		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	Radionuclide	Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)	External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Lambda	F_{surf}	Soil Volume Soil Volume SDCC (pCi/g)	Soil Volume 1cm SDCC (pCi/g)	Soil Volume 5cm SDCC (pCi/g)	Soil Volume 15cm SDCC (pCi/g)	Ground Plane SDCC (pCi/cm^2)	Soil Volume SDCC (mg/kg)
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Actinium (89)	Ac-223+D	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	1.66E+05							
Actinium (89)	Ac-223+E	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	1.66E+05							
Actinium (89)	Ac-224	7.72E-01	2.05E-01	5.50E-01	7.53E-01	2.07E-01	2.09E+03	1.33	9.94E+03	3.74E+04	1.40E+04	1.02E+04	3.72E+04	2.06E-09
Actinium (89)	Ac-225	5.76E-02	1.64E-02	4.25E-02	5.65E-02	1.72E-02	2.53E+01	1.41	1.52E+03	5.32E+03	2.05E+03	1.55E+03	5.09E+03	2.62E-08
Actinium (89)	Ac-225+D	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	2.53E+01	1.19	8.74E+01	4.08E+02	1.45E+02	9.66E+01	3.46E+02	1.51E-09
Actinium (89)	Ac-225+E	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	2.53E+01							
Actinium (89)	Ac-226	5.67E-01	1.40E-01	3.86E-01	5.48E-01	1.58E-01	2.09E+02	1.3	1.38E+03	5.61E+03	2.03E+03	1.43E+03	4.98E+03	2.90E-09
Actinium (89)	Ac-227	4.46E-04	1.31E-04	3.36E-04	4.40E-04	1.65E-04	3.18E-02	1.43	7.74E+03	2.62E+04	1.03E+04	7.83E+03	2.10E+04	1.07E-04
Actinium (89)	Ac-228	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	9.90E+02	1.19	7.14E+02	3.76E+03	1.31E+03	8.26E+02	3.68E+03	3.19E-10
Silver (47)	Ag-102	2.00E+01	3.71E+00	1.07E+01	1.71E+01	3.72E+00	2.82E+04	1.17	5.88E+03	3.16E+04	1.10E+04	6.88E+03	3.15E+04	4.12E-11
Silver (47)	Ag-103	4.18E+00	8.47E-01	2.41E+00	3.73E+00	8.69E-01	5.54E+03	1.21	5.36E+03	2.64E+04	9.30E+03	6.00E+03	2.57E+04	1.93E-10
Silver (47)	Ag-103+D	4.18E+00	8.49E-01	2.41E+00	3.73E+00	8.80E-01	5.54E+03	1	6.45E+03	3.17E+04	1.12E+04	7.22E+03	3.06E+04	2.32E-10
Silver (47)	Ag-104	1.56E+01	2.98E+00	8.56E+00	1.36E+01	2.94E+00	5.26E+03	1.18	1.39E+03	7.27E+03	2.53E+03	1.60E+03	7.38E+03	5.31E-11
Silver (47)	Ag-104m	6.88E+00	1.31E+00	3.75E+00	5.93E+00	1.33E+00	1.09E+04	1.18	6.52E+03	3.43E+04	1.20E+04	7.57E+03	3.37E+04	1.21E-10
Silver (47)	Ag-105	2.70E+00	5.73E-01	1.63E+00	2.48E+00	5.72E-01	6.17E+00	1.23	9.02E+00	4.26E+01	1.50E+01	9.83E+00	4.26E+01	2.98E-10
Silver (47)	Ag-106	3.90E+00	8.09E-01	2.29E+00	3.52E+00	8.65E-01	1.52E+04	1.21	1.57E+04	7.56E+04	2.67E+04	1.74E+04	7.08E+04	2.12E-10
Silver (47)	Ag-106m	1.64E+01	3.13E+00	9.01E+00	1.42E+01	3.08E+00	3.01E+01	1.18	7.56E+00	3.95E+01	1.37E+01	8.71E+00	4.02E+01	5.17E-11
Silver (47)	Ag-108	1.14E-01	2.98E-02	7.03E-02	1.04E-01	1.05E-01	1.54E+05	1.21	5.40E+06	2.07E+07	8.78E+06	5.94E+06	5.90E+06	7.36E-09
Silver (47)	Ag-108m	9.01E+00	1.82E+00	5.20E+00	8.08E+00	1.81E+00	5.46E-03	1.2	4.51E-01	2.23E+00	7.80E-01	5.03E-01	2.24E+00	1.73E-08
Silver (47)	Ag-108m+D	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	5.46E-03	1	5.41E-01	2.67E+00	9.38E-01	6.04E-01	2.68E+00	2.08E-08
Silver (47)	Ag-108m+E	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00								
Silver (47)	Ag-109m	1.02E-02	4.16E-03	8.60E-03	1.02E-02	8.78E-03	5.52E+05	1.33	1.97E+08	4.85E+08	2.35E+08	1.97E+08	2.30E+08	7.57E-08
Silver (47)	Ag-110	2.37E-01	6.99E-02	1.48E-01	2.14E-01	1.90E-01	8.88E+05	1.19	1.53E+07	5.19E+07	2.45E+07	1.69E+07	1.91E+07	3.69E-09
Silver (47)	Ag-110m	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	1.01E+00	1.17	4.08E-01	2.16E+00	7.48E-01	4.71E-01	2.19E+00	8.60E-11
Silver (47)	Ag-110m+D	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	1.01E+00	1	4.79E-01	2.53E+00	8.77E-01	5.52E-01	2.57E+00	1.01E-10
Silver (47)	Ag-110m+E	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00								
Silver (47)	Ag-111	1.40E-01	3.19E-02	8.78E-02	1.31E-01	6.16E-02	3.40E+01	1.22	9.72E+02	4.25E+03	1.54E+03	1.04E+03	2.20E+03	6.17E-09
Silver (47)	Ag-112	4.05E+00	7.70E-01	2.16E+00	3.43E+00	8.71E-01	1.95E+03	1.16	2.01E+03	1.06E+04	3.76E+03	2.37E+03	9.34E+03	2.25E-10
Silver (47)	Ag-115	4.31E+00	7.96E-01	2.26E+00	3.62E+00	8.75E-01	1.82E+04	1.16	1.78E+04	9.60E+04	3.39E+04	2.11E+04	8.74E+04	2.17E-10
Aluminum (13)	Al-26	1.65E+01	2.93E+00	8.47E+00	1.37E+01	2.88E+00	9.68E-07	1.16	2.56E-01	1.44E+00	4.98E-01	3.07E-01	1.46E+00	1.33E-05
Aluminum (13)	Al-28	1.16E+01	1.94E+00	5.61E+00	9.29E+00	2.00E+00	1.63E+05	1.13	6.04E+04	3.60E+05	1.24E+05	7.52E+04	3.50E+05	2.02E-11
Americium (95)	Am-237	1.71E+00	3.95E-01	1.10E+00	1.60E+00	3.94E-01	4.99E+03	1.28	1.11E+04	4.81E+04	1.73E+04	1.19E+04	4.82E+04	1.02E-09
Americium (95)	Am-238	5.02E+00	9.74E-01	2.78E+00	4.35E+00	9.65E-01	3.72E+03	1.21	2.99E+03	1.54E+04	5.39E+03	3.45E+03	1.55E+04	3.71E-10
Americium (95)	Am-239	8.82E-01	2.37E-01	6.32E-01	8.62E-01	2.43E-01	5.10E+02	1.34	2.11E+03	7.85E+03	2.94E+03	2.16E+03	7.66E+03	1.92E-09
Americium (95)	Am-240	5.84E+00	1.13E+00	3.21E+00	5.07E+00	1.12E+00	1.20E+02	1.21	8.25E+01	4.27E+02	1.50E+02	9.49E+01	4.31E+02	3.21E-10
Americium (95)	Am-241	3.71E-02	1.84E-02	3.45E-02	3.71E-02	2.72E-02	1.60E-03	1.39	9.42E+01	1.91E+02	1.01E+02	9.42E+01	1.29E+02	2.75E-05
Americium (95)	Am-242	4.48E-02	1.40E-02	3.51E-02	4.48E-02	1.88E-02	3.79E+02	1.38	2.99E+04	9.59E+04	3.81E+04	2.99E+04	7.12E+04	3.70E-08
Americium (95)	Am-242m	1.44E-03	6.47E-04	1.19E-03	1.43E-03	2.64E-03	4.56E-03	1.4	2.43E+03	5.40E+03	2.94E+03	2.44E+03	1.32E+03	2.32E-04
Americium (95)	Am-242m+D	6.15E-02	1.74E-02	4.44E-02	5.93E-02	2.44E-02	4.56E-03	1.31	6.05E+01	2.14E+02	8.40E+01	6.28E+01	1.53E+02	5.78E-06
Americium (95)	Am-242m+E	6.15E-02	1.75E-02	4.44E-02	5.95E-02	2.50E-02	4.56E-03							
Americium (95)	Am-243	1.24E-01	4.90E-02	1.08E-01	1.24E-01	5.59E-02	9.39E-05	1.34	2.94E+01	7.43E+01	3.38E+01	2.94E+01	6.52E+01	1.48E-04
Americium (95)	Am-243+D	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	9.39E-05	1.23	4.88E+00	1.76E+01	6.76E+00	5.02E+00	1.68E+01	2.45E-05
Americium (95)	Am-243+E	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	9.39E-05							
Americium (95)	Am-244	4.48E+00	8.84E-01	2.52E+00	3.95E+00	8.87E-01	6.01E+02	1.23	5.33E+02	2.70E+03	9.48E+02	6.03E+02	2.69E+03	4.20E-10
Americium (95)	Am-244m	1.07E-02	6.51E-03	8.95E-03	1.05E-02	6.48E-02	1.40E+04	1.39	4.57E+06	7.53E+06	5.48E+06	4.68E+06	7.57E+05	1.54E-07
Americium (95)	Am-245	1.33E-01	3.43E-02	9.21E-02	1.29E-01	4.81E-02	2.96E+03	1.31	8.29E+04	3.21E+05	1.20E+05	8.56E+04	2.29E+05	1.33E-08
Americium (95)	Am-246	3.67E+00	7.61E-01	2.14E+00	3.30E+00	7.94E-01	9.34E+03	1.25	9.90E+03	4.78E+04	1.70E+04	1.10E+04	4.59E+04	5.06E-10
Americium (95)	Am-246m	6.01E+00	1.13E+00	3.25E+00	5.17E+00	1.16E+00	1.46E+04	1.18	1.00E+04	5.31E+04	1.85E+04	1.16E+04	5.17E+04	3.28E-10
Argon (18)	Ar-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E+00	0						

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Argon (18)	Ar-39	8.02E-04	2.95E-04	6.29E-04	7.89E-04	2.95E-03	2.58E-03	1.25	4.85E+03	1.32E+04	6.18E+03	4.93E+03	1.32E+03	1.42E-04
Argon (18)	Ar-41	7.93E+00	1.41E+00	4.08E+00	6.62E+00	1.42E+00	3.32E+03	1.15	1.77E+03	9.93E+03	3.43E+03	2.12E+03	9.85E+03	4.24E-11
Arsenic (33)	As-69	5.60E+00	1.19E+00	3.32E+00	5.09E+00	1.30E+00	2.40E+04	1.2	1.74E+04	8.19E+04	2.93E+04	1.91E+04	7.50E+04	9.70E-11
Arsenic (33)	As-69+D	1.06E+01	2.16E+00	6.12E+00	9.49E+00	2.28E+00	2.40E+04	1.08	1.02E+04	5.01E+04	1.77E+04	1.14E+04	4.77E+04	5.71E-11
Arsenic (33)	As-70	2.44E+01	4.55E+00	1.31E+01	2.09E+01	4.55E+00	6.92E+03	1.17	1.18E+03	6.35E+03	2.21E+03	1.38E+03	6.34E+03	2.32E-11
Arsenic (33)	As-71	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	9.37E+01	1.21	1.26E+02	5.91E+02	2.08E+02	1.37E+02	5.96E+02	1.86E-10
Arsenic (33)	As-71+D	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	9.37E+01	1	1.53E+02	7.15E+02	2.52E+02	1.66E+02	7.21E+02	2.25E-10
Arsenic (33)	As-72	1.03E+01	2.03E+00	5.80E+00	9.08E+00	2.11E+00	2.33E+02	1.19	9.30E+01	4.72E+02	1.65E+02	1.06E+02	4.54E+02	5.56E-11
Arsenic (33)	As-73	7.83E-03	4.31E-03	7.52E-03	7.83E-03	6.05E-03	3.15E+00	1.51	1.35E+03	2.46E+03	1.41E+03	1.35E+03	1.75E+03	6.09E-08
Arsenic (33)	As-74	4.21E+00	8.60E-01	2.44E+00	3.79E+00	8.72E-01	1.42E+01	1.2	1.37E+01	6.74E+01	2.37E+01	1.53E+01	6.64E+01	1.39E-10
Arsenic (33)	As-76	2.54E+00	5.13E-01	1.42E+00	2.22E+00	6.12E-01	2.31E+02	1.18	3.74E+02	1.85E+03	6.66E+02	4.28E+02	1.55E+03	2.39E-10
Arsenic (33)	As-77	4.53E-02	1.03E-02	2.87E-02	4.25E-02	1.65E-02	1.56E+02	1.22	1.37E+04	6.06E+04	2.17E+04	1.46E+04	3.78E+04	1.31E-08
Arsenic (33)	As-78	7.63E+00	1.43E+00	4.05E+00	6.49E+00	1.51E+00	4.02E+03	1.16	2.20E+03	1.18E+04	4.15E+03	2.59E+03	1.12E+04	8.30E-11
Astatine (85)	At-207	7.61E+00	1.45E+00	4.14E+00	6.55E+00	1.42E+00	3.37E+03	1.19	1.81E+03	9.50E+03	3.33E+03	2.11E+03	9.68E+03	2.16E-10
Astatine (85)	At-211	1.03E-01	3.60E-02	8.41E-02	1.02E-01	3.87E-02	8.42E+02	1.4	2.84E+04	8.12E+04	3.48E+04	2.87E+04	7.54E+04	1.38E-08
Astatine (85)	At-211+D	1.29E-01	4.10E-02	9.88E-02	1.25E-01	4.38E-02	8.42E+02	1.02	3.12E+04	9.82E+04	4.08E+04	3.23E+04	9.21E+04	1.52E-08
Astatine (85)	At-211+E	3.82E+00	7.52E-01	2.14E+00	3.32E+00	7.49E-01	8.42E+02							
Astatine (85)	At-215	1.02E-03	2.18E-04	6.21E-04	9.44E-04	2.15E-04	2.19E+11	1.21	8.59E+14	4.02E+15	1.41E+15	9.30E+14	4.09E+15	1.64E-06
Astatine (85)	At-216	3.99E-03	1.41E-03	3.32E-03	3.99E-03	1.51E-03	7.28E+10	1.4	6.37E+13	1.80E+14	7.66E+13	6.37E+13	1.69E+14	3.66E-07
Astatine (85)	At-217	1.65E-03	3.47E-04	9.81E-04	1.50E-03	3.42E-04	6.77E+08	1.21	1.64E+12	7.83E+12	2.77E+12	1.81E+12	7.95E+12	1.02E-06
Astatine (85)	At-218	4.87E-03	2.70E-03	4.66E-03	4.87E-03	4.25E-03	1.09E+07	1.5	7.31E+09	1.32E+10	7.63E+09	7.31E+09	8.37E+09	2.83E-07
Gold (79)	Au-193	5.48E-01	1.57E-01	3.94E-01	5.28E-01	1.66E-01	3.44E+02	1.31	2.32E+03	8.12E+03	3.24E+03	2.41E+03	7.69E+03	2.53E-09
Gold (79)	Au-194	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	1.54E+02	1.18	1.03E+02	5.49E+02	1.92E+02	1.21E+02	5.59E+02	2.52E-10
Gold (79)	Au-195	1.81E-01	7.24E-02	1.58E-01	1.81E-01	8.23E-02	1.38E+00	1.4	3.54E+01	8.86E+01	4.07E+01	3.54E+01	7.79E+01	9.69E-09
Gold (79)	Au-195m	9.33E-01	2.18E-01	6.10E-01	8.90E-01	2.15E-01	7.17E+05	1.29	2.91E+06	1.24E+07	4.45E+06	3.05E+06	1.26E+07	1.54E-09
Gold (79)	Au-198	2.16E+00	4.59E-01	1.31E+00	1.98E+00	4.75E-01	9.38E+01	1.21	1.75E+02	8.23E+02	2.89E+02	1.91E+02	7.95E+02	7.15E-10
Gold (79)	Au-198m	2.41E+00	6.12E-01	1.66E+00	2.33E+00	6.10E-01	1.10E+02	1.27	1.75E+02	6.89E+02	2.54E+02	1.81E+02	6.91E+02	6.12E-10
Gold (79)	Au-199	3.54E-01	9.34E-02	2.52E-01	3.47E-01	9.30E-02	8.06E+01	1.29	8.58E+02	3.25E+03	1.21E+03	8.76E+02	3.27E+03	4.11E-09
Gold (79)	Au-200	1.63E+00	3.17E-01	8.90E-01	1.40E+00	3.93E-01	7.53E+03	1.17	1.92E+04	9.86E+04	3.52E+04	2.23E+04	7.95E+04	9.89E-10
Gold (79)	Au-200m	1.13E+01	2.33E+00	6.68E+00	1.03E+01	2.31E+00	3.25E+02	1.2	1.16E+02	5.64E+02	1.97E+02	1.28E+02	5.69E+02	1.39E-10
Gold (79)	Au-201	2.89E-01	6.32E-02	1.73E-01	2.63E-01	1.05E-01	1.38E+04	1.23	1.89E+05	8.65E+05	3.15E+05	2.08E+05	5.19E+05	5.35E-09
Barium (56)	Ba-126	7.37E-01	1.64E-01	4.55E-01	6.83E-01	1.76E-01	3.77E+03	1.24	2.01E+04	9.00E+04	3.25E+04	2.17E+04	8.40E+04	1.30E-09
Barium (56)	Ba-128	2.67E-01	6.60E-02	1.75E-01	2.54E-01	7.91E-02	1.04E+02	1.27	1.50E+03	6.05E+03	2.29E+03	1.58E+03	5.05E+03	3.57E-09
Barium (56)	Ba-131	2.24E+00	4.90E-01	1.37E+00	2.05E+00	5.01E-01	2.14E+01	1.22	3.81E+01	1.74E+02	6.22E+01	4.15E+01	1.70E+02	4.52E-10
Barium (56)	Ba-131m	2.16E-01	6.88E-02	1.68E-01	2.14E-01	7.82E-02	2.49E+04	1.27	4.42E+05	1.39E+06	5.68E+05	4.46E+05	1.22E+06	4.50E-09
Barium (56)	Ba-133	1.82E+00	4.18E-01	1.15E+00	1.70E+00	4.35E-01	6.45E-02	1.24	2.23E+00	9.72E+00	3.52E+00	2.38E+00	9.33E+00	8.93E-09
Barium (56)	Ba-133m	2.50E-01	6.06E-02	1.62E-01	2.37E-01	6.97E-02	1.56E+02	1.27	2.40E+03	9.89E+03	3.69E+03	2.53E+03	8.60E+03	3.97E-09
Barium (56)	Ba-135m	2.16E-01	5.35E-02	1.42E-01	2.07E-01	6.28E-02	2.12E+02	1.26	3.77E+03	1.52E+04	5.75E+03	3.94E+03	1.30E+04	4.67E-09
Barium (56)	Ba-137m	3.38E+00	6.71E-01	1.92E+00	3.00E+00	6.76E-01	1.43E+05	1.19	1.73E+05	8.69E+05	3.04E+05	1.94E+05	8.64E+05	3.22E-10
Barium (56)	Ba-139	2.24E-01	6.68E-02	1.55E-01	2.13E-01	1.70E-01	4.40E+03	1.23	7.77E+04	2.61E+05	1.13E+05	8.18E+04	1.02E+05	4.76E-09
Barium (56)	Ba-140	9.60E-01	2.03E-01	5.73E-01	8.77E-01	2.22E-01	1.99E+01	1.21	8.29E+01	3.92E+02	1.39E+02	9.08E+01	3.59E+02	1.13E-09
Barium (56)	Ba-141	4.76E+00	9.57E-01	2.70E+00	4.20E+00	1.03E+00	1.99E+04	1.19	1.72E+04	8.55E+04	3.03E+04	1.95E+04	7.91E+04	2.36E-10
Barium (56)	Ba-142	6.04E+00	1.16E+00	3.32E+00	5.24E+00	1.18E+00	3.44E+04	1.18	2.35E+04	1.23E+05	4.28E+04	2.71E+04	1.21E+05	1.89E-10
Beryllium (4)	Be-10	1.00E-03	3.66E-04	7.85E-04	9.88E-04	3.98E-03	4.33E-07	1.25	3.87E+03	1.06E+04	4.94E+03	3.93E+03	9.75E+02	1.73E-01
Beryllium (4)	Be-7	2.69E-01	5.60E-02	1.59E-01	2.44E-01	5.51E-02	4.75E+00	1.2	7.21E+01	3.46E+02	1.21E+02	7.93E+01	3.52E+02	2.06E-10
Bismuth (83)	Bi-200	1.33E+01	2.67E+00	7.59E+00	1.18E+01	2.64E+00	1.00E+04	1.2	3.06E+03	1.52E+04	5.35E+03	3.45E+03	1.54E+04	1.19E-10
Bismuth (83)	Bi-201	7.55E+00	1.48E+00	4.20E+00	6.58E+00	1.49E+00	3.37E+03	1.2	1.81E+03	9.27E+03	3.26E+03	2.08E+03	9.16E+03	2.10E-10
Bismuth (83)	Bi-202	1.55E+01	3.00E+00	8.60E+00	1.35E+01	2.96E+00	3.64E+03	1.19	9.61E+02	4.96E+03	1.73E+03	1.10E+03	5.03E+03	1.04E-10
Bismuth (83)	Bi-203	1.44E+01	2.59E+00	7.48E+00	1.20E+01	2.54E+00	5.16E+02	1.18	1.48E+02	8.21E+02	2.85E+02	1.77E+02	8.37E+02	1.13E-10

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Bismuth (83)	Bi-205	1.02E+01	1.84E+00	5.28E+00	8.50E+00	1.80E+00	1.65E+01	1.17	6.74E+00	3.74E+01	1.30E+01	8.07E+00	3.82E+01	1.62E-10
Bismuth (83)	Bi-206	1.90E+01	3.62E+00	1.04E+01	1.64E+01	3.57E+00	4.05E+01	1.18	8.76E+00	4.61E+01	1.60E+01	1.02E+01	4.67E+01	8.64E-11
Bismuth (83)	Bi-207	8.82E+00	1.70E+00	4.87E+00	7.67E+00	1.69E+00	1.82E-02	1.19	4.68E-01	2.42E+00	8.48E-01	5.38E-01	2.44E+00	1.03E-08
Bismuth (83)	Bi-210	5.45E-03	3.15E-03	4.53E-03	5.35E-03	4.10E-02	5.05E+01	1.25	3.60E+04	6.21E+04	4.32E+04	3.66E+04	4.78E+03	2.90E-07
Bismuth (83)	Bi-210m	1.27E+00	2.85E-01	8.09E-01	1.20E+00	2.80E-01	2.31E-07	1.24	3.10E+00	1.38E+01	4.87E+00	3.29E+00	1.41E+01	5.47E-03
Bismuth (83)	Bi-210m+D	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	2.31E-07	1.01	3.75E+00	1.65E+01	5.87E+00	3.97E+00	1.37E+01	6.61E-03
Bismuth (83)	Bi-210m+E	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01								
Bismuth (83)	Bi-211	2.37E-01	5.22E-02	1.48E-01	2.22E-01	5.13E-02	1.70E+05	1.23	2.85E+06	1.29E+07	4.56E+06	3.04E+06	1.31E+07	6.84E-09
Bismuth (83)	Bi-212	1.11E+00	2.14E-01	6.02E-01	9.55E-01	2.63E-01	6.02E+03	1.2	2.20E+04	1.14E+05	4.06E+04	2.56E+04	9.31E+04	1.50E-09
Bismuth (83)	Bi-212+D	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	6.02E+03	1.11	2.95E+03	1.77E+04	6.11E+03	3.68E+03	1.76E+04	2.02E-10
Bismuth (83)	Bi-212+E	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	6.02E+03							
Bismuth (83)	Bi-213	7.16E-01	1.54E-01	4.33E-01	6.55E-01	1.96E-01	7.98E+03	1.21	4.47E+04	2.08E+05	7.40E+04	4.89E+04	1.63E+05	2.32E-09
Bismuth (83)	Bi-213+D	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	7.98E+03	1.03	3.83E+04	1.85E+05	6.59E+04	4.29E+04	1.51E+05	1.98E-09
Bismuth (83)	Bi-213+E	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	7.98E+03							
Bismuth (83)	Bi-214	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	1.83E+04	1.16	8.27E+03	4.65E+04	1.61E+04	9.94E+03	4.59E+04	1.88E-10
Bismuth (83)	Bi-214+D	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	1.83E+04	1	9.54E+03	5.36E+04	1.86E+04	1.15E+04	5.30E+04	2.17E-10
Bismuth (83)	Bi-214+E	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.73E+00	1.83E+04							
Berkelium (97)	Bk-245	9.03E-01	2.37E-01	6.38E-01	8.78E-01	2.40E-01	5.12E+01	1.31	2.10E+02	8.01E+02	2.97E+02	2.16E+02	7.89E+02	1.95E-09
Berkelium (97)	Bk-246	5.32E+00	1.04E+00	2.97E+00	4.64E+00	1.04E+00	1.38E+02	1.21	1.04E+02	5.32E+02	1.87E+02	1.20E+02	5.36E+02	3.61E-10
Berkelium (97)	Bk-247	3.95E-01	1.08E-01	2.83E-01	3.84E-01	1.10E-01	5.02E-04	1.29	9.54E+00	3.49E+01	1.33E+01	9.82E+00	3.43E+01	9.11E-06
Berkelium (97)	Bk-249	3.75E-06	2.31E-06	3.47E-06	3.73E-06	6.23E-06	7.90E-01	1.26	1.50E+06	2.42E+06	1.62E+06	1.50E+06	9.00E+05	9.14E-04
Berkelium (97)	Bk-250	5.24E+00	9.83E-01	2.83E+00	4.51E+00	9.84E-01	1.88E+03	1.18	1.49E+03	7.92E+03	2.75E+03	1.72E+03	7.91E+03	3.82E-10
Bromine (35)	Br-74	2.89E+01	4.83E+00	1.40E+01	2.31E+01	4.73E+00	1.44E+04	1.14	2.13E+03	1.27E+04	4.38E+03	2.66E+03	1.30E+04	2.12E-11
Bromine (35)	Br-74m	2.50E+01	4.48E+00	1.29E+01	2.09E+01	4.46E+00	8.78E+03	1.16	1.47E+03	8.23E+03	2.86E+03	1.76E+03	8.27E+03	2.41E-11
Bromine (35)	Br-75	6.56E+00	1.38E+00	3.92E+00	5.99E+00	1.42E+00	3.72E+03	1.21	2.28E+03	1.08E+04	3.81E+03	2.49E+03	1.05E+04	8.91E-11
Bromine (35)	Br-76	1.61E+01	2.87E+00	8.32E+00	1.34E+01	2.85E+00	3.75E+02	1.17	9.71E+01	5.45E+02	1.88E+02	1.17E+02	5.50E+02	3.82E-11
Bromine (35)	Br-77	1.69E+00	3.54E-01	1.01E+00	1.54E+00	3.49E-01	1.08E+02	1.29	2.42E+02	1.15E+03	4.04E+02	2.65E+02	1.17E+03	3.34E-10
Bromine (35)	Br-80	4.48E-01	9.19E-02	2.59E-01	4.01E-01	1.21E-01	2.09E+04	1.22	1.87E+05	9.09E+05	3.22E+05	2.08E+05	6.89E+05	1.38E-09
Bromine (35)	Br-80m	8.88E-03	6.86E-03	8.86E-03	8.88E-03	1.60E-02	1.37E+03	1.48	5.08E+05	6.58E+05	5.09E+05	5.08E+05	2.82E+05	5.75E-08
Bromine (35)	Br-82	1.54E+01	2.95E+00	8.49E+00	1.34E+01	2.89E+00	1.72E+02	1.18	4.61E+01	2.42E+02	8.39E+01	5.30E+01	2.46E+02	4.27E-11
Bromine (35)	Br-83	4.44E-02	1.01E-02	2.67E-02	4.03E-02	3.34E-02	2.54E+03	1.2	2.32E+05	1.02E+06	3.87E+05	2.56E+05	3.09E+05	1.47E-08
Bromine (35)	Br-84	1.16E+01	1.94E+00	5.58E+00	9.25E+00	1.95E+00	1.15E+04	1.13	4.24E+03	2.54E+04	8.84E+03	5.33E+03	2.53E+04	6.04E-11
Carbon (6)	C-11	5.60E+00	1.16E+00	3.30E+00	5.07E+00	1.18E+00	1.79E+04	1.2	1.30E+04	6.26E+04	2.20E+04	1.43E+04	6.15E+04	1.55E-11
Carbon (6)	C-14	1.10E-05	6.43E-06	1.03E-05	1.10E-05	1.48E-05	1.21E-04	1.25	3.54E+05	6.03E+05	3.78E+05	3.54E+05	2.62E+05	7.95E-02
Calcium (20)	Ca-41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-06	0						
Calcium (20)	Ca-45	5.32E-05	2.48E-05	4.66E-05	5.32E-05	4.40E-05	1.55E+00	1.51	1.20E+05	2.57E+05	1.36E+05	1.20E+05	1.45E+05	6.74E-06
Calcium (20)	Ca-47	6.51E+00	1.17E+00	3.38E+00	5.46E+00	1.17E+00	5.58E+01	1.16	3.61E+01	2.01E+02	6.96E+01	4.30E+01	2.01E+02	5.90E-11
Calcium (20)	Ca-49	2.16E+01	3.21E+00	9.47E+00	1.62E+01	3.12E+00	4.18E+04	1.1	8.58E+03	5.78E+04	1.96E+04	1.14E+04	5.96E+04	1.95E-11
Cadmium (48)	Cd-104	1.22E+00	2.63E-01	7.27E-01	1.10E+00	2.75E-01	6.31E+03	1.25	2.01E+04	9.33E+04	3.37E+04	2.23E+04	8.91E+04	6.42E-10
Cadmium (48)	Cd-107	4.49E-02	1.32E-02	3.02E-02	4.20E-02	2.72E-02	9.35E+02	1.33	7.62E+04	2.60E+05	1.13E+05	8.16E+04	1.26E+05	1.69E-08
Cadmium (48)	Cd-109	1.22E-02	6.10E-03	1.06E-02	1.22E-02	1.94E-02	5.45E-01	1.33	3.88E+02	7.77E+02	4.48E+02	3.88E+02	2.44E+02	1.51E-07
Cadmium (48)	Cd-113	9.77E-05	4.18E-05	8.30E-05	9.74E-05	6.77E-05	7.45E-17	1.25	2.67E+04	6.24E+04	3.14E+04	2.68E+04	3.85E+04	7.84E+10
Cadmium (48)	Cd-113m	6.01E-04	2.24E-04	4.74E-04	5.93E-04	2.07E-03	5.10E-02	1.25	6.63E+03	1.78E+04	8.40E+03	6.71E+03	1.93E+03	2.85E-05
Cadmium (48)	Cd-115	1.27E+00	2.65E-01	7.52E-01	1.16E+00	2.84E-01	1.14E+02	1.2	3.61E+02	1.73E+03	6.11E+02	3.97E+02	1.62E+03	7.09E-10
Cadmium (48)	Cd-115m	1.47E-01	3.41E-02	8.36E-02	1.28E-01	1.08E-01	5.67E+00	1.17	1.61E+02	6.96E+02	2.84E+02	1.86E+02	2.20E+02	6.35E-09
Cadmium (48)	Cd-117	6.51E+00	1.20E+00	3.47E+00	5.54E+00	1.21E+00	2.44E+03	1.17	1.56E+03	8.48E+03	2.94E+03	1.84E+03	8.39E+03	1.46E-10
Cadmium (48)	Cd-117m	1.28E+01	2.22E+00	6.43E+00	1.05E+01	2.16E+00	1.81E+03	1.15	5.99E+02	3.45E+03	1.19E+03	7.29E+02	3.55E+03	7.53E-11
Cerium (58)	Ce-134	1.26E-02	1.03E-02	1.26E-02	1.26E-02	2.51E-02	8.43E+01	1.29	2.53E+04	3.09E+04	2.54E+04	2.53E+04	1.27E+04	7.80E-08
Cerium (58)	Ce-135	9.74E+00	2.00E+00	5.73E+00	8.80E+00	1.98E+00	3.45E+02	1.2	1.44E+02	7.02E+02	2.45E+02	1.59E+02	7.06E+02	1.09E-10

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Cerium (58)	Ce-137	5.84E-02	2.00E-02	3.99E-02	5.43E-02	3.48E-02	6.75E+02	1.29	4.38E+04	1.28E+05	6.40E+04	4.71E+04	7.35E+04	1.72E-08
Cerium (58)	Ce-137m	1.76E-01	4.51E-02	1.15E-01	1.66E-01	5.51E-02	1.76E+02	1.26	3.87E+03	1.51E+04	5.91E+03	4.10E+03	1.24E+04	5.83E-09
Cerium (58)	Ce-139	5.78E-01	1.54E-01	4.08E-01	5.67E-01	1.67E-01	1.84E+00	1.26	1.46E+01	5.48E+01	2.07E+01	1.49E+01	5.06E+01	2.14E-09
Cerium (58)	Ce-141	2.89E-01	7.83E-02	2.09E-01	2.85E-01	8.09E-02	7.78E+00	1.25	1.05E+02	3.87E+02	1.45E+02	1.06E+02	3.75E+02	3.69E-09
Cerium (58)	Ce-143	1.38E+00	3.04E-01	8.39E-01	1.26E+00	3.51E-01	1.84E+02	1.22	5.33E+02	2.42E+03	8.75E+02	5.81E+02	2.09E+03	8.04E-10
Cerium (58)	Ce-144	6.45E-02	1.94E-02	4.87E-02	6.40E-02	2.15E-02	8.90E-01	1.26	9.03E+01	3.00E+02	1.20E+02	9.11E+01	2.71E+02	2.84E-08
Cerium (58)	Ce-144+D	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	8.90E-01	1.1	2.01E+01	7.31E+01	3.30E+01	2.29E+01	3.15E+01	6.30E-09
Cerium (58)	Ce-144+E	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	8.90E-01							
Californium (98)	Cf-244	1.27E-04	1.24E-04	1.27E-04	1.27E-04	9.56E-04	1.88E+04	1.39	5.18E+08	5.30E+08	5.18E+08	5.18E+08	6.87E+07	1.31E-05
Californium (98)	Cf-246	1.45E-04	1.02E-04	1.32E-04	1.45E-04	6.69E-04	1.70E+02	1.39	4.10E+06	5.81E+06	4.52E+06	4.10E+06	8.90E+05	1.15E-05
Californium (98)	Cf-248	8.75E-05	8.52E-05	8.75E-05	8.75E-05	6.51E-04	7.58E-01	1.39	5.71E+04	5.86E+04	5.71E+04	5.71E+04	7.67E+03	3.62E-05
Californium (98)	Cf-249	1.72E+00	3.73E-01	1.06E+00	1.59E+00	3.68E-01	1.98E-03	1.24	2.28E+00	1.05E+01	3.71E+00	2.46E+00	1.07E+01	5.58E-07
Californium (98)	Cf-250	8.30E-05	8.09E-05	8.30E-05	8.30E-05	6.21E-04	5.30E-02	1.39	4.33E+04	4.44E+04	4.33E+04	4.33E+04	5.79E+03	3.96E-04
Californium (98)	Cf-251	4.79E-01	1.28E-01	3.43E-01	4.70E-01	1.32E-01	7.72E-04	1.34	7.60E+00	2.85E+01	1.06E+01	7.75E+00	2.76E+01	4.80E-06
Californium (98)	Cf-252	2.95E+00	5.13E-01	1.49E+00	2.42E+00	4.97E-01	2.63E-01	1.39	1.35E+00	7.76E+00	2.67E+00	1.64E+00	8.00E+00	2.51E-09
Californium (98)	Cf-253	6.53E-05	3.00E-05	5.67E-05	6.51E-05	6.03E-05	1.42E+01	1.39	7.62E+05	1.66E+06	8.77E+05	7.64E+05	8.24E+05	2.63E-05
Californium (98)	Cf-254	1.08E+02	1.88E+01	5.45E+01	8.86E+01	1.81E+01	4.18E+00	1.39	1.38E-01	7.89E-01	2.73E-01	1.68E-01	8.21E-01	1.62E-11
Chlorine (17)	Cl-36	2.48E-03	9.08E-04	1.81E-03	2.39E-03	1.31E-02	2.30E-06	1.2	1.64E+03	4.47E+03	2.24E+03	1.70E+03	3.10E+02	4.96E-02
Chlorine (17)	Cl-38	9.85E+00	1.64E+00	4.72E+00	7.83E+00	1.67E+00	9.79E+03	1.13	4.29E+03	2.58E+04	8.96E+03	5.40E+03	2.53E+04	3.23E-11
Chlorine (17)	Cl-39	8.82E+00	1.59E+00	4.59E+00	7.39E+00	1.65E+00	6.55E+03	1.16	3.13E+03	1.73E+04	6.01E+03	3.73E+03	1.68E+04	3.61E-11
Curium (96)	Cm-238	2.44E-01	7.37E-02	1.88E-01	2.42E-01	7.66E-02	2.53E+03	1.35	3.74E+04	1.24E+05	4.86E+04	3.77E+04	1.19E+05	6.83E-09
Curium (96)	Cm-240	1.12E-04	1.06E-04	1.12E-04	1.12E-04	8.97E-04	9.37E+00	1.41	2.89E+05	3.05E+05	2.90E+05	2.89E+05	3.62E+04	1.44E-05
Curium (96)	Cm-241	2.44E+00	5.41E-01	1.51E+00	2.26E+00	5.43E-01	7.71E+00	1.27	1.21E+01	5.47E+01	1.95E+01	1.31E+01	5.45E+01	7.34E-10
Curium (96)	Cm-242	1.28E-04	1.02E-04	1.19E-04	1.27E-04	8.19E-04	1.55E+00	1.41	5.32E+04	6.68E+04	5.74E+04	5.37E+04	8.33E+03	1.61E-05
Curium (96)	Cm-243	5.33E-01	1.35E-01	3.69E-01	5.17E-01	1.38E-01	2.43E-02	1.33	6.95E+00	2.74E+01	1.00E+01	7.18E+00	2.69E+01	1.35E-07
Curium (96)	Cm-244	8.93E-05	8.62E-05	8.93E-05	8.93E-05	7.52E-04	3.83E-02	1.41	3.95E+04	4.10E+04	3.95E+04	3.95E+04	4.70E+03	4.89E-04
Curium (96)	Cm-245	3.06E-01	8.99E-02	2.33E-01	3.04E-01	9.39E-02	8.15E-05	1.36	1.17E+01	3.99E+01	1.54E+01	1.18E+01	3.82E+01	6.84E-05
Curium (96)	Cm-246	8.28E-05	7.89E-05	8.26E-05	8.28E-05	6.72E-04	1.47E-04	1.41	4.18E+04	4.39E+04	4.19E+04	4.18E+04	5.15E+03	1.36E-01
Curium (96)	Cm-247	1.65E+00	3.54E-01	1.01E+00	1.53E+00	3.49E-01	4.44E-08	1.23	2.40E+00	1.12E+01	3.94E+00	2.60E+00	1.14E+01	2.59E-02
Curium (96)	Cm-247+D	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	4.44E-08	1.02	2.77E+00	1.26E+01	4.48E+00	2.99E+00	1.27E+01	2.99E-02
Curium (96)	Cm-247+E	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01								
Curium (96)	Cm-248	8.47E+00	1.47E+00	4.27E+00	6.96E+00	1.42E+00	1.99E-06	1.41	4.09E-01	2.35E+00	8.11E-01	4.98E-01	2.43E+00	9.89E-05
Curium (96)	Cm-249	1.07E-01	2.26E-02	6.32E-02	9.70E-02	3.87E-02	5.68E+03	1.2	2.14E+05	1.02E+06	3.64E+05	2.37E+05	5.93E+05	1.82E-08
Curium (96)	Cm-250	6.25E+01	1.09E+01	3.15E+01	5.13E+01	1.05E+01	7.14E-05	0						
Curium (96)	Cm-250+D	1.63E+00					7.14E-05	1.2	2.49E+00					1.69E-05
Curium (96)	Cm-250+E	6.42E+01	1.12E+01	3.25E+01	5.28E+01	1.08E+01	7.14E-05							
Cobalt (27)	Co-55	1.15E+01	2.24E+00	6.42E+00	1.01E+01	2.25E+00	3.46E+02	1.18	1.24E+02	6.38E+02	2.22E+02	1.41E+02	6.34E+02	3.82E-11
Cobalt (27)	Co-56	2.24E+01	3.88E+00	1.12E+01	1.83E+01	3.77E+00	3.21E+00	1.15	6.34E-01	3.66E+00	1.26E+00	7.74E-01	3.76E+00	2.14E-11
Cobalt (27)	Co-57	4.55E-01	1.28E-01	3.38E-01	4.49E-01	1.26E-01	9.34E-01	1.28	1.28E+01	4.57E+01	1.73E+01	1.30E+01	4.63E+01	1.52E-09
Cobalt (27)	Co-58	5.60E+00	1.09E+00	3.13E+00	4.92E+00	1.08E+00	3.57E+00	1.18	2.71E+00	1.38E+01	4.83E+00	3.08E+00	1.40E+01	8.53E-11
Cobalt (27)	Co-58m	1.78E-06	1.74E-06	1.78E-06	1.78E-06	7.76E-06	6.63E+02	1.32	1.38E+09	1.41E+09	1.37E+09	1.38E+09	3.15E+08	2.34E-04
Cobalt (27)	Co-60	1.54E+01	2.74E+00	7.96E+00	1.29E+01	2.68E+00	1.31E-01	1.16	2.92E-01	1.64E+00	5.65E-01	3.49E-01	1.68E+00	2.59E-10
Cobalt (27)	Co-60m	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.11E-03	3.48E+04	1.18	6.21E+06	3.02E+07	1.13E+07	7.34E+06	2.81E+07	2.08E-08
Cobalt (27)	Co-61	3.17E-01	9.25E-02	2.18E-01	2.93E-01	1.51E-01	3.68E+03	1.22	4.62E+04	1.58E+05	6.72E+04	5.00E+04	9.73E+04	1.49E-09
Cobalt (27)	Co-62m	1.68E+01	2.97E+00	8.58E+00	1.39E+01	3.01E+00	2.62E+04	1.15	6.60E+03	3.73E+04	1.29E+04	7.95E+03	3.68E+04	3.03E-11
Chromium (24)	Cr-48	2.05E+00	4.81E-01	1.34E+00	1.94E+00	4.71E-01	2.64E+02	1.22	5.12E+02	2.18E+03	7.84E+02	5.42E+02	2.23E+03	1.81E-10
Chromium (24)	Cr-49	5.58E+00	1.19E+00	3.36E+00	5.09E+00	1.25E+00	8.65E+03	1.2	6.28E+03	2.94E+04	1.04E+04	6.88E+03	2.80E+04	6.90E-11
Chromium (24)	Cr-51	1.62E-01	3.54E-02	1.01E-01	1.52E-01	3.47E-02	9.13E+00	1.22	2.26E+02	1.03E+03	3.60E+02	2.41E+02	1.05E+03	2.45E-09
Cesium (55)	Cs-125	3.67E+00	7.59E-01	2.14E+00	3.32E+00	7.99E-01	8.09E+03	1.2	8.91E+03	4.31E+04	1.53E+04	9.86E+03	4.09E+04	2.67E-10

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	Radionuclide	Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)	External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Lambda	F_{surf}	Soil Volume Soil Volume SDCC (pCi/g)	Soil Volume 1cm SDCC (pCi/g)	Soil Volume 5cm SDCC (pCi/g)	Soil Volume 15cm SDCC (pCi/g)	Ground Plane SDCC (pCi/cm^2)	Soil Volume SDCC (mg/kg)
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Cesium (55)	Cs-126	6.01E+00	1.28E+00	3.58E+00	5.46E+00	1.38E+00	2.22E+05	1.2	1.50E+05	7.01E+05	2.51E+05	1.64E+05	6.52E+05	1.65E-10
Cesium (55)	Cs-127	2.13E+00	4.53E-01	1.28E+00	1.94E+00	4.61E-01	9.71E+02	1.22	1.82E+03	8.54E+03	3.03E+03	2.00E+03	8.40E+03	4.62E-10
Cesium (55)	Cs-128	4.96E+00	1.04E+00	2.93E+00	4.49E+00	1.11E+00	9.34E+04	1.2	7.62E+04	3.65E+05	1.29E+05	8.41E+04	3.40E+05	2.03E-10
Cesium (55)	Cs-129	1.33E+00	2.91E-01	8.11E-01	1.23E+00	3.06E-01	1.89E+02	1.24	5.61E+02	2.56E+03	9.18E+02	6.07E+02	2.43E+03	7.42E-10
Cesium (55)	Cs-130	2.80E+00	5.82E-01	1.64E+00	2.54E+00	6.31E-01	1.22E+04	1.21	1.76E+04	8.45E+04	2.99E+04	1.94E+04	7.79E+04	3.64E-10
Cesium (55)	Cs-131	7.83E-03	7.03E-03	7.83E-03	7.83E-03	2.09E-02	2.61E+01	1.3	1.25E+04	1.39E+04	1.25E+04	1.25E+04	4.69E+03	1.22E-07
Cesium (55)	Cs-132	3.88E+00	7.78E-01	2.22E+00	3.45E+00	7.81E-01	3.91E+01	1.2	4.09E+01	2.04E+02	7.14E+01	4.60E+01	2.03E+02	2.68E-10
Cesium (55)	Cs-134	8.90E+00	1.75E+00	5.02E+00	7.85E+00	1.73E+00	3.36E-01	1.19	5.44E-01	2.76E+00	9.64E-01	6.16E-01	2.80E+00	4.21E-10
Cesium (55)	Cs-134m	6.49E-02	2.05E-02	4.92E-02	6.43E-02	2.63E-02	2.09E+03	1.29	1.21E+05	3.84E+05	1.60E+05	1.22E+05	3.00E+05	1.51E-08
Cesium (55)	Cs-135	3.21E-05	1.62E-05	2.89E-05	3.21E-05	3.14E-05	3.01E-07	1.25	1.21E+05	2.39E+05	1.34E+05	1.21E+05	1.24E+05	1.05E+02
Cesium (55)	Cs-135m	9.19E+00	1.78E+00	5.11E+00	8.04E+00	1.76E+00	6.87E+03	1.18	3.09E+03	1.59E+04	5.55E+03	3.53E+03	1.61E+04	1.18E-10
Cesium (55)	Cs-136	1.25E+01	2.41E+00	6.90E+00	1.09E+01	2.37E+00	1.93E+01	1.18	6.39E+00	3.32E+01	1.16E+01	7.34E+00	3.37E+01	8.73E-11
Cesium (55)	Cs-137	8.34E-04	3.86E-04	6.75E-04	8.21E-04	3.49E-03	2.31E-02	1.25	4.71E+03	1.02E+04	5.82E+03	4.78E+03	1.13E+03	5.42E-05
Cesium (55)	Cs-137+D	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	2.31E-02	1.19	1.30E+00	6.51E+00	2.28E+00	1.46E+00	6.43E+00	1.49E-08
Cesium (55)	Cs-137+E	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	2.31E-02							
Cesium (55)	Cs-138	1.48E+01	2.59E+00	7.50E+00	1.22E+01	2.64E+00	1.13E+04	1.15	3.24E+03	1.85E+04	6.39E+03	3.93E+03	1.82E+04	7.68E-11
Copper (29)	Cu-60	2.39E+01	4.27E+00	1.23E+01	2.00E+01	4.25E+00	1.57E+04	1.16	2.77E+03	1.55E+04	5.35E+03	3.31E+03	1.56E+04	2.05E-11
Copper (29)	Cu-61	4.57E+00	9.38E-01	2.67E+00	4.12E+00	9.58E-01	1.78E+03	1.2	1.59E+03	7.72E+03	2.72E+03	1.76E+03	7.56E+03	1.05E-10
Copper (29)	Cu-62	5.60E+00	1.18E+00	3.30E+00	5.07E+00	1.30E+00	3.74E+04	1.2	2.71E+04	1.28E+05	4.59E+04	2.99E+04	1.17E+05	8.72E-11
Copper (29)	Cu-64	1.04E+00	2.14E-01	6.12E-01	9.44E-01	2.14E-01	4.78E+02	1.2	1.86E+03	9.05E+03	3.17E+03	2.06E+03	9.09E+03	4.83E-10
Copper (29)	Cu-66	5.58E-01	1.24E-01	3.11E-01	4.81E-01	2.37E-01	7.14E+04	1.17	5.35E+05	2.41E+06	9.58E+05	6.20E+05	1.26E+06	9.59E-10
Copper (29)	Cu-67	4.87E-01	1.24E-01	3.39E-01	4.74E-01	1.23E-01	9.81E+01	1.24	7.93E+02	3.11E+03	1.14E+03	8.15E+02	3.15E+03	1.05E-09
Dysprosium (66)	Dy-155	3.06E+00	6.23E-01	1.75E+00	2.70E+00	6.28E-01	6.07E+02	1.19	8.10E+02	3.98E+03	1.41E+03	9.16E+02	3.94E+03	4.01E-10
Dysprosium (66)	Dy-157	1.67E+00	3.82E-01	1.06E+00	1.57E+00	3.89E-01	7.49E+02	1.23	1.78E+03	7.79E+03	2.81E+03	1.90E+03	7.66E+03	7.24E-10
Dysprosium (66)	Dy-159	4.46E-02	2.82E-02	4.38E-02	4.46E-02	4.52E-02	1.75E+00	1.27	1.82E+02	2.88E+02	1.85E+02	1.82E+02	1.80E+02	3.21E-08
Dysprosium (66)	Dy-165	1.23E-01	3.13E-02	7.76E-02	1.12E-01	8.06E-02	2.60E+03	1.22	8.48E+04	3.33E+05	1.34E+05	9.26E+04	1.29E+05	1.04E-08
Dysprosium (66)	Dy-166	7.93E-02	3.19E-02	6.51E-02	7.76E-02	4.10E-02	7.44E+01	1.26	3.62E+03	9.00E+03	4.41E+03	3.70E+03	7.01E+03	1.57E-08
Erbium (68)	Er-161	5.11E+00	1.00E+00	2.83E+00	4.44E+00	9.98E-01	1.87E+03	1.18	1.51E+03	7.72E+03	2.72E+03	1.74E+03	7.74E+03	2.52E-10
Erbium (68)	Er-165	4.21E-02	2.54E-02	4.10E-02	4.21E-02	3.78E-02	5.86E+02	1.27	5.34E+04	8.87E+04	5.48E+04	5.34E+04	5.95E+04	2.92E-08
Erbium (68)	Er-169	1.20E-04	4.98E-05	1.01E-04	1.20E-04	7.88E-05	2.72E+01	1.25	8.76E+05	2.12E+06	1.04E+06	8.80E+05	1.34E+06	1.06E-05
Erbium (68)	Er-171	1.81E+00	4.18E-01	1.16E+00	1.70E+00	4.49E-01	8.07E+02	1.22	1.78E+03	7.70E+03	2.78E+03	1.89E+03	7.16E+03	7.31E-10
Erbium (68)	Er-172	2.76E+00	5.82E-01	1.64E+00	2.50E+00	5.79E-01	1.23E+02	1.2	1.81E+02	8.57E+02	3.04E+02	1.99E+02	8.61E+02	4.90E-10
Einsteinium (99)	Es-250	2.11E+00	4.27E-01	1.20E+00	1.86E+00	4.26E-01	2.89E+03	1.22	5.46E+03	2.69E+04	9.55E+03	6.20E+03	2.70E+04	9.16E-10
Einsteinium (99)	Es-251	3.26E-01	9.38E-02	2.46E-01	3.25E-01	9.79E-02	1.84E+02	1.33	2.06E+03	7.16E+03	2.73E+03	2.07E+03	6.86E+03	5.45E-09
Einsteinium (99)	Es-253	1.61E-03	4.14E-04	1.04E-03	1.50E-03	7.74E-04	1.24E+01	1.38	2.71E+04	1.05E+05	4.20E+04	2.90E+04	5.63E+04	1.08E-06
Einsteinium (99)	Es-254	1.13E-02	4.16E-03	8.47E-03	1.09E-02	1.14E-02	9.17E-01	1.39	4.74E+02	1.29E+03	6.33E+02	4.91E+02	4.71E+02	2.54E-07
Einsteinium (99)	Es-254+D	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.95E-01	9.17E-01	1.18	1.20E+00	6.41E+00	2.23E+00	1.40E+00	6.35E+00	6.46E-10
Einsteinium (99)	Es-254+E	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.97E-01	9.17E-01							
Einsteinium (99)	Es-254m	2.63E+00	5.24E-01	1.50E+00	2.33E+00	5.34E-01	1.54E+02	1.21	2.37E+02	1.19E+03	4.16E+02	2.67E+02	1.17E+03	7.56E-10
Europium (63)	Eu-145	8.65E+00	1.59E+00	4.55E+00	7.31E+00	1.56E+00	4.26E+01	1.17	2.05E+01	1.12E+02	3.91E+01	2.43E+01	1.14E+02	1.36E-10
Europium (63)	Eu-146	1.45E+01	2.78E+00	7.96E+00	1.26E+01	2.74E+00	5.49E+01	1.18	1.56E+01	8.16E+01	2.85E+01	1.80E+01	8.27E+01	8.07E-11
Europium (63)	Eu-147	2.56E+00	5.30E-01	1.47E+00	2.28E+00	5.39E-01	1.05E+01	1.2	1.68E+01	8.10E+01	2.91E+01	1.88E+01	7.95E+01	4.54E-10
Europium (63)	Eu-148	1.23E+01	2.42E+00	6.92E+00	1.09E+01	2.40E+00	4.64E+00	1.19	1.56E+00	7.93E+00	2.78E+00	1.77E+00	8.00E+00	9.65E-11
Europium (63)	Eu-149	1.83E-01	5.20E-02	1.23E-01	1.73E-01	6.61E-02	2.72E+00	1.26	6.15E+01	2.17E+02	9.17E+01	6.53E+01	1.71E+02	6.55E-09
Europium (63)	Eu-150	8.15E+00	1.66E+00	4.74E+00	7.31E+00	1.66E+00	2.03E-02							
Europium (63)	Eu-150m	2.46E-01	5.24E-02	1.45E-01	2.20E-01	7.91E-02	4.81E+02							
Europium (63)	Eu-152	6.60E+00	1.26E+00	3.60E+00	5.69E+00	1.26E+00	5.20E-02	1.18	6.44E-01	3.37E+00	1.18E+00	7.47E-01	3.37E+00	3.65E-09
Europium (63)	Eu-152m	1.66E+00	3.30E-01	9.23E-01	1.45E+00	3.91E-01	6.51E+02	1.18	1.62E+03	8.13E+03	2.91E+03	1.85E+03	6.87E+03	7.32E-10
Europium (63)	Eu-154	7.25E+00	1.37E+00	3.92E+00	6.23E+00	1.37E+00	7.88E-02	1.17	5.96E-01	3.16E+00	1.10E+00	6.94E-01	3.17E+00	2.26E-09

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Europium (63)	Eu-155	1.62E-01	5.63E-02	1.32E-01	1.62E-01	6.24E-02	1.40E-01	1.26	2.57E+01	7.36E+01	3.15E+01	2.57E+01	6.64E+01	5.52E-08
Europium (63)	Eu-156	8.21E+00	1.45E+00	4.20E+00	6.81E+00	1.45E+00	1.67E+01	1.15	8.58E+00	4.86E+01	1.68E+01	1.03E+01	4.87E+01	1.56E-10
Europium (63)	Eu-157	1.22E+00	2.78E-01	7.50E-01	1.12E+00	3.22E-01	4.01E+02	1.22	1.32E+03	5.76E+03	2.13E+03	1.43E+03	4.97E+03	1.00E-09
Europium (63)	Eu-158	6.30E+00	1.19E+00	3.38E+00	5.37E+00	1.26E+00	7.94E+03	1.17	5.26E+03	2.79E+04	9.82E+03	6.17E+03	2.63E+04	2.03E-10
Fluorine (9)	F-18	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.15E+00	3.32E+03	1.2	2.40E+03	1.16E+04	4.08E+03	2.64E+03	1.17E+04	2.52E-11
Iron (26)	Fe-52	3.86E+00	8.32E-01	2.35E+00	3.56E+00	8.30E-01	7.34E+02	1.21	7.66E+02	3.56E+03	1.26E+03	8.30E+02	3.56E+03	1.05E-10
Iron (26)	Fe-55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-01	0						
Iron (26)	Fe-59	7.24E+00	1.31E+00	3.79E+00	6.10E+00	1.28E+00	5.68E+00	1.16	3.31E+00	1.83E+01	6.33E+00	3.93E+00	1.87E+01	6.67E-11
Iron (26)	Fe-60	9.03E-06	5.58E-06	8.58E-06	9.03E-06	1.37E-05	6.93E-06	1.25	4.30E+05	6.96E+05	4.52E+05	4.30E+05	2.84E+05	7.22E+00
Iron (26)	Fe-60+D	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	6.93E-06	1.18	1.79E+02	8.69E+02	3.25E+02	2.11E+02	8.06E+02	3.00E-03
Iron (26)	Fe-60+E	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	6.93E-06							
Fermium (100)	Fm-252	9.42E-05	9.25E-05	9.42E-05	9.42E-05	6.31E-04	2.67E+02	1.38	1.00E+07	1.02E+07	1.00E+07	1.00E+07	1.49E+06	1.83E-05
Fermium (100)	Fm-253	2.87E-01	8.04E-02	2.13E-01	2.83E-01	8.33E-02	8.43E+01	1.32	1.08E+03	3.86E+03	1.46E+03	1.09E+03	3.72E+03	6.28E-09
Fermium (100)	Fm-254	1.88E-04	1.26E-04	1.70E-04	1.88E-04	6.99E-04	1.87E+03	1.38	3.51E+07	5.23E+07	3.88E+07	3.51E+07	9.45E+06	9.23E-06
Fermium (100)	Fm-255	5.22E-03	2.31E-03	4.40E-03	5.18E-03	7.34E-03	3.02E+02	1.4	2.02E+05	4.56E+05	2.40E+05	2.03E+05	1.44E+05	3.30E-07
Fermium (100)	Fm-257	3.90E-01	1.06E-01	2.83E-01	3.84E-01	1.11E-01	2.52E+00	1.33	2.57E+01	9.41E+01	3.53E+01	2.61E+01	9.04E+01	5.09E-09
Francium (87)	Fr-219	1.81E-02	3.92E-03	1.11E-02	1.67E-02	3.85E-03	1.04E+09	1.22	2.29E+11	1.06E+12	3.74E+11	2.48E+11	1.08E+12	9.36E-08
Francium (87)	Fr-220	4.14E-02	1.12E-02	3.00E-02	4.07E-02	1.15E-02	7.98E+05	1.43	6.57E+07	2.42E+08	9.06E+07	6.69E+07	2.36E+08	3.52E-08
Francium (87)	Fr-220+D	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	7.98E+05	1.14	3.79E+05	2.26E+06	7.78E+05	4.72E+05	2.25E+06	2.03E-10
Francium (87)	Fr-220+E	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	7.98E+05							
Francium (87)	Fr-221	1.41E-01	3.38E-02	9.44E-02	1.36E-01	3.31E-02	7.59E+04	1.27	2.06E+06	8.62E+06	3.08E+06	2.14E+06	8.78E+06	1.17E-08
Francium (87)	Fr-221+D	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	7.59E+04	1.17	2.81E+05	1.34E+06	4.74E+05	3.12E+05	1.13E+06	1.59E-09
Francium (87)	Fr-221+E	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	7.59E+04							
Francium (87)	Fr-222	2.44E-02	1.47E-02	2.01E-02	2.37E-02	1.02E-01	2.53E+04	1.25	4.02E+06	6.67E+06	4.87E+06	4.14E+06	9.62E+05	6.84E-08
Francium (87)	Fr-223	1.81E-01	5.39E-02	1.29E-01	1.72E-01	9.06E-02	1.67E+04	1.37	3.28E+05	1.10E+06	4.62E+05	3.45E+05	6.56E+05	8.50E-09
Gallium (31)	Ga-65	6.38E+00	1.34E+00	3.77E+00	5.76E+00	1.41E+00	2.40E+04	1.2	1.53E+04	7.28E+04	2.58E+04	1.69E+04	6.89E+04	8.03E-11
Gallium (31)	Ga-66	1.57E+01	2.67E+00	7.70E+00	1.26E+01	2.63E+00	6.46E+02	1.14	1.75E+02	1.03E+03	3.58E+02	2.18E+02	1.05E+03	3.48E-11
Gallium (31)	Ga-67	6.81E-01	1.67E-01	4.57E-01	6.51E-01	1.65E-01	7.76E+01	1.23	4.52E+02	1.85E+03	6.73E+02	4.72E+02	1.87E+03	7.57E-10
Gallium (31)	Ga-68	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	5.36E+03	1.2	4.14E+03	1.99E+04	7.03E+03	4.58E+03	1.87E+04	1.02E-10
Gallium (31)	Ga-70	6.21E-02	1.92E-02	3.88E-02	5.56E-02	9.90E-02	1.72E+04	1.17	1.15E+06	3.73E+06	1.85E+06	1.29E+06	7.24E+05	9.11E-09
Gallium (31)	Ga-72	1.69E+01	2.95E+00	8.54E+00	1.39E+01	2.89E+00	4.31E+02	1.15	1.08E+02	6.19E+02	2.13E+02	1.31E+02	6.30E+02	3.50E-11
Gallium (31)	Ga-73	1.58E+00	3.51E-01	9.90E-01	1.48E+00	3.91E-01	1.24E+03	1.23	3.08E+03	1.39E+04	4.93E+03	3.30E+03	1.25E+04	3.53E-10
Gadolinium (64)	Gd-145	1.40E+01	2.46E+00	7.09E+00	1.15E+01	2.44E+00	1.59E+04	1.15	4.80E+03	2.73E+04	9.49E+03	5.84E+03	2.76E+04	8.49E-11
Gadolinium (64)	Gd-146	7.18E-01	2.26E-01	5.46E-01	7.11E-01	2.59E-01	5.24E+00	1.26	2.83E+01	9.02E+01	3.72E+01	2.86E+01	7.86E+01	1.53E-09
Gadolinium (64)	Gd-147	7.37E+00	1.47E+00	4.20E+00	6.51E+00	1.46E+00	1.59E+02	1.19	8.85E+01	4.43E+02	1.55E+02	1.00E+02	4.47E+02	1.58E-10
Gadolinium (64)	Gd-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.45E-03	0						
Gadolinium (64)	Gd-149	2.00E+00	4.46E-01	1.23E+00	1.84E+00	4.57E-01	2.69E+01	1.22	5.40E+01	2.42E+02	8.76E+01	5.86E+01	2.35E+02	5.80E-10
Gadolinium (64)	Gd-151	1.55E-01	5.02E-02	1.13E-01	1.51E-01	6.50E-02	2.11E+00	1.27	5.94E+01	1.84E+02	8.13E+01	6.13E+01	1.42E+02	8.26E-09
Gadolinium (64)	Gd-152	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.42E-15	0						
Gadolinium (64)	Gd-153	2.13E-01	8.37E-02	1.78E-01	2.13E-01	1.08E-01	1.05E+00	1.27	2.91E+01	7.39E+01	3.48E+01	2.91E+01	5.75E+01	8.27E-09
Gadolinium (64)	Gd-159	2.20E-01	5.28E-02	1.40E-01	2.07E-01	7.56E-02	3.27E+02	1.23	5.89E+03	2.46E+04	9.23E+03	6.26E+03	1.71E+04	5.56E-09
Germanium (32)	Ge-66	3.60E+00	7.59E-01	2.14E+00	3.28E+00	7.59E-01	2.67E+03	1.21	2.99E+03	1.42E+04	5.01E+03	3.27E+03	1.42E+04	1.43E-10
Germanium (32)	Ge-67	7.85E+00	1.62E+00	4.55E+00	7.01E+00	1.70E+00	1.95E+04	1.19	1.01E+04	4.91E+04	1.75E+04	1.13E+04	4.66E+04	6.75E-11
Germanium (32)	Ge-68	1.29E-06	1.29E-06	1.29E-06	1.29E-06	4.78E-05	8.78E-01	1.59	3.54E+06	3.54E+06	3.54E+06	3.54E+06	9.59E+04	5.32E-04
Germanium (32)	Ge-68+D	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	8.78E-01	1.2	1.16E+00	5.59E+00	1.97E+00	1.28E+00	5.24E+00	1.74E-10
Germanium (32)	Ge-68+E	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	8.78E-01							
Germanium (32)	Ge-69	5.02E+00	9.77E-01	2.80E+00	4.40E+00	9.79E-01	1.55E+02	1.18	1.27E+02	6.54E+02	2.28E+02	1.45E+02	6.53E+02	1.10E-10
Germanium (32)	Ge-71	1.31E-06	1.31E-06	1.31E-06	1.31E-06	4.84E-05	2.14E+01	1.59	5.00E+07	5.00E+07	5.00E+07	5.00E+07	1.35E+06	3.21E-04
Germanium (32)	Ge-75	1.76E-01	4.18E-02	1.14E-01	1.67E-01	8.40E-02	4.40E+03	1.23	9.93E+04	4.18E+05	1.53E+05	1.05E+05	2.08E+05	3.28E-09

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Germanium (32)	Ge-77	6.06E+00	1.22E+00	3.49E+00	5.39E+00	1.27E+00	5.37E+02	1.19	3.62E+02	1.80E+03	6.30E+02	4.08E+02	1.73E+03	1.01E-10
Germanium (32)	Ge-78	1.40E+00	3.11E-01	8.90E-01	1.32E+00	3.12E-01	4.19E+03	1.22	1.19E+04	5.35E+04	1.87E+04	1.26E+04	5.35E+04	4.32E-10
Hydrogen (1)	H-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.61E-02	0						
Hafnium (72)	Hf-170	2.57E+00	5.86E-01	1.60E+00	2.37E+00	5.96E-01	3.79E+02	1.22	5.89E+02	2.59E+03	9.49E+02	6.40E+02	2.54E+03	5.13E-10
Hafnium (72)	Hf-172	2.14E-01	9.19E-02	1.87E-01	2.14E-01	1.16E-01	3.71E-01	1.3	2.09E+01	4.88E+01	2.41E+01	2.09E+01	3.88E+01	1.88E-08
Hafnium (72)	Hf-173	1.71E+00	4.27E-01	1.14E+00	1.62E+00	4.35E-01	2.53E+02	1.23	5.86E+02	2.34E+03	8.74E+02	6.17E+02	2.30E+03	7.77E-10
Hafnium (72)	Hf-175	1.72E+00	3.97E-01	1.09E+00	1.61E+00	4.03E-01	3.61E+00	1.23	8.58E+00	3.71E+01	1.35E+01	9.16E+00	3.66E+01	8.06E-10
Hafnium (72)	Hf-177m	1.09E+01	2.48E+00	6.92E+00	1.02E+01	2.45E+00	7.09E+03	1.22	2.60E+03	1.14E+04	4.08E+03	2.76E+03	1.15E+04	1.26E-10
Hafnium (72)	Hf-178m	1.21E+01	2.63E+00	7.40E+00	1.12E+01	2.59E+00	2.24E-02	1.21	3.36E-01	1.55E+00	5.49E-01	3.64E-01	1.57E+00	5.20E-09
Hafnium (72)	Hf-179m	4.33E+00	9.85E-01	2.74E+00	4.05E+00	9.83E-01	1.01E+01	1.22	9.28E+00	4.08E+01	1.46E+01	9.92E+00	4.08E+01	3.20E-10
Hafnium (72)	Hf-180m	4.98E+00	1.11E+00	3.11E+00	4.63E+00	1.10E+00	1.10E+03	1.22	8.86E+02	3.97E+03	1.42E+03	9.54E+02	3.99E+03	2.80E-10
Hafnium (72)	Hf-181	2.82E+00	6.17E-01	1.73E+00	2.61E+00	6.13E-01	5.97E+00	1.21	8.54E+00	3.89E+01	1.39E+01	9.21E+00	3.92E+01	5.02E-10
Hafnium (72)	Hf-182	1.15E+00	2.65E-01	7.46E-01	1.09E+00	2.60E-01	7.70E-08	1.23	3.45E+00	1.50E+01	5.32E+00	3.62E+00	1.52E+01	1.58E-02
Hafnium (72)	Hf-182+D						7.70E-08	1.14						
Hafnium (72)	Hf-182+E	8.65E+00	1.68E+00	4.77E+00	7.50E+00	1.66E+00	7.70E-08							
Hafnium (72)	Hf-182m	4.81E+00	1.03E+00	2.89E+00	4.36E+00	1.02E+00	5.92E+03	1.2	4.98E+03	2.33E+04	8.28E+03	5.49E+03	2.34E+04	2.97E-10
Hafnium (72)	Hf-183	4.14E+00	8.37E-01	2.37E+00	3.67E+00	8.78E-01	5.69E+03	1.19	5.64E+03	2.79E+04	9.85E+03	6.35E+03	2.66E+04	3.52E-10
Hafnium (72)	Hf-184	1.10E+00	2.65E-01	7.27E-01	1.05E+00	2.87E-01	1.47E+03	1.25	5.23E+03	2.17E+04	7.90E+03	5.49E+03	2.00E+04	1.27E-09
Mercury (80)	Hg-193	7.09E-01	2.00E-01	5.07E-01	6.84E-01	2.10E-01	1.73E+03	1.33	8.94E+03	3.18E+04	1.25E+04	9.26E+03	3.02E+04	1.93E-09
Mercury (80)	Hg-193m	5.67E+00	1.14E+00	3.23E+00	5.00E+00	1.13E+00	5.47E+02	1.21	3.89E+02	1.93E+03	6.83E+02	4.41E+02	1.95E+03	2.66E-10
Mercury (80)	Hg-194	1.06E-05	1.06E-05	1.06E-05	1.06E-05	2.61E-04	2.67E-03	1.53	2.99E+05	2.99E+05	2.99E+05	2.99E+05	1.22E+04	4.23E-02
Mercury (80)	Hg-194+D	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	2.67E-03	1.18	6.72E-01	3.57E+00	1.25E+00	7.89E-01	3.64E+00	9.48E-08
Mercury (80)	Hg-194+E	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	2.67E-03							
Mercury (80)	Hg-195	9.23E-01	2.09E-01	5.60E-01	8.26E-01	2.16E-01	6.13E+02	1.28	2.53E+03	1.12E+04	4.17E+03	2.83E+03	1.08E+04	1.56E-09
Mercury (80)	Hg-195m	9.70E-01	2.24E-01	6.14E-01	9.01E-01	2.25E-01	1.46E+02	1.31	5.60E+02	2.43E+03	8.85E+02	6.03E+02	2.41E+03	1.45E-09
Mercury (80)	Hg-197	1.50E-01	5.99E-02	1.31E-01	1.50E-01	6.76E-02	9.47E+01	1.4	2.19E+03	5.49E+03	2.52E+03	2.19E+03	4.86E+03	8.85E-09
Mercury (80)	Hg-197m	3.19E-01	9.23E-02	2.37E-01	3.13E-01	9.48E-02	2.55E+02	1.35	2.88E+03	9.94E+03	3.87E+03	2.93E+03	9.68E+03	4.31E-09
Mercury (80)	Hg-199m	7.35E-01	1.92E-01	5.11E-01	7.09E-01	1.95E-01	8.55E+03	1.3	4.37E+04	1.67E+05	6.28E+04	4.53E+04	1.65E+05	1.97E-09
Mercury (80)	Hg-203	1.17E+00	2.65E-01	7.48E-01	1.10E+00	2.59E-01	5.43E+00	1.24	1.84E+01	8.09E+01	2.86E+01	1.94E+01	8.27E+01	1.33E-09
Holmium (67)	Ho-155	1.92E+00	4.21E-01	1.17E+00	1.76E+00	4.54E-01	7.59E+03	1.21	1.59E+04	7.24E+04	2.62E+04	1.74E+04	6.72E+04	6.30E-10
Holmium (67)	Ho-157	2.33E+00	5.17E-01	1.41E+00	2.11E+00	5.38E-01	2.89E+04	1.21	4.98E+04	2.25E+05	8.21E+04	5.51E+04	2.16E+05	5.25E-10
Holmium (67)	Ho-159	1.47E+00	3.69E-01	9.68E-01	1.38E+00	3.90E-01	1.10E+04	1.23	2.98E+04	1.18E+05	4.51E+04	3.17E+04	1.12E+05	8.32E-10
Holmium (67)	Ho-161	7.50E-02	3.92E-02	6.84E-02	7.48E-02	6.00E-02	2.43E+03	1.29	1.23E+05	2.35E+05	1.34E+05	1.23E+05	1.53E+05	1.58E-08
Holmium (67)	Ho-162	7.57E-01	1.65E-01	4.36E-01	6.62E-01	1.81E-01	2.43E+04	1.2	1.30E+05	5.94E+05	2.25E+05	1.48E+05	5.43E+05	1.68E-09
Holmium (67)	Ho-162m	3.08E+00	6.12E-01	1.71E+00	2.67E+00	6.19E-01	5.36E+03	1.18	7.16E+03	3.60E+04	1.29E+04	8.26E+03	3.56E+04	4.20E-10
Holmium (67)	Ho-164	3.80E-02	2.09E-02	3.58E-02	3.80E-02	3.94E-02	1.26E+04	1.27	1.27E+06	2.31E+06	1.35E+06	1.27E+06	1.22E+06	3.21E-08
Holmium (67)	Ho-164m	5.02E-02	3.00E-02	4.87E-02	5.02E-02	4.55E-02	9.71E+03	1.27	7.42E+05	1.24E+06	7.65E+05	7.42E+05	8.18E+05	2.43E-08
Holmium (67)	Ho-166	1.56E-01	4.10E-02	9.27E-02	1.35E-01	1.23E-01	2.27E+02	1.19	5.97E+03	2.27E+04	1.00E+04	6.89E+03	7.59E+03	8.48E-09
Holmium (67)	Ho-166m	9.64E+00	1.94E+00	5.56E+00	8.60E+00	1.93E+00	5.78E-04	1.19	4.24E-01	2.11E+00	7.36E-01	4.76E-01	2.12E+00	2.37E-07
Holmium (67)	Ho-167	1.83E+00	4.07E-01	1.15E+00	1.71E+00	4.10E-01	1.96E+03	1.22	4.27E+03	1.92E+04	6.83E+03	4.57E+03	1.91E+04	7.06E-10
Iodine (53)	I-120	1.66E+01	3.02E+00	8.67E+00	1.39E+01	3.06E+00	4.50E+03	1.16	1.13E+03	6.23E+03	2.17E+03	1.35E+03	6.15E+03	5.88E-11
Iodine (53)	I-120m	3.17E+01	5.87E+00	1.69E+01	2.70E+01	5.85E+00	6.87E+03	1.17	9.04E+02	4.88E+03	1.70E+03	1.06E+03	4.90E+03	3.06E-11
Iodine (53)	I-121	2.07E+00	4.51E-01	1.28E+00	1.92E+00	4.62E-01	2.86E+03	1.23	5.48E+03	2.51E+04	8.90E+03	5.91E+03	2.46E+04	4.49E-10
Iodine (53)	I-122	5.28E+00	1.10E+00	3.10E+00	4.76E+00	1.19E+00	1.01E+05	1.2	7.74E+04	3.72E+05	1.32E+05	8.59E+04	3.43E+05	1.82E-10
Iodine (53)	I-123	6.51E-01	1.67E-01	4.49E-01	6.30E-01	1.79E-01	4.60E+02	1.27	2.71E+03	1.06E+04	3.93E+03	2.80E+03	9.89E+03	1.41E-09
Iodine (53)	I-124	6.38E+00	1.21E+00	3.47E+00	5.50E+00	1.21E+00	6.05E+01	1.18	3.91E+01	2.06E+02	7.18E+01	4.53E+01	2.05E+02	1.55E-10
Iodine (53)	I-125	1.19E-02	1.10E-02	1.19E-02	1.19E-02	3.66E-02	4.21E+00	1.31	1.34E+03	1.45E+03	1.34E+03	1.34E+03	4.34E+02	7.74E-08
Iodine (53)	I-126	2.46E+00	5.05E-01	1.44E+00	2.22E+00	5.16E-01	1.94E+01	1.21	3.18E+01	1.55E+02	5.46E+01	3.53E+01	1.52E+02	4.01E-10
Iodine (53)	I-128	4.81E-01	1.11E-01	2.93E-01	4.40E-01	2.00E-01	1.46E+04	1.21	1.22E+05	5.27E+05	2.00E+05	1.33E+05	2.94E+05	2.08E-09

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Iodine (53)	I-129	9.53E-03	8.21E-03	9.53E-03	9.53E-03	2.28E-02	4.41E-08	1.3	3.94E+02	4.57E+02	3.94E+02	3.94E+02	1.65E+02	2.23E+00
Iodine (53)	I-130	1.21E+01	2.41E+00	6.90E+00	1.08E+01	2.39E+00	4.91E+02	1.19	1.66E+02	8.36E+02	2.92E+02	1.87E+02	8.41E+02	8.52E-11
Iodine (53)	I-131	2.01E+00	4.31E-01	1.22E+00	1.85E+00	4.25E-01	3.15E+01	1.21	6.28E+01	2.93E+02	1.03E+02	6.82E+01	2.98E+02	5.07E-10
Iodine (53)	I-132	1.32E+01	2.56E+00	7.35E+00	1.16E+01	2.57E+00	2.64E+03	1.18	8.23E+02	4.26E+03	1.48E+03	9.41E+02	4.24E+03	7.98E-11
Iodine (53)	I-132m	1.75E+00	3.54E-01	1.01E+00	1.56E+00	3.63E-01	4.36E+03	1.2	1.01E+04	4.97E+04	1.75E+04	1.13E+04	4.85E+04	5.91E-10
Iodine (53)	I-133	3.41E+00	6.88E-01	1.96E+00	3.04E+00	7.20E-01	2.92E+02	1.19	3.49E+02	1.73E+03	6.09E+02	3.92E+02	1.65E+03	3.09E-10
Iodine (53)	I-134	1.55E+01	2.93E+00	8.43E+00	1.34E+01	2.95E+00	6.92E+03	1.17	1.86E+03	9.83E+03	3.41E+03	2.15E+03	9.75E+03	6.97E-11
Iodine (53)	I-135	9.72E+00	1.73E+00	5.00E+00	8.11E+00	1.72E+00	9.18E+02	1.15	3.99E+02	2.24E+03	7.76E+02	4.78E+02	2.26E+03	1.14E-10
Indium (49)	In-109	3.62E+00	7.29E-01	2.09E+00	3.23E+00	7.28E-01	1.45E+03	1.21	1.61E+03	7.98E+03	2.79E+03	1.80E+03	7.99E+03	2.35E-10
Indium (49)	In-110	1.76E+01	3.39E+00	9.75E+00	1.54E+01	3.36E+00	1.24E+03							
Indium (49)	In-110m	8.95E+00	1.75E+00	4.98E+00	7.83E+00	1.79E+00	5.27E+03							
Indium (49)	In-111	1.81E+00	4.29E-01	1.20E+00	1.74E+00	4.29E-01	8.94E+01	1.26	1.91E+02	8.06E+02	2.87E+02	1.99E+02	8.05E+02	4.61E-10
Indium (49)	In-112	1.45E+00	3.00E-01	8.50E-01	1.31E+00	3.20E-01	2.53E+04	1.22	6.99E+04	3.37E+05	1.19E+05	7.73E+04	3.17E+05	6.01E-10
Indium (49)	In-113m	1.33E+00	2.85E-01	8.13E-01	1.23E+00	2.84E-01	3.66E+03	1.23	1.09E+04	5.10E+04	1.79E+04	1.18E+04	5.13E+04	6.54E-10
Indium (49)	In-114	1.68E-02	3.04E-03	8.73E-03	1.41E-02	3.22E-03	3.04E+05	1.19	7.43E+07	4.11E+08	1.43E+08	8.87E+07	3.88E+08	5.41E-08
Indium (49)	In-114m	4.51E-01	9.70E-02	2.72E-01	4.12E-01	1.01E-01	5.11E+00	1.25	4.43E+01	2.06E+02	7.35E+01	4.86E+01	1.99E+02	1.92E-09
Indium (49)	In-114m+D	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	5.11E+00	1	5.32E+01	2.49E+02	8.91E+01	5.86E+01	2.40E+02	2.30E-09
Indium (49)	In-114m+E	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	5.11E+00							
Indium (49)	In-115	3.54E-04	1.30E-04	2.83E-04	3.51E-04	4.17E-04	1.36E-16	1.25	1.34E+04	3.65E+04	1.68E+04	1.35E+04	1.14E+04	2.20E+10
Indium (49)	In-115m	7.93E-01	1.74E-01	4.94E-01	7.40E-01	1.76E-01	1.35E+03	1.24	6.69E+03	3.05E+04	1.07E+04	7.16E+03	3.01E+04	1.10E-09
Indium (49)	In-116m	1.52E+01	2.70E+00	7.85E+00	1.27E+01	2.66E+00	6.73E+03	1.16	1.87E+03	1.05E+04	3.61E+03	2.23E+03	1.07E+04	6.25E-11
Indium (49)	In-117	3.64E+00	7.76E-01	2.20E+00	3.34E+00	7.75E-01	8.32E+03	1.21	9.23E+03	4.33E+04	1.52E+04	1.01E+04	4.33E+04	2.52E-10
Indium (49)	In-117m	4.29E-01	1.02E-01	2.80E-01	4.07E-01	1.46E-01	3.13E+03	1.25	2.84E+04	1.19E+05	4.35E+04	2.99E+04	8.34E+04	2.06E-09
Indium (49)	In-119	4.42E+00	8.71E-01	2.48E+00	3.90E+00	9.36E-01	1.52E+05	1.19	1.41E+05	7.15E+05	2.51E+05	1.60E+05	6.65E+05	2.14E-10
Indium (49)	In-119m	9.03E-02	3.73E-02	6.30E-02	8.37E-02	1.52E-01	2.02E+04	1.3	8.42E+05	2.04E+06	1.21E+06	9.08E+05	5.01E+05	9.61E-09
Iridium (77)	Ir-182	7.35E+00	1.52E+00	4.27E+00	6.56E+00	1.56E+00	2.43E+04	1.2	1.34E+04	6.49E+04	2.31E+04	1.50E+04	6.30E+04	1.95E-10
Iridium (77)	Ir-184	1.08E+01	2.09E+00	5.97E+00	9.36E+00	2.08E+00	2.01E+03	1.19	7.62E+02	3.95E+03	1.38E+03	8.80E+02	3.97E+03	1.35E-10
Iridium (77)	Ir-185	3.34E+00	6.25E-01	1.76E+00	2.80E+00	6.22E-01	4.34E+02	1.21	5.24E+02	2.80E+03	9.93E+02	6.25E+02	2.81E+03	4.34E-10
Iridium (77)	Ir-186	9.25E+00	1.79E+00	5.11E+00	8.00E+00	1.76E+00	3.84E+02							
Iridium (77)	Ir-186m	5.28E+00	1.06E+00	3.00E+00	4.64E+00	1.07E+00	3.47E+03							
Iridium (77)	Ir-187	1.79E+00	3.88E-01	1.06E+00	1.60E+00	3.93E-01	5.78E+02	1.24	1.27E+03	5.84E+03	2.13E+03	1.42E+03	5.76E+03	7.95E-10
Iridium (77)	Ir-188	9.55E+00	1.70E+00	4.89E+00	7.89E+00	1.66E+00	1.46E+02	1.16	6.42E+01	3.61E+02	1.25E+02	7.77E+01	3.70E+02	1.60E-10
Iridium (77)	Ir-189	2.18E-01	7.31E-02	1.70E-01	2.14E-01	8.16E-02	1.90E+01	1.38	3.07E+02	9.16E+02	3.95E+02	3.12E+02	8.21E+02	5.92E-09
Iridium (77)	Ir-190	7.53E+00	1.60E+00	4.51E+00	6.86E+00	1.59E+00	2.09E+01	1.22	1.11E+01	5.23E+01	1.86E+01	1.22E+01	5.28E+01	1.96E-10
Iridium (77)	Ir-190m	2.05E-06	2.05E-06	2.05E-06	2.05E-06	6.21E-05	5.06E+03	1.56	7.68E+09	7.68E+09	7.68E+09	7.68E+09	2.54E+08	5.60E-04
Iridium (77)	Ir-190n	8.15E+00	1.73E+00	4.90E+00	7.46E+00	1.72E+00	1.96E+03	1.22	9.61E+02	4.52E+03	1.60E+03	1.05E+03	4.56E+03	1.81E-10
Iridium (77)	Ir-191m	2.05E-01	6.86E-02	1.63E-01	2.03E-01	7.39E-02	4.42E+06	1.4	7.52E+07	2.25E+08	9.46E+07	7.59E+07	2.09E+08	6.30E-09
Iridium (77)	Ir-192	4.27E+00	9.19E-01	2.63E+00	3.95E+00	9.07E-01	3.42E+00	1.21	3.32E+00	1.54E+01	5.39E+00	3.59E+00	1.56E+01	3.62E-10
Iridium (77)	Ir-192m	6.86E-01	1.75E-01	4.81E-01	6.71E-01	1.72E-01	2.88E-03	1.24	5.74E+00	2.25E+01	8.18E+00	5.86E+00	2.29E+01	7.43E-07
Iridium (77)	Ir-194	5.24E-01	1.19E-01	3.13E-01	4.74E-01	2.11E-01	3.17E+02	1.2	2.46E+03	1.08E+04	4.11E+03	2.72E+03	6.10E+03	2.92E-09
Iridium (77)	Ir-194m	1.27E+01	2.63E+00	7.52E+00	1.15E+01	2.60E+00	1.48E+00	1.2	6.10E-01	2.95E+00	1.03E+00	6.72E-01	2.98E+00	1.55E-10
Iridium (77)	Ir-195	1.46E-01	5.37E-02	1.21E-01	1.45E-01	8.60E-02	2.43E+03	1.39	5.81E+04	1.58E+05	7.03E+04	5.86E+04	9.88E+04	9.06E-09
Iridium (77)	Ir-195m	2.00E+00	4.51E-01	1.24E+00	1.84E+00	4.64E-01	1.60E+03	1.33	2.93E+03	1.30E+04	4.71E+03	3.19E+03	1.26E+04	6.95E-10
Potassium (19)	K-38	2.00E+01	3.47E+00	1.00E+01	1.64E+01	3.47E+00	4.77E+04	1.15	1.01E+04	5.83E+04	2.02E+04	1.23E+04	5.83E+04	1.57E-11
Potassium (19)	K-40	9.94E-01	1.77E-01	5.04E-01	8.21E-01	2.38E-01	5.41E-10	1.15	4.27E+00	2.40E+01	8.43E+00	5.18E+00	1.78E+01	6.12E-01
Potassium (19)	K-42	1.84E+00	3.49E-01	9.42E-01	1.52E+00	4.64E-01	4.91E+02	1.14	1.14E+03	6.00E+03	2.22E+03	1.38E+03	4.50E+03	1.89E-10
Potassium (19)	K-43	5.32E+00	1.10E+00	3.13E+00	4.83E+00	1.10E+00	2.69E+02	1.2	2.05E+02	9.93E+02	3.48E+02	2.26E+02	9.93E+02	6.37E-11
Potassium (19)	K-44	1.47E+01	2.46E+00	7.11E+00	1.17E+01	2.47E+00	1.65E+04	1.13	4.81E+03	2.87E+04	9.96E+03	6.02E+03	2.86E+04	2.49E-11
Potassium (19)	K-45	1.18E+01	2.01E+00	5.86E+00	9.59E+00	2.05E+00	1.82E+04	1.14	6.58E+03	3.86E+04	1.33E+04	8.12E+03	3.79E+04	3.16E-11

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Krypton (36)	Kr-74	6.19E+00	1.33E+00	3.73E+00	5.67E+00	1.40E+00	3.17E+04	1.21	2.05E+04	9.58E+04	3.41E+04	2.24E+04	9.08E+04	9.31E-11
Krypton (36)	Kr-76	2.18E+00	4.76E-01	1.35E+00	2.03E+00	4.70E-01	4.10E+02	1.29	7.08E+02	3.25E+03	1.15E+03	7.60E+02	3.29E+03	2.55E-10
Krypton (36)	Kr-77	5.32E+00	1.15E+00	3.25E+00	4.89E+00	1.21E+00	4.88E+03	1.22	3.67E+03	1.69E+04	6.00E+03	3.99E+03	1.61E+04	1.12E-10
Krypton (36)	Kr-79	1.36E+00	2.83E-01	8.08E-01	1.24E+00	2.79E-01	1.73E+02	1.3	4.78E+02	2.29E+03	8.04E+02	5.25E+02	2.33E+03	4.23E-10
Krypton (36)	Kr-81	2.76E-02	6.23E-03	1.77E-02	2.63E-02	6.99E-03	3.30E-06	1.51	1.17E+02	5.19E+02	1.83E+02	1.23E+02	4.63E+02	5.58E-03
Krypton (36)	Kr-81m	5.84E-01	1.41E-01	3.95E-01	5.65E-01	1.38E-01	1.68E+06	1.3	1.08E+07	4.44E+07	1.59E+07	1.11E+07	4.56E+07	1.01E-09
Krypton (36)	Kr-83m	2.52E-05	2.44E-05	2.52E-05	2.52E-05	4.17E-04	3.32E+03	1.49	4.29E+08	4.43E+08	4.29E+08	4.29E+08	2.60E+07	2.09E-05
Krypton (36)	Kr-85	1.35E-02	3.08E-03	8.21E-03	1.23E-02	1.23E-02	6.46E-02	1.2	3.11E+02	1.36E+03	5.10E+02	3.40E+02	3.42E+02	7.92E-07
Krypton (36)	Kr-85m	6.96E-01	1.73E-01	4.77E-01	6.73E-01	1.83E-01	1.36E+03	1.26	7.54E+03	3.03E+04	1.10E+04	7.79E+03	2.86E+04	9.18E-10
Krypton (36)	Kr-87	5.02E+00	8.95E-01	2.54E+00	4.12E+00	9.80E-01	4.77E+03	1.15	4.03E+03	2.26E+04	7.98E+03	4.91E+03	2.06E+04	1.43E-10
Krypton (36)	Kr-88	1.26E+01	2.07E+00	6.06E+00	1.01E+01	2.02E+00	2.14E+03	1.14	7.27E+02	4.43E+03	1.51E+03	9.12E+02	4.54E+03	5.81E-11
Lanthanum (57)	La-131	3.47E+00	7.39E-01	2.07E+00	3.17E+00	7.64E-01	6.17E+03	1.21	7.15E+03	3.36E+04	1.20E+04	7.82E+03	3.24E+04	2.94E-10
Lanthanum (57)	La-132	1.19E+01	2.22E+00	6.36E+00	1.01E+01	2.22E+00	1.26E+03	1.17	4.41E+02	2.37E+03	8.26E+02	5.19E+02	2.37E+03	8.94E-11
Lanthanum (57)	La-134	3.84E+00	8.02E-01	2.26E+00	3.47E+00	8.75E-01	5.46E+04	1.2	5.76E+04	2.76E+05	9.81E+04	6.38E+04	2.53E+05	2.74E-10
Lanthanum (57)	La-135	6.77E-02	2.09E-02	4.42E-02	6.21E-02	3.55E-02	3.11E+02	1.28	1.75E+04	5.67E+04	2.68E+04	1.91E+04	3.34E+04	1.47E-08
Lanthanum (57)	La-137	1.04E-02	8.82E-03	1.04E-02	1.04E-02	2.29E-02	1.16E-05	1.29	3.61E+02	4.27E+02	3.61E+02	3.61E+02	1.65E+02	8.32E-03
Lanthanum (57)	La-138	7.53E+00	1.34E+00	3.90E+00	6.30E+00	1.32E+00	5.13E-12	1.16	5.58E-01	3.13E+00	1.08E+00	6.67E-01	3.19E+00	2.91E+01
Lanthanum (57)	La-140	1.43E+01	2.54E+00	7.33E+00	1.19E+01	2.52E+00	1.51E+02	1.15	4.46E+01	2.51E+02	8.67E+01	5.35E+01	2.52E+02	8.03E-11
Lanthanum (57)	La-141	3.10E-01	7.11E-02	1.70E-01	2.61E-01	1.77E-01	1.54E+03	1.15	2.12E+04	9.22E+04	3.86E+04	2.51E+04	3.69E+04	3.75E-09
Lanthanum (57)	La-142	1.78E+01	2.93E+00	8.56E+00	1.42E+01	2.91E+00	3.94E+03	1.13	9.50E+02	5.78E+03	1.98E+03	1.19E+03	5.83E+03	6.64E-11
Lanthanum (57)	La-143	6.64E-01	1.45E-01	3.58E-01	5.58E-01	2.65E-01	2.56E+04	1.15	1.63E+05	7.46E+05	3.03E+05	1.94E+05	4.09E+05	1.77E-09
Lutetium (71)	Lu-169	5.89E+00	1.12E+00	3.17E+00	5.02E+00	1.12E+00	1.78E+02	1.17	1.26E+02	6.63E+02	2.34E+02	1.48E+02	6.65E+02	2.31E-10
Lutetium (71)	Lu-170	1.56E+01	2.63E+00	7.65E+00	1.26E+01	2.56E+00	1.26E+02	1.17	3.38E+01	2.00E+02	6.89E+01	4.19E+01	2.06E+02	8.80E-11
Lutetium (71)	Lu-171	3.62E+00	7.50E-01	2.09E+00	3.21E+00	7.63E-01	3.08E+01	1.2	3.45E+01	1.67E+02	5.98E+01	3.89E+01	1.64E+02	3.72E-10
Lutetium (71)	Lu-172	1.08E+01	2.07E+00	5.89E+00	9.33E+00	2.05E+00	3.78E+01	1.17	1.45E+01	7.57E+01	2.66E+01	1.68E+01	7.63E+01	1.28E-10
Lutetium (71)	Lu-173	3.75E-01	1.17E-01	2.72E-01	3.60E-01	1.35E-01	5.06E-01	1.25	1.32E+01	4.24E+01	1.82E+01	1.38E+01	3.66E+01	8.78E-09
Lutetium (71)	Lu-174	5.35E-01	1.20E-01	3.08E-01	4.61E-01	1.31E-01	2.09E-01	1.2	8.40E+00	3.73E+01	1.46E+01	9.76E+00	3.44E+01	1.35E-08
Lutetium (71)	Lu-174m	1.29E-01	4.94E-02	1.01E-01	1.23E-01	6.22E-02	1.78E+00	1.29	6.27E+01	1.63E+02	7.98E+01	6.58E+01	1.30E+02	1.19E-08
Lutetium (71)	Lu-176	2.33E+00	5.39E-01	1.51E+00	2.22E+00	5.33E-01	1.93E-11	1.23	1.70E+00	7.35E+00	2.62E+00	1.79E+00	7.43E+00	3.02E+01
Lutetium (71)	Lu-176m	3.90E-02	1.67E-02	3.32E-02	3.90E-02	6.54E-02	1.65E+03	1.3	1.59E+05	3.72E+05	1.87E+05	1.59E+05	9.48E+04	3.29E-08
Lutetium (71)	Lu-177	1.45E-01	3.71E-02	1.01E-01	1.41E-01	3.75E-02	3.77E+01	1.24	1.02E+03	3.98E+03	1.47E+03	1.05E+03	3.94E+03	9.28E-09
Lutetium (71)	Lu-177m	4.61E+00	1.09E+00	3.00E+00	4.36E+00	1.09E+00	1.57E+00	1.23	1.71E+00	7.23E+00	2.62E+00	1.80E+00	7.24E+00	3.73E-10
Lutetium (71)	Lu-178	8.50E-01	1.66E-01	4.51E-01	7.16E-01	2.51E-01	1.28E+04	1.16	6.33E+04	3.23E+05	1.19E+05	7.51E+04	2.14E+05	1.70E-09
Lutetium (71)	Lu-178m	5.39E+00	1.23E+00	3.43E+00	5.05E+00	1.26E+00	1.60E+04	1.22	1.19E+04	5.21E+04	1.86E+04	1.27E+04	5.07E+04	2.55E-10
Lutetium (71)	Lu-179	1.54E-01	3.90E-02	1.02E-01	1.47E-01	8.95E-02	1.32E+03	1.23	3.41E+04	1.35E+05	5.13E+04	3.57E+04	5.86E+04	8.95E-09
Mendelevium (101)	Md-257	4.61E-01	1.16E-01	3.15E-01	4.42E-01	1.18E-01	1.17E+03	1.29	9.54E+03	3.78E+04	1.39E+04	9.94E+03	3.73E+04	4.07E-09
Mendelevium (101)	Md-258	1.86E-03	1.04E-03	1.68E-03	1.86E-03	3.87E-03	4.60E+00	1.37	8.88E+03	1.59E+04	9.80E+03	8.88E+03	4.26E+03	9.66E-07
Magnesium (12)	Mg-28	8.15E+00	1.50E+00	4.31E+00	6.92E+00	1.47E+00	2.90E+02	1.17	1.48E+02	8.09E+02	2.81E+02	1.75E+02	8.23E+02	2.78E-11
Manganese (25)	Mn-51	5.52E+00	1.15E+00	3.25E+00	5.00E+00	1.25E+00	7.88E+03	1.2	5.79E+03	2.77E+04	9.85E+03	6.40E+03	2.56E+04	7.27E-11
Manganese (25)	Mn-52	2.07E+01	3.82E+00	1.10E+01	1.77E+01	3.76E+00	4.52E+01	1.17	9.13E+00	4.94E+01	1.71E+01	1.07E+01	5.03E+01	2.04E-11
Manganese (25)	Mn-52m	1.44E+01	2.70E+00	7.74E+00	1.23E+01	2.75E+00	1.73E+04	1.17	5.00E+03	2.66E+04	9.29E+03	5.84E+03	2.61E+04	2.92E-11
Manganese (25)	Mn-53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.87E-07	0						
Manganese (25)	Mn-54	4.85E+00	9.36E-01	2.69E+00	4.23E+00	9.23E-01	8.09E-01	1.18	1.24E+00	6.44E+00	2.25E+00	1.42E+00	6.53E+00	1.61E-10
Manganese (25)	Mn-56	1.05E+01	1.87E+00	5.37E+00	8.73E+00	1.89E+00	2.35E+03	1.15	9.46E+02	5.33E+03	1.85E+03	1.14E+03	5.26E+03	4.37E-11
Molybdenum (42)	Mo-101	8.24E+00	1.51E+00	4.35E+00	6.98E+00	1.53E+00	2.49E+04	1.16	1.26E+04	6.90E+04	2.40E+04	1.49E+04	6.82E+04	9.95E-11
Molybdenum (42)	Mo-90	4.29E+00	9.06E-01	2.57E+00	3.90E+00	9.08E-01	1.07E+03	1.24	9.82E+02	4.65E+03	1.64E+03	1.08E+03	4.64E+03	1.60E-10
Molybdenum (42)	Mo-93	4.16E-04	4.18E-04	4.16E-04	4.16E-04	4.53E-03	1.98E-04	1.4	8.39E+03	8.35E+03	8.39E+03	8.39E+03	7.71E+02	7.65E-03
Molybdenum (42)	Mo-93m	1.36E+01	2.48E+00	7.14E+00	1.15E+01	2.42E+00	8.86E+02	1.17	2.73E+02	1.49E+03	5.18E+02	3.22E+02	1.53E+03	5.56E-11
Molybdenum (42)	Mo-99	8.34E-01	1.71E-01	4.81E-01	7.44E-01	2.08E-01	9.20E+01	1.2	4.48E+02	2.19E+03	7.77E+02	5.02E+02	1.80E+03	9.36E-10

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Nitrogen (7)	N-13	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.20E+00	3.66E+04	1.2	2.64E+04	1.28E+05	4.49E+04	2.91E+04	1.23E+05	1.82E-11
Sodium (11)	Na-22	1.29E+01	2.44E+00	7.01E+00	1.11E+01	2.39E+00	2.66E-01	1.17	3.67E-01	1.93E+00	6.74E-01	4.24E-01	1.98E+00	5.88E-11
Sodium (11)	Na-24	2.72E+01	4.33E+00	1.27E+01	2.13E+01	4.19E+00	4.05E+02	1.12	6.45E+01	4.06E+02	1.39E+02	8.26E+01	4.19E+02	7.43E-12
Niobium (41)	Nb-88	2.37E+01	4.64E+00	1.33E+01	2.09E+01	4.69E+00	2.55E+04	1.19	4.41E+03	2.25E+04	7.88E+03	5.00E+03	2.23E+04	2.96E-11
Niobium (41)	Nb-89	8.32E+00	1.56E+00	4.46E+00	7.09E+00	1.62E+00	2.99E+03							
Niobium (41)	Nb-89m	1.07E+01	2.20E+00	6.25E+00	9.64E+00	2.26E+00	5.52E+03							
Niobium (41)	Nb-90	2.65E+01	4.53E+00	1.32E+01	2.14E+01	4.42E+00	4.16E+02	1.15	6.64E+01	3.88E+02	1.34E+02	8.20E+01	3.97E+02	2.79E-11
Niobium (41)	Nb-93m	7.35E-05	7.35E-05	7.35E-05	7.35E-05	7.96E-04	5.10E-02	1.4	4.87E+04	4.87E+04	4.87E+04	4.87E+04	4.50E+03	1.72E-04
Niobium (41)	Nb-94	9.10E+00	1.77E+00	5.07E+00	7.98E+00	1.74E+00	3.41E-05	1.18	4.54E-01	2.33E+00	8.14E-01	5.17E-01	2.37E+00	2.42E-06
Niobium (41)	Nb-95	4.42E+00	8.62E-01	2.46E+00	3.88E+00	8.50E-01	7.20E+00	1.18	6.71E+00	3.44E+01	1.21E+01	7.65E+00	3.49E+01	1.72E-10
Niobium (41)	Nb-95m	2.93E-01	6.79E-02	1.92E-01	2.82E-01	6.90E-02	7.01E+01	1.34	8.73E+02	3.76E+03	1.33E+03	9.07E+02	3.71E+03	2.30E-09
Niobium (41)	Nb-96	1.44E+01	2.78E+00	7.94E+00	1.25E+01	2.73E+00	2.60E+02	1.18	7.49E+01	3.87E+02	1.35E+02	8.58E+01	3.94E+02	5.36E-11
Niobium (41)	Nb-97	3.73E+00	7.46E-01	2.13E+00	3.32E+00	7.88E-01	5.05E+03	1.19	5.55E+03	2.77E+04	9.73E+03	6.23E+03	2.63E+04	2.07E-10
Niobium (41)	Nb-97m	4.18E+00	8.21E-01	2.35E+00	3.69E+00	8.11E-01	3.64E+05	1.18	3.58E+05	1.82E+06	6.37E+05	4.05E+05	1.85E+06	1.85E-10
Niobium (41)	Nb-98	1.44E+01	2.72E+00	7.80E+00	1.24E+01	2.77E+00	7.07E+03	1.17	2.04E+03	1.08E+04	3.77E+03	2.37E+03	1.06E+04	5.48E-11
Neodymium (60)	Nd-136	1.28E+00	2.95E-01	7.93E-01	1.17E+00	3.19E-01	7.19E+03	1.23	2.23E+04	9.67E+04	3.60E+04	2.43E+04	8.95E+04	8.17E-10
Neodymium (60)	Nd-138	8.77E-02	2.89E-02	6.17E-02	8.36E-02	4.38E-02	1.20E+03	1.27	5.25E+04	1.59E+05	7.46E+04	5.51E+04	1.05E+05	1.17E-08
Neodymium (60)	Nd-139	2.16E+00	4.46E-01	1.25E+00	1.94E+00	4.75E-01	1.23E+04	1.2	2.29E+04	1.11E+05	3.96E+04	2.56E+04	1.04E+05	5.04E-10
Neodymium (60)	Nd-139m	8.90E+00	1.73E+00	4.92E+00	7.74E+00	1.73E+00	1.10E+03	1.18	5.11E+02	2.64E+03	9.24E+02	5.88E+02	2.63E+03	1.25E-10
Neodymium (60)	Nd-141	2.87E-01	6.55E-02	1.67E-01	2.54E-01	7.98E-02	2.44E+03	1.24	3.33E+04	1.46E+05	5.72E+04	3.78E+04	1.20E+05	3.74E-09
Neodymium (60)	Nd-141m	4.36E+00	8.54E-01	2.44E+00	3.84E+00	8.54E-01	3.50E+05	1.18	3.30E+05	1.69E+06	5.90E+05	3.75E+05	1.69E+06	2.58E-10
Neodymium (60)	Nd-147	6.17E-01	1.45E-01	3.88E-01	5.69E-01	1.63E-01	2.30E+01	1.22	1.48E+02	6.34E+02	2.36E+02	1.61E+02	5.61E+02	1.84E-09
Neodymium (60)	Nd-149	1.90E+00	4.25E-01	1.18E+00	1.76E+00	4.74E-01	3.51E+03	1.22	7.38E+03	3.30E+04	1.19E+04	7.98E+03	2.96E+04	6.08E-10
Neodymium (60)	Nd-151	5.13E+00	1.02E+00	2.89E+00	4.49E+00	1.08E+00	2.93E+04	1.18	2.35E+04	1.18E+05	4.17E+04	2.68E+04	1.12E+05	2.35E-10
Neon (10)	Ne-19	5.65E+00	1.18E+00	3.34E+00	5.13E+00	1.28E+00	1.27E+06	1.2	9.11E+05	4.35E+06	1.54E+06	1.00E+06	4.01E+06	2.65E-11
Nickel (28)	Ni-56	9.68E+00	1.92E+00	5.48E+00	8.54E+00	1.89E+00	4.15E+01	1.18	1.76E+01	8.87E+01	3.11E+01	2.00E+01	9.02E+01	4.61E-11
Nickel (28)	Ni-57	1.17E+01	2.11E+00	6.08E+00	9.83E+00	2.05E+00	1.68E+02	1.16	6.03E+01	3.36E+02	1.16E+02	7.20E+01	3.45E+02	3.97E-11
Nickel (28)	Ni-59	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E-06	0						
Nickel (28)	Ni-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.22E-03	0						
Nickel (28)	Ni-65	3.41E+00	6.12E-01	1.76E+00	2.85E+00	6.64E-01	2.41E+03	1.15	2.98E+03	1.66E+04	5.79E+03	3.57E+03	1.53E+04	1.56E-10
Nickel (28)	Ni-66	3.64E-05	1.77E-05	3.23E-05	3.62E-05	3.30E-05	1.11E+02	1.25	1.19E+07	2.44E+07	1.34E+07	1.19E+07	1.31E+07	1.37E-05
Neptunium (93)	Np-232	6.58E+00	1.33E+00	3.77E+00	5.84E+00	1.32E+00	2.48E+04	1.22	1.51E+04	7.48E+04	2.63E+04	1.70E+04	7.52E+04	2.74E-10
Neptunium (93)	Np-233	2.95E-01	8.77E-02	2.24E-01	2.91E-01	9.09E-02	1.01E+04	1.35	1.23E+05	4.13E+05	1.62E+05	1.24E+05	3.98E+05	5.52E-09
Neptunium (93)	Np-234	8.77E+00	1.56E+00	4.49E+00	7.27E+00	1.53E+00	5.75E+01	1.18	2.71E+01	1.53E+02	5.29E+01	3.27E+01	1.56E+02	2.14E-10
Neptunium (93)	Np-235	2.82E-03	1.07E-03	2.29E-03	2.82E-03	3.34E-03	6.39E-01	1.42	1.65E+03	4.32E+03	2.02E+03	1.65E+03	1.39E+03	1.18E-06
Neptunium (93)	Np-236	4.16E-01	1.22E-01	3.15E-01	4.12E-01	1.30E-01	6.03E-06							
Neptunium (93)	Np-236m	1.72E-01	4.87E-02	1.25E-01	1.66E-01	5.11E-02	2.70E+02							
Neptunium (93)	Np-237	6.94E-02	2.31E-02	5.52E-02	6.92E-02	2.94E-02	3.24E-07	1.4	5.02E+01	1.51E+02	6.31E+01	5.03E+01	1.18E+02	7.13E-02
Neptunium (93)	Np-237+D						3.24E-07	1.25						
Neptunium (93)	Np-237+E	1.01E+00	2.41E-01	6.66E-01	9.59E-01	2.46E-01	3.24E-07							
Neptunium (93)	Np-238	3.25E+00	6.10E-01	1.75E+00	2.80E+00	6.23E-01	1.19E+02	1.2	1.50E+02	7.98E+02	2.77E+02	1.74E+02	7.81E+02	5.80E-10
Neptunium (93)	Np-239	6.88E-01	1.77E-01	4.79E-01	6.66E-01	1.80E-01	1.07E+02	1.32	5.76E+02	2.24E+03	8.27E+02	5.96E+02	2.21E+03	2.49E-09
Neptunium (93)	Np-240	7.25E+00	1.45E+00	4.12E+00	6.42E+00	1.45E+00	5.60E+03	1.22	3.08E+03	1.55E+04	5.42E+03	3.48E+03	1.54E+04	2.56E-10
Neptunium (93)	Np-240m	1.90E+00	3.80E-01	1.07E+00	1.68E+00	4.52E-01	4.92E+04	1.23	1.02E+05	5.10E+05	1.81E+05	1.16E+05	4.30E+05	9.65E-10
Oxygen (8)	O-15	5.61E+00	1.17E+00	3.32E+00	5.09E+00	1.25E+00	1.79E+05	1.2	1.29E+05	6.20E+05	2.18E+05	1.42E+05	5.81E+05	2.10E-11
Osmium (76)	Os-180	1.41E-01	5.22E-02	1.13E-01	1.36E-01	6.29E-02	1.66E+04	1.39	4.12E+05	1.11E+06	5.15E+05	4.26E+05	9.23E+05	8.69E-09
Osmium (76)	Os-181	6.75E+00	1.33E+00	3.77E+00	5.87E+00	1.32E+00	3.47E+03	1.19	2.10E+03	1.06E+04	3.76E+03	2.41E+03	1.07E+04	2.12E-10
Osmium (76)	Os-182	2.07E+00	4.70E-01	1.29E+00	1.92E+00	4.74E-01	2.76E+02	1.25	5.21E+02	2.30E+03	8.35E+02	5.62E+02	2.28E+03	6.67E-10
Osmium (76)	Os-185	3.90E+00	7.96E-01	2.24E+00	3.47E+00	7.95E-01	2.69E+00	1.2	3.00E+00	1.47E+01	5.22E+00	3.37E+00	1.47E+01	4.00E-10

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Osmium (76)	Os-189m	1.76E-06	1.76E-06	1.76E-06	1.76E-06	5.64E-05	1.01E+03	1.58	1.77E+09	1.77E+09	1.77E+09	1.77E+09	5.54E+07	6.43E-04
Osmium (76)	Os-190m	8.50E+00	1.78E+00	5.09E+00	7.76E+00	1.76E+00	3.68E+04	1.21	1.74E+04	8.29E+04	2.91E+04	1.91E+04	8.40E+04	1.74E-10
Osmium (76)	Os-191	2.14E-01	7.27E-02	1.72E-01	2.13E-01	7.88E-02	1.64E+01	1.39	2.68E+02	7.90E+02	3.35E+02	2.70E+02	7.30E+02	6.05E-09
Osmium (76)	Os-191m	1.38E-02	6.21E-03	1.26E-02	1.38E-02	7.47E-03	4.66E+02	1.49	1.10E+05	2.45E+05	1.21E+05	1.10E+05	2.03E+05	8.74E-08
Osmium (76)	Os-193	3.41E-01	8.11E-02	2.18E-01	3.17E-01	1.12E-01	2.02E+02	1.25	2.30E+03	9.69E+03	3.60E+03	2.48E+03	7.02E+03	4.26E-09
Osmium (76)	Os-194	9.31E-04	6.17E-04	9.18E-04	9.31E-04	1.11E-03	1.16E-01	1.52	3.65E+03	5.50E+03	3.70E+03	3.65E+03	3.05E+03	1.19E-05
Osmium (76)	Os-194+D	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	1.16E-01	1.2	8.23E+00	3.60E+01	1.38E+01	9.10E+00	2.03E+01	2.68E-08
Osmium (76)	Os-194+E	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	1.16E-01							
Phosphorus (15)	P-30	5.69E+00	1.21E+00	3.38E+00	5.17E+00	1.32E+00	1.46E+05	1.2	1.04E+05	4.90E+05	1.75E+05	1.14E+05	4.48E+05	4.15E-11
Phosphorus (15)	P-32	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	1.77E+01	1.25	3.38E+03	5.55E+03	4.07E+03	3.47E+03	6.91E+02	1.19E-08
Phosphorus (15)	P-33	5.02E-05	2.37E-05	4.40E-05	5.00E-05	4.25E-05	9.96E+00	1.25	7.70E+05	1.63E+06	8.78E+05	7.73E+05	9.10E+05	4.95E-06
Protactinium (91)	Pa-227	5.65E-02	1.92E-02	4.61E-02	5.65E-02	2.11E-02	9.51E+03	1.39	5.88E+05	1.73E+06	7.21E+05	5.88E+05	1.57E+06	2.72E-08
Protactinium (91)	Pa-228	6.38E+00	1.24E+00	3.54E+00	5.54E+00	1.23E+00	2.76E+02	1.23	1.72E+02	8.81E+02	3.09E+02	1.98E+02	8.95E+02	2.76E-10
Protactinium (91)	Pa-230	3.56E+00	7.14E-01	2.03E+00	3.13E+00	7.08E-01	1.45E+01	1.23	1.62E+01	8.08E+01	2.84E+01	1.84E+01	8.15E+01	4.97E-10
Protactinium (91)	Pa-231	1.76E-01	4.03E-02	1.12E-01	1.66E-01	4.41E-02	2.12E-05	1.4	1.97E+01	8.63E+01	3.10E+01	2.10E+01	7.88E+01	4.18E-04
Protactinium (91)	Pa-232	5.35E+00	1.04E+00	2.98E+00	4.68E+00	1.03E+00	1.93E+02	1.2	1.46E+02	7.51E+02	2.62E+02	1.67E+02	7.59E+02	3.40E-10
Protactinium (91)	Pa-233	9.40E-01	2.18E-01	6.10E-01	8.90E-01	2.17E-01	9.37E+00	1.29	3.75E+01	1.62E+02	5.79E+01	3.97E+01	1.63E+02	1.81E-09
Protactinium (91)	Pa-234	1.09E+01	2.11E+00	6.04E+00	9.47E+00	2.10E+00	9.06E+02	1.21	3.35E+02	1.73E+03	6.04E+02	3.85E+02	1.74E+03	1.68E-10
Protactinium (91)	Pa-234m	9.85E-02	3.13E-02	6.21E-02	8.80E-02	1.26E-01	3.11E+05	1.19	1.29E+07	4.05E+07	2.04E+07	1.44E+07	1.01E+07	1.88E-08
Lead (82)	Pb-195m	8.67E+00	1.78E+00	5.04E+00	7.78E+00	1.77E+00	2.31E+04	1.22	1.06E+04	5.17E+04	1.82E+04	1.18E+04	5.18E+04	1.74E-10
Lead (82)	Pb-198	2.05E+00	4.74E-01	1.31E+00	1.92E+00	4.74E-01	2.53E+03	1.27	4.72E+03	2.04E+04	7.41E+03	5.04E+03	2.04E+04	7.17E-10
Lead (82)	Pb-199	8.56E+00	1.61E+00	4.61E+00	7.31E+00	1.59E+00	4.05E+03	1.19	1.94E+03	1.03E+04	3.61E+03	2.27E+03	1.05E+04	1.85E-10
Lead (82)	Pb-200	7.63E-01	2.11E-01	5.46E-01	7.39E-01	2.17E-01	2.82E+02	1.35	1.33E+03	4.82E+03	1.86E+03	1.38E+03	4.68E+03	1.83E-09
Lead (82)	Pb-201	3.99E+00	8.34E-01	2.35E+00	3.58E+00	8.26E-01	6.46E+02	1.23	6.43E+02	3.08E+03	1.09E+03	7.17E+02	3.11E+03	3.88E-10
Lead (82)	Pb-202	7.33E-06	7.33E-06	7.33E-06	7.33E-06	2.23E-04	2.31E-06	1.57	4.22E+05	4.22E+05	4.22E+05	4.22E+05	1.39E+04	7.16E+01
Lead (82)	Pb-202+D	1.40E+01					2.31E-06	1.23	2.82E-01					4.79E-05
Lead (82)	Pb-202+E	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	2.31E-06							
Lead (82)	Pb-202m	1.17E+01	2.29E+00	6.56E+00	1.03E+01	2.25E+00	1.68E+03	1.19	5.89E+02	2.99E+03	1.05E+03	6.69E+02	3.05E+03	1.38E-10
Lead (82)	Pb-203	1.38E+00	3.34E-01	9.12E-01	1.31E+00	3.34E-01	1.17E+02	1.29	3.19E+02	1.32E+03	4.82E+02	3.35E+02	1.32E+03	1.08E-09
Lead (82)	Pb-205	8.19E-06	8.19E-06	8.19E-06	8.19E-06	2.43E-04	4.85E-08	1.57	3.78E+05	3.78E+05	3.78E+05	3.78E+05	1.28E+04	3.10E+03
Lead (82)	Pb-209	7.52E-04	2.95E-04	5.95E-04	7.40E-04	3.72E-03	1.87E+03	1.25	9.64E+06	2.46E+07	1.22E+07	9.78E+06	1.95E+06	2.09E-06
Lead (82)	Pb-210	1.98E-03	1.26E-03	1.96E-03	1.98E-03	2.49E-03	3.11E-02	1.5	1.67E+03	2.61E+03	1.68E+03	1.67E+03	1.33E+03	2.19E-05
Lead (82)	Pb-211	2.91E-01	6.17E-02	1.69E-01	2.59E-01	1.11E-01	1.01E+04	1.19	1.41E+05	6.66E+05	2.43E+05	1.59E+05	3.71E+05	5.74E-09
Lead (82)	Pb-212	6.45E-01	1.59E-01	4.36E-01	6.21E-01	1.58E-01	5.71E+02	1.29	3.34E+03	1.36E+04	4.94E+03	3.47E+03	1.37E+04	2.41E-09
Lead (82)	Pb-214	1.24E+00	2.78E-01	7.80E-01	1.16E+00	2.80E-01	1.36E+04	1.25	4.27E+04	1.91E+05	6.80E+04	4.57E+04	1.89E+05	1.31E-09
Palladium (46)	Pd-100	2.89E-01	1.04E-01	2.41E-01	2.89E-01	1.24E-01	6.97E+01	1.32	8.87E+02	2.46E+03	1.07E+03	8.87E+02	2.07E+03	2.47E-09
Palladium (46)	Pd-101	1.74E+00	3.52E-01	1.01E+00	1.55E+00	3.61E-01	7.34E+02	1.26	1.64E+03	8.07E+03	2.83E+03	1.83E+03	7.89E+03	4.37E-10
Palladium (46)	Pd-103	1.88E-03	1.43E-03	1.66E-03	1.84E-03	8.95E-03	1.49E+01	1.35	2.86E+04	3.76E+04	3.24E+04	2.93E+04	6.02E+03	3.83E-07
Palladium (46)	Pd-107	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-07	0						
Palladium (46)	Pd-109	1.80E-02	7.22E-03	1.41E-02	1.75E-02	4.35E-02	4.52E+02	1.33	9.20E+04	2.29E+05	1.17E+05	9.43E+04	3.80E+04	4.30E-08
Promethium (61)	Pm-141	4.18E+00	8.43E-01	2.39E+00	3.71E+00	9.02E-01	1.74E+04	1.19	1.71E+04	8.45E+04	2.99E+04	1.92E+04	7.90E+04	2.68E-10
Promethium (61)	Pm-142	4.89E+00	1.03E+00	2.85E+00	4.40E+00	1.12E+00	5.40E+05	1.2	4.49E+05	2.14E+06	7.69E+05	4.98E+05	1.95E+06	2.29E-10
Promethium (61)	Pm-143	1.66E+00	3.36E-01	9.40E-01	1.47E+00	3.47E-01	9.55E-01	1.2	3.80E+00	1.88E+01	6.70E+00	4.30E+00	1.82E+01	1.10E-09
Promethium (61)	Pm-144	8.65E+00	1.75E+00	4.98E+00	7.72E+00	1.74E+00	6.97E-01	1.19	6.54E-01	3.24E+00	1.14E+00	7.33E-01	3.25E+00	2.62E-10
Promethium (61)	Pm-145	2.31E-02	1.58E-02	2.26E-02	2.31E-02	3.05E-02	3.92E-02	1.28	1.68E+02	2.46E+02	1.72E+02	1.68E+02	1.27E+02	1.20E-06
Promethium (61)	Pm-146	4.12E+00	8.37E-01	2.39E+00	3.69E+00	8.39E-01	1.25E-01	1.2	1.05E+00	5.17E+00	1.81E+00	1.17E+00	5.16E+00	2.38E-09
Promethium (61)	Pm-147	4.29E-05	1.88E-05	3.66E-05	4.27E-05	3.27E-05	2.64E-01	1.26	1.03E+05	2.34E+05	1.21E+05	1.03E+05	1.35E+05	1.11E-04
Promethium (61)	Pm-148	3.49E+00	6.49E-01	1.85E+00	2.97E+00	7.13E-01	4.71E+01	1.16	5.65E+01	3.04E+02	1.06E+02	6.65E+01	2.76E+02	3.45E-10
Promethium (61)	Pm-148m	1.12E+01	2.26E+00	6.43E+00	1.00E+01	2.23E+00	6.12E+00	1.19	2.23E+00	1.11E+01	3.90E+00	2.50E+00	1.13E+01	1.05E-10

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Promethium (61)	Pm-149	5.95E-02	1.45E-02	3.77E-02	5.56E-02	4.71E-02	1.14E+02	1.21	7.71E+03	3.17E+04	1.22E+04	8.26E+03	9.73E+03	1.95E-08
Promethium (61)	Pm-150	8.56E+00	1.59E+00	4.57E+00	7.29E+00	1.65E+00	2.27E+03	1.17	1.10E+03	5.94E+03	2.07E+03	1.30E+03	5.75E+03	1.42E-10
Promethium (61)	Pm-151	1.61E+00	3.52E-01	9.88E-01	1.48E+00	3.71E-01	2.14E+02	1.22	5.29E+02	2.42E+03	8.62E+02	5.75E+02	2.30E+03	7.26E-10
Polonium (84)	Po-203	9.53E+00	1.80E+00	5.17E+00	8.17E+00	1.79E+00	9.92E+03	1.19	4.27E+03	2.26E+04	7.88E+03	4.99E+03	2.28E+04	1.70E-10
Polonium (84)	Po-205	9.16E+00	1.74E+00	4.96E+00	7.87E+00	1.72E+00	3.37E+03	1.19	1.51E+03	7.97E+03	2.79E+03	1.76E+03	8.07E+03	1.78E-10
Polonium (84)	Po-207	7.59E+00	1.47E+00	4.20E+00	6.58E+00	1.45E+00	1.04E+03	1.19	5.60E+02	2.89E+03	1.01E+03	6.45E+02	2.94E+03	2.16E-10
Polonium (84)	Po-210	4.92E-05	9.55E-06	2.74E-05	4.31E-05	9.44E-06	1.83E+00	1.18	1.83E+05	9.42E+05	3.28E+05	2.09E+05	9.52E+05	4.07E-05
Polonium (84)	Po-211	4.48E-02	8.77E-03	2.52E-02	3.94E-02	8.66E-03	4.24E+07	1.18	3.89E+09	1.99E+10	6.92E+09	4.43E+09	2.01E+10	3.76E-08
Polonium (84)	Po-212	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E+13	0						
Polonium (84)	Po-213	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E+12	0						
Polonium (84)	Po-214	4.83E-04	9.36E-05	2.69E-04	4.23E-04	9.25E-05	1.33E+11	1.18	1.14E+15	5.86E+15	2.04E+15	1.30E+15	5.93E+15	3.55E-06
Polonium (84)	Po-215	9.44E-04	2.00E-04	5.69E-04	8.67E-04	1.96E-04	1.23E+10	1.21	5.24E+13	2.48E+14	8.70E+13	5.70E+13	2.52E+14	1.78E-06
Polonium (84)	Po-216	9.81E-05	1.90E-05	5.45E-05	8.60E-05	1.88E-05	1.46E+08	1.18	6.13E+12	3.16E+13	1.10E+13	6.99E+12	3.20E+13	1.76E-05
Polonium (84)	Po-218	5.32E-05	1.02E-05	2.93E-05	4.64E-05	1.01E-05	1.19E+05	1.18	9.29E+09	4.82E+10	1.69E+10	1.06E+10	4.89E+10	3.29E-05
Praseodymium (59)	Pr-136	1.22E+01	2.35E+00	6.71E+00	1.06E+01	2.38E+00	2.78E+04	1.18	9.41E+03	4.88E+04	1.71E+04	1.08E+04	4.82E+04	8.93E-11
Praseodymium (59)	Pr-137	2.69E+00	5.54E-01	1.56E+00	2.41E+00	5.80E-01	4.76E+03	1.2	7.17E+03	3.48E+04	1.23E+04	8.00E+03	3.32E+04	4.01E-10
Praseodymium (59)	Pr-138	4.53E+00	9.57E-01	2.67E+00	4.08E+00	1.05E+00	2.51E+05	1.2	2.25E+05	1.06E+06	3.82E+05	2.49E+05	9.72E+05	2.40E-10
Praseodymium (59)	Pr-138m	1.42E+01	2.76E+00	7.89E+00	1.24E+01	2.74E+00	2.89E+03	1.18	8.40E+02	4.32E+03	1.51E+03	9.61E+02	4.34E+03	7.79E-11
Praseodymium (59)	Pr-139	5.56E-01	1.20E-01	3.25E-01	4.98E-01	1.37E-01	1.35E+03	1.23	9.60E+03	4.45E+04	1.64E+04	1.07E+04	3.91E+04	1.92E-09
Praseodymium (59)	Pr-142	4.03E-01	8.17E-02	2.09E-01	3.32E-01	1.72E-01	3.17E+02	1.14	3.36E+03	1.66E+04	6.48E+03	4.08E+03	7.89E+03	2.92E-09
Praseodymium (59)	Pr-142m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E+04	0						
Praseodymium (59)	Pr-143	2.91E-03	1.52E-03	2.39E-03	2.85E-03	2.40E-02	1.87E+01	1.18	2.64E+04	5.04E+04	3.21E+04	2.69E+04	3.19E+03	3.92E-07
Praseodymium (59)	Pr-144	2.67E-01	7.14E-02	1.52E-01	2.28E-01	1.90E-01	2.11E+04	1.15	3.35E+05	1.25E+06	5.87E+05	3.93E+05	4.70E+05	4.45E-09
Praseodymium (59)	Pr-144m	1.20E-02	6.23E-03	9.66E-03	1.14E-02	1.23E-02	5.06E+04	1.28	1.60E+07	3.09E+07	1.99E+07	1.69E+07	1.57E+07	8.86E-08
Praseodymium (59)	Pr-145	9.51E-02	2.69E-02	5.82E-02	8.49E-02	1.09E-01	1.02E+03	1.18	4.40E+04	1.56E+05	7.20E+04	4.93E+04	3.82E+04	1.22E-08
Praseodymium (59)	Pr-147	4.74E+00	9.57E-01	2.69E+00	4.18E+00	1.04E+00	2.68E+04	1.19	2.31E+04	1.14E+05	4.08E+04	2.62E+04	1.05E+05	2.46E-10
Platinum (78)	Pt-186	4.01E+00	8.21E-01	2.31E+00	3.58E+00	8.17E-01	3.04E+03	1.2	3.06E+03	1.50E+04	5.31E+03	3.43E+03	1.50E+04	3.64E-10
Platinum (78)	Pt-188	7.68E-01	2.05E-01	5.32E-01	7.37E-01	2.12E-01	2.48E+01	1.31	1.20E+02	4.51E+02	1.74E+02	1.26E+02	4.35E+02	1.77E-09
Platinum (78)	Pt-189	1.47E+00	3.39E-01	9.08E-01	1.33E+00	3.49E-01	5.58E+02	1.25	1.48E+03	6.39E+03	2.39E+03	1.63E+03	6.22E+03	9.69E-10
Platinum (78)	Pt-191	1.24E+00	3.11E-01	8.17E-01	1.16E+00	3.24E-01	9.03E+01	1.28	2.77E+02	1.11E+03	4.21E+02	2.97E+02	1.06E+03	1.14E-09
Platinum (78)	Pt-193	6.30E-06	6.30E-06	6.30E-06	6.30E-06	1.80E-04	1.39E-02	1.56	4.99E+05	4.99E+05	4.99E+05	4.99E+05	1.75E+04	1.35E-02
Platinum (78)	Pt-193m	2.22E-02	9.34E-03	1.98E-02	2.22E-02	1.09E-02	5.84E+01	1.46	8.76E+03	2.08E+04	9.84E+03	8.76E+03	1.79E+04	5.62E-08
Platinum (78)	Pt-195m	1.65E-01	6.40E-02	1.42E-01	1.65E-01	7.22E-02	6.29E+01	1.42	1.30E+03	3.37E+03	1.52E+03	1.30E+03	2.98E+03	7.84E-09
Platinum (78)	Pt-197	7.25E-02	2.29E-02	5.61E-02	7.14E-02	2.79E-02	3.32E+02	1.42	1.57E+04	4.97E+04	2.03E+04	1.60E+04	4.09E+04	1.81E-08
Platinum (78)	Pt-197m	3.04E-01	8.08E-02	2.07E-01	2.89E-01	8.50E-02	3.86E+03	1.37	4.52E+04	1.70E+05	6.63E+04	4.75E+04	1.62E+05	4.47E-09
Platinum (78)	Pt-199	1.10E+00	2.33E-01	6.53E-01	9.96E-01	2.88E-01	1.18E+04	1.21	4.34E+04	2.04E+05	7.30E+04	4.78E+04	1.65E+05	1.42E-09
Platinum (78)	Pt-200	2.01E-01	5.84E-02	1.47E-01	1.96E-01	6.37E-02	4.86E+02	1.37	8.60E+03	2.97E+04	1.18E+04	8.84E+03	2.72E+04	6.87E-09
Plutonium (94)	Pu-234	2.07E-01	6.43E-02	1.63E-01	2.07E-01	6.75E-02	6.90E+02	1.36	1.19E+04	3.84E+04	1.52E+04	1.19E+04	3.66E+04	7.85E-09
Plutonium (94)	Pu-235	3.04E-01	8.88E-02	2.28E-01	2.97E-01	9.34E-02	1.44E+04	1.36	1.70E+05	5.82E+05	2.27E+05	1.74E+05	5.53E+05	5.38E-09
Plutonium (94)	Pu-236	1.81E-04	1.18E-04	1.61E-04	1.79E-04	8.58E-04	2.43E-01	1.42	2.14E+04	3.27E+04	2.40E+04	2.16E+04	4.51E+03	4.03E-05
Plutonium (94)	Pu-237	1.45E-01	4.57E-02	1.14E-01	1.45E-01	4.96E-02	5.58E+00	1.38	1.37E+02	4.34E+02	1.74E+02	1.37E+02	4.00E+02	1.13E-08
Plutonium (94)	Pu-238	1.16E-04	8.77E-05	1.08E-04	1.16E-04	7.31E-04	7.90E-03	1.42	2.96E+04	3.93E+04	3.20E+04	2.98E+04	4.72E+03	1.73E-03
Plutonium (94)	Pu-239	2.63E-04	8.88E-05	1.88E-04	2.52E-04	3.31E-04	2.88E-05	1.42	1.31E+04	3.87E+04	1.82E+04	1.36E+04	1.04E+04	2.10E-01
Plutonium (94)	Pu-240	1.12E-04	8.58E-05	1.06E-04	1.12E-04	7.01E-04	1.06E-04	1.42	3.06E+04	4.00E+04	3.25E+04	3.06E+04	4.89E+03	1.34E-01
Plutonium (94)	Pu-241	5.30E-06	1.63E-06	4.10E-06	5.28E-06	2.01E-06	4.81E-02	1.41	6.69E+05	2.17E+06	8.63E+05	6.71E+05	1.77E+06	6.50E-03
Plutonium (94)	Pu-242	9.90E-05	7.25E-05	9.21E-05	9.90E-05	5.81E-04	1.84E-06	1.42	3.47E+04	4.73E+04	3.73E+04	3.47E+04	5.91E+03	8.84E+00
Plutonium (94)	Pu-243	7.11E-02	2.33E-02	5.61E-02	7.01E-02	2.65E-02	1.22E+03	1.34	6.25E+04	1.91E+05	7.91E+04	6.33E+04	1.68E+05	2.41E-08
Plutonium (94)	Pu-244	1.38E-01	2.41E-02	6.96E-02	1.13E-01	2.36E-02	8.66E-09	1.42	2.49E+01	1.43E+02	4.93E+01	3.03E+01	1.45E+02	1.36E+00
Plutonium (94)	Pu-244+D	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	8.66E-09	1.24	1.94E+00	9.74E+00	3.45E+00	2.20E+00	8.24E+00	1.06E-01

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	Radionuclide	Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)	External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Lambda	F_{surf}	Soil Volume Soil Volume SDCC (pCi/g)	Soil Volume 1cm SDCC (pCi/g)	Soil Volume 5cm SDCC (pCi/g)	Soil Volume 15cm SDCC (pCi/g)	Ground Plane SDCC (pCi/cm^2)	Soil Volume SDCC (mg/kg)
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Plutonium (94)	Pu-244+E	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	8.66E-09							
Plutonium (94)	Pu-245	2.22E+00	4.61E-01	1.31E+00	2.00E+00	4.74E-01	5.78E+02	1.22	1.04E+03	4.99E+03	1.76E+03	1.15E+03	4.85E+03	8.52E-10
Plutonium (94)	Pu-246	5.17E-01	1.38E-01	3.66E-01	5.04E-01	1.44E-01	2.33E+01	1.32	1.67E+02	6.26E+02	2.36E+02	1.71E+02	6.01E+02	3.42E-09
Radium (88)	Ra-222	4.70E-02	1.03E-02	2.95E-02	4.40E-02	1.01E-02	5.75E+05	1.22	4.87E+07	2.21E+08	7.76E+07	5.20E+07	2.26E+08	3.64E-08
Radium (88)	Ra-223	5.52E-01	1.41E-01	3.79E-01	5.30E-01	1.41E-01	2.21E+01	1.31	1.49E+02	5.85E+02	2.17E+02	1.55E+02	5.83E+02	2.92E-09
Radium (88)	Ra-223+D	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	2.21E+01	1.11	6.99E+01	2.98E+02	1.09E+02	7.47E+01	2.26E+02	1.37E-09
Radium (88)	Ra-223+E	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	2.21E+01							
Radium (88)	Ra-224	4.72E-02	1.09E-02	3.10E-02	4.51E-02	1.07E-02	6.91E+01	1.25	5.71E+03	2.46E+04	8.70E+03	5.97E+03	2.52E+04	3.59E-08
Radium (88)	Ra-224+D	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	6.91E+01	1.15	3.02E+01	1.75E+02	6.06E+01	3.72E+01	1.74E+02	1.90E-10
Radium (88)	Ra-224+E	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	6.91E+01							
Radium (88)	Ra-225	8.60E-03	6.21E-03	8.54E-03	8.58E-03	1.25E-02	1.71E+01	1.38	7.02E+03	9.71E+03	7.06E+03	7.03E+03	4.83E+03	1.79E-07
Radium (88)	Ra-225+D	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	1.71E+01	1.21	5.77E+01	2.65E+02	9.56E+01	6.36E+01	2.20E+02	1.47E-09
Radium (88)	Ra-225+E	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	1.71E+01							
Radium (88)	Ra-226	2.91E-02	7.24E-03	2.00E-02	2.82E-02	7.13E-03	4.33E-04	1.29	1.29E+02	5.21E+02	1.89E+02	1.34E+02	5.28E+02	1.31E-04
Radium (88)	Ra-226+D	1.06E+01					4.33E-04	1.17	3.93E-01					3.98E-07
Radium (88)	Ra-226+E	1.06E+01	1.94E+00	5.60E+00	8.95E+00	1.97E+00	4.33E-04							
Radium (88)	Ra-227	7.87E-01	1.76E-01	4.89E-01	7.31E-01	2.12E-01	8.63E+03	1.32	4.04E+04	1.81E+05	6.51E+04	4.35E+04	1.50E+05	2.06E-09
Radium (88)	Ra-227+D						8.63E+03	1.18						
Radium (88)	Ra-228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01	0						
Radium (88)	Ra-228+D	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	1.21E-01	1.17	7.81E-01	4.11E+00	1.43E+00	9.03E-01	4.03E+00	2.87E-09
Radium (88)	Ra-228+E	1.53E+01	2.74E+00	7.89E+00	1.27E+01	2.78E+00	1.21E-01							
Rubidium (37)	Rb-79	7.39E+00	1.54E+00	4.38E+00	6.70E+00	1.61E+00	1.59E+04	1.22	8.62E+03	4.12E+04	1.45E+04	9.51E+03	3.95E+04	8.31E-11
Rubidium (37)	Rb-80	7.03E+00	1.49E+00	4.16E+00	6.38E+00	1.61E+00	6.43E+05	1.2	3.71E+05	1.75E+06	6.27E+05	4.09E+05	1.62E+06	8.96E-11
Rubidium (37)	Rb-81	3.26E+00	6.94E-01	1.98E+00	3.00E+00	6.98E-01	1.33E+03	1.25	1.58E+03	7.41E+03	2.60E+03	1.71E+03	7.37E+03	1.87E-10
Rubidium (37)	Rb-81m	1.18E-02	4.21E-03	9.85E-03	1.18E-02	5.73E-03	1.14E+04	1.46	3.20E+06	8.99E+06	3.85E+06	3.20E+06	6.61E+06	4.42E-08
Rubidium (37)	Rb-82	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	2.80E+05	1.2	1.86E+05	8.85E+05	3.16E+05	2.05E+05	8.12E+05	1.06E-10
Rubidium (37)	Rb-82m	1.69E+01	3.25E+00	9.33E+00	1.47E+01	3.20E+00	9.79E+02	1.19	2.37E+02	1.24E+03	4.31E+02	2.73E+02	1.26E+03	3.86E-11
Rubidium (37)	Rb-83	2.74E+00	5.63E-01	1.61E+00	2.48E+00	5.55E-01	2.93E+00	1.26	4.38E+00	2.13E+01	7.48E+00	4.84E+00	2.16E+01	2.40E-10
Rubidium (37)	Rb-84	5.26E+00	1.03E+00	2.95E+00	4.63E+00	1.02E+00	7.72E+00	1.21	5.92E+00	3.04E+01	1.06E+01	6.73E+00	3.05E+01	1.25E-10
Rubidium (37)	Rb-86	5.87E-01	1.17E-01	3.19E-01	5.04E-01	1.95E-01	1.36E+01	1.16	9.66E+01	4.84E+02	1.78E+02	1.13E+02	2.91E+02	1.19E-09
Rubidium (37)	Rb-87	1.21E-04	5.24E-05	1.04E-04	1.21E-04	8.52E-05	1.47E-11	1.25	3.20E+04	7.41E+04	3.75E+04	3.21E+04	4.56E+04	3.67E+05
Rubidium (37)	Rb-88	4.21E+00	7.61E-01	2.11E+00	3.43E+00	8.65E-01	2.05E+04	1.14	2.08E+04	1.15E+05	4.16E+04	2.55E+04	1.01E+05	1.73E-10
Rubidium (37)	Rb-89	1.30E+01	2.28E+00	6.56E+00	1.07E+01	2.30E+00	2.40E+04	1.15	7.81E+03	4.47E+04	1.55E+04	9.51E+03	4.42E+04	5.63E-11
Rhenium (75)	Re-177	3.28E+00	6.66E-01	1.85E+00	2.85E+00	6.94E-01	2.60E+04	1.19	3.24E+04	1.60E+05	5.76E+04	3.73E+04	1.53E+05	4.28E-10
Rhenium (75)	Re-178	7.05E+00	1.32E+00	3.75E+00	5.95E+00	1.34E+00	2.76E+04	1.17	1.63E+04	8.70E+04	3.06E+04	1.93E+04	8.56E+04	2.04E-10
Rhenium (75)	Re-180	6.60E+00	1.31E+00	3.69E+00	5.76E+00	1.31E+00	1.50E+05	1.18	9.35E+04	4.73E+05	1.67E+05	1.07E+05	4.72E+05	2.18E-10
Rhenium (75)	Re-181	3.99E+00	8.39E-01	2.35E+00	3.58E+00	8.40E-01	3.04E+02	1.2	3.08E+02	1.47E+03	5.24E+02	3.44E+02	1.47E+03	3.57E-10
Rhenium (75)	Re-182	1.03E+01	2.03E+00	5.76E+00	8.93E+00	2.02E+00	9.49E+01							
Rhenium (75)	Re-182m	6.70E+00	1.27E+00	3.60E+00	5.69E+00	1.26E+00	4.78E+02							
Rhenium (75)	Re-184	4.92E+00	9.79E-01	2.76E+00	4.31E+00	9.77E-01	6.66E+00	1.18	5.57E+00	2.80E+01	9.93E+00	6.36E+00	2.81E+01	2.99E-10
Rhenium (75)	Re-184m	1.90E+00	4.16E-01	1.14E+00	1.72E+00	4.19E-01	1.53E+00	1.22	4.09E+00	1.87E+01	6.81E+00	4.53E+00	1.86E+01	9.52E-10
Rhenium (75)	Re-186	7.18E-02	2.24E-02	5.45E-02	7.07E-02	5.16E-02	6.70E+01	1.3	3.48E+03	1.12E+04	4.59E+03	3.54E+03	4.85E+03	1.88E-08
Rhenium (75)	Re-186m	2.35E-02	1.13E-02	2.14E-02	2.35E-02	1.49E-02	3.47E-06	1.52	1.36E+02	2.83E+02	1.49E+02	1.36E+02	2.14E+02	1.42E-02
Rhenium (75)	Re-186m+D	9.55E-02					3.47E-06	1.17	4.38E+01					4.56E-03
Rhenium (75)	Re-186m+E	9.53E-02	3.36E-02	7.59E-02	9.42E-02	6.65E-02	3.47E-06							
Rhenium (75)	Re-187	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-11	0						
Rhenium (75)	Re-188	3.11E-01	7.87E-02	1.96E-01	2.85E-01	1.69E-01	3.58E+02	1.23	4.56E+03	1.80E+04	7.25E+03	4.98E+03	8.39E+03	4.65E-09
Rhenium (75)	Re-188m	1.69E-01	6.83E-02	1.46E-01	1.68E-01	7.90E-02	1.96E+04	1.39	4.06E+05	1.00E+06	4.69E+05	4.07E+05	8.67E+05	7.56E-09
Rhenium (75)	Re-189	3.08E-01	7.57E-02	2.05E-01	2.95E-01	9.81E-02	2.50E+02	1.28	3.09E+03	1.25E+04	4.63E+03	3.22E+03	9.68E+03	4.53E-09

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	Radionuclide	Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)	External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Lambda	F_{surf}	Soil Volume Soil Volume SDCC (pCi/g)	Soil Volume 1cm SDCC (pCi/g)	Soil Volume 5cm SDCC (pCi/g)	Soil Volume 15cm SDCC (pCi/g)	Ground Plane SDCC (pCi/cm^2)	Soil Volume SDCC (mg/kg)
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Rhodium (45)	Rh-100	1.72E+01	2.98E+00	8.65E+00	1.41E+01	2.91E+00	2.92E+02	1.16	7.15E+01	4.11E+02	1.42E+02	8.69E+01	4.22E+02	4.75E-11
Rhodium (45)	Rh-101	1.12E+00	2.78E-01	7.68E-01	1.09E+00	2.80E-01	2.17E-01	1.29	3.75E+00	1.51E+01	5.48E+00	3.87E+00	1.50E+01	3.39E-09
Rhodium (45)	Rh-101m	1.51E+00	3.30E-01	9.42E-01	1.41E+00	3.30E-01	5.83E+01	1.26	1.49E+02	6.81E+02	2.39E+02	1.60E+02	6.81E+02	5.03E-10
Rhodium (45)	Rh-102	1.22E+01	2.39E+00	6.84E+00	1.07E+01	2.36E+00	2.39E-01	1.19	3.77E-01	1.92E+00	6.70E-01	4.28E-01	1.95E+00	3.12E-10
Rhodium (45)	Rh-102m	2.65E+00	5.43E-01	1.54E+00	2.39E+00	5.57E-01	1.22E+00	1.22	2.61E+00	1.27E+01	4.48E+00	2.90E+00	1.24E+01	4.23E-10
Rhodium (45)	Rh-103m	1.70E-04	1.63E-04	1.70E-04	1.70E-04	1.03E-03	6.49E+03	1.35	1.38E+08	1.43E+08	1.38E+08	1.38E+08	2.27E+07	4.26E-06
Rhodium (45)	Rh-105	3.97E-01	8.75E-02	2.50E-01	3.73E-01	8.66E-02	1.72E+02	1.22	1.73E+03	7.84E+03	2.74E+03	1.84E+03	7.92E+03	2.05E-09
Rhodium (45)	Rh-106	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	7.31E+05	1.19	2.40E+06	1.07E+07	4.10E+06	2.68E+06	7.42E+06	6.76E-10
Rhodium (45)	Rh-106m	1.71E+01	3.25E+00	9.34E+00	1.48E+01	3.21E+00	2.76E+03	1.18	6.70E+02	3.52E+03	1.22E+03	7.73E+02	3.56E+03	4.99E-11
Rhodium (45)	Rh-107	1.62E+00	3.56E-01	1.01E+00	1.51E+00	3.94E-01	1.68E+04	1.22	4.15E+04	1.88E+05	6.66E+04	4.44E+04	1.70E+05	5.13E-10
Rhodium (45)	Rh-99	3.15E+00	6.60E-01	1.86E+00	2.83E+00	6.61E-01	1.58E+01	1.23	1.98E+01	9.46E+01	3.35E+01	2.20E+01	9.45E+01	2.41E-10
Rhodium (45)	Rh-99m	3.79E+00	7.53E-01	2.16E+00	3.36E+00	7.46E-01	1.29E+03	1.21	1.37E+03	6.87E+03	2.39E+03	1.54E+03	6.94E+03	2.03E-10
Radon (86)	Rn-218	4.25E-03	8.56E-04	2.44E-03	3.80E-03	8.46E-04	6.24E+08	1.19	5.99E+11	2.98E+12	1.04E+12	6.70E+11	3.01E+12	4.06E-07
Radon (86)	Rn-219	2.85E-01	6.29E-02	1.78E-01	2.67E-01	6.16E-02	5.52E+06	1.23	7.66E+07	3.48E+08	1.23E+08	8.20E+07	3.55E+08	5.90E-09
Radon (86)	Rn-219+D	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	5.52E+06	1.13	2.84E+07	1.28E+08	4.64E+07	3.09E+07	8.22E+07	2.19E-09
Radon (86)	Rn-219+E	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	5.52E+06							
Radon (86)	Rn-220	2.14E-03	4.36E-04	1.25E-03	1.92E-03	4.31E-04	3.93E+05	1.2	7.44E+08	3.66E+09	1.28E+09	8.31E+08	3.71E+09	8.09E-07
Radon (86)	Rn-222	2.18E-03	4.51E-04	1.29E-03	1.98E-03	4.46E-04	6.62E+01	1.2	1.23E+05	5.94E+05	2.08E+05	1.36E+05	6.01E+05	8.00E-07
Radon (86)	Rn-222+D	1.06E+01	1.94E+00	5.58E+00	8.91E+00	1.96E+00	6.62E+01	1.17	2.60E+01	1.42E+02	4.94E+01	3.09E+01	1.40E+02	1.70E-10
Radon (86)	Rn-222+E	1.06E+01	1.94E+00	5.58E+00	8.93E+00	2.01E+00	6.62E+01							
Ruthenium (44)	Ru-103	2.57E+00	5.32E-01	1.51E+00	2.33E+00	5.24E-01	6.44E+00	1.2	1.02E+01	4.92E+01	1.73E+01	1.12E+01	4.99E+01	3.15E-10
Ruthenium (44)	Ru-105	4.40E+00	8.88E-01	2.54E+00	3.94E+00	9.13E-01	1.37E+03	1.19	1.27E+03	6.30E+03	2.20E+03	1.42E+03	6.13E+03	1.89E-10
Ruthenium (44)	Ru-105+D	4.79E+00	9.75E-01	2.78E+00	4.31E+00	9.99E-01	1.37E+03	1.02	1.37E+03	6.71E+03	2.35E+03	1.52E+03	6.55E+03	2.03E-10
Ruthenium (44)	Ru-106	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.87E-01	0						
Ruthenium (44)	Ru-106+D	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	6.87E-01	1.19	4.54E+00	2.03E+01	7.75E+00	5.07E+00	1.40E+01	1.36E-09
Ruthenium (44)	Ru-106+E	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	6.87E-01							
Ruthenium (44)	Ru-94	2.89E+00	5.87E-01	1.68E+00	2.59E+00	5.84E-01	7.03E+03	1.23	9.64E+03	4.74E+04	1.66E+04	1.07E+04	4.78E+04	2.50E-10
Ruthenium (44)	Ru-97	1.09E+00	2.54E-01	7.14E-01	1.04E+00	2.52E-01	8.72E+01	1.29	3.02E+02	1.30E+03	4.62E+02	3.17E+02	1.31E+03	6.52E-10
Sulfur (16)	S-35	1.22E-05	6.96E-06	1.13E-05	1.22E-05	1.55E-05	2.89E+00	1.25	9.73E+05	1.71E+06	1.05E+06	9.73E+05	7.66E+05	2.28E-05
Antimony (51)	Sb-115	4.94E+00	1.02E+00	2.91E+00	4.48E+00	1.04E+00	1.15E+04	1.21	9.34E+03	4.53E+04	1.59E+04	1.03E+04	4.43E+04	1.82E-10
Antimony (51)	Sb-116	1.30E+01	2.37E+00	6.84E+00	1.10E+01	2.37E+00	2.31E+04	1.16	7.39E+03	4.07E+04	1.41E+04	8.76E+03	4.07E+04	7.22E-11
Antimony (51)	Sb-116m	1.83E+01	3.47E+00	9.94E+00	1.58E+01	3.42E+00	6.04E+03	1.18	1.36E+03	7.21E+03	2.51E+03	1.58E+03	7.31E+03	5.08E-11
Antimony (51)	Sb-117	7.35E-01	1.83E-01	4.98E-01	7.05E-01	1.93E-01	2.17E+03	1.27	1.13E+04	4.56E+04	1.67E+04	1.18E+04	4.32E+04	1.19E-09
Antimony (51)	Sb-118m	1.51E+01	2.82E+00	8.11E+00	1.29E+01	2.79E+00	1.21E+03	1.18	3.32E+02	1.78E+03	6.19E+02	3.88E+02	1.80E+03	6.26E-11
Antimony (51)	Sb-119	4.48E-03	4.35E-03	4.49E-03	4.48E-03	1.82E-02	1.59E+02	1.32	1.31E+05	1.35E+05	1.31E+05	1.31E+05	3.23E+04	1.90E-07
Antimony (51)	Sb-120	2.44E+00	5.07E-01	1.43E+00	2.20E+00	5.45E-01	2.29E+04							
Antimony (51)	Sb-120m	1.43E+01	2.70E+00	7.74E+00	1.23E+01	2.66E+00	4.39E+01							
Antimony (51)	Sb-122	2.48E+00	5.07E-01	1.44E+00	2.22E+00	5.66E-01	9.37E+01	1.19	1.54E+02	7.53E+02	2.66E+02	1.72E+02	6.75E+02	3.89E-10
Antimony (51)	Sb-124	1.11E+01	2.00E+00	5.78E+00	9.33E+00	1.98E+00	4.20E+00	1.16	1.62E+00	8.97E+00	3.10E+00	1.92E+00	9.02E+00	9.27E-11
Antimony (51)	Sb-124m	1.98E+00	3.99E-01	1.14E+00	1.77E+00	4.01E-01	2.35E+05	1.19	4.85E+05	2.40E+06	8.42E+05	5.42E+05	2.39E+06	4.96E-10
Antimony (51)	Sb-124n	1.37E-05	1.34E-05	1.38E-05	1.37E-05	5.92E-05	1.80E+04	1.32	4.85E+09	4.96E+09	4.83E+09	4.85E+09	1.12E+09	6.48E-05
Antimony (51)	Sb-125	2.28E+00	4.74E-01	1.34E+00	2.07E+00	4.77E-01	2.50E-01	1.21	1.99E+00	9.57E+00	3.37E+00	2.19E+00	9.50E+00	1.93E-09
Antimony (51)	Sb-126	1.60E+01	3.21E+00	9.14E+00	1.43E+01	3.17E+00	2.04E+01	1.19	5.21E+00	2.61E+01	9.14E+00	5.86E+00	2.63E+01	6.24E-11
Antimony (51)	Sb-126m	8.71E+00	1.76E+00	5.02E+00	7.80E+00	1.81E+00	1.92E+04	1.19	8.99E+03	4.45E+04	1.56E+04	1.00E+04	4.33E+04	1.15E-10
Antimony (51)	Sb-127	3.86E+00	7.76E-01	2.22E+00	3.45E+00	7.89E-01	6.57E+01	1.19	6.95E+01	3.46E+02	1.21E+02	7.77E+01	3.40E+02	2.61E-10
Antimony (51)	Sb-128	1.76E+01	3.49E+00	9.98E+00	1.56E+01	3.48E+00	6.74E+02							
Antimony (51)	Sb-128m	1.13E+01	2.26E+00	6.43E+00	1.00E+01	2.32E+00	3.50E+04							
Antimony (51)	Sb-129	8.54E+00	1.60E+00	4.61E+00	7.33E+00	1.60E+00	1.41E+03	1.17	6.85E+02	3.66E+03	1.27E+03	7.98E+02	3.66E+03	1.22E-10
Antimony (51)	Sb-130	1.88E+01	3.66E+00	1.05E+01	1.64E+01	3.66E+00	9.11E+03	1.18	1.99E+03	1.03E+04	3.59E+03	2.28E+03	1.02E+04	5.52E-11

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Antimony (51)	Sb-131	1.13E+01	2.05E+00	5.93E+00	9.55E+00	2.07E+00	1.58E+04	1.16	5.88E+03	3.24E+04	1.12E+04	6.96E+03	3.22E+04	9.44E-11
Scandium (21)	Sc-43	5.95E+00	1.24E+00	3.54E+00	5.43E+00	1.25E+00	1.56E+03	1.2	1.06E+03	5.07E+03	1.78E+03	1.16E+03	5.05E+03	5.67E-11
Scandium (21)	Sc-44	1.24E+01	2.39E+00	6.86E+00	1.08E+01	2.43E+00	1.55E+03	1.18	5.14E+02	2.68E+03	9.31E+02	5.89E+02	2.63E+03	2.84E-11
Scandium (21)	Sc-44m	1.44E+00	3.13E-01	8.93E-01	1.34E+00	3.06E-01	1.04E+02	1.21	2.88E+02	1.33E+03	4.65E+02	3.10E+02	1.36E+03	2.37E-10
Scandium (21)	Sc-46	1.20E+01	2.24E+00	6.43E+00	1.03E+01	2.19E+00	3.02E+00	1.17	1.10E+00	5.91E+00	2.06E+00	1.29E+00	6.03E+00	3.27E-11
Scandium (21)	Sc-47	4.61E-01	1.18E-01	3.25E-01	4.51E-01	1.16E-01	7.55E+01	1.24	6.44E+02	2.52E+03	9.14E+02	6.57E+02	2.55E+03	7.78E-10
Scandium (21)	Sc-48	2.03E+01	3.69E+00	1.07E+01	1.72E+01	3.63E+00	1.39E+02	1.16	2.86E+01	1.58E+02	5.45E+01	3.39E+01	1.60E+02	1.92E-11
Scandium (21)	Sc-49	3.60E-02	1.88E-02	2.74E-02	3.39E-02	1.19E-01	6.35E+03	1.14	7.56E+05	1.44E+06	9.92E+05	8.02E+05	2.29E+05	1.13E-08
Selenium (34)	Se-70	5.32E+00	1.12E+00	3.17E+00	4.83E+00	1.16E+00	8.88E+03	1.25	6.52E+03	3.10E+04	1.09E+04	7.18E+03	2.98E+04	9.97E-11
Selenium (34)	Se-73	5.69E+00	1.22E+00	3.43E+00	5.22E+00	1.25E+00	8.49E+02	1.23	5.93E+02	2.77E+03	9.83E+02	6.46E+02	2.70E+03	9.89E-11
Selenium (34)	Se-73m	1.33E+00	2.78E-01	7.87E-01	1.21E+00	2.94E-01	9.34E+03	1.23	2.77E+04	1.33E+05	4.69E+04	3.05E+04	1.26E+05	4.20E-10
Selenium (34)	Se-75	1.83E+00	4.29E-01	1.20E+00	1.75E+00	4.21E-01	2.11E+00	1.31	4.88E+00	2.08E+01	7.40E+00	5.10E+00	2.12E+01	3.36E-10
Selenium (34)	Se-77m	3.64E-01	9.23E-02	2.54E-01	3.54E-01	9.07E-02	1.25E+06	1.37	1.23E+07	4.83E+07	1.76E+07	1.26E+07	4.92E+07	1.46E-09
Selenium (34)	Se-79	1.53E-05	8.69E-06	1.42E-05	1.53E-05	1.91E-05	1.07E-05	1.25	2.54E+05	4.47E+05	2.73E+05	2.54E+05	2.03E+05	3.65E+00
Selenium (34)	Se-81	6.53E-02	2.00E-02	4.27E-02	6.06E-02	9.50E-02	1.97E+04	1.2	1.22E+06	3.99E+06	1.87E+06	1.32E+06	8.39E+05	9.75E-09
Selenium (34)	Se-81m	4.57E-02	1.40E-02	3.56E-02	4.57E-02	1.47E-02	6.36E+03	1.52	4.47E+05	1.46E+06	5.73E+05	4.47E+05	1.39E+06	1.10E-08
Selenium (34)	Se-83	1.44E+01	2.69E+00	7.74E+00	1.23E+01	2.67E+00	1.62E+04	1.17	4.68E+03	2.51E+04	8.71E+03	5.47E+03	2.52E+04	4.66E-11
Silicon (14)	Si-31	1.98E-02	9.62E-03	1.47E-02	1.85E-02	8.33E-02	2.32E+03	1.15	4.94E+05	1.01E+06	6.64E+05	5.28E+05	1.17E+05	1.28E-08
Silicon (14)	Si-32	2.97E-05	1.51E-05	2.67E-05	2.97E-05	2.92E-05	1.54E-03	1.25	1.31E+05	2.58E+05	1.46E+05	1.31E+05	1.33E+05	5.28E-03
Silicon (14)	Si-32+D	2.04E-02					1.54E-03	1.25	1.91E+02					7.70E-06
Silicon (14)	Si-32+E	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	1.54E-03							
Samarium (62)	Sm-141	8.00E+00	1.58E+00	4.49E+00	7.03E+00	1.62E+00	3.57E+04	1.19	1.83E+04	9.28E+04	3.26E+04	2.09E+04	9.04E+04	1.40E-10
Samarium (62)	Sm-141m	1.13E+01	2.20E+00	6.29E+00	9.87E+00	2.21E+00	1.61E+04	1.18	5.88E+03	3.02E+04	1.06E+04	6.73E+03	3.01E+04	9.98E-11
Samarium (62)	Sm-142	3.79E-01	8.84E-02	2.29E-01	3.43E-01	1.04E-01	5.02E+03	1.23	5.24E+04	2.24E+05	8.65E+04	5.78E+04	1.90E+05	2.87E-09
Samarium (62)	Sm-145	5.43E-02	3.60E-02	5.32E-02	5.43E-02	6.49E-02	7.44E-01	1.28	9.95E+01	1.50E+02	1.02E+02	9.95E+01	8.32E+01	3.76E-08
Samarium (62)	Sm-146	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-09	0						
Samarium (62)	Sm-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-12	0						
Samarium (62)	Sm-151	6.75E-07	6.68E-07	6.75E-07	6.75E-07	4.13E-06	7.70E-03	1.34	5.40E+06	5.46E+06	5.40E+06	5.40E+06	8.82E+05	2.05E-01
Samarium (62)	Sm-153	1.39E-01	5.17E-02	1.13E-01	1.39E-01	7.12E-02	1.30E+02	1.26	3.59E+03	9.69E+03	4.41E+03	3.61E+03	7.03E+03	8.20E-09
Samarium (62)	Sm-155	3.66E-01	1.12E-01	2.76E-01	3.60E-01	1.82E-01	1.65E+04	1.25	1.76E+05	5.75E+05	2.33E+05	1.79E+05	3.53E+05	3.21E-09
Samarium (62)	Sm-156	4.83E-01	1.25E-01	3.36E-01	4.68E-01	1.31E-01	6.46E+02	1.25	5.21E+03	2.01E+04	7.49E+03	5.37E+03	1.92E+04	2.44E-09
Tin (50)	Sn-110	1.43E+00	3.21E-01	9.08E-01	1.35E+00	3.23E-01	1.52E+03	1.25	4.14E+03	1.84E+04	6.50E+03	4.38E+03	1.83E+04	5.82E-10
Tin (50)	Sn-111	2.87E+00	5.61E-01	1.60E+00	2.50E+00	5.85E-01	1.03E+04	1.2	1.46E+04	7.45E+04	2.62E+04	1.67E+04	7.16E+04	3.04E-10
Tin (50)	Sn-113	2.65E-02	8.39E-03	1.82E-02	2.54E-02	1.90E-02	2.20E+00	1.32	3.45E+02	1.09E+03	5.01E+02	3.60E+02	4.80E+02	3.44E-08
Tin (50)	Sn-117m	5.97E-01	1.56E-01	4.21E-01	5.86E-01	1.63E-01	1.86E+01	1.27	1.19E+02	4.55E+02	1.68E+02	1.21E+02	4.35E+02	1.45E-09
Tin (50)	Sn-119m	2.09E-03	2.03E-03	2.11E-03	2.09E-03	8.72E-03	8.63E-01	1.32	2.64E+03	2.71E+03	2.61E+03	2.64E+03	6.31E+02	7.05E-07
Tin (50)	Sn-121	1.71E-04	6.79E-05	1.41E-04	1.70E-04	1.03E-04	2.24E+02	1.25	5.09E+06	1.28E+07	6.16E+06	5.13E+06	8.44E+06	5.33E-06
Tin (50)	Sn-121m	1.43E-03	1.27E-03	1.42E-03	1.43E-03	4.20E-03	1.26E-02	1.31	2.62E+03	2.95E+03	2.63E+03	2.62E+03	8.91E+02	4.87E-05
Tin (50)	Sn-121m+D	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	1.26E-02	1	3.12E+03	3.69E+03	3.18E+03	3.12E+03	1.14E+03	5.82E-05
Tin (50)	Sn-121m+E	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	1.26E-02							
Tin (50)	Sn-123	5.30E-02	1.46E-02	3.15E-02	4.64E-02	7.59E-02	1.96E+00	1.16	1.80E+02	6.54E+02	3.03E+02	2.05E+02	1.26E+02	2.20E-08
Tin (50)	Sn-123m	5.91E-01	1.54E-01	4.16E-01	5.78E-01	2.02E-01	9.09E+03	1.25	6.00E+04	2.31E+05	8.53E+04	6.13E+04	1.76E+05	1.58E-09
Tin (50)	Sn-125	1.92E+00	3.66E-01	1.02E+00	1.63E+00	4.46E-01	2.62E+01	1.16	5.72E+01	3.01E+02	1.07E+02	6.73E+01	2.47E+02	5.29E-10
Tin (50)	Sn-126	1.30E-01	4.74E-02	1.09E-01	1.30E-01	5.62E-02	6.93E-06	1.29	2.90E+01	7.96E+01	3.47E+01	2.90E+01	6.70E+01	1.02E-03
Tin (50)	Sn-126+D	8.84E+00	1.81E+00	5.13E+00	7.93E+00	1.87E+00	6.93E-06	1.19	4.65E-01	2.27E+00	8.01E-01	5.18E-01	2.20E+00	1.64E-05
Tin (50)	Sn-126+E	1.11E+01	2.26E+00	6.42E+00	9.92E+00	2.31E+00	6.93E-06							
Tin (50)	Sn-127	1.15E+01	2.11E+00	6.08E+00	9.74E+00	2.10E+00	2.89E+03	1.16	1.05E+03	5.74E+03	1.99E+03	1.24E+03	5.76E+03	8.95E-11
Tin (50)	Sn-128	3.30E+00	7.03E-01	1.98E+00	3.00E+00	7.29E-01	6.16E+03	1.23	7.39E+03	3.47E+04	1.23E+04	8.12E+03	3.34E+04	2.98E-10
Strontium (38)	Sr-80	9.94E-05	9.94E-05	9.94E-05	9.94E-05	1.87E-03	3.64E+03	1.47	1.21E+08	1.21E+08	1.21E+08	1.21E+08	6.47E+06	5.18E-06

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	Radionuclide	Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)	External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Lambda	F_{surf}	Soil Volume Soil Volume SDCC (pCi/g)	Soil Volume 1cm SDCC (pCi/g)	Soil Volume 5cm SDCC (pCi/g)	Soil Volume 15cm SDCC (pCi/g)	Ground Plane SDCC (pCi/cm^2)	Soil Volume SDCC (mg/kg)
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Strontium (38)	Sr-81	7.53E+00	1.59E+00	4.48E+00	6.83E+00	1.67E+00	1.43E+04	1.2	7.66E+03	3.64E+04	1.29E+04	8.46E+03	3.46E+04	8.43E-11
Strontium (38)	Sr-82	9.77E-05	9.77E-05	9.77E-05	9.77E-05	1.83E-03	1.01E+01	1.47	3.43E+05	3.43E+05	3.43E+05	3.43E+05	1.83E+04	5.40E-06
Strontium (38)	Sr-82+D	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	1.01E+01	1.2	6.71E+00	3.20E+01	1.14E+01	7.41E+00	2.93E+01	1.06E-10
Strontium (38)	Sr-82+E	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	1.01E+01							
Strontium (38)	Sr-83	4.49E+00	8.88E-01	2.54E+00	3.97E+00	8.88E-01	1.87E+02	1.24	1.64E+02	8.31E+02	2.91E+02	1.86E+02	8.31E+02	1.41E-10
Strontium (38)	Sr-85	2.76E+00	5.71E-01	1.63E+00	2.50E+00	5.65E-01	3.90E+00	1.25	5.60E+00	2.71E+01	9.49E+00	6.18E+00	2.74E+01	2.37E-10
Strontium (38)	Sr-85m	1.04E+00	2.42E-01	6.86E-01	9.98E-01	2.36E-01	5.24E+03	1.25	1.96E+04	8.41E+04	2.97E+04	2.04E+04	8.65E+04	6.18E-10
Strontium (38)	Sr-87m	1.68E+00	3.60E-01	1.03E+00	1.56E+00	3.55E-01	2.16E+03	1.23	5.09E+03	2.38E+04	8.35E+03	5.50E+03	2.42E+04	3.97E-10
Strontium (38)	Sr-89	1.51E-02	8.97E-03	1.24E-02	1.47E-02	8.01E-02	5.01E+00	1.17	1.39E+03	2.33E+03	1.68E+03	1.43E+03	2.62E+02	4.78E-08
Strontium (38)	Sr-90	6.45E-04	2.35E-04	5.07E-04	6.36E-04	1.91E-03	2.38E-02	1.25	6.09E+03	1.67E+04	7.74E+03	6.18E+03	2.05E+03	4.47E-05
Strontium (38)	Sr-90+D	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	2.38E-02	1.4	8.66E+01	1.49E+02	1.07E+02	8.95E+01	2.69E+01	6.35E-07
Strontium (38)	Sr-90+E	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	2.38E-02							
Strontium (38)	Sr-91	4.12E+00	7.91E-01	2.26E+00	3.58E+00	8.48E-01	6.39E+02	1.17	6.43E+02	3.35E+03	1.17E+03	7.40E+02	3.12E+03	1.78E-10
Strontium (38)	Sr-92	8.30E+00	1.46E+00	4.25E+00	6.90E+00	1.44E+00	2.24E+03	1.15	1.14E+03	6.47E+03	2.23E+03	1.37E+03	6.60E+03	9.09E-11
Tantalum (73)	Ta-172	8.78E+00	1.71E+00	4.85E+00	7.61E+00	1.74E+00	9.90E+03	1.18	4.66E+03	2.40E+04	8.44E+03	5.38E+03	2.35E+04	1.57E-10
Tantalum (73)	Ta-173	2.98E+00	6.34E-01	1.75E+00	2.67E+00	6.71E-01	1.66E+03	1.2	2.26E+03	1.06E+04	3.85E+03	2.53E+03	1.00E+04	4.56E-10
Tantalum (73)	Ta-174	3.21E+00	6.86E-01	1.90E+00	2.89E+00	7.18E-01	5.06E+03	1.2	6.38E+03	2.98E+04	1.08E+04	7.08E+03	2.85E+04	4.26E-10
Tantalum (73)	Ta-175	5.18E+00	9.96E-01	2.82E+00	4.42E+00	9.91E-01	5.78E+02	1.17	4.62E+02	2.41E+03	8.51E+02	5.42E+02	2.42E+03	2.71E-10
Tantalum (73)	Ta-176	1.32E+01	2.29E+00	6.64E+00	1.08E+01	2.25E+00	7.51E+02	1.22	2.29E+02	1.31E+03	4.53E+02	2.78E+02	1.34E+03	1.04E-10
Tantalum (73)	Ta-177	1.57E-01	5.73E-02	1.23E-01	1.51E-01	6.85E-02	1.07E+02	1.27	2.62E+03	7.20E+03	3.35E+03	2.73E+03	6.01E+03	8.40E-09
Tantalum (73)	Ta-178	4.16E-01	1.02E-01	2.52E-01	3.62E-01	1.12E-01	3.91E+04							
Tantalum (73)	Ta-178m	4.79E+00	1.11E+00	3.06E+00	4.49E+00	1.11E+00	2.76E+03							
Tantalum (73)	Ta-179	4.87E-02	2.48E-02	4.57E-02	4.87E-02	3.21E-02	3.80E-01	1.3	9.27E+01	1.82E+02	9.87E+01	9.27E+01	1.41E+02	8.46E-08
Tantalum (73)	Ta-180	2.57E+00	6.04E-01	1.67E+00	2.44E+00	6.05E-01	6.93E-14	1.23	1.54E+00	6.55E+00	2.37E+00	1.62E+00	6.55E+00	7.75E+03
Tantalum (73)	Ta-180m	8.17E-02	3.86E-02	7.46E-02	8.17E-02	4.94E-02	7.49E+02	1.28	3.48E+04	7.36E+04	3.81E+04	3.48E+04	5.75E+04	1.62E-08
Tantalum (73)	Ta-182	7.50E+00	1.41E+00	4.03E+00	6.40E+00	1.40E+00	2.20E+00	1.17	1.38E+00	7.31E+00	2.56E+00	1.61E+00	7.37E+00	2.21E-10
Tantalum (73)	Ta-182m	9.42E-01	2.56E-01	6.70E-01	9.18E-01	2.63E-01	2.30E+04	1.25	9.48E+04	3.49E+05	1.33E+05	9.73E+04	3.40E+05	1.46E-09
Tantalum (73)	Ta-183	1.20E+00	3.04E-01	8.11E-01	1.15E+00	3.13E-01	4.96E+01	1.24	1.62E+02	6.38E+02	2.39E+02	1.69E+02	6.20E+02	1.16E-09
Tantalum (73)	Ta-184	8.80E+00	1.80E+00	5.13E+00	7.89E+00	1.81E+00	6.98E+02	1.19	3.23E+02	1.58E+03	5.55E+02	3.61E+02	1.57E+03	1.65E-10
Tantalum (73)	Ta-185	7.98E-01	2.09E-01	5.39E-01	7.57E-01	2.92E-01	7.43E+03	1.24	3.66E+04	1.40E+05	5.42E+04	3.86E+04	1.00E+05	1.77E-09
Tantalum (73)	Ta-186	8.43E+00	1.76E+00	4.98E+00	7.61E+00	1.84E+00	3.47E+04	1.2	1.67E+04	7.99E+04	2.83E+04	1.85E+04	7.64E+04	1.74E-10
Terbium (65)	Tb-147	9.12E+00	1.78E+00	5.05E+00	7.96E+00	1.81E+00	3.68E+03	1.18	1.67E+03	8.54E+03	3.00E+03	1.91E+03	8.40E+03	1.29E-10
Terbium (65)	Tb-149	9.47E+00	1.77E+00	5.07E+00	8.08E+00	1.75E+00	1.46E+03	1.17	6.43E+02	3.45E+03	1.20E+03	7.54E+02	3.48E+03	1.27E-10
Terbium (65)	Tb-150	9.75E+00	1.88E+00	5.35E+00	8.45E+00	1.89E+00	1.86E+03	1.18	7.86E+02	4.07E+03	1.43E+03	9.08E+02	4.06E+03	1.23E-10
Terbium (65)	Tb-151	4.59E+00	9.72E-01	2.72E+00	4.16E+00	9.78E-01	3.45E+02	1.2	3.04E+02	1.43E+03	5.12E+02	3.35E+02	1.43E+03	2.58E-10
Terbium (65)	Tb-153	9.18E-01	2.28E-01	5.97E-01	8.56E-01	2.44E-01	1.08E+02	1.23	4.66E+02	1.88E+03	7.16E+02	4.99E+02	1.75E+03	1.28E-09
Terbium (65)	Tb-154	1.47E+01	2.50E+00	7.24E+00	1.19E+01	2.43E+00	2.84E+02	1.14	8.23E+01	4.83E+02	1.67E+02	1.02E+02	4.98E+02	8.67E-11
Terbium (65)	Tb-155	4.20E-01	1.27E-01	3.08E-01	4.08E-01	1.46E-01	4.75E+01	1.25	4.40E+02	1.45E+03	6.00E+02	4.52E+02	1.26E+03	2.78E-09
Terbium (65)	Tb-156	1.04E+01	2.00E+00	5.69E+00	8.99E+00	1.97E+00	4.74E+01	1.18	1.88E+01	9.83E+01	3.45E+01	2.18E+01	9.95E+01	1.20E-10
Terbium (65)	Tb-156m	2.97E-02	1.76E-02	2.89E-02	2.97E-02	2.58E-02	2.49E+02	1.27	3.22E+04	5.43E+04	3.31E+04	3.22E+04	3.71E+04	3.92E-08
Terbium (65)	Tb-156n	5.46E-03	2.63E-03	4.90E-03	5.46E-03	3.68E-03	1.21E+03	1.27	8.53E+05	1.77E+06	9.50E+05	8.53E+05	1.27E+06	2.13E-07
Terbium (65)	Tb-157	2.31E-03	1.53E-03	2.28E-03	2.31E-03	2.57E-03	4.62E-03	1.27	1.66E+03	2.51E+03	1.68E+03	1.66E+03	1.49E+03	1.09E-04
Terbium (65)	Tb-158	4.46E+00	8.67E-01	2.46E+00	3.86E+00	8.74E-01	4.62E-03	1.18	9.28E-01	4.77E+00	1.68E+00	1.07E+00	4.73E+00	6.16E-08
Terbium (65)	Tb-160	6.53E+00	1.24E+00	3.56E+00	5.63E+00	1.24E+00	3.50E+00	1.17	2.29E+00	1.20E+01	4.20E+00	2.66E+00	1.21E+01	2.03E-10
Terbium (65)	Tb-161	4.64E-02	2.29E-02	4.20E-02	4.61E-02	3.44E-02	3.66E+01	1.29	2.97E+03	6.02E+03	3.29E+03	3.00E+03	4.01E+03	2.54E-08
Technetium (43)	Tc-101	1.73E+00	3.80E-01	1.08E+00	1.62E+00	4.26E-01	2.57E+04	1.22	5.93E+04	2.70E+05	9.52E+04	6.34E+04	2.41E+05	4.53E-10
Technetium (43)	Tc-104	1.22E+01	2.22E+00	6.34E+00	1.02E+01	2.28E+00	2.00E+04	1.16	6.92E+03	3.79E+04	1.33E+04	8.26E+03	3.70E+04	6.97E-11
Technetium (43)	Tc-93	9.06E+00	1.58E+00	4.59E+00	7.48E+00	1.54E+00	2.21E+03	1.17	1.02E+03	5.84E+03	2.01E+03	1.23E+03	5.98E+03	8.30E-11
Technetium (43)	Tc-93m	4.49E+00	7.65E-01	2.24E+00	3.66E+00	7.35E-01	8.37E+03	1.16	7.81E+03	4.59E+04	1.57E+04	9.60E+03	4.77E+04	1.68E-10

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	Radionuclide	Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)	External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Lambda	F_{surf}	Soil Volume Soil Volume SDCC (pCi/g)	Soil Volume 1cm SDCC (pCi/g)	Soil Volume 5cm SDCC (pCi/g)	Soil Volume 15cm SDCC (pCi/g)	Ground Plane SDCC (pCi/cm^2)	Soil Volume SDCC (mg/kg)
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Technetium (43)	Tc-94	1.54E+01	2.98E+00	8.56E+00	1.35E+01	2.95E+00	1.24E+03	1.19	3.31E+02	1.71E+03	5.95E+02	3.78E+02	1.73E+03	4.85E-11
Technetium (43)	Tc-94m	1.09E+01	2.09E+00	5.95E+00	9.42E+00	2.12E+00	7.00E+03	1.18	2.66E+03	1.38E+04	4.86E+03	3.07E+03	1.36E+04	6.92E-11
Technetium (43)	Tc-95	4.53E+00	8.82E-01	2.54E+00	3.97E+00	8.75E-01	3.04E+02	1.21	2.70E+02	1.39E+03	4.82E+02	3.08E+02	1.40E+03	1.64E-10
Technetium (43)	Tc-95m	3.67E+00	7.44E-01	2.13E+00	3.28E+00	7.38E-01	4.15E+00	1.22	4.56E+00	2.25E+01	7.89E+00	5.11E+00	2.27E+01	2.03E-10
Technetium (43)	Tc-96	1.45E+01	2.80E+00	8.02E+00	1.27E+01	2.77E+00	5.91E+01	1.19	1.67E+01	8.66E+01	3.02E+01	1.91E+01	8.76E+01	5.26E-11
Technetium (43)	Tc-96m	2.65E-01	5.04E-02	1.44E-01	2.28E-01	5.25E-02	7.07E+03	1.29	1.01E+05	5.29E+05	1.85E+05	1.17E+05	5.08E+05	2.65E-09
Technetium (43)	Tc-97	5.63E-04	5.67E-04	5.63E-04	5.63E-04	5.43E-03	2.67E-07	1.38	6.26E+03	6.22E+03	6.26E+03	6.26E+03	6.49E+02	4.42E+00
Technetium (43)	Tc-97m	1.53E-03	8.82E-04	1.34E-03	1.53E-03	5.19E-03	2.91E+00	1.37	7.15E+03	1.24E+04	8.17E+03	7.14E+03	2.11E+03	4.63E-07
Technetium (43)	Tc-98	8.06E+00	1.59E+00	4.57E+00	7.14E+00	1.58E+00	1.65E-07	1.19	5.09E-01	2.58E+00	8.98E-01	5.74E-01	2.60E+00	5.87E-04
Technetium (43)	Tc-99	1.08E-04	4.64E-05	9.21E-05	1.08E-04	7.55E-05	3.25E-06	1.25	3.59E+04	8.36E+04	4.21E+04	3.60E+04	5.14E+04	2.12E+00
Technetium (43)	Tc-99m	5.02E-01	1.35E-01	3.64E-01	4.96E-01	1.33E-01	1.01E+03	1.26	7.77E+03	2.89E+04	1.07E+04	7.86E+03	2.93E+04	1.48E-09
Tellurium (52)	Te-116	1.73E-01	5.17E-02	1.24E-01	1.65E-01	7.07E-02	2.44E+03	1.3	5.31E+04	1.77E+05	7.40E+04	5.54E+04	1.30E+05	4.90E-09
Tellurium (52)	Te-121	3.10E+00	6.36E-01	1.81E+00	2.80E+00	6.38E-01	1.49E+01	1.21	1.93E+01	9.39E+01	3.31E+01	2.13E+01	9.35E+01	3.04E-10
Tellurium (52)	Te-121m	9.90E-01	2.28E-01	6.36E-01	9.34E-01	2.31E-01	1.64E+00	1.24	8.05E+00	3.50E+01	1.25E+01	8.53E+00	3.45E+01	1.15E-09
Tellurium (52)	Te-123	4.63E-03	4.42E-03	4.64E-03	4.63E-03	1.66E-02	6.93E-14	1.31	8.03E+02	8.40E+02	8.00E+02	8.03E+02	2.24E+02	2.77E+06
Tellurium (52)	Te-123m	5.71E-01	1.49E-01	4.03E-01	5.60E-01	1.54E-01	2.11E+00	1.26	1.62E+01	6.22E+01	2.30E+01	1.66E+01	6.01E+01	1.83E-09
Tellurium (52)	Te-125m	1.11E-02	9.59E-03	1.08E-02	1.11E-02	3.10E-02	4.36E+00	1.31	1.48E+03	1.72E+03	1.52E+03	1.48E+03	5.31E+02	8.26E-08
Tellurium (52)	Te-127	2.67E-02	5.91E-03	1.64E-02	2.46E-02	1.20E-02	6.49E+02	1.21	9.78E+04	4.41E+05	1.59E+05	1.06E+05	2.17E+05	3.71E-08
Tellurium (52)	Te-127m	4.16E-03	3.13E-03	3.84E-03	4.10E-03	9.99E-03	2.32E+00	1.31	2.31E+03	3.06E+03	2.50E+03	2.34E+03	9.60E+02	2.45E-07
Tellurium (52)	Te-129	3.13E-01	6.98E-02	1.87E-01	2.83E-01	1.33E-01	5.23E+03	1.23	6.63E+04	2.98E+05	1.11E+05	7.33E+04	1.56E+05	3.17E-09
Tellurium (52)	Te-129m	1.75E-01	3.84E-02	1.01E-01	1.56E-01	6.65E-02	7.53E+00	1.25	1.67E+02	7.63E+02	2.89E+02	1.88E+02	4.41E+02	5.56E-09
Tellurium (52)	Te-131	2.24E+00	4.77E-01	1.33E+00	2.01E+00	5.53E-01	1.46E+04	1.2	2.64E+04	1.24E+05	4.44E+04	2.94E+04	1.07E+05	4.61E-10
Tellurium (52)	Te-131m	8.24E+00	1.58E+00	4.53E+00	7.16E+00	1.56E+00	2.02E+02	1.18	1.01E+02	5.28E+02	1.84E+02	1.17E+02	5.34E+02	1.27E-10
Tellurium (52)	Te-132	9.94E-01	2.39E-01	6.60E-01	9.55E-01	2.47E-01	7.76E+01	1.25	3.04E+02	1.26E+03	4.57E+02	3.16E+02	1.22E+03	1.00E-09
Tellurium (52)	Te-133	5.37E+00	1.05E+00	3.00E+00	4.70E+00	1.12E+00	2.93E+04	1.18	2.25E+04	1.15E+05	4.02E+04	2.57E+04	1.08E+05	1.98E-10
Tellurium (52)	Te-133m	1.36E+01	2.57E+00	7.39E+00	1.17E+01	2.61E+00	6.57E+03	1.17	2.01E+03	1.06E+04	3.69E+03	2.33E+03	1.04E+04	7.89E-11
Tellurium (52)	Te-134	4.76E+00	9.87E-01	2.80E+00	4.29E+00	9.90E-01	8.71E+03	1.2	7.42E+03	3.58E+04	1.26E+04	8.23E+03	3.57E+04	2.22E-10
()	Test Isotope													
Thorium (90)	Th-226	3.02E-02	8.21E-03	2.18E-02	2.95E-02	8.46E-03	1.18E+04	1.39	1.36E+06	5.02E+06	1.89E+06	1.40E+06	4.87E+06	5.07E-08
Thorium (90)	Th-227	4.79E-01	1.13E-01	3.15E-01	4.57E-01	1.14E-01	1.35E+01	1.34	1.02E+02	4.33E+02	1.56E+02	1.07E+02	4.29E+02	3.34E-09
Thorium (90)	Th-228	7.16E-03	2.09E-03	5.32E-03	7.03E-03	2.49E-03	3.62E-01	1.44	5.64E+02	1.94E+03	7.61E+02	5.75E+02	1.63E+03	6.89E-07
Thorium (90)	Th-229	2.89E-01	8.69E-02	2.20E-01	2.85E-01	9.21E-02	9.44E-05	1.4	1.20E+01	4.01E+01	1.58E+01	1.22E+01	3.78E+01	5.67E-05
Thorium (90)	Th-229+D	1.48E+00					9.44E-05	1.16	2.84E+00					1.34E-05
Thorium (90)	Th-229+E	1.48E+00	3.47E-01	9.38E-01	1.37E+00	4.04E-01	9.44E-05							
Thorium (90)	Th-230	1.07E-03	3.84E-04	8.62E-04	1.06E-03	7.43E-04	9.00E-06	1.45	3.15E+03	8.75E+03	3.90E+03	3.19E+03	4.52E+03	1.56E-01
Thorium (90)	Th-231	3.21E-02	1.16E-02	2.63E-02	3.19E-02	1.81E-02	2.38E+02	1.41	2.56E+04	7.08E+04	3.12E+04	2.57E+04	4.54E+04	4.82E-08
Thorium (90)	Th-232	4.55E-04	1.87E-04	3.82E-04	4.51E-04	5.31E-04	4.93E-11	1.45	7.38E+03	1.80E+04	8.78E+03	7.44E+03	6.32E+03	6.73E+04
Thorium (90)	Th-232+D						4.93E-11							
Thorium (90)	Th-234	2.13E-02	7.63E-03	1.77E-02	2.13E-02	8.74E-03	1.05E+01	1.39	1.73E+03	4.81E+03	2.07E+03	1.73E+03	4.20E+03	7.47E-08
Thorium (90)	Th-234+D	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	1.05E+01	1.15	2.86E+02	9.68E+02	4.46E+02	3.16E+02	3.15E+02	1.24E-08
Thorium (90)	Th-234+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	1.05E+01							
Titanium (22)	Ti-44	3.13E-01	1.24E-01	2.74E-01	3.13E-01	1.38E-01	1.47E-02	1.26	1.25E+01	3.14E+01	1.42E+01	1.25E+01	2.83E+01	7.26E-08
Titanium (22)	Ti-44+D	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	1.47E-02	1.17	3.30E-01	1.67E+00	5.89E-01	3.77E-01	1.64E+00	1.92E-09
Titanium (22)	Ti-44+E	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	1.47E-02							
Titanium (22)	Ti-45	4.77E+00	9.88E-01	2.82E+00	4.35E+00	1.01E+00	1.97E+03	1.2	1.67E+03	8.09E+03	2.84E+03	1.84E+03	7.91E+03	7.42E-11
Thallium (81)	Tl-194	4.08E+00	8.63E-01	2.42E+00	3.71E+00	8.58E-01	1.10E+04	1.21	1.08E+04	5.13E+04	1.83E+04	1.19E+04	5.16E+04	3.70E-10
Thallium (81)	Tl-194m	1.26E+01	2.61E+00	7.39E+00	1.14E+01	2.60E+00	1.11E+04	1.2	3.56E+03	1.72E+04	6.09E+03	3.95E+03	1.73E+04	1.21E-10
Thallium (81)	Tl-195	7.50E+00	1.37E+00	3.94E+00	6.29E+00	1.35E+00	5.23E+03	1.2	2.84E+03	1.55E+04	5.41E+03	3.39E+03	1.57E+04	2.05E-10
Thallium (81)	Tl-197	2.07E+00	4.38E-01	1.21E+00	1.83E+00	4.40E-01	2.14E+03	1.22	4.11E+03	1.94E+04	7.03E+03	4.64E+03	1.93E+04	7.35E-10

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	Radionuclide	Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)	Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)	External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Lambda	F_{surf}	Soil Volume Soil Volume SDCC (pCi/g)	Soil Volume 1cm SDCC (pCi/g)	Soil Volume 5cm SDCC (pCi/g)	Soil Volume 15cm SDCC (pCi/g)	Ground Plane SDCC (pCi/cm^2)	Soil Volume SDCC (mg/kg)
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Thallium (81)	Tl-198	1.20E+01	2.18E+00	6.27E+00	1.01E+01	2.12E+00	1.15E+03	1.17	3.98E+02	2.19E+03	7.64E+02	4.75E+02	2.25E+03	1.33E-10
Thallium (81)	Tl-198m	6.34E+00	1.33E+00	3.77E+00	5.76E+00	1.32E+00	3.25E+03	1.22	2.04E+03	9.73E+03	3.44E+03	2.25E+03	9.83E+03	2.42E-10
Thallium (81)	Tl-199	1.08E+00	2.61E-01	7.01E-01	1.01E+00	2.65E-01	8.18E+02	1.26	2.91E+03	1.21E+04	4.49E+03	3.12E+03	1.19E+04	1.37E-09
Thallium (81)	Tl-200	7.42E+00	1.44E+00	4.12E+00	6.45E+00	1.42E+00	2.33E+02	1.19	1.29E+02	6.62E+02	2.32E+02	1.48E+02	6.70E+02	2.15E-10
Thallium (81)	Tl-201	2.44E-01	8.54E-02	2.00E-01	2.42E-01	9.29E-02	8.31E+01	1.36	1.22E+03	3.48E+03	1.49E+03	1.23E+03	3.20E+03	5.71E-09
Thallium (81)	Tl-202	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	2.07E+01	1.23	3.51E+01	1.59E+02	5.72E+01	3.81E+01	1.59E+02	6.65E-10
Thallium (81)	Tl-204	3.88E-03	1.65E-03	3.30E-03	3.86E-03	1.26E-02	1.83E-01	1.39	9.91E+02	2.33E+03	1.17E+03	9.96E+02	3.05E+02	2.14E-06
Thallium (81)	Tl-206	1.26E-02	7.48E-03	1.04E-02	1.23E-02	7.08E-02	8.67E+04	1.34	2.51E+07	4.23E+07	3.03E+07	2.58E+07	4.46E+06	1.16E-07
Thallium (81)	Tl-207	2.29E-02	8.47E-03	1.54E-02	2.11E-02	6.49E-02	7.64E+04	1.17	1.38E+07	3.74E+07	2.05E+07	1.50E+07	4.88E+06	7.26E-08
Thallium (81)	Tl-208	2.18E+01	3.56E+00	1.04E+01	1.73E+01	3.47E+00	1.19E+05	1.13	2.34E+04	1.43E+05	4.91E+04	2.95E+04	1.47E+05	7.97E-11
Thallium (81)	Tl-209	1.22E+01	2.22E+00	6.40E+00	1.03E+01	2.24E+00	1.66E+05	1.16	5.67E+04	3.13E+05	1.08E+05	6.77E+04	3.10E+05	1.39E-10
Thulium (69)	Tm-162	1.08E+01	1.92E+00	5.52E+00	8.93E+00	1.90E+00	1.68E+04	1.17	6.49E+03	3.65E+04	1.27E+04	7.85E+03	3.69E+04	1.22E-10
Thulium (69)	Tm-166	1.12E+01	2.01E+00	5.80E+00	9.33E+00	1.98E+00	7.88E+02	1.16	2.96E+02	1.64E+03	5.71E+02	3.55E+02	1.67E+03	1.21E-10
Thulium (69)	Tm-167	5.07E-01	1.40E-01	3.52E-01	4.89E-01	1.53E-01	2.74E+01	1.24	2.11E+02	7.67E+02	3.04E+02	2.19E+02	7.01E+02	2.50E-09
Thulium (69)	Tm-170	1.41E-02	6.17E-03	1.21E-02	1.40E-02	3.08E-02	1.97E+00	1.26	6.27E+02	1.43E+03	7.27E+02	6.29E+02	2.86E+02	1.05E-07
Thulium (69)	Tm-171	9.38E-04	4.89E-04	8.86E-04	9.38E-04	6.48E-04	3.61E-01	1.27	4.87E+03	9.36E+03	5.16E+03	4.87E+03	7.06E+03	4.48E-06
Thulium (69)	Tm-172	2.91E+00	5.26E-01	1.51E+00	2.42E+00	5.68E-01	9.55E+01	1.15	1.38E+02	7.66E+02	2.68E+02	1.66E+02	7.09E+02	4.84E-10
Thulium (69)	Tm-173	2.03E+00	4.38E-01	1.24E+00	1.88E+00	4.53E-01	7.37E+02	1.21	1.46E+03	6.76E+03	2.38E+03	1.57E+03	6.54E+03	6.64E-10
Thulium (69)	Tm-175	5.99E+00	1.18E+00	3.38E+00	5.26E+00	1.21E+00	2.40E+04	1.18	1.65E+04	8.34E+04	2.92E+04	1.87E+04	8.12E+04	2.33E-10
Uranium (92)	U-230	3.95E-03	1.17E-03	2.91E-03	3.86E-03	1.81E-03	1.22E+01	1.43	1.05E+04	3.54E+04	1.43E+04	1.08E+04	2.29E+04	3.85E-07
Uranium (92)	U-231	2.07E-01	6.64E-02	1.64E-01	2.07E-01	7.47E-02	6.02E+01	1.39	1.02E+03	3.17E+03	1.28E+03	1.02E+03	2.82E+03	7.56E-09
Uranium (92)	U-232	7.91E-04	3.02E-04	6.30E-04	7.81E-04	9.42E-04	9.63E-03	1.43	4.32E+03	1.13E+04	5.42E+03	4.37E+03	3.63E+03	2.02E-04
Uranium (92)	U-233	1.26E-03	3.64E-04	8.97E-04	1.22E-03	6.99E-04	4.37E-06	1.43	2.70E+03	9.36E+03	3.79E+03	2.79E+03	4.87E+03	2.79E-01
Uranium (92)	U-234	3.43E-04	1.56E-04	2.89E-04	3.43E-04	6.84E-04	2.83E-06	1.43	9.90E+03	2.18E+04	1.17E+04	9.90E+03	4.97E+03	1.59E+00
Uranium (92)	U-235	6.58E-01	1.65E-01	4.57E-01	6.42E-01	1.63E-01	9.85E-10	1.3	5.68E+00	2.26E+01	8.19E+00	5.83E+00	2.29E+01	2.63E+00
Uranium (92)	U-235+D	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	9.85E-10	1.03	6.85E+00	2.68E+01	9.79E+00	7.02E+00	2.60E+01	3.17E+00
Uranium (92)	U-235+E	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	9.85E-10							
Uranium (92)	U-236	1.77E-04	9.72E-05	1.56E-04	1.77E-04	5.87E-04	2.96E-08	1.43	1.91E+04	3.50E+04	2.18E+04	1.92E+04	5.79E+03	2.96E+02
Uranium (92)	U-237	4.81E-01	1.36E-01	3.51E-01	4.70E-01	1.44E-01	3.75E+01	1.34	2.83E+02	9.98E+02	3.88E+02	2.89E+02	9.47E+02	3.47E-09
Uranium (92)	U-238	7.94E-05	6.29E-05	7.83E-05	7.94E-05	4.94E-04	1.55E-10	1.43	4.27E+04	5.40E+04	4.33E+04	4.27E+04	6.87E+03	1.27E+05
Uranium (92)	U-238+D	1.56E-01					1.55E-10	1.23	2.54E+01					7.56E+01
Uranium (92)	U-238+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	1.55E-10							
Uranium (92)	U-239	1.58E-01	5.17E-02	1.19E-01	1.51E-01	9.63E-02	1.55E+04	1.32	3.63E+05	1.11E+06	4.82E+05	3.80E+05	5.95E+05	1.09E-08
Uranium (92)	U-240	1.11E-03	8.06E-04	1.08E-03	1.11E-03	3.72E-03	4.31E+02	1.41	1.34E+06	1.84E+06	1.38E+06	1.34E+06	3.99E+05	1.45E-06
Vanadium (23)	V-47	5.50E+00	1.14E+00	3.25E+00	4.98E+00	1.23E+00	1.12E+04	1.2	8.24E+03	3.96E+04	1.40E+04	9.10E+03	3.70E+04	6.72E-11
Vanadium (23)	V-48	1.74E+01	3.23E+00	9.31E+00	1.49E+01	3.17E+00	1.56E+01	1.17	3.74E+00	2.02E+01	6.99E+00	4.37E+00	2.05E+01	2.23E-11
Vanadium (23)	V-49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.67E-01	0						
Tungsten (74)	W-176	4.18E-01	1.59E-01	3.52E-01	4.18E-01	1.80E-01	2.64E+03	1.27	2.41E+04	6.35E+04	2.86E+04	2.41E+04	5.61E+04	3.12E-09
Tungsten (74)	W-177	4.55E+00	9.72E-01	2.69E+00	4.07E+00	9.78E-01	2.70E+03	1.2	2.41E+03	1.13E+04	4.08E+03	2.70E+03	1.12E+04	3.07E-10
Tungsten (74)	W-178	2.13E-02	1.05E-02	1.98E-02	2.13E-02	1.33E-02	1.17E+01	1.35	1.98E+03	4.03E+03	2.13E+03	1.98E+03	3.17E+03	5.87E-08
Tungsten (74)	W-178+D	4.37E-01					1.17E+01	1.19	1.09E+02					3.23E-09
Tungsten (74)	W-178+E	4.37E-01					1.17E+01							
Tungsten (74)	W-179	8.09E-02	4.14E-02	7.57E-02	8.09E-02	5.81E-02	9.71E+03	1.3	4.50E+05	8.80E+05	4.81E+05	4.50E+05	6.27E+05	1.61E-08
Tungsten (74)	W-181	6.49E-02	3.17E-02	6.04E-02	6.49E-02	4.01E-02	2.09E+00	1.29	1.39E+02	2.84E+02	1.49E+02	1.39E+02	2.24E+02	2.33E-08
Tungsten (74)	W-185	3.82E-04	1.40E-04	3.10E-04	3.79E-04	2.00E-04	3.37E+00	1.33	3.34E+04	9.13E+04	4.12E+04	3.37E+04	6.40E+04	3.56E-06
Tungsten (74)	W-187	2.57E+00	5.33E-01	1.50E+00	2.31E+00	5.46E-01	2.54E+02	1.23	3.92E+02	1.89E+03	6.72E+02	4.36E+02	1.85E+03	5.60E-10
Tungsten (74)	W-188	8.90E-03	2.11E-03	5.84E-03	8.47E-03	2.12E-03	3.64E+00	1.26	1.63E+03	6.89E+03	2.49E+03	1.71E+03	6.83E+03	1.63E-07
Xenon (54)	Xe-120	2.13E+00	4.49E-01	1.25E+00	1.92E+00	4.68E-01	9.11E+03	1.23	1.70E+04	8.02E+04	2.88E+04	1.88E+04	7.71E+04	4.34E-10
Xenon (54)	Xe-121	1.09E+01	1.98E+00	5.67E+00	9.10E+00	1.97E+00	9.08E+03	1.18	3.44E+03	1.90E+04	6.61E+03	4.12E+03	1.90E+04	8.90E-11

		Toxicity and Isotope-specific Information							Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)					
Element (Atomic No.)	**Radionuclide**	**Soil Volume External Exposure DCF (Infinite Volume) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (1 cm) (mrem/yr per pCi/g)**	**Soil Volume External Exposure DCF (5 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**F_{surf}**	**Soil Volume Soil Volume SDCC (pCi/g)**	**Soil Volume 1cm SDCC (pCi/g)**	**Soil Volume 5cm SDCC (pCi/g)**	**Soil Volume 15cm SDCC (pCi/g)**	**Ground Plane SDCC (pCi/cm^2)**	**Soil Volume SDCC (mg/kg)**
Actinium (89)	Ac-223	1.98E-02	4.81E-03	1.31E-02	1.87E-02	5.16E-03	1.66E+05	1.46	2.79E+07	1.14E+08	4.21E+07	2.95E+07	1.07E+08	7.28E-08
Xenon (54)	Xe-122	2.33E-01	5.71E-02	1.50E-01	2.20E-01	7.04E-02	3.02E+02	1.28	4.95E+03	2.02E+04	7.68E+03	5.24E+03	1.64E+04	3.88E-09
Xenon (54)	Xe-123	3.41E+00	6.84E-01	1.94E+00	3.00E+00	7.04E-01	2.92E+03	1.2	3.47E+03	1.73E+04	6.11E+03	3.95E+03	1.68E+04	2.84E-10
Xenon (54)	Xe-125	1.19E+00	2.74E-01	7.59E-01	1.12E+00	2.88E-01	3.57E+02	1.25	1.17E+03	5.08E+03	1.84E+03	1.25E+03	4.83E+03	7.98E-10
Xenon (54)	Xe-127	1.21E+00	2.89E-01	7.98E-01	1.16E+00	2.99E-01	6.95E+00	1.25	2.24E+01	9.36E+01	3.39E+01	2.34E+01	9.05E+01	7.94E-10
Xenon (54)	Xe-129m	5.69E-02	2.35E-02	4.35E-02	5.56E-02	4.85E-02	3.16E+01	1.29	2.09E+03	5.06E+03	2.74E+03	2.14E+03	2.45E+03	1.66E-08
Xenon (54)	Xe-131m	1.92E-02	8.58E-03	1.52E-02	1.88E-02	1.87E-02	2.13E+01	1.3	4.16E+03	9.30E+03	5.26E+03	4.24E+03	4.27E+03	4.97E-08
Xenon (54)	Xe-133	8.71E-02	3.49E-02	7.46E-02	8.73E-02	4.61E-02	4.82E+01	1.28	2.10E+03	5.25E+03	2.45E+03	2.10E+03	3.97E+03	1.12E-08
Xenon (54)	Xe-133m	1.18E-01	3.13E-02	7.94E-02	1.14E-01	4.12E-02	1.16E+02	1.28	3.71E+03	1.40E+04	5.53E+03	3.87E+03	1.07E+04	8.29E-09
Xenon (54)	Xe-135	1.23E+00	2.78E-01	7.89E-01	1.16E+00	2.92E-01	6.68E+02	1.23	2.16E+03	9.55E+03	3.36E+03	2.28E+03	9.09E+03	8.48E-10
Xenon (54)	Xe-135m	2.35E+00	4.83E-01	1.37E+00	2.13E+00	4.89E-01	2.38E+04	1.2	4.10E+04	2.00E+05	7.02E+04	4.54E+04	1.97E+05	4.51E-10
Xenon (54)	Xe-138	6.99E+00	1.23E+00	3.54E+00	5.76E+00	1.25E+00	2.57E+04	1.15	1.56E+04	8.88E+04	3.07E+04	1.89E+04	8.71E+04	1.62E-10
Yttrium (39)	Y-86	2.14E+01	3.95E+00	1.14E+01	1.83E+01	3.89E+00	4.12E+02	1.17	7.98E+01	4.33E+02	1.50E+02	9.35E+01	4.40E+02	3.23E-11
Yttrium (39)	Y-86m	1.06E+00	2.44E-01	6.88E-01	1.00E+00	2.38E-01	7.59E+03	1.23	2.84E+04	1.23E+05	4.35E+04	2.99E+04	1.26E+05	6.24E-10
Yttrium (39)	Y-87	2.44E+00	5.09E-01	1.45E+00	2.22E+00	5.03E-01	7.56E+01	1.26	1.20E+02	5.74E+02	2.02E+02	1.32E+02	5.81E+02	2.67E-10
Yttrium (39)	Y-88	1.69E+01	2.91E+00	8.45E+00	1.38E+01	2.81E+00	2.37E+00	1.16	6.50E-01	3.77E+00	1.30E+00	7.93E-01	3.90E+00	4.68E-11
Yttrium (39)	Y-90	4.01E-02	2.35E-02	3.25E-02	3.88E-02	1.28E-01	9.49E+01	1.41	8.16E+03	1.39E+04	1.01E+04	8.44E+03	2.55E+03	1.50E-08
Yttrium (39)	Y-90m	3.26E+00	7.05E-01	2.00E+00	3.02E+00	6.97E-01	1.90E+03	1.22	2.33E+03	1.08E+04	3.82E+03	2.52E+03	1.09E+04	2.14E-10
Yttrium (39)	Y-91	3.79E-02	1.36E-02	2.46E-02	3.39E-02	8.71E-02	4.32E+00	1.16	4.87E+02	1.36E+03	7.49E+02	5.43E+02	2.12E+02	1.99E-08
Yttrium (39)	Y-91m	2.95E+00	6.01E-01	1.71E+00	2.65E+00	5.95E-01	7.33E+03	1.2	1.01E+04	4.95E+04	1.74E+04	1.12E+04	5.00E+04	2.43E-10
Yttrium (39)	Y-92	1.60E+00	3.30E-01	8.78E-01	1.38E+00	4.47E-01	1.71E+03	1.17	4.47E+03	2.17E+04	8.14E+03	5.20E+03	1.60E+04	4.66E-10
Yttrium (39)	Y-93	5.97E-01	1.33E-01	3.32E-01	5.11E-01	2.45E-01	6.01E+02	1.16	4.22E+03	1.90E+04	7.58E+03	4.93E+03	1.03E+04	1.27E-09
Yttrium (39)	Y-94	6.81E+00	1.29E+00	3.64E+00	5.80E+00	1.39E+00	1.91E+04	1.16	1.17E+04	6.19E+04	2.19E+04	1.38E+04	5.75E+04	1.12E-10
Yttrium (39)	Y-95	5.97E+00	9.94E-01	2.83E+00	4.70E+00	1.06E+00	3.40E+04	1.12	2.47E+04	1.48E+05	5.20E+04	3.14E+04	1.39E+05	1.34E-10
Ytterbium (70)	Yb-162	4.20E-01	1.29E-01	3.15E-01	4.12E-01	1.42E-01	1.93E+04	1.25	1.79E+05	5.80E+05	2.38E+05	1.82E+05	5.26E+05	2.91E-09
Ytterbium (70)	Yb-166	1.27E-01	6.47E-02	1.18E-01	1.27E-01	8.68E-02	1.07E+02	1.27	3.24E+03	6.36E+03	3.48E+03	3.23E+03	4.74E+03	9.74E-09
Ytterbium (70)	Yb-167	7.98E-01	2.48E-01	5.93E-01	7.74E-01	2.77E-01	2.08E+04	1.25	1.02E+05	3.27E+05	1.37E+05	1.05E+05	2.94E+05	1.58E-09
Ytterbium (70)	Yb-169	9.96E-01	2.95E-01	7.25E-01	9.70E-01	3.24E-01	7.90E+00	1.25	3.10E+01	1.05E+02	4.25E+01	3.18E+01	9.51E+01	1.29E-09
Ytterbium (70)	Yb-175	1.94E-01	4.38E-02	1.23E-01	1.82E-01	4.36E-02	6.04E+01	1.22	1.24E+03	5.50E+03	1.97E+03	1.33E+03	5.52E+03	6.99E-09
Ytterbium (70)	Yb-177	1.04E+00	2.09E-01	5.86E-01	9.10E-01	2.53E-01	3.20E+03	1.18	1.26E+04	6.32E+04	2.26E+04	1.45E+04	5.22E+04	1.36E-09
Ytterbium (70)	Yb-178	1.82E-01	3.95E-02	1.12E-01	1.69E-01	4.20E-02	4.92E+03	1.22	1.08E+05	4.98E+05	1.76E+05	1.17E+05	4.69E+05	7.60E-09
Zinc (30)	Zn-62	2.35E+00	4.87E-01	1.38E+00	2.13E+00	4.84E-01	6.56E+02	1.2	1.13E+03	5.46E+03	1.92E+03	1.25E+03	5.49E+03	2.07E-10
Zinc (30)	Zn-63	6.14E+00	1.27E+00	3.58E+00	5.52E+00	1.35E+00	9.56E+03	1.2	6.34E+03	3.07E+04	1.09E+04	7.05E+03	2.87E+04	8.11E-11
Zinc (30)	Zn-65	3.51E+00	6.43E-01	1.86E+00	2.97E+00	6.31E-01	1.04E+00	1.16	1.92E+00	1.05E+01	3.62E+00	2.27E+00	1.07E+01	2.33E-10
Zinc (30)	Zn-69	2.93E-03	1.51E-03	2.39E-03	2.87E-03	2.43E-02	6.39E+03	1.2	8.84E+06	1.72E+07	1.08E+07	9.02E+06	1.07E+06	1.85E-07
Zinc (30)	Zn-69m	2.24E+00	4.72E-01	1.34E+00	2.05E+00	4.64E-01	4.41E+02	1.21	7.96E+02	3.77E+03	1.32E+03	8.68E+02	3.83E+03	2.41E-10
Zinc (30)	Zn-71m	8.60E+00	1.76E+00	5.02E+00	7.74E+00	1.80E+00	1.55E+03	1.2	7.33E+02	3.58E+03	1.26E+03	8.14E+02	3.51E+03	6.52E-11
Zinc (30)	Zn-72	5.97E-01	1.58E-01	4.27E-01	5.86E-01	1.56E-01	1.31E+02	1.29	8.28E+02	3.13E+03	1.16E+03	8.44E+02	3.16E+03	8.86E-10
Zirconium (40)	Zr-86	1.32E+00	2.98E-01	8.43E-01	1.25E+00	2.99E-01	3.68E+02	1.33	1.02E+03	4.52E+03	1.60E+03	1.08E+03	4.52E+03	4.65E-10
Zirconium (40)	Zr-88	2.09E+00	4.46E-01	1.27E+00	1.92E+00	4.40E-01	3.03E+00	1.27	5.85E+00	2.74E+01	9.64E+00	6.36E+00	2.78E+01	3.29E-10
Zirconium (40)	Zr-89	6.73E+00	1.30E+00	3.73E+00	5.87E+00	1.28E+00	7.74E+01	1.2	4.67E+01	2.42E+02	8.43E+01	5.35E+01	2.45E+02	1.04E-10
Zirconium (40)	Zr-93	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.53E-07	0						
Zirconium (40)	Zr-95	4.23E+00	8.32E-01	2.39E+00	3.75E+00	8.22E-01	3.95E+00	1.18	3.92E+00	1.99E+01	6.95E+00	4.42E+00	2.02E+01	1.83E-10
Zirconium (40)	Zr-97	1.08E+00	2.13E-01	5.91E-01	9.33E-01	2.92E-01	3.59E+02	1.17	1.38E+03	7.03E+03	2.53E+03	1.60E+03	5.12E+03	7.23E-10