pu-238	2.30E-07	4.60E-05	6.24E-22	8.78E-01	2.15E-03	2.07E+00	3.74E+00	6.21E-02	2.30E-03
Plutonium	Pu-239	2.50E-07	5.00E-05	1.41E-21	7.19E-01	1.70E-03	1.72E+00	3.12E+00	5.71E-02	2.12E-03
Plutonium	Pu-240	2.50E-07	5.00E-05	6.02E-22	7.20E-01	1.70E-03	1.73E+00	3.13E+00	5.71E-02	2.12E-03
Plutonium	Pu-241	4.80E-09	9.00E-07	2.84E-23	7.07E+01	1.99E-01	1.55E+02	2.80E+02	2.98E+00	1.10E-01
Plutonium	Pu-241+D	4.80E-09	9.00E-07	9.16E-23	7.05E+01	1.99E-01	1.54E+02	2.79E+02	2.98E+00	1.10E-01
Plutonium	Pu-241+E	4.80E-09	9.00E-07	9.16E-23	7.05E+01	1.99E-01	1.54E+02	2.79E+02	2.98E+00	1.10E-01
Plutonium	Pu-242	2.40E-07	4.80E-05	5.31E-22	7.49E-01	1.77E-03	1.80E+00	3.26E+00	5.95E-02	2.20E-03
Plutonium	Pu-243	8.50E-11	8.30E-11	3.81E-19	6.39E+04	6.32E+04	8.69E+04	1.96E+05	1.68E+02	6.22E+00
Plutonium	Pu-244	2.40E-07	4.70E-05	2.92E-22	7.49E-01	1.77E-03	1.80E+00	3.26E+00	5.95E-02	2.20E-03
Plutonium	Pu-244+D	2.40E-07	4.70E-05	1.02E-17	5.98E-02	1.72E-03	1.00E-01	2.22E-01	5.95E-02	2.20E-03
Plutonium	Pu-244+E	2.40E-07	4.70E-05	1.02E-17	5.98E-02	1.72E-03	1.00E-01	2.22E-01	5.95E-02	2.20E-03
Plutonium	Pu-245	7.20E-10	4.00E-10	1.19E-17	9.66E+02	1.18E+03	1.31E+03	2.96E+03	1.98E+01	7.35E-01
Plutonium	Pu-245+D	7.20E-10	4.50E-10	1.19E-17	9.66E+02	1.18E+03	1.31E+03	2.96E+03	1.98E+01	7.35E-01
Plutonium	Pu-245+E	7.20E-10	4.50E-10	1.19E-17	9.66E+02	1.18E+03	1.31E+03	2.96E+03	1.98E+01	7.35E-01
Plutonium	Pu-246	3.30E-09	7.40E-09	2.77E-18	1.67E+02	7.79E+01	2.27E+02	5.10E+02	4.33E+00	1.60E-01
Plutonium	Pu-246+D	3.30E-09	7.40E-09	3.50E-17	1.32E+01	1.54E+01	1.80E+01	4.05E+01	4.33E+00	1.60E-01
Plutonium	Pu-246+E	3.30E-09	7.40E-09	3.50E-17	1.32E+01	1.54E+01	1.80E+01	4.05E+01	4.33E+00	1.60E-01
Polonium	Po-203	4.60E-11	3.50E-11	5.11E-17	3.86E+03	5.15E+03	5.25E+03	1.18E+04	3.11E+02	1.15E+01
Polonium	Po-203+D	7.60E-10	4.90E-10	1.36E-16	1.45E+03	1.94E+03	1.97E+03	4.44E+03	1.88E+01	6.96E-01
Polonium	Po-203+E	7.60E-10	4.90E-10	1.36E-16	1.45E+03	1.94E+03	1.97E+03	4.44E+03	1.88E+01	6.96E-01
Polonium	Po-205	5.80E-11	6.50E-11	4.91E-17	1.37E+03	1.82E+03	1.86E+03	4.18E+03	2.46E+02	9.12E+00
Polonium	Po-205+D	9.60E-10	9.90E-10	1.04E-16	6.45E+02	8.60E+02	8.77E+02	1.97E+03	1.49E+01	5.51E-01
Polonium	Po-205+E	9.60E-10	9.90E-10	1.04E-16	6.45E+02	8.60E+02	8.77E+02	1.97E+03	1.49E+01	5.51E-01
Polonium	Po-207	1.10E-10	7.80E-11	4.07E-17	5.09E+02	6.78E+02	6.92E+02	1.56E+03	1.30E+02	4.81E+00
Polonium	Po-207+E	1.40E-09	5.70E-09	8.80E-17	2.35E+02	3.14E+02	3.20E+02	7.20E+02	1.02E+01	3.78E-01
Polonium	Po-210	1.20E-06	3.30E-06	2.64E-22	8.27E+00	8.97E+00	1.69E+01	3.05E+01	1.19E-02	4.41E-04
Polonium	Po-211			2.40E-19	3.51E+09	4.68E+09	4.77E+09	1.07E+10		
Polonium	Po-212			0.00E+00						
Polonium	Po-213			0.00E+00						
Polonium	Po-213+D			4.03E-21	2.57E+16	3.42E+16	3.49E+16	7.86E+16		
Polonium	Po-213+E			4.03E-21	2.57E+16	3.42E+16	3.49E+16	7.86E+16		
Polonium	Po-214			2.59E-21	1.02E+15	1.36E+15	1.39E+15	3.13E+15		
Polonium	Po-214+D			4.27E-20	6.20E+13	8.26E+13	8.43E+13	1.90E+14		
Polonium	Po-214+E			4.27E-20	6.20E+13	8.26E+13	8.43E+13	1.90E+14		
Polonium	Po-215			5.06E-21	4.83E+13	6.43E+13	6.56E+13	1.48E+14		
Polonium	Po-215+D			2.96E-18	8.25E+10	1.10E+11	1.12E+11	2.52E+11		
Polonium	Po-215+E			2.96E-18	8.25E+10	1.10E+11	1.12E+11	2.52E+11		
Polonium	Po-216			5.26E-22	5.51E+12	7.35E+12	7.49E+12	1.69E+13		
Polonium	Po-216+D			5.15E-17	5.63E+07	7.50E+07	7.65E+07	1.72E+08		
Polonium	Po-216+E			5.15E-17	5.63E+07	7.50E+07	7.65E+07	1.72E+08		
Polonium	Po-218			2.85E-22	8.33E+09	1.11E+10	1.13E+10	2.55E+10		
Polonium	Po-218+D			5.67E-17	4.19E+04	5.59E+04	5.70E+04	1.28E+05		
Polonium	Po-218+E			5.67E-17	4.19E+04	5.59E+04	5.70E+04	1.28E+05		
Potassium	K-38			1.07E-16	8.87E+03	1.18E+04	1.21E+04	2.71E+04		
Potassium	K-40	6.20E-09	2.10E-09	5.33E-18	9.49E-02	7.21E-02	2.02E-01	4.55E-01	2.30E+00	8.53E-02

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Potassium	K-42	4.30E-10	1.20E-10	9.84E-18	9.81E+02	1.29E+03	1.35E+03	3.04E+03	3.32E+01	1.23E+00
Potassium	K-43	2.50E-10	1.40E-10	2.85E-17	1.87E+02	2.49E+02	2.55E+02	5.74E+02	5.71E+01	2.12E+00
Potassium	K-44	8.40E-11	2.00E-11	7.89E-17	4.15E+03	5.53E+03	5.64E+03	1.27E+04	1.70E+02	6.30E+00
Potassium	K-45	5.40E-11	1.50E-11	6.34E-17	5.71E+03	7.61E+03	7.77E+03	1.75E+04	2.65E+02	9.80E+00
Potassium	K-45+D	7.60E-10	2.70E-09	6.34E-17	5.69E+03	7.56E+03	7.77E+03	1.75E+04	1.88E+01	6.96E-01
Potassium	K-45+E	7.60E-10	2.70E-09	6.34E-17	5.69E+03	7.56E+03	7.77E+03	1.75E+04	1.88E+01	6.96E-01
Praseodymium	Pr-136	3.30E-11	1.30E-11	6.54E-17	8.46E+03	1.13E+04	1.15E+04	2.59E+04	4.33E+02	1.60E+01
Praseodymium	Pr-137	4.00E-11	2.00E-11	1.44E-17	6.57E+03	8.76E+03	8.93E+03	2.01E+04	3.57E+02	1.32E+01
Praseodymium	Pr-137+D	6.50E-11	3.00E-11	1.44E-17	6.57E+03	8.76E+03	8.93E+03	2.01E+04	2.20E+02	8.14E+00
Praseodymium	Pr-137+E	6.50E-11	3.00E-11	1.44E-17	6.57E+03	8.76E+03	8.93E+03	2.01E+04	2.20E+02	8.14E+00
Praseodymium	Pr-138			2.43E-17	2.06E+05	2.74E+05	2.80E+05	6.29E+05		
Praseodymium	Pr-138m	1.30E-10	7.20E-11	7.60E-17	7.56E+02	1.01E+03	1.03E+03	2.31E+03	1.10E+02	4.07E+00
Praseodymium	Pr-139	3.10E-11	1.80E-11	2.98E-18	8.98E+03	1.20E+04	1.22E+04	2.75E+04	4.61E+02	1.71E+01
Praseodymium	Pr-139+D	2.90E-10	1.70E-09	6.08E-18	4.40E+03	5.87E+03	5.99E+03	1.35E+04	4.93E+01	1.82E+00
Praseodymium	Pr-139+E	2.90E-10	1.70E-09	6.08E-18	4.40E+03	5.87E+03	5.99E+03	1.35E+04	4.93E+01	1.82E+00
Praseodymium	Pr-142	1.30E-09	5.20E-10	2.16E-18	2.91E+03	3.88E+03	3.97E+03	8.92E+03	1.10E+01	4.07E-01
Praseodymium	Pr-142m	1.70E-11	6.60E-12	0.00E+00	5.85E+09	4.45E+09	1.63E+10	2.93E+10	8.40E+02	3.11E+01
Praseodymium	Pr-142m+D	1.30E-09	5.30E-10	2.16E-18	2.29E+05	3.05E+05	3.12E+05	7.02E+05	1.10E+01	4.07E-01
Praseodymium	Pr-142m+E	1.30E-09	5.30E-10	2.16E-18	2.29E+05	3.05E+05	3.12E+05	7.02E+05	1.10E+01	4.07E-01
Praseodymium	Pr-143	1.20E-09	2.20E-09	1.56E-20	1.72E+04	1.90E+04	2.72E+04	5.90E+04	1.19E+01	4.41E-01
Praseodymium	Pr-144	5.00E-11	1.80E-11	1.43E-18	2.93E+05	3.91E+05	3.99E+05	8.97E+05	2.86E+02	1.06E+01
Praseodymium	Pr-144m			6.43E-20	1.56E+07	2.09E+07	2.13E+07	4.79E+07		
Praseodymium	Pr-144m+D			1.49E-18	6.75E+05	9.00E+05	9.18E+05	2.07E+06		
Praseodymium	Pr-144m+E			1.49E-18	6.75E+05	9.00E+05	9.18E+05	2.07E+06		
Praseodymium	Pr-145	3.90E-10	1.60E-10	5.10E-19	3.94E+04	5.24E+04	5.37E+04	1.21E+05	3.66E+01	1.36E+00
Praseodymium	Pr-147	3.30E-11	1.80E-11	2.54E-17	2.10E+04	2.80E+04	2.85E+04	6.42E+04	4.33E+02	1.60E+01
Praseodymium	Pr-147+D	1.40E-09	7.10E-09	2.87E-17	1.86E+04	2.47E+04	2.52E+04	5.68E+04	1.02E+01	3.78E-01
Praseodymium	Pr-147+E	1.40E-09	7.10E-09	2.87E-17	1.86E+04	2.47E+04	2.52E+04	5.68E+04	1.02E+01	3.78E-01
Promethium	Pm-141	3.60E-11	1.40E-11	2.24E-17	1.55E+04	2.06E+04	2.10E+04	4.73E+04	3.97E+02	1.47E+01
Promethium	Pm-141+D	4.40E-11	1.90E-11	2.24E-17	1.55E+04	2.06E+04	2.10E+04	4.73E+04	3.25E+02	1.20E+01
Promethium	Pm-141+E	4.40E-11	1.90E-11	2.24E-17	1.55E+04	2.06E+04	2.10E+04	4.73E+04	3.25E+02	1.20E+01
Promethium	Pm-142			2.62E-17	4.10E+05	5.46E+05	5.57E+05	1.25E+06		
Promethium	Pm-143	2.30E-10	1.50E-09	8.90E-18	2.13E+00	2.84E+00	2.90E+00	6.53E+00	6.21E+01	2.30E+00
Promethium	Pm-144	9.70E-10	8.20E-09	4.64E-17	2.99E-01	3.98E-01	4.06E-01	9.14E-01	1.47E+01	5.45E-01
Promethium	Pm-145	1.10E-10	3.60E-09	1.24E-19	9.05E+00	1.05E+01	1.37E+01	3.07E+01	1.30E+02	4.81E+00
Promethium	Pm-146	9.00E-10	2.10E-08	2.21E-17	1.15E-01	1.51E-01	1.60E-01	3.61E-01	1.59E+01	5.88E-01
Promethium	Pm-147	2.60E-10	5.00E-09	2.30E-22	3.44E+03	3.13E+03	8.27E+03	1.57E+04	5.49E+01	2.04E+00
Promethium	Pm-148	2.70E-09	2.00E-09	1.87E-17	5.01E+01	6.67E+01	6.81E+01	1.53E+02	5.29E+00	1.96E-01
Promethium	Pm-148m	1.70E-09	5.10E-09	6.03E-17	2.02E+00	2.69E+00	2.75E+00	6.18E+00	8.40E+00	3.11E-01
Promethium	Pm-149	9.90E-10	6.70E-10	3.19E-19	7.02E+03	9.28E+03	9.62E+03	2.16E+04	1.44E+01	5.34E-01
Promethium	Pm-150	2.60E-10	1.20E-10	4.59E-17	9.81E+02	1.31E+03	1.33E+03	3.00E+03	5.49E+01	2.04E+00
Promethium	Pm-151	7.30E-10	4.30E-10	8.63E-18	4.92E+02	6.56E+02	6.70E+02	1.51E+03	1.96E+01	7.25E-01
Promethium	Pm-151+E	8.30E-10	4.40E-09	8.63E-18	4.92E+02	6.56E+02	6.70E+02	1.51E+03	1.72E+01	6.37E-01
Protactinium	Pa-227	4.50E-10	7.40E-08	3.03E-19	6.14E+05	8.07E+05	8.46E+05	1.90E+06	3.17E+01	1.18E+00
Protactinium	Pa-227+D	1.70E-08	2.70E-06	3.17E-18	5.62E+04	7.15E+04	8.01E+04	1.80E+05	8.40E-01	3.11E-02
Protactinium	Pa-227+E	1.70E-08	2.70E-06	3.17E-18	5.62E+04	7.15E+04	8.01E+04	1.80E+05	8.40E-01	3.11E-02
Protactinium	Pa-228	7.80E-10	6.40E-08	3.42E-17	1.60E+02	2.14E+02	2.18E+02	4.91E+02	1.83E+01	6.78E-01
Protactinium	Pa-228+D	1.40E-07	4.20E-05	8.59E-17	6.27E+01	8.24E+01	8.65E+01	1.94E+02	1.02E-01	3.78E-03

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Protactinium	Pa-228+E	1.40E-07	4.20E-05	8.59E-17	6.27E+01	8.24E+01	8.65E+01	1.94E+02	1.02E-01	3.78E-03
Protactinium	Pa-230	9.20E-10	6.10E-07	1.91E-17	1.51E+01	2.02E+01	2.06E+01	4.63E+01	1.55E+01	5.75E-01
Protactinium	Pa-230+D	6.30E-09	1.80E-06	1.91E-17	1.51E+01	2.00E+01	2.06E+01	4.63E+01	2.27E+00	8.40E-02
Protactinium	Pa-230+E	6.30E-09	1.80E-06	1.91E-17	1.51E+01	2.00E+01	2.06E+01	4.63E+01	2.27E+00	8.40E-02
Protactinium	Pa-231	7.10E-07	1.40E-04	9.44E-19	7.22E-02	4.18E-02	3.98E-01	7.72E-01	2.01E-02	7.45E-04
Protactinium	Pa-232	7.20E-10	1.00E-08	2.87E-17	1.34E+02	1.78E+02	1.82E+02	4.09E+02	1.98E+01	7.35E-01
Protactinium	Pa-232+E	4.70E-07	5.10E-05	8.05E-17	4.47E+01	5.67E+01	6.40E+01	1.43E+02	3.04E-02	1.13E-03
Protactinium	Pa-233	8.70E-10	3.30E-09	5.04E-18	3.69E+01	4.91E+01	5.03E+01	1.13E+02	1.64E+01	6.08E-01
Protactinium	Pa-234	5.10E-10	3.80E-10	5.83E-17	3.09E+02	4.12E+02	4.20E+02	9.46E+02	2.80E+01	1.04E+00
Protactinium	Pa-234m			5.28E-19	1.17E+07	1.56E+07	1.59E+07	3.59E+07		
Protactinium	Pa-234m+D			6.04E-19	1.03E+07	1.37E+07	1.39E+07	3.14E+07		
Protactinium	Pa-234m+E			6.04E-19	1.03E+07	1.37E+07	1.39E+07	3.14E+07		
Radium	Ra-222			2.52E-19	4.54E+07	6.05E+07	6.17E+07	1.39E+08		
Radium	Ra-222+D			2.77E-19	4.13E+07	5.51E+07	5.62E+07	1.26E+08		
Radium	Ra-222+E			3.17E-19	3.61E+07	4.81E+07	4.91E+07	1.10E+08		
Radium	Ra-223	1.00E-07	7.40E-06	2.96E-18	6.51E+01	1.21E+00	1.87E+02	4.12E+02	1.43E-01	5.29E-03
Radium	Ra-223+D	1.00E-07	7.40E-06	7.45E-18	3.91E+01	1.20E+00	7.77E+01	1.74E+02	1.43E-01	5.29E-03
Radium	Ra-223+E	1.00E-07	7.40E-06	7.45E-18	3.91E+01	1.20E+00	7.77E+01	1.74E+02	1.43E-01	5.29E-03
Radium	Ra-224	6.50E-08	3.00E-06	2.53E-19	5.05E+02	5.86E+00	4.53E+03	9.31E+03	9.48E-04	8.14E-03
Radium	Ra-224+D	6.50E-08	3.00E-06	5.17E-17	2.54E+01	5.03E+00	3.60E+01	8.10E+01	2.20E-01	8.14E-03
Radium	Ra-224+E	6.50E-08	3.00E-06	5.17E-17	2.54E+01	5.03E+00	3.60E+01	8.10E+01	2.20E-01	8.14E-03
Radium	Ra-225	9.90E-08	6.30E-06	4.61E-20	8.92E+01	9.51E-01	1.60E+03	2.98E+03	1.44E-01	5.34E-03
Radium	Ra-225+D	1.20E-07	1.40E-05	6.38E-18	3.11E+01	7.76E-01	6.92E+01	1.54E+02	1.19E-01	4.41E-03
Radium	Ra-225+E	1.20E-07	1.40E-05	6.38E-18	3.11E+01	7.76E-01	6.92E+01	1.54E+02	1.19E-01	4.41E-03
Radium	Ra-226	2.80E-07	3.50E-06	1.56E-19	6.18E-02	4.96E-04	1.30E+00	2.43E+00	8.03E-04	1.89E-03
Radium	Ra-226+D	2.80E-07	3.50E-06	5.68E-17	9.89E-03	4.76E-04	1.89E-02	4.25E-02	8.03E-04	1.89E-03
Radium	Ra-226+E	2.80E-07	3.50E-06	5.68E-17	9.89E-03	4.76E-04	1.89E-02	4.25E-02	5.10E-02	1.89E-03
Radium	Ra-227	8.10E-11	2.80E-10	4.22E-18	4.06E+04	4.97E+04	5.53E+04	1.24E+05	1.76E+02	6.53E+00
Radium	Ra-227+E	1.20E-06	2.40E-04	1.42E-17	2.87E+03	3.95E+01	1.36E+04	2.93E+04	1.19E-02	4.41E-04
Radium	Ra-228	6.90E-07	2.60E-06	0.00E+00	9.39E-02	9.70E-04	2.04E+00	3.67E+00	2.07E-02	7.67E-04
Radium	Ra-228+D	8.30E-07	4.60E-05	8.21E-17	2.17E-02	7.91E-04	4.07E-02	9.11E-02	1.72E-02	6.37E-04
Radium	Ra-228+E	8.30E-07	4.60E-05	8.21E-17	2.17E-02	7.91E-04	4.07E-02	9.11E-02	1.72E-02	6.37E-04
Radon	Rn-218			2.28E-20	5.45E+11	7.26E+11	7.41E+11	1.67E+12		
Radon	Rn-218+D			6.29E-20	1.97E+11	2.63E+11	2.68E+11	6.04E+11		
Radon	Rn-218+E			6.29E-20	1.97E+11	2.63E+11	2.68E+11	6.04E+11		
Radon	Rn-219			1.53E-18	7.17E+07	9.57E+07	9.76E+07	2.20E+08		
Radon	Rn-219+D			4.49E-18	2.44E+07	3.26E+07	3.32E+07	7.48E+07		
Radon	Rn-219+E			4.49E-18	2.44E+07	3.26E+07	3.32E+07	7.48E+07		
Radon	Rn-220			1.15E-20	6.80E+08	9.06E+08	9.24E+08	2.08E+09		
Radon	Rn-220+D			5.15E-17	1.52E+05	2.02E+05	2.06E+05	4.64E+05		
Radon	Rn-220+E			5.15E-17	1.52E+05	2.02E+05	2.06E+05	4.64E+05		
Radon	Rn-222			1.17E-20	1.12E+05	1.50E+05	1.53E+05	3.44E+05		
Radon	Rn-222+D			5.67E-17	2.32E+01	3.09E+01	3.16E+01	7.10E+01		
Radon	Rn-222+E			5.67E-17	2.32E+01	3.09E+01	3.16E+01	7.10E+01		
Rhenium	Re-177	2.20E-11	1.40E-11	1.76E-17	2.94E+04	3.92E+04	4.00E+04	9.00E+04	6.49E+02	2.41E+01
Rhenium	Re-177+D	1.90E-10	1.30E-10	4.28E-17	1.21E+04	1.61E+04	1.64E+04	3.70E+04	7.52E+01	2.78E+00
Rhenium	Re-177+E	1.90E-10	1.30E-10	4.28E-17	1.21E+04	1.61E+04	1.64E+04	3.70E+04	7.52E+01	2.78E+00
Rhenium	Re-178	2.50E-11	1.40E-11	3.78E-17	1.45E+04	1.94E+04	1.97E+04	4.44E+04	5.71E+02	2.12E+01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Rhenium	Re-178+D	2.40E-10	8.60E-11	3.78E-17	1.45E+04	1.94E+04	1.97E+04	4.44E+04	5.95E+01	2.20E+00
Rhenium	Re-178+E	2.40E-10	8.60E-11	3.78E-17	1.45E+04	1.94E+04	1.97E+04	4.44E+04	5.95E+01	2.20E+00
Rhenium	Re-180			3.54E-17	8.42E+04	1.12E+05	1.15E+05	2.58E+05		
Rhenium	Re-181	4.20E-10	2.50E-10	2.14E-17	2.82E+02	3.76E+02	3.84E+02	8.63E+02	3.40E+01	1.26E+00
Rhenium	Re-181+D	5.00E-10	2.80E-10	2.14E-17	2.82E+02	3.76E+02	3.84E+02	8.63E+02	2.86E+01	1.06E+00
Rhenium	Re-181+E	5.00E-10	2.80E-10	2.14E-17	2.82E+02	3.76E+02	3.84E+02	8.63E+02	2.86E+01	1.06E+00
Rhenium	Re-182a	2.70E-10	2.00E-10	3.59E-17	2.65E+02	3.53E+02	3.60E+02	8.10E+02	5.29E+01	1.96E+00
Rhenium	Re-182b	1.40E-09	1.20E-09	5.50E-17	3.43E+01	4.57E+01	4.66E+01	1.05E+02	1.02E+01	3.78E-01
Rhenium	Re-184	1.00E-09	1.90E-09	2.64E-17	5.01E+00	6.69E+00	6.82E+00	1.53E+01	1.43E+01	5.29E-01
Rhenium	Re-184m	1.50E-09	6.50E-09	1.02E-17	2.99E+00	3.98E+00	4.06E+00	9.14E+00	9.52E+00	3.53E-01
Rhenium	Re-184m+D	2.20E-09	7.90E-09	2.99E-17	1.02E+00	1.36E+00	1.39E+00	3.12E+00	6.49E+00	2.41E-01
Rhenium	Re-184m+E	2.20E-09	7.90E-09	2.99E-17	1.02E+00	1.36E+00	1.39E+00	3.12E+00	6.49E+00	2.41E-01
Rhenium	Re-186	1.50E-09	1.10E-09	3.85E-19	3.42E+03	4.57E+03	4.66E+03	1.05E+04	9.52E+00	3.53E-01
Rhenium	Re-186m	2.20E-09	1.20E-08	1.26E-19	5.02E+00	5.03E+00	8.24E+00	1.83E+01	6.49E+00	2.41E-01
Rhenium	Re-186m+D	3.70E-09	1.20E-08	5.11E-19	1.27E+00	1.27E+00	2.08E+00	4.66E+00	3.86E+00	1.43E-01
Rhenium	Re-186m+E	3.70E-09	1.20E-08	5.11E-19	1.27E+00	1.27E+00	2.08E+00	4.66E+00	3.86E+00	1.43E-01
Rhenium	Re-187	5.10E-12	6.30E-12	0.00E+00	4.67E+04	4.87E+04	8.71E+04	1.57E+05	2.80E+03	1.04E+02
Rhenium	Re-188	1.40E-09	5.40E-10	1.67E-18	4.25E+03	5.66E+03	5.78E+03	1.30E+04	1.02E+01	3.78E-01
Rhenium	Re-188m	3.00E-11	1.30E-11	9.05E-19	4.30E+05	5.74E+05	5.85E+05	1.32E+06	4.76E+02	1.76E+01
Rhenium	Re-188m+D	1.40E-09	5.50E-10	2.58E-18	1.51E+05	2.01E+05	2.05E+05	4.61E+05	1.02E+01	3.78E-01
Rhenium	Re-188m+E	1.40E-09	5.50E-10	2.58E-18	1.51E+05	2.01E+05	2.05E+05	4.61E+05	1.02E+01	3.78E-01
Rhenium	Re-189	7.80E-10	4.30E-10	1.65E-18	3.01E+03	4.01E+03	4.09E+03	9.20E+03	1.83E+01	6.78E-01
Rhodium	Rh-100	7.10E-10	3.40E-10	9.20E-17	6.30E+01	8.40E+01	8.58E+01	1.93E+02	2.01E+01	7.45E-01
Rhodium	Rh-101	5.50E-10	2.30E-09	6.02E-18	7.09E-01	9.34E-01	9.77E-01	2.20E+00	2.60E+01	9.62E-01
Rhodium	Rh-101m	2.20E-10	1.90E-10	8.07E-18	1.43E+02	1.90E+02	1.95E+02	4.39E+02	6.49E+01	2.41E+00
Rhodium	Rh-101m+D	2.60E-10	3.60E-10	8.07E-18	1.43E+02	1.90E+02	1.95E+02	4.39E+02	5.49E+01	2.04E+00
Rhodium	Rh-101m+E	2.60E-10	3.60E-10	8.07E-18	1.43E+02	1.90E+02	1.95E+02	4.39E+02	5.49E+01	2.04E+00
Rhodium	Rh-102	2.60E-09	6.90E-09	6.52E-17	7.26E-02	9.63E-02	9.94E-02	2.24E-01	5.49E+00	2.04E-01
Rhodium	Rh-102m	1.20E-09	4.00E-09	1.42E-17	1.69E+00	2.24E+00	2.33E+00	5.24E+00	1.19E+01	4.41E-01
Rhodium	Rh-102m+D	1.30E-09	4.00E-09	1.75E-17	1.38E+00	1.82E+00	1.89E+00	4.25E+00	1.10E+01	4.07E-01
Rhodium	Rh-102m+E	1.30E-09	4.00E-09	1.75E-17	1.38E+00	1.82E+00	1.89E+00	4.25E+00	1.10E+01	4.07E-01
Rhodium	Rh-103m	3.80E-12	2.50E-12	9.09E-22	9.53E+07	9.43E+07	1.91E+08	4.29E+08	3.76E+03	1.39E+02
Rhodium	Rh-105	3.70E-10	3.20E-10	2.13E-18	1.57E+03	2.05E+03	2.18E+03	4.90E+03	3.86E+01	1.43E+00
Rhodium	Rh-106			6.67E-18	2.18E+06	2.91E+06	2.96E+06	6.67E+06		
Rhodium	Rh-106m	1.60E-10	1.10E-10	9.15E-17	6.00E+02	7.99E+02	8.16E+02	1.84E+03	8.93E+01	3.31E+00
Rhodium	Rh-107	2.40E-11	1.60E-11	8.68E-18	3.84E+04	5.12E+04	5.23E+04	1.18E+05	5.95E+02	2.20E+01
Rhodium	Rh-99	5.10E-10	7.70E-10	1.69E-17	1.85E+01	2.46E+01	2.53E+01	5.69E+01	2.80E+01	1.04E+00
Rhodium	Rh-99m	6.60E-11	3.90E-11	2.03E-17	1.26E+03	1.69E+03	1.72E+03	3.87E+03	2.16E+02	8.02E+00
Rubidium	Rb-79	5.00E-11	1.60E-11	3.96E-17	7.99E+03	1.06E+04	1.09E+04	2.44E+04	2.86E+02	1.06E+01
Rubidium	Rb-79+D	5.00E-11	1.60E-11	4.69E-17	6.74E+03	8.99E+03	9.17E+03	2.06E+04	2.86E+02	1.06E+01
Rubidium	Rb-79+E	5.00E-11	1.60E-11	4.69E-17	6.74E+03	8.99E+03	9.17E+03	2.06E+04	2.86E+02	1.06E+01
Rubidium	Rb-80			3.77E-17	3.39E+05	4.52E+05	4.61E+05	1.04E+06		
Rubidium	Rb-81	5.40E-11	3.40E-11	1.75E-17	1.51E+03	2.01E+03	2.05E+03	4.61E+03	2.65E+02	9.80E+00
Rubidium	Rb-81m	9.70E-12	7.00E-12	6.34E-20	3.51E+06	4.59E+06	4.85E+06	1.09E+07	1.47E+03	5.45E+01
Rubidium	Rb-81m+D	6.40E-11	4.10E-11	1.76E-17	1.29E+04	1.71E+04	1.75E+04	3.94E+04	2.23E+02	8.27E+00
Rubidium	Rb-81m+E	6.40E-11	4.10E-11	1.76E-17	1.29E+04	1.71E+04	1.75E+04	3.94E+04	2.23E+02	8.27E+00
Rubidium	Rb-82			3.28E-17	1.70E+05	2.27E+05	2.31E+05	5.20E+05		
Rubidium	Rb-82m	1.30E-10	1.10E-10	9.08E-17	2.14E+02	2.86E+02	2.92E+02	6.56E+02	1.10E+02	4.07E+00

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Rubidium	Rb-83	1.90E-09	6.90E-10	1.47E-17	3.91E+00	5.13E+00	5.40E+00	1.21E+01	7.52E+00	2.78E-01
Rubidium	Rb-84	2.80E-09	1.00E-09	2.82E-17	5.38E+00	7.09E+00	7.40E+00	1.67E+01	5.10E+00	1.89E-01
Rubidium	Rb-86	2.80E-09	9.30E-10	3.15E-18	7.75E+01	9.40E+01	1.16E+02	2.61E+02	5.10E+00	1.89E-01
Rubidium	Rb-87	1.50E-09	5.00E-10	6.50E-22	3.76E+00	1.83E+00	2.52E+02	4.67E+02	9.52E+00	3.53E-01
Rubidium	Rb-88	9.00E-11	1.60E-11	2.26E-17	1.80E+04	2.40E+04	2.45E+04	5.51E+04	1.59E+02	5.88E+00
Rubidium	Rb-89	4.70E-11	1.40E-11	6.98E-17	6.83E+03	9.10E+03	9.29E+03	2.09E+04	3.04E+02	1.13E+01
Rubidium	Rb-89+D	2.60E-09	6.10E-09	6.98E-17	6.80E+03	9.02E+03	9.28E+03	2.09E+04	5.49E+00	2.04E-01
Rubidium	Rb-89+E	2.60E-09	6.10E-09	6.98E-17	6.80E+03	9.02E+03	9.28E+03	2.09E+04	5.49E+00	2.04E-01
Ruthenium	Ru-103	7.30E-10	2.40E-09	1.38E-17	9.27E+00	1.02E+01	1.26E+01	2.84E+01	1.96E+01	7.25E-01
Ruthenium	Ru-105	2.60E-10	1.70E-10	2.36E-17	1.15E+03	1.47E+03	1.57E+03	3.53E+03	5.49E+01	2.04E+00
Ruthenium	Ru-105+D	6.30E-10	4.90E-10	2.36E-17	1.15E+03	1.39E+03	1.57E+03	3.53E+03	2.27E+01	8.40E-01
Ruthenium	Ru-105+E	6.30E-10	4.90E-10	2.36E-17	1.15E+03	1.39E+03	1.57E+03	3.53E+03	2.27E+01	8.40E-01
Ruthenium	Ru-106	7.00E-09	2.80E-08	0.00E+00	6.69E+01	6.48E-01	1.09E+03	1.96E+03	2.04E+00	7.56E-02
Ruthenium	Ru-106+D	7.00E-09	2.80E-08	6.67E-18	1.99E+00	5.24E-01	2.78E+00	6.25E+00	2.04E+00	7.56E-02
Ruthenium	Ru-106+E	7.00E-09	2.80E-08	6.67E-18	1.99E+00	5.24E-01	2.78E+00	6.25E+00	2.04E+00	7.56E-02
Ruthenium	Ru-94	9.40E-11	4.20E-11	1.55E-17	9.02E+03	1.17E+04	1.23E+04	2.76E+04	1.52E+02	5.63E+00
Ruthenium	Ru-94+D	1.90E-10	8.70E-11	7.38E-17	1.89E+03	2.50E+03	2.58E+03	5.80E+03	7.52E+01	2.78E+00
Ruthenium	Ru-94+E	1.90E-10	8.70E-11	7.38E-17	1.89E+03	2.50E+03	2.58E+03	5.80E+03	7.52E+01	2.78E+00
Ruthenium	Ru-97	1.50E-10	1.00E-10	5.86E-18	2.96E+02	3.58E+02	4.03E+02	9.06E+02	9.52E+01	3.53E+00
Samarium	Sm-141	3.90E-11	1.50E-11	4.29E-17	1.66E+04	2.21E+04	2.25E+04	5.07E+04	3.66E+02	1.36E+01
Samarium	Sm-141+D	8.30E-11	3.40E-11	8.46E-17	8.39E+03	1.12E+04	1.14E+04	2.57E+04	1.72E+02	6.37E+00
Samarium	Sm-141+E	8.30E-11	3.40E-11	8.46E-17	8.39E+03	1.12E+04	1.14E+04	2.57E+04	1.72E+02	6.37E+00
Samarium	Sm-141m	6.50E-11	3.20E-11	6.06E-17	5.29E+03	7.05E+03	7.19E+03	1.62E+04	2.20E+02	8.14E+00
Samarium	Sm-141m+D	1.10E-10	5.10E-11	8.47E-17	3.78E+03	5.05E+03	5.15E+03	1.16E+04	1.30E+02	4.81E+00
Samarium	Sm-141m+E	1.10E-10	5.10E-11	8.47E-17	3.78E+03	5.05E+03	5.15E+03	1.16E+04	1.30E+02	4.81E+00
Samarium	Sm-142	1.90E-10	7.10E-11	2.03E-18	4.92E+04	6.56E+04	6.69E+04	1.51E+05	7.52E+01	2.78E+00
Samarium	Sm-142+D	1.90E-10	7.10E-11	2.82E-17	3.54E+03	4.72E+03	4.82E+03	1.08E+04	7.52E+01	2.78E+00
Samarium	Sm-142+E	1.90E-10	7.10E-11	2.82E-17	3.54E+03	4.72E+03	4.82E+03	1.08E+04	7.52E+01	2.78E+00
Samarium	Sm-145	2.10E-10	1.60E-09	2.91E-19	5.07E+01	6.74E+01	6.90E+01	1.55E+02	6.80E+01	2.52E+00
Samarium	Sm-145+E	3.20E-10	5.20E-09	4.15E-19	3.55E+01	4.73E+01	4.84E+01	1.09E+02	4.46E+01	1.65E+00
Samarium	Sm-146	5.40E-08	1.10E-05	0.00E+00	2.45E+00	1.69E+00	7.99E+00	1.45E+01	2.65E-01	9.80E-03
Samarium	Sm-147	4.90E-08	9.60E-06	0.00E+00	2.70E+00	1.86E+00	8.82E+00	1.60E+01	2.92E-01	1.08E-02
Samarium	Sm-151	9.80E-11	4.00E-09	3.62E-24	1.51E+03	1.08E+03	4.88E+03	8.83E+03	1.46E+02	5.40E+00
Samarium	Sm-153	7.40E-10	6.30E-10	7.47E-19	3.44E+03	4.58E+03	4.70E+03	1.06E+04	1.93E+01	7.15E-01
Samarium	Sm-155	2.90E-11	1.70E-11	1.96E-18	1.67E+05	2.23E+05	2.27E+05	5.12E+05	4.93E+02	1.82E+01
Samarium	Sm-155+D	3.50E-10	6.90E-09	2.83E-18	1.16E+05	1.54E+05	1.57E+05	3.54E+05	4.08E+01	1.51E+00
Samarium	Sm-155+E	3.50E-10	6.90E-09	2.83E-18	1.16E+05	1.54E+05	1.57E+05	3.54E+05	4.08E+01	1.51E+00
Samarium	Sm-156	2.50E-10	2.20E-10	2.59E-18	4.96E+03	6.61E+03	6.74E+03	1.52E+04	5.71E+01	2.12E+00
Samarium	Sm-156+D	2.40E-09	3.60E-09	4.66E-17	2.76E+02	3.67E+02	3.75E+02	8.43E+02	5.95E+00	2.20E-01
Samarium	Sm-156+E	2.40E-09	3.60E-09	4.66E-17	2.76E+02	3.67E+02	3.75E+02	8.43E+02	5.95E+00	2.20E-01
Scandium	Sc-43	1.90E-10	1.10E-10	3.19E-17	9.73E+02	1.30E+03	1.32E+03	2.98E+03	7.52E+01	2.78E+00
Scandium	Sc-44	3.50E-10	1.80E-10	6.66E-17	4.62E+02	6.16E+02	6.28E+02	1.41E+03	4.08E+01	1.51E+00
Scandium	Sc-44m	2.40E-09	1.40E-09	7.74E-18	2.66E+02	3.54E+02	3.62E+02	8.14E+02	5.95E+00	2.20E-01
Scandium	Sc-44m+D	2.80E-09	1.60E-09	7.34E-17	2.81E+01	3.74E+01	3.82E+01	8.59E+01	5.10E+00	1.89E-01
Scandium	Sc-44m+E	2.80E-09	1.60E-09	7.34E-17	2.81E+01	3.74E+01	3.82E+01	8.59E+01	5.10E+00	1.89E-01
Scandium	Sc-46	1.50E-09	6.80E-09	6.42E-17	9.35E-01	1.25E+00	1.27E+00	2.86E+00	9.52E+00	3.53E-01
Scandium	Sc-47	5.40E-10	7.30E-10	2.47E-18	6.07E+02	8.09E+02	8.26E+02	1.86E+03	2.65E+01	9.80E-01
Scandium	Sc-48	1.70E-09	1.10E-09	1.09E-16	2.53E+01	3.38E+01	3.45E+01	7.76E+01	8.40E+00	3.11E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Scandium	Sc-49	8.20E-11	4.00E-11	1.93E-19	6.53E+05	8.70E+05	8.88E+05	2.00E+06	1.74E+02	6.45E+00
Selenium	Se-70	1.20E-10	4.20E-11	2.85E-17	6.20E+03	8.22E+03	8.43E+03	1.90E+04	1.19E+02	4.41E+00
Selenium	Se-70+D	2.50E-10	1.10E-10	1.60E-16	1.10E+03	1.47E+03	1.50E+03	3.38E+03	5.71E+01	2.12E+00
Selenium	Se-70+E	2.50E-10	1.10E-10	1.60E-16	1.10E+03	1.47E+03	1.50E+03	3.38E+03	5.71E+01	2.12E+00
Selenium	Se-73	2.10E-10	8.00E-11	3.05E-17	5.53E+02	7.32E+02	7.53E+02	1.69E+03	6.80E+01	2.52E+00
Selenium	Se-73+D	4.70E-10	1.10E-09	3.05E-17	5.53E+02	7.24E+02	7.53E+02	1.69E+03	3.04E+01	1.13E+00
Selenium	Se-73+E	4.70E-10	1.10E-09	3.05E-17	5.53E+02	7.24E+02	7.53E+02	1.69E+03	3.04E+01	1.13E+00
Selenium	Se-73m	2.80E-11	9.20E-12	7.15E-18	2.60E+04	3.45E+04	3.53E+04	7.95E+04	5.10E+02	1.89E+01
Selenium	Se-73m+D	4.40E-10	1.10E-09	2.95E-17	6.29E+03	8.24E+03	8.56E+03	1.93E+04	3.25E+01	1.20E+00
Selenium	Se-73m+E	4.40E-10	1.10E-09	2.95E-17	6.29E+03	8.24E+03	8.56E+03	1.93E+04	3.25E+01	1.20E+00
Selenium	Se-75	2.60E-09	1.00E-09	9.80E-18	4.18E+00	4.25E+00	5.82E+00	1.31E+01	5.49E+00	2.04E-01
Selenium	Se-77m			1.95E-18	1.28E+07	1.70E+07	1.74E+07	3.91E+07		
Selenium	Se-79	2.90E-09	1.10E-09	8.19E-23	2.52E+00	1.77E-01	1.52E+02	2.73E+02	4.93E+00	1.82E-01
Selenium	Se-81	2.70E-11	8.00E-12	3.50E-19	1.11E+06	1.36E+06	1.52E+06	3.42E+06	5.29E+02	1.96E+01
Selenium	Se-81m	5.30E-11	1.60E-11	2.45E-19	5.07E+05	5.38E+05	7.02E+05	1.58E+06	2.70E+02	9.98E+00
Selenium	Se-81m+D	8.00E-11	2.40E-11	5.95E-19	2.10E+05	2.42E+05	2.89E+05	6.50E+05	1.79E+02	6.61E+00
Selenium	Se-81m+E	8.00E-11	2.40E-11	5.95E-19	2.10E+05	2.42E+05	2.89E+05	6.50E+05	1.79E+02	6.61E+00
Selenium	Se-83	4.70E-11	1.80E-11	7.72E-17	4.17E+03	5.56E+03	5.67E+03	1.28E+04	3.04E+02	1.13E+01
Selenium	Se-83+D	9.00E-11	6.60E-11	7.72E-17	4.17E+03	5.55E+03	5.67E+03	1.28E+04	1.59E+02	5.88E+00
Selenium	Se-83+E	9.00E-11	6.60E-11	7.72E-17	4.17E+03	5.55E+03	5.67E+03	1.28E+04	1.59E+02	5.88E+00
Silicon	Si-31	1.60E-10	7.40E-11	1.06E-19	4.33E+05	5.77E+05	5.89E+05	1.32E+06	8.93E+01	3.31E+00
Silicon	Si-32	5.60E-10	1.70E-08	1.59E-22	3.94E+02	4.13E+02	7.22E+02	1.33E+03	2.55E+01	9.45E-01
Silicon	Si-32+D	3.00E-09	2.00E-08	1.09E-19	5.78E+00	5.84E+00	9.48E+00	2.10E+01	4.76E+00	1.76E-01
Silicon	Si-32+E	3.00E-09	2.00E-08	1.09E-19	5.78E+00	5.84E+00	9.48E+00	2.10E+01	4.76E+00	1.76E-01
Silver	Ag-102	4.00E-11	1.70E-11	1.07E-16	5.25E+03	6.96E+03	7.14E+03	1.61E+04	3.57E+02	1.32E+01
Silver	Ag-103	4.30E-11	2.60E-11	2.24E-17	4.92E+03	6.40E+03	6.69E+03	1.51E+04	3.32E+02	1.23E+01
Silver	Ag-103+D	2.40E-10	4.10E-10	2.24E-17	4.92E+03	5.73E+03	6.69E+03	1.51E+04	5.95E+01	2.20E+00
Silver	Ag-103+E	2.40E-10	4.10E-10	2.24E-17	4.92E+03	5.73E+03	6.69E+03	1.51E+04	5.95E+01	2.20E+00
Silver	Ag-104	6.00E-11	3.60E-11	8.39E-17	1.25E+03	1.65E+03	1.70E+03	3.82E+03	2.38E+02	8.82E+00
Silver	Ag-104m	5.40E-11	2.50E-11	3.69E-17	5.86E+03	7.66E+03	7.97E+03	1.79E+04	2.65E+02	9.80E+00
Silver	Ag-104m+D	7.40E-11	3.70E-11	6.46E-17	3.35E+03	4.40E+03	4.55E+03	1.02E+04	1.93E+02	7.15E+00
Silver	Ag-104m+E	7.40E-11	3.70E-11	6.46E-17	3.35E+03	4.40E+03	4.55E+03	1.02E+04	1.93E+02	7.15E+00
Silver	Ag-105	4.70E-10	7.30E-10	1.45E-17	8.43E+00	7.85E+00	1.15E+01	2.59E+01	3.04E+01	1.13E+00
Silver	Ag-106	3.20E-11	1.50E-11	2.09E-17	1.45E+04	1.89E+04	1.97E+04	4.43E+04	4.46E+02	1.65E+01
Silver	Ag-106m	1.50E-09	1.10E-09	8.77E-17	6.81E+00	7.39E+00	9.28E+00	2.09E+01	9.52E+00	3.53E-01
Silver	Ag-108			6.13E-19	4.99E+06	6.65E+06	6.78E+06	1.53E+07		
Silver	Ag-108m	2.30E-09	7.40E-09	4.83E-17	1.48E-02	9.30E-03	2.40E-02	5.39E-02	6.21E+00	2.30E-01
Silver	Ag-109m			5.48E-20	2.00E+08	2.67E+08	2.72E+08	6.13E+08		
Silver	Ag-110			1.27E-18	1.39E+07	1.85E+07	1.89E+07	4.26E+07		
Silver	Ag-110m	2.80E-09	7.60E-09	8.67E-17	2.31E-01	2.16E-01	3.16E-01	7.10E-01	5.10E+00	1.89E-01
Silver	Ag-111	1.30E-09	1.50E-09	7.48E-19	7.31E+02	4.92E+01	1.22E+03	2.75E+03	1.10E+01	4.07E-01
Silver	Ag-112	4.30E-10	1.60E-10	2.17E-17	1.78E+03	1.88E+03	2.43E+03	5.46E+03	3.32E+01	1.23E+00
Silver	Ag-115	6.00E-11	2.70E-11	2.31E-17	1.57E+04	2.02E+04	2.13E+04	4.80E+04	2.38E+02	8.82E+00
Silver	Ag-115+D	1.70E-09	1.40E-09	3.35E-17	1.07E+04	8.56E+03	1.47E+04	3.31E+04	8.40E+00	3.11E-01
Silver	Ag-115+E	1.70E-09	1.40E-09	3.35E-17	1.07E+04	8.56E+03	1.47E+04	3.31E+04	8.40E+00	3.11E-01
Sodium	Na-22	3.20E-09	1.30E-09	6.91E-17	7.65E-02	1.01E-01	1.04E-01	2.35E-01	4.46E+00	1.65E-01
Sodium	Na-24	4.30E-10	2.70E-10	1.46E-16	5.51E+01	7.35E+01	7.50E+01	1.69E+02	3.32E+01	1.23E+00
Strontium	Sr-80	3.40E-10	1.30E-10	5.33E-22	7.94E+05	1.46E+04	7.24E+07	1.41E+08	4.20E+01	1.56E+00

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Strontium	Sr-80+D	3.40E-10	1.30E-10	3.77E-17	1.92E+03	2.18E+03	2.61E+03	5.88E+03	4.20E+01	1.56E+00
Strontium	Sr-80+E	3.40E-10	1.30E-10	3.77E-17	1.92E+03	2.18E+03	2.61E+03	5.88E+03	4.20E+01	1.56E+00
Strontium	Sr-81	7.70E-11	3.50E-11	4.04E-17	7.03E+03	9.04E+03	9.56E+03	2.15E+04	1.86E+02	6.87E+00
Strontium	Sr-81+D	1.30E-10	6.90E-11	5.79E-17	4.90E+03	6.27E+03	6.67E+03	1.50E+04	1.10E+02	4.07E+00
Strontium	Sr-81+E	1.30E-10	6.90E-11	5.79E-17	4.90E+03	6.27E+03	6.67E+03	1.50E+04	1.10E+02	4.07E+00
Strontium	Sr-82	6.10E-09	8.90E-09	5.24E-22	1.24E+02	2.27E+00	1.78E+04	3.23E+04	2.34E+00	8.67E-02
Strontium	Sr-82+D	6.10E-09	8.90E-09	3.28E-17	5.84E+00	1.77E+00	8.34E+00	1.88E+01	2.34E+00	8.67E-02
Strontium	Sr-82+E	6.10E-09	8.90E-09	3.28E-17	5.84E+00	1.77E+00	8.34E+00	1.88E+01	2.34E+00	8.67E-02
Strontium	Sr-83	4.90E-10	3.10E-10	2.41E-17	1.54E+02	1.48E+02	2.10E+02	4.73E+02	2.92E+01	1.08E+00
Strontium	Sr-83+D	2.40E-09	1.00E-09	3.88E-17	9.45E+01	5.82E+01	1.31E+02	2.94E+02	5.95E+00	2.20E-01
Strontium	Sr-83+E	2.40E-09	1.00E-09	3.88E-17	9.45E+01	5.82E+01	1.31E+02	2.94E+02	5.95E+00	2.20E-01
Strontium	Sr-85	5.60E-10	6.40E-10	1.48E-17	5.19E+00	4.03E+00	7.13E+00	1.60E+01	2.55E+01	9.45E-01
Strontium	Sr-85m	6.10E-12	4.10E-12	5.57E-18	1.87E+04	2.44E+04	2.54E+04	5.73E+04	2.34E+03	8.67E+01
Strontium	Sr-85m+D	5.00E-10	5.70E-10	1.86E-17	5.56E+03	4.91E+03	7.62E+03	1.71E+04	2.86E+01	1.06E+00
Strontium	Sr-85m+E	5.00E-10	5.70E-10	1.86E-17	5.56E+03	4.91E+03	7.62E+03	1.71E+04	2.86E+01	1.06E+00
Strontium	Sr-87m	3.00E-11	2.00E-11	9.03E-18	4.76E+03	5.97E+03	6.48E+03	1.46E+04	4.76E+02	1.76E+01
Strontium	Sr-89	2.60E-09	6.10E-09	8.09E-20	1.29E+02	2.63E+00	1.55E+03	3.43E+03	5.49E+00	2.04E-01
Strontium	Sr-90	2.80E-08	3.60E-08	3.46E-21	1.24E-01	1.89E-03	2.00E+01	3.64E+01	5.10E-01	1.89E-02
Strontium	Sr-90+D	2.80E-08	3.60E-08	2.18E-19	1.21E-01	1.89E-03	5.02E+00	1.07E+01	5.10E-01	1.89E-02
Strontium	Sr-90+E	2.80E-08	3.60E-08	2.18E-19	1.21E-01	1.89E-03	5.02E+00	1.07E+01	5.10E-01	1.89E-02
Strontium	Sr-91	6.50E-10	3.70E-10	2.21E-17	5.71E+02	4.88E+02	7.82E+02	1.76E+03	2.20E+01	8.14E-01
Strontium	Sr-91+D	3.10E-09	7.50E-09	3.14E-17	3.94E+02	1.85E+02	5.50E+02	1.24E+03	4.61E+00	1.71E-01
Strontium	Sr-91+E	3.10E-09	7.50E-09	3.14E-17	3.94E+02	1.85E+02	5.50E+02	1.24E+03	4.61E+00	1.71E-01
Strontium	Sr-92	4.30E-10	2.10E-10	4.45E-17	9.99E+02	1.12E+03	1.36E+03	3.06E+03	3.32E+01	1.23E+00
Strontium	Sr-92+D	9.20E-10	3.80E-10	5.31E-17	8.35E+02	8.37E+02	1.14E+03	2.57E+03	1.55E+01	5.75E-01
Strontium	Sr-92+E	9.20E-10	3.80E-10	5.31E-17	8.35E+02	8.37E+02	1.14E+03	2.57E+03	1.55E+01	5.75E-01
Sulphur	S-35	7.70E-10	1.40E-09	6.55E-23	1.41E+02	9.04E+01	4.03E+04	7.31E+04	1.86E+01	6.87E-01
Tantalum	Ta-172	5.30E-11	3.30E-11	4.71E-17	4.18E+03	5.57E+03	5.68E+03	1.28E+04	2.70E+02	9.98E+00
Tantalum	Ta-172+D	2.40E-09	2.10E-08	1.06E-16	1.86E+03	2.47E+03	2.53E+03	5.68E+03	5.95E+00	2.20E-01
Tantalum	Ta-172+E	2.40E-09	2.10E-08	1.06E-16	1.86E+03	2.47E+03	2.53E+03	5.68E+03	5.95E+00	2.20E-01
Tantalum	Ta-173	1.90E-10	1.10E-10	1.60E-17	2.07E+03	2.76E+03	2.81E+03	6.33E+03	7.52E+01	2.78E+00
Tantalum	Ta-173+D	6.80E-10	2.50E-09	2.72E-17	1.22E+03	1.62E+03	1.65E+03	3.72E+03	2.10E+01	7.78E-01
Tantalum	Ta-173+E	6.80E-10	2.50E-09	2.72E-17	1.22E+03	1.62E+03	1.65E+03	3.72E+03	2.10E+01	7.78E-01
Tantalum	Ta-174	5.70E-11	4.10E-11	1.72E-17	5.85E+03	7.80E+03	7.96E+03	1.79E+04	2.51E+02	9.28E+00
Tantalum	Ta-175	2.10E-10	1.20E-10	2.78E-17	4.14E+02	5.51E+02	5.62E+02	1.27E+03	6.80E+01	2.52E+00
Tantalum	Ta-175+D	6.20E-10	1.30E-09	3.70E-17	3.11E+02	4.14E+02	4.23E+02	9.51E+02	2.30E+01	8.53E-01
Tantalum	Ta-175+E	6.20E-10	1.30E-09	3.70E-17	3.11E+02	4.14E+02	4.23E+02	9.51E+02	2.30E+01	8.53E-01
Tantalum	Ta-176	3.10E-10	1.90E-10	7.06E-17	2.12E+02	2.82E+02	2.88E+02	6.48E+02	4.61E+01	1.71E+00
Tantalum	Ta-177	1.10E-10	9.60E-11	8.42E-19	2.53E+03	3.36E+03	3.44E+03	7.75E+03	1.30E+02	4.81E+00
Tantalum	Ta-178a			2.23E-18	3.49E+05	4.65E+05	4.75E+05	1.07E+06		
Tantalum	Ta-178b	7.20E-11	6.50E-11	2.57E-17	2.14E+03	2.85E+03	2.90E+03	6.53E+03	1.98E+02	7.35E+00
Tantalum	Ta-179	6.50E-11	2.20E-10	2.61E-19	2.88E+01	3.83E+01	3.94E+01	8.86E+01	2.20E+02	8.14E+00
Tantalum	Ta-180	8.40E-10	6.40E-09	1.38E-17	4.80E-02	4.79E-02	7.84E-02	1.76E-01	1.70E+01	6.30E-01
Tantalum	Ta-180m	5.40E-11	4.40E-11	4.38E-19	3.39E+04	4.52E+04	4.63E+04	1.04E+05	2.65E+02	9.80E+00
Tantalum	Ta-182	1.50E-09	7.60E-09	4.02E-17	1.09E+00	1.45E+00	1.48E+00	3.33E+00	9.52E+00	3.53E-01
Tantalum	Ta-182m	1.20E-11	2.00E-11	5.05E-18	9.06E+04	1.21E+05	1.23E+05	2.77E+05	1.19E+03	4.41E+01
Tantalum	Ta-182m+D	1.50E-09	7.60E-09	4.53E-17	1.01E+04	1.34E+04	1.37E+04	3.09E+04	9.52E+00	3.53E-01
Tantalum	Ta-182m+E	1.50E-09	7.60E-09	4.53E-17	1.01E+04	1.34E+04	1.37E+04	3.09E+04	9.52E+00	3.53E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Tantalum	Ta-183	1.30E-09	1.90E-09	6.41E-18	1.53E+02	2.04E+02	2.09E+02	4.71E+02	1.10E+01	4.07E-01
Tantalum	Ta-184	6.80E-10	4.10E-10	4.72E-17	2.94E+02	3.92E+02	4.00E+02	9.00E+02	2.10E+01	7.78E-01
Tantalum	Ta-185	6.80E-11	4.50E-11	4.28E-18	3.45E+04	4.60E+04	4.70E+04	1.06E+05	2.10E+02	7.78E+00
Tantalum	Ta-185+D	5.10E-10	1.60E-10	4.28E-18	3.45E+04	4.58E+04	4.70E+04	1.06E+05	2.80E+01	1.04E+00
Tantalum	Ta-185+E	5.10E-10	1.60E-10	4.28E-18	3.45E+04	4.58E+04	4.70E+04	1.06E+05	2.80E+01	1.04E+00
Tantalum	Ta-186	3.30E-11	1.70E-11	4.52E-17	1.53E+04	2.04E+04	2.08E+04	4.67E+04	4.33E+02	1.60E+01
Technetium	Tc-101	1.90E-11	1.20E-11	9.28E-18	5.45E+04	6.36E+04	7.48E+04	1.68E+05	7.52E+02	2.78E+01
Technetium	Tc-104	8.00E-11	2.80E-11	6.52E-17	6.07E+03	7.46E+03	8.30E+03	1.87E+04	1.79E+02	6.61E+00
Technetium	Tc-93	5.50E-11	3.50E-11	4.86E-17	8.99E+02	1.11E+03	1.23E+03	2.76E+03	2.60E+02	9.62E+00
Technetium	Tc-93m	2.50E-11	1.70E-11	2.41E-17	6.88E+03	8.55E+03	9.40E+03	2.11E+04	5.71E+02	2.12E+01
Technetium	Tc-93m+D	7.00E-11	4.60E-11	6.39E-17	2.59E+03	3.21E+03	3.54E+03	7.97E+03	2.04E+02	7.56E+00
Technetium	Tc-93m+E	7.00E-11	4.60E-11	6.39E-17	2.59E+03	3.21E+03	3.54E+03	7.97E+03	2.04E+02	7.56E+00
Technetium	Tc-94	2.00E-10	1.20E-10	8.26E-17	2.96E+02	3.38E+02	4.07E+02	9.16E+02	7.14E+01	2.65E+00
Technetium	Tc-94m	1.00E-10	4.50E-11	5.83E-17	2.37E+03	2.83E+03	3.25E+03	7.31E+03	1.43E+02	5.29E+00
Technetium	Tc-95	1.80E-10	1.00E-10	2.43E-17	2.41E+02	2.14E+02	3.38E+02	7.60E+02	7.94E+01	2.94E+00
Technetium	Tc-95m	5.60E-10	8.80E-10	1.97E-17	3.72E+00	1.79E+00	5.69E+00	1.28E+01	2.55E+01	9.45E-01
Technetium	Tc-96	1.10E-09	6.80E-10	7.78E-17	1.42E+01	9.82E+00	2.05E+01	4.62E+01	1.30E+01	4.81E-01
Technetium	Tc-96m	1.20E-11	7.40E-12	1.42E-18	9.55E+04	8.11E+04	1.35E+05	3.03E+05	1.19E+03	4.41E+01
Technetium	Tc-96m+D	1.10E-09	6.70E-10	7.77E-17	1.70E+03	1.18E+03	2.46E+03	5.54E+03	1.30E+01	4.81E-01
Technetium	Tc-96m+E	1.10E-09	6.70E-10	7.77E-17	1.70E+03	1.18E+03	2.46E+03	5.54E+03	1.30E+01	4.81E-01
Technetium	Tc-97	6.80E-11	2.20E-10	3.02E-21	2.19E+00	1.31E-01	3.40E+02	7.54E+02	2.10E+02	7.78E+00
Technetium	Tc-97m	5.50E-10	3.20E-09	8.21E-21	2.38E+01	1.88E+00	8.23E+03	1.79E+04	2.60E+01	9.62E-01
Technetium	Tc-98	2.00E-09	8.30E-09	4.32E-17	1.27E-02	3.45E-03	2.50E-02	5.63E-02	7.14E+00	2.65E-01
Technetium	Tc-99	6.40E-10	4.00E-09	5.80E-22	2.35E-01	1.39E-02	5.06E+02	9.63E+02	2.23E+01	8.27E-01
Technetium	Tc-99m	2.20E-11	1.90E-11	2.69E-18	7.20E+03	6.18E+03	1.01E+04	2.28E+04	6.49E+02	2.41E+01
Tellurium	Te-116	1.70E-10	1.00E-10	9.26E-19	4.77E+04	5.18E+04	7.12E+04	1.60E+05	8.40E+01	3.11E+00
Tellurium	Te-116+D	2.00E-10	1.10E-10	7.08E-17	6.84E+02	9.08E+02	9.31E+02	2.10E+03	7.14E+01	2.65E+00
Tellurium	Te-116+E	2.00E-10	1.10E-10	7.08E-17	6.84E+02	9.08E+02	9.31E+02	2.10E+03	7.14E+01	2.65E+00
Tellurium	Te-121	4.30E-10	3.80E-10	1.66E-17	1.76E+01	2.27E+01	2.42E+01	5.45E+01	3.32E+01	1.23E+00
Tellurium	Te-121m	2.30E-09	4.20E-09	5.31E-18	5.00E+00	4.51E+00	8.36E+00	1.88E+01	6.21E+00	2.30E-01
Tellurium	Te-121m+D	2.70E-09	4.20E-09	2.00E-17	1.52E+00	1.73E+00	2.22E+00	5.00E+00	5.29E+00	1.96E-01
Tellurium	Te-121m+E	2.70E-09	4.20E-09	2.00E-17	1.52E+00	1.73E+00	2.22E+00	5.00E+00	5.29E+00	1.96E-01
Tellurium	Te-123	4.40E-09	1.90E-09	2.48E-20	2.81E-01	7.94E-02	3.05E+01	6.37E+01	3.25E+00	1.20E-01
Tellurium	Te-123m	1.40E-09	4.00E-09	3.06E-18	1.10E+01	9.82E+00	1.87E+01	4.20E+01	1.02E+01	3.78E-01
Tellurium	Te-125m	8.70E-10	3.40E-09	5.95E-20	1.66E+02	6.78E+01	1.91E+03	4.27E+03	1.64E+01	6.08E-01
Tellurium	Te-127	1.70E-10	1.30E-10	1.43E-19	5.54E+04	3.71E+04	1.22E+05	2.75E+05	8.40E+01	3.11E+00
Tellurium	Te-127m	2.30E-09	7.40E-09	2.23E-20	3.71E+01	1.41E+01	2.25E+03	4.82E+03	6.21E+00	2.30E-01
Tellurium	Te-127m+D	2.30E-09	7.40E-09	1.62E-19	3.34E+01	1.36E+01	3.74E+02	8.36E+02	6.21E+00	2.30E-01
Tellurium	Te-127m+E	2.30E-09	7.40E-09	1.62E-19	3.34E+01	1.36E+01	3.74E+02	8.36E+02	6.21E+00	2.30E-01
Tellurium	Te-129	6.30E-11	3.70E-11	1.68E-18	6.07E+04	7.71E+04	8.42E+04	1.90E+05	2.27E+02	8.40E+00
Tellurium	Te-129m	3.00E-09	6.60E-09	9.40E-19	5.91E+01	3.02E+01	2.15E+02	4.83E+02	4.76E+00	1.76E-01
Tellurium	Te-129m+D	3.00E-09	6.60E-09	2.03E-18	4.13E+01	2.59E+01	9.99E+01	2.25E+02	4.76E+00	1.76E-01
Tellurium	Te-129m+E	3.00E-09	6.60E-09	2.03E-18	4.13E+01	2.59E+01	9.99E+01	2.25E+02	4.76E+00	1.76E-01
Tellurium	Te-131	8.70E-11	2.80E-11	1.20E-17	2.41E+04	3.18E+04	3.28E+04	7.39E+04	1.64E+02	6.08E+00
Tellurium	Te-131+D	2.20E-08	7.40E-09	5.50E-17	4.35E+03	4.00E+03	7.16E+03	1.61E+04	6.49E-01	2.41E-02
Tellurium	Te-131+E	2.20E-08	7.40E-09	5.50E-17	4.35E+03	4.00E+03	7.16E+03	1.61E+04	6.49E-01	2.41E-02
Tellurium	Te-131m	1.90E-09	9.40E-10	4.42E-17	8.90E+01	1.12E+02	1.24E+02	2.79E+02	7.52E+00	2.78E-01
Tellurium	Te-131m+D	2.40E-08	8.40E-09	5.77E-17	5.71E+01	5.21E+01	9.48E+01	2.13E+02	5.95E-01	2.20E-02

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Tellurium	Te-131m+E	2.40E-08	8.40E-09	5.77E-17	5.71E+01	5.21E+01	9.48E+01	2.13E+02	5.95E-01	2.20E-02
Tellurium	Te-132	3.80E-09	2.00E-09	5.33E-18	2.10E+02	1.64E+02	3.93E+02	8.84E+02	3.76E+00	1.39E-01
Tellurium	Te-132+D	3.80E-09	2.00E-09	7.63E-17	1.97E+01	2.47E+01	2.75E+01	6.19E+01	3.76E+00	1.39E-01
Tellurium	Te-132+E	3.80E-09	2.00E-09	7.63E-17	1.97E+01	2.47E+01	2.75E+01	6.19E+01	3.76E+00	1.39E-01
Tellurium	Te-133	7.20E-11	2.00E-11	2.88E-17	2.02E+04	2.68E+04	2.75E+04	6.18E+04	1.98E+02	7.35E+00
Tellurium	Te-133+D	4.40E-09	1.50E-09	9.16E-17	6.19E+03	7.76E+03	8.64E+03	1.94E+04	3.25E+00	1.20E-01
Tellurium	Te-133+E	4.40E-09	1.50E-09	9.16E-17	6.19E+03	7.76E+03	8.64E+03	1.94E+04	3.25E+00	1.20E-01
Tellurium	Te-133m	2.80E-10	8.70E-11	7.28E-17	1.79E+03	2.38E+03	2.44E+03	5.50E+03	5.10E+01	1.89E+00
Tellurium	Te-133m+D	4.60E-09	1.60E-09	9.53E-17	1.34E+03	1.68E+03	1.87E+03	4.20E+03	3.11E+00	1.15E-01
Tellurium	Te-133m+E	4.60E-09	1.60E-09	9.53E-17	1.34E+03	1.68E+03	1.87E+03	4.20E+03	3.11E+00	1.15E-01
Tellurium	Te-134	1.10E-10	6.60E-11	2.55E-17	6.78E+03	8.99E+03	9.24E+03	2.08E+04	1.30E+02	4.81E+00
Tellurium	Te-134+D	2.20E-10	1.10E-10	1.09E-16	1.59E+03	2.11E+03	2.16E+03	4.87E+03	6.49E+01	2.41E+00
Tellurium	Te-134+E	2.20E-10	1.10E-10	1.09E-16	1.59E+03	2.11E+03	2.16E+03	4.87E+03	6.49E+01	2.41E+00
Terbium	Tb-147	1.60E-10	7.60E-11	4.89E-17	1.50E+03	2.00E+03	2.03E+03	4.58E+03	8.93E+01	3.31E+00
Terbium	Tb-147+D	1.20E-09	1.60E-09	1.02E-16	7.17E+02	9.56E+02	9.76E+02	2.20E+03	1.19E+01	4.41E-01
Terbium	Tb-147+E	1.20E-09	1.60E-09	1.02E-16	7.17E+02	9.56E+02	9.76E+02	2.20E+03	1.19E+01	4.41E-01
Terbium	Tb-149	2.50E-10	4.90E-09	5.08E-17	5.73E+02	7.64E+02	7.79E+02	1.75E+03	5.71E+01	2.12E+00
Terbium	Tb-149+D	8.80E-10	6.20E-09	6.95E-17	4.19E+02	5.58E+02	5.69E+02	1.28E+03	1.62E+01	6.01E-01
Terbium	Tb-149+E	9.00E-10	6.90E-09	6.95E-17	4.19E+02	5.58E+02	5.69E+02	1.28E+03	1.59E+01	5.88E-01
Terbium	Tb-150	2.50E-10	1.10E-10	5.23E-17	7.06E+02	9.41E+02	9.60E+02	2.16E+03	5.71E+01	2.12E+00
Terbium	Tb-151	3.40E-10	2.30E-10	2.46E-17	2.79E+02	3.72E+02	3.79E+02	8.53E+02	4.20E+01	1.56E+00
Terbium	Tb-151+D	5.40E-10	1.10E-09	2.46E-17	2.79E+02	3.72E+02	3.79E+02	8.53E+02	2.65E+01	9.80E-01
Terbium	Tb-151+E	5.40E-10	1.10E-09	2.46E-17	2.79E+02	3.72E+02	3.79E+02	8.53E+02	2.65E+01	9.80E-01
Terbium	Tb-153	2.50E-10	1.90E-10	4.92E-18	4.37E+02	5.82E+02	5.94E+02	1.34E+03	5.71E+01	2.12E+00
Terbium	Tb-153+D	5.20E-10	2.30E-09	6.06E-18	3.55E+02	4.73E+02	4.82E+02	1.09E+03	2.75E+01	1.02E+00
Terbium	Tb-153+E	5.20E-10	2.30E-09	6.06E-18	3.55E+02	4.73E+02	4.82E+02	1.09E+03	2.75E+01	1.02E+00
Terbium	Tb-154	6.50E-10	3.60E-10	7.87E-17	7.17E+01	9.56E+01	9.75E+01	2.19E+02	2.20E+01	8.14E-01
Terbium	Tb-155	2.10E-10	2.20E-10	2.25E-18	4.20E+02	5.60E+02	5.71E+02	1.29E+03	6.80E+01	2.52E+00
Terbium	Tb-156	1.20E-09	1.20E-09	5.60E-17	1.68E+01	2.24E+01	2.29E+01	5.15E+01	1.19E+01	4.41E-01
Terbium	Tb-156m	1.70E-10	2.10E-10	1.59E-19	3.10E+04	4.12E+04	4.22E+04	9.49E+04	8.40E+01	3.11E+00
Terbium	Tb-156m+D	1.70E-10	2.10E-10	5.62E-17	8.80E+01	1.17E+02	1.20E+02	2.69E+02	8.40E+01	3.11E+00
Terbium	Tb-156m+E	1.70E-10	2.10E-10	5.62E-17	8.80E+01	1.17E+02	1.20E+02	2.69E+02	8.40E+01	3.11E+00
Terbium	Tb-156n	8.10E-11	9.60E-11	2.93E-20	8.13E+05	1.08E+06	1.11E+06	2.50E+06	1.76E+02	6.53E+00
Terbium	Tb-156n+D	8.10E-11	1.30E-09	5.60E-17	4.31E+02	5.75E+02	5.86E+02	1.32E+03	1.76E+02	6.53E+00
Terbium	Tb-156n+E	8.10E-11	1.30E-09	5.60E-17	4.31E+02	5.75E+02	5.86E+02	1.32E+03	1.76E+02	6.53E+00
Terbium	Tb-157	3.40E-11	1.20E-09	1.24E-20	5.65E+01	5.74E+01	9.18E+01	2.06E+02	4.20E+02	1.56E+01
Terbium	Tb-158	1.10E-09	4.60E-08	2.39E-17	2.97E-02	3.04E-02	4.79E-02	1.08E-01	1.30E+01	4.81E-01
Terbium	Tb-160	1.60E-09	7.00E-09	3.50E-17	1.99E+00	2.65E+00	2.70E+00	6.08E+00	8.93E+00	3.31E-01
Terbium	Tb-161	7.20E-10	1.30E-09	2.49E-19	2.88E+03	3.82E+03	3.95E+03	8.87E+03	1.98E+01	7.35E-01
Thallium	Tl-194	8.10E-12	4.40E-12	2.19E-17	1.00E+04	1.34E+04	1.36E+04	3.07E+04	1.76E+03	6.53E+01
Thallium	Tl-194m	4.00E-11	1.90E-11	6.78E-17	3.26E+03	4.34E+03	4.43E+03	9.97E+03	3.57E+02	1.32E+01
Thallium	Tl-195	2.70E-11	1.50E-11	4.02E-17	2.59E+03	3.45E+03	3.52E+03	7.92E+03	5.29E+02	1.96E+01
Thallium	Tl-195+D	3.70E-10	1.20E-09	4.61E-17	2.25E+03	3.00E+03	3.07E+03	6.91E+03	3.86E+01	1.43E+00
Thallium	Tl-195+E	3.70E-10	1.20E-09	4.61E-17	2.25E+03	3.00E+03	3.07E+03	6.91E+03	3.86E+01	1.43E+00
Thallium	Tl-197	2.30E-11	1.40E-11	1.11E-17	3.83E+03	5.10E+03	5.21E+03	1.17E+04	6.21E+02	2.30E+01
Thallium	Tl-197+D	2.50E-10	3.10E-10	1.11E-17	3.81E+03	5.06E+03	5.21E+03	1.17E+04	5.71E+01	2.12E+00
Thallium	Tl-197+E	2.50E-10	3.10E-10	1.11E-17	3.81E+03	5.06E+03	5.21E+03	1.17E+04	5.71E+01	2.12E+00
Thallium	Tl-198	7.30E-11	6.00E-11	6.45E-17	3.53E+02	4.71E+02	4.80E+02	1.08E+03	1.96E+02	7.25E+00

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Thallium	Tl-198m	5.40E-11	3.70E-11	3.40E-17	1.90E+03	2.53E+03	2.58E+03	5.81E+03	2.65E+02	9.80E+00
Thallium	Tl-198m+D	8.80E-11	6.50E-11	6.43E-17	1.00E+03	1.34E+03	1.37E+03	3.07E+03	1.62E+02	6.01E+00
Thallium	Tl-198m+E	8.80E-11	6.50E-11	6.43E-17	1.00E+03	1.34E+03	1.37E+03	3.07E+03	1.62E+02	6.01E+00
Thallium	Tl-199	2.60E-11	1.90E-11	5.81E-18	2.80E+03	3.73E+03	3.81E+03	8.57E+03	5.49E+02	2.04E+01
Thallium	Tl-200	2.00E-10	1.30E-10	3.98E-17	1.16E+02	1.55E+02	1.58E+02	3.56E+02	7.14E+01	2.65E+00
Thallium	Tl-201	9.50E-11	4.40E-11	1.31E-18	1.25E+03	1.64E+03	1.72E+03	3.86E+03	1.50E+02	5.57E+00
Thallium	Tl-202	4.50E-10	1.90E-10	1.25E-17	3.27E+01	4.33E+01	4.47E+01	1.01E+02	3.17E+01	1.18E+00
Thallium	Tl-204	1.20E-09	3.90E-10	2.08E-20	1.56E+01	1.05E+01	2.11E+02	4.61E+02	1.19E+01	4.41E-01
Thallium	Tl-206			6.76E-20	2.55E+07	3.40E+07	3.47E+07	7.81E+07		
Thallium	Tl-207			1.23E-19	1.23E+07	1.65E+07	1.68E+07	3.78E+07		
Thallium	Tl-208			1.17E-16	2.02E+04	2.69E+04	2.74E+04	6.17E+04		
Thallium	Tl-209			6.56E-17	5.02E+04	6.69E+04	6.83E+04	1.54E+05		
Thorium	Th-226	3.50E-10	6.10E-08	1.62E-19	1.44E+06	5.01E+05	1.96E+06	4.40E+06	4.08E+01	1.51E+00
Thorium	Th-226+D	3.50E-10	6.10E-08	4.39E-19	5.32E+05	3.47E+05	7.25E+05	1.63E+06	4.08E+01	1.51E+00
Thorium	Th-226+E	1.90E-06	4.60E-06	4.79E-19	3.15E+04	1.24E+02	6.24E+04	1.15E+05	7.52E-03	2.78E-04
Thorium	Th-227	8.80E-09	1.00E-05	2.57E-18	1.03E+02	2.52E+01	1.41E+02	3.16E+02	1.62E+00	6.01E-02
Thorium	Th-227+D	1.10E-07	1.70E-05	1.00E-17	2.58E+01	2.31E+00	3.56E+01	7.95E+01	1.30E-01	4.81E-03
Thorium	Th-227+E	1.10E-07	1.70E-05	1.00E-17	2.58E+01	2.31E+00	3.56E+01	7.95E+01	1.30E-01	4.81E-03
Thorium	Th-228	7.20E-08	4.00E-05	3.84E-20	2.35E+01	1.01E-01	4.30E+01	8.12E+01	1.98E-01	7.35E-03
Thorium	Th-228+D	1.40E-07	4.00E-05	5.18E-17	1.38E-01	4.06E-02	1.88E-01	4.22E-01	1.02E-01	3.78E-03
Thorium	Th-228+E	1.40E-07	4.00E-05	5.18E-17	1.38E-01	4.06E-02	1.88E-01	4.22E-01	1.02E-01	3.78E-03
Thorium	Th-229	4.90E-07	7.10E-05	1.55E-18	1.98E-01	1.02E-03	3.91E-01	7.95E-01	2.92E-02	1.08E-03
Thorium	Th-229+D	6.10E-07	8.50E-05	7.93E-18	6.52E-02	8.16E-04	1.15E-01	2.48E-01	2.34E-02	8.67E-04
Thorium	Th-229+E	6.10E-07	8.50E-05	7.93E-18	6.52E-02	8.16E-04	1.15E-01	2.48E-01	2.34E-02	8.67E-04
Thorium	Th-230	2.10E-07	1.40E-05	5.73E-21	8.54E-01	2.39E-03	2.07E+00	3.75E+00	6.80E-02	2.52E-03
Thorium	Th-231	3.40E-10	3.30E-10	1.72E-19	2.73E+04	1.02E+04	3.72E+04	8.37E+04	4.20E+01	1.56E+00
Thorium	Th-232	2.30E-07	2.50E-05	2.44E-21	7.82E-01	2.18E-03	1.89E+00	3.42E+00	6.21E-02	2.30E-03
Thorium	Th-234	3.40E-09	7.70E-09	1.14E-19	1.65E+03	6.04E+01	2.32E+03	5.14E+03	4.20E+00	1.56E-01
Thorium	Th-234+D	3.40E-09	7.70E-09	8.33E-19	2.47E+02	5.23E+01	3.37E+02	7.57E+02	4.20E+00	1.56E-01
Thorium	Th-234+E	3.40E-09	7.70E-09	8.33E-19	2.47E+02	5.23E+01	3.37E+02	7.57E+02	4.20E+00	1.56E-01
Thulium	Tm-162	2.90E-11	1.60E-11	5.79E-17	5.77E+03	7.69E+03	7.84E+03	1.76E+04	4.93E+02	1.82E+01
Thulium	Tm-166	2.80E-10	1.70E-10	5.99E-17	2.62E+02	3.49E+02	3.56E+02	8.01E+02	5.10E+01	1.89E+00
Thulium	Tm-167	5.60E-10	1.10E-09	2.72E-18	2.00E+02	2.67E+02	2.72E+02	6.12E+02	2.55E+01	9.45E-01
Thulium	Tm-170	1.30E-09	7.00E-09	7.54E-20	4.95E+02	6.61E+02	6.77E+02	1.51E+03	1.10E+01	4.07E-01
Thulium	Tm-171	1.10E-10	1.40E-09	5.03E-21	1.35E+03	1.80E+03	1.84E+03	4.09E+03	1.30E+02	4.81E+00
Thulium	Tm-172	1.70E-09	1.10E-09	1.56E-17	1.22E+02	1.62E+02	1.65E+02	3.72E+02	8.40E+00	3.11E-01
Thulium	Tm-173	3.10E-10	1.80E-10	1.09E-17	1.34E+03	1.79E+03	1.83E+03	4.11E+03	4.61E+01	1.71E+00
Thulium	Tm-175	2.70E-11	1.80E-11	3.21E-17	1.48E+04	1.98E+04	2.02E+04	4.54E+04	5.29E+02	1.96E+01
Thulium	Tm-175+D	4.70E-10	6.70E-10	3.21E-17	1.48E+04	1.98E+04	2.02E+04	4.54E+04	3.04E+01	1.13E+00
Thulium	Tm-175+E	4.70E-10	6.70E-10	3.21E-17	1.48E+04	1.98E+04	2.02E+04	4.54E+04	3.04E+01	1.13E+00
Tin	Sn-110	3.50E-10	1.60E-10	7.65E-18	3.94E+03	5.26E+03	5.37E+03	1.21E+04	4.08E+01	1.51E+00
Tin	Sn-110+D	3.50E-10	1.60E-10	5.57E-17	5.42E+02	7.23E+02	7.37E+02	1.66E+03	4.08E+01	1.51E+00
Tin	Sn-110+E	3.50E-10	1.60E-10	5.57E-17	5.42E+02	7.23E+02	7.37E+02	1.66E+03	4.08E+01	1.51E+00
Tin	Sn-111	2.30E-11	1.30E-11	1.54E-17	1.33E+04	1.78E+04	1.81E+04	4.08E+04	6.21E+02	2.30E+01
Tin	Sn-111+D	3.10E-10	2.40E-10	2.51E-17	8.18E+03	1.09E+04	1.11E+04	2.50E+04	4.61E+01	1.71E+00
Tin	Sn-111+E	3.10E-10	2.40E-10	2.51E-17	8.18E+03	1.09E+04	1.11E+04	2.50E+04	4.61E+01	1.71E+00
Tin	Sn-113	7.30E-10	2.70E-09	1.42E-19	3.00E+02	3.96E+02	4.13E+02	9.27E+02	1.96E+01	7.25E-01
Tin	Sn-113+D	7.30E-10	2.70E-09	7.28E-18	6.00E+00	8.00E+00	8.16E+00	1.84E+01	1.96E+01	7.25E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Tin	Sn-113+E	7.30E-10	2.70E-09	7.28E-18	6.00E+00	8.00E+00	8.16E+00	1.84E+01	1.96E+01	7.25E-01
Tin	Sn-117m	7.10E-10	2.40E-09	3.20E-18	1.15E+02	1.54E+02	1.57E+02	3.53E+02	2.01E+01	7.45E-01
Tin	Sn-119m	3.40E-10	2.20E-09	1.12E-20	1.33E+03	1.68E+03	1.94E+03	4.29E+03	4.20E+01	1.56E+00
Tin	Sn-121	2.30E-10	2.30E-10	9.17E-22	2.16E+06	2.30E+06	4.11E+06	8.44E+06	6.21E+01	2.30E+00
Tin	Sn-121m	3.80E-10	4.50E-09	7.67E-21	8.32E+01	8.10E+01	1.47E+02	3.21E+02	3.76E+01	1.39E+00
Tin	Sn-121m+D	5.60E-10	4.50E-09	7.67E-21	7.61E+01	7.19E+01	1.40E+02	3.03E+02	2.55E+01	9.45E-01
Tin	Sn-121m+E	5.60E-10	4.50E-09	7.67E-21	7.61E+01	7.19E+01	1.40E+02	3.03E+02	2.55E+01	9.45E-01
Tin	Sn-123	2.10E-09	8.10E-09	2.84E-19	1.32E+02	1.74E+02	1.83E+02	4.10E+02	6.80E+00	2.52E-01
Tin	Sn-123m	3.80E-11	2.70E-11	3.17E-18	5.70E+04	7.60E+04	7.75E+04	1.74E+05	3.76E+02	1.39E+01
Tin	Sn-125	3.10E-09	3.10E-09	1.03E-17	5.06E+01	6.74E+01	6.89E+01	1.55E+02	4.61E+00	1.71E-01
Tin	Sn-125+D	4.40E-09	8.70E-09	2.25E-17	2.32E+01	3.09E+01	3.15E+01	7.09E+01	3.25E+00	1.20E-01
Tin	Sn-125+E	4.40E-09	8.70E-09	2.25E-17	2.32E+01	3.09E+01	3.15E+01	7.09E+01	3.25E+00	1.20E-01
Tin	Sn-126	4.70E-09	2.80E-08	6.96E-19	9.22E-01	9.08E-01	1.53E+00	3.43E+00	3.04E+00	1.13E-01
Tin	Sn-126+D	4.70E-09	2.80E-08	5.94E-17	1.12E-02	1.12E-02	1.82E-02	4.10E-02	3.04E+00	1.13E-01
Tin	Sn-126+E	4.70E-09	2.80E-08	5.94E-17	1.12E-02	1.12E-02	1.82E-02	4.10E-02	3.04E+00	1.13E-01
Tin	Sn-127	2.00E-10	1.30E-10	6.18E-17	9.30E+02	1.24E+03	1.27E+03	2.85E+03	7.14E+01	2.65E+00
Tin	Sn-127+D	2.50E-09	3.30E-09	8.26E-17	6.96E+02	9.28E+02	9.47E+02	2.13E+03	5.71E+00	2.12E-01
Tin	Sn-127+E	2.50E-09	3.30E-09	8.26E-17	6.96E+02	9.28E+02	9.47E+02	2.13E+03	5.71E+00	2.12E-01
Tin	Sn-128	1.50E-10	9.20E-11	1.77E-17	6.92E+03	9.23E+03	9.42E+03	2.12E+04	9.52E+01	3.53E+00
Tin	Sn-128+D	1.50E-10	9.20E-11	7.83E-17	1.57E+03	2.09E+03	2.13E+03	4.79E+03	9.52E+01	3.53E+00
Tin	Sn-128+E	1.50E-10	9.20E-11	7.83E-17	1.57E+03	2.09E+03	2.13E+03	4.79E+03	9.52E+01	3.53E+00
Titanium	Ti-44	5.80E-09	4.20E-08	1.68E-18	4.83E-01	5.17E-01	7.63E-01	1.71E+00	2.46E+00	9.12E-02
Titanium	Ti-44+D	5.80E-09	4.20E-08	6.83E-17	1.20E-02	1.28E-02	1.89E-02	4.26E-02	2.46E+00	9.12E-02
Titanium	Ti-44+E	5.80E-09	4.20E-08	6.83E-17	1.20E-02	1.28E-02	1.89E-02	4.26E-02	2.46E+00	9.12E-02
Titanium	Ti-45	1.50E-10	8.80E-11	2.56E-17	1.53E+03	2.04E+03	2.08E+03	4.69E+03	9.52E+01	3.53E+00
Tungsten	W-176	1.00E-10	4.10E-11	2.24E-18	2.34E+04	3.12E+04	3.19E+04	7.17E+04	1.43E+02	5.29E+00
Tungsten	W-176+D	4.10E-10	2.30E-10	7.28E-17	7.21E+02	9.61E+02	9.81E+02	2.21E+03	3.48E+01	1.29E+00
Tungsten	W-176+E	4.10E-10	2.30E-10	7.28E-17	7.21E+02	9.61E+02	9.81E+02	2.21E+03	3.48E+01	1.29E+00
Tungsten	W-177	5.80E-11	2.40E-11	2.44E-17	2.20E+03	2.93E+03	2.99E+03	6.73E+03	2.46E+02	9.12E+00
Tungsten	W-177+D	1.70E-10	1.20E-10	2.44E-17	2.20E+03	2.93E+03	2.99E+03	6.73E+03	8.40E+01	3.11E+00
Tungsten	W-177+E	1.70E-10	1.20E-10	2.44E-17	2.20E+03	2.93E+03	2.99E+03	6.73E+03	8.40E+01	3.11E+00
Tungsten	W-178	2.20E-10	7.20E-11	1.14E-19	1.96E+03	2.54E+03	2.75E+03	6.19E+03	6.49E+01	2.41E+00
Tungsten	W-178+D	2.20E-10	7.20E-11	2.34E-18	9.89E+01	1.32E+02	1.35E+02	3.03E+02	6.49E+01	2.41E+00
Tungsten	W-178+E	2.20E-10	7.20E-11	2.34E-18	9.89E+01	1.32E+02	1.35E+02	3.03E+02	6.49E+01	2.41E+00
Tungsten	W-179	3.30E-12	9.20E-13	4.34E-19	4.45E+05	5.93E+05	6.05E+05	1.36E+06	4.33E+03	1.60E+02
Tungsten	W-179+D	6.80E-11	2.20E-10	6.95E-19	2.77E+05	3.69E+05	3.78E+05	8.50E+05	2.10E+02	7.78E+00
Tungsten	W-179+E	6.80E-11	2.20E-10	6.95E-19	2.77E+05	3.69E+05	3.78E+05	8.50E+05	2.10E+02	7.78E+00
Tungsten	W-181	7.60E-11	2.70E-11	3.48E-19	1.19E+02	1.58E+02	1.62E+02	3.65E+02	1.88E+02	6.96E+00
Tungsten	W-185	4.40E-10	1.20E-10	2.05E-21	6.54E+03	5.03E+03	2.92E+04	6.05E+04	3.25E+01	1.20E+00
Tungsten	W-187	6.30E-10	1.90E-10	1.38E-17	3.66E+02	4.87E+02	4.98E+02	1.12E+03	2.27E+01	8.40E-01
Tungsten	W-188	2.10E-09	5.70E-10	4.77E-20	8.35E+02	7.88E+02	1.87E+03	4.10E+03	6.80E+00	2.52E-01
Tungsten	W-188+D	3.50E-09	1.10E-09	1.72E-18	4.06E+01	5.24E+01	5.70E+01	1.28E+02	4.08E+00	1.51E-01
Tungsten	W-188+E	3.50E-09	1.10E-09	1.72E-18	4.06E+01	5.24E+01	5.70E+01	1.28E+02	4.08E+00	1.51E-01
Uranium	U-230	5.60E-08	1.30E-05	2.12E-20	8.01E+02	6.21E-01	2.03E+03	3.77E+03	2.55E-01	9.45E-03
Uranium	U-230+D	5.60E-08	1.30E-05	4.61E-19	3.26E+02	6.20E-01	5.46E+02	1.16E+03	2.55E-01	9.45E-03
Uranium	U-230+E	2.00E-06	1.80E-05	5.01E-19	2.31E+01	1.74E-02	6.12E+01	1.12E+02	7.14E-03	2.65E-04
Uranium	U-231	2.80E-10	4.70E-10	1.11E-18	1.08E+03	4.31E+02	1.47E+03	3.30E+03	5.10E+01	1.89E+00
Uranium	U-232	3.30E-07	7.80E-06	4.24E-21	4.63E-01	2.61E-04	1.50E+00	2.71E+00	4.33E-02	1.60E-03

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Uranium	U-232+E	4.70E-07	5.10E-05	5.18E-17	1.41E-02	1.81E-04	2.30E-02	5.14E-02	3.04E-02	1.13E-03
Uranium	U-233	5.10E-08	3.60E-06	6.77E-21	2.54E+00	1.40E-03	8.18E+00	1.49E+01	2.80E-01	1.04E-02
Uranium	U-234	4.90E-08	3.50E-06	1.84E-21	2.69E+00	1.46E-03	8.84E+00	1.60E+01	2.92E-01	1.08E-02
Uranium	U-235	4.70E-08	3.10E-06	3.53E-18	1.76E-01	1.51E-03	2.97E-01	6.63E-01	3.04E-01	1.13E-02
Uranium	U-236	4.70E-08	3.20E-06	9.51E-22	2.81E+00	1.52E-03	9.29E+00	1.68E+01	3.04E-01	1.13E-02
Uranium	U-237	7.60E-10	1.70E-09	2.58E-18	2.88E+02	1.03E+02	3.93E+02	8.83E+02	1.88E+01	6.96E-01
Uranium	U-238	4.50E-08	2.90E-06	4.26E-22	2.95E+00	1.59E-03	9.75E+00	1.76E+01	3.17E-01	1.18E-02
Uranium	U-238+D	4.50E-08	2.90E-06	8.34E-19	6.26E-01	1.58E-03	1.15E+00	2.50E+00	3.17E-01	1.18E-02
Uranium	U-238+E	4.50E-08	2.90E-06	8.34E-19	6.26E-01	1.58E-03	1.15E+00	2.50E+00	3.17E-01	1.18E-02
Uranium	U-239	2.70E-11	2.20E-11	8.47E-19	3.63E+05	3.74E+05	4.94E+05	1.11E+06	5.29E+02	1.96E+01
Uranium	U-239+D	8.30E-10	9.50E-10	4.54E-18	6.77E+04	3.35E+04	9.21E+04	2.07E+05	1.72E+01	6.37E-01
Uranium	U-239+E	8.30E-10	9.50E-10	4.54E-18	6.77E+04	3.35E+04	9.21E+04	2.07E+05	1.72E+01	6.37E-01
Uranium	U-240	1.10E-09	5.30E-10	5.94E-21	7.50E+05	1.12E+03	1.35E+06	2.82E+06	1.30E+01	4.81E-01
Uranium	U-240+D	1.10E-09	5.30E-10	1.02E-17	8.39E+02	5.59E+02	1.14E+03	2.57E+03	1.30E+01	4.81E-01
Uranium	U-240+E	1.10E-09	5.30E-10	1.02E-17	8.39E+02	5.59E+02	1.14E+03	2.57E+03	1.30E+01	4.81E-01
Vanadium	V-47	6.30E-11	2.90E-11	2.95E-17	7.53E+03	1.00E+04	1.02E+04	2.30E+04	2.27E+02	8.40E+00
Vanadium	V-48	2.00E-09	2.40E-09	9.33E-17	3.32E+00	4.43E+00	4.52E+00	1.02E+01	7.14E+00	2.65E-01
Vanadium	V-49	1.80E-11	3.40E-11	0.00E+00	3.04E+05	4.23E+05	4.73E+05	8.51E+05	7.94E+02	2.94E+01
Xenon	Xe-120			1.14E-17	1.59E+04	2.12E+04	2.16E+04	4.86E+04		
Xenon	Xe-120+D			1.00E-16	1.81E+03	2.41E+03	2.46E+03	5.54E+03		
Xenon	Xe-120+E			1.00E-16	1.81E+03	2.41E+03	2.46E+03	5.54E+03		
Xenon	Xe-121			5.84E-17	3.09E+03	4.12E+03	4.21E+03	9.47E+03		
Xenon	Xe-121+D			8.61E-17	2.10E+03	2.80E+03	2.85E+03	6.42E+03		
Xenon	Xe-121+E			8.61E-17	2.10E+03	2.80E+03	2.85E+03	6.42E+03		
Xenon	Xe-122			1.25E-18	4.81E+03	6.41E+03	6.54E+03	1.47E+04		
Xenon	Xe-122+D			2.96E-17	2.03E+02	2.71E+02	2.76E+02	6.21E+02		
Xenon	Xe-122+E			2.96E-17	2.03E+02	2.71E+02	2.76E+02	6.21E+02		
Xenon	Xe-123			1.83E-17	3.17E+03	4.23E+03	4.31E+03	9.71E+03		
Xenon	Xe-123+D			2.18E-17	2.66E+03	3.55E+03	3.62E+03	8.15E+03		
Xenon	Xe-123+E			2.18E-17	2.66E+03	3.55E+03	3.62E+03	8.15E+03		
Xenon	Xe-125			6.36E-18	1.12E+03	1.49E+03	1.52E+03	3.42E+03		
Xenon	Xe-127			6.48E-18	2.13E+01	2.84E+01	2.90E+01	6.52E+01		
Xenon	Xe-129m			3.05E-19	2.06E+03	2.75E+03	2.80E+03	6.31E+03		
Xenon	Xe-131m			1.03E-19	4.10E+03	5.47E+03	5.58E+03	1.26E+04		
Xenon	Xe-133			4.67E-19	2.05E+03	2.74E+03	2.79E+03	6.28E+03		
Xenon	Xe-133m			6.34E-19	3.63E+03	4.84E+03	4.93E+03	1.11E+04		
Xenon	Xe-133m+D			1.10E-18	2.09E+03	2.79E+03	2.84E+03	6.40E+03		
Xenon	Xe-133m+E			1.10E-18	2.09E+03	2.79E+03	2.84E+03	6.40E+03		
Xenon	Xe-135			6.58E-18	2.02E+03	2.69E+03	2.75E+03	6.18E+03		
Xenon	Xe-135m			1.26E-17	3.76E+04	5.01E+04	5.11E+04	1.15E+05		
Xenon	Xe-135m+D			1.92E-17	2.47E+04	3.29E+04	3.36E+04	7.55E+04		
Xenon	Xe-135m+E			1.92E-17	2.47E+04	3.29E+04	3.36E+04	7.55E+04		
Xenon	Xe-138			3.75E-17	1.36E+04	1.82E+04	1.85E+04	4.17E+04		
Xenon	Xe-138+D			1.17E-16	4.37E+03	5.83E+03	5.94E+03	1.34E+04		
Xenon	Xe-138+E			1.17E-16	4.37E+03	5.83E+03	5.94E+03	1.34E+04		
Ytterbium	Yb-162	2.30E-11	1.30E-11	2.25E-18	1.70E+05	2.27E+05	2.32E+05	5.21E+05	6.21E+02	2.30E+01
Ytterbium	Yb-162+D	5.20E-11	2.90E-11	6.02E-17	6.37E+03	8.49E+03	8.66E+03	1.95E+04	2.75E+02	1.02E+01
Ytterbium	Yb-162+E	5.20E-11	2.90E-11	6.02E-17	6.37E+03	8.49E+03	8.66E+03	1.95E+04	2.75E+02	1.02E+01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Ytterbium	Yb-166	9.50E-10	7.20E-10	6.82E-19	3.11E+03	4.15E+03	4.23E+03	9.51E+03	1.50E+01	5.57E-01
Ytterbium	Yb-166+D	1.20E-09	8.90E-10	6.06E-17	3.51E+01	4.68E+01	4.78E+01	1.08E+02	1.19E+01	4.41E-01
Ytterbium	Yb-166+E	1.20E-09	8.90E-10	6.06E-17	3.51E+01	4.68E+01	4.78E+01	1.08E+02	1.19E+01	4.41E-01
Ytterbium	Yb-167	6.70E-12	6.50E-12	4.28E-18	9.67E+04	1.29E+05	1.32E+05	2.96E+05	2.13E+03	7.90E+01
Ytterbium	Yb-167+D	5.70E-10	1.10E-09	7.00E-18	5.91E+04	7.88E+04	8.04E+04	1.81E+05	2.51E+01	9.28E-01
Ytterbium	Yb-167+E	5.70E-10	1.10E-09	7.00E-18	5.91E+04	7.88E+04	8.04E+04	1.81E+05	2.51E+01	9.28E-01
Ytterbium	Yb-169	7.10E-10	2.50E-09	5.34E-18	2.94E+01	3.92E+01	4.00E+01	9.00E+01	2.01E+01	7.45E-01
Ytterbium	Yb-175	4.40E-10	6.50E-10	1.04E-18	1.15E+03	1.54E+03	1.57E+03	3.53E+03	3.25E+01	1.20E+00
Ytterbium	Yb-177	8.80E-11	6.40E-11	5.60E-18	1.13E+04	1.51E+04	1.54E+04	3.47E+04	1.62E+02	6.01E+00
Ytterbium	Yb-177+D	6.20E-10	1.20E-09	6.38E-18	9.96E+03	1.33E+04	1.35E+04	3.05E+04	2.30E+01	8.53E-01
Ytterbium	Yb-177+E	6.20E-10	1.20E-09	6.38E-18	9.96E+03	1.33E+04	1.35E+04	3.05E+04	2.30E+01	8.53E-01
Ytterbium	Yb-178	1.20E-10	7.00E-11	9.75E-19	1.00E+05	1.34E+05	1.37E+05	3.07E+05	1.19E+02	4.41E+00
Ytterbium	Yb-178+D	1.70E-10	9.40E-11	5.54E-18	1.77E+04	2.36E+04	2.40E+04	5.41E+04	8.40E+01	3.11E+00
Ytterbium	Yb-178+E	1.70E-10	9.40E-11	5.54E-18	1.77E+04	2.36E+04	2.40E+04	5.41E+04	8.40E+01	3.11E+00
Yttrium	Y-86	9.60E-10	4.50E-10	1.15E-16	7.12E+01	9.50E+01	9.69E+01	2.18E+02	1.49E+01	5.51E-01
Yttrium	Y-86m	5.60E-11	2.70E-11	5.66E-18	2.67E+04	3.55E+04	3.63E+04	8.16E+04	2.55E+02	9.45E+00
Yttrium	Y-86m+D	1.00E-09	4.70E-10	1.20E-16	1.26E+03	1.68E+03	1.71E+03	3.85E+03	1.43E+01	5.29E-01
Yttrium	Y-86m+E	1.00E-09	4.70E-10	1.20E-16	1.26E+03	1.68E+03	1.71E+03	3.85E+03	1.43E+01	5.29E-01
Yttrium	Y-87	5.50E-10	3.70E-10	1.31E-17	1.15E+02	1.53E+02	1.56E+02	3.51E+02	2.60E+01	9.62E-01
Yttrium	Y-87+D	5.50E-10	3.70E-10	2.21E-17	6.80E+01	9.07E+01	9.25E+01	2.08E+02	2.60E+01	9.62E-01
Yttrium	Y-87+E	5.50E-10	3.70E-10	2.21E-17	6.80E+01	9.07E+01	9.25E+01	2.08E+02	2.60E+01	9.62E-01
Yttrium	Y-88	1.30E-09	4.10E-09	9.05E-17	5.21E-01	6.95E-01	7.09E-01	1.59E+00	1.10E+01	4.07E-01
Yttrium	Y-90	2.70E-09	1.40E-09	2.15E-19	8.26E+03	1.07E+04	1.16E+04	2.59E+04	5.29E+00	1.96E-01
Yttrium	Y-90m	1.70E-10	9.50E-11	1.75E-17	2.16E+03	2.88E+03	2.94E+03	6.62E+03	8.40E+01	3.11E+00
Yttrium	Y-90m+D	2.80E-09	1.50E-09	1.75E-17	2.16E+03	2.88E+03	2.94E+03	6.61E+03	5.10E+00	1.89E-01
Yttrium	Y-90m+E	2.80E-09	1.50E-09	1.75E-17	2.16E+03	2.88E+03	2.94E+03	6.61E+03	5.10E+00	1.89E-01
Yttrium	Y-91	2.40E-09	7.10E-09	2.03E-19	4.00E+02	5.17E+02	5.60E+02	1.25E+03	5.95E+00	2.20E-01
Yttrium	Y-91m	1.10E-11	1.00E-11	1.58E-17	9.22E+03	1.23E+04	1.25E+04	2.82E+04	1.30E+03	4.81E+01
Yttrium	Y-91m+D	2.40E-09	7.10E-09	1.58E-17	9.22E+03	1.23E+04	1.25E+04	2.82E+04	5.95E+00	2.20E-01
Yttrium	Y-91m+E	2.40E-09	7.10E-09	1.58E-17	9.22E+03	1.23E+04	1.25E+04	2.82E+04	5.95E+00	2.20E-01
Yttrium	Y-92	4.90E-10	1.70E-10	8.57E-18	3.98E+03	5.30E+03	5.41E+03	1.22E+04	2.92E+01	1.08E+00
Yttrium	Y-93	1.20E-09	4.00E-10	3.20E-18	3.73E+03	4.97E+03	5.08E+03	1.14E+04	1.19E+01	4.41E-01
Yttrium	Y-94	8.10E-11	2.70E-11	3.65E-17	1.04E+04	1.39E+04	1.41E+04	3.18E+04	1.76E+02	6.53E+00
Yttrium	Y-95	4.60E-11	1.50E-11	3.20E-17	2.12E+04	2.82E+04	2.88E+04	6.47E+04	3.11E+02	1.15E+01
Yttrium	Y-95+D	1.60E-09	6.30E-09	7.84E-17	8.63E+03	1.15E+04	1.17E+04	2.64E+04	8.93E+00	3.31E-01
Yttrium	Y-95+E	1.60E-09	6.30E-09	7.84E-17	8.63E+03	1.15E+04	1.17E+04	2.64E+04	8.93E+00	3.31E-01
Zinc	Zn-62	9.40E-10	5.00E-10	1.26E-17	1.01E+03	1.24E+01	1.41E+03	3.17E+03	1.52E+01	5.63E-01
Zinc	Zn-62+D	9.40E-10	5.00E-10	4.26E-17	3.04E+02	1.21E+01	4.16E+02	9.36E+02	1.52E+01	5.63E-01
Zinc	Zn-62+E	9.40E-10	5.00E-10	4.26E-17	3.04E+02	1.21E+01	4.16E+02	9.36E+02	1.52E+01	5.63E-01
Zinc	Zn-63	7.90E-11	3.50E-11	3.29E-17	5.77E+03	1.69E+03	7.86E+03	1.77E+04	1.81E+02	6.70E+00
Zinc	Zn-65	3.90E-09	1.60E-09	1.88E-17	1.02E+00	4.75E-03	1.49E+00	3.35E+00	3.66E+00	1.36E-01
Zinc	Zn-69	3.10E-11	2.60E-11	1.57E-20	4.76E+06	3.69E+03	1.10E+07	2.46E+07	4.61E+02	1.71E+01
Zinc	Zn-69m	3.30E-10	2.40E-10	1.20E-17	7.24E+02	2.34E+01	9.94E+02	2.24E+03	4.33E+01	1.60E+00
Zinc	Zn-69m+D	3.30E-10	2.70E-10	1.20E-17	7.24E+02	2.34E+01	9.94E+02	2.24E+03	4.33E+01	1.60E+00
Zinc	Zn-69m+E	3.30E-10	2.70E-10	1.20E-17	7.24E+02	2.34E+01	9.94E+02	2.24E+03	4.33E+01	1.60E+00
Zinc	Zn-71m	2.40E-10	1.50E-10	4.61E-17	6.67E+02	1.02E+02	9.09E+02	2.04E+03	5.95E+01	2.20E+00
Zinc	Zn-72	1.40E-09	1.20E-09	3.20E-18	7.02E+02	1.67E+00	1.10E+03	2.48E+03	1.02E+01	3.78E-01
Zinc	Zn-72+D	2.50E-09	1.70E-09	9.39E-17	2.74E+01	9.12E-01	3.76E+01	8.46E+01	5.71E+00	2.12E-01

		Toxicity			Dose Cleanup Concentrations					
Element	Isotope	ICRP60 Ingestion Dose Conversion Factor (Sv/Bq)	ICRP60 Inhalation Dose Conversion Factor (Sv/Bq)	ICRP60 External Exposure Dose Conversion Factor (Sv/s per Bq/m^3)	ICRP60 Residential Soil (Bq/g)	ICRP60 Agricultural Soil (Bq/g)	ICRP60 Outdoor Worker Soil (Bq/g)	ICRP60 Indoor Worker Soil (Bq/g)	ICRP60 Tapwater (Bq/L)	ICRP60 Ingestion of Fish (Bq/g)
Zinc	Zn-72+E	2.50E-09	1.70E-09	9.39E-17	2.74E+01	9.12E-01	3.76E+01	8.46E+01	5.71E+00	2.12E-01
Zirconium	Zr-86	8.60E-10	4.20E-10	7.06E-18	1.04E+03	1.38E+03	1.41E+03	3.17E+03	1.66E+01	6.15E-01
Zirconium	Zr-86+D	1.80E-09	8.70E-10	1.22E-16	6.00E+01	8.00E+01	8.16E+01	1.84E+02	7.94E+00	2.94E-01
Zirconium	Zr-86+E	1.80E-09	8.70E-10	1.22E-16	6.00E+01	8.00E+01	8.16E+01	1.84E+02	7.94E+00	2.94E-01
Zirconium	Zr-88	4.50E-10	2.60E-09	1.12E-17	5.38E+00	7.18E+00	7.32E+00	1.65E+01	3.17E+01	1.18E+00
Zirconium	Zr-88+D	1.80E-09	6.70E-09	1.02E-16	5.91E-01	7.88E-01	8.04E-01	1.81E+00	7.94E+00	2.94E-01
Zirconium	Zr-88+E	1.80E-09	6.70E-09	1.02E-16	5.91E-01	7.88E-01	8.04E-01	1.81E+00	7.94E+00	2.94E-01
Zirconium	Zr-89	7.90E-10	5.20E-10	3.61E-17	4.26E+01	5.69E+01	5.80E+01	1.30E+02	1.81E+01	6.70E-01
Zirconium	Zr-93	1.10E-09	1.00E-08	0.00E+00	1.64E+02	1.34E+02	4.04E+02	7.27E+02	1.30E+01	4.81E-01
Zirconium	Zr-95	9.50E-10	4.80E-09	2.27E-17	3.46E+00	4.62E+00	4.71E+00	1.06E+01	1.50E+01	5.57E-01
Zirconium	Zr-95+D	1.50E-09	6.30E-09	4.64E-17	1.69E+00	2.26E+00	2.30E+00	5.18E+00	9.52E+00	3.53E-01
Zirconium	Zr-95+E	1.50E-09	6.30E-09	4.64E-17	1.69E+00	2.26E+00	2.30E+00	5.18E+00	9.52E+00	3.53E-01
Zirconium	Zr-97	2.10E-09	9.20E-10	5.81E-18	1.23E+03	1.64E+03	1.67E+03	3.76E+03	6.80E+00	2.52E-01
Zirconium	Zr-97+D	2.10E-09	9.20E-10	4.70E-17	1.52E+02	2.03E+02	2.07E+02	4.65E+02	6.80E+00	2.52E-01
Zirconium	Zr-97+E	2.10E-09	9.20E-10	4.70E-17	1.52E+02	2.03E+02	2.07E+02	4.65E+02	6.80E+00	2.52E-01