		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Actinium (89)	Ac-223+D			1.25E-01	1.66E+05	1.36E+09	2.11E+07	4.40E+06	4.40E+06
Actinium (89)	Ac-223+E			1.25E-01	1.66E+05	1.36E+09	2.11E+07	4.40E+06	4.40E+06
Actinium (89)	Ac-224	2.59E-06	4.07E-04	2.07E-01	2.09E+03	1.36E+09	2.11E+07	1.94E+03	3.41E+01
Actinium (89)	Ac-225	8.88E-05	2.74E-02	1.72E-02	2.53E+01	1.36E+09	2.11E+07	3.83E-01	6.13E-03
Actinium (89)	Ac-225+D	8.88E-05	2.74E-02	2.99E-01	2.53E+01	1.36E+09	2.11E+07	3.83E-01	6.13E-03
Actinium (89)	Ac-225+E	8.88E-05	2.74E-02	2.99E-01	2.53E+01	1.36E+09	2.11E+07	3.83E-01	6.13E-03
Actinium (89)	Ac-226	3.70E-05	4.44E-03	1.58E-01	2.09E+02	1.36E+09	2.11E+07	1.86E+01	3.13E-01
Actinium (89)	Ac-227	4.07E-03	8.14E-01	1.65E-04	3.18E-02	1.36E+09	2.11E+07	5.09E-04	8.28E-06
Actinium (89)	Ac-228	1.59E-06	6.29E-05	1.10E+00	9.90E+02	1.36E+09	2.11E+07	1.85E+03	1.00E+02
Silver (47)	Ag-102	1.48E-07	6.29E-08	3.72E+00	2.82E+04	1.36E+09	2.11E+07	2.73E+04	2.71E+04
Silver (47)	Ag-103	1.59E-07	9.62E-08	8.69E-01	5.54E+03	1.36E+09	2.11E+07	2.02E+04	1.92E+04
Silver (47)	Ag-103+D	8.88E-07	1.52E-06	8.80E-01	5.54E+03	1.36E+09	2.11E+07	1.86E+04	1.06E+04
Silver (47)	Ag-104	2.22E-07	1.33E-07	2.94E+00	5.26E+03	1.36E+09	2.11E+07	6.18E+03	6.04E+03
Silver (47)	Ag-104m	2.00E-07	9.25E-08	1.33E+00	1.09E+04	1.36E+09	2.11E+07	2.84E+04	2.74E+04
Silver (47)	Ag-105	1.74E-06	2.70E-06	5.72E-01	6.17E+00	1.36E+09	2.11E+07	2.84E+01	1.00E+01
Silver (47)	Ag-106	1.18E-07	5.55E-08	8.65E-01	1.52E+04	1.36E+09	2.11E+07	5.72E+04	5.55E+04
Silver (47)	Ag-106m	5.55E-06	4.07E-06	3.08E+00	3.01E+01	1.36E+09	2.11E+07	2.90E+01	1.83E+01
Silver (47)	Ag-108			1.05E-01	1.54E+05	1.36E+09	2.11E+07	5.04E+06	5.04E+06
Silver (47)	Ag-108m	8.51E-06	2.74E-05	1.81E+00	5.46E-03	1.36E+09	2.11E+07	1.28E+00	2.07E-01
Silver (47)	Ag-108m+D			1.82E+00	5.46E-03	1.36E+09	2.11E+07	1.88E+00	1.88E+00
Silver (47)	Ag-108m+E			1.82E+00		1.36E+09	2.11E+07		
Silver (47)	Ag-109m			8.78E-03	5.52E+05	1.36E+09	2.11E+07	1.90E+08	1.90E+08
Silver (47)	Ag-110			1.90E-01	8.88E+05	1.36E+09	2.11E+07	1.62E+07	1.62E+07
Silver (47)	Ag-110m	1.04E-05	2.81E-05	3.01E+00	1.01E+00	1.36E+09	2.11E+07	1.31E+00	2.95E-01
Silver (47)	Ag-110m+D			3.01E+00	1.01E+00	1.36E+09	2.11E+07	1.73E+00	1.73E+00
Silver (47)	Ag-110m+E			3.01E+00		1.36E+09	2.11E+07		
Silver (47)	Ag-111	4.81E-06	5.55E-06	6.16E-02	3.40E+01	1.36E+09	2.11E+07	2.42E+02	3.53E+01
Silver (47)	Ag-112	1.59E-06	5.92E-07	8.71E-01	1.95E+03	1.36E+09	2.11E+07	6.73E+03	5.16E+03
Silver (47)	Ag-115	2.22E-07	9.99E-08	8.75E-01	1.82E+04	1.36E+09	2.11E+07	6.99E+04	6.62E+04
Aluminum (13)	Al-26	1.30E-05	7.40E-05	2.88E+00	9.68E-07	1.36E+09	2.11E+07	7.85E-01	8.16E-02
Aluminum (13)	Al-28			2.00E+00	1.63E+05	1.36E+09	2.11E+07	3.01E+05	3.01E+05
Americium (95)	Am-237	6.66E-08	9.25E-08	3.94E-01	4.99E+03	1.36E+09	2.11E+07	3.98E+04	3.58E+04
Americium (95)	Am-238	1.18E-07	3.33E-07	9.65E-01	3.72E+03	1.36E+09	2.11E+07	1.21E+04	1.04E+04
Americium (95)	Am-239	8.88E-07	8.14E-07	2.43E-01	5.10E+02	1.36E+09	2.11E+07	4.98E+03	2.29E+03
Americium (95)	Am-240	2.15E-06	1.59E-06	1.12E+00	1.20E+02	1.36E+09	2.11E+07	2.91E+02	1.85E+02
Americium (95)	Am-241	7.40E-04	1.55E-01	2.72E-02	1.60E-03	1.36E+09	2.11E+07	2.63E-03	4.27E-05
Americium (95)	Am-242	1.11E-06	6.29E-05	1.88E-02	3.79E+02	1.36E+09	2.11E+07	2.13E+03	3.99E+01
Americium (95)	Am-242m	7.03E-04	1.37E-01	2.64E-03	4.56E-03	1.36E+09	2.11E+07	2.98E-03	4.86E-05
Americium (95)	Am-242m+D	7.03E-04	1.37E-01	2.44E-02	4.56E-03	1.36E+09	2.11E+07	2.98E-03	4.86E-05
Americium (95)	Am-242m+E	7.03E-04	1.52E-01	2.50E-02	4.56E-03	1.36E+09	2.11E+07	2.71E-03	4.38E-05
Americium (95)	Am-243	7.40E-04	1.52E-01	5.59E-02	9.39E-05	1.36E+09	2.11E+07	2.69E-03	4.37E-05
Americium (95)	Am-243+D	7.40E-04	1.52E-01	2.36E-01	9.39E-05	1.36E+09	2.11E+07	2.69E-03	4.37E-05
Americium (95)	Am-243+E	7.40E-04	1.52E-01	2.36E-01	9.39E-05	1.36E+09	2.11E+07	2.69E-03	4.37E-05
Americium (95)	Am-244	1.70E-06	7.40E-06	8.87E-01	6.01E+02	1.36E+09	2.11E+07	1.91E+03	4.26E+02
Americium (95)	Am-244m	1.07E-07	3.11E-07	6.48E-02	1.40E+04	1.36E+09	2.11E+07	5.69E+05	1.98E+05
Americium (95)	Am-245	2.29E-07	1.96E-07	4.81E-02	2.96E+03	1.36E+09	2.11E+07	1.45E+05	5.98E+04
Americium (95)	Am-246	2.15E-07	2.44E-07	7.94E-01	9.34E+03	1.36E+09	2.11E+07	3.72E+04	3.25E+04
Americium (95)	Am-246m	1.26E-07	8.14E-08	1.16E+00	1.46E+04	1.36E+09	2.11E+07	3.83E+04	3.71E+04
Argon (18)	Ar-37			0.00E+00	7.22E+00	1.36E+09	2.11E+07		
Argon (18)	Ar-39			2.95E-03	2.58E-03	1.36E+09	2.11E+07	1.10E+03	1.10E+03
Argon (18)	Ar-41			1.42E+00	3.32E+03	1.36E+09	2.11E+07	8.44E+03	8.44E+03
Arsenic (33)	As-69	2.11E-07	7.77E-08	1.30E+00	2.40E+04	1.36E+09	2.11E+07	6.23E+04	6.05E+04
Arsenic (33)	As-69+D	1.11E-06	1.15E-06	2.28E+00	2.40E+04	1.36E+09	2.11E+07	3.30E+04	2.67E+04
Arsenic (33)	As-70	4.81E-07	2.48E-07	4.55E+00	6.92E+03	1.36E+09	2.11E+07	5.22E+03	5.08E+03
Arsenic (33)	As-71	1.70E-06	1.48E-06	6.33E-01	9.37E+01	1.36E+09	2.11E+07	4.12E+02	2.10E+02
Arsenic (33)	As-71+D			6.33E-01	9.37E+01	1.36E+09	2.11E+07	5.05E+02	5.05E+02
Arsenic (33)	As-72	6.66E-06	3.33E-06	2.11E+00	2.33E+02	1.36E+09	2.11E+07	3.06E+02	1.86E+02
Arsenic (33)	As-73	9.62E-07	3.70E-06	6.05E-03	3.15E+00	1.36E+09	2.11E+07	1.02E+02	5.66E+00
Arsenic (33)	As-74	4.81E-06	7.77E-06	8.72E-01	1.42E+01	1.36E+09	2.11E+07	3.74E+01	9.29E+00
Arsenic (33)	As-76	5.92E-06	2.74E-06	6.12E-01	2.31E+02	1.36E+09	2.11E+07	7.26E+02	3.19E+02
Arsenic (33)	As-77	1.48E-06	1.44E-06	1.65E-02	1.56E+02	1.36E+09	2.11E+07	3.75E+03	6.12E+02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Arsenic (33)	As-78	7.77E-07	3.29E-07	1.51E+00	4.02E+03	1.36E+09	2.11E+07	8.98E+03	8.09E+03
Astatine (85)	At-207	8.88E-07	8.51E-06	1.42E+00	3.37E+03	1.36E+09	2.11E+07	7.00E+03	1.93E+03
Astatine (85)	At-211	4.07E-05	4.07E-04	3.87E-02	8.42E+02	1.36E+09	2.11E+07	4.47E+02	1.35E+01
Astatine (85)	At-211+D	4.07E-05	4.07E-04	4.38E-02	8.42E+02	1.36E+09	2.11E+07	4.47E+02	1.35E+01
Astatine (85)	At-211+E	4.07E-05	4.07E-04	7.49E-01	8.42E+02	1.36E+09	2.11E+07	3.98E+02	1.35E+01
Astatine (85)	At-215			2.15E-04	2.19E+11	1.36E+09	2.11E+07	3.43E+15	3.43E+15
Astatine (85)	At-216			1.51E-03	7.28E+10	1.36E+09	2.11E+07	1.53E+14	1.53E+14
Astatine (85)	At-217			3.42E-04	6.77E+08	1.36E+09	2.11E+07	6.70E+12	6.70E+12
Astatine (85)	At-218			4.25E-03	1.09E+07	1.36E+09	2.11E+07	7.78E+09	7.78E+09
Gold (79)	Au-193	4.81E-07	4.07E-07	1.66E-01	3.44E+02	1.36E+09	2.11E+07	5.37E+03	2.76E+03
Gold (79)	Au-194	1.55E-06	8.51E-07	1.13E+00	1.54E+02	1.36E+09	2.11E+07	3.87E+02	2.94E+02
Gold (79)	Au-195	9.25E-07	4.07E-06	8.23E-02	1.38E+00	1.36E+09	2.11E+07	3.26E+01	2.80E+00
Gold (79)	Au-195m			2.15E-01	7.17E+05	1.36E+09	2.11E+07	1.10E+07	1.10E+07
Gold (79)	Au-198	3.70E-06	2.89E-06	4.75E-01	9.38E+01	1.36E+09	2.11E+07	4.06E+02	1.42E+02
Gold (79)	Au-198m	4.81E-06	6.66E-06	6.10E-01	1.10E+02	1.36E+09	2.11E+07	3.54E+02	8.47E+01
Gold (79)	Au-199	1.63E-06	2.63E-06	9.30E-02	8.06E+01	1.36E+09	2.11E+07	1.13E+03	1.75E+02
Gold (79)	Au-200	2.52E-07	1.22E-07	3.93E-01	7.53E+03	1.36E+09	2.11E+07	6.11E+04	5.33E+04
Gold (79)	Au-200m	4.07E-06	2.52E-06	2.31E+00	3.25E+02	1.36E+09	2.11E+07	3.83E+02	2.66E+02
Gold (79)	Au-201	8.88E-08	6.29E-08	1.05E-01	1.38E+04	1.36E+09	2.11E+07	4.09E+05	3.21E+05
Barium (56)	Ba-126	9.62E-07	3.70E-07	1.76E-01	3.77E+03	1.36E+09	2.11E+07	4.86E+04	2.85E+04
Barium (56)	Ba-128	9.99E-06	4.81E-06	7.91E-02	1.04E+02	1.36E+09	2.11E+07	3.97E+02	1.07E+02
Barium (56)	Ba-131	1.67E-06	2.81E-06	5.01E-01	2.14E+01	1.36E+09	2.11E+07	1.10E+02	3.50E+01
Barium (56)	Ba-131m	1.81E-08	2.74E-08	7.82E-02	2.49E+04	1.36E+09	2.11E+07	9.88E+05	8.51E+05
Barium (56)	Ba-133	5.55E-06	1.15E-05	4.35E-01	6.45E-02	1.36E+09	2.11E+07	3.64E+00	5.20E-01
Barium (56)	Ba-133m	2.00E-06	1.55E-06	6.97E-02	1.56E+02	1.36E+09	2.11E+07	2.20E+03	5.18E+02
Barium (56)	Ba-135m	1.59E-06	1.22E-06	6.28E-02	2.12E+02	1.36E+09	2.11E+07	3.60E+03	8.82E+02
Barium (56)	Ba-137m			6.76E-01	1.43E+05	1.36E+09	2.11E+07	7.25E+05	7.25E+05
Barium (56)	Ba-139	4.44E-07	2.07E-07	1.70E-01	4.40E+03	1.36E+09	2.11E+07	7.11E+04	4.75E+04
Barium (56)	Ba-140	9.62E-06	1.89E-05	2.22E-01	1.99E+01	1.36E+09	2.11E+07	6.08E+01	6.35E+00
Barium (56)	Ba-141	2.59E-07	1.18E-07	1.03E+00	1.99E+04	1.36E+09	2.11E+07	6.37E+04	6.03E+04
Barium (56)	Ba-142	1.30E-07	7.77E-08	1.18E+00	3.44E+04	1.36E+09	2.11E+07	9.62E+04	9.32E+04
Beryllium (4)	Be-10	4.07E-06	3.55E-05	3.98E-03	4.33E-07	1.36E+09	2.11E+07	5.68E+00	1.84E-01
Beryllium (4)	Be-7	1.04E-07	1.85E-07	5.51E-02	4.75E+00	1.36E+09	2.11E+07	2.52E+02	1.03E+02
Bismuth (83)	Bi-200	1.89E-07	1.22E-07	2.64E+00	1.00E+04	1.36E+09	2.11E+07	1.23E+04	1.20E+04
Bismuth (83)	Bi-201	4.44E-07	2.44E-07	1.49E+00	3.37E+03	1.36E+09	2.11E+07	7.65E+03	7.07E+03
Bismuth (83)	Bi-202	3.29E-07	2.04E-07	2.96E+00	3.64E+03	1.36E+09	2.11E+07	3.85E+03	3.73E+03
Bismuth (83)	Bi-203	1.78E-06	9.62E-07	2.54E+00	5.16E+02	1.36E+09	2.11E+07	6.10E+02	5.22E+02
Bismuth (83)	Bi-205	3.33E-06	3.44E-06	1.80E+00	1.65E+01	1.36E+09	2.11E+07	2.51E+01	1.41E+01
Bismuth (83)	Bi-206	7.03E-06	6.29E-06	3.57E+00	4.05E+01	1.36E+09	2.11E+07	3.15E+01	1.82E+01
Bismuth (83)	Bi-207	4.81E-06	2.07E-05	1.69E+00	1.82E-02	1.36E+09	2.11E+07	1.57E+00	2.72E-01
Bismuth (83)	Bi-210	4.81E-06	3.44E-04	4.10E-02	5.05E+01	1.36E+09	2.11E+07	5.45E+01	9.71E-01
Bismuth (83)	Bi-210m	5.55E-05	1.26E-02	2.80E-01	2.31E-07	1.36E+09	2.11E+07	3.25E-02	5.27E-04
Bismuth (83)	Bi-210m+D			3.51E-01	2.31E-07	1.36E+09	2.11E+07	9.46E+00	9.46E+00
Bismuth (83)	Bi-210m+E			3.51E-01		1.36E+09	2.11E+07		
Bismuth (83)	Bi-211			5.13E-02	1.70E+05	1.36E+09	2.11E+07	1.11E+07	1.11E+07
Bismuth (83)	Bi-212	9.62E-07	1.15E-04	2.63E-01	6.02E+03	1.36E+09	2.11E+07	1.60E+04	3.46E+02
Bismuth (83)	Bi-212+D	9.62E-07	1.15E-04	1.51E+00	6.02E+03	1.36E+09	2.11E+07	8.15E+03	3.39E+02
Bismuth (83)	Bi-212+E	9.62E-07	1.15E-04	1.51E+00	6.02E+03	1.36E+09	2.11E+07	8.15E+03	3.39E+02
Bismuth (83)	Bi-213	7.40E-07	1.11E-04	1.96E-01	7.98E+03	1.36E+09	2.11E+07	2.34E+04	4.75E+02
Bismuth (83)	Bi-213+D	9.62E-07	1.11E-04	2.49E-01	7.98E+03	1.36E+09	2.11E+07	2.21E+04	4.74E+02
Bismuth (83)	Bi-213+E	9.62E-07	1.11E-04	2.49E-01	7.98E+03	1.36E+09	2.11E+07	2.21E+04	4.74E+02
Bismuth (83)	Bi-214	4.07E-07	5.18E-05	1.68E+00	1.83E+04	1.36E+09	2.11E+07	2.83E+04	2.20E+03
Bismuth (83)	Bi-214+D	4.07E-07	5.18E-05	1.68E+00	1.83E+04	1.36E+09	2.11E+07	2.83E+04	2.20E+03
Bismuth (83)	Bi-214+E	7.03E-03	1.67E-02	1.73E+00	1.83E+04	1.36E+09	2.11E+07	9.24E+01	6.86E+00
Berkelium (97)	Bk-245	2.11E-06	7.77E-06	2.40E-01	5.12E+01	1.36E+09	2.11E+07	3.52E+02	3.95E+01
Berkelium (97)	Bk-246	1.78E-06	1.22E-06	1.04E+00	1.38E+02	1.36E+09	2.11E+07	4.00E+02	2.62E+02
Berkelium (97)	Bk-247	1.30E-03	2.55E-01	1.10E-01	5.02E-04	1.36E+09	2.11E+07	1.60E-03	2.60E-05
Berkelium (97)	Bk-249	3.59E-06	5.92E-04	6.23E-06	7.90E-01	1.36E+09	2.11E+07	9.88E-01	1.62E-02
Berkelium (97)	Bk-250	5.18E-07	3.70E-06	9.84E-01	1.88E+03	1.36E+09	2.11E+07	6.31E+03	2.22E+03
Bromine (35)	Br-74	3.11E-07	1.41E-07	4.73E+00	1.44E+04	1.36E+09	2.11E+07	1.08E+04	1.06E+04
Bromine (35)	Br-74m	5.18E-07	2.29E-07	4.46E+00	8.78E+03	1.36E+09	2.11E+07	6.77E+03	6.60E+03

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Bromine (35)	Br-75	2.92E-07	1.96E-07	1.42E+00	3.72E+03	1.36E+09	2.11E+07	8.74E+03	8.18E+03
Bromine (35)	Br-76	1.70E-06	1.52E-06	2.85E+00	3.75E+02	1.36E+09	2.11E+07	4.27E+02	3.40E+02
Bromine (35)	Br-77	3.55E-07	3.11E-07	3.49E-01	1.08E+02	1.36E+09	2.11E+07	9.38E+02	6.71E+02
Bromine (35)	Br-80	1.15E-07	3.48E-08	1.21E-01	2.09E+04	1.36E+09	2.11E+07	5.44E+05	4.80E+05
Bromine (35)	Br-80m	4.07E-07	2.81E-07	1.60E-02	1.37E+03	1.36E+09	2.11E+07	9.08E+04	2.42E+04
Bromine (35)	Br-82	2.00E-06	2.33E-06	2.89E+00	1.72E+02	1.36E+09	2.11E+07	1.95E+02	1.40E+02
Bromine (35)	Br-83	1.59E-07	1.78E-07	3.34E-02	2.54E+03	1.36E+09	2.11E+07	1.84E+05	6.33E+04
Bromine (35)	Br-84	3.26E-07	1.37E-07	1.95E+00	1.15E+04	1.36E+09	2.11E+07	2.06E+04	1.98E+04
Carbon (6)	C-11	8.88E-08	8.14E-09	1.18E+00	1.79E+04	1.36E+09	2.11E+07	5.14E+04	5.12E+04
Carbon (6)	C-14	2.15E-06	2.29E-08	1.48E-05	1.21E-04	1.36E+09	2.11E+07	2.06E+01	1.93E+01
Calcium (20)	Ca-41	7.03E-07	3.52E-07	0.00E+00	4.95E-06	1.36E+09	2.11E+07	5.99E+01	1.45E+01
Calcium (20)	Ca-45	2.63E-06	9.99E-06	4.40E-05	1.55E+00	1.36E+09	2.11E+07	2.38E+01	1.26E+00
Calcium (20)	Ca-47	5.92E-06	7.03E-06	1.17E+00	5.58E+01	1.36E+09	2.11E+07	1.18E+02	3.68E+01
Calcium (20)	Ca-49			3.12E+00	4.18E+04	1.36E+09	2.11E+07	5.19E+04	5.19E+04
Cadmium (48)	Cd-104	2.00E-07	1.26E-07	2.75E-01	6.31E+03	1.36E+09	2.11E+07	7.01E+04	5.81E+04
Cadmium (48)	Cd-107	2.29E-07	3.07E-07	2.72E-02	9.35E+02	1.36E+09	2.11E+07	6.36E+04	1.55E+04
Cadmium (48)	Cd-109	7.40E-06	2.44E-05	1.94E-02	5.45E-01	1.36E+09	2.11E+07	5.63E+00	3.37E-01
Cadmium (48)	Cd-113	9.25E-05	2.04E-04	6.77E-05	7.45E-17	1.36E+09	2.11E+07	2.62E-01	2.05E-02
Cadmium (48)	Cd-113m	8.51E-05	1.92E-04	2.07E-03	5.10E-02	1.36E+09	2.11E+07	4.33E-01	3.32E-02
Cadmium (48)	Cd-115	5.18E-06	3.63E-06	2.84E-01	1.14E+02	1.36E+09	2.11E+07	5.44E+02	1.52E+02
Cadmium (48)	Cd-115m	1.22E-05	2.29E-05	1.08E-01	5.67E+00	1.36E+09	2.11E+07	1.58E+01	1.51E+00
Cadmium (48)	Cd-117	1.04E-06	5.92E-07	1.21E+00	2.44E+03	1.36E+09	2.11E+07	6.28E+03	5.12E+03
Cadmium (48)	Cd-117m	1.04E-06	7.40E-07	2.16E+00	1.81E+03	1.36E+09	2.11E+07	2.76E+03	2.36E+03
Cerium (58)	Ce-134	9.25E-06	4.81E-06	2.51E-02	8.43E+01	1.36E+09	2.11E+07	3.69E+02	8.96E+01
Cerium (58)	Ce-135	2.92E-06	1.78E-06	1.98E+00	3.45E+02	1.36E+09	2.11E+07	5.15E+02	3.70E+02
Cerium (58)	Ce-137	9.25E-08	3.63E-08	3.48E-02	6.75E+02	1.36E+09	2.11E+07	5.04E+04	3.60E+04
Cerium (58)	Ce-137m	2.00E-06	1.52E-06	5.51E-02	1.76E+02	1.36E+09	2.11E+07	2.68E+03	6.07E+02
Cerium (58)	Ce-139	9.62E-07	6.29E-06	1.67E-01	1.84E+00	1.36E+09	2.11E+07	2.46E+01	2.14E+00
Cerium (58)	Ce-141	2.63E-06	1.18E-05	8.09E-02	7.78E+00	1.36E+09	2.11E+07	6.94E+01	4.17E+00
Cerium (58)	Ce-143	4.07E-06	2.78E-06	3.51E-01	1.84E+02	1.36E+09	2.11E+07	9.03E+02	2.99E+02
Cerium (58)	Ce-144	1.92E-05	1.33E-04	2.15E-02	8.90E-01	1.36E+09	2.11E+07	2.01E+00	7.36E-02
Cerium (58)	Ce-144+D	1.92E-05	1.33E-04	2.11E-01	8.90E-01	1.36E+09	2.11E+07	1.87E+00	7.34E-02
Cerium (58)	Ce-144+E	1.92E-05	1.33E-04	2.11E-01	8.90E-01	1.36E+09	2.11E+07	1.87E+00	7.34E-02
Californium (98)	Cf-244	2.59E-07	5.18E-05	9.56E-04	1.88E+04	1.36E+09	2.11E+07	1.48E+05	2.40E+03
Californium (98)	Cf-246	1.22E-05	1.67E-03	6.69E-04	1.70E+02	1.36E+09	2.11E+07	4.08E+01	6.77E-01
Californium (98)	Cf-248	1.04E-04	3.26E-02	6.51E-04	7.58E-01	1.36E+09	2.11E+07	1.82E-02	2.91E-04
Californium (98)	Cf-249	1.30E-03	2.59E-01	3.68E-01	1.98E-03	1.36E+09	2.11E+07	1.58E-03	2.56E-05
Californium (98)	Cf-250	5.92E-04	1.26E-01	6.21E-04	5.30E-02	1.36E+09	2.11E+07	3.34E-03	5.41E-05
Californium (98)	Cf-251	1.33E-03	2.63E-01	1.32E-01	7.72E-04	1.36E+09	2.11E+07	1.55E-03	2.53E-05
Californium (98)	Cf-252	3.33E-04	7.40E-02	4.97E-01	2.63E-01	1.36E+09	2.11E+07	6.29E-03	1.02E-04
Californium (98)	Cf-253	5.18E-06	4.81E-03	6.03E-05	1.42E+01	1.36E+09	2.11E+07	1.25E+00	1.96E-02
Californium (98)	Cf-254	1.48E-03	1.52E-01	1.81E+01	4.18E+00	1.36E+09	2.11E+07	1.07E-02	1.85E-04
Chlorine (17)	Cl-36	3.44E-06	2.70E-05	1.31E-02	2.30E-06	1.36E+09	2.11E+07	6.91E+00	2.41E-01
Chlorine (17)	Cl-38	4.44E-07	1.67E-07	1.67E+00	9.79E+03	1.36E+09	2.11E+07	2.14E+04	2.03E+04
Chlorine (17)	Cl-39	3.15E-07	1.70E-07	1.65E+00	6.55E+03	1.36E+09	2.11E+07	1.41E+04	1.34E+04
Curium (96)	Cm-238	2.96E-07	1.67E-05	7.66E-02	2.53E+03	1.36E+09	2.11E+07	3.62E+04	9.96E+02
Curium (96)	Cm-240	2.81E-05	1.18E-02	8.97E-04	9.37E+00	1.36E+09	2.11E+07	3.31E-01	5.25E-03
Curium (96)	Cm-241	3.37E-06	1.37E-04	5.43E-01	7.71E+00	1.36E+09	2.11E+07	1.34E+01	3.70E-01
Curium (96)	Cm-242	4.44E-05	1.92E-02	8.19E-04	1.55E+00	1.36E+09	2.11E+07	4.29E-02	6.80E-04
Curium (96)	Cm-243	5.55E-04	1.15E-01	1.38E-01	2.43E-02	1.36E+09	2.11E+07	3.61E-03	5.85E-05
Curium (96)	Cm-244	4.44E-04	9.99E-02	7.52E-04	3.83E-02	1.36E+09	2.11E+07	4.19E-03	6.77E-05
Curium (96)	Cm-245	7.77E-04	1.55E-01	9.39E-02	8.15E-05	1.36E+09	2.11E+07	2.63E-03	4.27E-05
Curium (96)	Cm-246	7.77E-04	1.55E-01	6.72E-04	1.47E-04	1.36E+09	2.11E+07	2.63E-03	4.27E-05
Curium (96)	Cm-247	7.03E-04	1.44E-01	3.49E-01	4.44E-08	1.36E+09	2.11E+07	2.83E-03	4.60E-05
Curium (96)	Cm-247+D			3.76E-01	4.44E-08	1.36E+09	2.11E+07	8.66E+00	8.66E+00
Curium (96)	Cm-247+E			3.76E-01		1.36E+09	2.11E+07		
Curium (96)	Cm-248	2.85E-03	5.55E-01	1.42E+00	1.99E-06	1.36E+09	2.11E+07	7.34E-04	1.20E-05
Curium (96)	Cm-249	1.15E-07	1.22E-07	3.87E-02	5.68E+03	1.36E+09	2.11E+07	3.90E+05	1.74E+05
Curium (96)	Cm-250	1.63E-02	3.11E+00	1.05E+01	7.14E-05	1.36E+09	2.11E+07	1.31E-04	2.13E-06
Curium (96)	Cm-250+D	1.63E-02	3.11E+00		7.14E-05	1.36E+09	2.11E+07	1.31E-04	2.13E-06
Curium (96)	Cm-250+E	1.63E-02	3.11E+00	1.08E+01	7.14E-05	1.36E+09	2.11E+07	1.31E-04	2.13E-06

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Cobalt (27)	Co-55	3.70E-06	1.85E-06	2.25E+00	3.46E+02	1.36E+09	2.11E+07	4.79E+02	3.47E+02
Cobalt (27)	Co-56	9.25E-06	1.78E-05	3.77E+00	3.21E+00	1.36E+09	2.11E+07	2.61E+00	8.55E-01
Cobalt (27)	Co-57	7.77E-07	2.04E-06	1.26E-01	9.34E-01	1.36E+09	2.11E+07	2.44E+01	4.22E+00
Cobalt (27)	Co-58	2.74E-06	5.92E-06	1.08E+00	3.57E+00	1.36E+09	2.11E+07	9.55E+00	2.91E+00
Cobalt (27)	Co-58m	8.88E-08	4.81E-08	7.76E-06	6.63E+02	1.36E+09	2.11E+07	3.13E+05	7.17E+04
Cobalt (27)	Co-60	1.26E-05	3.70E-05	2.68E+00	1.31E-01	1.36E+09	2.11E+07	9.58E-01	1.62E-01
Cobalt (27)	Co-60m	6.29E-09	4.44E-09	5.11E-03	3.48E+04	1.36E+09	2.11E+07	2.02E+07	1.46E+07
Cobalt (27)	Co-61	2.74E-07	1.74E-07	1.51E-01	3.68E+03	1.36E+09	2.11E+07	6.88E+04	4.64E+04
Cobalt (27)	Co-62m	1.74E-07	7.40E-08	3.01E+00	2.62E+04	1.36E+09	2.11E+07	3.15E+04	3.11E+04
Chromium (24)	Cr-48	7.40E-07	7.40E-07	4.71E-01	2.64E+02	1.36E+09	2.11E+07	1.64E+03	9.75E+02
Chromium (24)	Cr-49	2.26E-07	1.22E-07	1.25E+00	8.65E+03	1.36E+09	2.11E+07	2.31E+04	2.20E+04
Chromium (24)	Cr-51	1.41E-07	1.18E-07	3.47E-02	9.13E+00	1.36E+09	2.11E+07	6.60E+02	2.91E+02
Cesium (55)	Cs-125	1.30E-07	4.44E-08	7.99E-01	8.09E+03	1.36E+09	2.11E+07	3.43E+04	3.34E+04
Cesium (55)	Cs-126			1.38E+00	2.22E+05	1.36E+09	2.11E+07	5.48E+05	5.48E+05
Cesium (55)	Cs-127	8.88E-08	7.40E-08	4.61E-01	9.71E+02	1.36E+09	2.11E+07	6.96E+03	6.45E+03
Cesium (55)	Cs-128			1.11E+00	9.34E+04	1.36E+09	2.11E+07	2.85E+05	2.85E+05
Cesium (55)	Cs-129	2.22E-07	1.55E-07	3.06E-01	1.89E+02	1.36E+09	2.11E+07	1.96E+03	1.58E+03
Cesium (55)	Cs-130	1.04E-07	2.89E-08	6.31E-01	1.22E+04	1.36E+09	2.11E+07	6.45E+04	6.30E+04
Cesium (55)	Cs-131	2.15E-07	9.99E-08	2.09E-02	2.61E+01	1.36E+09	2.11E+07	2.19E+03	9.77E+02
Cesium (55)	Cs-132	1.85E-06	8.51E-07	7.81E-01	3.91E+01	1.36E+09	2.11E+07	1.45E+02	9.87E+01
Cesium (55)	Cs-134	7.03E-05	2.44E-05	1.73E+00	3.36E-01	1.36E+09	2.11E+07	5.50E-01	2.04E-01
Cesium (55)	Cs-134m	7.40E-08	5.18E-08	2.63E-02	2.09E+03	1.36E+09	2.11E+07	2.04E+05	1.17E+05
Cesium (55)	Cs-135	7.40E-06	2.55E-06	3.14E-05	3.01E-07	1.36E+09	2.11E+07	5.78E+00	1.81E+00
Cesium (55)	Cs-135m	7.03E-08	4.44E-08	1.76E+00	6.87E+03	1.36E+09	2.11E+07	1.36E+04	1.34E+04
Cesium (55)	Cs-136	1.11E-05	4.44E-06	2.37E+00	1.93E+01	1.36E+09	2.11E+07	2.07E+01	1.21E+01
Cesium (55)	Cs-137	4.81E-05	1.70E-05	3.49E-03	2.31E-02	1.36E+09	2.11E+07	8.98E-01	2.77E-01
Cesium (55)	Cs-137+D	4.81E-05	1.70E-05	6.43E-01	2.31E-02	1.36E+09	2.11E+07	7.70E-01	2.64E-01
Cesium (55)	Cs-137+E	4.81E-05	1.70E-05	6.43E-01	2.31E-02	1.36E+09	2.11E+07	7.70E-01	2.64E-01
Cesium (55)	Cs-138	3.40E-07	8.88E-08	2.64E+00	1.13E+04	1.36E+09	2.11E+07	1.44E+04	1.42E+04
Copper (29)	Cu-60	2.59E-07	1.22E-07	4.25E+00	1.57E+04	1.36E+09	2.11E+07	1.33E+04	1.31E+04
Copper (29)	Cu-61	4.44E-07	2.74E-07	9.58E-01	1.78E+03	1.36E+09	2.11E+07	6.33E+03	5.53E+03
Copper (29)	Cu-62			1.30E+00	3.74E+04	1.36E+09	2.11E+07	9.86E+04	9.86E+04
Copper (29)	Cu-64	4.44E-07	4.07E-07	2.14E-01	4.78E+02	1.36E+09	2.11E+07	6.50E+03	3.57E+03
Copper (29)	Cu-66			2.37E-01	7.14E+04	1.36E+09	2.11E+07	1.07E+06	1.07E+06
Copper (29)	Cu-67	1.26E-06	2.04E-06	1.23E-01	9.81E+01	1.36E+09	2.11E+07	1.39E+03	2.63E+02
Dysprosium (66)	Dy-155	4.81E-07	2.85E-07	6.28E-01	6.07E+02	1.36E+09	2.11E+07	3.00E+03	2.48E+03
Dysprosium (66)	Dy-157	2.26E-07	1.11E-07	3.89E-01	7.49E+02	1.36E+09	2.11E+07	6.14E+03	5.41E+03
Dysprosium (66)	Dy-159	3.70E-07	1.37E-06	4.52E-02	1.75E+00	1.36E+09	2.11E+07	8.17E+01	9.26E+00
Dysprosium (66)	Dy-165	4.07E-07	2.22E-07	8.06E-02	2.60E+03	1.36E+09	2.11E+07	7.46E+04	3.84E+04
Dysprosium (66)	Dy-166	5.92E-06	7.03E-06	4.10E-02	7.44E+01	1.36E+09	2.11E+07	4.57E+02	6.17E+01
Erbium (68)	Er-161	2.96E-07	1.78E-07	9.98E-01	1.87E+03	1.36E+09	2.11E+07	5.87E+03	5.42E+03
Erbium (68)	Er-165	7.03E-08	2.92E-08	3.78E-02	5.86E+02	1.36E+09	2.11E+07	4.29E+04	3.25E+04
Erbium (68)	Er-169	1.37E-06	3.70E-06	7.88E-05	2.72E+01	1.36E+09	2.11E+07	6.87E+02	4.62E+01
Erbium (68)	Er-171	1.33E-06	8.14E-07	4.49E-01	8.07E+02	1.36E+09	2.11E+07	4.83E+03	2.81E+03
Erbium (68)	Er-172	3.70E-06	4.07E-06	5.79E-01	1.23E+02	1.36E+09	2.11E+07	4.54E+02	1.41E+02
Einsteinium (99)	Es-250	7.77E-08	2.33E-06	4.26E-01	2.89E+03	1.36E+09	2.11E+07	2.18E+04	6.04E+03
Einsteinium (99)	Es-251	6.29E-07	7.77E-06	9.79E-02	1.84E+02	1.36E+09	2.11E+07	2.91E+03	1.51E+02
Einsteinium (99)	Es-253	2.26E-05	9.99E-03	7.74E-04	1.24E+01	1.36E+09	2.11E+07	5.18E-01	8.21E-03
Einsteinium (99)	Es-254	1.04E-04	3.18E-02	1.14E-02	9.17E-01	1.36E+09	2.11E+07	1.99E-02	3.19E-04
Einsteinium (99)	Es-254+D	1.04E-04	3.18E-02	9.95E-01	9.17E-01	1.36E+09	2.11E+07	1.98E-02	3.19E-04
Einsteinium (99)	Es-254+E	7.03E-04	1.59E-01	9.97E-01	9.17E-01	1.36E+09	2.11E+07	3.94E-03	6.37E-05
Einsteinium (99)	Es-254m	1.55E-05	1.74E-03	5.34E-01	1.54E+02	1.36E+09	2.11E+07	3.36E+01	5.89E-01
Europium (63)	Eu-145	2.78E-06	2.04E-06	1.56E+00	4.26E+01	1.36E+09	2.11E+07	8.16E+01	5.17E+01
Europium (63)	Eu-146	4.81E-06	2.96E-06	2.74E+00	5.49E+01	1.36E+09	2.11E+07	6.04E+01	4.07E+01
Europium (63)	Eu-147	1.63E-06	4.07E-06	5.39E-01	1.05E+01	1.36E+09	2.11E+07	5.24E+01	1.31E+01
Europium (63)	Eu-148	4.81E-06	9.62E-06	2.40E+00	4.64E+00	1.36E+09	2.11E+07	5.44E+00	2.05E+00
Europium (63)	Eu-149	3.70E-07	1.07E-06	6.61E-02	2.72E+00	1.36E+09	2.11E+07	9.35E+01	1.53E+01
Europium (63)	Eu-150	4.81E-06	1.96E-04	1.66E+00	2.03E-02	1.36E+09	2.11E+07	9.51E-01	3.35E-02
Europium (63)	Eu-150m	1.41E-06	7.03E-07	7.91E-02	4.81E+02	1.36E+09	2.11E+07	8.61E+03	3.00E+03
Europium (63)	Eu-152	5.18E-06	1.55E-04	1.26E+00	5.20E-02	1.36E+09	2.11E+07	1.19E+00	4.29E-02
Europium (63)	Eu-152m	1.85E-06	8.14E-07	3.91E-01	6.51E+02	1.36E+09	2.11E+07	4.03E+03	2.31E+03

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Europium (63)	Eu-154	7.40E-06	1.96E-04	1.37E+00	7.88E-02	1.36E+09	2.11E+07	9.91E-01	3.45E-02
Europium (63)	Eu-155	1.18E-06	2.55E-05	6.24E-02	1.40E-01	1.36E+09	2.11E+07	1.01E+01	2.75E-01
Europium (63)	Eu-156	8.14E-06	1.26E-05	1.45E+00	1.67E+01	1.36E+09	2.11E+07	2.58E+01	6.64E+00
Europium (63)	Eu-157	2.22E-06	1.04E-06	3.22E-01	4.01E+02	1.36E+09	2.11E+07	2.70E+03	1.33E+03
Europium (63)	Eu-158	3.48E-07	1.74E-07	1.26E+00	7.94E+03	1.36E+09	2.11E+07	2.16E+04	2.02E+04
Fluorine (9)	F-18	1.81E-07	2.07E-07	1.15E+00	3.32E+03	1.36E+09	2.11E+07	9.74E+03	8.94E+03
Iron (26)	Fe-52	5.18E-06	2.22E-06	8.30E-01	7.34E+02	1.36E+09	2.11E+07	1.99E+03	1.05E+03
Iron (26)	Fe-55	1.22E-06	1.41E-06	0.00E+00	2.57E-01	1.36E+09	2.11E+07	3.68E+01	4.74E+00
Iron (26)	Fe-59	6.66E-06	1.37E-05	1.28E+00	5.68E+00	1.36E+09	2.11E+07	1.06E+01	2.22E+00
Iron (26)	Fe-60	4.07E-04	5.18E-04	1.37E-05	6.93E-06	1.36E+09	2.11E+07	9.62E-02	1.15E-02
Iron (26)	Fe-60+D	4.07E-04	5.18E-04	5.12E-03	6.93E-06	1.36E+09	2.11E+07	9.62E-02	1.15E-02
Iron (26)	Fe-60+E	4.07E-04	5.18E-04	5.12E-03	6.93E-06	1.36E+09	2.11E+07	9.62E-02	1.15E-02
Fermium (100)	Fm-252	9.99E-06	1.18E-03	6.31E-04	2.67E+02	1.36E+09	2.11E+07	8.94E+01	1.50E+00
Fermium (100)	Fm-253	3.37E-06	1.48E-03	8.33E-02	8.43E+01	1.36E+09	2.11E+07	2.37E+01	3.78E-01
Fermium (100)	Fm-254	1.63E-06	2.26E-04	6.99E-04	1.87E+03	1.36E+09	2.11E+07	3.32E+03	5.51E+01
Fermium (100)	Fm-255	9.25E-06	9.99E-04	7.34E-03	3.02E+02	1.36E+09	2.11E+07	1.19E+02	2.01E+00
Fermium (100)	Fm-257	5.55E-05	2.63E-02	1.11E-01	2.52E+00	1.36E+09	2.11E+07	4.37E-02	6.92E-04
Francium (87)	Fr-219			3.85E-03	1.04E+09	1.36E+09	2.11E+07	9.07E+11	9.07E+11
Francium (87)	Fr-220			1.15E-02	7.98E+05	1.36E+09	2.11E+07	2.15E+08	2.15E+08
Francium (87)	Fr-220+D			1.52E+00	7.98E+05	1.36E+09	2.11E+07	1.77E+06	1.77E+06
Francium (87)	Fr-220+E			1.52E+00	7.98E+05	1.36E+09	2.11E+07	1.77E+06	1.77E+06
Francium (87)	Fr-221			3.31E-02	7.59E+04	1.36E+09	2.11E+07	7.50E+06	7.50E+06
Francium (87)	Fr-221+D			2.81E-01	7.59E+04	1.36E+09	2.11E+07	8.36E+05	8.36E+05
Francium (87)	Fr-221+E			2.81E-01	7.59E+04	1.36E+09	2.11E+07	8.36E+05	8.36E+05
Francium (87)	Fr-222	2.66E-06	5.18E-05	1.02E-01	2.53E+04	1.36E+09	2.11E+07	1.19E+05	3.20E+03
Francium (87)	Fr-223	8.88E-06	3.29E-06	9.06E-02	1.67E+04	1.36E+09	2.11E+07	7.05E+04	2.30E+04
Gallium (31)	Ga-65	1.37E-07	6.29E-08	1.41E+00	2.40E+04	1.36E+09	2.11E+07	5.86E+04	5.73E+04
Gallium (31)	Ga-66	4.44E-06	1.63E-06	2.63E+00	6.46E+02	1.36E+09	2.11E+07	7.70E+02	5.98E+02
Gallium (31)	Ga-67	7.03E-07	8.88E-07	1.65E-01	7.76E+01	1.36E+09	2.11E+07	1.14E+03	3.89E+02
Gallium (31)	Ga-68	3.70E-07	1.81E-07	1.17E+00	5.36E+03	1.36E+09	2.11E+07	1.53E+04	1.42E+04
Gallium (31)	Ga-70	1.15E-07	5.92E-08	9.90E-02	1.72E+04	1.36E+09	2.11E+07	5.53E+05	4.32E+05
Gallium (31)	Ga-72	4.07E-06	1.96E-06	2.89E+00	4.31E+02	1.36E+09	2.11E+07	4.61E+02	3.52E+02
Gallium (31)	Ga-73	9.62E-07	5.18E-07	3.91E-01	1.24E+03	1.36E+09	2.11E+07	8.61E+03	5.61E+03
Gadolinium (64)	Gd-145	1.63E-07	7.40E-08	2.44E+00	1.59E+04	1.36E+09	2.11E+07	2.40E+04	2.36E+04
Gadolinium (64)	Gd-146	3.55E-06	2.37E-05	2.59E-01	5.24E+00	1.36E+09	2.11E+07	2.43E+01	1.41E+00
Gadolinium (64)	Gd-147	2.26E-06	1.48E-06	1.46E+00	1.59E+02	1.36E+09	2.11E+07	3.21E+02	2.23E+02
Gadolinium (64)	Gd-148	2.07E-04	4.07E-02	0.00E+00	7.45E-03	1.36E+09	2.11E+07	1.01E-02	1.64E-04
Gadolinium (64)	Gd-149	1.67E-06	2.70E-06	4.57E-01	2.69E+01	1.36E+09	2.11E+07	1.50E+02	4.64E+01
Gadolinium (64)	Gd-151	7.40E-07	3.18E-06	6.50E-02	2.11E+00	1.36E+09	2.11E+07	5.43E+01	4.65E+00
Gadolinium (64)	Gd-152	1.52E-04	2.96E-02	0.00E+00	6.42E-15	1.36E+09	2.11E+07	1.37E-02	2.23E-04
Gadolinium (64)	Gd-153	9.99E-07	7.77E-06	1.08E-01	1.05E+00	1.36E+09	2.11E+07	2.16E+01	1.31E+00
Gadolinium (64)	Gd-159	1.81E-06	9.99E-07	7.56E-02	3.27E+02	1.36E+09	2.11E+07	4.97E+03	1.53E+03
Germanium (32)	Ge-66	3.70E-07	3.37E-07	7.59E-01	2.67E+03	1.36E+09	2.11E+07	1.12E+04	9.24E+03
Germanium (32)	Ge-67	2.41E-07	9.25E-08	1.70E+00	1.95E+04	1.36E+09	2.11E+07	4.04E+04	3.92E+04
Germanium (32)	Ge-68	4.81E-06	5.18E-05	4.78E-05	8.78E-01	1.36E+09	2.11E+07	6.54E+00	1.90E-01
Germanium (32)	Ge-68+D	4.81E-06	5.18E-05	1.17E+00	8.78E-01	1.36E+09	2.11E+07	2.63E+00	1.82E-01
Germanium (32)	Ge-68+E	4.81E-06	5.18E-05	1.17E+00	8.78E-01	1.36E+09	2.11E+07	2.63E+00	1.82E-01
Germanium (32)	Ge-69	8.88E-07	1.07E-06	9.79E-01	1.55E+02	1.36E+09	2.11E+07	5.22E+02	3.40E+02
Germanium (32)	Ge-71	4.44E-08	4.07E-08	4.84E-05	2.14E+01	1.36E+09	2.11E+07	1.93E+04	3.00E+03
Germanium (32)	Ge-75	1.70E-07	1.33E-07	8.40E-02	4.40E+03	1.36E+09	2.11E+07	1.49E+05	8.93E+04
Germanium (32)	Ge-77	1.22E-06	1.37E-06	1.27E+00	5.37E+02	1.36E+09	2.11E+07	1.31E+03	8.76E+02
Germanium (32)	Ge-78	4.44E-07	3.52E-07	3.12E-01	4.19E+03	1.36E+09	2.11E+07	3.99E+04	2.67E+04
Hydrogen (1)	H-3	1.55E-07	1.52E-07	0.00E+00	5.61E-02	1.36E+09	2.11E+07	2.66E+02	3.90E+01
Hafnium (72)	Hf-170	1.78E-06	1.18E-06	5.96E-01	3.79E+02	1.36E+09	2.11E+07	1.64E+03	9.33E+02
Hafnium (72)	Hf-172	3.70E-06	7.40E-05	1.16E-01	3.71E-01	1.36E+09	2.11E+07	4.09E+00	1.06E-01
Hafnium (72)	Hf-173	8.51E-07	5.92E-07	4.35E-01	2.53E+02	1.36E+09	2.11E+07	1.66E+03	1.05E+03
Hafnium (72)	Hf-175	1.52E-06	4.44E-06	4.03E-01	3.61E+00	1.36E+09	2.11E+07	2.25E+01	4.51E+00
Hafnium (72)	Hf-177m	3.00E-07	3.33E-07	2.45E+00	7.09E+03	1.36E+09	2.11E+07	9.37E+03	8.80E+03
Hafnium (72)	Hf-178m	1.74E-05	4.44E-04	2.59E+00	2.24E-02	1.36E+09	2.11E+07	4.61E-01	1.49E-02
Hafnium (72)	Hf-179m	4.44E-06	1.41E-05	9.83E-01	1.01E+01	1.36E+09	2.11E+07	2.37E+01	4.01E+00
Hafnium (72)	Hf-180m	6.29E-07	4.81E-07	1.10E+00	1.10E+03	1.36E+09	2.11E+07	3.19E+03	2.64E+03

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Hafnium (72)	Hf-181	4.07E-06	1.85E-05	6.13E-01	5.97E+00	1.36E+09	2.11E+07	1.89E+01	1.95E+00
Hafnium (72)	Hf-182	1.11E-05	4.81E-04	2.60E-01	7.70E-08	1.36E+09	2.11E+07	6.88E-01	1.37E-02
Hafnium (72)	Hf-182+D				7.70E-08	1.36E+09	2.11E+07		
Hafnium (72)	Hf-182+E	1.67E-05	4.81E-04	1.66E+00	7.70E-08	1.36E+09	2.11E+07	5.00E-01	1.36E-02
Hafnium (72)	Hf-182m	1.55E-07	1.70E-07	1.02E+00	5.92E+03	1.36E+09	2.11E+07	1.83E+04	1.69E+04
Hafnium (72)	Hf-183	2.70E-07	2.11E-07	8.78E-01	5.69E+03	1.36E+09	2.11E+07	2.20E+04	1.96E+04
Hafnium (72)	Hf-184	1.92E-06	1.22E-06	2.87E-01	1.47E+03	1.36E+09	2.11E+07	1.10E+04	4.68E+03
Mercury (80)	Hg-193	3.03E-07	2.78E-07	2.10E-01	1.73E+03	1.36E+09	2.11E+07	2.38E+04	1.52E+04
Mercury (80)	Hg-193m	1.48E-06	9.62E-07	1.13E+00	5.47E+02	1.36E+09	2.11E+07	1.38E+03	1.01E+03
Mercury (80)	Hg-194	5.18E-06	3.07E-05	2.61E-04	2.67E-03	1.36E+09	2.11E+07	5.30E+00	2.11E-01
Mercury (80)	Hg-194+D	6.66E-06	3.07E-05	1.13E+00	2.67E-03	1.36E+09	2.11E+07	1.72E+00	1.95E-01
Mercury (80)	Hg-194+E	6.66E-06	3.07E-05	1.13E+00	2.67E-03	1.36E+09	2.11E+07	1.72E+00	1.95E-01
Mercury (80)	Hg-195	3.59E-07	2.70E-07	2.16E-01	6.13E+02	1.36E+09	2.11E+07	7.97E+03	5.24E+03
Mercury (80)	Hg-195m	2.07E-06	1.96E-06	2.25E-01	1.46E+02	1.36E+09	2.11E+07	1.16E+03	3.50E+02
Mercury (80)	Hg-197	8.51E-07	1.11E-06	6.76E-02	9.47E+01	1.36E+09	2.11E+07	2.18E+03	4.55E+02
Mercury (80)	Hg-197m	1.74E-06	1.96E-06	9.48E-02	2.55E+02	1.36E+09	2.11E+07	3.43E+03	6.99E+02
Mercury (80)	Hg-199m	1.15E-07	1.18E-07	1.95E-01	8.55E+03	1.36E+09	2.11E+07	1.35E+05	1.06E+05
Mercury (80)	Hg-203	2.00E-06	8.88E-06	2.59E-01	5.43E+00	1.36E+09	2.11E+07	3.78E+01	3.73E+00
Holmium (67)	Ho-155	1.37E-07	7.40E-08	4.54E-01	7.59E+03	1.36E+09	2.11E+07	5.31E+04	4.93E+04
Holmium (67)	Ho-157	2.41E-08	1.55E-08	5.38E-01	2.89E+04	1.36E+09	2.11E+07	1.75E+05	1.72E+05
Holmium (67)	Ho-159	2.92E-08	2.26E-08	3.90E-01	1.10E+04	1.36E+09	2.11E+07	9.14E+04	8.90E+04
Holmium (67)	Ho-161	4.81E-08	2.22E-08	6.00E-02	2.43E+03	1.36E+09	2.11E+07	1.20E+05	1.03E+05
Holmium (67)	Ho-162	1.22E-08	1.04E-08	1.81E-01	2.43E+04	1.36E+09	2.11E+07	4.57E+05	4.44E+05
Holmium (67)	Ho-162m	9.62E-08	7.77E-08	6.19E-01	5.36E+03	1.36E+09	2.11E+07	2.79E+04	2.63E+04
Holmium (67)	Ho-164	3.52E-08	3.11E-08	3.94E-02	1.26E+04	1.36E+09	2.11E+07	9.44E+05	7.01E+05
Holmium (67)	Ho-164m	5.92E-08	4.44E-08	4.55E-02	9.71E+03	1.36E+09	2.11E+07	6.11E+05	4.32E+05
Holmium (67)	Ho-166	5.18E-06	2.41E-06	1.23E-01	2.27E+02	1.36E+09	2.11E+07	1.42E+03	4.39E+02
Holmium (67)	Ho-166m	7.40E-06	4.44E-04	1.93E+00	5.78E-04	1.36E+09	2.11E+07	5.61E-01	1.48E-02
Holmium (67)	Ho-167	3.07E-07	2.63E-07	4.10E-01	1.96E+03	1.36E+09	2.11E+07	1.51E+04	1.16E+04
Iodine (53)	I-120	1.26E-06	7.40E-07	3.06E+00	4.50E+03	1.36E+09	2.11E+07	4.88E+03	4.36E+03
Iodine (53)	I-120m	7.77E-07	3.70E-07	5.85E+00	6.87E+03	1.36E+09	2.11E+07	4.08E+03	3.96E+03
Iodine (53)	I-121	3.03E-07	2.07E-07	4.62E-01	2.86E+03	1.36E+09	2.11E+07	1.99E+04	1.64E+04
Iodine (53)	I-122			1.19E+00	1.01E+05	1.36E+09	2.11E+07	2.91E+05	2.91E+05
Iodine (53)	I-123	7.77E-07	5.55E-07	1.79E-01	4.60E+02	1.36E+09	2.11E+07	6.09E+03	2.91E+03
Iodine (53)	I-124	4.81E-05	3.40E-05	1.21E+00	6.05E+01	1.36E+09	2.11E+07	3.99E+01	9.22E+00
Iodine (53)	I-125	5.55E-05	4.07E-05	3.66E-02	4.21E+00	1.36E+09	2.11E+07	3.14E+00	5.77E-01
Iodine (53)	I-126	1.07E-04	7.40E-05	5.16E-01	1.94E+01	1.36E+09	2.11E+07	7.07E+00	1.42E+00
Iodine (53)	I-128	1.70E-07	4.81E-08	2.00E-01	1.46E+04	1.36E+09	2.11E+07	2.32E+05	2.08E+05
Iodine (53)	I-129	4.07E-04	2.74E-04	2.28E-02	4.41E-08	1.36E+09	2.11E+07	1.02E-01	1.98E-02
Iodine (53)	I-130	7.40E-06	5.18E-06	2.39E+00	4.91E+02	1.36E+09	2.11E+07	5.63E+02	2.99E+02
Iodine (53)	I-131	8.14E-05	5.55E-05	4.25E-01	3.15E+01	1.36E+09	2.11E+07	1.50E+01	3.05E+00
Iodine (53)	I-132	1.07E-06	7.03E-07	2.57E+00	2.64E+03	1.36E+09	2.11E+07	3.36E+03	2.96E+03
Iodine (53)	I-132m	8.14E-07	5.92E-07	3.63E-01	4.36E+03	1.36E+09	2.11E+07	3.48E+04	2.05E+04
Iodine (53)	I-133	1.59E-05	1.15E-05	7.20E-01	2.92E+02	1.36E+09	2.11E+07	4.89E+02	1.27E+02
Iodine (53)	I-134	4.07E-07	1.85E-07	2.95E+00	6.92E+03	1.36E+09	2.11E+07	7.95E+03	7.70E+03
Iodine (53)	I-135	3.44E-06	2.52E-06	1.72E+00	9.18E+02	1.36E+09	2.11E+07	1.54E+03	9.47E+02
Indium (49)	In-109	2.44E-07	1.55E-07	7.28E-01	1.45E+03	1.36E+09	2.11E+07	6.47E+03	5.87E+03
Indium (49)	In-110	8.88E-07	4.81E-07	3.36E+00	1.24E+03	1.36E+09	2.11E+07	1.25E+03	1.16E+03
Indium (49)	In-110m	3.70E-07	1.74E-07	1.79E+00	5.27E+03	1.36E+09	2.11E+07	1.00E+04	9.54E+03
Indium (49)	In-111	1.07E-06	8.51E-07	4.29E-01	8.94E+01	1.36E+09	2.11E+07	5.52E+02	3.10E+02
Indium (49)	In-112	3.70E-08	2.74E-08	3.20E-01	2.53E+04	1.36E+09	2.11E+07	2.54E+05	2.44E+05
Indium (49)	In-113m	1.04E-07	7.40E-08	2.84E-01	3.66E+03	1.36E+09	2.11E+07	4.06E+04	3.62E+04
Indium (49)	In-114			3.22E-03	3.04E+05	1.36E+09	2.11E+07	3.27E+08	3.27E+08
Indium (49)	In-114m	1.52E-05	2.26E-05	1.01E-01	5.11E+00	1.36E+09	2.11E+07	1.20E+01	1.36E+00
Indium (49)	In-114m+D	1.52E-05	4.44E-05	1.04E-01	5.11E+00	1.36E+09	2.11E+07	1.07E+01	7.28E-01
Indium (49)	In-114m+E	1.52E-05	4.44E-05	1.04E-01	5.11E+00	1.36E+09	2.11E+07	1.07E+01	7.28E-01
Indium (49)	In-115	1.18E-04	5.92E-04	4.17E-04	1.36E-16	1.36E+09	2.11E+07	3.02E-01	1.33E-02
Indium (49)	In-115m	3.18E-07	2.18E-07	1.76E-01	1.35E+03	1.36E+09	2.11E+07	2.21E+04	1.44E+04
Indium (49)	In-116m	2.37E-07	1.67E-07	2.66E+00	6.73E+03	1.36E+09	2.11E+07	8.47E+03	8.22E+03
Indium (49)	In-117	1.15E-07	1.07E-07	7.75E-01	8.32E+03	1.36E+09	2.11E+07	3.56E+04	3.33E+04
Indium (49)	In-117m	4.44E-07	2.66E-07	1.46E-01	3.13E+03	1.36E+09	2.11E+07	5.65E+04	3.30E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Indium (49)	In-119			9.36E-01	1.52E+05	1.36E+09	2.11E+07	5.61E+05	5.61E+05
Indium (49)	In-119m	1.74E-07	6.29E-08	1.52E-01	2.02E+04	1.36E+09	2.11E+07	3.97E+05	3.36E+05
Iridium (77)	Ir-182	1.78E-07	8.51E-08	1.56E+00	2.43E+04	1.36E+09	2.11E+07	4.99E+04	4.87E+04
Iridium (77)	Ir-184	6.29E-07	4.07E-07	2.08E+00	2.01E+03	1.36E+09	2.11E+07	3.02E+03	2.77E+03
Iridium (77)	Ir-185	9.62E-07	6.66E-07	6.22E-01	4.34E+02	1.36E+09	2.11E+07	1.97E+03	1.36E+03
Iridium (77)	Ir-186	1.81E-06	1.15E-06	1.76E+00	3.84E+02	1.36E+09	2.11E+07	6.46E+02	5.02E+02
Iridium (77)	Ir-186m	2.26E-07	1.55E-07	1.07E+00	3.47E+03	1.36E+09	2.11E+07	1.09E+04	1.02E+04
Iridium (77)	Ir-187	4.44E-07	2.74E-07	3.93E-01	5.78E+02	1.36E+09	2.11E+07	4.26E+03	3.28E+03
Iridium (77)	Ir-188	2.33E-06	1.48E-06	1.66E+00	1.46E+02	1.36E+09	2.11E+07	2.63E+02	1.89E+02
Iridium (77)	Ir-189	8.88E-07	1.92E-06	8.16E-02	1.90E+01	1.36E+09	2.11E+07	3.77E+02	5.67E+01
Iridium (77)	Ir-190	4.44E-06	7.77E-06	1.59E+00	2.09E+01	1.36E+09	2.11E+07	3.44E+01	1.19E+01
Iridium (77)	Ir-190m			6.21E-05	5.06E+03	1.36E+09	2.11E+07	2.45E+08	2.45E+08
Iridium (77)	Ir-190n			1.72E+00	1.96E+03	1.36E+09	2.11E+07	3.60E+03	3.60E+03
Iridium (77)	Ir-191m			7.39E-02	4.42E+06	1.36E+09	2.11E+07	1.91E+08	1.91E+08
Iridium (77)	Ir-192	5.18E-06	1.92E-05	9.07E-01	3.42E+00	1.36E+09	2.11E+07	7.85E+00	1.07E+00
Iridium (77)	Ir-192m	1.15E-06	2.15E-05	1.72E-01	2.88E-03	1.36E+09	2.11E+07	7.78E+00	3.02E-01
Iridium (77)	Ir-194	4.81E-06	1.92E-06	2.11E-01	3.17E+02	1.36E+09	2.11E+07	1.80E+03	6.87E+02
Iridium (77)	Ir-194m	7.77E-06	3.33E-05	2.60E+00	1.48E+00	1.36E+09	2.11E+07	1.89E+00	3.22E-01
Iridium (77)	Ir-195	3.70E-07	2.48E-07	8.60E-02	2.43E+03	1.36E+09	2.11E+07	6.71E+04	3.33E+04
Iridium (77)	Ir-195m	7.77E-07	5.92E-07	4.64E-01	1.60E+03	1.36E+09	2.11E+07	9.24E+03	6.13E+03
Potassium (19)	K-38			3.47E+00	4.77E+04	1.36E+09	2.11E+07	4.91E+04	4.91E+04
Potassium (19)	K-40	2.29E-05	7.77E-06	2.38E-01	5.41E-10	1.36E+09	2.11E+07	1.66E+00	5.70E-01
Potassium (19)	K-42	1.59E-06	4.44E-07	4.64E-01	4.91E+02	1.36E+09	2.11E+07	3.00E+03	2.14E+03
Potassium (19)	K-43	9.25E-07	5.18E-07	1.10E+00	2.69E+02	1.36E+09	2.11E+07	7.85E+02	6.41E+02
Potassium (19)	K-44	3.11E-07	7.40E-08	2.47E+00	1.65E+04	1.36E+09	2.11E+07	2.48E+04	2.44E+04
Potassium (19)	K-45	2.00E-07	5.55E-08	2.05E+00	1.82E+04	1.36E+09	2.11E+07	3.18E+04	3.13E+04
Krypton (36)	Kr-74			1.40E+00	3.17E+04	1.36E+09	2.11E+07	7.38E+04	7.38E+04
Krypton (36)	Kr-76			4.70E-01	4.10E+02	1.36E+09	2.11E+07	2.70E+03	2.70E+03
Krypton (36)	Kr-77			1.21E+00	4.88E+03	1.36E+09	2.11E+07	1.35E+04	1.35E+04
Krypton (36)	Kr-79			2.79E-01	1.73E+02	1.36E+09	2.11E+07	2.09E+03	2.09E+03
Krypton (36)	Kr-81			6.99E-03	3.30E-06	1.36E+09	2.11E+07	4.31E+02	4.31E+02
Krypton (36)	Kr-81m			1.38E-01	1.68E+06	1.36E+09	2.11E+07	3.80E+07	3.80E+07
Krypton (36)	Kr-83m			4.17E-04	3.32E+03	1.36E+09	2.11E+07	2.40E+07	2.40E+07
Krypton (36)	Kr-85			1.23E-02	6.46E-02	1.36E+09	2.11E+07	2.87E+02	2.87E+02
Krypton (36)	Kr-85m			1.83E-01	1.36E+03	1.36E+09	2.11E+07	2.40E+04	2.40E+04
Krypton (36)	Kr-87			9.80E-01	4.77E+03	1.36E+09	2.11E+07	1.73E+04	1.73E+04
Krypton (36)	Kr-88			2.02E+00	2.14E+03	1.36E+09	2.11E+07	3.48E+03	3.48E+03
Lanthanum (57)	La-131	1.30E-07	8.51E-08	7.64E-01	6.17E+03	1.36E+09	2.11E+07	2.68E+04	2.54E+04
Lanthanum (57)	La-132	1.44E-06	5.92E-07	2.22E+00	1.26E+03	1.36E+09	2.11E+07	1.86E+03	1.64E+03
Lanthanum (57)	La-134			8.75E-01	5.46E+04	1.36E+09	2.11E+07	2.11E+05	2.11E+05
Lanthanum (57)	La-135	1.11E-07	5.18E-08	3.55E-02	3.11E+02	1.36E+09	2.11E+07	2.27E+04	1.45E+04
Lanthanum (57)	La-137	3.00E-07	1.33E-05	2.29E-02	1.16E-05	1.36E+09	2.11E+07	2.21E+01	4.95E-01
Lanthanum (57)	La-138	4.07E-06	2.37E-04	1.32E+00	5.13E-12	1.36E+09	2.11E+07	9.86E-01	2.77E-02
Lanthanum (57)	La-140	7.40E-06	4.07E-06	2.52E+00	1.51E+02	1.36E+09	2.11E+07	1.67E+02	1.00E+02
Lanthanum (57)	La-141	1.33E-06	5.55E-07	1.77E-01	1.54E+03	1.36E+09	2.11E+07	1.93E+04	9.51E+03
Lanthanum (57)	La-142	6.66E-07	3.29E-07	2.91E+00	3.94E+03	1.36E+09	2.11E+07	4.55E+03	4.31E+03
Lanthanum (57)	La-143	2.07E-07	7.77E-08	2.65E-01	2.56E+04	1.36E+09	2.11E+07	3.20E+05	2.80E+05
Lutetium (71)	Lu-169	1.70E-06	1.30E-06	1.12E+00	1.78E+02	1.36E+09	2.11E+07	4.65E+02	3.10E+02
Lutetium (71)	Lu-170	3.66E-06	2.33E-06	2.56E+00	1.26E+02	1.36E+09	2.11E+07	1.43E+02	1.03E+02
Lutetium (71)	Lu-171	2.48E-06	2.96E-06	7.63E-01	3.08E+01	1.36E+09	2.11E+07	1.02E+02	4.16E+01
Lutetium (71)	Lu-172	4.81E-06	5.18E-06	2.05E+00	3.78E+01	1.36E+09	2.11E+07	5.05E+01	2.49E+01
Lutetium (71)	Lu-173	9.62E-07	8.14E-06	1.35E-01	5.06E-01	1.36E+09	2.11E+07	1.56E+01	9.89E-01
Lutetium (71)	Lu-174	9.99E-07	1.55E-05	1.31E-01	2.09E-01	1.36E+09	2.11E+07	1.12E+01	4.61E-01
Lutetium (71)	Lu-174m	1.96E-06	1.37E-05	6.22E-02	1.78E+00	1.36E+09	2.11E+07	2.23E+01	1.01E+00
Lutetium (71)	Lu-176	6.66E-06	2.59E-04	5.33E-01	1.93E-11	1.36E+09	2.11E+07	1.09E+00	2.54E-02
Lutetium (71)	Lu-176m	6.29E-07	4.07E-07	6.54E-02	1.65E+03	1.36E+09	2.11E+07	4.62E+04	1.72E+04
Lutetium (71)	Lu-177	1.96E-06	4.07E-06	3.75E-02	3.77E+01	1.36E+09	2.11E+07	5.78E+02	5.64E+01
Lutetium (71)	Lu-177m	6.29E-06	4.81E-05	1.09E+00	1.57E+00	1.36E+09	2.11E+07	3.34E+00	2.57E-01
Lutetium (71)	Lu-178	1.74E-07	8.88E-08	2.51E-01	1.28E+04	1.36E+09	2.11E+07	1.74E+05	1.47E+05
Lutetium (71)	Lu-178m	1.41E-07	1.18E-07	1.26E+00	1.60E+04	1.36E+09	2.11E+07	4.20E+04	4.02E+04
Lutetium (71)	Lu-179	7.77E-07	4.07E-07	8.95E-02	1.32E+03	1.36E+09	2.11E+07	2.91E+04	1.25E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Mendelevium (101)	Md-257	4.44E-07	9.25E-05	1.18E-01	1.17E+03	1.36E+09	2.11E+07	4.40E+03	8.35E+01
Mendelevium (101)	Md-258	4.81E-05	2.18E-02	3.87E-03	4.60E+00	1.36E+09	2.11E+07	8.92E-02	1.41E-03
Magnesium (12)	Mg-28	8.14E-06	4.44E-06	1.47E+00	2.90E+02	1.36E+09	2.11E+07	4.68E+02	2.27E+02
Manganese (25)	Mn-51	3.44E-07	1.52E-07	1.25E+00	7.88E+03	1.36E+09	2.11E+07	2.11E+04	1.99E+04
Manganese (25)	Mn-52	6.66E-06	5.18E-06	3.76E+00	4.52E+01	1.36E+09	2.11E+07	3.75E+01	2.29E+01
Manganese (25)	Mn-52m	2.55E-07	1.07E-07	2.75E+00	1.73E+04	1.36E+09	2.11E+07	2.21E+04	2.16E+04
Manganese (25)	Mn-53	1.11E-07	2.00E-07	0.00E+00	1.87E-07	1.36E+09	2.11E+07	3.36E+02	3.07E+01
Manganese (25)	Mn-54	2.63E-06	5.55E-06	9.23E-01	8.09E-01	1.36E+09	2.11E+07	4.35E+00	1.26E+00
Manganese (25)	Mn-56	9.25E-07	4.44E-07	1.89E+00	2.35E+03	1.36E+09	2.11E+07	4.35E+03	3.88E+03
Molybdenum (42)	Mo-101	1.52E-07	9.25E-08	1.53E+00	2.49E+04	1.36E+09	2.11E+07	5.31E+04	5.16E+04
Molybdenum (42)	Mo-90	8.14E-07	1.26E-06	9.08E-01	1.07E+03	1.36E+09	2.11E+07	3.72E+03	2.26E+03
Molybdenum (42)	Mo-93	1.15E-05	2.18E-06	4.53E-03	1.98E-04	1.36E+09	2.11E+07	3.77E+00	1.70E+00
Molybdenum (42)	Mo-93m	4.07E-07	5.92E-07	2.42E+00	8.86E+02	1.36E+09	2.11E+07	1.26E+03	1.12E+03
Molybdenum (42)	Mo-99	2.22E-06	3.29E-06	2.08E-01	9.20E+01	1.36E+09	2.11E+07	7.55E+02	1.51E+02
Nitrogen (7)	N-13			1.20E+00	3.66E+04	1.36E+09	2.11E+07	1.04E+05	1.04E+05
Sodium (11)	Na-22	1.18E-05	4.81E-06	2.39E+00	2.66E-01	1.36E+09	2.11E+07	1.18E+00	6.80E-01
Sodium (11)	Na-24	1.59E-06	9.99E-07	4.19E+00	4.05E+02	1.36E+09	2.11E+07	3.49E+02	3.09E+02
Niobium (41)	Nb-88	2.33E-07	9.99E-08	4.69E+00	2.55E+04	1.36E+09	2.11E+07	1.87E+04	1.85E+04
Niobium (41)	Nb-89	9.99E-07	4.07E-07	1.62E+00	2.99E+03	1.36E+09	2.11E+07	5.97E+03	5.33E+03
Niobium (41)	Nb-89m	5.18E-07	2.52E-07	2.26E+00	5.52E+03	1.36E+09	2.11E+07	8.10E+03	7.68E+03
Niobium (41)	Nb-90	4.44E-06	2.33E-06	4.42E+00	4.16E+02	1.36E+09	2.11E+07	3.07E+02	2.44E+02
Niobium (41)	Nb-93m	4.44E-07	1.89E-06	7.96E-04	5.10E-02	1.36E+09	2.11E+07	6.98E+01	3.48E+00
Niobium (41)	Nb-94	6.29E-06	4.07E-05	1.74E+00	3.41E-05	1.36E+09	2.11E+07	1.36E+00	1.48E-01
Niobium (41)	Nb-95	2.15E-06	5.55E-06	8.50E-01	7.20E+00	1.36E+09	2.11E+07	2.36E+01	6.38E+00
Niobium (41)	Nb-95m	2.07E-06	2.92E-06	6.90E-02	7.01E+01	1.36E+09	2.11E+07	9.20E+02	1.38E+02
Niobium (41)	Nb-96	4.07E-06	2.33E-06	2.73E+00	2.60E+02	1.36E+09	2.11E+07	2.95E+02	2.12E+02
Niobium (41)	Nb-97	2.52E-07	1.59E-07	7.88E-01	5.05E+03	1.36E+09	2.11E+07	2.16E+04	1.96E+04
Niobium (41)	Nb-97m			8.11E-01	3.64E+05	1.36E+09	2.11E+07	1.55E+06	1.55E+06
Niobium (41)	Nb-98	4.07E-07	2.07E-07	2.77E+00	7.07E+03	1.36E+09	2.11E+07	9.05E+03	8.71E+03
Neodymium (60)	Nd-136	3.66E-07	1.89E-07	3.19E-01	7.19E+03	1.36E+09	2.11E+07	7.03E+04	5.52E+04
Neodymium (60)	Nd-138	2.37E-06	8.51E-07	4.38E-02	1.20E+03	1.36E+09	2.11E+07	1.74E+04	6.17E+03
Neodymium (60)	Nd-139	7.40E-08	3.66E-08	4.75E-01	1.23E+04	1.36E+09	2.11E+07	8.82E+04	8.49E+04
Neodymium (60)	Nd-139m	9.25E-07	5.55E-07	1.73E+00	1.10E+03	1.36E+09	2.11E+07	2.05E+03	1.78E+03
Neodymium (60)	Nd-141	3.07E-08	1.78E-08	7.98E-02	2.44E+03	1.36E+09	2.11E+07	9.48E+04	8.60E+04
Neodymium (60)	Nd-141m			8.54E-01	3.50E+05	1.36E+09	2.11E+07	1.43E+06	1.43E+06
Neodymium (60)	Nd-147	4.07E-06	7.77E-06	1.63E-01	2.30E+01	1.36E+09	2.11E+07	1.46E+02	1.76E+01
Neodymium (60)	Nd-149	4.44E-07	3.11E-07	4.74E-01	3.51E+03	1.36E+09	2.11E+07	2.24E+04	1.73E+04
Neodymium (60)	Nd-151	1.11E-07	6.29E-08	1.08E+00	2.93E+04	1.36E+09	2.11E+07	8.75E+04	8.51E+04
Neon (10)	Ne-19			1.28E+00	1.27E+06	1.36E+09	2.11E+07	3.37E+06	3.37E+06
Nickel (28)	Ni-56	3.18E-06	3.22E-06	1.89E+00	4.15E+01	1.36E+09	2.11E+07	6.64E+01	3.76E+01
Nickel (28)	Ni-57	3.22E-06	1.85E-06	2.05E+00	1.68E+02	1.36E+09	2.11E+07	2.62E+02	1.84E+02
Nickel (28)	Ni-59	2.33E-07	4.81E-07	0.00E+00	9.24E-06	1.36E+09	2.11E+07	1.57E+02	1.29E+01
Nickel (28)	Ni-63	5.55E-07	1.78E-06	0.00E+00	7.22E-03	1.36E+09	2.11E+07	6.02E+01	3.58E+00
Nickel (28)	Ni-65	6.66E-07	3.15E-07	6.64E-01	2.41E+03	1.36E+09	2.11E+07	1.21E+04	9.81E+03
Nickel (28)	Ni-66	1.11E-05	5.92E-06	3.30E-05	1.11E+02	1.36E+09	2.11E+07	4.20E+02	9.73E+01
Neptunium (93)	Np-232	3.59E-08	1.85E-07	1.32E+00	2.48E+04	1.36E+09	2.11E+07	6.16E+04	5.76E+04
Neptunium (93)	Np-233	8.14E-09	5.92E-09	9.09E-02	1.01E+04	1.36E+09	2.11E+07	3.48E+05	3.38E+05
Neptunium (93)	Np-234	3.00E-06	1.96E-06	1.53E+00	5.75E+01	1.36E+09	2.11E+07	1.02E+02	6.74E+01
Neptunium (93)	Np-235	1.96E-07	1.55E-06	3.34E-03	6.39E-01	1.36E+09	2.11E+07	1.48E+02	5.65E+00
Neptunium (93)	Np-236	6.29E-05	1.18E-02	1.30E-01	6.03E-06	1.36E+09	2.11E+07	3.43E-02	5.60E-04
Neptunium (93)	Np-236m			5.11E-02	2.70E+02	1.36E+09	2.11E+07	1.59E+04	1.59E+04
Neptunium (93)	Np-237	4.07E-04	8.51E-02	2.94E-02	3.24E-07	1.36E+09	2.11E+07	4.81E-03	7.80E-05
Neptunium (93)	Np-237+D				3.24E-07	1.36E+09	2.11E+07		
Neptunium (93)	Np-237+E	4.07E-04	8.51E-02	2.46E-01	3.24E-07	1.36E+09	2.11E+07	4.80E-03	7.80E-05
Neptunium (93)	Np-238	3.37E-06	7.77E-06	6.23E-01	1.19E+02	1.36E+09	2.11E+07	3.98E+02	8.23E+01
Neptunium (93)	Np-239	2.96E-06	3.44E-06	1.80E-01	1.07E+02	1.36E+09	2.11E+07	8.18E+02	1.67E+02
Neptunium (93)	Np-240	3.03E-07	3.15E-07	1.45E+00	5.60E+03	1.36E+09	2.11E+07	1.20E+04	1.09E+04
Neptunium (93)	Np-240m			4.52E-01	4.92E+04	1.36E+09	2.11E+07	3.38E+05	3.38E+05
Oxygen (8)	O-15			1.25E+00	1.79E+05	1.36E+09	2.11E+07	4.88E+05	4.88E+05
Osmium (76)	Os-180	6.29E-08	5.18E-08	6.29E-02	1.66E+04	1.36E+09	2.11E+07	7.59E+05	5.62E+05
Osmium (76)	Os-181	3.29E-07	2.29E-07	1.32E+00	3.47E+03	1.36E+09	2.11E+07	8.46E+03	7.81E+03

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Osmium (76)	Os-182	2.07E-06	1.33E-06	4.74E-01	2.76E+02	1.36E+09	2.11E+07	1.38E+03	6.95E+02
Osmium (76)	Os-185	1.89E-06	4.81E-06	7.95E-01	2.69E+00	1.36E+09	2.11E+07	1.02E+01	2.90E+00
Osmium (76)	Os-189m	6.66E-08	1.85E-08	5.64E-05	1.01E+03	1.36E+09	2.11E+07	6.46E+05	2.35E+05
Osmium (76)	Os-190m			1.76E+00	3.68E+04	1.36E+09	2.11E+07	7.09E+04	7.09E+04
Osmium (76)	Os-191	2.11E-06	6.29E-06	7.88E-02	1.64E+01	1.36E+09	2.11E+07	1.89E+02	1.61E+01
Osmium (76)	Os-191m	3.55E-07	5.18E-07	7.47E-03	4.66E+02	1.36E+09	2.11E+07	4.00E+04	5.27E+03
Osmium (76)	Os-193	3.00E-06	1.78E-06	1.12E-01	2.02E+02	1.36E+09	2.11E+07	1.90E+03	5.47E+02
Osmium (76)	Os-194	8.88E-06	7.77E-05	1.11E-03	1.16E-01	1.36E+09	2.11E+07	2.77E+00	8.89E-02
Osmium (76)	Os-194+D	1.37E-05	7.77E-05	2.12E-01	1.16E-01	1.36E+09	2.11E+07	1.91E+00	8.77E-02
Osmium (76)	Os-194+E	1.37E-05	7.77E-05	2.12E-01	1.16E-01	1.36E+09	2.11E+07	1.91E+00	8.77E-02
Phosphorus (15)	P-30			1.32E+00	1.46E+05	1.36E+09	2.11E+07	3.77E+05	3.77E+05
Phosphorus (15)	P-32	8.88E-06	1.26E-05	9.94E-02	1.77E+01	1.36E+09	2.11E+07	6.80E+01	8.33E+00
Phosphorus (15)	P-33	8.88E-07	5.55E-06	4.25E-05	9.96E+00	1.36E+09	2.11E+07	3.02E+02	1.16E+01
Protactinium (91)	Pa-227	1.67E-06	2.74E-04	2.11E-02	9.51E+03	1.36E+09	2.11E+07	1.39E+04	2.30E+02
Protactinium (91)	Pa-228	2.89E-06	2.37E-04	1.23E+00	2.76E+02	1.36E+09	2.11E+07	2.69E+02	7.64E+00
Protactinium (91)	Pa-230	3.40E-06	2.26E-03	7.08E-01	1.45E+01	1.36E+09	2.11E+07	2.60E+00	4.27E-02
Protactinium (91)	Pa-231	2.63E-03	5.18E-01	4.41E-02	2.12E-05	1.36E+09	2.11E+07	7.88E-04	1.28E-05
Protactinium (91)	Pa-232	2.66E-06	3.70E-05	1.03E+00	1.93E+02	1.36E+09	2.11E+07	4.09E+02	3.24E+01
Protactinium (91)	Pa-233	3.22E-06	1.22E-05	2.17E-01	9.37E+00	1.36E+09	2.11E+07	5.52E+01	4.73E+00
Protactinium (91)	Pa-234	1.89E-06	1.41E-06	2.10E+00	9.06E+02	1.36E+09	2.11E+07	1.27E+03	9.83E+02
Protactinium (91)	Pa-234m			1.26E-01	3.11E+05	1.36E+09	2.11E+07	7.45E+06	7.45E+06
Lead (82)	Pb-195m	1.07E-07	9.25E-08	1.77E+00	2.31E+04	1.36E+09	2.11E+07	4.32E+04	4.21E+04
Lead (82)	Pb-198	3.70E-07	2.44E-07	4.74E-01	2.53E+03	1.36E+09	2.11E+07	1.62E+04	1.31E+04
Lead (82)	Pb-199	2.00E-07	1.33E-07	1.59E+00	4.05E+03	1.36E+09	2.11E+07	7.94E+03	7.64E+03
Lead (82)	Pb-200	1.48E-06	1.22E-06	2.17E-01	2.82E+02	1.36E+09	2.11E+07	2.72E+03	9.91E+02
Lead (82)	Pb-201	5.92E-07	4.07E-07	8.26E-01	6.46E+02	1.36E+09	2.11E+07	2.33E+03	1.91E+03
Lead (82)	Pb-202	3.26E-05	2.33E-05	2.23E-04	2.31E-06	1.36E+09	2.11E+07	1.27E+00	2.36E-01
Lead (82)	Pb-202+D	3.26E-05	2.33E-05		2.31E-06	1.36E+09	2.11E+07	1.27E+00	2.36E-01
Lead (82)	Pb-202+E	3.26E-05	2.33E-05	5.13E-01	2.31E-06	1.36E+09	2.11E+07	1.06E+00	2.27E-01
Lead (82)	Pb-202m	4.81E-07	3.52E-07	2.25E+00	1.68E+03	1.36E+09	2.11E+07	2.22E+03	2.08E+03
Lead (82)	Pb-203	8.88E-07	7.40E-07	3.34E-01	1.17E+02	1.36E+09	2.11E+07	9.42E+02	4.99E+02
Lead (82)	Pb-205	1.04E-06	9.25E-07	2.43E-04	4.85E-08	1.36E+09	2.11E+07	3.90E+01	6.14E+00
Lead (82)	Pb-209	2.11E-07	2.07E-07	3.72E-03	1.87E+03	1.36E+09	2.11E+07	2.92E+05	5.03E+04
Lead (82)	Pb-210	2.55E-03	4.07E-03	2.49E-03	3.11E-02	1.36E+09	2.11E+07	1.51E-02	1.51E-03
Lead (82)	Pb-211	6.66E-07	4.07E-05	1.11E-01	1.01E+04	1.36E+09	2.11E+07	7.05E+04	1.63E+03
Lead (82)	Pb-212	2.22E-05	6.29E-04	1.58E-01	5.71E+02	1.36E+09	2.11E+07	2.83E+02	5.99E+00
Lead (82)	Pb-214	5.18E-07	5.18E-05	2.80E-01	1.36E+04	1.36E+09	2.11E+07	6.20E+04	1.72E+03
Palladium (46)	Pd-100	3.48E-06	2.96E-06	1.24E-01	6.97E+01	1.36E+09	2.11E+07	5.56E+02	1.23E+02
Palladium (46)	Pd-101	3.48E-07	2.18E-07	3.61E-01	7.34E+02	1.36E+09	2.11E+07	6.37E+03	4.97E+03
Palladium (46)	Pd-103	7.03E-07	1.41E-06	8.95E-03	1.49E+01	1.36E+09	2.11E+07	6.74E+02	6.47E+01
Palladium (46)	Pd-107	1.37E-07	3.15E-07	0.00E+00	1.07E-07	1.36E+09	2.11E+07	2.61E+02	1.98E+01
Palladium (46)	Pd-109	2.04E-06	1.26E-06	4.35E-02	4.52E+02	1.36E+09	2.11E+07	7.15E+03	1.81E+03
Promethium (61)	Pm-141	1.33E-07	5.18E-08	9.02E-01	1.74E+04	1.36E+09	2.11E+07	6.56E+04	6.37E+04
Promethium (61)	Pm-142			1.12E+00	5.40E+05	1.36E+09	2.11E+07	1.64E+06	1.64E+06
Promethium (61)	Pm-143	8.51E-07	5.55E-06	3.47E-01	9.55E-01	1.36E+09	2.11E+07	1.13E+01	1.62E+00
Promethium (61)	Pm-144	3.59E-06	3.03E-05	1.74E+00	6.97E-01	1.36E+09	2.11E+07	2.11E+00	2.69E-01
Promethium (61)	Pm-145	4.07E-07	1.33E-05	3.05E-02	3.92E-02	1.36E+09	2.11E+07	2.04E+01	5.03E-01
Promethium (61)	Pm-146	3.33E-06	7.77E-05	8.39E-01	1.25E-01	1.36E+09	2.11E+07	2.13E+00	8.85E-02
Promethium (61)	Pm-147	9.62E-07	1.85E-05	3.27E-05	2.64E-01	1.36E+09	2.11E+07	1.75E+01	4.05E-01
Promethium (61)	Pm-148	9.99E-06	7.40E-06	7.13E-01	4.71E+01	1.36E+09	2.11E+07	1.06E+02	3.06E+01
Promethium (61)	Pm-148m	6.29E-06	1.89E-05	2.23E+00	6.12E+00	1.36E+09	2.11E+07	7.36E+00	1.69E+00
Promethium (61)	Pm-149	3.66E-06	2.48E-06	4.71E-02	1.14E+02	1.36E+09	2.11E+07	1.12E+03	2.43E+02
Promethium (61)	Pm-150	9.62E-07	4.44E-07	1.65E+00	2.27E+03	1.36E+09	2.11E+07	4.41E+03	3.91E+03
Promethium (61)	Pm-151	2.70E-06	1.59E-06	3.71E-01	2.14E+02	1.36E+09	2.11E+07	1.18E+03	5.13E+02
Polonium (84)	Po-203	1.70E-07	1.30E-07	1.79E+00	9.92E+03	1.36E+09	2.11E+07	1.78E+04	1.72E+04
Polonium (84)	Po-205	2.15E-07	2.41E-07	1.72E+00	3.37E+03	1.36E+09	2.11E+07	6.14E+03	5.76E+03
Polonium (84)	Po-207	4.07E-07	2.89E-07	1.45E+00	1.04E+03	1.36E+09	2.11E+07	2.22E+03	2.03E+03
Polonium (84)	Po-210	4.44E-03	1.22E-02	9.44E-06	1.83E+00	1.36E+09	2.11E+07	1.69E-02	1.12E-03
Polonium (84)	Po-211			8.66E-03	4.24E+07	1.36E+09	2.11E+07	1.70E+10	1.70E+10
Polonium (84)	Po-212			0.00E+00	7.17E+13	1.36E+09	2.11E+07		
Polonium (84)	Po-213			0.00E+00	5.20E+12	1.36E+09	2.11E+07		

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Polonium (84)	Po-214			9.25E-05	1.33E+11	1.36E+09	2.11E+07	5.03E+15	5.03E+15
Polonium (84)	Po-215			1.96E-04	1.23E+10	1.36E+09	2.11E+07	2.12E+14	2.12E+14
Polonium (84)	Po-216			1.88E-05	1.46E+08	1.36E+09	2.11E+07	2.72E+13	2.72E+13
Polonium (84)	Po-218			1.01E-05	1.19E+05	1.36E+09	2.11E+07	4.15E+10	4.15E+10
Praseodymium (59)	Pr-136	1.22E-07	4.81E-08	2.38E+00	2.78E+04	1.36E+09	2.11E+07	4.10E+04	4.05E+04
Praseodymium (59)	Pr-137	1.48E-07	7.40E-08	5.80E-01	4.76E+03	1.36E+09	2.11E+07	2.73E+04	2.57E+04
Praseodymium (59)	Pr-138			1.05E+00	2.51E+05	1.36E+09	2.11E+07	8.21E+05	8.21E+05
Praseodymium (59)	Pr-138m	4.81E-07	2.66E-07	2.74E+00	2.89E+03	1.36E+09	2.11E+07	3.60E+03	3.44E+03
Praseodymium (59)	Pr-139	1.15E-07	6.66E-08	1.37E-01	1.35E+03	1.36E+09	2.11E+07	2.98E+04	2.44E+04
Praseodymium (59)	Pr-142	4.81E-06	1.92E-06	1.72E-01	3.17E+02	1.36E+09	2.11E+07	1.99E+03	7.13E+02
Praseodymium (59)	Pr-142m	6.29E-08	2.44E-08	0.00E+00	2.49E+04	1.36E+09	2.11E+07	1.69E+07	4.89E+06
Praseodymium (59)	Pr-143	4.44E-06	8.14E-06	2.40E-02	1.87E+01	1.36E+09	2.11E+07	1.48E+02	1.40E+01
Praseodymium (59)	Pr-144	1.85E-07	6.66E-08	1.90E-01	2.11E+04	1.36E+09	2.11E+07	3.75E+05	3.19E+05
Praseodymium (59)	Pr-144m			1.23E-02	5.06E+04	1.36E+09	2.11E+07	1.29E+07	1.29E+07
Praseodymium (59)	Pr-145	1.44E-06	5.92E-07	1.09E-01	1.02E+03	1.36E+09	2.11E+07	1.56E+04	6.63E+03
Praseodymium (59)	Pr-147	1.22E-07	6.66E-08	1.04E+00	2.68E+04	1.36E+09	2.11E+07	8.54E+04	8.28E+04
Platinum (78)	Pt-186	3.44E-07	1.22E-07	8.17E-01	3.04E+03	1.36E+09	2.11E+07	1.22E+04	1.14E+04
Platinum (78)	Pt-188	2.81E-06	1.55E-06	2.12E-01	2.48E+01	1.36E+09	2.11E+07	1.87E+02	6.83E+01
Platinum (78)	Pt-189	4.44E-07	1.41E-07	3.49E-01	5.58E+02	1.36E+09	2.11E+07	4.65E+03	3.96E+03
Platinum (78)	Pt-191	1.26E-06	4.07E-07	3.24E-01	9.03E+01	1.36E+09	2.11E+07	6.89E+02	4.72E+02
Platinum (78)	Pt-193	1.15E-07	7.77E-08	1.80E-04	1.39E-02	1.36E+09	2.11E+07	3.56E+02	7.02E+01
Platinum (78)	Pt-193m	1.67E-06	4.44E-07	1.09E-02	5.84E+01	1.36E+09	2.11E+07	1.39E+03	5.41E+02
Platinum (78)	Pt-195m	2.33E-06	6.66E-07	7.22E-02	6.29E+01	1.36E+09	2.11E+07	8.16E+02	3.58E+02
Platinum (78)	Pt-197	1.48E-06	3.15E-07	2.79E-02	3.32E+02	1.36E+09	2.11E+07	7.71E+03	3.70E+03
Platinum (78)	Pt-197m	3.11E-07	8.88E-08	8.50E-02	3.86E+03	1.36E+09	2.11E+07	1.13E+05	8.13E+04
Platinum (78)	Pt-199	1.44E-07	4.44E-08	2.88E-01	1.18E+04	1.36E+09	2.11E+07	1.28E+05	1.20E+05
Platinum (78)	Pt-200	4.44E-06	8.14E-07	6.37E-02	4.86E+02	1.36E+09	2.11E+07	3.97E+03	2.00E+03
Plutonium (94)	Pu-234	5.92E-07	7.77E-05	6.75E-02	6.90E+02	1.36E+09	2.11E+07	3.17E+03	5.88E+01
Plutonium (94)	Pu-235	7.77E-09	5.18E-09	9.34E-02	1.44E+04	1.36E+09	2.11E+07	4.83E+05	4.71E+05
Plutonium (94)	Pu-236	3.22E-04	7.40E-02	8.58E-04	2.43E-01	1.36E+09	2.11E+07	6.25E-03	1.01E-04
Plutonium (94)	Pu-237	3.70E-07	1.30E-06	4.96E-02	5.58E+00	1.36E+09	2.11E+07	2.01E+02	2.55E+01
Plutonium (94)	Pu-238	8.51E-04	1.70E-01	7.31E-04	7.90E-03	1.36E+09	2.11E+07	2.41E-03	3.91E-05
Plutonium (94)	Pu-239	9.25E-04	1.85E-01	3.31E-04	2.88E-05	1.36E+09	2.11E+07	2.21E-03	3.59E-05
Plutonium (94)	Pu-240	9.25E-04	1.85E-01	7.01E-04	1.06E-04	1.36E+09	2.11E+07	2.21E-03	3.59E-05
Plutonium (94)	Pu-241	1.78E-05	3.33E-03	2.01E-06	4.81E-02	1.36E+09	2.11E+07	1.25E-01	2.04E-03
Plutonium (94)	Pu-242	8.88E-04	1.78E-01	5.81E-04	1.84E-06	1.36E+09	2.11E+07	2.30E-03	3.74E-05
Plutonium (94)	Pu-243	3.15E-07	3.07E-07	2.65E-02	1.22E+03	1.36E+09	2.11E+07	7.56E+04	1.98E+04
Plutonium (94)	Pu-244	8.88E-04	1.74E-01	2.36E-02	8.66E-09	1.36E+09	2.11E+07	2.34E-03	3.81E-05
Plutonium (94)	Pu-244+D	8.88E-04	1.74E-01	4.78E-01	8.66E-09	1.36E+09	2.11E+07	2.34E-03	3.81E-05
Plutonium (94)	Pu-244+E	8.88E-04	1.74E-01	4.78E-01	8.66E-09	1.36E+09	2.11E+07	2.34E-03	3.81E-05
Plutonium (94)	Pu-245	2.66E-06	1.48E-06	4.74E-01	5.78E+02	1.36E+09	2.11E+07	2.71E+03	1.34E+03
Plutonium (94)	Pu-246	1.22E-05	2.74E-05	1.44E-01	2.33E+01	1.36E+09	2.11E+07	6.05E+01	5.24E+00
Radium (88)	Ra-222			1.01E-02	5.75E+05	1.36E+09	2.11E+07	1.90E+08	1.90E+08
Radium (88)	Ra-223	3.70E-04	2.74E-02	1.41E-01	2.21E+01	1.36E+09	2.11E+07	3.06E-01	5.35E-03
Radium (88)	Ra-223+D	3.70E-04	2.74E-02	4.29E-01	2.21E+01	1.36E+09	2.11E+07	3.05E-01	5.35E-03
Radium (88)	Ra-223+E	3.70E-04	2.74E-02	4.29E-01	2.21E+01	1.36E+09	2.11E+07	3.05E-01	5.35E-03
Radium (88)	Ra-224	2.41E-04	1.11E-02	1.07E-02	6.91E+01	1.36E+09	2.11E+07	2.20E+00	4.12E-02
Radium (88)	Ra-224+D	2.41E-04	1.11E-02	1.68E+00	6.91E+01	1.36E+09	2.11E+07	2.17E+00	4.12E-02
Radium (88)	Ra-224+E	2.41E-04	1.11E-02	1.68E+00	6.91E+01	1.36E+09	2.11E+07	2.17E+00	4.12E-02
Radium (88)	Ra-225	3.66E-04	2.33E-02	1.25E-02	1.71E+01	1.36E+09	2.11E+07	2.72E-01	4.86E-03
Radium (88)	Ra-225+D	4.44E-04	5.18E-02	3.12E-01	1.71E+01	1.36E+09	2.11E+07	1.30E-01	2.19E-03
Radium (88)	Ra-225+E	4.44E-04	5.18E-02	3.12E-01	1.71E+01	1.36E+09	2.11E+07	1.30E-01	2.19E-03
Radium (88)	Ra-226	1.04E-03	1.30E-02	7.13E-03	4.33E-04	1.36E+09	2.11E+07	1.86E-02	5.07E-04
Radium (88)	Ra-226+D	1.04E-03	1.30E-02		4.33E-04	1.36E+09	2.11E+07	1.86E-02	5.07E-04
Radium (88)	Ra-226+E	1.04E-03	1.30E-02	1.97E+00	4.33E-04	1.36E+09	2.11E+07	1.84E-02	5.07E-04
Radium (88)	Ra-227	3.00E-07	1.04E-06	2.12E-01	8.63E+03	1.36E+09	2.11E+07	1.10E+05	3.72E+04
Radium (88)	Ra-227+D				8.63E+03	1.36E+09	2.11E+07		
Radium (88)	Ra-228	2.55E-03	9.62E-03	0.00E+00	1.21E-01	1.36E+09	2.11E+07	1.32E-02	7.05E-04
Radium (88)	Ra-228+D	3.07E-03	1.70E-01	1.10E+00	1.21E-01	1.36E+09	2.11E+07	2.27E-03	4.13E-05
Radium (88)	Ra-228+E	3.07E-03	1.70E-01	2.78E+00	1.21E-01	1.36E+09	2.11E+07	2.27E-03	4.13E-05
Rubidium (37)	Rb-79	1.85E-07	5.92E-08	1.61E+00	1.59E+04	1.36E+09	2.11E+07	3.23E+04	3.17E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Rubidium (37)	Rb-80			1.61E+00	6.43E+05	1.36E+09	2.11E+07	1.36E+06	1.36E+06
Rubidium (37)	Rb-81	2.00E-07	1.26E-07	6.98E-01	1.33E+03	1.36E+09	2.11E+07	6.20E+03	5.70E+03
Rubidium (37)	Rb-81m	3.59E-08	2.59E-08	5.73E-03	1.14E+04	1.36E+09	2.11E+07	4.11E+06	1.72E+06
Rubidium (37)	Rb-82			1.40E+00	2.80E+05	1.36E+09	2.11E+07	6.82E+05	6.82E+05
Rubidium (37)	Rb-82m	4.81E-07	4.07E-07	3.20E+00	9.79E+02	1.36E+09	2.11E+07	1.06E+03	9.91E+02
Rubidium (37)	Rb-83	7.03E-06	2.55E-06	5.55E-01	2.93E+00	1.36E+09	2.11E+07	9.15E+00	4.32E+00
Rubidium (37)	Rb-84	1.04E-05	3.70E-06	1.02E+00	7.72E+00	1.36E+09	2.11E+07	1.38E+01	6.96E+00
Rubidium (37)	Rb-86	1.04E-05	3.44E-06	1.95E-01	1.36E+01	1.36E+09	2.11E+07	4.57E+01	1.68E+01
Rubidium (37)	Rb-87	5.55E-06	1.85E-06	8.52E-05	1.47E-11	1.36E+09	2.11E+07	7.71E+00	2.48E+00
Rubidium (37)	Rb-88	3.33E-07	5.92E-08	8.65E-01	2.05E+04	1.36E+09	2.11E+07	8.53E+04	8.23E+04
Rubidium (37)	Rb-89	1.74E-07	5.18E-08	2.30E+00	2.40E+04	1.36E+09	2.11E+07	3.68E+04	3.64E+04
Rhenium (75)	Re-177	8.14E-08	5.18E-08	6.94E-01	2.60E+04	1.36E+09	2.11E+07	1.26E+05	1.21E+05
Rhenium (75)	Re-178	9.25E-08	5.18E-08	1.34E+00	2.76E+04	1.36E+09	2.11E+07	7.05E+04	6.92E+04
Rhenium (75)	Re-180			1.31E+00	1.50E+05	1.36E+09	2.11E+07	4.02E+05	4.02E+05
Rhenium (75)	Re-181	1.55E-06	9.25E-07	8.40E-01	3.04E+02	1.36E+09	2.11E+07	1.01E+03	6.93E+02
Rhenium (75)	Re-182	5.18E-06	4.44E-06	2.02E+00	9.49E+01	1.36E+09	2.11E+07	1.25E+02	6.70E+01
Rhenium (75)	Re-182m	9.99E-07	7.40E-07	1.26E+00	4.78E+02	1.36E+09	2.11E+07	1.16E+03	9.16E+02
Rhenium (75)	Re-184	3.70E-06	7.03E-06	9.77E-01	6.66E+00	1.36E+09	2.11E+07	1.70E+01	4.65E+00
Rhenium (75)	Re-184m	5.55E-06	2.41E-05	4.19E-01	1.53E+00	1.36E+09	2.11E+07	6.23E+00	5.04E-01
Rhenium (75)	Re-186	5.55E-06	4.07E-06	5.16E-02	6.70E+01	1.36E+09	2.11E+07	4.43E+02	8.87E+01
Rhenium (75)	Re-186m	8.14E-06	4.44E-05	1.49E-02	3.47E-06	1.36E+09	2.11E+07	3.42E+00	1.45E-01
Rhenium (75)	Re-186m+D	1.37E-05	4.44E-05		3.47E-06	1.36E+09	2.11E+07	2.42E+00	1.43E-01
Rhenium (75)	Re-186m+E	1.37E-05	4.44E-05	6.65E-02	3.47E-06	1.36E+09	2.11E+07	2.30E+00	1.42E-01
Rhenium (75)	Re-187	1.89E-08	2.33E-08	0.00E+00	1.39E-11	1.36E+09	2.11E+07	2.08E+03	2.54E+02
Rhenium (75)	Re-188	5.18E-06	2.00E-06	1.69E-01	3.58E+02	1.36E+09	2.11E+07	2.07E+03	7.63E+02
Rhenium (75)	Re-188m	1.11E-07	4.81E-08	7.90E-02	1.96E+04	1.36E+09	2.11E+07	7.09E+05	5.63E+05
Rhenium (75)	Re-189	2.89E-06	1.59E-06	9.81E-02	2.50E+02	1.36E+09	2.11E+07	2.53E+03	7.46E+02
Rhodium (45)	Rh-100	2.63E-06	1.26E-06	2.91E+00	2.92E+02	1.36E+09	2.11E+07	3.18E+02	2.64E+02
Rhodium (45)	Rh-101	2.04E-06	8.51E-06	2.80E-01	2.17E-01	1.36E+09	2.11E+07	7.30E+00	7.86E-01
Rhodium (45)	Rh-101m	8.14E-07	7.03E-07	3.30E-01	5.83E+01	1.36E+09	2.11E+07	4.88E+02	2.60E+02
Rhodium (45)	Rh-102	9.62E-06	2.55E-05	2.36E+00	2.39E-01	1.36E+09	2.11E+07	1.18E+00	2.37E-01
Rhodium (45)	Rh-102m	4.44E-06	1.48E-05	5.57E-01	1.22E+00	1.36E+09	2.11E+07	5.46E+00	6.90E-01
Rhodium (45)	Rh-103m	1.41E-08	9.25E-09	1.03E-03	6.49E+03	1.36E+09	2.11E+07	9.52E+06	3.16E+06
Rhodium (45)	Rh-105	1.37E-06	1.18E-06	8.66E-02	1.72E+02	1.36E+09	2.11E+07	2.88E+03	7.30E+02
Rhodium (45)	Rh-106			4.03E-01	7.31E+05	1.36E+09	2.11E+07	6.19E+06	6.19E+06
Rhodium (45)	Rh-106m	5.92E-07	4.07E-07	3.21E+00	2.76E+03	1.36E+09	2.11E+07	2.93E+03	2.75E+03
Rhodium (45)	Rh-107	8.88E-08	5.92E-08	3.94E-01	1.68E+04	1.36E+09	2.11E+07	1.40E+05	1.30E+05
Rhodium (45)	Rh-99	1.89E-06	2.85E-06	6.61E-01	1.58E+01	1.36E+09	2.11E+07	6.46E+01	2.37E+01
Rhodium (45)	Rh-99m	2.44E-07	1.44E-07	7.46E-01	1.29E+03	1.36E+09	2.11E+07	5.91E+03	5.38E+03
Radon (86)	Rn-218			8.46E-04	6.24E+08	1.36E+09	2.11E+07	2.54E+12	2.54E+12
Radon (86)	Rn-219			6.16E-02	5.52E+06	1.36E+09	2.11E+07	2.96E+08	2.96E+08
Radon (86)	Rn-219+D			2.89E-01	5.52E+06	1.36E+09	2.11E+07	6.17E+07	6.17E+07
Radon (86)	Rn-219+E			2.89E-01	5.52E+06	1.36E+09	2.11E+07	6.17E+07	6.17E+07
Radon (86)	Rn-220			4.31E-04	3.93E+05	1.36E+09	2.11E+07	3.12E+09	3.12E+09
Radon (86)	Rn-222			4.46E-04	6.62E+01	1.36E+09	2.11E+07	5.06E+05	5.06E+05
Radon (86)	Rn-222+D			1.96E+00	6.62E+01	1.36E+09	2.11E+07	1.10E+02	1.10E+02
Radon (86)	Rn-222+E			2.01E+00	6.62E+01	1.36E+09	2.11E+07	1.07E+02	1.07E+02
Ruthenium (44)	Ru-103	2.70E-06	8.88E-06	5.24E-01	6.44E+00	1.36E+09	2.11E+07	2.74E+01	4.16E+00
Ruthenium (44)	Ru-105	9.62E-07	6.29E-07	9.13E-01	1.37E+03	1.36E+09	2.11E+07	4.63E+03	3.52E+03
Ruthenium (44)	Ru-105+D	2.33E-06	1.81E-06	9.99E-01	1.37E+03	1.36E+09	2.11E+07	3.55E+03	2.09E+03
Ruthenium (44)	Ru-106	2.59E-05	1.04E-04	0.00E+00	6.87E-01	1.36E+09	2.11E+07	1.67E+00	8.54E-02
Ruthenium (44)	Ru-106+D	2.59E-05	1.04E-04	4.03E-01	6.87E-01	1.36E+09	2.11E+07	1.46E+00	8.48E-02
Ruthenium (44)	Ru-106+E	2.59E-05	1.04E-04	4.03E-01	6.87E-01	1.36E+09	2.11E+07	1.46E+00	8.48E-02
Ruthenium (44)	Ru-94	3.48E-07	1.55E-07	5.84E-01	7.03E+03	1.36E+09	2.11E+07	3.65E+04	3.26E+04
Ruthenium (44)	Ru-97	5.55E-07	3.70E-07	2.52E-01	8.72E+01	1.36E+09	2.11E+07	9.40E+02	5.91E+02
Sulfur (16)	S-35	2.85E-06	5.18E-06	1.55E-05	2.89E+00	1.36E+09	2.11E+07	4.01E+01	3.63E+00
Antimony (51)	Sb-115	8.88E-08	4.81E-08	1.04E+00	1.15E+04	1.36E+09	2.11E+07	3.69E+04	3.61E+04
Antimony (51)	Sb-116	9.62E-08	4.81E-08	2.37E+00	2.31E+04	1.36E+09	2.11E+07	3.37E+04	3.33E+04
Antimony (51)	Sb-116m	2.48E-07	1.74E-07	3.42E+00	6.04E+03	1.36E+09	2.11E+07	6.18E+03	6.02E+03
Antimony (51)	Sb-117	6.66E-08	5.92E-08	1.93E-01	2.17E+03	1.36E+09	2.11E+07	3.43E+04	3.01E+04
Antimony (51)	Sb-118m	7.77E-07	4.44E-07	2.79E+00	1.21E+03	1.36E+09	2.11E+07	1.47E+03	1.36E+03

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Antimony (51)	Sb-119	2.96E-07	1.30E-07	1.82E-02	1.59E+02	1.36E+09	2.11E+07	1.23E+04	4.95E+03
Antimony (51)	Sb-120	5.18E-08	2.59E-08	5.45E-01	2.29E+04	1.36E+09	2.11E+07	1.36E+05	1.33E+05
Antimony (51)	Sb-120m	4.44E-06	3.70E-06	2.66E+00	4.39E+01	1.36E+09	2.11E+07	4.95E+01	3.06E+01
Antimony (51)	Sb-122	6.29E-06	3.70E-06	5.66E-01	9.37E+01	1.36E+09	2.11E+07	2.97E+02	1.08E+02
Antimony (51)	Sb-124	9.25E-06	2.37E-05	1.98E+00	4.20E+00	1.36E+09	2.11E+07	5.09E+00	9.81E-01
Antimony (51)	Sb-124m			4.01E-01	2.35E+05	1.36E+09	2.11E+07	2.01E+06	2.01E+06
Antimony (51)	Sb-124n	2.96E-08	2.00E-08	5.92E-05	1.80E+04	1.36E+09	2.11E+07	2.46E+07	4.88E+06
Antimony (51)	Sb-125	4.07E-06	1.78E-05	4.77E-01	2.50E-01	1.36E+09	2.11E+07	4.14E+00	3.89E-01
Antimony (51)	Sb-126	8.88E-06	1.04E-05	3.17E+00	2.04E+01	1.36E+09	2.11E+07	1.79E+01	7.63E+00
Antimony (51)	Sb-126m	1.33E-07	7.03E-08	1.81E+00	1.92E+04	1.36E+09	2.11E+07	3.64E+04	3.57E+04
Antimony (51)	Sb-127	6.29E-06	6.29E-06	7.89E-01	6.57E+01	1.36E+09	2.11E+07	1.69E+02	4.97E+01
Antimony (51)	Sb-128	2.81E-06	1.48E-06	3.48E+00	6.74E+02	1.36E+09	2.11E+07	6.19E+02	5.15E+02
Antimony (51)	Sb-128m	1.22E-07	5.18E-08	2.32E+00	3.50E+04	1.36E+09	2.11E+07	5.24E+04	5.18E+04
Antimony (51)	Sb-129	1.55E-06	8.51E-07	1.60E+00	1.41E+03	1.36E+09	2.11E+07	2.80E+03	2.24E+03
Antimony (51)	Sb-130	3.37E-07	1.89E-07	3.66E+00	9.11E+03	1.36E+09	2.11E+07	8.60E+03	8.38E+03
Antimony (51)	Sb-131	3.70E-07	1.63E-07	2.07E+00	1.58E+04	1.36E+09	2.11E+07	2.65E+04	2.55E+04
Scandium (21)	Sc-43	7.03E-07	4.07E-07	1.25E+00	1.56E+03	1.36E+09	2.11E+07	4.06E+03	3.51E+03
Scandium (21)	Sc-44	1.30E-06	6.66E-07	2.43E+00	1.55E+03	1.36E+09	2.11E+07	2.13E+03	1.87E+03
Scandium (21)	Sc-44m	8.88E-06	5.18E-06	3.06E-01	1.04E+02	1.36E+09	2.11E+07	3.41E+02	9.66E+01
Scandium (21)	Sc-46	5.55E-06	2.52E-05	2.19E+00	3.02E+00	1.36E+09	2.11E+07	3.96E+00	7.00E-01
Scandium (21)	Sc-47	2.00E-06	2.70E-06	1.16E-01	7.55E+01	1.36E+09	2.11E+07	8.66E+02	1.55E+02
Scandium (21)	Sc-48	6.29E-06	4.07E-06	3.63E+00	1.39E+02	1.36E+09	2.11E+07	1.19E+02	7.86E+01
Scandium (21)	Sc-49	3.03E-07	1.48E-07	1.19E-01	6.35E+03	1.36E+09	2.11E+07	1.61E+05	1.03E+05
Selenium (34)	Se-70	4.44E-07	1.55E-07	1.16E+00	8.88E+03	1.36E+09	2.11E+07	2.39E+04	2.25E+04
Selenium (34)	Se-73	7.77E-07	2.96E-07	1.25E+00	8.49E+02	1.36E+09	2.11E+07	2.16E+03	1.94E+03
Selenium (34)	Se-73m	1.04E-07	3.40E-08	2.94E-01	9.34E+03	1.36E+09	2.11E+07	9.90E+04	9.40E+04
Selenium (34)	Se-75	9.62E-06	3.70E-06	4.21E-01	2.11E+00	1.36E+09	2.11E+07	6.78E+00	2.66E+00
Selenium (34)	Se-77m			9.07E-02	1.25E+06	1.36E+09	2.11E+07	4.24E+07	4.24E+07
Selenium (34)	Se-79	1.07E-05	4.07E-06	1.91E-05	1.07E-05	1.36E+09	2.11E+07	3.97E+00	1.17E+00
Selenium (34)	Se-81	9.99E-08	2.96E-08	9.50E-02	1.97E+04	1.36E+09	2.11E+07	6.56E+05	5.72E+05
Selenium (34)	Se-81m	1.96E-07	5.92E-08	1.47E-02	6.36E+03	1.36E+09	2.11E+07	6.78E+05	3.50E+05
Selenium (34)	Se-83	1.74E-07	6.66E-08	2.67E+00	1.62E+04	1.36E+09	2.11E+07	2.06E+04	2.03E+04
Silicon (14)	Si-31	5.92E-07	2.74E-07	8.33E-02	2.32E+03	1.36E+09	2.11E+07	6.24E+04	2.98E+04
Silicon (14)	Si-32	2.07E-06	6.29E-05	2.92E-05	1.54E-03	1.36E+09	2.11E+07	5.16E+00	1.05E-01
Silicon (14)	Si-32+D	1.11E-05	7.40E-05		1.54E-03	1.36E+09	2.11E+07	2.36E+00	8.78E-02
Silicon (14)	Si-32+E	1.11E-05	7.40E-05	9.94E-02	1.54E-03	1.36E+09	2.11E+07	2.20E+00	8.76E-02
Samarium (62)	Sm-141	1.44E-07	5.55E-08	1.62E+00	3.57E+04	1.36E+09	2.11E+07	7.73E+04	7.60E+04
Samarium (62)	Sm-141m	2.41E-07	1.18E-07	2.21E+00	1.61E+04	1.36E+09	2.11E+07	2.45E+04	2.39E+04
Samarium (62)	Sm-142	7.03E-07	2.63E-07	1.04E-01	5.02E+03	1.36E+09	2.11E+07	1.02E+05	5.70E+04
Samarium (62)	Sm-145	7.77E-07	5.92E-06	6.49E-02	7.44E-01	1.36E+09	2.11E+07	2.72E+01	1.52E+00
Samarium (62)	Sm-146	2.00E-04	4.07E-02	0.00E+00	6.73E-09	1.36E+09	2.11E+07	1.00E-02	1.63E-04
Samarium (62)	Sm-147	1.81E-04	3.55E-02	0.00E+00	6.54E-12	1.36E+09	2.11E+07	1.15E-02	1.87E-04
Samarium (62)	Sm-151	3.63E-07	1.48E-05	4.13E-06	7.70E-03	1.36E+09	2.11E+07	2.35E+01	4.49E-01
Samarium (62)	Sm-153	2.74E-06	2.33E-06	7.12E-02	1.30E+02	1.36E+09	2.11E+07	1.45E+03	2.99E+02
Samarium (62)	Sm-155	1.07E-07	6.29E-08	1.82E-01	1.65E+04	1.36E+09	2.11E+07	2.82E+05	2.43E+05
Samarium (62)	Sm-156	9.25E-07	8.14E-07	1.31E-01	6.46E+02	1.36E+09	2.11E+07	1.03E+04	3.52E+03
Tin (50)	Sn-110	1.30E-06	5.92E-07	3.23E-01	1.52E+03	1.36E+09	2.11E+07	1.14E+04	6.87E+03
Tin (50)	Sn-111	8.51E-08	4.81E-08	5.85E-01	1.03E+04	1.36E+09	2.11E+07	6.03E+04	5.79E+04
Tin (50)	Sn-113	2.70E-06	9.99E-06	1.90E-02	2.20E+00	1.36E+09	2.11E+07	2.73E+01	1.57E+00
Tin (50)	Sn-117m	2.63E-06	8.88E-06	1.63E-01	1.86E+01	1.36E+09	2.11E+07	1.41E+02	1.28E+01
Tin (50)	Sn-119m	1.26E-06	8.14E-06	8.72E-03	8.63E-01	1.36E+09	2.11E+07	2.97E+01	1.19E+00
Tin (50)	Sn-121	8.51E-07	8.51E-07	1.03E-04	2.24E+02	1.36E+09	2.11E+07	1.06E+04	1.52E+03
Tin (50)	Sn-121m	1.41E-06	1.67E-05	4.20E-03	1.26E-02	1.36E+09	2.11E+07	1.40E+01	3.96E-01
Tin (50)	Sn-121m+D	2.07E-06	1.67E-05	4.28E-03	1.26E-02	1.36E+09	2.11E+07	1.16E+01	3.94E-01
Tin (50)	Sn-121m+E	2.07E-06	1.67E-05	4.28E-03	1.26E-02	1.36E+09	2.11E+07	1.16E+01	3.94E-01
Tin (50)	Sn-123	7.77E-06	3.00E-05	7.59E-02	1.96E+00	1.36E+09	2.11E+07	8.55E+00	4.84E-01
Tin (50)	Sn-123m	1.41E-07	9.99E-08	2.02E-01	9.09E+03	1.36E+09	2.11E+07	1.37E+05	1.12E+05
Tin (50)	Sn-125	1.15E-05	1.15E-05	4.46E-01	2.62E+01	1.36E+09	2.11E+07	6.36E+01	1.24E+01
Tin (50)	Sn-126	1.74E-05	1.04E-04	5.62E-02	6.93E-06	1.36E+09	2.11E+07	1.53E+00	6.24E-02
Tin (50)	Sn-126+D	1.74E-05	1.04E-04	1.87E+00	6.93E-06	1.36E+09	2.11E+07	8.50E-01	6.05E-02
Tin (50)	Sn-126+E	1.74E-05	1.04E-04	2.31E+00	6.93E-06	1.36E+09	2.11E+07	7.66E-01	6.00E-02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Tin (50)	Sn-127	7.40E-07	4.81E-07	2.10E+00	2.89E+03	1.36E+09	2.11E+07	4.35E+03	3.92E+03
Tin (50)	Sn-128	5.55E-07	3.40E-07	7.29E-01	6.16E+03	1.36E+09	2.11E+07	2.65E+04	2.18E+04
Strontium (38)	Sr-80	1.26E-06	4.81E-07	1.87E-03	3.64E+03	1.36E+09	2.11E+07	1.21E+05	3.59E+04
Strontium (38)	Sr-81	2.85E-07	1.30E-07	1.67E+00	1.43E+04	1.36E+09	2.11E+07	2.84E+04	2.74E+04
Strontium (38)	Sr-82	2.26E-05	3.29E-05	1.83E-03	1.01E+01	1.36E+09	2.11E+07	1.72E+01	1.85E+00
Strontium (38)	Sr-82+D	2.26E-05	3.29E-05	1.40E+00	1.01E+01	1.36E+09	2.11E+07	1.01E+01	1.72E+00
Strontium (38)	Sr-82+E	2.26E-05	3.29E-05	1.40E+00	1.01E+01	1.36E+09	2.11E+07	1.01E+01	1.72E+00
Strontium (38)	Sr-83	1.81E-06	1.15E-06	8.88E-01	1.87E+02	1.36E+09	2.11E+07	6.03E+02	3.90E+02
Strontium (38)	Sr-85	2.07E-06	2.37E-06	5.65E-01	3.90E+00	1.36E+09	2.11E+07	1.70E+01	6.81E+00
Strontium (38)	Sr-85m	2.26E-08	1.52E-08	2.36E-01	5.24E+03	1.36E+09	2.11E+07	7.21E+04	7.00E+04
Strontium (38)	Sr-87m	1.11E-07	7.40E-08	3.55E-01	2.16E+03	1.36E+09	2.11E+07	1.95E+04	1.78E+04
Strontium (38)	Sr-89	9.62E-06	2.26E-05	8.01E-02	5.01E+00	1.36E+09	2.11E+07	1.72E+01	1.39E+00
Strontium (38)	Sr-90	1.04E-04	1.33E-04	1.91E-03	2.38E-02	1.36E+09	2.11E+07	3.82E-01	4.52E-02
Strontium (38)	Sr-90+D	1.04E-04	1.33E-04	1.31E-01	2.38E-02	1.36E+09	2.11E+07	3.76E-01	4.51E-02
Strontium (38)	Sr-90+E	1.04E-04	1.33E-04	1.31E-01	2.38E-02	1.36E+09	2.11E+07	3.76E-01	4.51E-02
Strontium (38)	Sr-91	2.41E-06	1.37E-06	8.48E-01	6.39E+02	1.36E+09	2.11E+07	2.13E+03	1.27E+03
Strontium (38)	Sr-92	1.59E-06	7.77E-07	1.44E+00	2.24E+03	1.36E+09	2.11E+07	5.16E+03	4.08E+03
Tantalum (73)	Ta-172	1.96E-07	1.22E-07	1.74E+00	9.90E+03	1.36E+09	2.11E+07	1.86E+04	1.80E+04
Tantalum (73)	Ta-173	7.03E-07	4.07E-07	6.71E-01	1.66E+03	1.36E+09	2.11E+07	7.42E+03	5.85E+03
Tantalum (73)	Ta-174	2.11E-07	1.52E-07	7.18E-01	5.06E+03	1.36E+09	2.11E+07	2.39E+04	2.16E+04
Tantalum (73)	Ta-175	7.77E-07	4.44E-07	9.91E-01	5.78E+02	1.36E+09	2.11E+07	1.77E+03	1.48E+03
Tantalum (73)	Ta-176	1.15E-06	7.03E-07	2.25E+00	7.51E+02	1.36E+09	2.11E+07	1.03E+03	8.99E+02
Tantalum (73)	Ta-177	4.07E-07	3.55E-07	6.85E-02	1.07E+02	1.36E+09	2.11E+07	3.41E+03	1.28E+03
Tantalum (73)	Ta-178			1.12E-01	3.91E+04	1.36E+09	2.11E+07	1.16E+06	1.16E+06
Tantalum (73)	Ta-178m	2.66E-07	2.41E-07	1.11E+00	2.76E+03	1.36E+09	2.11E+07	8.09E+03	7.32E+03
Tantalum (73)	Ta-179	2.41E-07	8.14E-07	3.21E-02	3.80E-01	1.36E+09	2.11E+07	6.85E+01	8.70E+00
Tantalum (73)	Ta-180	3.11E-06	2.37E-05	6.05E-01	6.93E-14	1.36E+09	2.11E+07	3.24E+00	2.62E-01
Tantalum (73)	Ta-180m	2.00E-07	1.63E-07	4.94E-02	7.49E+02	1.36E+09	2.11E+07	3.67E+04	1.68E+04
Tantalum (73)	Ta-182	5.55E-06	2.81E-05	1.40E+00	2.20E+00	1.36E+09	2.11E+07	3.98E+00	5.16E-01
Tantalum (73)	Ta-182m	4.44E-08	7.40E-08	2.63E-01	2.30E+04	1.36E+09	2.11E+07	2.80E+05	2.47E+05
Tantalum (73)	Ta-183	4.81E-06	7.03E-06	3.13E-01	4.96E+01	1.36E+09	2.11E+07	2.24E+02	3.92E+01
Tantalum (73)	Ta-184	2.52E-06	1.52E-06	1.81E+00	6.98E+02	1.36E+09	2.11E+07	1.15E+03	8.36E+02
Tantalum (73)	Ta-185	2.52E-07	1.67E-07	2.92E-01	7.43E+03	1.36E+09	2.11E+07	7.78E+04	6.18E+04
Tantalum (73)	Ta-186	1.22E-07	6.29E-08	1.84E+00	3.47E+04	1.36E+09	2.11E+07	6.17E+04	6.07E+04
Terbium (65)	Tb-147	5.92E-07	2.81E-07	1.81E+00	3.68E+03	1.36E+09	2.11E+07	6.94E+03	6.44E+03
Terbium (65)	Tb-149	9.25E-07	1.81E-05	1.75E+00	1.46E+03	1.36E+09	2.11E+07	2.59E+03	4.50E+02
Terbium (65)	Tb-150	9.25E-07	4.07E-07	1.89E+00	1.86E+03	1.36E+09	2.11E+07	3.28E+03	2.96E+03
Terbium (65)	Tb-151	1.26E-06	8.51E-07	9.78E-01	3.45E+02	1.36E+09	2.11E+07	1.08E+03	7.73E+02
Terbium (65)	Tb-153	9.25E-07	7.03E-07	2.44E-01	1.08E+02	1.36E+09	2.11E+07	1.10E+03	5.35E+02
Terbium (65)	Tb-154	2.41E-06	1.33E-06	2.43E+00	2.84E+02	1.36E+09	2.11E+07	3.66E+02	2.92E+02
Terbium (65)	Tb-155	7.77E-07	8.14E-07	1.46E-01	4.75E+01	1.36E+09	2.11E+07	7.33E+02	2.56E+02
Terbium (65)	Tb-156	4.44E-06	4.44E-06	1.97E+00	4.74E+01	1.36E+09	2.11E+07	6.88E+01	3.52E+01
Terbium (65)	Tb-156m	6.29E-07	7.77E-07	2.58E-02	2.49E+02	1.36E+09	2.11E+07	1.03E+04	1.78E+03
Terbium (65)	Tb-156n	3.00E-07	3.55E-07	3.68E-03	1.21E+03	1.36E+09	2.11E+07	1.39E+05	1.98E+04
Terbium (65)	Tb-157	1.26E-07	4.44E-06	2.57E-03	4.62E-03	1.36E+09	2.11E+07	7.14E+01	1.49E+00
Terbium (65)	Tb-158	4.07E-06	1.70E-04	8.74E-01	4.62E-03	1.36E+09	2.11E+07	1.36E+00	3.86E-02
Terbium (65)	Tb-160	5.92E-06	2.59E-05	1.24E+00	3.50E+00	1.36E+09	2.11E+07	6.58E+00	8.22E-01
Terbium (65)	Tb-161	2.66E-06	4.81E-06	3.44E-02	3.66E+01	1.36E+09	2.11E+07	4.45E+02	4.60E+01
Technetium (43)	Tc-101	7.03E-08	4.44E-08	4.26E-01	2.57E+04	1.36E+09	2.11E+07	2.00E+05	1.90E+05
Technetium (43)	Tc-104	2.96E-07	1.04E-07	2.28E+00	2.00E+04	1.36E+09	2.11E+07	2.92E+04	2.86E+04
Technetium (43)	Tc-93	2.04E-07	1.30E-07	1.54E+00	2.21E+03	1.36E+09	2.11E+07	4.79E+03	4.60E+03
Technetium (43)	Tc-93m	9.25E-08	6.29E-08	7.35E-01	8.37E+03	1.36E+09	2.11E+07	3.78E+04	3.63E+04
Technetium (43)	Tc-94	7.40E-07	4.44E-07	2.95E+00	1.24E+03	1.36E+09	2.11E+07	1.43E+03	1.33E+03
Technetium (43)	Tc-94m	3.70E-07	1.67E-07	2.12E+00	7.00E+03	1.36E+09	2.11E+07	1.14E+04	1.10E+04
Technetium (43)	Tc-95	6.66E-07	3.70E-07	8.75E-01	3.04E+02	1.36E+09	2.11E+07	1.12E+03	9.32E+02
Technetium (43)	Tc-95m	2.07E-06	3.26E-06	7.38E-01	4.15E+00	1.36E+09	2.11E+07	1.57E+01	5.61E+00
Technetium (43)	Tc-96	4.07E-06	2.52E-06	2.77E+00	5.91E+01	1.36E+09	2.11E+07	6.66E+01	4.69E+01
Technetium (43)	Tc-96m	4.44E-08	2.74E-08	5.25E-02	7.07E+03	1.36E+09	2.11E+07	4.06E+05	3.29E+05
Technetium (43)	Tc-97	2.52E-07	8.14E-07	5.43E-03	2.67E-07	1.36E+09	2.11E+07	1.07E+02	7.69E+00
Technetium (43)	Tc-97m	2.04E-06	1.18E-05	5.19E-03	2.91E+00	1.36E+09	2.11E+07	4.08E+01	1.68E+00
Technetium (43)	Tc-98	7.40E-06	3.07E-05	1.58E+00	1.65E-07	1.36E+09	2.11E+07	1.44E+00	1.91E-01

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Technetium (43)	Tc-99	2.37E-06	1.48E-05	7.55E-05	3.25E-06	1.36E+09	2.11E+07	1.14E+01	4.38E-01
Technetium (43)	Tc-99m	8.14E-08	7.03E-08	1.33E-01	1.01E+03	1.36E+09	2.11E+07	2.30E+04	1.86E+04
Tellurium (52)	Te-116	6.29E-07	3.70E-07	7.07E-02	2.44E+03	1.36E+09	2.11E+07	6.40E+04	2.62E+04
Tellurium (52)	Te-121	1.59E-06	1.41E-06	6.38E-01	1.49E+01	1.36E+09	2.11E+07	6.46E+01	3.39E+01
Tellurium (52)	Te-121m	8.51E-06	1.55E-05	2.31E-01	1.64E+00	1.36E+09	2.11E+07	6.82E+00	7.82E-01
Tellurium (52)	Te-123	1.63E-05	7.03E-06	1.66E-02	6.93E-14	1.36E+09	2.11E+07	2.57E+00	6.99E-01
Tellurium (52)	Te-123m	5.18E-06	1.48E-05	1.54E-01	2.11E+00	1.36E+09	2.11E+07	1.20E+01	1.00E+00
Tellurium (52)	Te-125m	3.22E-06	1.26E-05	3.10E-02	4.36E+00	1.36E+09	2.11E+07	3.94E+01	2.23E+00
Tellurium (52)	Te-127	6.29E-07	4.81E-07	1.20E-02	6.49E+02	1.36E+09	2.11E+07	3.44E+04	7.20E+03
Tellurium (52)	Te-127m	8.51E-06	2.74E-05	9.99E-03	2.32E+00	1.36E+09	2.11E+07	9.92E+00	5.96E-01
Tellurium (52)	Te-129	2.33E-07	1.37E-07	1.33E-01	5.23E+03	1.36E+09	2.11E+07	1.17E+05	8.03E+04
Tellurium (52)	Te-129m	1.11E-05	2.44E-05	6.65E-02	7.53E+00	1.36E+09	2.11E+07	2.29E+01	1.91E+00
Tellurium (52)	Te-131	3.22E-07	1.04E-07	5.53E-01	1.46E+04	1.36E+09	2.11E+07	8.28E+04	7.61E+04
Tellurium (52)	Te-131m	7.03E-06	3.48E-06	1.56E+00	2.02E+02	1.36E+09	2.11E+07	3.07E+02	1.72E+02
Tellurium (52)	Te-132	1.41E-05	7.40E-06	2.47E-01	7.76E+01	1.36E+09	2.11E+07	1.89E+02	5.14E+01
Tellurium (52)	Te-133	2.66E-07	7.40E-08	1.12E+00	2.93E+04	1.36E+09	2.11E+07	9.17E+04	8.86E+04
Tellurium (52)	Te-133m	1.04E-06	3.22E-07	2.61E+00	6.57E+03	1.36E+09	2.11E+07	7.93E+03	7.50E+03
Tellurium (52)	Te-134	4.07E-07	2.44E-07	9.90E-01	8.71E+03	1.36E+09	2.11E+07	2.94E+04	2.62E+04
()	Test Isotope					1.36E+09	2.11E+07		
Thorium (90)	Th-226	1.30E-06	2.26E-04	8.46E-03	1.18E+04	1.36E+09	2.11E+07	2.11E+04	3.46E+02
Thorium (90)	Th-227	3.26E-05	3.70E-02	1.14E-01	1.35E+01	1.36E+09	2.11E+07	1.55E-01	2.42E-03
Thorium (90)	Th-228	2.66E-04	1.48E-01	2.49E-03	3.62E-01	1.36E+09	2.11E+07	3.39E-03	5.35E-05
Thorium (90)	Th-229	1.81E-03	2.63E-01	9.21E-02	9.44E-05	1.36E+09	2.11E+07	1.53E-03	2.52E-05
Thorium (90)	Th-229+D	2.26E-03	3.15E-01		9.44E-05	1.36E+09	2.11E+07	1.27E-03	2.11E-05
Thorium (90)	Th-229+E	2.26E-03	3.15E-01	4.04E-01	9.44E-05	1.36E+09	2.11E+07	1.27E-03	2.11E-05
Thorium (90)	Th-230	7.77E-04	5.18E-02	7.43E-04	9.00E-06	1.36E+09	2.11E+07	7.22E-03	1.28E-04
Thorium (90)	Th-231	1.26E-06	1.22E-06	1.81E-02	2.38E+02	1.36E+09	2.11E+07	6.40E+03	1.09E+03
Thorium (90)	Th-232	8.51E-04	9.25E-02	5.31E-04	4.93E-11	1.36E+09	2.11E+07	4.25E-03	7.17E-05
Thorium (90)	Th-232+D				4.93E-11	1.36E+09	2.11E+07		
Thorium (90)	Th-234	1.26E-05	2.85E-05	8.74E-03	1.05E+01	1.36E+09	2.11E+07	2.97E+01	2.29E+00
Thorium (90)	Th-234+D	1.26E-05	2.85E-05	1.41E-01	1.05E+01	1.36E+09	2.11E+07	2.64E+01	2.27E+00
Thorium (90)	Th-234+E	1.26E-05	2.85E-05	1.41E-01	1.05E+01	1.36E+09	2.11E+07	2.64E+01	2.27E+00
Titanium (22)	Ti-44	2.15E-05	1.55E-04	1.38E-01	1.47E-02	1.36E+09	2.11E+07	1.13E+00	4.21E-02
Titanium (22)	Ti-44+D	2.15E-05	1.55E-04	2.57E+00	1.47E-02	1.36E+09	2.11E+07	6.33E-01	4.09E-02
Titanium (22)	Ti-44+E	2.15E-05	1.55E-04	2.57E+00	1.47E-02	1.36E+09	2.11E+07	6.33E-01	4.09E-02
Titanium (22)	Ti-45	5.55E-07	3.26E-07	1.01E+00	1.97E+03	1.36E+09	2.11E+07	6.37E+03	5.51E+03
Thallium (81)	Tl-194	3.00E-08	1.63E-08	8.58E-01	1.10E+04	1.36E+09	2.11E+07	4.36E+04	4.32E+04
Thallium (81)	Tl-194m	1.48E-07	7.03E-08	2.60E+00	1.11E+04	1.36E+09	2.11E+07	1.38E+04	1.36E+04
Thallium (81)	Tl-195	9.99E-08	5.55E-08	1.35E+00	5.23E+03	1.36E+09	2.11E+07	1.23E+04	1.20E+04
Thallium (81)	Tl-197	8.51E-08	5.18E-08	4.40E-01	2.14E+03	1.36E+09	2.11E+07	1.54E+04	1.46E+04
Thallium (81)	Tl-198	2.70E-07	2.22E-07	2.12E+00	1.15E+03	1.36E+09	2.11E+07	1.70E+03	1.62E+03
Thallium (81)	Tl-198m	2.00E-07	1.37E-07	1.32E+00	3.25E+03	1.36E+09	2.11E+07	7.47E+03	7.14E+03
Thallium (81)	Tl-199	9.62E-08	7.03E-08	2.65E-01	8.18E+02	1.36E+09	2.11E+07	9.71E+03	8.64E+03
Thallium (81)	Tl-200	7.40E-07	4.81E-07	1.42E+00	2.33E+02	1.36E+09	2.11E+07	4.97E+02	4.31E+02
Thallium (81)	Tl-201	3.52E-07	1.63E-07	9.29E-02	8.31E+01	1.36E+09	2.11E+07	2.22E+03	1.35E+03
Thallium (81)	Tl-202	1.67E-06	7.03E-07	5.13E-01	2.07E+01	1.36E+09	2.11E+07	1.07E+02	6.94E+01
Thallium (81)	Tl-204	4.44E-06	1.44E-06	1.26E-02	1.83E-01	1.36E+09	2.11E+07	1.02E+01	3.40E+00
Thallium (81)	Tl-206			7.08E-02	8.67E+04	1.36E+09	2.11E+07	3.95E+06	3.95E+06
Thallium (81)	Tl-207			6.49E-02	7.64E+04	1.36E+09	2.11E+07	4.14E+06	4.14E+06
Thallium (81)	Tl-208			3.47E+00	1.19E+05	1.36E+09	2.11E+07	1.17E+05	1.17E+05
Thallium (81)	Tl-209			2.24E+00	1.66E+05	1.36E+09	2.11E+07	2.57E+05	2.57E+05
Thulium (69)	Tm-162	1.07E-07	5.92E-08	1.90E+00	1.68E+04	1.36E+09	2.11E+07	3.00E+04	2.95E+04
Thulium (69)	Tm-166	1.04E-06	6.29E-07	1.98E+00	7.88E+02	1.36E+09	2.11E+07	1.26E+03	1.10E+03
Thulium (69)	Tm-167	2.07E-06	4.07E-06	1.53E-01	2.74E+01	1.36E+09	2.11E+07	2.65E+02	3.87E+01
Thulium (69)	Tm-170	4.81E-06	2.59E-05	3.08E-02	1.97E+00	1.36E+09	2.11E+07	1.28E+01	5.69E-01
Thulium (69)	Tm-171	4.07E-07	5.18E-06	6.48E-04	3.61E-01	1.36E+09	2.11E+07	5.54E+01	1.51E+00
Thulium (69)	Tm-172	6.29E-06	4.07E-06	5.68E-01	9.55E+01	1.36E+09	2.11E+07	2.97E+02	1.03E+02
Thulium (69)	Tm-173	1.15E-06	6.66E-07	4.53E-01	7.37E+02	1.36E+09	2.11E+07	4.55E+03	2.82E+03
Thulium (69)	Tm-175	9.99E-08	6.66E-08	1.21E+00	2.40E+04	1.36E+09	2.11E+07	6.62E+04	6.44E+04
Uranium (92)	U-230	2.07E-04	4.81E-02	1.81E-03	1.22E+01	1.36E+09	2.11E+07	1.04E-01	1.68E-03
Uranium (92)	U-231	1.04E-06	1.74E-06	7.47E-02	6.02E+01	1.36E+09	2.11E+07	1.17E+03	1.95E+02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Uranium (92)	U-232	1.22E-03	2.89E-02	9.42E-04	9.63E-03	1.36E+09	2.11E+07	1.06E-02	2.30E-04
Uranium (92)	U-233	1.89E-04	1.33E-02	6.99E-04	4.37E-06	1.36E+09	2.11E+07	2.83E-02	4.97E-04
Uranium (92)	U-234	1.81E-04	1.30E-02	6.84E-04	2.83E-06	1.36E+09	2.11E+07	2.91E-02	5.12E-04
Uranium (92)	U-235	1.74E-04	1.15E-02	1.63E-01	9.85E-10	1.36E+09	2.11E+07	3.25E-02	5.77E-04
Uranium (92)	U-235+D			1.82E-01	9.85E-10	1.36E+09	2.11E+07	1.72E+01	1.72E+01
Uranium (92)	U-235+E			1.82E-01	9.85E-10	1.36E+09	2.11E+07	1.72E+01	1.72E+01
Uranium (92)	U-236	1.74E-04	1.18E-02	5.87E-04	2.96E-08	1.36E+09	2.11E+07	3.17E-02	5.59E-04
Uranium (92)	U-237	2.81E-06	6.29E-06	1.44E-01	3.75E+01	1.36E+09	2.11E+07	3.03E+02	3.55E+01
Uranium (92)	U-238	1.67E-04	1.07E-02	4.94E-04	1.55E-10	1.36E+09	2.11E+07	3.47E-02	6.17E-04
Uranium (92)	U-238+D	1.67E-04	1.07E-02		1.55E-10	1.36E+09	2.11E+07	3.47E-02	6.17E-04
Uranium (92)	U-238+E	1.67E-04	1.07E-02	1.41E-01	1.55E-10	1.36E+09	2.11E+07	3.46E-02	6.17E-04
Uranium (92)	U-239	9.99E-08	8.14E-08	9.63E-02	1.55E+04	1.36E+09	2.11E+07	4.68E+05	3.43E+05
Uranium (92)	U-240	4.07E-06	1.96E-06	3.72E-03	4.31E+02	1.36E+09	2.11E+07	4.41E+03	1.11E+03
Vanadium (23)	V-47	2.33E-07	1.07E-07	1.23E+00	1.12E+04	1.36E+09	2.11E+07	3.07E+04	2.94E+04
Vanadium (23)	V-48	7.40E-06	8.88E-06	3.17E+00	1.56E+01	1.36E+09	2.11E+07	1.45E+01	6.51E+00
Vanadium (23)	V-49	6.66E-08	1.26E-07	0.00E+00	7.67E-01	1.36E+09	2.11E+07	7.97E+02	7.00E+01
Tungsten (74)	W-176	3.70E-07	1.52E-07	1.80E-01	2.64E+03	1.36E+09	2.11E+07	4.07E+04	3.02E+04
Tungsten (74)	W-177	2.15E-07	8.88E-08	9.78E-01	2.70E+03	1.36E+09	2.11E+07	8.81E+03	8.45E+03
Tungsten (74)	W-178	8.14E-07	2.66E-07	1.33E-02	1.17E+01	1.36E+09	2.11E+07	5.01E+02	1.86E+02
Tungsten (74)	W-178+D	8.14E-07	2.66E-07		1.17E+01	1.36E+09	2.11E+07	6.14E+02	1.99E+02
Tungsten (74)	W-178+E	8.14E-07	2.66E-07		1.17E+01	1.36E+09	2.11E+07	6.14E+02	1.99E+02
Tungsten (74)	W-179	1.22E-08	3.40E-09	5.81E-02	9.71E+03	1.36E+09	2.11E+07	5.13E+05	4.99E+05
Tungsten (74)	W-181	2.81E-07	9.99E-08	4.01E-02	2.09E+00	1.36E+09	2.11E+07	1.23E+02	6.98E+01
Tungsten (74)	W-185	1.63E-06	4.44E-07	2.00E-04	3.37E+00	1.36E+09	2.11E+07	9.22E+01	3.36E+01
Tungsten (74)	W-187	2.33E-06	7.03E-07	5.46E-01	2.54E+02	1.36E+09	2.11E+07	1.13E+03	7.72E+02
Tungsten (74)	W-188	7.77E-06	2.11E-06	2.12E-03	3.64E+00	1.36E+09	2.11E+07	2.07E+01	7.58E+00
Xenon (54)	Xe-120			4.68E-01	9.11E+03	1.36E+09	2.11E+07	6.16E+04	6.16E+04
Xenon (54)	Xe-121			1.97E+00	9.08E+03	1.36E+09	2.11E+07	1.54E+04	1.54E+04
Xenon (54)	Xe-122			7.04E-02	3.02E+02	1.36E+09	2.11E+07	1.43E+04	1.43E+04
Xenon (54)	Xe-123			7.04E-01	2.92E+03	1.36E+09	2.11E+07	1.38E+04	1.38E+04
Xenon (54)	Xe-125			2.88E-01	3.57E+02	1.36E+09	2.11E+07	4.12E+03	4.12E+03
Xenon (54)	Xe-127			2.99E-01	6.95E+00	1.36E+09	2.11E+07	7.51E+01	7.51E+01
Xenon (54)	Xe-129m			4.85E-02	3.16E+01	1.36E+09	2.11E+07	2.00E+03	2.00E+03
Xenon (54)	Xe-131m			1.87E-02	2.13E+01	1.36E+09	2.11E+07	3.49E+03	3.49E+03
Xenon (54)	Xe-133			4.61E-02	4.82E+01	1.36E+09	2.11E+07	3.27E+03	3.27E+03
Xenon (54)	Xe-133m			4.12E-02	1.16E+02	1.36E+09	2.11E+07	8.68E+03	8.68E+03
Xenon (54)	Xe-135			2.92E-01	6.68E+02	1.36E+09	2.11E+07	7.60E+03	7.60E+03
Xenon (54)	Xe-135m			4.89E-01	2.38E+04	1.36E+09	2.11E+07	1.66E+05	1.66E+05
Xenon (54)	Xe-138			1.25E+00	2.57E+04	1.36E+09	2.11E+07	6.94E+04	6.94E+04
Yttrium (39)	Y-86	3.55E-06	1.67E-06	3.89E+00	4.12E+02	1.36E+09	2.11E+07	3.31E+02	2.76E+02
Yttrium (39)	Y-86m	2.07E-07	9.99E-08	2.38E-01	7.59E+03	1.36E+09	2.11E+07	9.78E+04	8.21E+04
Yttrium (39)	Y-87	2.04E-06	1.37E-06	5.03E-01	7.56E+01	1.36E+09	2.11E+07	3.58E+02	1.83E+02
Yttrium (39)	Y-88	4.81E-06	1.52E-05	2.81E+00	2.37E+00	1.36E+09	2.11E+07	2.71E+00	8.13E-01
Yttrium (39)	Y-90	9.99E-06	5.18E-06	1.28E-01	9.49E+01	1.36E+09	2.11E+07	3.38E+02	9.05E+01
Yttrium (39)	Y-90m	6.29E-07	3.52E-07	6.97E-01	1.90E+03	1.36E+09	2.11E+07	8.42E+03	6.84E+03
Yttrium (39)	Y-91	8.88E-06	2.63E-05	8.71E-02	4.32E+00	1.36E+09	2.11E+07	1.53E+01	1.05E+00
Yttrium (39)	Y-91m	4.07E-08	3.70E-08	5.95E-01	7.33E+03	1.36E+09	2.11E+07	4.13E+04	4.01E+04
Yttrium (39)	Y-92	1.81E-06	6.29E-07	4.47E-01	1.71E+03	1.36E+09	2.11E+07	1.02E+04	6.58E+03
Yttrium (39)	Y-93	4.44E-06	1.48E-06	2.45E-01	6.01E+02	1.36E+09	2.11E+07	3.54E+03	1.54E+03
Yttrium (39)	Y-94	3.00E-07	9.99E-08	1.39E+00	1.91E+04	1.36E+09	2.11E+07	4.89E+04	4.71E+04
Yttrium (39)	Y-95	1.70E-07	5.55E-08	1.06E+00	3.40E+04	1.36E+09	2.11E+07	1.15E+05	1.12E+05
Ytterbium (70)	Yb-162	8.51E-08	4.81E-08	1.42E-01	1.93E+04	1.36E+09	2.11E+07	4.16E+05	3.60E+05
Ytterbium (70)	Yb-166	3.52E-06	2.66E-06	8.68E-02	1.07E+02	1.36E+09	2.11E+07	9.47E+02	2.11E+02
Ytterbium (70)	Yb-167	2.48E-08	2.41E-08	2.77E-01	2.08E+04	1.36E+09	2.11E+07	2.42E+05	2.33E+05
Ytterbium (70)	Yb-169	2.63E-06	9.25E-06	3.24E-01	7.90E+00	1.36E+09	2.11E+07	4.39E+01	5.09E+00
Ytterbium (70)	Yb-175	1.63E-06	2.41E-06	4.36E-02	6.04E+01	1.36E+09	2.11E+07	1.09E+03	1.47E+02
Ytterbium (70)	Yb-177	3.26E-07	2.37E-07	2.53E-01	3.20E+03	1.36E+09	2.11E+07	3.89E+04	2.73E+04
Ytterbium (70)	Yb-178	4.44E-07	2.59E-07	4.20E-02	4.92E+03	1.36E+09	2.11E+07	2.13E+05	8.00E+04
Zinc (30)	Zn-62	3.48E-06	1.85E-06	4.84E-01	6.56E+02	1.36E+09	2.11E+07	2.92E+03	1.31E+03
Zinc (30)	Zn-63	2.92E-07	1.30E-07	1.35E+00	9.56E+03	1.36E+09	2.11E+07	2.42E+04	2.31E+04
Zinc (30)	Zn-65	1.44E-05	5.92E-06	6.31E-01	1.04E+00	1.36E+09	2.11E+07	3.11E+00	1.15E+00

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07	9.80E+07	9.80E+07
Zinc (30)	Zn-69	1.15E-07	9.62E-08	2.43E-02	6.39E+03	1.36E+09	2.11E+07	6.39E+05	2.63E+05
Zinc (30)	Zn-69m	1.22E-06	8.88E-07	4.64E-01	4.41E+02	1.36E+09	2.11E+07	2.65E+03	1.48E+03
Zinc (30)	Zn-71m	8.88E-07	5.55E-07	1.80E+00	1.55E+03	1.36E+09	2.11E+07	2.87E+03	2.49E+03
Zinc (30)	Zn-72	5.18E-06	4.44E-06	1.56E-01	1.31E+02	1.36E+09	2.11E+07	7.41E+02	1.56E+02
Zirconium (40)	Zr-86	3.18E-06	1.55E-06	2.99E-01	3.68E+02	1.36E+09	2.11E+07	2.13E+03	9.12E+02
Zirconium (40)	Zr-88	1.67E-06	9.62E-06	4.40E-01	3.03E+00	1.36E+09	2.11E+07	1.58E+01	1.96E+00
Zirconium (40)	Zr-89	2.92E-06	1.92E-06	1.28E+00	7.74E+01	1.36E+09	2.11E+07	1.65E+02	1.03E+02
Zirconium (40)	Zr-93	4.07E-06	3.70E-05	0.00E+00	4.53E-07	1.36E+09	2.11E+07	5.61E+00	1.77E-01
Zirconium (40)	Zr-95	3.52E-06	1.78E-05	8.22E-01	3.95E+00	1.36E+09	2.11E+07	1.13E+01	1.35E+00
Zirconium (40)	Zr-97	7.77E-06	3.40E-06	2.92E-01	3.59E+02	1.36E+09	2.11E+07	1.35E+03	4.65E+02

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Actinium (89)	Ac-223+D	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	0.907	1.66E+05	1.83E+06	7.88E+06	2.92E+06	1.96E+06	4.40E+06	4.78E-09
Actinium (89)	Ac-223+E	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	0.907	1.66E+05	1.83E+06	7.88E+06	2.92E+06	1.96E+06	4.40E+06	4.78E-09
Actinium (89)	Ac-224	7.72E-01	2.05E-01	5.50E-01	7.53E-01	2.07E-01	1	2.09E+03	8.16E+03	3.07E+04	1.15E+04	8.37E+03	3.05E+04	1.70E-09
Actinium (89)	Ac-225	5.76E-02	1.64E-02	4.25E-02	5.65E-02	1.72E-02	0.978	2.53E+01	1.35E+03	4.74E+03	1.83E+03	1.38E+03	4.54E+03	2.33E-08
Actinium (89)	Ac-225+D	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	0.963	2.53E+01	6.69E+01	3.12E+02	1.11E+02	7.39E+01	2.65E+02	1.15E-09
Actinium (89)	Ac-225+E	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	0.963	2.53E+01	6.69E+01	3.12E+02	1.11E+02	7.39E+01	2.65E+02	1.15E-09
Actinium (89)	Ac-226	5.67E-01	1.40E-01	3.86E-01	5.48E-01	1.58E-01	1	2.09E+02	1.11E+03	4.51E+03	1.63E+03	1.15E+03	4.00E+03	2.33E-09
Actinium (89)	Ac-227	4.46E-04	1.31E-04	3.36E-04	4.40E-04	1.65E-04	1	3.18E-02	6.86E+03	2.33E+04	9.11E+03	6.95E+03	1.86E+04	9.50E-05
Actinium (89)	Ac-228	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	0.969	9.90E+02	5.45E+02	2.86E+03	1.00E+03	6.30E+02	2.81E+03	2.43E-10
Silver (47)	Ag-102	2.00E+01	3.71E+00	1.07E+01	1.71E+01	3.72E+00	0.833	2.82E+04	5.11E+03	2.75E+04	9.55E+03	5.98E+03	2.74E+04	3.59E-11
Silver (47)	Ag-103	4.18E+00	8.47E-01	2.41E+00	3.73E+00	8.69E-01	0.938	5.54E+03	4.26E+03	2.10E+04	7.40E+03	4.77E+03	2.05E+04	1.54E-10
Silver (47)	Ag-103+D	4.18E+00	8.49E-01	2.41E+00	3.73E+00	8.80E-01	0.938	5.54E+03	4.26E+03	2.10E+04	7.40E+03	4.77E+03	2.02E+04	1.54E-10
Silver (47)	Ag-104	1.56E+01	2.98E+00	8.56E+00	1.36E+01	2.94E+00	0.867	5.26E+03	1.17E+03	6.13E+03	2.14E+03	1.35E+03	6.22E+03	4.48E-11
Silver (47)	Ag-104m	6.88E+00	1.31E+00	3.75E+00	5.93E+00	1.33E+00	0.856	1.09E+04	5.56E+03	2.93E+04	1.02E+04	6.45E+03	2.87E+04	1.03E-10
Silver (47)	Ag-105	2.70E+00	5.73E-01	1.63E+00	2.48E+00	5.72E-01	0.905	6.17E+00	7.61E+00	3.59E+01	1.26E+01	8.29E+00	3.60E+01	2.51E-10
Silver (47)	Ag-106	3.90E+00	8.09E-01	2.29E+00	3.52E+00	8.65E-01	0.916	1.52E+04	1.28E+04	6.17E+04	2.18E+04	1.42E+04	5.78E+04	1.73E-10
Silver (47)	Ag-106m	1.64E+01	3.13E+00	9.01E+00	1.42E+01	3.08E+00	0.881	3.01E+01	6.29E+00	3.28E+01	1.14E+01	7.23E+00	3.34E+01	4.30E-11
Silver (47)	Ag-108	1.14E-01	2.98E-02	7.03E-02	1.04E-01	1.05E-01	0.878	1.54E+05	4.61E+06	1.77E+07	7.50E+06	5.07E+06	5.04E+06	6.29E-09
Silver (47)	Ag-108m	9.01E+00	1.82E+00	5.20E+00	8.08E+00	1.81E+00	0.88	5.46E-03	3.81E-01	1.88E+00	6.59E-01	4.25E-01	1.90E+00	1.46E-08
Silver (47)	Ag-108m+D	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	0.88	5.46E-03	3.80E-01	1.88E+00	6.59E-01	4.25E-01	1.88E+00	1.46E-08
Silver (47)	Ag-108m+E	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	0.88							
Silver (47)	Ag-109m	1.02E-02	4.16E-03	8.60E-03	1.02E-02	8.78E-03	0.995	5.52E+05	1.63E+08	4.02E+08	1.94E+08	1.63E+08	1.90E+08	6.26E-08
Silver (47)	Ag-110	2.37E-01	6.99E-02	1.48E-01	2.14E-01	1.90E-01	0.87	8.88E+05	1.30E+07	4.40E+07	2.07E+07	1.43E+07	1.62E+07	3.12E-09
Silver (47)	Ag-110m	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918	1.01E+00	3.23E-01	1.71E+00	5.91E-01	3.72E-01	1.73E+00	6.80E-11
Silver (47)	Ag-110m+D	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918	1.01E+00	3.23E-01	1.71E+00	5.91E-01	3.72E-01	1.73E+00	6.80E-11
Silver (47)	Ag-110m+E	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918							
Silver (47)	Ag-111	1.40E-01	3.19E-02	8.78E-02	1.31E-01	6.16E-02	0.902	3.40E+01	8.12E+02	3.55E+03	1.29E+03	8.67E+02	1.84E+03	5.15E-09
Silver (47)	Ag-112	4.05E+00	7.70E-01	2.16E+00	3.43E+00	8.71E-01	0.871	1.95E+03	1.66E+03	8.73E+03	3.11E+03	1.96E+03	7.73E+03	1.86E-10
Silver (47)	Ag-115	4.31E+00	7.96E-01	2.26E+00	3.62E+00	8.75E-01	0.878	1.82E+04	1.45E+04	7.84E+04	2.77E+04	1.73E+04	7.14E+04	1.78E-10
Aluminum (13)	Al-26	1.65E+01	2.93E+00	8.47E+00	1.37E+01	2.88E+00	0.845	9.68E-07	2.16E-01	1.22E+00	4.21E-01	2.60E-01	1.24E+00	1.13E-05
Aluminum (13)	Al-28	1.16E+01	1.94E+00	5.61E+00	9.29E+00	2.00E+00	0.814	1.63E+05	5.20E+04	3.10E+05	1.07E+05	6.48E+04	3.01E+05	1.74E-11
Americium (95)	Am-237	1.71E+00	3.95E-01	1.10E+00	1.60E+00	3.94E-01	0.945	4.99E+03	9.30E+03	4.02E+04	1.45E+04	9.92E+03	4.03E+04	8.57E-10
Americium (95)	Am-238	5.02E+00	9.74E-01	2.78E+00	4.35E+00	9.65E-01	0.95	3.72E+03	2.35E+03	1.21E+04	4.24E+03	2.71E+03	1.22E+04	2.92E-10
Americium (95)	Am-239	8.82E-01	2.37E-01	6.32E-01	8.62E-01	2.43E-01	0.999	5.10E+02	1.74E+03	6.49E+03	2.43E+03	1.78E+03	6.33E+03	1.58E-09
Americium (95)	Am-240	5.84E+00	1.13E+00	3.21E+00	5.07E+00	1.12E+00	0.966	1.20E+02	6.38E+01	3.31E+02	1.16E+02	7.34E+01	3.34E+02	2.49E-10
Americium (95)	Am-241	3.71E-02	1.84E-02	3.45E-02	3.71E-02	2.72E-02	0.965	1.60E-03	8.41E+01	1.70E+02	9.05E+01	8.41E+01	1.15E+02	2.45E-05
Americium (95)	Am-242	4.48E-02	1.40E-02	3.51E-02	4.48E-02	1.88E-02	0.998	3.79E+02	2.55E+04	8.20E+04	3.26E+04	2.55E+04	6.09E+04	3.17E-08
Americium (95)	Am-242m	1.44E-03	6.47E-04	1.19E-03	1.43E-03	2.64E-03	0.999	4.56E-03	2.10E+03	4.67E+03	2.54E+03	2.11E+03	1.15E+03	2.01E-04
Americium (95)	Am-242m+D	6.15E-02	1.74E-02	4.44E-02	5.93E-02	2.44E-02	0.998	4.56E-03	4.91E+01	1.73E+02	6.81E+01	5.10E+01	1.24E+02	4.69E-06
Americium (95)	Am-242m+E	6.15E-02	1.75E-02	4.44E-02	5.95E-02	2.50E-02	0.998	4.56E-03	4.91E+01	1.73E+02	6.81E+01	5.08E+01	1.21E+02	4.69E-06
Americium (95)	Am-243	1.24E-01	4.90E-02	1.08E-01	1.24E-01	5.59E-02	0.954	9.39E-05	2.55E+01	6.44E+01	2.93E+01	2.55E+01	5.65E+01	1.28E-04
Americium (95)	Am-243+D	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	0.958	9.39E-05	3.87E+00	1.39E+01	5.35E+00	3.98E+00	1.33E+01	1.94E-05
Americium (95)	Am-243+E	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	0.958	9.39E-05	3.87E+00	1.39E+01	5.35E+00	3.98E+00	1.33E+01	1.94E-05
Americium (95)	Am-244	4.48E+00	8.84E-01	2.52E+00	3.95E+00	8.87E-01	0.877	6.01E+02	4.61E+02	2.33E+03	8.20E+02	5.22E+02	2.33E+03	3.63E-10
Americium (95)	Am-244m	1.07E-02	6.51E-03	8.95E-03	1.05E-02	6.48E-02	0.999	1.40E+04	3.94E+06	6.49E+06	4.72E+06	4.03E+06	6.52E+05	1.33E-07
Americium (95)	Am-245	1.33E-01	3.43E-02	9.21E-02	1.29E-01	4.81E-02	0.926	2.96E+03	7.24E+04	2.81E+05	1.05E+05	7.48E+04	2.00E+05	1.16E-08
Americium (95)	Am-246	3.67E+00	7.61E-01	2.14E+00	3.30E+00	7.94E-01	0.933	9.34E+03	8.20E+03	3.96E+04	1.41E+04	9.13E+03	3.80E+04	4.19E-10
Americium (95)	Am-246m	6.01E+00	1.13E+00	3.25E+00	5.17E+00	1.16E+00	0.979	1.46E+04	7.46E+03	3.97E+04	1.38E+04	8.67E+03	3.86E+04	2.44E-10
Argon (18)	Ar-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.22E+00						
Argon (18)	Ar-39	8.02E-04	2.95E-04	6.29E-04	7.89E-04	2.95E-03	0.927	2.58E-03	4.06E+03	1.10E+04	5.17E+03	4.12E+03	1.10E+03	1.19E-04
Argon (18)	Ar-41	7.93E+00	1.41E+00	4.08E+00	6.62E+00	1.42E+00	0.833	3.32E+03	1.52E+03	8.51E+03	2.94E+03	1.81E+03	8.44E+03	3.63E-11
Arsenic (33)	As-69	5.60E+00	1.19E+00	3.32E+00	5.09E+00	1.30E+00	0.883	2.40E+04	1.46E+04	6.89E+04	2.46E+04	1.60E+04	6.31E+04	8.16E-11
Arsenic (33)	As-69+D	1.06E+01	2.16E+00	6.12E+00	9.49E+00	2.28E+00	0.925	2.40E+04	7.35E+03	3.61E+04	1.28E+04	8.22E+03	3.43E+04	4.11E-11
Arsenic (33)	As-70	2.44E+01	4.55E+00	1.31E+01	2.09E+01	4.55E+00	0.87	6.92E+03	9.81E+02	5.27E+03	1.83E+03	1.15E+03	5.27E+03	1.92E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Arsenic (33)	As-71	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	0.884	9.37E+01	1.07E+02	5.00E+02	1.76E+02	1.16E+02	5.05E+02	1.57E-10
Arsenic (33)	As-71+D	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	0.884	9.37E+01	1.07E+02	5.00E+02	1.76E+02	1.16E+02	5.05E+02	1.57E-10
Arsenic (33)	As-72	1.03E+01	2.03E+00	5.80E+00	9.08E+00	2.11E+00	0.863	2.33E+02	7.90E+01	4.01E+02	1.40E+02	8.97E+01	3.86E+02	4.73E-11
Arsenic (33)	As-73	7.83E-03	4.31E-03	7.52E-03	7.83E-03	6.05E-03	0.994	3.15E+00	1.27E+03	2.31E+03	1.33E+03	1.27E+03	1.65E+03	5.72E-08
Arsenic (33)	As-74	4.21E+00	8.60E-01	2.44E+00	3.79E+00	8.72E-01	0.877	1.42E+01	1.16E+01	5.69E+01	2.00E+01	1.29E+01	5.61E+01	1.17E-10
Arsenic (33)	As-76	2.54E+00	5.13E-01	1.42E+00	2.22E+00	6.12E-01	0.875	2.31E+02	3.13E+02	1.55E+03	5.57E+02	3.58E+02	1.30E+03	2.00E-10
Arsenic (33)	As-77	4.53E-02	1.03E-02	2.87E-02	4.25E-02	1.65E-02	0.9	1.56E+02	1.16E+04	5.10E+04	1.82E+04	1.23E+04	3.18E+04	1.10E-08
Arsenic (33)	As-78	7.63E+00	1.43E+00	4.05E+00	6.49E+00	1.51E+00	0.858	4.02E+03	1.85E+03	9.88E+03	3.48E+03	2.17E+03	9.36E+03	6.96E-11
Astatine (85)	At-207	7.61E+00	1.45E+00	4.14E+00	6.55E+00	1.42E+00	0.934	3.37E+03	1.43E+03	7.49E+03	2.63E+03	1.66E+03	7.64E+03	1.70E-10
Astatine (85)	At-211	1.03E-01	3.60E-02	8.41E-02	1.02E-01	3.87E-02	1	8.42E+02	2.46E+04	7.04E+04	3.01E+04	2.49E+04	6.54E+04	1.20E-08
Astatine (85)	At-211+D	1.29E-01	4.10E-02	9.88E-02	1.25E-01	4.38E-02	0.985	8.42E+02	1.99E+04	6.27E+04	2.60E+04	2.06E+04	5.88E+04	9.70E-09
Astatine (85)	At-211+E	3.82E+00	7.52E-01	2.14E+00	3.32E+00	7.49E-01	0.985	8.42E+02	6.73E+02	3.42E+03	1.20E+03	7.75E+02	3.43E+03	3.27E-10
Astatine (85)	At-215	1.02E-03	2.18E-04	6.21E-04	9.44E-04	2.15E-04	0.894	2.19E+11	7.20E+14	3.37E+15	1.19E+15	7.80E+14	3.43E+15	1.37E-06
Astatine (85)	At-216	3.99E-03	1.41E-03	3.32E-03	3.99E-03	1.51E-03	0.954	7.28E+10	5.76E+13	1.63E+14	6.93E+13	5.76E+13	1.53E+14	3.31E-07
Astatine (85)	At-217	1.65E-03	3.47E-04	9.81E-04	1.50E-03	3.42E-04	0.889	6.77E+08	1.39E+12	6.61E+12	2.34E+12	1.53E+12	6.70E+12	8.63E-07
Astatine (85)	At-218	4.87E-03	2.70E-03	4.66E-03	4.87E-03	4.25E-03	0.995	1.09E+07	6.79E+09	1.22E+10	7.09E+09	6.79E+09	7.78E+09	2.63E-07
Gold (79)	Au-193	5.48E-01	1.57E-01	3.94E-01	5.28E-01	1.66E-01	0.95	3.44E+02	1.99E+03	6.95E+03	2.77E+03	2.07E+03	6.58E+03	2.16E-09
Gold (79)	Au-194	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	1.54E+02	7.87E+01	4.19E+02	1.47E+02	9.25E+01	4.27E+02	1.93E-10
Gold (79)	Au-195	1.81E-01	7.24E-02	1.58E-01	1.81E-01	8.23E-02	0.96	1.38E+00	3.20E+01	8.00E+01	3.67E+01	3.20E+01	7.04E+01	8.75E-09
Gold (79)	Au-195m	9.33E-01	2.18E-01	6.10E-01	8.90E-01	2.15E-01	0.917	7.17E+05	2.52E+06	1.08E+07	3.86E+06	2.64E+06	1.10E+07	1.33E-09
Gold (79)	Au-198	2.16E+00	4.59E-01	1.31E+00	1.98E+00	4.75E-01	0.892	9.38E+01	1.46E+02	6.90E+02	2.42E+02	1.60E+02	6.67E+02	5.99E-10
Gold (79)	Au-198m	2.41E+00	6.12E-01	1.66E+00	2.33E+00	6.10E-01	0.922	1.10E+02	1.49E+02	5.87E+02	2.16E+02	1.54E+02	5.88E+02	5.22E-10
Gold (79)	Au-199	3.54E-01	9.34E-02	2.52E-01	3.47E-01	9.30E-02	0.93	8.06E+01	7.36E+02	2.79E+03	1.04E+03	7.52E+02	2.81E+03	3.53E-09
Gold (79)	Au-200	1.63E+00	3.17E-01	8.90E-01	1.40E+00	3.93E-01	0.897	7.53E+03	1.55E+04	7.97E+04	2.84E+04	1.80E+04	6.42E+04	7.99E-10
Gold (79)	Au-200m	1.13E+01	2.33E+00	6.68E+00	1.03E+01	2.31E+00	0.978	3.25E+02	8.81E+01	4.29E+02	1.50E+02	9.74E+01	4.33E+02	1.05E-10
Gold (79)	Au-201	2.89E-01	6.32E-02	1.73E-01	2.63E-01	1.05E-01	0.902	1.38E+04	1.59E+05	7.29E+05	2.66E+05	1.75E+05	4.37E+05	4.50E-09
Barium (56)	Ba-126	7.37E-01	1.64E-01	4.55E-01	6.83E-01	1.76E-01	0.94	3.77E+03	1.64E+04	7.35E+04	2.66E+04	1.77E+04	6.86E+04	1.06E-09
Barium (56)	Ba-128	2.67E-01	6.60E-02	1.75E-01	2.54E-01	7.91E-02	0.966	1.04E+02	1.22E+03	4.91E+03	1.86E+03	1.28E+03	4.10E+03	2.90E-09
Barium (56)	Ba-131	2.24E+00	4.90E-01	1.37E+00	2.05E+00	5.01E-01	0.905	2.14E+01	3.19E+01	1.45E+02	5.20E+01	3.48E+01	1.42E+02	3.78E-10
Barium (56)	Ba-131m	2.16E-01	6.88E-02	1.68E-01	2.14E-01	7.82E-02	0.954	2.49E+04	3.64E+05	1.14E+06	4.68E+05	3.67E+05	1.01E+06	3.71E-09
Barium (56)	Ba-133	1.82E+00	4.18E-01	1.15E+00	1.70E+00	4.35E-01	0.912	6.45E-02	1.87E+00	8.16E+00	2.96E+00	2.00E+00	7.83E+00	7.50E-09
Barium (56)	Ba-133m	2.50E-01	6.06E-02	1.62E-01	2.37E-01	6.97E-02	0.962	1.56E+02	1.95E+03	8.06E+03	3.01E+03	2.06E+03	7.01E+03	3.23E-09
Barium (56)	Ba-135m	2.16E-01	5.35E-02	1.42E-01	2.07E-01	6.28E-02	0.961	2.12E+02	3.06E+03	1.24E+04	4.68E+03	3.20E+03	1.06E+04	3.79E-09
Barium (56)	Ba-137m	3.38E+00	6.71E-01	1.92E+00	3.00E+00	6.76E-01	0.877	1.43E+05	1.45E+05	7.30E+05	2.55E+05	1.63E+05	7.25E+05	2.70E-10
Barium (56)	Ba-139	2.24E-01	6.68E-02	1.55E-01	2.13E-01	1.70E-01	0.909	4.40E+03	6.52E+04	2.19E+05	9.44E+04	6.86E+04	8.56E+04	3.99E-09
Barium (56)	Ba-140	9.60E-01	2.03E-01	5.73E-01	8.77E-01	2.22E-01	0.888	1.99E+01	7.01E+01	3.31E+02	1.18E+02	7.68E+01	3.04E+02	9.59E-10
Barium (56)	Ba-141	4.76E+00	9.57E-01	2.70E+00	4.20E+00	1.03E+00	0.894	1.99E+04	1.41E+04	7.02E+04	2.48E+04	1.60E+04	6.49E+04	1.94E-10
Barium (56)	Ba-142	6.04E+00	1.16E+00	3.32E+00	5.24E+00	1.18E+00	0.905	3.44E+04	1.89E+04	9.86E+04	3.44E+04	2.18E+04	9.70E+04	1.52E-10
Beryllium (4)	Be-10	1.00E-03	3.66E-04	7.85E-04	9.88E-04	3.98E-03	0.927	4.33E-07	3.24E+03	8.89E+03	4.14E+03	3.29E+03	8.16E+02	1.45E-01
Beryllium (4)	Be-7	2.69E-01	5.60E-02	1.59E-01	2.44E-01	5.51E-02	0.886	4.75E+00	6.06E+01	2.91E+02	1.02E+02	6.66E+01	2.95E+02	1.73E-10
Bismuth (83)	Bi-200	1.33E+01	2.67E+00	7.59E+00	1.18E+01	2.64E+00	0.924	1.00E+04	2.46E+03	1.22E+04	4.30E+03	2.77E+03	1.24E+04	9.54E-11
Bismuth (83)	Bi-201	7.55E+00	1.48E+00	4.20E+00	6.58E+00	1.49E+00	0.867	3.37E+03	1.55E+03	7.93E+03	2.79E+03	1.78E+03	7.84E+03	1.79E-10
Bismuth (83)	Bi-202	1.55E+01	3.00E+00	8.60E+00	1.35E+01	2.96E+00	0.951	3.64E+03	7.42E+02	3.83E+03	1.34E+03	8.51E+02	3.88E+03	8.00E-11
Bismuth (83)	Bi-203	1.44E+01	2.59E+00	7.48E+00	1.20E+01	2.54E+00	0.951	5.16E+02	1.14E+02	6.31E+02	2.19E+02	1.36E+02	6.42E+02	8.66E-11
Bismuth (83)	Bi-205	1.02E+01	1.84E+00	5.28E+00	8.50E+00	1.80E+00	0.962	1.65E+01	5.08E+00	2.82E+01	9.80E+00	6.08E+00	2.88E+01	1.22E-10
Bismuth (83)	Bi-206	1.90E+01	3.62E+00	1.04E+01	1.64E+01	3.57E+00	0.94	4.05E+01	6.82E+00	3.59E+01	1.25E+01	7.92E+00	3.63E+01	6.73E-11
Bismuth (83)	Bi-207	8.82E+00	1.70E+00	4.87E+00	7.67E+00	1.69E+00	0.865	1.82E-02	3.98E-01	2.06E+00	7.22E-01	4.58E-01	2.08E+00	8.77E-09
Bismuth (83)	Bi-210	5.45E-03	3.15E-03	4.53E-03	5.35E-03	4.10E-02	0.927	5.05E+01	3.01E+04	5.20E+04	3.62E+04	3.06E+04	4.00E+03	2.43E-07
Bismuth (83)	Bi-210m	1.27E+00	2.85E-01	8.09E-01	1.20E+00	2.80E-01	0.906	2.31E-07	2.61E+00	1.16E+01	4.11E+00	2.77E+00	1.19E+01	4.61E-03
Bismuth (83)	Bi-210m+D	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	0.906	2.31E-07	2.59E+00	1.14E+01	4.05E+00	2.74E+00	9.46E+00	4.56E-03
Bismuth (83)	Bi-210m+E	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	0.906							
Bismuth (83)	Bi-211	2.37E-01	5.22E-02	1.48E-01	2.22E-01	5.13E-02	0.903	1.70E+05	2.40E+06	1.09E+07	3.84E+06	2.56E+06	1.11E+07	5.76E-09
Bismuth (83)	Bi-212	1.11E+00	2.14E-01	6.02E-01	9.55E-01	2.63E-01	0.991	6.02E+03	1.64E+04	8.52E+04	3.03E+04	1.91E+04	6.96E+04	1.12E-09
Bismuth (83)	Bi-212+D	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	0.896	6.02E+03	2.26E+03	1.35E+04	4.67E+03	2.82E+03	1.34E+04	1.54E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Bismuth (83)	Bi-212+E	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	0.896	6.02E+03	2.26E+03	1.35E+04	4.67E+03	2.82E+03	1.34E+04	1.54E-10
Bismuth (83)	Bi-213	7.16E-01	1.54E-01	4.33E-01	6.55E-01	1.96E-01	1	7.98E+03	3.35E+04	1.56E+05	5.55E+04	3.67E+04	1.23E+05	1.74E-09
Bismuth (83)	Bi-213+D	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	0.968	7.98E+03	2.53E+04	1.22E+05	4.35E+04	2.83E+04	9.99E+04	1.31E-09
Bismuth (83)	Bi-213+E	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	0.968	7.98E+03	2.53E+04	1.22E+05	4.35E+04	2.83E+04	9.99E+04	1.31E-09
Bismuth (83)	Bi-214	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	0.925	1.83E+04	6.39E+03	3.59E+04	1.24E+04	7.68E+03	3.55E+04	1.45E-10
Bismuth (83)	Bi-214+D	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	0.925	1.83E+04	6.39E+03	3.59E+04	1.24E+04	7.68E+03	3.55E+04	1.45E-10
Bismuth (83)	Bi-214+E	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.73E+00	0.925	1.83E+04	6.39E+03	3.58E+04	1.24E+04	7.68E+03	3.45E+04	1.45E-10
Berkelium (97)	Bk-245	9.03E-01	2.37E-01	6.38E-01	8.78E-01	2.40E-01	0.998	5.12E+01	1.71E+02	6.52E+02	2.42E+02	1.76E+02	6.43E+02	1.59E-09
Berkelium (97)	Bk-246	5.32E+00	1.04E+00	2.97E+00	4.64E+00	1.04E+00	0.88	1.38E+02	8.90E+01	4.54E+02	1.59E+02	1.02E+02	4.56E+02	3.07E-10
Berkelium (97)	Bk-247	3.95E-01	1.08E-01	2.83E-01	3.84E-01	1.10E-01	0.928	5.02E-04	8.21E+00	3.01E+01	1.14E+01	8.45E+00	2.95E+01	7.83E-06
Berkelium (97)	Bk-249	3.75E-06	2.31E-06	3.47E-06	3.73E-06	6.23E-06	0.911	7.90E-01	1.28E+06	2.07E+06	1.38E+06	1.28E+06	7.67E+05	7.80E-04
Berkelium (97)	Bk-250	5.24E+00	9.83E-01	2.83E+00	4.51E+00	9.84E-01	0.851	1.88E+03	1.27E+03	6.78E+03	2.35E+03	1.48E+03	6.78E+03	3.28E-10
Bromine (35)	Br-74	2.89E+01	4.83E+00	1.40E+01	2.31E+01	4.73E+00	0.848	1.44E+04	1.77E+03	1.06E+04	3.64E+03	2.21E+03	1.08E+04	1.76E-11
Bromine (35)	Br-74m	2.50E+01	4.48E+00	1.29E+01	2.09E+01	4.46E+00	0.867	8.78E+03	1.22E+03	6.81E+03	2.36E+03	1.46E+03	6.84E+03	2.00E-11
Bromine (35)	Br-75	6.56E+00	1.38E+00	3.92E+00	5.99E+00	1.42E+00	0.884	3.72E+03	1.93E+03	9.19E+03	3.23E+03	2.11E+03	8.89E+03	7.55E-11
Bromine (35)	Br-76	1.61E+01	2.87E+00	8.32E+00	1.34E+01	2.85E+00	0.884	3.75E+02	7.92E+01	4.44E+02	1.53E+02	9.52E+01	4.48E+02	3.12E-11
Bromine (35)	Br-77	1.69E+00	3.54E-01	1.01E+00	1.54E+00	3.49E-01	0.922	1.08E+02	2.10E+02	9.99E+02	3.50E+02	2.30E+02	1.01E+03	2.89E-10
Bromine (35)	Br-80	4.48E-01	9.19E-02	2.59E-01	4.01E-01	1.21E-01	0.888	2.09E+04	1.59E+05	7.72E+05	2.74E+05	1.77E+05	5.85E+05	1.18E-09
Bromine (35)	Br-80m	8.88E-03	6.86E-03	8.86E-03	8.88E-03	1.60E-02	0.995	1.37E+03	4.68E+05	6.06E+05	4.69E+05	4.68E+05	2.60E+05	5.29E-08
Bromine (35)	Br-82	1.54E+01	2.95E+00	8.49E+00	1.34E+01	2.89E+00	0.865	1.72E+02	3.88E+01	2.03E+02	7.05E+01	4.46E+01	2.07E+02	3.59E-11
Bromine (35)	Br-83	4.44E-02	1.01E-02	2.67E-02	4.03E-02	3.34E-02	0.881	2.54E+03	1.96E+05	8.62E+05	3.26E+05	2.16E+05	2.60E+05	1.24E-08
Bromine (35)	Br-84	1.16E+01	1.94E+00	5.58E+00	9.25E+00	1.95E+00	0.849	1.15E+04	3.50E+03	2.09E+04	7.29E+03	4.39E+03	2.08E+04	4.98E-11
Carbon (6)	C-11	5.60E+00	1.16E+00	3.30E+00	5.07E+00	1.18E+00	0.883	1.79E+04	1.09E+04	5.26E+04	1.85E+04	1.20E+04	5.17E+04	1.30E-11
Carbon (6)	C-14	1.10E-05	6.43E-06	1.03E-05	1.10E-05	1.48E-05	0.927	1.21E-04	2.96E+05	5.05E+05	3.17E+05	2.96E+05	2.19E+05	6.65E-02
Calcium (20)	Ca-41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	4.95E-06						
Calcium (20)	Ca-45	5.32E-05	2.48E-05	4.66E-05	5.32E-05	4.40E-05	1	1.55E+00	1.12E+05	2.39E+05	1.27E+05	1.12E+05	1.35E+05	6.28E-06
Calcium (20)	Ca-47	6.51E+00	1.17E+00	3.38E+00	5.46E+00	1.17E+00	0.836	5.58E+01	3.09E+01	1.72E+02	5.96E+01	3.68E+01	1.72E+02	5.05E-11
Calcium (20)	Ca-49	2.16E+01	3.21E+00	9.47E+00	1.62E+01	3.12E+00	0.778	4.18E+04	7.48E+03	5.04E+04	1.71E+04	9.96E+03	5.19E+04	1.70E-11
Cadmium (48)	Cd-104	1.22E+00	2.63E-01	7.27E-01	1.10E+00	2.75E-01	0.932	6.31E+03	1.67E+04	7.76E+04	2.80E+04	1.86E+04	7.41E+04	5.34E-10
Cadmium (48)	Cd-107	4.49E-02	1.32E-02	3.02E-02	4.20E-02	2.72E-02	0.975	9.35E+02	6.43E+04	2.19E+05	9.56E+04	6.88E+04	1.06E+05	1.43E-08
Cadmium (48)	Cd-109	1.22E-02	6.10E-03	1.06E-02	1.22E-02	1.94E-02	0.996	5.45E-01	3.22E+02	6.43E+02	3.71E+02	3.21E+02	2.02E+02	1.25E-07
Cadmium (48)	Cd-113	9.77E-05	4.18E-05	8.30E-05	9.74E-05	6.77E-05	0.927	7.45E-17	2.23E+04	5.22E+04	2.63E+04	2.24E+04	3.22E+04	6.56E+10
Cadmium (48)	Cd-113m	6.01E-04	2.24E-04	4.74E-04	5.93E-04	2.07E-03	0.927	5.10E-02	5.55E+03	1.49E+04	7.03E+03	5.62E+03	1.61E+03	2.39E-05
Cadmium (48)	Cd-115	1.27E+00	2.65E-01	7.52E-01	1.16E+00	2.84E-01	0.886	1.14E+02	3.03E+02	1.46E+03	5.13E+02	3.34E+02	1.36E+03	5.95E-10
Cadmium (48)	Cd-115m	1.47E-01	3.41E-02	8.36E-02	1.28E-01	1.08E-01	0.843	5.67E+00	1.38E+02	5.96E+02	2.43E+02	1.59E+02	1.89E+02	5.44E-09
Cadmium (48)	Cd-117	6.51E+00	1.20E+00	3.47E+00	5.54E+00	1.21E+00	0.902	2.44E+03	1.25E+03	6.78E+03	2.35E+03	1.47E+03	6.71E+03	1.16E-10
Cadmium (48)	Cd-117m	1.28E+01	2.22E+00	6.43E+00	1.05E+01	2.16E+00	0.879	1.81E+03	4.84E+02	2.79E+03	9.62E+02	5.88E+02	2.87E+03	6.08E-11
Cerium (58)	Ce-134	1.26E-02	1.03E-02	1.26E-02	1.26E-02	2.51E-02	0.976	8.43E+01	2.07E+04	2.52E+04	2.07E+04	2.07E+04	1.04E+04	6.37E-08
Cerium (58)	Ce-135	9.74E+00	2.00E+00	5.73E+00	8.80E+00	1.98E+00	0.91	3.45E+02	1.17E+02	5.72E+02	1.99E+02	1.30E+02	5.75E+02	8.90E-11
Cerium (58)	Ce-137	5.84E-02	2.00E-02	3.99E-02	5.43E-02	3.48E-02	0.97	6.75E+02	3.59E+04	1.05E+05	5.25E+04	3.86E+04	6.02E+04	1.41E-08
Cerium (58)	Ce-137m	1.76E-01	4.51E-02	1.15E-01	1.66E-01	5.51E-02	0.944	1.76E+02	3.19E+03	1.25E+04	4.88E+03	3.38E+03	1.02E+04	4.81E-09
Cerium (58)	Ce-139	5.78E-01	1.54E-01	4.08E-01	5.67E-01	1.67E-01	0.949	1.84E+00	1.20E+01	4.50E+01	1.70E+01	1.22E+01	4.16E+01	1.76E-09
Cerium (58)	Ce-141	2.89E-01	7.83E-02	2.09E-01	2.85E-01	8.09E-02	0.938	7.78E+00	8.65E+01	3.19E+02	1.20E+02	8.76E+01	3.09E+02	3.04E-09
Cerium (58)	Ce-143	1.38E+00	3.04E-01	8.39E-01	1.26E+00	3.51E-01	0.904	1.84E+02	4.45E+02	2.02E+03	7.30E+02	4.85E+02	1.74E+03	6.71E-10
Cerium (58)	Ce-144	6.45E-02	1.94E-02	4.87E-02	6.40E-02	2.15E-02	0.935	8.90E-01	7.54E+01	2.51E+02	9.99E+01	7.60E+01	2.26E+02	2.37E-08
Cerium (58)	Ce-144+D	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	0.881	8.90E-01	1.55E+01	5.67E+01	2.56E+01	1.77E+01	2.44E+01	4.88E-09
Cerium (58)	Ce-144+E	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	0.881	8.90E-01	1.55E+01	5.67E+01	2.56E+01	1.77E+01	2.44E+01	4.88E-09
Californium (98)	Cf-244	1.27E-04	1.24E-04	1.27E-04	1.27E-04	9.56E-04	0.999	1.88E+04	4.46E+08	4.56E+08	4.46E+08	4.46E+08	5.92E+07	1.13E-05
Californium (98)	Cf-246	1.45E-04	1.02E-04	1.32E-04	1.45E-04	6.69E-04	0.998	1.70E+02	3.53E+06	5.01E+06	3.90E+06	3.54E+06	7.67E+05	9.91E-06
Californium (98)	Cf-248	8.75E-05	8.52E-05	8.75E-05	8.75E-05	6.51E-04	0.999	7.58E-01	4.92E+04	5.05E+04	4.92E+04	4.92E+04	6.60E+03	3.12E-05
Californium (98)	Cf-249	1.72E+00	3.73E-01	1.06E+00	1.59E+00	3.68E-01	0.962	1.98E-03	1.82E+00	8.40E+00	2.96E+00	1.96E+00	8.52E+00	4.45E-07
Californium (98)	Cf-250	8.30E-05	8.09E-05	8.30E-05	8.30E-05	6.21E-04	0.999	5.30E-02	3.73E+04	3.82E+04	3.73E+04	3.73E+04	4.98E+03	3.41E-04
Californium (98)	Cf-251	4.79E-01	1.28E-01	3.43E-01	4.70E-01	1.32E-01	0.955	7.72E-04	6.58E+00	2.47E+01	9.19E+00	6.71E+00	2.39E+01	4.15E-06
Californium (98)	Cf-252	2.95E+00	5.13E-01	1.49E+00	2.42E+00	4.97E-01	1.69	2.63E-01	6.88E-01	3.95E+00	1.36E+00	8.36E-01	4.08E+00	1.28E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Californium (98)	Cf-253	6.53E-05	3.00E-05	5.67E-05	6.51E-05	6.03E-05	0.998	1.42E+01	6.56E+05	1.43E+06	7.56E+05	6.58E+05	7.10E+05	2.27E-05
Californium (98)	Cf-254	1.08E+02	1.88E+01	5.45E+01	8.86E+01	1.81E+01	1.68	4.18E+00	7.06E-02	4.04E-01	1.40E-01	8.59E-02	4.21E-01	8.32E-12
Chlorine (17)	Cl-36	2.48E-03	9.08E-04	1.81E-03	2.39E-03	1.31E-02	0.883	2.30E-06	1.37E+03	3.75E+03	1.88E+03	1.43E+03	2.61E+02	4.17E-02
Chlorine (17)	Cl-38	9.85E+00	1.64E+00	4.72E+00	7.83E+00	1.67E+00	0.807	9.79E+03	3.71E+03	2.23E+04	7.74E+03	4.66E+03	2.19E+04	2.79E-11
Chlorine (17)	Cl-39	8.82E+00	1.59E+00	4.59E+00	7.39E+00	1.65E+00	0.834	6.55E+03	2.68E+03	1.49E+04	5.16E+03	3.20E+03	1.44E+04	3.10E-11
Curium (96)	Cm-238	2.44E-01	7.37E-02	1.88E-01	2.42E-01	7.66E-02	0.958	2.53E+03	3.25E+04	1.08E+05	4.22E+04	3.28E+04	1.04E+05	5.94E-09
Curium (96)	Cm-240	1.12E-04	1.06E-04	1.12E-04	1.12E-04	8.97E-04	0.999	9.37E+00	2.52E+05	2.66E+05	2.52E+05	2.52E+05	3.15E+04	1.25E-05
Curium (96)	Cm-241	2.44E+00	5.41E-01	1.51E+00	2.26E+00	5.43E-01	0.999	7.71E+00	9.52E+00	4.30E+01	1.54E+01	1.03E+01	4.29E+01	5.77E-10
Curium (96)	Cm-242	1.28E-04	1.02E-04	1.19E-04	1.27E-04	8.19E-04	0.999	1.55E+00	4.63E+04	5.81E+04	4.99E+04	4.68E+04	7.25E+03	1.40E-05
Curium (96)	Cm-243	5.33E-01	1.35E-01	3.69E-01	5.17E-01	1.38E-01	0.949	2.43E-02	6.02E+00	2.37E+01	8.70E+00	6.22E+00	2.33E+01	1.17E-07
Curium (96)	Cm-244	8.93E-05	8.62E-05	8.93E-05	8.93E-05	7.52E-04	0.999	3.83E-02	3.44E+04	3.57E+04	3.44E+04	3.44E+04	4.09E+03	4.26E-04
Curium (96)	Cm-245	3.06E-01	8.99E-02	2.33E-01	3.04E-01	9.39E-02	0.952	8.15E-05	1.03E+01	3.52E+01	1.36E+01	1.04E+01	3.37E+01	6.03E-05
Curium (96)	Cm-246	8.28E-05	7.89E-05	8.26E-05	8.28E-05	6.72E-04	0.999	1.47E-04	3.64E+04	3.82E+04	3.65E+04	3.64E+04	4.48E+03	1.19E-01
Curium (96)	Cm-247	1.65E+00	3.54E-01	1.01E+00	1.53E+00	3.49E-01	0.925	4.44E-08	1.97E+00	9.19E+00	3.23E+00	2.13E+00	9.33E+00	2.13E-02
Curium (96)	Cm-247+D	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	0.925	4.44E-08	1.89E+00	8.60E+00	3.06E+00	2.04E+00	8.66E+00	2.04E-02
Curium (96)	Cm-247+E	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	0.925							
Curium (96)	Cm-248	8.47E+00	1.47E+00	4.27E+00	6.96E+00	1.42E+00	1.68	1.99E-06	2.12E-01	1.22E+00	4.20E-01	2.58E-01	1.26E+00	5.12E-05
Curium (96)	Cm-249	1.07E-01	2.26E-02	6.32E-02	9.70E-02	3.87E-02	0.909	5.68E+03	1.75E+05	8.33E+05	2.97E+05	1.94E+05	4.85E+05	1.49E-08
Curium (96)	Cm-250	6.25E+01	1.09E+01	3.15E+01	5.13E+01	1.05E+01	1.68	7.14E-05	2.87E-02	1.65E-01	5.69E-02	3.49E-02	1.70E-01	1.95E-07
Curium (96)	Cm-250+D	1.63E+00					1.68	7.14E-05	1.10E+00					7.45E-06
Curium (96)	Cm-250+E	6.42E+01	1.12E+01	3.25E+01	5.28E+01	1.08E+01	1.68	7.14E-05	2.79E-02	1.60E-01	5.52E-02	3.40E-02	1.65E-01	1.90E-07
Cobalt (27)	Co-55	1.15E+01	2.24E+00	6.42E+00	1.01E+01	2.25E+00	0.848	3.46E+02	1.07E+02	5.49E+02	1.92E+02	1.22E+02	5.46E+02	3.29E-11
Cobalt (27)	Co-56	2.24E+01	3.88E+00	1.12E+01	1.83E+01	3.77E+00	0.823	3.21E+00	5.47E-01	3.16E+00	1.09E+00	6.68E-01	3.25E+00	1.85E-11
Cobalt (27)	Co-57	4.55E-01	1.28E-01	3.38E-01	4.49E-01	1.26E-01	0.971	9.34E-01	1.05E+01	3.73E+01	1.41E+01	1.06E+01	3.79E+01	1.24E-09
Cobalt (27)	Co-58	5.60E+00	1.09E+00	3.13E+00	4.92E+00	1.08E+00	0.863	3.57E+00	2.29E+00	1.17E+01	4.09E+00	2.60E+00	1.19E+01	7.22E-11
Cobalt (27)	Co-58m	1.78E-06	1.74E-06	1.78E-06	1.78E-06	7.76E-06	0.994	6.63E+02	1.13E+09	1.16E+09	1.13E+09	1.13E+09	2.59E+08	1.92E-04
Cobalt (27)	Co-60	1.54E+01	2.74E+00	7.96E+00	1.29E+01	2.68E+00	0.834	1.31E-01	2.50E-01	1.41E+00	4.84E-01	2.99E-01	1.44E+00	2.22E-10
Cobalt (27)	Co-60m	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.11E-03	0.925	3.48E+04	4.90E+06	2.38E+07	8.90E+06	5.78E+06	2.22E+07	1.64E-08
Cobalt (27)	Co-61	3.17E-01	9.25E-02	2.18E-01	2.93E-01	1.51E-01	0.938	3.68E+03	3.73E+04	1.28E+05	5.41E+04	4.03E+04	7.85E+04	1.20E-09
Cobalt (27)	Co-62m	1.68E+01	2.97E+00	8.58E+00	1.39E+01	3.01E+00	0.828	2.62E+04	5.67E+03	3.21E+04	1.11E+04	6.84E+03	3.16E+04	2.61E-11
Chromium (24)	Cr-48	2.05E+00	4.81E-01	1.34E+00	1.94E+00	4.71E-01	0.913	2.64E+02	4.25E+02	1.81E+03	6.50E+02	4.50E+02	1.85E+03	1.50E-10
Chromium (24)	Cr-49	5.58E+00	1.19E+00	3.36E+00	5.09E+00	1.25E+00	0.892	8.65E+03	5.24E+03	2.45E+04	8.70E+03	5.74E+03	2.34E+04	5.76E-11
Chromium (24)	Cr-51	1.62E-01	3.54E-02	1.01E-01	1.52E-01	3.47E-02	0.903	9.13E+00	1.89E+02	8.59E+02	3.01E+02	2.01E+02	8.79E+02	2.04E-09
Cesium (55)	Cs-125	3.67E+00	7.59E-01	2.14E+00	3.32E+00	7.99E-01	0.878	8.09E+03	7.56E+03	3.66E+04	1.29E+04	8.36E+03	3.47E+04	2.26E-10
Cesium (55)	Cs-126	6.01E+00	1.28E+00	3.58E+00	5.46E+00	1.38E+00	0.887	2.22E+05	1.26E+05	5.88E+05	2.11E+05	1.38E+05	5.48E+05	1.38E-10
Cesium (55)	Cs-127	2.13E+00	4.53E-01	1.28E+00	1.94E+00	4.61E-01	0.898	9.71E+02	1.53E+03	7.19E+03	2.55E+03	1.68E+03	7.07E+03	3.89E-10
Cesium (55)	Cs-128	4.96E+00	1.04E+00	2.93E+00	4.49E+00	1.11E+00	0.885	9.34E+04	6.41E+04	3.06E+05	1.09E+05	7.07E+04	2.85E+05	1.70E-10
Cesium (55)	Cs-129	1.33E+00	2.91E-01	8.11E-01	1.23E+00	3.06E-01	0.898	1.89E+02	4.79E+02	2.18E+03	7.83E+02	5.18E+02	2.08E+03	6.33E-10
Cesium (55)	Cs-130	2.80E+00	5.82E-01	1.64E+00	2.54E+00	6.31E-01	0.89	1.22E+04	1.47E+04	7.08E+04	2.51E+04	1.62E+04	6.53E+04	3.05E-10
Cesium (55)	Cs-131	7.83E-03	7.03E-03	7.83E-03	7.83E-03	2.09E-02	0.983	2.61E+01	1.02E+04	1.14E+04	1.02E+04	1.02E+04	3.83E+03	9.94E-08
Cesium (55)	Cs-132	3.88E+00	7.78E-01	2.22E+00	3.45E+00	7.81E-01	0.871	3.91E+01	3.48E+01	1.74E+02	6.09E+01	3.91E+01	1.73E+02	2.28E-10
Cesium (55)	Cs-134	8.90E+00	1.75E+00	5.02E+00	7.85E+00	1.73E+00	0.865	3.36E-01	4.61E-01	2.34E+00	8.17E-01	5.22E-01	2.37E+00	3.56E-10
Cesium (55)	Cs-134m	6.49E-02	2.05E-02	4.92E-02	6.43E-02	2.63E-02	0.971	2.09E+03	1.00E+05	3.16E+05	1.32E+05	1.01E+05	2.47E+05	1.24E-08
Cesium (55)	Cs-135	3.21E-05	1.62E-05	2.89E-05	3.21E-05	3.14E-05	0.927	3.01E-07	1.01E+05	2.00E+05	1.12E+05	1.01E+05	1.03E+05	8.80E+01
Cesium (55)	Cs-135m	9.19E+00	1.78E+00	5.11E+00	8.04E+00	1.76E+00	0.861	6.87E+03	2.61E+03	1.35E+04	4.70E+03	2.99E+03	1.36E+04	9.96E-11
Cesium (55)	Cs-136	1.25E+01	2.41E+00	6.90E+00	1.09E+01	2.37E+00	0.856	1.93E+01	5.43E+00	2.82E+01	9.84E+00	6.24E+00	2.87E+01	7.42E-11
Cesium (55)	Cs-137	8.34E-04	3.86E-04	6.75E-04	8.21E-04	3.49E-03	0.927	2.31E-02	3.94E+03	8.51E+03	4.87E+03	4.00E+03	9.42E+02	4.54E-05
Cesium (55)	Cs-137+D	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	0.877	2.31E-02	1.09E+00	5.46E+00	1.91E+00	1.23E+00	5.40E+00	1.25E-08
Cesium (55)	Cs-137+E	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	0.877	2.31E-02	1.09E+00	5.46E+00	1.91E+00	1.23E+00	5.40E+00	1.25E-08
Cesium (55)	Cs-138	1.48E+01	2.59E+00	7.50E+00	1.22E+01	2.64E+00	0.885	1.13E+04	2.61E+03	1.48E+04	5.13E+03	3.16E+03	1.46E+04	6.17E-11
Copper (29)	Cu-60	2.39E+01	4.27E+00	1.23E+01	2.00E+01	4.25E+00	0.832	1.57E+04	2.38E+03	1.33E+04	4.60E+03	2.85E+03	1.34E+04	1.77E-11
Copper (29)	Cu-61	4.57E+00	9.38E-01	2.67E+00	4.12E+00	9.58E-01	0.851	1.78E+03	1.38E+03	6.72E+03	2.36E+03	1.53E+03	6.58E+03	9.17E-11
Copper (29)	Cu-62	5.60E+00	1.18E+00	3.30E+00	5.07E+00	1.30E+00	0.882	3.74E+04	2.28E+04	1.08E+05	3.87E+04	2.52E+04	9.86E+04	7.34E-11
Copper (29)	Cu-64	1.04E+00	2.14E-01	6.12E-01	9.44E-01	2.14E-01	0.882	4.78E+02	1.56E+03	7.61E+03	2.67E+03	1.73E+03	7.64E+03	4.06E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Copper (29)	Cu-66	5.58E-01	1.24E-01	3.11E-01	4.81E-01	2.37E-01	0.846	7.14E+04	4.56E+05	2.06E+06	8.16E+05	5.28E+05	1.07E+06	8.17E-10
Copper (29)	Cu-67	4.87E-01	1.24E-01	3.39E-01	4.74E-01	1.23E-01	0.924	9.81E+01	6.57E+02	2.57E+03	9.42E+02	6.75E+02	2.61E+03	8.70E-10
Dysprosium (66)	Dy-155	3.06E+00	6.23E-01	1.75E+00	2.70E+00	6.28E-01	0.916	6.07E+02	6.52E+02	3.20E+03	1.14E+03	7.38E+02	3.18E+03	3.23E-10
Dysprosium (66)	Dy-157	1.67E+00	3.82E-01	1.06E+00	1.57E+00	3.89E-01	0.904	7.49E+02	1.49E+03	6.53E+03	2.36E+03	1.59E+03	6.42E+03	6.07E-10
Dysprosium (66)	Dy-159	4.46E-02	2.82E-02	4.38E-02	4.46E-02	4.52E-02	0.96	1.75E+00	1.49E+02	2.36E+02	1.52E+02	1.49E+02	1.47E+02	2.63E-08
Dysprosium (66)	Dy-165	1.23E-01	3.13E-02	7.76E-02	1.12E-01	8.06E-02	0.94	2.60E+03	6.78E+04	2.66E+05	1.07E+05	7.41E+04	1.03E+05	8.34E-09
Dysprosium (66)	Dy-166	7.93E-02	3.19E-02	6.51E-02	7.76E-02	4.10E-02	0.944	7.44E+01	2.99E+03	7.44E+03	3.65E+03	3.06E+03	5.79E+03	1.30E-08
Erbium (68)	Er-161	5.11E+00	1.00E+00	2.83E+00	4.44E+00	9.98E-01	0.942	1.87E+03	1.17E+03	5.99E+03	2.11E+03	1.35E+03	6.00E+03	1.95E-10
Erbium (68)	Er-165	4.21E-02	2.54E-02	4.10E-02	4.21E-02	3.78E-02	0.957	5.86E+02	4.37E+04	7.27E+04	4.49E+04	4.37E+04	4.88E+04	2.39E-08
Erbium (68)	Er-169	1.20E-04	4.98E-05	1.01E-04	1.20E-04	7.88E-05	0.927	2.72E+01	7.33E+05	1.77E+06	8.72E+05	7.37E+05	1.12E+06	8.84E-06
Erbium (68)	Er-171	1.81E+00	4.18E-01	1.16E+00	1.70E+00	4.49E-01	0.905	8.07E+02	1.49E+03	6.43E+03	2.32E+03	1.58E+03	5.98E+03	6.11E-10
Erbium (68)	Er-172	2.76E+00	5.82E-01	1.64E+00	2.50E+00	5.79E-01	0.928	1.23E+02	1.45E+02	6.87E+02	2.44E+02	1.60E+02	6.90E+02	3.92E-10
Einsteinium (99)	Es-250	2.11E+00	4.27E-01	1.20E+00	1.86E+00	4.26E-01	0.888	2.89E+03	4.65E+03	2.30E+04	8.14E+03	5.28E+03	2.30E+04	7.81E-10
Einsteinium (99)	Es-251	3.26E-01	9.38E-02	2.46E-01	3.25E-01	9.79E-02	0.948	1.84E+02	1.79E+03	6.23E+03	2.37E+03	1.80E+03	5.97E+03	4.74E-09
Einsteinium (99)	Es-253	1.61E-03	4.14E-04	1.04E-03	1.50E-03	7.74E-04	0.995	1.24E+01	2.33E+04	9.03E+04	3.61E+04	2.49E+04	4.83E+04	9.24E-07
Einsteinium (99)	Es-254	1.13E-02	4.16E-03	8.47E-03	1.09E-02	1.14E-02	0.995	9.17E-01	4.08E+02	1.11E+03	5.46E+02	4.24E+02	4.06E+02	2.19E-07
Einsteinium (99)	Es-254+D	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.95E-01	0.853	9.17E-01	1.03E+00	5.47E+00	1.90E+00	1.19E+00	5.42E+00	5.51E-10
Einsteinium (99)	Es-254+E	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.97E-01	0.853	9.17E-01	1.03E+00	5.47E+00	1.90E+00	1.19E+00	5.41E+00	5.51E-10
Einsteinium (99)	Es-254m	2.63E+00	5.24E-01	1.50E+00	2.33E+00	5.34E-01	0.995	1.54E+02	1.78E+02	8.92E+02	3.12E+02	2.01E+02	8.75E+02	5.67E-10
Europium (63)	Eu-145	8.65E+00	1.59E+00	4.55E+00	7.31E+00	1.56E+00	0.875	4.26E+01	1.69E+01	9.23E+01	3.22E+01	2.00E+01	9.37E+01	1.12E-10
Europium (63)	Eu-146	1.45E+01	2.78E+00	7.96E+00	1.26E+01	2.74E+00	0.871	5.49E+01	1.31E+01	6.83E+01	2.38E+01	1.51E+01	6.92E+01	6.75E-11
Europium (63)	Eu-147	2.56E+00	5.30E-01	1.47E+00	2.28E+00	5.39E-01	0.866	1.05E+01	1.43E+01	6.92E+01	2.49E+01	1.61E+01	6.80E+01	3.88E-10
Europium (63)	Eu-148	1.23E+01	2.42E+00	6.92E+00	1.09E+01	2.40E+00	0.914	4.64E+00	1.25E+00	6.37E+00	2.23E+00	1.42E+00	6.42E+00	7.75E-11
Europium (63)	Eu-149	1.83E-01	5.20E-02	1.23E-01	1.73E-01	6.61E-02	0.924	2.72E+00	5.18E+01	1.82E+02	7.71E+01	5.50E+01	1.44E+02	5.51E-09
Europium (63)	Eu-150	8.15E+00	1.66E+00	4.74E+00	7.31E+00	1.66E+00	0.901	2.03E-02	4.14E-01	2.03E+00	7.13E-01	4.62E-01	2.04E+00	5.95E-09
Europium (63)	Eu-150m	2.46E-01	5.24E-02	1.45E-01	2.20E-01	7.91E-02	0.856	4.81E+02	6.87E+03	3.23E+04	1.17E+04	7.69E+03	2.14E+04	4.16E-09
Europium (63)	Eu-152	6.60E+00	1.26E+00	3.60E+00	5.69E+00	1.26E+00	0.919	5.20E-02	5.09E-01	2.67E+00	9.34E-01	5.91E-01	2.67E+00	2.89E-09
Europium (63)	Eu-152m	1.66E+00	3.30E-01	9.23E-01	1.45E+00	3.91E-01	0.91	6.51E+02	1.30E+03	6.53E+03	2.33E+03	1.49E+03	5.51E+03	5.88E-10
Europium (63)	Eu-154	7.25E+00	1.37E+00	3.92E+00	6.23E+00	1.37E+00	0.935	7.88E-02	4.62E-01	2.45E+00	8.55E-01	5.38E-01	2.45E+00	1.75E-09
Europium (63)	Eu-155	1.62E-01	5.63E-02	1.32E-01	1.62E-01	6.24E-02	0.941	1.40E-01	2.12E+01	6.09E+01	2.60E+01	2.12E+01	5.49E+01	4.57E-08
Europium (63)	Eu-156	8.21E+00	1.45E+00	4.20E+00	6.81E+00	1.45E+00	0.897	1.67E+01	6.81E+00	3.86E+01	1.33E+01	8.21E+00	3.86E+01	1.24E-10
Europium (63)	Eu-157	1.22E+00	2.78E-01	7.50E-01	1.12E+00	3.22E-01	0.895	4.01E+02	1.11E+03	4.85E+03	1.80E+03	1.20E+03	4.19E+03	8.43E-10
Europium (63)	Eu-158	6.30E+00	1.19E+00	3.38E+00	5.37E+00	1.26E+00	0.856	7.94E+03	4.43E+03	2.35E+04	8.27E+03	5.20E+03	2.21E+04	1.71E-10
Fluorine (9)	F-18	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.15E+00	0.883	3.32E+03	2.02E+03	9.77E+03	3.43E+03	2.22E+03	9.87E+03	2.12E-11
Iron (26)	Fe-52	3.86E+00	8.32E-01	2.35E+00	3.56E+00	8.30E-01	0.896	7.34E+02	6.39E+02	2.96E+03	1.05E+03	6.92E+02	2.97E+03	8.78E-11
Iron (26)	Fe-55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	2.57E-01						
Iron (26)	Fe-59	7.24E+00	1.31E+00	3.79E+00	6.10E+00	1.28E+00	0.839	5.68E+00	2.83E+00	1.56E+01	5.40E+00	3.35E+00	1.59E+01	5.70E-11
Iron (26)	Fe-60	9.03E-06	5.58E-06	8.58E-06	9.03E-06	1.37E-05	0.927	6.93E-06	3.60E+05	5.83E+05	3.79E+05	3.60E+05	2.38E+05	6.05E+00
Iron (26)	Fe-60+D	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	0.925	6.93E-06	1.41E+02	6.84E+02	2.56E+02	1.66E+02	6.35E+02	2.36E-03
Iron (26)	Fe-60+E	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	0.925	6.93E-06	1.41E+02	6.84E+02	2.56E+02	1.66E+02	6.35E+02	2.36E-03
Fermium (100)	Fm-252	9.42E-05	9.25E-05	9.42E-05	9.42E-05	6.31E-04	0.998	2.67E+02	8.57E+06	8.72E+06	8.57E+06	8.57E+06	1.28E+06	1.57E-05
Fermium (100)	Fm-253	2.87E-01	8.04E-02	2.13E-01	2.83E-01	8.33E-02	0.996	8.43E+01	8.88E+02	3.17E+03	1.20E+03	8.99E+02	3.06E+03	5.17E-09
Fermium (100)	Fm-254	1.88E-04	1.26E-04	1.70E-04	1.88E-04	6.99E-04	0.997	1.87E+03	3.00E+07	4.48E+07	3.33E+07	3.00E+07	8.10E+06	7.90E-06
Fermium (100)	Fm-255	5.22E-03	2.31E-03	4.40E-03	5.18E-03	7.34E-03	0.991	3.02E+02	1.76E+05	3.97E+05	2.09E+05	1.77E+05	1.25E+05	2.88E-07
Fermium (100)	Fm-257	3.90E-01	1.06E-01	2.83E-01	3.84E-01	1.11E-01	0.939	2.52E+00	2.25E+01	8.24E+01	3.10E+01	2.29E+01	7.92E+01	4.46E-09
Francium (87)	Fr-219	1.81E-02	3.92E-03	1.11E-02	1.67E-02	3.85E-03	0.897	1.04E+09	1.93E+11	8.92E+11	3.15E+11	2.09E+11	9.07E+11	7.89E-08
Francium (87)	Fr-220	4.14E-02	1.12E-02	3.00E-02	4.07E-02	1.15E-02	0.968	7.98E+05	5.99E+07	2.21E+08	8.26E+07	6.10E+07	2.15E+08	3.21E-08
Francium (87)	Fr-220+D	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	0.896	7.98E+05	2.98E+05	1.78E+06	6.12E+05	3.71E+05	1.77E+06	1.60E-10
Francium (87)	Fr-220+E	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	0.896	7.98E+05	2.98E+05	1.78E+06	6.12E+05	3.71E+05	1.77E+06	1.60E-10
Francium (87)	Fr-221	1.41E-01	3.38E-02	9.44E-02	1.36E-01	3.31E-02	0.919	7.59E+04	1.76E+06	7.37E+06	2.63E+06	1.83E+06	7.50E+06	9.97E-09
Francium (87)	Fr-221+D	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	0.972	7.59E+04	2.09E+05	9.92E+05	3.52E+05	2.32E+05	8.36E+05	1.18E-09
Francium (87)	Fr-221+E	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	0.972	7.59E+04	2.09E+05	9.92E+05	3.52E+05	2.32E+05	8.36E+05	1.18E-09
Francium (87)	Fr-222	2.44E-02	1.47E-02	2.01E-02	2.37E-02	1.02E-01	0.927	2.53E+04	3.36E+06	5.58E+06	4.08E+06	3.47E+06	8.06E+05	5.73E-08
Francium (87)	Fr-223	1.81E-01	5.39E-02	1.29E-01	1.72E-01	9.06E-02	0.961	1.67E+04	2.89E+05	9.71E+05	4.07E+05	3.04E+05	5.78E+05	7.49E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Gallium (31)	Ga-65	6.38E+00	1.34E+00	3.77E+00	5.76E+00	1.41E+00	0.865	2.40E+04	1.31E+04	6.24E+04	2.21E+04	1.45E+04	5.91E+04	6.88E-11
Gallium (31)	Ga-66	1.57E+01	2.67E+00	7.70E+00	1.26E+01	2.63E+00	0.843	6.46E+02	1.47E+02	8.65E+02	2.99E+02	1.82E+02	8.79E+02	2.91E-11
Gallium (31)	Ga-67	6.81E-01	1.67E-01	4.57E-01	6.51E-01	1.65E-01	0.915	7.76E+01	3.75E+02	1.53E+03	5.59E+02	3.92E+02	1.55E+03	6.28E-10
Gallium (31)	Ga-68	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	5.36E+03	3.48E+03	1.68E+04	5.92E+03	3.85E+03	1.57E+04	8.58E-11
Gallium (31)	Ga-70	6.21E-02	1.92E-02	3.88E-02	5.56E-02	9.90E-02	0.864	1.72E+04	9.66E+05	3.12E+06	1.55E+06	1.08E+06	6.06E+05	7.62E-09
Gallium (31)	Ga-72	1.69E+01	2.95E+00	8.54E+00	1.39E+01	2.89E+00	0.871	4.31E+02	8.80E+01	5.05E+02	1.74E+02	1.07E+02	5.14E+02	2.86E-11
Gallium (31)	Ga-73	1.58E+00	3.51E-01	9.90E-01	1.48E+00	3.91E-01	0.929	1.24E+03	2.53E+03	1.14E+04	4.05E+03	2.71E+03	1.03E+04	2.90E-10
Gadolinium (64)	Gd-145	1.40E+01	2.46E+00	7.09E+00	1.15E+01	2.44E+00	0.814	1.59E+04	4.20E+03	2.39E+04	8.30E+03	5.10E+03	2.41E+04	7.43E-11
Gadolinium (64)	Gd-146	7.18E-01	2.26E-01	5.46E-01	7.11E-01	2.59E-01	0.943	5.24E+00	2.34E+01	7.45E+01	3.08E+01	2.37E+01	6.49E+01	1.27E-09
Gadolinium (64)	Gd-147	7.37E+00	1.47E+00	4.20E+00	6.51E+00	1.46E+00	0.911	1.59E+02	7.15E+01	3.57E+02	1.26E+02	8.09E+01	3.61E+02	1.28E-10
Gadolinium (64)	Gd-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.45E-03						
Gadolinium (64)	Gd-149	2.00E+00	4.46E-01	1.23E+00	1.84E+00	4.57E-01	0.892	2.69E+01	4.55E+01	2.04E+02	7.39E+01	4.94E+01	1.99E+02	4.89E-10
Gadolinium (64)	Gd-151	1.55E-01	5.02E-02	1.13E-01	1.51E-01	6.50E-02	0.93	2.11E+00	5.01E+01	1.55E+02	6.85E+01	5.16E+01	1.20E+02	6.96E-09
Gadolinium (64)	Gd-152	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.42E-15						
Gadolinium (64)	Gd-153	2.13E-01	8.37E-02	1.78E-01	2.13E-01	1.08E-01	0.945	1.05E+00	2.42E+01	6.13E+01	2.89E+01	2.42E+01	4.77E+01	6.86E-09
Gadolinium (64)	Gd-159	2.20E-01	5.28E-02	1.40E-01	2.07E-01	7.56E-02	0.9	3.27E+02	4.97E+03	2.07E+04	7.79E+03	5.29E+03	1.45E+04	4.69E-09
Germanium (32)	Ge-66	3.60E+00	7.59E-01	2.14E+00	3.28E+00	7.59E-01	0.915	2.67E+03	2.45E+03	1.16E+04	4.10E+03	2.68E+03	1.16E+04	1.17E-10
Germanium (32)	Ge-67	7.85E+00	1.62E+00	4.55E+00	7.01E+00	1.70E+00	0.843	1.95E+04	8.86E+03	4.30E+04	1.53E+04	9.92E+03	4.08E+04	5.91E-11
Germanium (32)	Ge-68	1.29E-06	1.29E-06	1.29E-06	1.29E-06	4.78E-05	1	8.78E-01	3.50E+06	3.50E+06	3.50E+06	3.50E+06	9.46E+04	5.25E-04
Germanium (32)	Ge-68+D	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	8.78E-01	9.78E-01	4.71E+00	1.66E+00	1.08E+00	4.41E+00	1.47E-10
Germanium (32)	Ge-68+E	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	8.78E-01	9.78E-01	4.71E+00	1.66E+00	1.08E+00	4.41E+00	1.47E-10
Germanium (32)	Ge-69	5.02E+00	9.77E-01	2.80E+00	4.40E+00	9.79E-01	0.846	1.55E+02	1.10E+02	5.66E+02	1.98E+02	1.26E+02	5.65E+02	9.50E-11
Germanium (32)	Ge-71	1.31E-06	1.31E-06	1.31E-06	1.31E-06	4.84E-05	1	2.14E+01	4.93E+07	4.93E+07	4.93E+07	4.93E+07	1.33E+06	3.17E-04
Germanium (32)	Ge-75	1.76E-01	4.18E-02	1.14E-01	1.67E-01	8.40E-02	0.909	4.40E+03	8.28E+04	3.49E+05	1.28E+05	8.72E+04	1.73E+05	2.74E-09
Germanium (32)	Ge-77	6.06E+00	1.22E+00	3.49E+00	5.39E+00	1.27E+00	0.898	5.37E+02	2.97E+02	1.47E+03	5.17E+02	3.34E+02	1.42E+03	8.27E-11
Germanium (32)	Ge-78	1.40E+00	3.11E-01	8.90E-01	1.32E+00	3.12E-01	0.909	4.19E+03	9.94E+03	4.45E+04	1.56E+04	1.05E+04	4.45E+04	3.59E-10
Hydrogen (1)	H-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	5.61E-02						
Hafnium (72)	Hf-170	2.57E+00	5.86E-01	1.60E+00	2.37E+00	5.96E-01	0.949	3.79E+02	4.67E+02	2.05E+03	7.53E+02	5.08E+02	2.02E+03	4.07E-10
Hafnium (72)	Hf-172	2.14E-01	9.19E-02	1.87E-01	2.14E-01	1.16E-01	0.947	3.71E-01	1.77E+01	4.14E+01	2.04E+01	1.77E+01	3.29E+01	1.60E-08
Hafnium (72)	Hf-173	1.71E+00	4.27E-01	1.14E+00	1.62E+00	4.35E-01	0.913	2.53E+02	4.89E+02	1.95E+03	7.30E+02	5.15E+02	1.92E+03	6.49E-10
Hafnium (72)	Hf-175	1.72E+00	3.97E-01	1.09E+00	1.61E+00	4.03E-01	0.903	3.61E+00	7.21E+00	3.12E+01	1.14E+01	7.69E+00	3.08E+01	6.77E-10
Hafnium (72)	Hf-177m	1.09E+01	2.48E+00	6.92E+00	1.02E+01	2.45E+00	0.92	7.09E+03	2.14E+03	9.35E+03	3.35E+03	2.27E+03	9.46E+03	1.04E-10
Hafnium (72)	Hf-178m	1.21E+01	2.63E+00	7.40E+00	1.12E+01	2.59E+00	0.888	2.24E-02	2.84E-01	1.30E+00	4.63E-01	3.07E-01	1.32E+00	4.38E-09
Hafnium (72)	Hf-179m	4.33E+00	9.85E-01	2.74E+00	4.05E+00	9.83E-01	0.896	1.01E+01	7.83E+00	3.44E+01	1.24E+01	8.37E+00	3.45E+01	2.70E-10
Hafnium (72)	Hf-180m	4.98E+00	1.11E+00	3.11E+00	4.63E+00	1.10E+00	0.902	1.10E+03	7.40E+02	3.31E+03	1.18E+03	7.97E+02	3.34E+03	2.34E-10
Hafnium (72)	Hf-181	2.82E+00	6.17E-01	1.73E+00	2.61E+00	6.13E-01	0.893	5.97E+00	7.16E+00	3.27E+01	1.16E+01	7.72E+00	3.29E+01	4.22E-10
Hafnium (72)	Hf-182	1.15E+00	2.65E-01	7.46E-01	1.09E+00	2.60E-01	0.911	7.70E-08	2.87E+00	1.25E+01	4.43E+00	3.02E+00	1.27E+01	1.32E-02
Hafnium (72)	Hf-182+D						0.911	7.70E-08						
Hafnium (72)	Hf-182+E	8.65E+00	1.68E+00	4.77E+00	7.50E+00	1.66E+00	0.911	7.70E-08	3.82E-01	1.97E+00	6.92E-01	4.41E-01	1.99E+00	1.75E-03
Hafnium (72)	Hf-182m	4.81E+00	1.03E+00	2.89E+00	4.36E+00	1.02E+00	0.942	5.92E+03	3.93E+03	1.84E+04	6.55E+03	4.34E+03	1.85E+04	2.35E-10
Hafnium (72)	Hf-183	4.14E+00	8.37E-01	2.37E+00	3.67E+00	8.78E-01	0.866	5.69E+03	4.78E+03	2.36E+04	8.35E+03	5.39E+03	2.25E+04	2.98E-10
Hafnium (72)	Hf-184	1.10E+00	2.65E-01	7.27E-01	1.05E+00	2.87E-01	0.917	1.47E+03	4.40E+03	1.83E+04	6.65E+03	4.62E+03	1.69E+04	1.07E-09
Mercury (80)	Hg-193	7.09E-01	2.00E-01	5.07E-01	6.84E-01	2.10E-01	0.938	1.73E+03	7.86E+03	2.79E+04	1.10E+04	8.13E+03	2.65E+04	1.70E-09
Mercury (80)	Hg-193m	5.67E+00	1.14E+00	3.23E+00	5.00E+00	1.13E+00	0.965	5.47E+02	3.01E+02	1.50E+03	5.29E+02	3.41E+02	1.51E+03	2.06E-10
Mercury (80)	Hg-194	1.06E-05	1.06E-05	1.06E-05	1.06E-05	2.61E-04	1	2.67E-03	2.83E+05	2.83E+05	2.83E+05	2.83E+05	1.15E+04	4.00E-02
Mercury (80)	Hg-194+D	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	2.67E-03	5.13E-01	2.73E+00	9.56E-01	6.02E-01	2.78E+00	7.25E-08
Mercury (80)	Hg-194+E	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	2.67E-03	5.13E-01	2.73E+00	9.56E-01	6.02E-01	2.78E+00	7.25E-08
Mercury (80)	Hg-195	9.23E-01	2.09E-01	5.60E-01	8.26E-01	2.16E-01	0.951	6.13E+02	2.10E+03	9.30E+03	3.47E+03	2.35E+03	8.99E+03	1.30E-09
Mercury (80)	Hg-195m	9.70E-01	2.24E-01	6.14E-01	9.01E-01	2.25E-01	0.998	1.46E+02	4.54E+02	1.97E+03	7.18E+02	4.89E+02	1.95E+03	1.18E-09
Mercury (80)	Hg-197	1.50E-01	5.99E-02	1.31E-01	1.50E-01	6.76E-02	0.965	9.47E+01	1.97E+03	4.94E+03	2.26E+03	1.97E+03	4.37E+03	7.96E-09
Mercury (80)	Hg-197m	3.19E-01	9.23E-02	2.37E-01	3.13E-01	9.48E-02	0.969	2.55E+02	2.49E+03	8.59E+03	3.35E+03	2.53E+03	8.36E+03	3.72E-09
Mercury (80)	Hg-199m	7.35E-01	1.92E-01	5.11E-01	7.09E-01	1.95E-01	0.932	8.55E+03	3.76E+04	1.44E+05	5.41E+04	3.90E+04	1.42E+05	1.70E-09
Mercury (80)	Hg-203	1.17E+00	2.65E-01	7.48E-01	1.10E+00	2.59E-01	0.911	5.43E+00	1.55E+01	6.80E+01	2.41E+01	1.63E+01	6.96E+01	1.12E-09
Holmium (67)	Ho-155	1.92E+00	4.21E-01	1.17E+00	1.76E+00	4.54E-01	0.926	7.59E+03	1.28E+04	5.85E+04	2.12E+04	1.40E+04	5.44E+04	5.09E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Holmium (67)	Ho-157	2.33E+00	5.17E-01	1.41E+00	2.11E+00	5.38E-01	0.923	2.89E+04	4.05E+04	1.83E+05	6.67E+04	4.47E+04	1.75E+05	4.26E-10
Holmium (67)	Ho-159	1.47E+00	3.69E-01	9.68E-01	1.38E+00	3.90E-01	0.927	1.10E+04	2.44E+04	9.71E+04	3.70E+04	2.60E+04	9.20E+04	6.83E-10
Holmium (67)	Ho-161	7.50E-02	3.92E-02	6.84E-02	7.48E-02	6.00E-02	0.957	2.43E+03	1.02E+05	1.95E+05	1.12E+05	1.02E+05	1.27E+05	1.31E-08
Holmium (67)	Ho-162	7.57E-01	1.65E-01	4.36E-01	6.62E-01	1.81E-01	0.879	2.43E+04	1.10E+05	5.03E+05	1.91E+05	1.26E+05	4.60E+05	1.42E-09
Holmium (67)	Ho-162m	3.08E+00	6.12E-01	1.71E+00	2.67E+00	6.19E-01	0.924	5.36E+03	5.67E+03	2.85E+04	1.02E+04	6.55E+03	2.82E+04	3.33E-10
Holmium (67)	Ho-164	3.80E-02	2.09E-02	3.58E-02	3.80E-02	3.94E-02	0.95	1.26E+04	1.05E+06	1.91E+06	1.11E+06	1.05E+06	1.01E+06	2.65E-08
Holmium (67)	Ho-164m	5.02E-02	3.00E-02	4.87E-02	5.02E-02	4.55E-02	0.957	9.71E+03	6.09E+05	1.02E+06	6.28E+05	6.09E+05	6.71E+05	2.00E-08
Holmium (67)	Ho-166	1.56E-01	4.10E-02	9.27E-02	1.35E-01	1.23E-01	0.897	2.27E+02	4.88E+03	1.85E+04	8.20E+03	5.63E+03	6.21E+03	6.94E-09
Holmium (67)	Ho-166m	9.64E+00	1.94E+00	5.56E+00	8.60E+00	1.93E+00	0.903	5.78E-04	3.46E-01	1.72E+00	6.00E-01	3.88E-01	1.73E+00	1.93E-07
Holmium (67)	Ho-167	1.83E+00	4.07E-01	1.15E+00	1.71E+00	4.10E-01	0.9	1.96E+03	3.57E+03	1.61E+04	5.72E+03	3.82E+03	1.60E+04	5.91E-10
Iodine (53)	I-120	1.66E+01	3.02E+00	8.67E+00	1.39E+01	3.06E+00	0.878	4.50E+03	9.30E+02	5.10E+03	1.78E+03	1.11E+03	5.04E+03	4.82E-11
Iodine (53)	I-120m	3.17E+01	5.87E+00	1.69E+01	2.70E+01	5.85E+00	0.857	6.87E+03	7.62E+02	4.11E+03	1.43E+03	8.93E+02	4.13E+03	2.58E-11
Iodine (53)	I-121	2.07E+00	4.51E-01	1.28E+00	1.92E+00	4.62E-01	0.892	2.86E+03	4.67E+03	2.14E+04	7.58E+03	5.03E+03	2.09E+04	3.83E-10
Iodine (53)	I-122	5.28E+00	1.10E+00	3.10E+00	4.76E+00	1.19E+00	0.875	1.01E+05	6.56E+04	3.15E+05	1.12E+05	7.28E+04	2.91E+05	1.54E-10
Iodine (53)	I-123	6.51E-01	1.67E-01	4.49E-01	6.30E-01	1.79E-01	0.956	4.60E+02	2.23E+03	8.69E+03	3.22E+03	2.30E+03	8.11E+03	1.15E-09
Iodine (53)	I-124	6.38E+00	1.21E+00	3.47E+00	5.50E+00	1.21E+00	0.875	6.05E+01	3.26E+01	1.72E+02	6.00E+01	3.79E+01	1.72E+02	1.30E-10
Iodine (53)	I-125	1.19E-02	1.10E-02	1.19E-02	1.19E-02	3.66E-02	0.986	4.21E+00	1.10E+03	1.19E+03	1.10E+03	1.10E+03	3.56E+02	6.34E-08
Iodine (53)	I-126	2.46E+00	5.05E-01	1.44E+00	2.22E+00	5.16E-01	0.881	1.94E+01	2.70E+01	1.31E+02	4.62E+01	2.99E+01	1.29E+02	3.39E-10
Iodine (53)	I-128	4.81E-01	1.11E-01	2.93E-01	4.40E-01	2.00E-01	0.89	1.46E+04	1.02E+05	4.44E+05	1.68E+05	1.12E+05	2.47E+05	1.75E-09
Iodine (53)	I-129	9.53E-03	8.21E-03	9.53E-03	9.53E-03	2.28E-02	0.98	4.41E-08	3.22E+02	3.74E+02	3.22E+02	3.22E+02	1.35E+02	1.83E+00
Iodine (53)	I-130	1.21E+01	2.41E+00	6.90E+00	1.08E+01	2.39E+00	0.872	4.91E+02	1.40E+02	7.05E+02	2.46E+02	1.57E+02	7.09E+02	7.19E-11
Iodine (53)	I-131	2.01E+00	4.31E-01	1.22E+00	1.85E+00	4.25E-01	0.891	3.15E+01	5.28E+01	2.47E+02	8.69E+01	5.74E+01	2.50E+02	4.26E-10
Iodine (53)	I-132	1.32E+01	2.56E+00	7.35E+00	1.16E+01	2.57E+00	0.892	2.64E+03	6.73E+02	3.49E+03	1.21E+03	7.69E+02	3.47E+03	6.53E-11
Iodine (53)	I-132m	1.75E+00	3.54E-01	1.01E+00	1.56E+00	3.63E-01	0.874	4.36E+03	8.57E+03	4.24E+04	1.49E+04	9.60E+03	4.14E+04	5.04E-10
Iodine (53)	I-133	3.41E+00	6.88E-01	1.96E+00	3.04E+00	7.20E-01	0.881	2.92E+02	2.92E+02	1.45E+03	5.09E+02	3.28E+02	1.39E+03	2.58E-10
Iodine (53)	I-134	1.55E+01	2.93E+00	8.43E+00	1.34E+01	2.95E+00	0.879	6.92E+03	1.53E+03	8.10E+03	2.81E+03	1.77E+03	8.03E+03	5.75E-11
Iodine (53)	I-135	9.72E+00	1.73E+00	5.00E+00	8.11E+00	1.72E+00	0.9	9.18E+02	3.16E+02	1.78E+03	6.15E+02	3.79E+02	1.79E+03	9.02E-11
Indium (49)	In-109	3.62E+00	7.29E-01	2.09E+00	3.23E+00	7.28E-01	0.899	1.45E+03	1.34E+03	6.64E+03	2.32E+03	1.50E+03	6.65E+03	1.96E-10
Indium (49)	In-110	1.76E+01	3.39E+00	9.75E+00	1.54E+01	3.36E+00	0.871	1.24E+03	2.43E+02	1.26E+03	4.39E+02	2.78E+02	1.27E+03	4.19E-11
Indium (49)	In-110m	8.95E+00	1.75E+00	4.98E+00	7.83E+00	1.79E+00	0.874	5.27E+03	2.03E+03	1.04E+04	3.65E+03	2.32E+03	1.02E+04	8.21E-11
Indium (49)	In-111	1.81E+00	4.29E-01	1.20E+00	1.74E+00	4.29E-01	0.952	8.94E+01	1.56E+02	6.59E+02	2.35E+02	1.63E+02	6.58E+02	3.77E-10
Indium (49)	In-112	1.45E+00	3.00E-01	8.50E-01	1.31E+00	3.20E-01	0.931	2.53E+04	5.65E+04	2.72E+05	9.62E+04	6.24E+04	2.56E+05	4.85E-10
Indium (49)	In-113m	1.33E+00	2.85E-01	8.13E-01	1.23E+00	2.84E-01	0.932	3.66E+03	8.88E+03	4.15E+04	1.45E+04	9.61E+03	4.17E+04	5.32E-10
Indium (49)	In-114	1.68E-02	3.04E-03	8.73E-03	1.41E-02	3.22E-03	0.869	3.04E+05	6.27E+07	3.46E+08	1.21E+08	7.48E+07	3.27E+08	4.56E-08
Indium (49)	In-114m	4.51E-01	9.70E-02	2.72E-01	4.12E-01	1.01E-01	0.946	5.11E+00	3.63E+01	1.69E+02	6.01E+01	3.97E+01	1.62E+02	1.57E-09
Indium (49)	In-114m+D	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	0.946	5.11E+00	3.50E+01	1.64E+02	5.85E+01	3.85E+01	1.58E+02	1.51E-09
Indium (49)	In-114m+E	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	0.946	5.11E+00	3.50E+01	1.64E+02	5.85E+01	3.85E+01	1.58E+02	1.51E-09
Indium (49)	In-115	3.54E-04	1.30E-04	2.83E-04	3.51E-04	4.17E-04	0.927	1.36E-16	1.12E+04	3.06E+04	1.40E+04	1.13E+04	9.54E+03	1.84E+10
Indium (49)	In-115m	7.93E-01	1.74E-01	4.94E-01	7.40E-01	1.76E-01	0.917	1.35E+03	5.61E+03	2.55E+04	8.99E+03	6.00E+03	2.52E+04	9.24E-10
Indium (49)	In-116m	1.52E+01	2.70E+00	7.85E+00	1.27E+01	2.66E+00	0.892	6.73E+03	1.50E+03	8.40E+03	2.89E+03	1.79E+03	8.53E+03	5.01E-11
Indium (49)	In-117	3.64E+00	7.76E-01	2.20E+00	3.34E+00	7.75E-01	0.897	8.32E+03	7.68E+03	3.60E+04	1.27E+04	8.36E+03	3.60E+04	2.10E-10
Indium (49)	In-117m	4.29E-01	1.02E-01	2.80E-01	4.07E-01	1.46E-01	0.923	3.13E+03	2.38E+04	9.96E+04	3.65E+04	2.51E+04	6.99E+04	1.73E-09
Indium (49)	In-119	4.42E+00	8.71E-01	2.48E+00	3.90E+00	9.36E-01	0.871	1.52E+05	1.19E+05	6.02E+05	2.12E+05	1.35E+05	5.61E+05	1.81E-10
Indium (49)	In-119m	9.03E-02	3.73E-02	6.30E-02	8.37E-02	1.52E-01	0.93	2.02E+04	7.26E+05	1.76E+06	1.04E+06	7.82E+05	4.32E+05	8.28E-09
Iridium (77)	Ir-182	7.35E+00	1.52E+00	4.27E+00	6.56E+00	1.56E+00	0.928	2.43E+04	1.07E+04	5.20E+04	1.84E+04	1.20E+04	5.04E+04	1.56E-10
Iridium (77)	Ir-184	1.08E+01	2.09E+00	5.97E+00	9.36E+00	2.08E+00	0.944	2.01E+03	5.93E+02	3.07E+03	1.07E+03	6.85E+02	3.09E+03	1.05E-10
Iridium (77)	Ir-185	3.34E+00	6.25E-01	1.76E+00	2.80E+00	6.22E-01	0.953	4.34E+02	4.10E+02	2.19E+03	7.78E+02	4.90E+02	2.20E+03	3.40E-10
Iridium (77)	Ir-186	9.25E+00	1.79E+00	5.11E+00	8.00E+00	1.76E+00	0.942	3.84E+02	1.33E+02	6.85E+02	2.40E+02	1.54E+02	6.97E+02	1.25E-10
Iridium (77)	Ir-186m	5.28E+00	1.06E+00	3.00E+00	4.64E+00	1.07E+00	0.878	3.47E+03	2.25E+03	1.12E+04	3.96E+03	2.56E+03	1.11E+04	2.35E-10
Iridium (77)	Ir-187	1.79E+00	3.88E-01	1.06E+00	1.60E+00	3.93E-01	0.958	5.78E+02	1.02E+03	4.68E+03	1.71E+03	1.14E+03	4.62E+03	6.38E-10
Iridium (77)	Ir-188	9.55E+00	1.70E+00	4.89E+00	7.89E+00	1.66E+00	0.908	1.46E+02	5.08E+01	2.86E+02	9.93E+01	6.15E+01	2.93E+02	1.27E-10
Iridium (77)	Ir-189	2.18E-01	7.31E-02	1.70E-01	2.14E-01	8.16E-02	0.954	1.90E+01	2.75E+02	8.21E+02	3.54E+02	2.80E+02	7.36E+02	5.30E-09
Iridium (77)	Ir-190	7.53E+00	1.60E+00	4.51E+00	6.86E+00	1.59E+00	0.928	2.09E+01	9.00E+00	4.23E+01	1.50E+01	9.88E+00	4.27E+01	1.59E-10
Iridium (77)	Ir-190m	2.05E-06	2.05E-06	2.05E-06	2.05E-06	6.21E-05	1	5.06E+03	7.43E+09	7.43E+09	7.43E+09	7.43E+09	2.45E+08	5.41E-04

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Iridium (77)	Ir-190n	8.15E+00	1.73E+00	4.90E+00	7.46E+00	1.72E+00	0.955	1.96E+03	7.58E+02	3.56E+03	1.26E+03	8.28E+02	3.60E+03	1.43E-10
Iridium (77)	Ir-191m	2.05E-01	6.86E-02	1.63E-01	2.03E-01	7.39E-02	0.945	4.42E+06	6.87E+07	2.05E+08	8.64E+07	6.93E+07	1.91E+08	5.76E-09
Iridium (77)	Ir-192	4.27E+00	9.19E-01	2.63E+00	3.95E+00	9.07E-01	0.957	3.42E+00	2.60E+00	1.21E+01	4.23E+00	2.81E+00	1.23E+01	2.84E-10
Iridium (77)	Ir-192m	6.86E-01	1.75E-01	4.81E-01	6.71E-01	1.72E-01	0.925	2.88E-03	4.75E+00	1.86E+01	6.78E+00	4.86E+00	1.90E+01	6.15E-07
Iridium (77)	Ir-194	5.24E-01	1.19E-01	3.13E-01	4.74E-01	2.11E-01	0.902	3.17E+02	2.02E+03	8.88E+03	3.38E+03	2.23E+03	5.01E+03	2.40E-09
Iridium (77)	Ir-194m	1.27E+01	2.63E+00	7.52E+00	1.15E+01	2.60E+00	0.881	1.48E+00	5.15E-01	2.49E+00	8.71E-01	5.67E-01	2.52E+00	1.31E-10
Iridium (77)	Ir-195	1.46E-01	5.37E-02	1.21E-01	1.45E-01	8.60E-02	0.954	2.43E+03	5.24E+04	1.43E+05	6.34E+04	5.28E+04	8.91E+04	8.17E-09
Iridium (77)	Ir-195m	2.00E+00	4.51E-01	1.24E+00	1.84E+00	4.64E-01	0.998	1.60E+03	2.42E+03	1.07E+04	3.87E+03	2.62E+03	1.04E+04	5.72E-10
Potassium (19)	K-38	2.00E+01	3.47E+00	1.00E+01	1.64E+01	3.47E+00	0.844	4.77E+04	8.53E+03	4.91E+04	1.70E+04	1.04E+04	4.91E+04	1.32E-11
Potassium (19)	K-40	9.94E-01	1.77E-01	5.04E-01	8.21E-01	2.38E-01	0.826	5.41E-10	3.67E+00	2.06E+01	7.24E+00	4.44E+00	1.53E+01	5.26E-01
Potassium (19)	K-42	1.84E+00	3.49E-01	9.42E-01	1.52E+00	4.64E-01	0.823	4.91E+02	9.79E+02	5.15E+03	1.91E+03	1.19E+03	3.87E+03	1.62E-10
Potassium (19)	K-43	5.32E+00	1.10E+00	3.13E+00	4.83E+00	1.10E+00	0.878	2.69E+02	1.73E+02	8.39E+02	2.94E+02	1.91E+02	8.39E+02	5.38E-11
Potassium (19)	K-44	1.47E+01	2.46E+00	7.11E+00	1.17E+01	2.47E+00	0.799	1.65E+04	4.22E+03	2.52E+04	8.73E+03	5.28E+03	2.51E+04	2.19E-11
Potassium (19)	K-45	1.18E+01	2.01E+00	5.86E+00	9.59E+00	2.05E+00	0.833	1.82E+04	5.57E+03	3.27E+04	1.12E+04	6.87E+03	3.21E+04	2.67E-11
Krypton (36)	Kr-74	6.19E+00	1.33E+00	3.73E+00	5.67E+00	1.40E+00	0.923	3.17E+04	1.67E+04	7.78E+04	2.77E+04	1.82E+04	7.38E+04	7.57E-11
Krypton (36)	Kr-76	2.18E+00	4.76E-01	1.35E+00	2.03E+00	4.70E-01	0.971	4.10E+02	5.83E+02	2.67E+03	9.43E+02	6.26E+02	2.70E+03	2.10E-10
Krypton (36)	Kr-77	5.32E+00	1.15E+00	3.25E+00	4.89E+00	1.21E+00	0.894	4.88E+03	3.09E+03	1.43E+04	5.06E+03	3.36E+03	1.35E+04	9.47E-11
Krypton (36)	Kr-79	1.36E+00	2.83E-01	8.08E-01	1.24E+00	2.79E-01	0.893	1.73E+02	4.30E+02	2.06E+03	7.23E+02	4.72E+02	2.09E+03	3.81E-10
Krypton (36)	Kr-81	2.76E-02	6.23E-03	1.77E-02	2.63E-02	6.99E-03	0.999	3.30E-06	1.09E+02	4.84E+02	1.70E+02	1.15E+02	4.31E+02	5.20E-03
Krypton (36)	Kr-81m	5.84E-01	1.41E-01	3.95E-01	5.65E-01	1.38E-01	0.968	1.68E+06	8.96E+06	3.70E+07	1.32E+07	9.25E+06	3.80E+07	8.38E-10
Krypton (36)	Kr-83m	2.52E-05	2.44E-05	2.52E-05	2.52E-05	4.17E-04	1	3.32E+03	3.97E+08	4.09E+08	3.97E+08	3.97E+08	2.40E+07	1.93E-05
Krypton (36)	Kr-85	1.35E-02	3.08E-03	8.21E-03	1.23E-02	1.23E-02	0.884	6.46E-02	2.61E+02	1.14E+03	4.29E+02	2.85E+02	2.87E+02	6.66E-07
Krypton (36)	Kr-85m	6.96E-01	1.73E-01	4.77E-01	6.73E-01	1.83E-01	0.928	1.36E+03	6.32E+03	2.54E+04	9.21E+03	6.53E+03	2.40E+04	7.69E-10
Krypton (36)	Kr-87	5.02E+00	8.95E-01	2.54E+00	4.12E+00	9.80E-01	0.849	4.77E+03	3.37E+03	1.89E+04	6.68E+03	4.11E+03	1.73E+04	1.19E-10
Krypton (36)	Kr-88	1.26E+01	2.07E+00	6.06E+00	1.01E+01	2.02E+00	0.916	2.14E+03	5.57E+02	3.39E+03	1.16E+03	6.99E+02	3.48E+03	4.45E-11
Lanthanum (57)	La-131	3.47E+00	7.39E-01	2.07E+00	3.17E+00	7.64E-01	0.896	6.17E+03	5.98E+03	2.81E+04	1.00E+04	6.54E+03	2.71E+04	2.46E-10
Lanthanum (57)	La-132	1.19E+01	2.22E+00	6.36E+00	1.01E+01	2.22E+00	0.879	1.26E+03	3.64E+02	1.95E+03	6.81E+02	4.28E+02	1.95E+03	7.37E-11
Lanthanum (57)	La-134	3.84E+00	8.02E-01	2.26E+00	3.47E+00	8.75E-01	0.89	5.46E+04	4.81E+04	2.30E+05	8.19E+04	5.33E+04	2.11E+05	2.29E-10
Lanthanum (57)	La-135	6.77E-02	2.09E-02	4.42E-02	6.21E-02	3.55E-02	0.943	3.11E+02	1.47E+04	4.76E+04	2.25E+04	1.60E+04	2.80E+04	1.24E-08
Lanthanum (57)	La-137	1.04E-02	8.82E-03	1.04E-02	1.04E-02	2.29E-02	0.978	1.16E-05	2.95E+02	3.49E+02	2.95E+02	2.95E+02	1.35E+02	6.80E-03
Lanthanum (57)	La-138	7.53E+00	1.34E+00	3.90E+00	6.30E+00	1.32E+00	0.842	5.13E-12	4.75E-01	2.66E+00	9.17E-01	5.67E-01	2.71E+00	2.48E+01
Lanthanum (57)	La-140	1.43E+01	2.54E+00	7.33E+00	1.19E+01	2.52E+00	0.868	1.51E+02	3.67E+01	2.06E+02	7.13E+01	4.40E+01	2.07E+02	6.61E-11
Lanthanum (57)	La-141	3.10E-01	7.11E-02	1.70E-01	2.61E-01	1.77E-01	0.829	1.54E+03	1.81E+04	7.90E+04	3.31E+04	2.15E+04	3.16E+04	3.21E-09
Lanthanum (57)	La-142	1.78E+01	2.93E+00	8.56E+00	1.42E+01	2.91E+00	0.88	3.94E+03	7.56E+02	4.60E+03	1.57E+03	9.49E+02	4.64E+03	5.29E-11
Lanthanum (57)	La-143	6.64E-01	1.45E-01	3.58E-01	5.58E-01	2.65E-01	0.853	2.56E+04	1.36E+05	6.22E+05	2.52E+05	1.62E+05	3.41E+05	1.48E-09
Lutetium (71)	Lu-169	5.89E+00	1.12E+00	3.17E+00	5.02E+00	1.12E+00	0.922	1.78E+02	9.88E+01	5.20E+02	1.84E+02	1.16E+02	5.22E+02	1.82E-10
Lutetium (71)	Lu-170	1.56E+01	2.63E+00	7.65E+00	1.26E+01	2.56E+00	0.941	1.26E+02	2.59E+01	1.54E+02	5.29E+01	3.22E+01	1.58E+02	6.76E-11
Lutetium (71)	Lu-171	3.62E+00	7.50E-01	2.09E+00	3.21E+00	7.63E-01	0.941	3.08E+01	2.72E+01	1.31E+02	4.71E+01	3.07E+01	1.29E+02	2.93E-10
Lutetium (71)	Lu-172	1.08E+01	2.07E+00	5.89E+00	9.33E+00	2.05E+00	0.92	3.78E+01	1.14E+01	5.97E+01	2.10E+01	1.33E+01	6.02E+01	1.01E-10
Lutetium (71)	Lu-173	3.75E-01	1.17E-01	2.72E-01	3.60E-01	1.35E-01	0.907	5.06E-01	1.13E+01	3.61E+01	1.55E+01	1.18E+01	3.12E+01	7.49E-09
Lutetium (71)	Lu-174	5.35E-01	1.20E-01	3.08E-01	4.61E-01	1.31E-01	0.917	2.09E-01	6.80E+00	3.02E+01	1.18E+01	7.90E+00	2.78E+01	1.10E-08
Lutetium (71)	Lu-174m	1.29E-01	4.94E-02	1.01E-01	1.23E-01	6.22E-02	0.948	1.78E+00	5.29E+01	1.38E+02	6.73E+01	5.55E+01	1.09E+02	1.00E-08
Lutetium (71)	Lu-176	2.33E+00	5.39E-01	1.51E+00	2.22E+00	5.33E-01	0.912	1.93E-11	1.42E+00	6.13E+00	2.18E+00	1.49E+00	6.19E+00	2.51E+01
Lutetium (71)	Lu-176m	3.90E-02	1.67E-02	3.32E-02	3.90E-02	6.54E-02	0.947	1.65E+03	1.35E+05	3.15E+05	1.58E+05	1.35E+05	8.03E+04	2.79E-08
Lutetium (71)	Lu-177	1.45E-01	3.71E-02	1.01E-01	1.41E-01	3.75E-02	0.923	3.77E+01	8.49E+02	3.31E+03	1.22E+03	8.75E+02	3.28E+03	7.73E-09
Lutetium (71)	Lu-177m	4.61E+00	1.09E+00	3.00E+00	4.36E+00	1.09E+00	0.941	1.57E+00	1.38E+00	5.84E+00	2.11E+00	1.45E+00	5.84E+00	3.01E-10
Lutetium (71)	Lu-178	8.50E-01	1.66E-01	4.51E-01	7.16E-01	2.51E-01	0.836	1.28E+04	5.43E+04	2.78E+05	1.02E+05	6.45E+04	1.84E+05	1.46E-09
Lutetium (71)	Lu-178m	5.39E+00	1.23E+00	3.43E+00	5.05E+00	1.26E+00	0.904	1.60E+04	9.92E+03	4.36E+04	1.56E+04	1.06E+04	4.24E+04	2.13E-10
Lutetium (71)	Lu-179	1.54E-01	3.90E-02	1.02E-01	1.47E-01	8.95E-02	0.905	1.32E+03	2.86E+04	1.13E+05	4.31E+04	3.00E+04	4.92E+04	7.51E-09
Mendelevium (101)	Md-257	4.61E-01	1.16E-01	3.15E-01	4.42E-01	1.18E-01	0.995	1.17E+03	7.67E+03	3.04E+04	1.12E+04	7.99E+03	3.00E+04	3.28E-09
Mendelevium (101)	Md-258	1.86E-03	1.04E-03	1.68E-03	1.86E-03	3.87E-03	0.996	4.60E+00	7.56E+03	1.35E+04	8.35E+03	7.56E+03	3.63E+03	8.23E-07
Magnesium (12)	Mg-28	8.15E+00	1.50E+00	4.31E+00	6.92E+00	1.47E+00	0.872	2.90E+02	1.23E+02	6.70E+02	2.33E+02	1.45E+02	6.82E+02	2.30E-11
Manganese (25)	Mn-51	5.52E+00	1.15E+00	3.25E+00	5.00E+00	1.25E+00	0.882	7.88E+03	4.88E+03	2.34E+04	8.29E+03	5.39E+03	2.16E+04	6.12E-11
Manganese (25)	Mn-52	2.07E+01	3.82E+00	1.10E+01	1.77E+01	3.76E+00	0.836	4.52E+01	7.87E+00	4.26E+01	1.48E+01	9.23E+00	4.34E+01	1.76E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Manganese (25)	Mn-52m	1.44E+01	2.70E+00	7.74E+00	1.23E+01	2.75E+00	0.848	1.73E+04	4.26E+03	2.27E+04	7.92E+03	4.98E+03	2.23E+04	2.49E-11
Manganese (25)	Mn-53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.87E-07						
Manganese (25)	Mn-54	4.85E+00	9.36E-01	2.69E+00	4.23E+00	9.23E-01	0.858	8.09E-01	1.06E+00	5.47E+00	1.91E+00	1.21E+00	5.55E+00	1.37E-10
Manganese (25)	Mn-56	1.05E+01	1.87E+00	5.37E+00	8.73E+00	1.89E+00	0.827	2.35E+03	8.16E+02	4.60E+03	1.60E+03	9.82E+02	4.53E+03	3.77E-11
Molybdenum (42)	Mo-101	8.24E+00	1.51E+00	4.35E+00	6.98E+00	1.53E+00	0.917	2.49E+04	9.92E+03	5.42E+04	1.88E+04	1.17E+04	5.35E+04	7.81E-11
Molybdenum (42)	Mo-90	4.29E+00	9.06E-01	2.57E+00	3.90E+00	9.08E-01	0.884	1.07E+03	8.50E+02	4.02E+03	1.42E+03	9.36E+02	4.02E+03	1.39E-10
Molybdenum (42)	Mo-93	4.16E-04	4.18E-04	4.16E-04	4.16E-04	4.53E-03	1	1.98E-04	7.24E+03	7.21E+03	7.24E+03	7.24E+03	6.65E+02	6.60E-03
Molybdenum (42)	Mo-93m	1.36E+01	2.48E+00	7.14E+00	1.15E+01	2.42E+00	0.861	8.86E+02	2.29E+02	1.25E+03	4.34E+02	2.70E+02	1.28E+03	4.65E-11
Molybdenum (42)	Mo-99	8.34E-01	1.71E-01	4.81E-01	7.44E-01	2.08E-01	0.929	9.20E+01	3.58E+02	1.75E+03	6.20E+02	4.01E+02	1.44E+03	7.47E-10
Nitrogen (7)	N-13	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.20E+00	0.883	3.66E+04	2.22E+04	1.07E+05	3.78E+04	2.45E+04	1.04E+05	1.53E-11
Sodium (11)	Na-22	1.29E+01	2.44E+00	7.01E+00	1.11E+01	2.39E+00	0.861	2.66E-01	3.09E-01	1.63E+00	5.68E-01	3.58E-01	1.67E+00	4.95E-11
Sodium (11)	Na-24	2.72E+01	4.33E+00	1.27E+01	2.13E+01	4.19E+00	0.806	4.05E+02	5.55E+01	3.49E+02	1.19E+02	7.11E+01	3.61E+02	6.39E-12
Niobium (41)	Nb-88	2.37E+01	4.64E+00	1.33E+01	2.09E+01	4.69E+00	0.871	2.55E+04	3.72E+03	1.90E+04	6.64E+03	4.22E+03	1.88E+04	2.49E-11
Niobium (41)	Nb-89	8.32E+00	1.56E+00	4.46E+00	7.09E+00	1.62E+00	0.885	2.99E+03	1.22E+03	6.50E+03	2.28E+03	1.43E+03	6.26E+03	7.06E-11
Niobium (41)	Nb-89m	1.07E+01	2.20E+00	6.25E+00	9.64E+00	2.26E+00	0.89	5.52E+03	1.75E+03	8.48E+03	2.99E+03	1.94E+03	8.25E+03	5.48E-11
Niobium (41)	Nb-90	2.65E+01	4.53E+00	1.32E+01	2.14E+01	4.42E+00	0.851	4.16E+02	5.56E+01	3.25E+02	1.12E+02	6.86E+01	3.33E+02	2.33E-11
Niobium (41)	Nb-93m	7.35E-05	7.35E-05	7.35E-05	7.35E-05	7.96E-04	1	5.10E-02	4.20E+04	4.20E+04	4.20E+04	4.20E+04	3.88E+03	1.49E-04
Niobium (41)	Nb-94	9.10E+00	1.77E+00	5.07E+00	7.98E+00	1.74E+00	0.861	3.41E-05	3.84E-01	1.98E+00	6.89E-01	4.38E-01	2.01E+00	2.05E-06
Niobium (41)	Nb-95	4.42E+00	8.62E-01	2.46E+00	3.88E+00	8.50E-01	0.863	7.20E+00	5.68E+00	2.92E+01	1.02E+01	6.48E+00	2.96E+01	1.46E-10
Niobium (41)	Nb-95m	2.93E-01	6.79E-02	1.92E-01	2.82E-01	6.90E-02	0.988	7.01E+01	7.30E+02	3.15E+03	1.11E+03	7.59E+02	3.10E+03	1.92E-09
Niobium (41)	Nb-96	1.44E+01	2.78E+00	7.94E+00	1.25E+01	2.73E+00	0.866	2.60E+02	6.29E+01	3.25E+02	1.14E+02	7.21E+01	3.31E+02	4.51E-11
Niobium (41)	Nb-97	3.73E+00	7.46E-01	2.13E+00	3.32E+00	7.88E-01	0.87	5.05E+03	4.69E+03	2.34E+04	8.22E+03	5.27E+03	2.22E+04	1.75E-10
Niobium (41)	Nb-97m	4.18E+00	8.21E-01	2.35E+00	3.69E+00	8.11E-01	0.87	3.64E+05	3.02E+05	1.54E+06	5.36E+05	3.41E+05	1.55E+06	1.56E-10
Niobium (41)	Nb-98	1.44E+01	2.72E+00	7.80E+00	1.24E+01	2.77E+00	0.84	7.07E+03	1.76E+03	9.31E+03	3.25E+03	2.04E+03	9.17E+03	4.72E-11
Neodymium (60)	Nd-136	1.28E+00	2.95E-01	7.93E-01	1.17E+00	3.19E-01	0.884	7.19E+03	1.91E+04	8.31E+04	3.09E+04	2.09E+04	7.69E+04	7.03E-10
Neodymium (60)	Nd-138	8.77E-02	2.89E-02	6.17E-02	8.36E-02	4.38E-02	0.945	1.20E+03	4.38E+04	1.33E+05	6.22E+04	4.59E+04	8.77E+04	9.73E-09
Neodymium (60)	Nd-139	2.16E+00	4.46E-01	1.25E+00	1.94E+00	4.75E-01	0.87	1.23E+04	1.96E+04	9.52E+04	3.39E+04	2.19E+04	8.94E+04	4.31E-10
Neodymium (60)	Nd-139m	8.90E+00	1.73E+00	4.92E+00	7.74E+00	1.73E+00	0.898	1.10E+03	4.16E+02	2.15E+03	7.52E+02	4.78E+02	2.14E+03	1.02E-10
Neodymium (60)	Nd-141	2.87E-01	6.55E-02	1.67E-01	2.54E-01	7.98E-02	0.942	2.44E+03	2.71E+04	1.19E+05	4.65E+04	3.07E+04	9.76E+04	3.05E-09
Neodymium (60)	Nd-141m	4.36E+00	8.54E-01	2.44E+00	3.84E+00	8.54E-01	0.865	3.50E+05	2.79E+05	1.43E+06	4.99E+05	3.17E+05	1.43E+06	2.18E-10
Neodymium (60)	Nd-147	6.17E-01	1.45E-01	3.88E-01	5.69E-01	1.63E-01	0.89	2.30E+01	1.26E+02	5.39E+02	2.01E+02	1.37E+02	4.77E+02	1.56E-09
Neodymium (60)	Nd-149	1.90E+00	4.25E-01	1.18E+00	1.76E+00	4.74E-01	0.927	3.51E+03	5.99E+03	2.68E+04	9.64E+03	6.48E+03	2.41E+04	4.94E-10
Neodymium (60)	Nd-151	5.13E+00	1.02E+00	2.89E+00	4.49E+00	1.08E+00	0.928	2.93E+04	1.85E+04	9.33E+04	3.29E+04	2.11E+04	8.82E+04	1.85E-10
Neon (10)	Ne-19	5.65E+00	1.18E+00	3.34E+00	5.13E+00	1.28E+00	0.883	1.27E+06	7.66E+05	3.66E+06	1.30E+06	8.44E+05	3.37E+06	2.22E-11
Nickel (28)	Ni-56	9.68E+00	1.92E+00	5.48E+00	8.54E+00	1.89E+00	0.869	4.15E+01	1.48E+01	7.48E+01	2.62E+01	1.68E+01	7.60E+01	3.89E-11
Nickel (28)	Ni-57	1.17E+01	2.11E+00	6.08E+00	9.83E+00	2.05E+00	0.829	1.68E+02	5.21E+01	2.90E+02	1.01E+02	6.22E+01	2.98E+02	3.42E-11
Nickel (28)	Ni-59	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	9.24E-06						
Nickel (28)	Ni-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.22E-03						
Nickel (28)	Ni-65	3.41E+00	6.12E-01	1.76E+00	2.85E+00	6.64E-01	0.831	2.41E+03	2.56E+03	1.43E+04	4.97E+03	3.06E+03	1.31E+04	1.34E-10
Nickel (28)	Ni-66	3.64E-05	1.77E-05	3.23E-05	3.62E-05	3.30E-05	0.927	1.11E+02	9.93E+06	2.04E+07	1.12E+07	9.98E+06	1.09E+07	1.14E-05
Neptunium (93)	Np-232	6.58E+00	1.33E+00	3.77E+00	5.84E+00	1.32E+00	0.916	2.48E+04	1.24E+04	6.14E+04	2.16E+04	1.40E+04	6.18E+04	2.25E-10
Neptunium (93)	Np-233	2.95E-01	8.77E-02	2.24E-01	2.91E-01	9.09E-02	0.951	1.01E+04	1.08E+05	3.63E+05	1.42E+05	1.10E+05	3.50E+05	4.86E-09
Neptunium (93)	Np-234	8.77E+00	1.56E+00	4.49E+00	7.27E+00	1.53E+00	0.966	5.75E+01	2.04E+01	1.15E+02	3.99E+01	2.46E+01	1.17E+02	1.61E-10
Neptunium (93)	Np-235	2.82E-03	1.07E-03	2.29E-03	2.82E-03	3.34E-03	1	6.39E-01	1.45E+03	3.79E+03	1.78E+03	1.45E+03	1.22E+03	1.03E-06
Neptunium (93)	Np-236	4.16E-01	1.22E-01	3.15E-01	4.12E-01	1.30E-01	0.999	6.03E-06	7.25E+00	2.48E+01	9.56E+00	7.31E+00	2.33E+01	5.51E-04
Neptunium (93)	Np-236m	1.72E-01	4.87E-02	1.25E-01	1.66E-01	5.11E-02	0.999	2.70E+02	4.74E+03	1.67E+04	6.49E+03	4.89E+03	1.59E+04	8.04E-09
Neptunium (93)	Np-237	6.94E-02	2.31E-02	5.52E-02	6.92E-02	2.94E-02	0.973	3.24E-07	4.46E+01	1.34E+02	5.61E+01	4.47E+01	1.05E+02	6.33E-02
Neptunium (93)	Np-237+D						0.973	3.24E-07						
Neptunium (93)	Np-237+E	1.01E+00	2.41E-01	6.66E-01	9.59E-01	2.46E-01	0.973	3.24E-07	3.07E+00	1.29E+01	4.65E+00	3.23E+00	1.26E+01	4.36E-03
Neptunium (93)	Np-238	3.25E+00	6.10E-01	1.75E+00	2.80E+00	6.23E-01	0.995	1.19E+02	1.11E+02	5.93E+02	2.06E+02	1.29E+02	5.80E+02	4.31E-10
Neptunium (93)	Np-239	6.88E-01	1.77E-01	4.79E-01	6.66E-01	1.80E-01	0.945	1.07E+02	4.97E+02	1.94E+03	7.14E+02	5.14E+02	1.90E+03	2.15E-09
Neptunium (93)	Np-240	7.25E+00	1.45E+00	4.12E+00	6.42E+00	1.45E+00	0.954	5.60E+03	2.44E+03	1.22E+04	4.29E+03	2.76E+03	1.22E+04	2.03E-10
Neptunium (93)	Np-240m	1.90E+00	3.80E-01	1.07E+00	1.68E+00	4.52E-01	0.97	4.92E+04	8.03E+04	4.02E+05	1.42E+05	9.11E+04	3.38E+05	7.60E-10
Oxygen (8)	O-15	5.61E+00	1.17E+00	3.32E+00	5.09E+00	1.25E+00	0.883	1.79E+05	1.09E+05	5.21E+05	1.84E+05	1.20E+05	4.88E+05	1.77E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Osmium (76)	Os-180	1.41E-01	5.22E-02	1.13E-01	1.36E-01	6.29E-02	0.97	1.66E+04	3.65E+05	9.84E+05	4.56E+05	3.77E+05	8.17E+05	7.69E-09
Osmium (76)	Os-181	6.75E+00	1.33E+00	3.77E+00	5.87E+00	1.32E+00	0.918	3.47E+03	1.69E+03	8.56E+03	3.02E+03	1.94E+03	8.63E+03	1.71E-10
Osmium (76)	Os-182	2.07E+00	4.70E-01	1.29E+00	1.92E+00	4.74E-01	0.95	2.76E+02	4.22E+02	1.86E+03	6.77E+02	4.55E+02	1.85E+03	5.41E-10
Osmium (76)	Os-185	3.90E+00	7.96E-01	2.24E+00	3.47E+00	7.95E-01	0.871	2.69E+00	2.56E+00	1.25E+01	4.46E+00	2.88E+00	1.26E+01	3.42E-10
Osmium (76)	Os-189m	1.76E-06	1.76E-06	1.76E-06	1.76E-06	5.64E-05	1	1.01E+03	1.73E+09	1.73E+09	1.73E+09	1.73E+09	5.41E+07	6.27E-04
Osmium (76)	Os-190m	8.50E+00	1.78E+00	5.09E+00	7.76E+00	1.76E+00	0.887	3.68E+04	1.47E+04	7.00E+04	2.45E+04	1.61E+04	7.09E+04	1.47E-10
Osmium (76)	Os-191	2.14E-01	7.27E-02	1.72E-01	2.13E-01	7.88E-02	0.945	1.64E+01	2.44E+02	7.20E+02	3.05E+02	2.46E+02	6.64E+02	5.51E-09
Osmium (76)	Os-191m	1.38E-02	6.21E-03	1.26E-02	1.38E-02	7.47E-03	0.98	4.66E+02	1.04E+05	2.31E+05	1.14E+05	1.04E+05	1.92E+05	8.24E-08
Osmium (76)	Os-193	3.41E-01	8.11E-02	2.18E-01	3.17E-01	1.12E-01	0.939	2.02E+02	1.90E+03	8.00E+03	2.97E+03	2.05E+03	5.80E+03	3.52E-09
Osmium (76)	Os-194	9.31E-04	6.17E-04	9.18E-04	9.31E-04	1.11E-03	0.994	1.16E-01	3.45E+03	5.20E+03	3.50E+03	3.45E+03	2.88E+03	1.12E-05
Osmium (76)	Os-194+D	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	0.903	1.16E-01	6.74E+00	2.95E+01	1.13E+01	7.45E+00	1.66E+01	2.20E-08
Osmium (76)	Os-194+E	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	0.903	1.16E-01	6.74E+00	2.95E+01	1.13E+01	7.45E+00	1.66E+01	2.20E-08
Phosphorus (15)	P-30	5.69E+00	1.21E+00	3.38E+00	5.17E+00	1.32E+00	0.883	1.46E+05	8.74E+04	4.12E+05	1.47E+05	9.62E+04	3.77E+05	3.49E-11
Phosphorus (15)	P-32	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	0.927	1.77E+01	2.83E+03	4.64E+03	3.41E+03	2.91E+03	5.78E+02	9.92E-09
Phosphorus (15)	P-33	5.02E-05	2.37E-05	4.40E-05	5.00E-05	4.25E-05	0.927	9.96E+00	6.45E+05	1.37E+06	7.35E+05	6.47E+05	7.62E+05	4.15E-06
Protactinium (91)	Pa-227	5.65E-02	1.92E-02	4.61E-02	5.65E-02	2.11E-02	1	9.51E+03	5.07E+05	1.49E+06	6.22E+05	5.07E+05	1.36E+06	2.35E-08
Protactinium (91)	Pa-228	6.38E+00	1.24E+00	3.54E+00	5.54E+00	1.23E+00	1	2.76E+02	1.30E+02	6.68E+02	2.34E+02	1.50E+02	6.78E+02	2.09E-10
Protactinium (91)	Pa-230	3.56E+00	7.14E-01	2.03E+00	3.13E+00	7.08E-01	1	1.45E+01	1.23E+01	6.13E+01	2.15E+01	1.40E+01	6.18E+01	3.77E-10
Protactinium (91)	Pa-231	1.76E-01	4.03E-02	1.12E-01	1.66E-01	4.41E-02	0.994	2.12E-05	1.72E+01	7.52E+01	2.70E+01	1.83E+01	6.87E+01	3.65E-04
Protactinium (91)	Pa-232	5.35E+00	1.04E+00	2.98E+00	4.68E+00	1.03E+00	0.952	1.93E+02	1.14E+02	5.87E+02	2.05E+02	1.30E+02	5.93E+02	2.66E-10
Protactinium (91)	Pa-233	9.40E-01	2.18E-01	6.10E-01	8.90E-01	2.17E-01	0.951	9.37E+00	3.16E+01	1.36E+02	4.86E+01	3.33E+01	1.37E+02	1.52E-09
Protactinium (91)	Pa-234	1.09E+01	2.11E+00	6.04E+00	9.47E+00	2.10E+00	0.957	9.06E+02	2.62E+02	1.35E+03	4.72E+02	3.01E+02	1.36E+03	1.31E-10
Protactinium (91)	Pa-234m	9.85E-02	3.13E-02	6.21E-02	8.80E-02	1.26E-01	0.999	3.11E+05	9.53E+06	2.99E+07	1.51E+07	1.07E+07	7.45E+06	1.39E-08
Lead (82)	Pb-195m	8.67E+00	1.78E+00	5.04E+00	7.78E+00	1.77E+00	0.902	2.31E+04	8.87E+03	4.33E+04	1.53E+04	9.90E+03	4.34E+04	1.46E-10
Lead (82)	Pb-198	2.05E+00	4.74E-01	1.31E+00	1.92E+00	4.74E-01	0.936	2.53E+03	3.97E+03	1.72E+04	6.23E+03	4.24E+03	1.72E+04	6.02E-10
Lead (82)	Pb-199	8.56E+00	1.61E+00	4.61E+00	7.31E+00	1.59E+00	0.958	4.05E+03	1.49E+03	7.89E+03	2.76E+03	1.74E+03	8.01E+03	1.42E-10
Lead (82)	Pb-200	7.63E-01	2.11E-01	5.46E-01	7.39E-01	2.17E-01	0.939	2.82E+02	1.19E+03	4.30E+03	1.66E+03	1.23E+03	4.17E+03	1.63E-09
Lead (82)	Pb-201	3.99E+00	8.34E-01	2.35E+00	3.58E+00	8.26E-01	0.96	6.46E+02	5.08E+02	2.43E+03	8.62E+02	5.66E+02	2.45E+03	3.07E-10
Lead (82)	Pb-202	7.33E-06	7.33E-06	7.33E-06	7.33E-06	2.23E-04	1	2.31E-06	4.11E+05	4.11E+05	4.11E+05	4.11E+05	1.35E+04	6.97E+01
Lead (82)	Pb-202+D	1.40E+01					0.906	2.31E-06	2.37E-01					4.03E-05
Lead (82)	Pb-202+E	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	0.906	2.31E-06	1.43E+00	6.46E+00	2.32E+00	1.55E+00	6.47E+00	2.42E-04
Lead (82)	Pb-202m	1.17E+01	2.29E+00	6.56E+00	1.03E+01	2.25E+00	0.994	1.68E+03	4.36E+02	2.21E+03	7.74E+02	4.94E+02	2.26E+03	1.02E-10
Lead (82)	Pb-203	1.38E+00	3.34E-01	9.12E-01	1.31E+00	3.34E-01	0.921	1.17E+02	2.77E+02	1.14E+03	4.18E+02	2.91E+02	1.14E+03	9.34E-10
Lead (82)	Pb-205	8.19E-06	8.19E-06	8.19E-06	8.19E-06	2.43E-04	1	4.85E-08	3.68E+05	3.68E+05	3.68E+05	3.68E+05	1.24E+04	3.02E+03
Lead (82)	Pb-209	7.52E-04	2.95E-04	5.95E-04	7.40E-04	3.72E-03	0.927	1.87E+03	8.07E+06	2.06E+07	1.02E+07	8.19E+06	1.63E+06	1.75E-06
Lead (82)	Pb-210	1.98E-03	1.26E-03	1.96E-03	1.98E-03	2.49E-03	0.996	3.11E-02	1.55E+03	2.43E+03	1.57E+03	1.55E+03	1.24E+03	2.04E-05
Lead (82)	Pb-211	2.91E-01	6.17E-02	1.69E-01	2.59E-01	1.11E-01	0.894	1.01E+04	1.17E+05	5.51E+05	2.01E+05	1.31E+05	3.07E+05	4.74E-09
Lead (82)	Pb-212	6.45E-01	1.59E-01	4.36E-01	6.21E-01	1.58E-01	0.919	5.71E+02	2.90E+03	1.18E+04	4.28E+03	3.01E+03	1.19E+04	2.09E-09
Lead (82)	Pb-214	1.24E+00	2.78E-01	7.80E-01	1.16E+00	2.80E-01	0.929	1.36E+04	3.55E+04	1.59E+05	5.65E+04	3.80E+04	1.57E+05	1.09E-09
Palladium (46)	Pd-100	2.89E-01	1.04E-01	2.41E-01	2.89E-01	1.24E-01	0.973	6.97E+01	7.46E+02	2.07E+03	8.96E+02	7.46E+02	1.74E+03	2.08E-09
Palladium (46)	Pd-101	1.74E+00	3.52E-01	1.01E+00	1.55E+00	3.61E-01	0.893	7.34E+02	1.43E+03	7.02E+03	2.46E+03	1.59E+03	6.86E+03	3.81E-10
Palladium (46)	Pd-103	1.88E-03	1.43E-03	1.66E-03	1.84E-03	8.95E-03	0.998	1.49E+01	2.39E+04	3.14E+04	2.71E+04	2.45E+04	5.03E+03	3.20E-07
Palladium (46)	Pd-107	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.07E-07						
Palladium (46)	Pd-109	1.80E-02	7.22E-03	1.41E-02	1.75E-02	4.35E-02	0.992	4.52E+02	7.63E+04	1.90E+05	9.71E+04	7.82E+04	3.15E+04	3.57E-08
Promethium (61)	Pm-141	4.18E+00	8.43E-01	2.39E+00	3.71E+00	9.02E-01	0.877	1.74E+04	1.43E+04	7.10E+04	2.51E+04	1.61E+04	6.63E+04	2.25E-10
Promethium (61)	Pm-142	4.89E+00	1.03E+00	2.85E+00	4.40E+00	1.12E+00	0.88	5.40E+05	3.78E+05	1.80E+06	6.47E+05	4.20E+05	1.64E+06	1.93E-10
Promethium (61)	Pm-143	1.66E+00	3.36E-01	9.40E-01	1.47E+00	3.47E-01	0.918	9.55E-01	3.07E+00	1.52E+01	5.42E+00	3.47E+00	1.47E+01	8.92E-10
Promethium (61)	Pm-144	8.65E+00	1.75E+00	4.98E+00	7.72E+00	1.74E+00	0.875	6.97E-01	5.52E-01	2.74E+00	9.60E-01	6.19E-01	2.75E+00	2.21E-10
Promethium (61)	Pm-145	2.31E-02	1.58E-02	2.26E-02	2.31E-02	3.05E-02	0.968	3.92E-02	1.37E+02	2.01E+02	1.41E+02	1.37E+02	1.04E+02	9.86E-07
Promethium (61)	Pm-146	4.12E+00	8.37E-01	2.39E+00	3.69E+00	8.39E-01	0.873	1.25E-01	8.90E-01	4.38E+00	1.54E+00	9.94E-01	4.37E+00	2.01E-09
Promethium (61)	Pm-147	4.29E-05	1.88E-05	3.66E-05	4.27E-05	3.27E-05	0.942	2.64E-01	8.48E+04	1.93E+05	9.95E+04	8.52E+04	1.11E+05	9.16E-05
Promethium (61)	Pm-148	3.49E+00	6.49E-01	1.85E+00	2.97E+00	7.13E-01	0.845	4.71E+01	4.81E+01	2.59E+02	9.05E+01	5.66E+01	2.35E+02	2.93E-10
Promethium (61)	Pm-148m	1.12E+01	2.26E+00	6.43E+00	1.00E+01	2.23E+00	0.875	6.12E+00	1.88E+00	9.36E+00	3.28E+00	2.11E+00	9.48E+00	8.81E-11
Promethium (61)	Pm-149	5.95E-02	1.45E-02	3.77E-02	5.56E-02	4.71E-02	0.898	1.14E+02	6.45E+03	2.65E+04	1.02E+04	6.90E+03	8.13E+03	1.63E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Promethium (61)	Pm-150	8.56E+00	1.59E+00	4.57E+00	7.29E+00	1.65E+00	0.899	2.27E+03	8.86E+02	4.77E+03	1.66E+03	1.04E+03	4.61E+03	1.14E-10
Promethium (61)	Pm-151	1.61E+00	3.52E-01	9.88E-01	1.48E+00	3.71E-01	0.939	2.14E+02	4.26E+02	1.94E+03	6.93E+02	4.62E+02	1.85E+03	5.84E-10
Polonium (84)	Po-203	9.53E+00	1.80E+00	5.17E+00	8.17E+00	1.79E+00	0.935	9.92E+03	3.35E+03	1.77E+04	6.19E+03	3.91E+03	1.79E+04	1.33E-10
Polonium (84)	Po-205	9.16E+00	1.74E+00	4.96E+00	7.87E+00	1.72E+00	0.955	3.37E+03	1.16E+03	6.12E+03	2.14E+03	1.35E+03	6.20E+03	1.37E-10
Polonium (84)	Po-207	7.59E+00	1.47E+00	4.20E+00	6.58E+00	1.45E+00	0.955	1.04E+03	4.32E+02	2.23E+03	7.82E+02	4.98E+02	2.27E+03	1.67E-10
Polonium (84)	Po-210	4.92E-05	9.55E-06	2.74E-05	4.31E-05	9.44E-06	0.86	1.83E+00	1.55E+05	7.99E+05	2.78E+05	1.77E+05	8.08E+05	3.45E-05
Polonium (84)	Po-211	4.48E-02	8.77E-03	2.52E-02	3.94E-02	8.66E-03	0.865	4.24E+07	3.29E+09	1.68E+10	5.86E+09	3.75E+09	1.70E+10	3.18E-08
Polonium (84)	Po-212	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.17E+13						
Polonium (84)	Po-213	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	5.20E+12						
Polonium (84)	Po-214	4.83E-04	9.36E-05	2.69E-04	4.23E-04	9.25E-05	0.861	1.33E+11	9.63E+14	4.97E+15	1.73E+15	1.10E+15	5.03E+15	3.01E-06
Polonium (84)	Po-215	9.44E-04	2.00E-04	5.69E-04	8.67E-04	1.96E-04	0.89	1.23E+10	4.40E+13	2.08E+14	7.30E+13	4.79E+13	2.12E+14	1.50E-06
Polonium (84)	Po-216	9.81E-05	1.90E-05	5.45E-05	8.60E-05	1.88E-05	0.86	1.46E+08	5.20E+12	2.68E+13	9.37E+12	5.93E+12	2.72E+13	1.50E-05
Polonium (84)	Po-218	5.32E-05	1.02E-05	2.93E-05	4.64E-05	1.01E-05	0.858	1.19E+05	7.89E+09	4.09E+10	1.43E+10	9.03E+09	4.15E+10	2.79E-05
Praseodymium (59)	Pr-136	1.22E+01	2.35E+00	6.71E+00	1.06E+01	2.38E+00	0.855	2.78E+04	8.03E+03	4.17E+04	1.46E+04	9.24E+03	4.11E+04	7.62E-11
Praseodymium (59)	Pr-137	2.69E+00	5.54E-01	1.56E+00	2.41E+00	5.80E-01	0.885	4.76E+03	6.02E+03	2.92E+04	1.04E+04	6.72E+03	2.79E+04	3.37E-10
Praseodymium (59)	Pr-138	4.53E+00	9.57E-01	2.67E+00	4.08E+00	1.05E+00	0.879	2.51E+05	1.90E+05	8.99E+05	3.23E+05	2.11E+05	8.21E+05	2.02E-10
Praseodymium (59)	Pr-138m	1.42E+01	2.76E+00	7.89E+00	1.24E+01	2.74E+00	0.868	2.89E+03	7.08E+02	3.63E+03	1.27E+03	8.09E+02	3.66E+03	6.55E-11
Praseodymium (59)	Pr-139	5.56E-01	1.20E-01	3.25E-01	4.98E-01	1.37E-01	0.937	1.35E+03	7.78E+03	3.61E+04	1.33E+04	8.69E+03	3.17E+04	1.56E-09
Praseodymium (59)	Pr-142	4.03E-01	8.17E-02	2.09E-01	3.32E-01	1.72E-01	0.821	3.17E+02	2.89E+03	1.42E+04	5.57E+03	3.51E+03	6.78E+03	2.51E-09
Praseodymium (59)	Pr-142m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	2.49E+04						
Praseodymium (59)	Pr-143	2.91E-03	1.52E-03	2.39E-03	2.85E-03	2.40E-02	0.864	1.87E+01	2.23E+04	4.27E+04	2.72E+04	2.28E+04	2.70E+03	3.32E-07
Praseodymium (59)	Pr-144	2.67E-01	7.14E-02	1.52E-01	2.28E-01	1.90E-01	0.821	2.11E+04	2.90E+05	1.08E+06	5.07E+05	3.40E+05	4.06E+05	3.84E-09
Praseodymium (59)	Pr-144m	1.20E-02	6.23E-03	9.66E-03	1.14E-02	1.23E-02	0.964	5.06E+04	1.32E+07	2.54E+07	1.64E+07	1.39E+07	1.29E+07	7.28E-08
Praseodymium (59)	Pr-145	9.51E-02	2.69E-02	5.82E-02	8.49E-02	1.09E-01	0.86	1.02E+03	3.74E+04	1.32E+05	6.11E+04	4.19E+04	3.25E+04	1.04E-08
Praseodymium (59)	Pr-147	4.74E+00	9.57E-01	2.69E+00	4.18E+00	1.04E+00	0.896	2.68E+04	1.90E+04	9.41E+04	3.35E+04	2.15E+04	8.62E+04	2.02E-10
Platinum (78)	Pt-186	4.01E+00	8.21E-01	2.31E+00	3.58E+00	8.17E-01	0.887	3.04E+03	2.57E+03	1.26E+04	4.46E+03	2.88E+03	1.26E+04	3.06E-10
Platinum (78)	Pt-188	7.68E-01	2.05E-01	5.32E-01	7.37E-01	2.12E-01	0.928	2.48E+01	1.05E+02	3.92E+02	1.51E+02	1.09E+02	3.79E+02	1.54E-09
Platinum (78)	Pt-189	1.47E+00	3.39E-01	9.08E-01	1.33E+00	3.49E-01	0.947	5.58E+02	1.21E+03	5.23E+03	1.96E+03	1.33E+03	5.09E+03	7.93E-10
Platinum (78)	Pt-191	1.24E+00	3.11E-01	8.17E-01	1.16E+00	3.24E-01	0.945	9.03E+01	2.31E+02	9.24E+02	3.52E+02	2.48E+02	8.87E+02	9.49E-10
Platinum (78)	Pt-193	6.30E-06	6.30E-06	6.30E-06	6.30E-06	1.80E-04	1	1.39E-02	4.81E+05	4.81E+05	4.81E+05	4.81E+05	1.69E+04	1.30E-02
Platinum (78)	Pt-193m	2.22E-02	9.34E-03	1.98E-02	2.22E-02	1.09E-02	0.976	5.84E+01	8.12E+03	1.93E+04	9.12E+03	8.12E+03	1.66E+04	5.21E-08
Platinum (78)	Pt-195m	1.65E-01	6.40E-02	1.42E-01	1.65E-01	7.22E-02	0.955	6.29E+01	1.20E+03	3.10E+03	1.40E+03	1.20E+03	2.75E+03	7.22E-09
Platinum (78)	Pt-197	7.25E-02	2.29E-02	5.61E-02	7.14E-02	2.79E-02	0.961	3.32E+02	1.43E+04	4.53E+04	1.85E+04	1.46E+04	3.73E+04	1.65E-08
Platinum (78)	Pt-197m	3.04E-01	8.08E-02	2.07E-01	2.89E-01	8.50E-02	0.959	3.86E+03	3.99E+04	1.50E+05	5.85E+04	4.19E+04	1.43E+05	3.95E-09
Platinum (78)	Pt-199	1.10E+00	2.33E-01	6.53E-01	9.96E-01	2.88E-01	0.927	1.18E+04	3.50E+04	1.65E+05	5.88E+04	3.86E+04	1.33E+05	1.14E-09
Platinum (78)	Pt-200	2.01E-01	5.84E-02	1.47E-01	1.96E-01	6.37E-02	0.95	4.86E+02	7.64E+03	2.64E+04	1.04E+04	7.86E+03	2.42E+04	6.11E-09
Plutonium (94)	Pu-234	2.07E-01	6.43E-02	1.63E-01	2.07E-01	6.75E-02	0.999	6.90E+02	1.00E+04	3.23E+04	1.28E+04	1.00E+04	3.08E+04	6.61E-09
Plutonium (94)	Pu-235	3.04E-01	8.88E-02	2.28E-01	2.97E-01	9.34E-02	0.955	1.44E+04	1.49E+05	5.11E+05	2.00E+05	1.53E+05	4.86E+05	4.73E-09
Plutonium (94)	Pu-236	1.81E-04	1.18E-04	1.61E-04	1.79E-04	8.58E-04	0.999	2.43E-01	1.88E+04	2.88E+04	2.11E+04	1.90E+04	3.96E+03	3.54E-05
Plutonium (94)	Pu-237	1.45E-01	4.57E-02	1.14E-01	1.45E-01	4.96E-02	0.999	5.58E+00	1.17E+02	3.70E+02	1.48E+02	1.17E+02	3.41E+02	9.60E-09
Plutonium (94)	Pu-238	1.16E-04	8.77E-05	1.08E-04	1.16E-04	7.31E-04	0.999	7.90E-03	2.60E+04	3.45E+04	2.81E+04	2.62E+04	4.14E+03	1.52E-03
Plutonium (94)	Pu-239	2.63E-04	8.88E-05	1.88E-04	2.52E-04	3.31E-04	0.999	2.88E-05	1.15E+04	3.40E+04	1.60E+04	1.20E+04	9.09E+03	1.85E-01
Plutonium (94)	Pu-240	1.12E-04	8.58E-05	1.06E-04	1.12E-04	7.01E-04	0.999	1.06E-04	2.68E+04	3.51E+04	2.86E+04	2.68E+04	4.30E+03	1.18E-01
Plutonium (94)	Pu-241	5.30E-06	1.63E-06	4.10E-06	5.28E-06	2.01E-06	0.974	4.81E-02	5.98E+05	1.94E+06	7.72E+05	6.00E+05	1.58E+06	5.81E-03
Plutonium (94)	Pu-242	9.90E-05	7.25E-05	9.21E-05	9.90E-05	5.81E-04	0.999	1.84E-06	3.04E+04	4.15E+04	3.27E+04	3.04E+04	5.19E+03	7.76E+00
Plutonium (94)	Pu-243	7.11E-02	2.33E-02	5.61E-02	7.01E-02	2.65E-02	0.952	1.22E+03	5.45E+04	1.66E+05	6.90E+04	5.53E+04	1.46E+05	2.10E-08
Plutonium (94)	Pu-244	1.38E-01	2.41E-02	6.96E-02	1.13E-01	2.36E-02	1.78	8.66E-09	1.23E+01	7.03E+01	2.43E+01	1.50E+01	7.18E+01	6.72E-01
Plutonium (94)	Pu-244+D	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	0.973	8.66E-09	1.52E+00	7.65E+00	2.71E+00	1.73E+00	6.47E+00	8.32E-02
Plutonium (94)	Pu-244+E	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	0.973	8.66E-09	1.52E+00	7.65E+00	2.71E+00	1.73E+00	6.47E+00	8.32E-02
Plutonium (94)	Pu-245	2.22E+00	4.61E-01	1.31E+00	2.00E+00	4.74E-01	0.95	5.78E+02	8.26E+02	3.98E+03	1.40E+03	9.18E+02	3.87E+03	6.79E-10
Plutonium (94)	Pu-246	5.17E-01	1.38E-01	3.66E-01	5.04E-01	1.44E-01	0.955	2.33E+01	1.42E+02	5.34E+02	2.01E+02	1.46E+02	5.12E+02	2.91E-09
Radium (88)	Ra-222	4.70E-02	1.03E-02	2.95E-02	4.40E-02	1.01E-02	0.903	5.75E+05	4.08E+07	1.86E+08	6.51E+07	4.36E+07	1.90E+08	3.06E-08
Radium (88)	Ra-223	5.52E-01	1.41E-01	3.79E-01	5.30E-01	1.41E-01	0.958	2.21E+01	1.26E+02	4.94E+02	1.84E+02	1.31E+02	4.92E+02	2.46E-09
Radium (88)	Ra-223+D	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	0.945	2.21E+01	5.07E+01	2.16E+02	7.92E+01	5.42E+01	1.64E+02	9.92E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Radium (88)	Ra-223+E	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	0.945	2.21E+01	5.07E+01	2.16E+02	7.92E+01	5.42E+01	1.64E+02	9.92E-10
Radium (88)	Ra-224	4.72E-02	1.09E-02	3.10E-02	4.51E-02	1.07E-02	0.916	6.91E+01	4.81E+03	2.08E+04	7.34E+03	5.03E+03	2.13E+04	3.03E-08
Radium (88)	Ra-224+D	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	0.898	6.91E+01	2.40E+01	1.39E+02	4.82E+01	2.96E+01	1.38E+02	1.51E-10
Radium (88)	Ra-224+E	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	0.898	6.91E+01	2.40E+01	1.39E+02	4.82E+01	2.96E+01	1.38E+02	1.51E-10
Radium (88)	Ra-225	8.60E-03	6.21E-03	8.54E-03	8.58E-03	1.25E-02	0.977	1.71E+01	6.13E+03	8.48E+03	6.17E+03	6.14E+03	4.22E+03	1.57E-07
Radium (88)	Ra-225+D	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	0.964	1.71E+01	4.49E+01	2.06E+02	7.43E+01	4.94E+01	1.71E+02	1.15E-09
Radium (88)	Ra-225+E	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	0.964	1.71E+01	4.49E+01	2.06E+02	7.43E+01	4.94E+01	1.71E+02	1.15E-09
Radium (88)	Ra-226	2.91E-02	7.24E-03	2.00E-02	2.82E-02	7.13E-03	0.928	4.33E-04	1.12E+02	4.49E+02	1.63E+02	1.15E+02	4.55E+02	1.13E-04
Radium (88)	Ra-226+D	1.06E+01					0.926	4.33E-04	3.07E-01					3.10E-07
Radium (88)	Ra-226+E	1.06E+01	1.94E+00	5.60E+00	8.95E+00	1.97E+00	0.926	4.33E-04	3.06E-01	1.68E+00	5.81E-01	3.63E-01	1.65E+00	3.10E-07
Radium (88)	Ra-227	7.87E-01	1.76E-01	4.89E-01	7.31E-01	2.12E-01	0.979	8.63E+03	3.37E+04	1.51E+05	5.43E+04	3.63E+04	1.25E+05	1.72E-09
Radium (88)	Ra-227+D						0.979	8.63E+03						
Radium (88)	Ra-228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.21E-01						
Radium (88)	Ra-228+D	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	0.926	1.21E-01	6.11E-01	3.21E+00	1.12E+00	7.06E-01	3.15E+00	2.24E-09
Radium (88)	Ra-228+E	1.53E+01	2.74E+00	7.89E+00	1.27E+01	2.78E+00	0.926	1.21E-01	2.25E-01	1.26E+00	4.38E-01	2.71E-01	1.24E+00	8.27E-10
Rubidium (37)	Rb-79	7.39E+00	1.54E+00	4.38E+00	6.70E+00	1.61E+00	0.914	1.59E+04	7.10E+03	3.39E+04	1.20E+04	7.83E+03	3.25E+04	6.84E-11
Rubidium (37)	Rb-80	7.03E+00	1.49E+00	4.16E+00	6.38E+00	1.61E+00	0.883	6.43E+05	3.12E+05	1.47E+06	5.27E+05	3.44E+05	1.36E+06	7.53E-11
Rubidium (37)	Rb-81	3.26E+00	6.94E-01	1.98E+00	3.00E+00	6.98E-01	0.902	1.33E+03	1.36E+03	6.38E+03	2.24E+03	1.47E+03	6.34E+03	1.61E-10
Rubidium (37)	Rb-81m	1.18E-02	4.21E-03	9.85E-03	1.18E-02	5.73E-03	0.999	1.14E+04	2.90E+06	8.14E+06	3.48E+06	2.90E+06	5.99E+06	4.01E-08
Rubidium (37)	Rb-82	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	2.80E+05	1.56E+05	7.44E+05	2.65E+05	1.72E+05	6.82E+05	8.87E-11
Rubidium (37)	Rb-82m	1.69E+01	3.25E+00	9.33E+00	1.47E+01	3.20E+00	0.862	9.79E+02	2.02E+02	1.05E+03	3.67E+02	2.32E+02	1.07E+03	3.28E-11
Rubidium (37)	Rb-83	2.74E+00	5.63E-01	1.61E+00	2.48E+00	5.55E-01	0.944	2.93E+00	3.61E+00	1.76E+01	6.16E+00	3.99E+00	1.78E+01	1.98E-10
Rubidium (37)	Rb-84	5.26E+00	1.03E+00	2.95E+00	4.63E+00	1.02E+00	0.94	7.72E+00	4.70E+00	2.41E+01	8.39E+00	5.35E+00	2.43E+01	9.93E-11
Rubidium (37)	Rb-86	5.87E-01	1.17E-01	3.19E-01	5.04E-01	1.95E-01	0.844	1.36E+01	8.23E+01	4.12E+02	1.52E+02	9.60E+01	2.48E+02	1.01E-09
Rubidium (37)	Rb-87	1.21E-04	5.24E-05	1.04E-04	1.21E-04	8.52E-05	0.927	1.47E-11	2.68E+04	6.20E+04	3.14E+04	2.69E+04	3.81E+04	3.07E+05
Rubidium (37)	Rb-88	4.21E+00	7.61E-01	2.11E+00	3.43E+00	8.65E-01	0.809	2.05E+04	1.81E+04	1.00E+05	3.61E+04	2.22E+04	8.81E+04	1.51E-10
Rubidium (37)	Rb-89	1.30E+01	2.28E+00	6.56E+00	1.07E+01	2.30E+00	0.847	2.40E+04	6.54E+03	3.74E+04	1.30E+04	7.97E+03	3.71E+04	4.72E-11
Rhenium (75)	Re-177	3.28E+00	6.66E-01	1.85E+00	2.85E+00	6.94E-01	0.89	2.60E+04	2.68E+04	1.32E+05	4.77E+04	3.08E+04	1.27E+05	3.54E-10
Rhenium (75)	Re-178	7.05E+00	1.32E+00	3.75E+00	5.95E+00	1.34E+00	0.873	2.76E+04	1.35E+04	7.21E+04	2.54E+04	1.60E+04	7.09E+04	1.69E-10
Rhenium (75)	Re-180	6.60E+00	1.31E+00	3.69E+00	5.76E+00	1.31E+00	0.859	1.50E+05	7.96E+04	4.02E+05	1.42E+05	9.12E+04	4.02E+05	1.85E-10
Rhenium (75)	Re-181	3.99E+00	8.39E-01	2.35E+00	3.58E+00	8.40E-01	0.945	3.04E+02	2.42E+02	1.15E+03	4.12E+02	2.70E+02	1.15E+03	2.80E-10
Rhenium (75)	Re-182	1.03E+01	2.03E+00	5.76E+00	8.93E+00	2.02E+00	0.94	9.49E+01	2.96E+01	1.49E+02	5.27E+01	3.40E+01	1.51E+02	1.10E-10
Rhenium (75)	Re-182m	6.70E+00	1.27E+00	3.60E+00	5.69E+00	1.26E+00	0.926	4.78E+02	2.32E+02	1.22E+03	4.32E+02	2.73E+02	1.23E+03	1.72E-10
Rhenium (75)	Re-184	4.92E+00	9.79E-01	2.76E+00	4.31E+00	9.77E-01	0.897	6.66E+00	4.54E+00	2.29E+01	8.11E+00	5.19E+00	2.29E+01	2.44E-10
Rhenium (75)	Re-184m	1.90E+00	4.16E-01	1.14E+00	1.72E+00	4.19E-01	0.952	1.53E+00	3.25E+00	1.49E+01	5.41E+00	3.60E+00	1.48E+01	7.57E-10
Rhenium (75)	Re-186	7.18E-02	2.24E-02	5.45E-02	7.07E-02	5.16E-02	0.954	6.70E+01	2.94E+03	9.45E+03	3.88E+03	2.99E+03	4.10E+03	1.59E-08
Rhenium (75)	Re-186m	2.35E-02	1.13E-02	2.14E-02	2.35E-02	1.49E-02	0.985	3.47E-06	1.30E+02	2.71E+02	1.43E+02	1.30E+02	2.05E+02	1.36E-02
Rhenium (75)	Re-186m+D	9.55E-02					0.973	3.47E-06	3.24E+01					3.38E-03
Rhenium (75)	Re-186m+E	9.53E-02	3.36E-02	7.59E-02	9.42E-02	6.65E-02	0.973	3.47E-06	3.25E+01	9.22E+01	4.08E+01	3.29E+01	4.65E+01	3.38E-03
Rhenium (75)	Re-187	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.39E-11						
Rhenium (75)	Re-188	3.11E-01	7.87E-02	1.96E-01	2.85E-01	1.69E-01	0.903	3.58E+02	3.83E+03	1.51E+04	6.09E+03	4.18E+03	7.05E+03	3.91E-09
Rhenium (75)	Re-188m	1.69E-01	6.83E-02	1.46E-01	1.68E-01	7.90E-02	0.953	1.96E+04	3.67E+05	9.06E+05	4.24E+05	3.68E+05	7.83E+05	6.83E-09
Rhenium (75)	Re-189	3.08E-01	7.57E-02	2.05E-01	2.95E-01	9.81E-02	0.921	2.50E+02	2.65E+03	1.08E+04	3.98E+03	2.77E+03	8.32E+03	3.90E-09
Rhodium (45)	Rh-100	1.72E+01	2.98E+00	8.65E+00	1.41E+01	2.91E+00	0.886	2.92E+02	5.78E+01	3.32E+02	1.15E+02	7.03E+01	3.41E+02	3.84E-11
Rhodium (45)	Rh-101	1.12E+00	2.78E-01	7.68E-01	1.09E+00	2.80E-01	0.931	2.17E-01	3.20E+00	1.29E+01	4.68E+00	3.31E+00	1.28E+01	2.90E-09
Rhodium (45)	Rh-101m	1.51E+00	3.30E-01	9.42E-01	1.41E+00	3.30E-01	0.907	5.83E+01	1.29E+02	5.86E+02	2.05E+02	1.37E+02	5.86E+02	4.32E-10
Rhodium (45)	Rh-102	1.22E+01	2.39E+00	6.84E+00	1.07E+01	2.36E+00	0.861	2.39E-01	3.23E-01	1.65E+00	5.74E-01	3.67E-01	1.67E+00	2.68E-10
Rhodium (45)	Rh-102m	2.65E+00	5.43E-01	1.54E+00	2.39E+00	5.57E-01	0.987	1.22E+00	2.00E+00	9.74E+00	3.42E+00	2.21E+00	9.49E+00	3.23E-10
Rhodium (45)	Rh-103m	1.70E-04	1.63E-04	1.70E-04	1.70E-04	1.03E-03	0.998	6.49E+03	1.16E+08	1.20E+08	1.16E+08	1.16E+08	1.89E+07	3.56E-06
Rhodium (45)	Rh-105	3.97E-01	8.75E-02	2.50E-01	3.73E-01	8.66E-02	0.905	1.72E+02	1.44E+03	6.53E+03	2.29E+03	1.53E+03	6.60E+03	1.71E-09
Rhodium (45)	Rh-106	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	7.31E+05	2.00E+06	8.97E+06	3.42E+06	2.24E+06	6.19E+06	5.64E-10
Rhodium (45)	Rh-106m	1.71E+01	3.25E+00	9.34E+00	1.48E+01	3.21E+00	0.87	2.76E+03	5.60E+02	2.94E+03	1.02E+03	6.46E+02	2.98E+03	4.17E-11
Rhodium (45)	Rh-107	1.62E+00	3.56E-01	1.01E+00	1.51E+00	3.94E-01	0.9	1.68E+04	3.47E+04	1.58E+05	5.58E+04	3.71E+04	1.42E+05	4.29E-10
Rhodium (45)	Rh-99	3.15E+00	6.60E-01	1.86E+00	2.83E+00	6.61E-01	0.891	1.58E+01	1.70E+01	8.09E+01	2.87E+01	1.88E+01	8.09E+01	2.06E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Rhodium (45)	Rh-99m	3.79E+00	7.53E-01	2.16E+00	3.36E+00	7.46E-01	0.859	1.29E+03	1.20E+03	6.01E+03	2.09E+03	1.35E+03	6.07E+03	1.78E-10
Radon (86)	Rn-218	4.25E-03	8.56E-04	2.44E-03	3.80E-03	8.46E-04	0.875	6.24E+08	5.05E+11	2.51E+12	8.80E+11	5.65E+11	2.54E+12	3.42E-07
Radon (86)	Rn-219	2.85E-01	6.29E-02	1.78E-01	2.67E-01	6.16E-02	0.911	5.52E+06	6.39E+07	2.90E+08	1.02E+08	6.84E+07	2.96E+08	4.92E-09
Radon (86)	Rn-219+D	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	0.931	5.52E+06	2.13E+07	9.63E+07	3.48E+07	2.32E+07	6.17E+07	1.64E-09
Radon (86)	Rn-219+E	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	0.931	5.52E+06	2.13E+07	9.63E+07	3.48E+07	2.32E+07	6.17E+07	1.64E-09
Radon (86)	Rn-220	2.14E-03	4.36E-04	1.25E-03	1.92E-03	4.31E-04	0.88	3.93E+05	6.27E+08	3.08E+09	1.08E+09	7.00E+08	3.12E+09	6.81E-07
Radon (86)	Rn-222	2.18E-03	4.51E-04	1.29E-03	1.98E-03	4.46E-04	0.883	6.62E+01	1.03E+05	5.00E+05	1.75E+05	1.14E+05	5.06E+05	6.73E-07
Radon (86)	Rn-222+D	1.06E+01	1.94E+00	5.58E+00	8.91E+00	1.96E+00	0.926	6.62E+01	2.03E+01	1.11E+02	3.86E+01	2.41E+01	1.10E+02	1.32E-10
Radon (86)	Rn-222+E	1.06E+01	1.94E+00	5.58E+00	8.93E+00	2.01E+00	0.926	6.62E+01	2.03E+01	1.11E+02	3.86E+01	2.41E+01	1.07E+02	1.32E-10
Ruthenium (44)	Ru-103	2.57E+00	5.32E-01	1.51E+00	2.33E+00	5.24E-01	0.882	6.44E+00	8.56E+00	4.14E+01	1.45E+01	9.45E+00	4.20E+01	2.66E-10
Ruthenium (44)	Ru-105	4.40E+00	8.88E-01	2.54E+00	3.94E+00	9.13E-01	0.898	1.37E+03	1.04E+03	5.16E+03	1.81E+03	1.17E+03	5.02E+03	1.55E-10
Ruthenium (44)	Ru-105+D	4.79E+00	9.75E-01	2.78E+00	4.31E+00	9.99E-01	0.991	1.37E+03	8.67E+02	4.26E+03	1.50E+03	9.64E+02	4.16E+03	1.29E-10
Ruthenium (44)	Ru-106	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.87E-01						
Ruthenium (44)	Ru-106+D	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	6.87E-01	3.79E+00	1.70E+01	6.47E+00	4.23E+00	1.17E+01	1.13E-09
Ruthenium (44)	Ru-106+E	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	6.87E-01	3.79E+00	1.70E+01	6.47E+00	4.23E+00	1.17E+01	1.13E-09
Ruthenium (44)	Ru-94	2.89E+00	5.87E-01	1.68E+00	2.59E+00	5.84E-01	0.951	7.03E+03	7.70E+03	3.79E+04	1.32E+04	8.59E+03	3.82E+04	2.00E-10
Ruthenium (44)	Ru-97	1.09E+00	2.54E-01	7.14E-01	1.04E+00	2.52E-01	0.949	8.72E+01	2.53E+02	1.09E+03	3.87E+02	2.65E+02	1.10E+03	5.46E-10
Sulfur (16)	S-35	1.22E-05	6.96E-06	1.13E-05	1.22E-05	1.55E-05	0.927	2.89E+00	8.14E+05	1.43E+06	8.77E+05	8.14E+05	6.41E+05	1.91E-05
Antimony (51)	Sb-115	4.94E+00	1.02E+00	2.91E+00	4.48E+00	1.04E+00	0.891	1.15E+04	7.83E+03	3.79E+04	1.33E+04	8.65E+03	3.71E+04	1.53E-10
Antimony (51)	Sb-116	1.30E+01	2.37E+00	6.84E+00	1.10E+01	2.37E+00	0.867	2.31E+04	6.14E+03	3.38E+04	1.17E+04	7.28E+03	3.38E+04	6.00E-11
Antimony (51)	Sb-116m	1.83E+01	3.47E+00	9.94E+00	1.58E+01	3.42E+00	0.856	6.04E+03	1.16E+03	6.13E+03	2.14E+03	1.35E+03	6.21E+03	4.32E-11
Antimony (51)	Sb-117	7.35E-01	1.83E-01	4.98E-01	7.05E-01	1.93E-01	0.962	2.17E+03	9.24E+03	3.72E+04	1.36E+04	9.63E+03	3.52E+04	9.67E-10
Antimony (51)	Sb-118m	1.51E+01	2.82E+00	8.11E+00	1.29E+01	2.79E+00	0.87	1.21E+03	2.78E+02	1.49E+03	5.18E+02	3.25E+02	1.51E+03	5.24E-11
Antimony (51)	Sb-119	4.48E-03	4.35E-03	4.49E-03	4.48E-03	1.82E-02	0.992	1.59E+02	1.08E+05	1.11E+05	1.08E+05	1.08E+05	2.66E+04	1.57E-07
Antimony (51)	Sb-120	2.44E+00	5.07E-01	1.43E+00	2.20E+00	5.45E-01	0.927	2.29E+04	3.05E+04	1.47E+05	5.19E+04	3.38E+04	1.37E+05	3.10E-10
Antimony (51)	Sb-120m	1.43E+01	2.70E+00	7.74E+00	1.23E+01	2.66E+00	0.88	4.39E+01	1.05E+01	5.56E+01	1.94E+01	1.23E+01	5.65E+01	5.58E-11
Antimony (51)	Sb-122	2.48E+00	5.07E-01	1.44E+00	2.22E+00	5.66E-01	0.875	9.37E+01	1.30E+02	6.36E+02	2.24E+02	1.45E+02	5.70E+02	3.28E-10
Antimony (51)	Sb-124	1.11E+01	2.00E+00	5.78E+00	9.33E+00	1.98E+00	0.871	4.20E+00	1.33E+00	7.39E+00	2.55E+00	1.58E+00	7.43E+00	7.64E-11
Antimony (51)	Sb-124m	1.98E+00	3.99E-01	1.14E+00	1.77E+00	4.01E-01	0.875	2.35E+05	4.09E+05	2.03E+06	7.11E+05	4.58E+05	2.01E+06	4.19E-10
Antimony (51)	Sb-124n	1.37E-05	1.34E-05	1.38E-05	1.37E-05	5.92E-05	0.993	1.80E+04	3.99E+09	4.08E+09	3.97E+09	3.99E+09	9.24E+08	5.32E-05
Antimony (51)	Sb-125	2.28E+00	4.74E-01	1.34E+00	2.07E+00	4.77E-01	0.881	2.50E-01	1.70E+00	8.16E+00	2.87E+00	1.87E+00	8.09E+00	1.65E-09
Antimony (51)	Sb-126	1.60E+01	3.21E+00	9.14E+00	1.43E+01	3.17E+00	0.866	2.04E+01	4.42E+00	2.21E+01	7.76E+00	4.97E+00	2.23E+01	5.30E-11
Antimony (51)	Sb-126m	8.71E+00	1.76E+00	5.02E+00	7.80E+00	1.81E+00	0.872	1.92E+04	7.60E+03	3.76E+04	1.32E+04	8.49E+03	3.66E+04	9.69E-11
Antimony (51)	Sb-127	3.86E+00	7.76E-01	2.22E+00	3.45E+00	7.89E-01	0.883	6.57E+01	5.80E+01	2.89E+02	1.01E+02	6.49E+01	2.84E+02	2.18E-10
Antimony (51)	Sb-128	1.76E+01	3.49E+00	9.98E+00	1.56E+01	3.48E+00	0.885	6.74E+02	1.30E+02	6.57E+02	2.30E+02	1.47E+02	6.59E+02	4.79E-11
Antimony (51)	Sb-128m	1.13E+01	2.26E+00	6.43E+00	1.00E+01	2.32E+00	0.863	3.50E+04	1.08E+04	5.42E+04	1.90E+04	1.22E+04	5.26E+04	7.67E-11
Antimony (51)	Sb-129	8.54E+00	1.60E+00	4.61E+00	7.33E+00	1.60E+00	0.875	1.41E+03	5.66E+02	3.02E+03	1.05E+03	6.60E+02	3.02E+03	1.01E-10
Antimony (51)	Sb-130	1.88E+01	3.66E+00	1.05E+01	1.64E+01	3.66E+00	0.863	9.11E+03	1.69E+03	8.69E+03	3.04E+03	1.93E+03	8.67E+03	4.67E-11
Antimony (51)	Sb-131	1.13E+01	2.05E+00	5.93E+00	9.55E+00	2.07E+00	0.858	1.58E+04	4.92E+03	2.71E+04	9.37E+03	5.82E+03	2.69E+04	7.89E-11
Scandium (21)	Sc-43	5.95E+00	1.24E+00	3.54E+00	5.43E+00	1.25E+00	0.886	1.56E+03	8.91E+02	4.26E+03	1.50E+03	9.77E+02	4.25E+03	4.77E-11
Scandium (21)	Sc-44	1.24E+01	2.39E+00	6.86E+00	1.08E+01	2.43E+00	0.863	1.55E+03	4.34E+02	2.26E+03	7.86E+02	4.98E+02	2.22E+03	2.40E-11
Scandium (21)	Sc-44m	1.44E+00	3.13E-01	8.93E-01	1.34E+00	3.06E-01	0.902	1.04E+02	2.40E+02	1.10E+03	3.87E+02	2.58E+02	1.13E+03	1.97E-10
Scandium (21)	Sc-46	1.20E+01	2.24E+00	6.43E+00	1.03E+01	2.19E+00	0.847	3.02E+00	9.42E-01	5.04E+00	1.75E+00	1.10E+00	5.14E+00	2.79E-11
Scandium (21)	Sc-47	4.61E-01	1.18E-01	3.25E-01	4.51E-01	1.16E-01	0.926	7.55E+01	5.33E+02	2.08E+03	7.56E+02	5.44E+02	2.11E+03	6.44E-10
Scandium (21)	Sc-48	2.03E+01	3.69E+00	1.07E+01	1.72E+01	3.63E+00	0.84	1.39E+02	2.45E+01	1.35E+02	4.66E+01	2.90E+01	1.37E+02	1.64E-11
Scandium (21)	Sc-49	3.60E-02	1.88E-02	2.74E-02	3.39E-02	1.19E-01	0.815	6.35E+03	6.51E+05	1.24E+06	8.55E+05	6.91E+05	1.97E+05	9.76E-09
Selenium (34)	Se-70	5.32E+00	1.12E+00	3.17E+00	4.83E+00	1.16E+00	0.936	8.88E+03	5.38E+03	2.55E+04	9.01E+03	5.92E+03	2.45E+04	8.22E-11
Selenium (34)	Se-73	5.69E+00	1.22E+00	3.43E+00	5.22E+00	1.25E+00	0.905	8.49E+02	4.97E+02	2.32E+03	8.23E+02	5.41E+02	2.26E+03	8.29E-11
Selenium (34)	Se-73m	1.33E+00	2.78E-01	7.87E-01	1.21E+00	2.94E-01	0.941	9.34E+03	2.24E+04	1.08E+05	3.80E+04	2.47E+04	1.02E+05	3.40E-10
Selenium (34)	Se-75	1.83E+00	4.29E-01	1.20E+00	1.75E+00	4.21E-01	0.918	2.11E+00	4.31E+00	1.84E+01	6.54E+00	4.51E+00	1.87E+01	2.97E-10
Selenium (34)	Se-77m	3.64E-01	9.23E-02	2.54E-01	3.54E-01	9.07E-02	0.98	1.25E+06	1.06E+07	4.17E+07	1.52E+07	1.09E+07	4.24E+07	1.26E-09
Selenium (34)	Se-79	1.53E-05	8.69E-06	1.42E-05	1.53E-05	1.91E-05	0.927	1.07E-05	2.13E+05	3.74E+05	2.29E+05	2.13E+05	1.70E+05	3.06E+00
Selenium (34)	Se-81	6.53E-02	2.00E-02	4.27E-02	6.06E-02	9.50E-02	0.878	1.97E+04	1.03E+06	3.38E+06	1.58E+06	1.11E+06	7.11E+05	8.26E-09
Selenium (34)	Se-81m	4.57E-02	1.40E-02	3.56E-02	4.57E-02	1.47E-02	0.987	6.36E+03	4.25E+05	1.38E+06	5.45E+05	4.25E+05	1.32E+06	1.05E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Selenium (34)	Se-83	1.44E+01	2.69E+00	7.74E+00	1.23E+01	2.67E+00	0.881	1.62E+04	3.84E+03	2.06E+04	7.15E+03	4.49E+03	2.07E+04	3.82E-11
Silicon (14)	Si-31	1.98E-02	9.62E-03	1.47E-02	1.85E-02	8.33E-02	0.834	2.32E+03	4.23E+05	8.69E+05	5.69E+05	4.52E+05	1.00E+05	1.10E-08
Silicon (14)	Si-32	2.97E-05	1.51E-05	2.67E-05	2.97E-05	2.92E-05	0.927	1.54E-03	1.10E+05	2.16E+05	1.22E+05	1.10E+05	1.11E+05	4.42E-03
Silicon (14)	Si-32+D	2.04E-02					0.928	1.54E-03	1.59E+02					6.43E-06
Silicon (14)	Si-32+E	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	0.928	1.54E-03	1.60E+02	2.62E+02	1.92E+02	1.64E+02	3.27E+01	6.44E-06
Samarium (62)	Sm-141	8.00E+00	1.58E+00	4.49E+00	7.03E+00	1.62E+00	0.851	3.57E+04	1.58E+04	8.00E+04	2.81E+04	1.80E+04	7.79E+04	1.21E-10
Samarium (62)	Sm-141m	1.13E+01	2.20E+00	6.29E+00	9.87E+00	2.21E+00	0.89	1.61E+04	4.82E+03	2.48E+04	8.68E+03	5.53E+03	2.47E+04	8.19E-11
Samarium (62)	Sm-142	3.79E-01	8.84E-02	2.29E-01	3.43E-01	1.04E-01	0.944	5.02E+03	4.23E+04	1.81E+05	6.99E+04	4.67E+04	1.53E+05	2.32E-09
Samarium (62)	Sm-145	5.43E-02	3.60E-02	5.32E-02	5.43E-02	6.49E-02	0.965	7.44E-01	8.15E+01	1.23E+02	8.32E+01	8.15E+01	6.82E+01	3.08E-08
Samarium (62)	Sm-146	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.73E-09						
Samarium (62)	Sm-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.54E-12						
Samarium (62)	Sm-151	6.75E-07	6.68E-07	6.75E-07	6.75E-07	4.13E-06	0.998	7.70E-03	4.49E+06	4.54E+06	4.49E+06	4.49E+06	7.33E+05	1.71E-01
Samarium (62)	Sm-153	1.39E-01	5.17E-02	1.13E-01	1.39E-01	7.12E-02	0.94	1.30E+02	2.99E+03	8.06E+03	3.67E+03	3.01E+03	5.85E+03	6.83E-09
Samarium (62)	Sm-155	3.66E-01	1.12E-01	2.76E-01	3.60E-01	1.82E-01	0.925	1.65E+04	1.47E+05	4.79E+05	1.94E+05	1.49E+05	2.95E+05	2.68E-09
Samarium (62)	Sm-156	4.83E-01	1.25E-01	3.36E-01	4.68E-01	1.31E-01	0.924	6.46E+02	4.36E+03	1.68E+04	6.27E+03	4.50E+03	1.61E+04	2.04E-09
Tin (50)	Sn-110	1.43E+00	3.21E-01	9.08E-01	1.35E+00	3.23E-01	0.956	1.52E+03	3.35E+03	1.49E+04	5.26E+03	3.55E+03	1.48E+04	4.71E-10
Tin (50)	Sn-111	2.87E+00	5.61E-01	1.60E+00	2.50E+00	5.85E-01	0.871	1.03E+04	1.24E+04	6.35E+04	2.23E+04	1.43E+04	6.10E+04	2.59E-10
Tin (50)	Sn-113	2.65E-02	8.39E-03	1.82E-02	2.54E-02	1.90E-02	0.992	2.20E+00	2.83E+02	8.94E+02	4.12E+02	2.96E+02	3.94E+02	2.83E-08
Tin (50)	Sn-117m	5.97E-01	1.56E-01	4.21E-01	5.86E-01	1.63E-01	0.961	1.86E+01	9.76E+01	3.73E+02	1.38E+02	9.94E+01	3.56E+02	1.19E-09
Tin (50)	Sn-119m	2.09E-03	2.03E-03	2.11E-03	2.09E-03	8.72E-03	0.992	8.63E-01	2.17E+03	2.23E+03	2.15E+03	2.17E+03	5.20E+02	5.80E-07
Tin (50)	Sn-121	1.71E-04	6.79E-05	1.41E-04	1.70E-04	1.03E-04	0.927	2.24E+02	4.26E+06	1.07E+07	5.15E+06	4.29E+06	7.06E+06	4.46E-06
Tin (50)	Sn-121m	1.43E-03	1.27E-03	1.42E-03	1.43E-03	4.20E-03	0.986	1.26E-02	2.15E+03	2.42E+03	2.16E+03	2.15E+03	7.31E+02	4.00E-05
Tin (50)	Sn-121m+D	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	0.986	1.26E-02	1.97E+03	2.33E+03	2.00E+03	1.97E+03	7.18E+02	3.66E-05
Tin (50)	Sn-121m+E	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	0.986	1.26E-02	1.97E+03	2.33E+03	2.00E+03	1.97E+03	7.18E+02	3.66E-05
Tin (50)	Sn-123	5.30E-02	1.46E-02	3.15E-02	4.64E-02	7.59E-02	0.843	1.96E+00	1.54E+02	5.58E+02	2.58E+02	1.75E+02	1.07E+02	1.87E-08
Tin (50)	Sn-123m	5.91E-01	1.54E-01	4.16E-01	5.78E-01	2.02E-01	0.936	9.09E+03	4.95E+04	1.90E+05	7.03E+04	5.06E+04	1.45E+05	1.30E-09
Tin (50)	Sn-125	1.92E+00	3.66E-01	1.02E+00	1.63E+00	4.46E-01	0.857	2.62E+01	4.80E+01	2.52E+02	9.00E+01	5.65E+01	2.07E+02	4.44E-10
Tin (50)	Sn-126	1.30E-01	4.74E-02	1.09E-01	1.30E-01	5.62E-02	0.957	6.93E-06	2.42E+01	6.64E+01	2.90E+01	2.42E+01	5.59E+01	8.55E-04
Tin (50)	Sn-126+D	8.84E+00	1.81E+00	5.13E+00	7.93E+00	1.87E+00	0.874	6.93E-06	3.90E-01	1.91E+00	6.72E-01	4.35E-01	1.85E+00	1.37E-05
Tin (50)	Sn-126+E	1.11E+01	2.26E+00	6.42E+00	9.92E+00	2.31E+00	0.874	6.93E-06	3.11E-01	1.53E+00	5.37E-01	3.47E-01	1.49E+00	1.10E-05
Tin (50)	Sn-127	1.15E+01	2.11E+00	6.08E+00	9.74E+00	2.10E+00	0.928	2.89E+03	8.14E+02	4.45E+03	1.54E+03	9.63E+02	4.47E+03	6.94E-11
Tin (50)	Sn-128	3.30E+00	7.03E-01	1.98E+00	3.00E+00	7.29E-01	0.904	6.16E+03	6.22E+03	2.92E+04	1.04E+04	6.84E+03	2.81E+04	2.51E-10
Strontium (38)	Sr-80	9.94E-05	9.94E-05	9.94E-05	9.94E-05	1.87E-03	1	3.64E+03	1.10E+08	1.10E+08	1.10E+08	1.10E+08	5.87E+06	4.70E-06
Strontium (38)	Sr-81	7.53E+00	1.59E+00	4.48E+00	6.83E+00	1.67E+00	0.895	1.43E+04	6.38E+03	3.03E+04	1.07E+04	7.04E+03	2.88E+04	7.02E-11
Strontium (38)	Sr-82	9.77E-05	9.77E-05	9.77E-05	9.77E-05	1.83E-03	1	1.01E+01	3.12E+05	3.12E+05	3.12E+05	3.12E+05	1.66E+04	4.90E-06
Strontium (38)	Sr-82+D	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	1.01E+01	5.64E+00	2.69E+01	9.59E+00	6.23E+00	2.46E+01	8.87E-11
Strontium (38)	Sr-82+E	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	1.01E+01	5.64E+00	2.69E+01	9.59E+00	6.23E+00	2.46E+01	8.87E-11
Strontium (38)	Sr-83	4.49E+00	8.88E-01	2.54E+00	3.97E+00	8.88E-01	0.906	1.87E+02	1.39E+02	7.01E+02	2.46E+02	1.57E+02	7.01E+02	1.19E-10
Strontium (38)	Sr-85	2.76E+00	5.71E-01	1.63E+00	2.50E+00	5.65E-01	0.968	3.90E+00	4.49E+00	2.17E+01	7.61E+00	4.96E+00	2.19E+01	1.90E-10
Strontium (38)	Sr-85m	1.04E+00	2.42E-01	6.86E-01	9.98E-01	2.36E-01	0.921	5.24E+03	1.65E+04	7.07E+04	2.50E+04	1.72E+04	7.27E+04	5.19E-10
Strontium (38)	Sr-87m	1.68E+00	3.60E-01	1.03E+00	1.56E+00	3.55E-01	0.917	2.16E+03	4.22E+03	1.97E+04	6.92E+03	4.56E+03	2.00E+04	3.29E-10
Strontium (38)	Sr-89	1.51E-02	8.97E-03	1.24E-02	1.47E-02	8.01E-02	0.856	5.01E+00	1.18E+03	1.98E+03	1.43E+03	1.21E+03	2.22E+02	4.05E-08
Strontium (38)	Sr-90	6.45E-04	2.35E-04	5.07E-04	6.36E-04	1.91E-03	0.927	2.38E-02	5.09E+03	1.40E+04	6.48E+03	5.17E+03	1.72E+03	3.74E-05
Strontium (38)	Sr-90+D	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	1	2.38E-02	7.49E+01	1.29E+02	9.23E+01	7.74E+01	2.33E+01	5.50E-07
Strontium (38)	Sr-90+E	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	1	2.38E-02	7.49E+01	1.29E+02	9.23E+01	7.74E+01	2.33E+01	5.50E-07
Strontium (38)	Sr-91	4.12E+00	7.91E-01	2.26E+00	3.58E+00	8.48E-01	0.862	6.39E+02	5.42E+02	2.82E+03	9.89E+02	6.23E+02	2.63E+03	1.50E-10
Strontium (38)	Sr-92	8.30E+00	1.46E+00	4.25E+00	6.90E+00	1.44E+00	0.831	2.24E+03	9.78E+02	5.54E+03	1.91E+03	1.18E+03	5.65E+03	7.79E-11
Tantalum (73)	Ta-172	8.78E+00	1.71E+00	4.85E+00	7.61E+00	1.74E+00	0.913	9.90E+03	3.72E+03	1.91E+04	6.73E+03	4.29E+03	1.88E+04	1.25E-10
Tantalum (73)	Ta-173	2.98E+00	6.34E-01	1.75E+00	2.67E+00	6.71E-01	0.93	1.66E+03	1.80E+03	8.49E+03	3.08E+03	2.02E+03	8.03E+03	3.64E-10
Tantalum (73)	Ta-174	3.21E+00	6.86E-01	1.90E+00	2.89E+00	7.18E-01	0.865	5.06E+03	5.49E+03	2.57E+04	9.26E+03	6.09E+03	2.45E+04	3.66E-10
Tantalum (73)	Ta-175	5.18E+00	9.96E-01	2.82E+00	4.42E+00	9.91E-01	0.934	5.78E+02	3.60E+02	1.87E+03	6.62E+02	4.22E+02	1.88E+03	2.11E-10
Tantalum (73)	Ta-176	1.32E+01	2.29E+00	6.64E+00	1.08E+01	2.25E+00	0.941	7.51E+02	1.83E+02	1.05E+03	3.62E+02	2.22E+02	1.07E+03	8.30E-11
Tantalum (73)	Ta-177	1.57E-01	5.73E-02	1.23E-01	1.51E-01	6.85E-02	0.941	1.07E+02	2.19E+03	5.99E+03	2.79E+03	2.27E+03	5.01E+03	7.00E-09
Tantalum (73)	Ta-178	4.16E-01	1.02E-01	2.52E-01	3.62E-01	1.12E-01	0.905	3.91E+04	3.13E+05	1.28E+06	5.17E+05	3.60E+05	1.16E+06	2.76E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Tantalum (73)	Ta-178m	4.79E+00	1.11E+00	3.06E+00	4.49E+00	1.11E+00	0.906	2.76E+03	1.91E+03	8.25E+03	3.00E+03	2.04E+03	8.25E+03	2.39E-10
Tantalum (73)	Ta-179	4.87E-02	2.48E-02	4.57E-02	4.87E-02	3.21E-02	0.959	3.80E-01	7.76E+01	1.52E+02	8.26E+01	7.76E+01	1.18E+02	7.08E-08
Tantalum (73)	Ta-180	2.57E+00	6.04E-01	1.67E+00	2.44E+00	6.05E-01	0.912	6.93E-14	1.28E+00	5.47E+00	1.97E+00	1.35E+00	5.46E+00	6.47E+03
Tantalum (73)	Ta-180m	8.17E-02	3.86E-02	7.46E-02	8.17E-02	4.94E-02	0.946	7.49E+02	2.92E+04	6.18E+04	3.20E+04	2.92E+04	4.83E+04	1.36E-08
Tantalum (73)	Ta-182	7.50E+00	1.41E+00	4.03E+00	6.40E+00	1.40E+00	0.925	2.20E+00	1.07E+00	5.70E+00	2.00E+00	1.26E+00	5.75E+00	1.72E-10
Tantalum (73)	Ta-182m	9.42E-01	2.56E-01	6.70E-01	9.18E-01	2.63E-01	0.928	2.30E+04	7.92E+04	2.92E+05	1.11E+05	8.13E+04	2.84E+05	1.22E-09
Tantalum (73)	Ta-183	1.20E+00	3.04E-01	8.11E-01	1.15E+00	3.13E-01	0.932	4.96E+01	1.34E+02	5.27E+02	1.98E+02	1.40E+02	5.12E+02	9.60E-10
Tantalum (73)	Ta-184	8.80E+00	1.80E+00	5.13E+00	7.89E+00	1.81E+00	0.914	6.98E+02	2.61E+02	1.28E+03	4.48E+02	2.91E+02	1.27E+03	1.34E-10
Tantalum (73)	Ta-185	7.98E-01	2.09E-01	5.39E-01	7.57E-01	2.92E-01	0.923	7.43E+03	3.04E+04	1.16E+05	4.50E+04	3.20E+04	8.31E+04	1.47E-09
Tantalum (73)	Ta-186	8.43E+00	1.76E+00	4.98E+00	7.61E+00	1.84E+00	0.913	3.47E+04	1.36E+04	6.48E+04	2.30E+04	1.50E+04	6.20E+04	1.41E-10
Terbium (65)	Tb-147	9.12E+00	1.78E+00	5.05E+00	7.96E+00	1.81E+00	0.859	3.68E+03	1.41E+03	7.25E+03	2.55E+03	1.62E+03	7.13E+03	1.10E-10
Terbium (65)	Tb-149	9.47E+00	1.77E+00	5.07E+00	8.08E+00	1.75E+00	0.863	1.46E+03	5.39E+02	2.89E+03	1.01E+03	6.32E+02	2.92E+03	1.06E-10
Terbium (65)	Tb-150	9.75E+00	1.88E+00	5.35E+00	8.45E+00	1.89E+00	0.868	1.86E+03	6.60E+02	3.42E+03	1.20E+03	7.62E+02	3.41E+03	1.04E-10
Terbium (65)	Tb-151	4.59E+00	9.72E-01	2.72E+00	4.16E+00	9.78E-01	0.892	3.45E+02	2.54E+02	1.20E+03	4.28E+02	2.80E+02	1.19E+03	2.16E-10
Terbium (65)	Tb-153	9.18E-01	2.28E-01	5.97E-01	8.56E-01	2.44E-01	0.931	1.08E+02	3.81E+02	1.54E+03	5.86E+02	4.08E+02	1.43E+03	1.05E-09
Terbium (65)	Tb-154	1.47E+01	2.50E+00	7.24E+00	1.19E+01	2.43E+00	0.889	2.84E+02	6.55E+01	3.84E+02	1.33E+02	8.09E+01	3.96E+02	6.90E-11
Terbium (65)	Tb-155	4.20E-01	1.27E-01	3.08E-01	4.08E-01	1.46E-01	0.937	4.75E+01	3.64E+02	1.20E+03	4.97E+02	3.74E+02	1.05E+03	2.30E-09
Terbium (65)	Tb-156	1.04E+01	2.00E+00	5.69E+00	8.99E+00	1.97E+00	0.883	4.74E+01	1.55E+01	8.09E+01	2.84E+01	1.80E+01	8.19E+01	9.88E-11
Terbium (65)	Tb-156m	2.97E-02	1.76E-02	2.89E-02	2.97E-02	2.58E-02	0.957	2.49E+02	2.64E+04	4.45E+04	2.71E+04	2.64E+04	3.04E+04	3.21E-08
Terbium (65)	Tb-156n	5.46E-03	2.63E-03	4.90E-03	5.46E-03	3.68E-03	0.955	1.21E+03	7.01E+05	1.46E+06	7.80E+05	7.01E+05	1.04E+06	1.75E-07
Terbium (65)	Tb-157	2.31E-03	1.53E-03	2.28E-03	2.31E-03	2.57E-03	0.962	4.62E-03	1.36E+03	2.05E+03	1.38E+03	1.36E+03	1.22E+03	8.95E-05
Terbium (65)	Tb-158	4.46E+00	8.67E-01	2.46E+00	3.86E+00	8.74E-01	0.854	4.62E-03	7.93E-01	4.08E+00	1.44E+00	9.15E-01	4.04E+00	5.26E-08
Terbium (65)	Tb-160	6.53E+00	1.24E+00	3.56E+00	5.63E+00	1.24E+00	0.861	3.50E+00	1.93E+00	1.01E+01	3.54E+00	2.24E+00	1.02E+01	1.72E-10
Terbium (65)	Tb-161	4.64E-02	2.29E-02	4.20E-02	4.61E-02	3.44E-02	0.954	3.66E+01	2.49E+03	5.04E+03	2.75E+03	2.51E+03	3.36E+03	2.12E-08
Technetium (43)	Tc-101	1.73E+00	3.80E-01	1.08E+00	1.62E+00	4.26E-01	0.894	2.57E+04	4.99E+04	2.27E+05	8.01E+04	5.34E+04	2.03E+05	3.81E-10
Technetium (43)	Tc-104	1.22E+01	2.22E+00	6.34E+00	1.02E+01	2.28E+00	0.898	2.00E+04	5.52E+03	3.02E+04	1.06E+04	6.59E+03	2.95E+04	5.56E-11
Technetium (43)	Tc-93	9.06E+00	1.58E+00	4.59E+00	7.48E+00	1.54E+00	0.891	2.21E+03	8.23E+02	4.73E+03	1.63E+03	9.98E+02	4.84E+03	6.73E-11
Technetium (43)	Tc-93m	4.49E+00	7.65E-01	2.24E+00	3.66E+00	7.35E-01	0.898	8.37E+03	6.25E+03	3.67E+04	1.25E+04	7.68E+03	3.82E+04	1.35E-10
Technetium (43)	Tc-94	1.54E+01	2.98E+00	8.56E+00	1.35E+01	2.95E+00	0.87	1.24E+03	2.79E+02	1.44E+03	5.03E+02	3.19E+02	1.46E+03	4.10E-11
Technetium (43)	Tc-94m	1.09E+01	2.09E+00	5.95E+00	9.42E+00	2.12E+00	0.859	7.00E+03	2.26E+03	1.18E+04	4.13E+03	2.61E+03	1.16E+04	5.88E-11
Technetium (43)	Tc-95	4.53E+00	8.82E-01	2.54E+00	3.97E+00	8.75E-01	0.877	3.04E+02	2.30E+02	1.18E+03	4.11E+02	2.62E+02	1.19E+03	1.40E-10
Technetium (43)	Tc-95m	3.67E+00	7.44E-01	2.13E+00	3.28E+00	7.38E-01	0.873	4.15E+00	3.96E+00	1.95E+01	6.84E+00	4.43E+00	1.97E+01	1.76E-10
Technetium (43)	Tc-96	1.45E+01	2.80E+00	8.02E+00	1.27E+01	2.77E+00	0.86	5.91E+01	1.43E+01	7.40E+01	2.58E+01	1.63E+01	7.48E+01	4.50E-11
Technetium (43)	Tc-96m	2.65E-01	5.04E-02	1.44E-01	2.28E-01	5.25E-02	0.938	7.07E+03	8.57E+04	4.51E+05	1.58E+05	9.98E+04	4.32E+05	2.26E-09
Technetium (43)	Tc-97	5.63E-04	5.67E-04	5.63E-04	5.63E-04	5.43E-03	1	2.67E-07	5.35E+03	5.31E+03	5.35E+03	5.35E+03	5.55E+02	3.78E+00
Technetium (43)	Tc-97m	1.53E-03	8.82E-04	1.34E-03	1.53E-03	5.19E-03	0.999	2.91E+00	6.05E+03	1.05E+04	6.92E+03	6.05E+03	1.78E+03	3.92E-07
Technetium (43)	Tc-98	8.06E+00	1.59E+00	4.57E+00	7.14E+00	1.58E+00	0.867	1.65E-07	4.31E-01	2.18E+00	7.60E-01	4.86E-01	2.20E+00	4.97E-04
Technetium (43)	Tc-99	1.08E-04	4.64E-05	9.21E-05	1.08E-04	7.55E-05	0.927	3.25E-06	3.00E+04	6.99E+04	3.53E+04	3.01E+04	4.30E+04	1.77E+00
Technetium (43)	Tc-99m	5.02E-01	1.35E-01	3.64E-01	4.96E-01	1.33E-01	0.946	1.01E+03	6.40E+03	2.38E+04	8.83E+03	6.47E+03	2.41E+04	1.22E-09
Tellurium (52)	Te-116	1.73E-01	5.17E-02	1.24E-01	1.65E-01	7.07E-02	0.98	2.44E+03	4.34E+04	1.45E+05	6.05E+04	4.53E+04	1.06E+05	4.00E-09
Tellurium (52)	Te-121	3.10E+00	6.36E-01	1.81E+00	2.80E+00	6.38E-01	0.902	1.49E+01	1.60E+01	7.81E+01	2.75E+01	1.78E+01	7.78E+01	2.53E-10
Tellurium (52)	Te-121m	9.90E-01	2.28E-01	6.36E-01	9.34E-01	2.31E-01	0.917	1.64E+00	6.75E+00	2.94E+01	1.05E+01	7.16E+00	2.89E+01	9.65E-10
Tellurium (52)	Te-123	4.63E-03	4.42E-03	4.64E-03	4.63E-03	1.66E-02	0.989	6.93E-14	6.58E+02	6.89E+02	6.56E+02	6.58E+02	1.84E+02	2.27E+06
Tellurium (52)	Te-123m	5.71E-01	1.49E-01	4.03E-01	5.60E-01	1.54E-01	0.951	2.11E+00	1.33E+01	5.11E+01	1.89E+01	1.36E+01	4.94E+01	1.51E-09
Tellurium (52)	Te-125m	1.11E-02	9.59E-03	1.08E-02	1.11E-02	3.10E-02	0.986	4.36E+00	1.22E+03	1.41E+03	1.25E+03	1.22E+03	4.35E+02	6.76E-08
Tellurium (52)	Te-127	2.67E-02	5.91E-03	1.64E-02	2.46E-02	1.20E-02	0.894	6.49E+02	8.20E+04	3.70E+05	1.33E+05	8.88E+04	1.82E+05	3.11E-08
Tellurium (52)	Te-127m	4.16E-03	3.13E-03	3.84E-03	4.10E-03	9.99E-03	0.983	2.32E+00	1.90E+03	2.52E+03	2.05E+03	1.92E+03	7.89E+02	2.01E-07
Tellurium (52)	Te-129	3.13E-01	6.98E-02	1.87E-01	2.83E-01	1.33E-01	0.889	5.23E+03	5.66E+04	2.54E+05	9.50E+04	6.25E+04	1.33E+05	2.71E-09
Tellurium (52)	Te-129m	1.75E-01	3.84E-02	1.01E-01	1.56E-01	6.65E-02	0.985	7.53E+00	1.31E+02	5.99E+02	2.27E+02	1.48E+02	3.46E+02	4.37E-09
Tellurium (52)	Te-131	2.24E+00	4.77E-01	1.33E+00	2.01E+00	5.53E-01	0.917	1.46E+04	2.14E+04	1.00E+05	3.59E+04	2.38E+04	8.65E+04	3.73E-10
Tellurium (52)	Te-131m	8.24E+00	1.58E+00	4.53E+00	7.16E+00	1.56E+00	0.949	2.02E+02	7.79E+01	4.06E+02	1.42E+02	8.97E+01	4.11E+02	9.78E-11
Tellurium (52)	Te-132	9.94E-01	2.39E-01	6.60E-01	9.55E-01	2.47E-01	0.936	7.76E+01	2.51E+02	1.05E+03	3.78E+02	2.62E+02	1.01E+03	8.29E-10
Tellurium (52)	Te-133	5.37E+00	1.05E+00	3.00E+00	4.70E+00	1.12E+00	0.842	2.93E+04	1.95E+04	9.96E+04	3.48E+04	2.23E+04	9.35E+04	1.72E-10
Tellurium (52)	Te-133m	1.36E+01	2.57E+00	7.39E+00	1.17E+01	2.61E+00	0.927	6.57E+03	1.57E+03	8.30E+03	2.89E+03	1.82E+03	8.17E+03	6.17E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Tellurium (52)	Te-134	4.76E+00	9.87E-01	2.80E+00	4.29E+00	9.90E-01	0.872	8.71E+03	6.33E+03	3.05E+04	1.08E+04	7.01E+03	3.04E+04	1.89E-10
()	Test Isotope													
Thorium (90)	Th-226	3.02E-02	8.21E-03	2.18E-02	2.95E-02	8.46E-03	0.947	1.18E+04	1.24E+06	4.57E+06	1.72E+06	1.27E+06	4.43E+06	4.62E-08
Thorium (90)	Th-227	4.79E-01	1.13E-01	3.15E-01	4.57E-01	1.14E-01	0.971	1.35E+01	8.74E+01	3.70E+02	1.33E+02	9.17E+01	3.66E+02	2.85E-09
Thorium (90)	Th-228	7.16E-03	2.09E-03	5.32E-03	7.03E-03	2.49E-03	0.98	3.62E-01	5.11E+02	1.75E+03	6.89E+02	5.21E+02	1.47E+03	6.25E-07
Thorium (90)	Th-229	2.89E-01	8.69E-02	2.20E-01	2.85E-01	9.21E-02	0.959	9.44E-05	1.09E+01	3.61E+01	1.43E+01	1.10E+01	3.41E+01	5.11E-05
Thorium (90)	Th-229+D	1.48E+00					0.972	9.44E-05	2.09E+00					9.84E-06
Thorium (90)	Th-229+E	1.48E+00	3.47E-01	9.38E-01	1.37E+00	4.04E-01	0.972	9.44E-05	2.09E+00	8.93E+00	3.30E+00	2.27E+00	7.67E+00	9.86E-06
Thorium (90)	Th-230	1.07E-03	3.84E-04	8.62E-04	1.06E-03	7.43E-04	0.997	9.00E-06	2.83E+03	7.86E+03	3.51E+03	2.86E+03	4.06E+03	1.40E-01
Thorium (90)	Th-231	3.21E-02	1.16E-02	2.63E-02	3.19E-02	1.81E-02	0.985	2.38E+02	2.27E+04	6.28E+04	2.77E+04	2.28E+04	4.02E+04	4.27E-08
Thorium (90)	Th-232	4.55E-04	1.87E-04	3.82E-04	4.51E-04	5.31E-04	0.998	4.93E-11	6.63E+03	1.62E+04	7.89E+03	6.69E+03	5.68E+03	6.05E+04
Thorium (90)	Th-232+D						0.998	4.93E-11						
Thorium (90)	Th-234	2.13E-02	7.63E-03	1.77E-02	2.13E-02	8.74E-03	0.957	1.05E+01	1.55E+03	4.33E+03	1.87E+03	1.55E+03	3.78E+03	6.72E-08
Thorium (90)	Th-234+D	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.991	1.05E+01	2.05E+02	6.95E+02	3.20E+02	2.27E+02	2.26E+02	8.88E-09
Thorium (90)	Th-234+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.991	1.05E+01	2.05E+02	6.95E+02	3.20E+02	2.27E+02	2.26E+02	8.88E-09
Titanium (22)	Ti-44	3.13E-01	1.24E-01	2.74E-01	3.13E-01	1.38E-01	0.945	1.47E-02	1.02E+01	2.58E+01	1.17E+01	1.02E+01	2.33E+01	5.97E-08
Titanium (22)	Ti-44+D	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	0.871	1.47E-02	2.73E-01	1.38E+00	4.88E-01	3.12E-01	1.36E+00	1.59E-09
Titanium (22)	Ti-44+E	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	0.871	1.47E-02	2.73E-01	1.38E+00	4.88E-01	3.12E-01	1.36E+00	1.59E-09
Titanium (22)	Ti-45	4.77E+00	9.88E-01	2.82E+00	4.35E+00	1.01E+00	0.882	1.97E+03	1.41E+03	6.81E+03	2.39E+03	1.55E+03	6.66E+03	6.24E-11
Thallium (81)	Tl-194	4.08E+00	8.63E-01	2.42E+00	3.71E+00	8.58E-01	0.886	1.10E+04	9.18E+03	4.34E+04	1.55E+04	1.01E+04	4.37E+04	3.13E-10
Thallium (81)	Tl-194m	1.26E+01	2.61E+00	7.39E+00	1.14E+01	2.60E+00	0.927	1.11E+04	2.85E+03	1.38E+04	4.88E+03	3.17E+03	1.39E+04	9.67E-11
Thallium (81)	Tl-195	7.50E+00	1.37E+00	3.94E+00	6.29E+00	1.35E+00	0.944	5.23E+03	2.23E+03	1.22E+04	4.24E+03	2.66E+03	1.23E+04	1.61E-10
Thallium (81)	Tl-197	2.07E+00	4.38E-01	1.21E+00	1.83E+00	4.40E-01	0.934	2.14E+03	3.33E+03	1.57E+04	5.69E+03	3.76E+03	1.57E+04	5.95E-10
Thallium (81)	Tl-198	1.20E+01	2.18E+00	6.27E+00	1.01E+01	2.12E+00	0.948	1.15E+03	3.02E+02	1.67E+03	5.81E+02	3.61E+02	1.71E+03	1.01E-10
Thallium (81)	Tl-198m	6.34E+00	1.33E+00	3.77E+00	5.76E+00	1.32E+00	0.981	3.25E+03	1.57E+03	7.48E+03	2.65E+03	1.73E+03	7.56E+03	1.86E-10
Thallium (81)	Tl-199	1.08E+00	2.61E-01	7.01E-01	1.01E+00	2.65E-01	0.931	8.18E+02	2.44E+03	1.01E+04	3.77E+03	2.62E+03	9.99E+03	1.15E-09
Thallium (81)	Tl-200	7.42E+00	1.44E+00	4.12E+00	6.45E+00	1.42E+00	0.952	2.33E+02	9.91E+01	5.10E+02	1.78E+02	1.14E+02	5.17E+02	1.65E-10
Thallium (81)	Tl-201	2.44E-01	8.54E-02	2.00E-01	2.42E-01	9.29E-02	0.944	8.31E+01	1.08E+03	3.10E+03	1.33E+03	1.09E+03	2.85E+03	5.09E-09
Thallium (81)	Tl-202	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	0.906	2.07E+01	2.95E+01	1.34E+02	4.81E+01	3.20E+01	1.34E+02	5.59E-10
Thallium (81)	Tl-204	3.88E-03	1.65E-03	3.30E-03	3.86E-03	1.26E-02	0.963	1.83E-01	8.82E+02	2.07E+03	1.04E+03	8.86E+02	2.72E+02	1.90E-06
Thallium (81)	Tl-206	1.26E-02	7.48E-03	1.04E-02	1.23E-02	7.08E-02	0.934	8.67E+04	2.22E+07	3.74E+07	2.68E+07	2.28E+07	3.95E+06	1.02E-07
Thallium (81)	Tl-207	2.29E-02	8.47E-03	1.54E-02	2.11E-02	6.49E-02	0.855	7.64E+04	1.17E+07	3.18E+07	1.74E+07	1.28E+07	4.14E+06	6.17E-08
Thallium (81)	Tl-208	2.18E+01	3.56E+00	1.04E+01	1.73E+01	3.47E+00	0.879	1.19E+05	1.86E+04	1.14E+05	3.91E+04	2.35E+04	1.17E+05	6.34E-11
Thallium (81)	Tl-209	1.22E+01	2.22E+00	6.40E+00	1.03E+01	2.24E+00	0.865	1.66E+05	4.71E+04	2.60E+05	9.01E+04	5.62E+04	2.57E+05	1.15E-10
Thulium (69)	Tm-162	1.08E+01	1.92E+00	5.52E+00	8.93E+00	1.90E+00	0.883	1.68E+04	5.30E+03	2.98E+04	1.04E+04	6.41E+03	3.01E+04	9.93E-11
Thulium (69)	Tm-166	1.12E+01	2.01E+00	5.80E+00	9.33E+00	1.98E+00	0.912	7.88E+02	2.33E+02	1.29E+03	4.49E+02	2.79E+02	1.31E+03	9.52E-11
Thulium (69)	Tm-167	5.07E-01	1.40E-01	3.52E-01	4.89E-01	1.53E-01	0.928	2.74E+01	1.75E+02	6.36E+02	2.52E+02	1.82E+02	5.81E+02	2.07E-09
Thulium (69)	Tm-170	1.41E-02	6.17E-03	1.21E-02	1.40E-02	3.08E-02	0.944	1.97E+00	5.19E+02	1.18E+03	6.02E+02	5.20E+02	2.37E+02	8.70E-08
Thulium (69)	Tm-171	9.38E-04	4.89E-04	8.86E-04	9.38E-04	6.48E-04	0.953	3.61E-01	4.01E+03	7.70E+03	4.25E+03	4.01E+03	5.81E+03	3.69E-06
Thulium (69)	Tm-172	2.91E+00	5.26E-01	1.51E+00	2.42E+00	5.68E-01	0.898	9.55E+01	1.10E+02	6.09E+02	2.13E+02	1.32E+02	5.63E+02	3.85E-10
Thulium (69)	Tm-173	2.03E+00	4.38E-01	1.24E+00	1.88E+00	4.53E-01	0.895	7.37E+02	1.22E+03	5.66E+03	1.99E+03	1.32E+03	5.47E+03	5.56E-10
Thulium (69)	Tm-175	5.99E+00	1.18E+00	3.38E+00	5.26E+00	1.21E+00	0.892	2.40E+04	1.35E+04	6.85E+04	2.40E+04	1.54E+04	6.67E+04	1.91E-10
Uranium (92)	U-230	3.95E-03	1.17E-03	2.91E-03	3.86E-03	1.81E-03	0.987	1.22E+01	9.38E+03	3.16E+04	1.28E+04	9.61E+03	2.05E+04	3.44E-07
Uranium (92)	U-231	2.07E-01	6.64E-02	1.64E-01	2.07E-01	7.47E-02	0.961	6.02E+01	9.12E+02	2.84E+03	1.15E+03	9.12E+02	2.53E+03	6.78E-09
Uranium (92)	U-232	7.91E-04	3.02E-04	6.30E-04	7.81E-04	9.42E-04	0.997	9.63E-03	3.84E+03	1.00E+04	4.81E+03	3.88E+03	3.22E+03	1.79E-04
Uranium (92)	U-233	1.26E-03	3.64E-04	8.97E-04	1.22E-03	6.99E-04	0.998	4.37E-06	2.39E+03	8.30E+03	3.36E+03	2.47E+03	4.32E+03	2.47E-01
Uranium (92)	U-234	3.43E-04	1.56E-04	2.89E-04	3.43E-04	6.84E-04	0.998	2.83E-06	8.79E+03	1.94E+04	1.04E+04	8.79E+03	4.41E+03	1.41E+00
Uranium (92)	U-235	6.58E-01	1.65E-01	4.57E-01	6.42E-01	1.63E-01	0.96	9.85E-10	4.76E+00	1.90E+01	6.86E+00	4.89E+00	1.92E+01	2.21E+00
Uranium (92)	U-235+D	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	0.96	9.85E-10	4.55E+00	1.77E+01	6.49E+00	4.66E+00	1.72E+01	2.11E+00
Uranium (92)	U-235+E	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	0.96	9.85E-10	4.55E+00	1.77E+01	6.49E+00	4.66E+00	1.72E+01	
Uranium (92)	U-236	1.77E-04	9.72E-05	1.56E-04	1.77E-04	5.87E-04	0.999	2.96E-08	1.70E+04	3.10E+04	1.93E+04	1.70E+04	5.13E+03	2.63E+02
Uranium (92)	U-237	4.81E-01	1.36E-01	3.51E-01	4.70E-01	1.44E-01	0.953	3.75E+01	2.46E+02	8.68E+02	3.38E+02	2.52E+02	8.25E+02	3.02E-09
Uranium (92)	U-238	7.94E-05	6.29E-05	7.83E-05	7.94E-05	4.94E-04	1	1.55E-10	3.79E+04	4.79E+04	3.84E+04	3.79E+04	6.10E+03	1.13E+05
Uranium (92)	U-238+D	1.56E-01					0.979	1.55E-10	1.97E+01					5.88E+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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Uranium (92)	U-238+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.979	1.55E-10	1.98E+01	6.70E+01	3.09E+01	2.19E+01	2.18E+01	5.89E+01
Uranium (92)	U-239	1.58E-01	5.17E-02	1.19E-01	1.51E-01	9.63E-02	0.958	1.55E+04	3.08E+05	9.41E+05	4.09E+05	3.23E+05	5.05E+05	9.23E-09
Uranium (92)	U-240	1.11E-03	8.06E-04	1.08E-03	1.11E-03	3.72E-03	0.998	4.31E+02	1.17E+06	1.61E+06	1.20E+06	1.17E+06	3.49E+05	1.27E-06
Vanadium (23)	V-47	5.50E+00	1.14E+00	3.25E+00	4.98E+00	1.23E+00	0.882	1.12E+04	6.93E+03	3.34E+04	1.18E+04	7.66E+03	3.11E+04	5.66E-11
Vanadium (23)	V-48	1.74E+01	3.23E+00	9.31E+00	1.49E+01	3.17E+00	0.844	1.56E+01	3.19E+00	1.72E+01	5.97E+00	3.74E+00	1.75E+01	1.91E-11
Vanadium (23)	V-49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.67E-01						
Tungsten (74)	W-176	4.18E-01	1.59E-01	3.52E-01	4.18E-01	1.80E-01	0.942	2.64E+03	2.02E+04	5.31E+04	2.39E+04	2.02E+04	4.69E+04	2.61E-09
Tungsten (74)	W-177	4.55E+00	9.72E-01	2.69E+00	4.07E+00	9.78E-01	0.927	2.70E+03	1.93E+03	9.02E+03	3.26E+03	2.16E+03	8.96E+03	2.45E-10
Tungsten (74)	W-178	2.13E-02	1.05E-02	1.98E-02	2.13E-02	1.33E-02	0.971	1.17E+01	1.70E+03	3.45E+03	1.83E+03	1.70E+03	2.72E+03	5.04E-08
Tungsten (74)	W-178+D	4.37E-01					0.915	1.17E+01	8.78E+01					2.60E-09
Tungsten (74)	W-178+E	4.37E-01					0.915	1.17E+01	8.78E+01					2.60E-09
Tungsten (74)	W-179	8.09E-02	4.14E-02	7.57E-02	8.09E-02	5.81E-02	0.967	9.71E+03	3.74E+05	7.31E+05	3.99E+05	3.74E+05	5.20E+05	1.34E-08
Tungsten (74)	W-181	6.49E-02	3.17E-02	6.04E-02	6.49E-02	4.01E-02	0.956	2.09E+00	1.16E+02	2.37E+02	1.24E+02	1.16E+02	1.87E+02	1.95E-08
Tungsten (74)	W-185	3.82E-04	1.40E-04	3.10E-04	3.79E-04	2.00E-04	0.945	3.37E+00	2.91E+04	7.95E+04	3.59E+04	2.94E+04	5.57E+04	3.10E-06
Tungsten (74)	W-187	2.57E+00	5.33E-01	1.50E+00	2.31E+00	5.46E-01	0.94	2.54E+02	3.16E+02	1.53E+03	5.42E+02	3.52E+02	1.49E+03	4.52E-10
Tungsten (74)	W-188	8.90E-03	2.11E-03	5.84E-03	8.47E-03	2.12E-03	0.911	3.64E+00	1.39E+03	5.87E+03	2.12E+03	1.46E+03	5.82E+03	1.39E-07
Xenon (54)	Xe-120	2.13E+00	4.49E-01	1.25E+00	1.92E+00	4.68E-01	0.951	9.11E+03	1.36E+04	6.41E+04	2.30E+04	1.50E+04	6.16E+04	3.47E-10
Xenon (54)	Xe-121	1.09E+01	1.98E+00	5.67E+00	9.10E+00	1.97E+00	0.902	9.08E+03	2.78E+03	1.53E+04	5.35E+03	3.33E+03	1.54E+04	7.20E-11
Xenon (54)	Xe-122	2.33E-01	5.71E-02	1.50E-01	2.20E-01	7.04E-02	0.906	3.02E+02	4.31E+03	1.76E+04	6.69E+03	4.56E+03	1.43E+04	3.37E-09
Xenon (54)	Xe-123	3.41E+00	6.84E-01	1.94E+00	3.00E+00	7.04E-01	0.903	2.92E+03	2.85E+03	1.42E+04	5.02E+03	3.24E+03	1.38E+04	2.33E-10
Xenon (54)	Xe-125	1.19E+00	2.74E-01	7.59E-01	1.12E+00	2.88E-01	0.906	3.57E+02	1.00E+03	4.33E+03	1.56E+03	1.06E+03	4.12E+03	6.80E-10
Xenon (54)	Xe-127	1.21E+00	2.89E-01	7.98E-01	1.16E+00	2.99E-01	0.933	6.95E+00	1.86E+01	7.76E+01	2.81E+01	1.94E+01	7.51E+01	6.59E-10
Xenon (54)	Xe-129m	5.69E-02	2.35E-02	4.35E-02	5.56E-02	4.85E-02	0.979	3.16E+01	1.71E+03	4.14E+03	2.24E+03	1.75E+03	2.00E+03	1.35E-08
Xenon (54)	Xe-131m	1.92E-02	8.58E-03	1.52E-02	1.88E-02	1.87E-02	0.981	2.13E+01	3.40E+03	7.61E+03	4.30E+03	3.46E+03	3.49E+03	4.06E-08
Xenon (54)	Xe-133	8.71E-02	3.49E-02	7.46E-02	8.73E-02	4.61E-02	0.964	4.82E+01	1.73E+03	4.32E+03	2.02E+03	1.73E+03	3.27E+03	9.26E-09
Xenon (54)	Xe-133m	1.18E-01	3.13E-02	7.94E-02	1.14E-01	4.12E-02	0.973	1.16E+02	3.03E+03	1.14E+04	4.50E+03	3.15E+03	8.68E+03	6.75E-09
Xenon (54)	Xe-135	1.23E+00	2.78E-01	7.89E-01	1.16E+00	2.92E-01	0.907	6.68E+02	1.81E+03	7.98E+03	2.81E+03	1.91E+03	7.60E+03	7.09E-10
Xenon (54)	Xe-135m	2.35E+00	4.83E-01	1.37E+00	2.13E+00	4.89E-01	0.884	2.38E+04	3.45E+04	1.68E+05	5.90E+04	3.82E+04	1.66E+05	3.80E-10
Xenon (54)	Xe-138	6.99E+00	1.23E+00	3.54E+00	5.76E+00	1.25E+00	0.893	2.57E+04	1.24E+04	7.07E+04	2.45E+04	1.50E+04	6.94E+04	1.29E-10
Yttrium (39)	Y-86	2.14E+01	3.95E+00	1.14E+01	1.83E+01	3.89E+00	0.898	4.12E+02	6.44E+01	3.49E+02	1.21E+02	7.54E+01	3.55E+02	2.61E-11
Yttrium (39)	Y-86m	1.06E+00	2.44E-01	6.88E-01	1.00E+00	2.38E-01	0.919	7.59E+03	2.36E+04	1.02E+05	3.61E+04	2.48E+04	1.04E+05	5.18E-10
Yttrium (39)	Y-87	2.44E+00	5.09E-01	1.45E+00	2.22E+00	5.03E-01	0.969	7.56E+01	9.62E+01	4.61E+02	1.62E+02	1.06E+02	4.67E+02	2.15E-10
Yttrium (39)	Y-88	1.69E+01	2.91E+00	8.45E+00	1.38E+01	2.81E+00	0.881	2.37E+00	5.30E-01	3.07E+00	1.06E+00	6.46E-01	3.18E+00	3.81E-11
Yttrium (39)	Y-90	4.01E-02	2.35E-02	3.25E-02	3.88E-02	1.28E-01	1	9.49E+01	7.12E+03	1.22E+04	8.80E+03	7.36E+03	2.22E+03	1.31E-08
Yttrium (39)	Y-90m	3.26E+00	7.05E-01	2.00E+00	3.02E+00	6.97E-01	0.912	1.90E+03	1.93E+03	8.91E+03	3.15E+03	2.08E+03	9.02E+03	1.77E-10
Yttrium (39)	Y-91	3.79E-02	1.36E-02	2.46E-02	3.39E-02	8.71E-02	0.837	4.32E+00	4.16E+02	1.16E+03	6.40E+02	4.64E+02	1.81E+02	1.70E-08
Yttrium (39)	Y-91m	2.95E+00	6.01E-01	1.71E+00	2.65E+00	5.95E-01	0.892	7.33E+03	8.39E+03	4.12E+04	1.44E+04	9.34E+03	4.16E+04	2.02E-10
Yttrium (39)	Y-92	1.60E+00	3.30E-01	8.78E-01	1.38E+00	4.47E-01	0.843	1.71E+03	3.83E+03	1.86E+04	6.97E+03	4.45E+03	1.37E+04	3.99E-10
Yttrium (39)	Y-93	5.97E-01	1.33E-01	3.32E-01	5.11E-01	2.45E-01	0.814	6.01E+02	3.73E+03	1.68E+04	6.70E+03	4.35E+03	9.07E+03	1.12E-09
Yttrium (39)	Y-94	6.81E+00	1.29E+00	3.64E+00	5.80E+00	1.39E+00	0.83	1.91E+04	1.02E+04	5.37E+04	1.90E+04	1.19E+04	4.98E+04	9.72E-11
Yttrium (39)	Y-95	5.97E+00	9.94E-01	2.83E+00	4.70E+00	1.06E+00	0.829	3.40E+04	2.07E+04	1.24E+05	4.36E+04	2.63E+04	1.16E+05	1.12E-10
Ytterbium (70)	Yb-162	4.20E-01	1.29E-01	3.15E-01	4.12E-01	1.42E-01	0.937	1.93E+04	1.48E+05	4.79E+05	1.96E+05	1.50E+05	4.35E+05	2.41E-09
Ytterbium (70)	Yb-166	1.27E-01	6.47E-02	1.18E-01	1.27E-01	8.68E-02	0.952	1.07E+02	2.66E+03	5.23E+03	2.86E+03	2.66E+03	3.90E+03	8.01E-09
Ytterbium (70)	Yb-167	7.98E-01	2.48E-01	5.93E-01	7.74E-01	2.77E-01	0.928	2.08E+04	8.46E+04	2.72E+05	1.14E+05	8.73E+04	2.44E+05	1.32E-09
Ytterbium (70)	Yb-169	9.96E-01	2.95E-01	7.25E-01	9.70E-01	3.24E-01	0.921	7.90E+00	2.60E+01	8.77E+01	3.56E+01	2.66E+01	7.97E+01	1.08E-09
Ytterbium (70)	Yb-175	1.94E-01	4.38E-02	1.23E-01	1.82E-01	4.36E-02	0.901	6.04E+01	1.04E+03	4.60E+03	1.65E+03	1.11E+03	4.62E+03	5.85E-09
Ytterbium (70)	Yb-177	1.04E+00	2.09E-01	5.86E-01	9.10E-01	2.53E-01	0.882	3.20E+03	1.04E+04	5.22E+04	1.86E+04	1.20E+04	4.31E+04	1.12E-09
Ytterbium (70)	Yb-178	1.82E-01	3.95E-02	1.12E-01	1.69E-01	4.20E-02	0.898	4.92E+03	9.08E+04	4.17E+05	1.47E+05	9.79E+04	3.93E+05	6.37E-09
Zinc (30)	Zn-62	2.35E+00	4.87E-01	1.38E+00	2.13E+00	4.84E-01	0.879	6.56E+02	9.56E+02	4.61E+03	1.63E+03	1.06E+03	4.64E+03	1.75E-10
Zinc (30)	Zn-63	6.14E+00	1.27E+00	3.58E+00	5.52E+00	1.35E+00	0.862	9.56E+03	5.44E+03	2.64E+04	9.33E+03	6.05E+03	2.47E+04	6.96E-11
Zinc (30)	Zn-65	3.51E+00	6.43E-01	1.86E+00	2.97E+00	6.31E-01	0.843	1.04E+00	1.64E+00	8.92E+00	3.09E+00	1.94E+00	9.09E+00	1.99E-10
Zinc (30)	Zn-69	2.93E-03	1.51E-03	2.39E-03	2.87E-03	2.43E-02	0.892	6.39E+03	7.37E+06	1.43E+07	9.04E+06	7.51E+06	8.89E+05	1.54E-07
Zinc (30)	Zn-69m	2.24E+00	4.72E-01	1.34E+00	2.05E+00	4.64E-01	0.889	4.41E+02	6.68E+02	3.17E+03	1.11E+03	7.28E+02	3.22E+03	2.03E-10
Zinc (30)	Zn-71m	8.60E+00	1.76E+00	5.02E+00	7.74E+00	1.80E+00	0.868	1.55E+03	6.25E+02	3.05E+03	1.07E+03	6.94E+02	2.99E+03	5.56E-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)**	**Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Area Correction Factor**	**Lambda**	**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	0.986	1.66E+05	2.56E+07	1.05E+08	3.87E+07	2.71E+07	9.80E+07	6.68E-08
Zinc (30)	Zn-72	5.97E-01	1.58E-01	4.27E-01	5.86E-01	1.56E-01	0.943	1.31E+02	6.99E+02	2.64E+03	9.76E+02	7.12E+02	2.67E+03	7.48E-10
Zirconium (40)	Zr-86	1.32E+00	2.98E-01	8.43E-01	1.25E+00	2.99E-01	0.982	3.68E+02	8.57E+02	3.78E+03	1.34E+03	9.06E+02	3.78E+03	3.89E-10
Zirconium (40)	Zr-88	2.09E+00	4.46E-01	1.27E+00	1.92E+00	4.40E-01	0.97	3.03E+00	4.74E+00	2.22E+01	7.80E+00	5.15E+00	2.25E+01	2.67E-10
Zirconium (40)	Zr-89	6.73E+00	1.30E+00	3.73E+00	5.87E+00	1.28E+00	0.932	7.74E+01	3.71E+01	1.93E+02	6.70E+01	4.26E+01	1.95E+02	8.29E-11
Zirconium (40)	Zr-93	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	4.53E-07						
Zirconium (40)	Zr-95	4.23E+00	8.32E-01	2.39E+00	3.75E+00	8.22E-01	0.865	3.95E+00	3.31E+00	1.69E+01	5.88E+00	3.74E+00	1.71E+01	1.55E-10
Zirconium (40)	Zr-97	1.08E+00	2.13E-01	5.91E-01	9.33E-01	2.92E-01	0.863	3.59E+02	1.16E+03	5.90E+03	2.12E+03	1.34E+03	4.30E+03	6.06E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	6.15E+03	2.32E+04	8.63E+03	6.30E+03	2.30E+04	1.28E-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	9.59E+02	3.36E+03	1.30E+03	9.78E+02	3.22E+03	1.66E-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	5.62E+01	2.62E+02	9.35E+01	6.20E+01	2.22E+02	9.69E-10
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	8.56E+02	3.47E+03	1.26E+03	8.85E+02	3.08E+03	1.79E-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	4.79E+03	1.62E+04	6.36E+03	4.85E+03	1.30E+04	6.62E-05
Actinium (89)	Ac-228	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	9.90E+02	1.19	4.56E+02	2.40E+03	8.38E+02	5.27E+02	2.35E+03	2.04E-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	4.37E+03	2.35E+04	8.16E+03	5.11E+03	2.34E+04	3.06E-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	3.53E+03	1.74E+04	6.13E+03	3.96E+03	1.70E+04	1.27E-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	4.25E+03	2.09E+04	7.38E+03	4.76E+03	2.02E+04	1.53E-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	9.89E+02	5.19E+03	1.81E+03	1.14E+03	5.26E+03	3.79E-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	4.71E+03	2.48E+04	8.65E+03	5.47E+03	2.44E+04	8.75E-11
Silver (47)	Ag-105	2.70E+00	5.73E-01	1.63E+00	2.48E+00	5.72E-01	6.17E+00	1.23	6.16E+00	2.91E+01	1.02E+01	6.72E+00	2.92E+01	2.04E-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	1.06E+04	5.11E+04	1.80E+04	1.17E+04	4.78E+04	1.43E-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	5.31E+00	2.77E+01	9.65E+00	6.11E+00	2.82E+01	3.63E-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	3.80E+06	1.46E+07	6.19E+06	4.19E+06	4.16E+06	5.19E-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	3.17E-01	1.56E+00	5.49E-01	3.53E-01	1.58E+00	1.22E-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	3.80E-01	1.88E+00	6.59E-01	4.25E-01	1.88E+00	1.46E-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	1.23E+08	3.02E+08	1.46E+08	1.23E+08	1.43E+08	4.71E-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	1.09E+07	3.69E+07	1.74E+07	1.20E+07	1.36E+07	2.62E-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	2.75E-01	1.45E+00	5.04E-01	3.17E-01	1.48E+00	5.80E-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	3.23E-01	1.71E+00	5.91E-01	3.72E-01	1.73E+00	6.80E-11
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	6.67E+02	2.92E+03	1.06E+03	7.12E+02	1.51E+03	4.23E-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	1.43E+03	7.50E+03	2.67E+03	1.68E+03	6.64E+03	1.59E-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	1.25E+04	6.77E+04	2.39E+04	1.49E+04	6.16E+04	1.53E-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	1.87E-01	1.05E+00	3.64E-01	2.25E-01	1.07E+00	9.75E-06
Aluminum (13)	Al-28	1.16E+01	1.94E+00	5.61E+00	9.29E+00	2.00E+00	1.63E+05	1.13	4.59E+04	2.74E+05	9.46E+04	5.72E+04	2.66E+05	1.53E-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	7.28E+03	3.15E+04	1.14E+04	7.77E+03	3.16E+04	6.71E-10
Americium (95)	Am-238	5.02E+00	9.74E-01	2.78E+00	4.35E+00	9.65E-01	3.72E+03	1.21	1.95E+03	1.00E+04	3.51E+03	2.25E+03	1.01E+04	2.42E-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	1.31E+03	4.86E+03	1.82E+03	1.34E+03	4.75E+03	1.19E-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	5.28E+01	2.74E+02	9.61E+01	6.08E+01	2.76E+02	2.06E-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	6.04E+01	1.22E+02	6.50E+01	6.04E+01	8.24E+01	1.76E-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	1.85E+04	5.94E+04	2.36E+04	1.85E+04	4.41E+04	2.30E-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	1.50E+03	3.34E+03	1.82E+03	1.51E+03	8.20E+02	1.44E-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	3.75E+01	1.32E+02	5.20E+01	3.90E+01	9.47E+01	3.59E-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	1.91E+01	4.82E+01	2.19E+01	1.91E+01	4.23E+01	9.57E-05
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	3.15E+00	1.14E+01	4.36E+00	3.24E+00	1.09E+01	1.58E-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	3.76E+02	1.90E+03	6.69E+02	4.26E+02	1.90E+03	2.96E-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	2.83E+06	4.66E+06	3.39E+06	2.90E+06	4.69E+05	9.57E-08
Americium (95)	Am-245	1.33E-01	3.43E-02	9.21E-02	1.29E-01	4.81E-02	2.96E+03	1.31	5.54E+04	2.15E+05	7.99E+04	5.72E+04	1.53E+05	8.89E-09
Americium (95)	Am-246	3.67E+00	7.61E-01	2.14E+00	3.30E+00	7.94E-01	9.34E+03	1.25	6.57E+03	3.17E+04	1.13E+04	7.31E+03	3.04E+04	3.36E-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	6.32E+03	3.36E+04	1.17E+04	7.34E+03	3.27E+04	2.07E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	3.23E+03	8.80E+03	4.13E+03	3.29E+03	8.78E+02	9.50E-05
Argon (18)	Ar-41	7.93E+00	1.41E+00	4.08E+00	6.62E+00	1.42E+00	3.32E+03	1.15	1.31E+03	7.38E+03	2.55E+03	1.57E+03	7.32E+03	3.15E-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	1.22E+04	5.74E+04	2.05E+04	1.34E+04	5.25E+04	6.79E-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	6.84E+03	3.35E+04	1.19E+04	7.64E+03	3.19E+04	3.82E-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	8.41E+02	4.51E+03	1.57E+03	9.83E+02	4.51E+03	1.65E-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	8.84E+01	4.13E+02	1.46E+02	9.62E+01	4.17E+02	1.30E-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	1.07E+02	5.00E+02	1.76E+02	1.16E+02	5.05E+02	1.57E-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	6.67E+01	3.38E+02	1.19E+02	7.57E+01	3.25E+02	3.99E-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	8.43E+02	1.53E+03	8.78E+02	8.43E+02	1.09E+03	3.79E-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	9.69E+00	4.75E+01	1.67E+01	1.08E+01	4.69E+01	9.77E-11
Arsenic (33)	As-76	2.54E+00	5.13E-01	1.42E+00	2.22E+00	6.12E-01	2.31E+02	1.18	2.65E+02	1.31E+03	4.71E+02	3.03E+02	1.10E+03	1.69E-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	9.44E+03	4.17E+04	1.49E+04	1.01E+04	2.60E+04	9.01E-09
Arsenic (33)	As-78	7.63E+00	1.43E+00	4.05E+00	6.49E+00	1.51E+00	4.02E+03	1.16	1.59E+03	8.49E+03	2.99E+03	1.87E+03	8.04E+03	5.98E-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	1.20E+03	6.29E+03	2.20E+03	1.39E+03	6.41E+03	1.43E-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	1.76E+04	5.02E+04	2.15E+04	1.78E+04	4.67E+04	8.55E-09
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	1.96E+04	6.17E+04	2.56E+04	2.03E+04	5.79E+04	9.55E-09
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	5.94E+14	2.78E+15	9.78E+14	6.44E+14	2.83E+15	1.13E-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	4.13E+13	1.17E+14	4.97E+13	4.13E+13	1.09E+14	2.38E-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	1.14E+12	5.45E+12	1.93E+12	1.26E+12	5.53E+12	7.12E-07
Astatine (85)	At-218	4.87E-03	2.70E-03	4.66E-03	4.87E-03	4.25E-03	1.09E+07	1.5	4.54E+09	8.18E+09	4.74E+09	4.54E+09	5.21E+09	1.76E-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	1.51E+03	5.29E+03	2.11E+03	1.57E+03	5.01E+03	1.65E-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	6.68E+01	3.55E+02	1.25E+02	7.84E+01	3.62E+02	1.64E-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	2.28E+01	5.71E+01	2.62E+01	2.28E+01	5.02E+01	6.25E-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	1.96E+06	8.39E+06	3.00E+06	2.06E+06	8.53E+06	1.04E-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	1.21E+02	5.71E+02	2.00E+02	1.33E+02	5.52E+02	4.96E-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	1.18E+02	4.63E+02	1.70E+02	1.21E+02	4.64E+02	4.11E-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	5.71E+02	2.16E+03	8.03E+02	5.83E+02	2.17E+03	2.74E-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	1.32E+04	6.80E+04	2.43E+04	1.54E+04	5.49E+04	6.83E-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	7.33E+01	3.57E+02	1.25E+02	8.11E+01	3.60E+02	8.77E-11
Gold (79)	Au-201	2.89E-01	6.32E-02	1.73E-01	2.63E-01	1.05E-01	1.38E+04	1.23	1.30E+05	5.93E+05	2.16E+05	1.43E+05	3.56E+05	3.67E-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	1.32E+04	5.92E+04	2.14E+04	1.43E+04	5.53E+04	8.57E-10
Barium (56)	Ba-128	2.67E-01	6.60E-02	1.75E-01	2.54E-01	7.91E-02	1.04E+02	1.27	9.59E+02	3.88E+03	1.47E+03	1.01E+03	3.23E+03	2.29E-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	2.60E+01	1.19E+02	4.25E+01	2.84E+01	1.16E+02	3.09E-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	2.87E+05	9.01E+05	3.68E+05	2.89E+05	7.93E+05	2.92E-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	1.51E+00	6.59E+00	2.39E+00	1.62E+00	6.33E+00	6.06E-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	1.54E+03	6.36E+03	2.38E+03	1.63E+03	5.53E+03	2.55E-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	2.43E+03	9.80E+03	3.70E+03	2.53E+03	8.36E+03	3.00E-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	1.22E+05	6.13E+05	2.14E+05	1.37E+05	6.09E+05	2.27E-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	5.29E+04	1.77E+05	7.66E+04	5.57E+04	6.95E+04	3.24E-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	5.77E+01	2.73E+02	9.69E+01	6.33E+01	2.50E+02	7.90E-10
Barium (56)	Ba-141	4.76E+00	9.57E-01	2.70E+00	4.20E+00	1.03E+00	1.99E+04	1.19	1.19E+04	5.92E+04	2.09E+04	1.35E+04	5.48E+04	1.63E-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	1.61E+04	8.38E+04	2.93E+04	1.86E+04	8.25E+04	1.29E-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	2.58E+03	7.09E+03	3.30E+03	2.62E+03	6.51E+02	1.16E-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	5.04E+01	2.42E+02	8.48E+01	5.54E+01	2.46E+02	1.44E-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	2.05E+03	1.02E+04	3.58E+03	2.31E+03	1.03E+04	7.95E-11
Bismuth (83)	Bi-201	7.55E+00	1.48E+00	4.20E+00	6.58E+00	1.49E+00	3.37E+03	1.2	1.29E+03	6.61E+03	2.33E+03	1.48E+03	6.54E+03	1.50E-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	6.25E+02	3.23E+03	1.13E+03	7.17E+02	3.27E+03	6.74E-11
Bismuth (83)	Bi-203	1.44E+01	2.59E+00	7.48E+00	1.20E+01	2.54E+00	5.16E+02	1.18	9.62E+01	5.34E+02	1.85E+02	1.15E+02	5.44E+02	7.34E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	4.33E+00	2.40E+01	8.36E+00	5.19E+00	2.46E+01	1.04E-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	5.77E+00	3.03E+01	1.06E+01	6.69E+00	3.07E+01	5.69E-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	3.35E-01	1.73E+00	6.06E-01	3.85E-01	1.74E+00	7.37E-09
Bismuth (83)	Bi-210	5.45E-03	3.15E-03	4.53E-03	5.35E-03	4.10E-02	5.05E+01	1.25	2.40E+04	4.15E+04	2.88E+04	2.44E+04	3.19E+03	1.94E-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	2.12E+00	9.43E+00	3.32E+00	2.24E+00	9.61E+00	3.73E-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	2.56E+00	1.12E+01	4.01E+00	2.71E+00	9.37E+00	4.52E-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	1.95E+06	8.84E+06	3.12E+06	2.08E+06	8.99E+06	4.69E-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	1.37E+04	7.11E+04	2.53E+04	1.60E+04	5.81E+04	9.39E-10
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	2.04E+03	1.22E+04	4.22E+03	2.54E+03	1.21E+04	1.39E-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	2.77E+04	1.28E+05	4.58E+04	3.03E+04	1.01E+05	1.43E-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	2.45E+04	1.18E+05	4.21E+04	2.74E+04	9.67E+04	1.27E-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	5.53E+03	3.11E+04	1.08E+04	6.65E+03	3.07E+04	1.26E-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	6.38E+03	3.59E+04	1.24E+04	7.67E+03	3.54E+04	1.45E-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	1.30E+02	4.96E+02	1.84E+02	1.34E+02	4.89E+02	1.21E-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	7.34E+01	3.74E+02	1.32E+02	8.40E+01	3.77E+02	2.54E-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	6.36E+00	2.33E+01	8.88E+00	6.55E+00	2.29E+01	6.07E-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	1.02E+06	1.65E+06	1.10E+06	1.02E+06	6.11E+05	6.21E-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	1.08E+03	5.76E+03	2.00E+03	1.25E+03	5.75E+03	2.78E-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	1.55E+03	9.29E+03	3.20E+03	1.94E+03	9.50E+03	1.55E-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	1.05E+03	5.88E+03	2.04E+03	1.26E+03	5.90E+03	1.72E-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	1.59E+03	7.59E+03	2.67E+03	1.75E+03	7.34E+03	6.24E-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	6.80E+01	3.81E+02	1.32E+02	8.17E+01	3.85E+02	2.68E-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	1.62E+02	7.73E+02	2.71E+02	1.78E+02	7.85E+02	2.24E-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	1.30E+05	6.33E+05	2.25E+05	1.45E+05	4.80E+05	9.65E-10
Bromine (35)	Br-80m	8.88E-03	6.86E-03	8.86E-03	8.88E-03	1.60E-02	1.37E+03	1.48	3.16E+05	4.09E+05	3.17E+05	3.16E+05	1.76E+05	3.57E-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	3.30E+01	1.73E+02	6.00E+01	3.79E+01	1.76E+02	3.05E-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	1.63E+05	7.19E+05	2.71E+05	1.80E+05	2.17E+05	1.03E-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	3.09E+03	1.85E+04	6.44E+03	3.88E+03	1.84E+04	4.40E-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	9.08E+03	4.39E+04	1.54E+04	1.00E+04	4.31E+04	1.08E-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	2.36E+05	4.03E+05	2.53E+05	2.36E+05	1.75E+05	5.31E-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	7.41E+04	1.59E+05	8.44E+04	7.41E+04	8.95E+04	4.17E-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	2.67E+01	1.49E+02	5.15E+01	3.18E+01	1.49E+02	4.37E-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	6.82E+03	4.60E+04	1.56E+04	9.08E+03	4.74E+04	1.55E-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	1.33E+04	6.19E+04	2.24E+04	1.48E+04	5.91E+04	4.26E-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	4.84E+04	1.65E+05	7.19E+04	5.18E+04	7.99E+04	1.07E-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	2.41E+02	4.82E+02	2.78E+02	2.41E+02	1.52E+02	9.36E-08
Cadmium (48)	Cd-113	9.77E-05	4.18E-05	8.30E-05	9.74E-05	6.77E-05	7.45E-17	1.25	1.78E+04	4.16E+04	2.09E+04	1.79E+04	2.57E+04	5.23E+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	4.42E+03	1.19E+04	5.61E+03	4.48E+03	1.29E+03	1.90E-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	2.52E+02	1.21E+03	4.27E+02	2.77E+02	1.13E+03	4.95E-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	1.18E+02	5.11E+02	2.09E+02	1.36E+02	1.62E+02	4.66E-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	1.07E+03	5.82E+03	2.01E+03	1.26E+03	5.76E+03	9.99E-11
Cadmium (48)	Cd-117m	1.28E+01	2.22E+00	6.43E+00	1.05E+01	2.16E+00	1.81E+03	1.15	4.22E+02	2.43E+03	8.39E+02	5.13E+02	2.50E+03	5.30E-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	1.60E+04	1.96E+04	1.61E+04	1.60E+04	8.04E+03	4.94E-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	9.78E+01	4.77E+02	1.66E+02	1.08E+02	4.80E+02	7.43E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	2.79E+04	8.17E+04	4.08E+04	3.00E+04	4.69E+04	1.10E-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	2.53E+03	9.90E+03	3.88E+03	2.69E+03	8.11E+03	3.82E-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	9.53E+00	3.58E+01	1.35E+01	9.71E+00	3.30E+01	1.40E-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	6.92E+01	2.55E+02	9.57E+01	7.01E+01	2.47E+02	2.43E-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	3.65E+02	1.65E+03	5.99E+02	3.98E+02	1.43E+03	5.50E-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	5.98E+01	1.99E+02	7.92E+01	6.03E+01	1.80E+02	1.88E-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	1.41E+01	5.14E+01	2.32E+01	1.61E+01	2.21E+01	4.42E-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	3.21E+08	3.28E+08	3.21E+08	3.21E+08	4.26E+07	8.09E-06
Californium (98)	Cf-246	1.45E-04	1.02E-04	1.32E-04	1.45E-04	6.69E-04	1.70E+02	1.39	2.54E+06	3.60E+06	2.80E+06	2.54E+06	5.52E+05	7.13E-06
Californium (98)	Cf-248	8.75E-05	8.52E-05	8.75E-05	8.75E-05	6.51E-04	7.58E-01	1.39	3.53E+04	3.63E+04	3.53E+04	3.53E+04	4.75E+03	2.24E-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	1.47E+00	6.77E+00	2.38E+00	1.58E+00	6.87E+00	3.59E-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	2.68E+04	2.75E+04	2.68E+04	2.68E+04	3.58E+03	2.45E-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	4.93E+00	1.85E+01	6.88E+00	5.02E+00	1.79E+01	3.11E-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	4.94E-01	2.84E+00	9.77E-01	6.01E-01	2.93E+00	9.20E-10
Californium (98)	Cf-253	6.53E-05	3.00E-05	5.67E-05	6.51E-05	6.03E-05	1.42E+01	1.39	4.72E+05	1.03E+06	5.44E+05	4.74E+05	5.11E+05	1.63E-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	5.08E-02	2.90E-01	1.00E-01	6.18E-02	3.02E-01	5.98E-12
Chlorine (17)	Cl-36	2.48E-03	9.08E-04	1.81E-03	2.39E-03	1.31E-02	2.30E-06	1.2	1.15E+03	3.13E+03	1.57E+03	1.19E+03	2.17E+02	3.48E-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	3.29E+03	1.98E+04	6.87E+03	4.14E+03	1.94E+04	2.48E-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	2.32E+03	1.29E+04	4.46E+03	2.77E+03	1.24E+04	2.68E-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	2.42E+04	8.02E+04	3.14E+04	2.44E+04	7.72E+04	4.41E-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	1.79E+05	1.89E+05	1.79E+05	1.79E+05	2.24E+04	8.90E-06
Curium (96)	Cm-241	2.44E+00	5.41E-01	1.51E+00	2.26E+00	5.43E-01	7.71E+00	1.27	7.49E+00	3.39E+01	1.21E+01	8.11E+00	3.37E+01	4.54E-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	3.29E+04	4.14E+04	3.55E+04	3.33E+04	5.16E+03	9.96E-06
Curium (96)	Cm-243	5.33E-01	1.35E-01	3.69E-01	5.17E-01	1.38E-01	2.43E-02	1.33	4.53E+00	1.79E+01	6.55E+00	4.68E+00	1.76E+01	8.79E-08
Curium (96)	Cm-244	8.93E-05	8.62E-05	8.93E-05	8.93E-05	7.52E-04	3.83E-02	1.41	2.45E+04	2.54E+04	2.45E+04	2.45E+04	2.91E+03	3.03E-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	7.62E+00	2.59E+01	1.00E+01	7.67E+00	2.48E+01	4.44E-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	2.59E+04	2.72E+04	2.60E+04	2.59E+04	3.19E+03	8.44E-02
Curium (96)	Cm-247	1.65E+00	3.54E-01	1.01E+00	1.53E+00	3.49E-01	4.44E-08	1.23	1.61E+00	7.50E+00	2.63E+00	1.74E+00	7.62E+00	1.74E-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	1.85E+00	8.44E+00	3.00E+00	2.00E+00	8.50E+00	2.00E-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	1.51E-01	8.66E-01	2.99E-01	1.83E-01	8.96E-01	3.64E-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	1.46E+05	6.93E+05	2.48E+05	1.61E+05	4.04E+05	1.24E-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	9.18E-01					6.23E-06
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	9.04E+01	4.65E+02	1.62E+02	1.03E+02	4.62E+02	2.79E-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	4.77E-01	2.75E+00	9.48E-01	5.82E-01	2.83E+00	1.61E-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	8.18E+00	2.91E+01	1.10E+01	8.28E+00	2.95E+01	9.69E-10
Cobalt (27)	Co-58	5.60E+00	1.09E+00	3.13E+00	4.92E+00	1.08E+00	3.57E+00	1.18	1.94E+00	9.92E+00	3.47E+00	2.21E+00	1.01E+01	6.11E-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	8.58E+08	8.76E+08	8.55E+08	8.58E+08	1.96E+08	1.45E-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	2.17E-01	1.22E+00	4.19E-01	2.59E-01	1.24E+00	1.92E-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	4.16E+06	2.02E+07	7.56E+06	4.91E+06	1.88E+07	1.39E-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	3.05E+04	1.04E+05	4.43E+04	3.30E+04	6.42E+04	9.81E-10
Cobalt (27)	Co-62m	1.68E+01	2.97E+00	8.58E+00	1.39E+01	3.01E+00	2.62E+04	1.15	4.93E+03	2.79E+04	9.64E+03	5.94E+03	2.75E+04	2.26E-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	3.47E+02	1.48E+03	5.31E+02	3.67E+02	1.51E+03	1.22E-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	4.35E+03	2.04E+04	7.23E+03	4.77E+03	1.94E+04	4.78E-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	1.55E+02	7.05E+02	2.47E+02	1.65E+02	7.21E+02	1.68E-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	6.28E+03	3.04E+04	1.08E+04	6.95E+03	2.88E+04	1.88E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	1.04E+05	4.89E+05	1.75E+05	1.15E+05	4.55E+05	1.15E-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	1.25E+03	5.89E+03	2.09E+03	1.38E+03	5.79E+03	3.18E-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	5.33E+04	2.55E+05	9.03E+04	5.88E+04	2.37E+05	1.42E-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	3.87E+02	1.76E+03	6.32E+02	4.19E+02	1.68E+03	5.11E-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	1.22E+04	5.87E+04	2.08E+04	1.35E+04	5.41E+04	2.53E-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	7.86E+03	8.76E+03	7.86E+03	7.86E+03	2.95E+03	7.66E-08
Cesium (55)	Cs-132	3.88E+00	7.78E-01	2.22E+00	3.45E+00	7.81E-01	3.91E+01	1.2	2.90E+01	1.45E+02	5.08E+01	3.26E+01	1.44E+02	1.90E-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	3.89E-01	1.98E+00	6.89E-01	4.41E-01	2.00E+00	3.01E-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	7.74E+04	2.45E+05	1.02E+05	7.80E+04	1.91E+05	9.61E-09
Cesium (55)	Cs-135	3.21E-05	1.62E-05	2.89E-05	3.21E-05	3.14E-05	3.01E-07	1.25	8.08E+04	1.59E+05	8.96E+04	8.08E+04	8.25E+04	7.02E+01
Cesium (55)	Cs-135m	9.19E+00	1.78E+00	5.11E+00	8.04E+00	1.76E+00	6.87E+03	1.18	2.22E+03	1.15E+04	3.99E+03	2.54E+03	1.16E+04	8.45E-11
Cesium (55)	Cs-136	1.25E+01	2.41E+00	6.90E+00	1.09E+01	2.37E+00	1.93E+01	1.18	4.62E+00	2.40E+01	8.37E+00	5.30E+00	2.44E+01	6.31E-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	3.14E+03	6.79E+03	3.88E+03	3.19E+03	7.51E+02	3.62E-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	9.15E-01	4.59E+00	1.61E+00	1.03E+00	4.54E+00	1.05E-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	2.27E+03	1.29E+04	4.47E+03	2.75E+03	1.27E+04	5.37E-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	2.06E+03	1.15E+04	3.98E+03	2.46E+03	1.16E+04	1.53E-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	1.15E+03	5.61E+03	1.97E+03	1.28E+03	5.50E+03	7.66E-11
Copper (29)	Cu-62	5.60E+00	1.18E+00	3.30E+00	5.07E+00	1.30E+00	3.74E+04	1.2	1.90E+04	9.01E+04	3.22E+04	2.10E+04	8.21E+04	6.12E-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	1.30E+03	6.35E+03	2.23E+03	1.44E+03	6.38E+03	3.39E-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	3.91E+05	1.76E+06	7.01E+05	4.53E+05	9.21E+05	7.02E-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	5.31E+02	2.08E+03	7.62E+02	5.46E+02	2.11E+03	7.04E-10
Dysprosium (66)	Dy-155	3.06E+00	6.23E-01	1.75E+00	2.70E+00	6.28E-01	6.07E+02	1.19	5.47E+02	2.69E+03	9.55E+02	6.19E+02	2.66E+03	2.71E-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	1.22E+03	5.33E+03	1.92E+03	1.30E+03	5.24E+03	4.96E-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	1.17E+02	1.86E+02	1.19E+02	1.17E+02	1.16E+02	2.07E-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	5.58E+04	2.19E+05	8.84E+04	6.10E+04	8.50E+04	6.87E-09
Dysprosium (66)	Dy-166	7.93E-02	3.19E-02	6.51E-02	7.76E-02	4.10E-02	7.44E+01	1.26	2.37E+03	5.90E+03	2.89E+03	2.43E+03	4.59E+03	1.03E-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	9.92E+02	5.07E+03	1.79E+03	1.14E+03	5.08E+03	1.65E-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	3.45E+04	5.73E+04	3.54E+04	3.45E+04	3.85E+04	1.88E-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	5.85E+05	1.41E+06	6.96E+05	5.87E+05	8.94E+05	7.05E-06
Erbium (68)	Er-171	1.81E+00	4.18E-01	1.16E+00	1.70E+00	4.49E-01	8.07E+02	1.22	1.22E+03	5.26E+03	1.90E+03	1.29E+03	4.89E+03	5.00E-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	1.20E+02	5.71E+02	2.03E+02	1.33E+02	5.74E+02	3.26E-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	3.80E+03	1.88E+04	6.65E+03	4.32E+03	1.88E+04	6.38E-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	1.34E+03	4.67E+03	1.78E+03	1.35E+03	4.48E+03	3.56E-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	1.69E+04	6.54E+04	2.61E+04	1.80E+04	3.50E+04	6.70E-07
Einsteinium (99)	Es-254	1.13E-02	4.16E-03	8.47E-03	1.09E-02	1.14E-02	9.17E-01	1.39	2.94E+02	8.02E+02	3.94E+02	3.06E+02	2.93E+02	1.58E-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	8.72E-01	4.65E+00	1.62E+00	1.01E+00	4.61E+00	4.68E-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	1.47E+02	7.40E+02	2.59E+02	1.66E+02	7.25E+02	4.70E-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	1.45E+01	7.92E+01	2.76E+01	1.72E+01	8.04E+01	9.60E-11
Europium (63)	Eu-146	1.45E+01	2.78E+00	7.96E+00	1.26E+01	2.74E+00	5.49E+01	1.18	1.11E+01	5.80E+01	2.02E+01	1.28E+01	5.88E+01	5.73E-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	1.20E+01	5.79E+01	2.08E+01	1.35E+01	5.68E+01	3.25E-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	1.06E+00	5.37E+00	1.88E+00	1.20E+00	5.42E+00	6.53E-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	4.12E+01	1.45E+02	6.14E+01	4.38E+01	1.14E+02	4.39E-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	4.33E-01	2.27E+00	7.95E-01	5.03E-01	2.27E+00	2.46E-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	1.10E+03	5.53E+03	1.98E+03	1.26E+03	4.67E+03	4.98E-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	3.95E-01	2.09E+00	7.31E-01	4.60E-01	2.10E+00	1.50E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	1.69E+01	4.84E+01	2.07E+01	1.69E+01	4.37E+01	3.63E-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	5.92E+00	3.35E+01	1.16E+01	7.13E+00	3.36E+01	1.08E-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	9.09E+02	3.98E+03	1.48E+03	9.88E+02	3.43E+03	6.91E-10
Europium (63)	Eu-158	6.30E+00	1.19E+00	3.38E+00	5.37E+00	1.26E+00	7.94E+03	1.17	3.80E+03	2.02E+04	7.10E+03	4.46E+03	1.90E+04	1.47E-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	1.68E+03	8.14E+03	2.86E+03	1.85E+03	8.23E+03	1.77E-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	5.29E+02	2.46E+03	8.69E+02	5.73E+02	2.46E+03	7.28E-11
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	2.44E+00	1.35E+01	4.67E+00	2.90E+00	1.38E+01	4.92E-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	2.87E+05	4.65E+05	3.02E+05	2.87E+05	1.90E+05	4.82E+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	1.19E+02	5.81E+02	2.17E+02	1.41E+02	5.39E+02	2.01E-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	6.21E+06	6.32E+06	6.21E+06	6.21E+06	9.26E+05	1.14E-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	6.70E+02	2.40E+03	9.06E+02	6.79E+02	2.31E+03	3.90E-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	2.18E+07	3.25E+07	2.41E+07	2.18E+07	5.87E+06	5.73E-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	1.26E+05	2.85E+05	1.50E+05	1.27E+05	8.97E+04	2.06E-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	1.69E+01	6.20E+01	2.33E+01	1.72E+01	5.95E+01	3.36E-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	1.58E+11	7.29E+11	2.58E+11	1.71E+11	7.42E+11	6.45E-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	4.20E+07	1.55E+08	5.79E+07	4.28E+07	1.51E+08	2.25E-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	2.62E+05	1.56E+06	5.37E+05	3.26E+05	1.55E+06	1.40E-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	1.39E+06	5.80E+06	2.08E+06	1.44E+06	5.91E+06	7.85E-09
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	1.79E+05	8.50E+05	3.02E+05	1.99E+05	7.16E+05	1.01E-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	2.68E+06	4.45E+06	3.25E+06	2.77E+06	6.42E+05	4.57E-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	2.11E+05	7.10E+05	2.97E+05	2.22E+05	4.22E+05	5.47E-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	1.09E+04	5.21E+04	1.85E+04	1.21E+04	4.93E+04	5.75E-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	1.29E+02	7.59E+02	2.63E+02	1.60E+02	7.71E+02	2.55E-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	3.05E+02	1.25E+03	4.55E+02	3.19E+02	1.26E+03	5.12E-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	2.91E+03	1.40E+04	4.94E+03	3.22E+03	1.31E+04	7.17E-11
Gallium (31)	Ga-70	6.21E-02	1.92E-02	3.88E-02	5.56E-02	9.90E-02	1.72E+04	1.17	8.27E+05	2.67E+06	1.32E+06	9.24E+05	5.19E+05	6.52E-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	7.66E+01	4.40E+02	1.52E+02	9.31E+01	4.48E+02	2.49E-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	2.05E+03	9.27E+03	3.28E+03	2.19E+03	8.31E+03	2.35E-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	3.65E+03	2.08E+04	7.21E+03	4.44E+03	2.10E+04	6.46E-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	1.86E+01	5.92E+01	2.44E+01	1.88E+01	5.15E+01	1.01E-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	6.01E+01	3.01E+02	1.06E+02	6.81E+01	3.04E+02	1.08E-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	3.74E+01	1.68E+02	6.08E+01	4.07E+01	1.63E+02	4.02E-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	3.95E+01	1.22E+02	5.41E+01	4.08E+01	9.44E+01	5.50E-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	1.91E+01	4.84E+01	2.28E+01	1.91E+01	3.77E+01	5.42E-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	4.05E+03	1.69E+04	6.35E+03	4.30E+03	1.18E+04	3.82E-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	2.02E+03	9.57E+03	3.39E+03	2.21E+03	9.58E+03	9.67E-11
Germanium (32)	Ge-67	7.85E+00	1.62E+00	4.55E+00	7.01E+00	1.70E+00	1.95E+04	1.19	7.43E+03	3.61E+04	1.28E+04	8.32E+03	3.42E+04	4.96E-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	2.19E+06	2.19E+06	2.19E+06	2.19E+06	5.93E+04	3.29E-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	8.16E-01	3.93E+00	1.39E+00	9.02E-01	3.68E+00	1.23E-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	9.32E+01	4.78E+02	1.67E+02	1.06E+02	4.77E+02	8.02E-11
Germanium (32)	Ge-71	1.31E-06	1.31E-06	1.31E-06	1.31E-06	4.84E-05	2.14E+01	1.59	3.09E+07	3.09E+07	3.09E+07	3.09E+07	8.36E+05	1.99E-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	6.76E+04	2.85E+05	1.04E+05	7.12E+04	1.42E+05	2.24E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	2.50E+02	1.24E+03	4.34E+02	2.81E+02	1.19E+03	6.95E-11
Germanium (32)	Ge-78	1.40E+00	3.11E-01	8.90E-01	1.32E+00	3.12E-01	4.19E+03	1.22	8.13E+03	3.64E+04	1.27E+04	8.59E+03	3.64E+04	2.94E-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	3.84E+02	1.69E+03	6.19E+02	4.17E+02	1.66E+03	3.34E-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	1.37E+01	3.19E+01	1.57E+01	1.37E+01	2.53E+01	1.23E-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	3.97E+02	1.59E+03	5.92E+02	4.18E+02	1.56E+03	5.27E-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	5.88E+00	2.54E+01	9.26E+00	6.28E+00	2.51E+01	5.53E-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	1.75E+03	7.65E+03	2.74E+03	1.86E+03	7.74E+03	8.47E-11
Hafnium (72)	Hf-178m	1.21E+01	2.63E+00	7.40E+00	1.12E+01	2.59E+00	2.24E-02	1.21	2.34E-01	1.08E+00	3.82E-01	2.54E-01	1.09E+00	3.62E-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	6.41E+00	2.81E+01	1.01E+01	6.85E+00	2.82E+01	2.21E-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	6.08E+02	2.72E+03	9.71E+02	6.54E+02	2.74E+03	1.92E-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	5.91E+00	2.70E+01	9.61E+00	6.38E+00	2.72E+01	3.48E-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	2.34E+00	1.02E+01	3.61E+00	2.46E+00	1.04E+01	1.07E-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	3.27E+03	1.53E+04	5.44E+03	3.60E+03	1.53E+04	1.95E-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	4.03E+03	1.99E+04	7.04E+03	4.54E+03	1.90E+04	2.51E-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	3.53E+03	1.46E+04	5.33E+03	3.71E+03	1.35E+04	8.55E-10
Mercury (80)	Hg-193	7.09E-01	2.00E-01	5.07E-01	6.84E-01	2.10E-01	1.73E+03	1.33	5.90E+03	2.09E+04	8.24E+03	6.11E+03	1.99E+04	1.27E-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	2.49E+02	1.24E+03	4.38E+02	2.83E+02	1.25E+03	1.71E-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	1.85E+05	1.85E+05	1.85E+05	1.85E+05	7.54E+03	2.62E-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	4.35E-01	2.32E+00	8.11E-01	5.11E-01	2.36E+00	6.15E-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	1.65E+03	7.27E+03	2.72E+03	1.84E+03	7.04E+03	1.02E-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	3.47E+02	1.50E+03	5.49E+02	3.74E+02	1.49E+03	9.00E-10
Mercury (80)	Hg-197	1.50E-01	5.99E-02	1.31E-01	1.50E-01	6.76E-02	9.47E+01	1.4	1.41E+03	3.52E+03	1.61E+03	1.41E+03	3.12E+03	5.68E-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	1.84E+03	6.35E+03	2.47E+03	1.87E+03	6.18E+03	2.75E-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	2.90E+04	1.11E+05	4.17E+04	3.01E+04	1.09E+05	1.31E-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	1.25E+01	5.49E+01	1.94E+01	1.32E+01	5.61E+01	9.05E-10
Holmium (67)	Ho-155	1.92E+00	4.21E-01	1.17E+00	1.76E+00	4.54E-01	7.59E+03	1.21	1.06E+04	4.84E+04	1.75E+04	1.16E+04	4.49E+04	4.21E-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	3.34E+04	1.51E+05	5.50E+04	3.69E+04	1.45E+05	3.52E-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	1.99E+04	7.89E+04	3.01E+04	2.11E+04	7.48E+04	5.55E-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	7.92E+04	1.52E+05	8.68E+04	7.94E+04	9.90E+04	1.02E-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	9.12E+04	4.18E+05	1.58E+05	1.04E+05	3.82E+05	1.18E-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	4.80E+03	2.41E+04	8.61E+03	5.53E+03	2.39E+04	2.81E-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	8.25E+05	1.50E+06	8.76E+05	8.25E+05	7.95E+05	2.09E-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	4.80E+05	8.01E+05	4.94E+05	4.80E+05	5.29E+05	1.57E-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	4.12E+03	1.56E+04	6.92E+03	4.75E+03	5.24E+03	5.85E-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	2.91E-01	1.45E+00	5.04E-01	3.26E-01	1.46E+00	1.62E-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	2.93E+03	1.32E+04	4.70E+03	3.14E+03	1.31E+04	4.86E-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	8.00E+02	4.39E+03	1.53E+03	9.52E+02	4.34E+03	4.14E-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	6.53E+02	3.52E+03	1.23E+03	7.65E+02	3.54E+03	2.21E-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	3.80E+03	1.74E+04	6.17E+03	4.10E+03	1.70E+04	3.12E-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	5.47E+04	2.63E+05	9.33E+04	6.07E+04	2.43E+05	1.29E-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	1.76E+03	6.85E+03	2.54E+03	1.81E+03	6.40E+03	9.11E-10
Iodine (53)	I-124	6.38E+00	1.21E+00	3.47E+00	5.50E+00	1.21E+00	6.05E+01	1.18	2.76E+01	1.46E+02	5.08E+01	3.20E+01	1.45E+02	1.10E-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	8.42E+02	9.10E+02	8.42E+02	8.42E+02	2.72E+02	4.85E-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	2.24E+01	1.09E+02	3.83E+01	2.48E+01	1.07E+02	2.81E-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	8.47E+04	3.67E+05	1.39E+05	9.26E+04	2.04E+05	1.44E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	2.49E+02	2.89E+02	2.49E+02	2.49E+02	1.04E+02	1.41E+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	1.18E+02	5.93E+02	2.07E+02	1.32E+02	5.97E+02	6.05E-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	4.36E+01	2.04E+02	7.18E+01	4.74E+01	2.07E+02	3.52E-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	5.71E+02	2.96E+03	1.03E+03	6.53E+02	2.94E+03	5.54E-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	7.12E+03	3.52E+04	1.24E+04	7.98E+03	3.44E+04	4.19E-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	2.45E+02	1.22E+03	4.27E+02	2.75E+02	1.16E+03	2.17E-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	1.31E+03	6.92E+03	2.40E+03	1.51E+03	6.86E+03	4.91E-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	2.74E+02	1.54E+03	5.33E+02	3.28E+02	1.55E+03	7.82E-11
Indium (49)	In-109	3.62E+00	7.29E-01	2.09E+00	3.23E+00	7.28E-01	1.45E+03	1.21	1.11E+03	5.49E+03	1.92E+03	1.24E+03	5.50E+03	1.62E-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	1.24E+02	5.24E+02	1.87E+02	1.29E+02	5.23E+02	3.00E-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	4.65E+04	2.24E+05	7.92E+04	5.14E+04	2.11E+05	3.99E-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	7.25E+03	3.38E+04	1.19E+04	7.85E+03	3.41E+04	4.34E-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	5.29E+07	2.92E+08	1.02E+08	6.31E+07	2.76E+08	3.85E-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	2.90E+01	1.35E+02	4.81E+01	3.18E+01	1.30E+02	1.26E-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	3.48E+01	1.63E+02	5.83E+01	3.83E+01	1.57E+02	1.51E-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	8.95E+03	2.44E+04	1.12E+04	9.04E+03	7.61E+03	1.47E+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	4.51E+03	2.06E+04	7.24E+03	4.83E+03	2.03E+04	7.44E-10
Indium (49)	In-116m	1.52E+01	2.70E+00	7.85E+00	1.27E+01	2.66E+00	6.73E+03	1.16	1.30E+03	7.27E+03	2.50E+03	1.55E+03	7.39E+03	4.33E-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	6.36E+03	2.98E+04	1.05E+04	6.93E+03	2.99E+04	1.74E-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	1.90E+04	7.96E+04	2.91E+04	2.01E+04	5.59E+04	1.38E-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	1.00E+05	5.08E+05	1.78E+05	1.13E+05	4.73E+05	1.52E-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	5.60E+05	1.36E+06	8.03E+05	6.04E+05	3.33E+05	6.40E-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	8.94E+03	4.33E+04	1.54E+04	1.00E+04	4.20E+04	1.30E-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	4.99E+02	2.59E+03	9.05E+02	5.77E+02	2.60E+03	8.87E-11
Iridium (77)	Ir-185	3.34E+00	6.25E-01	1.76E+00	2.80E+00	6.22E-01	4.34E+02	1.21	3.40E+02	1.82E+03	6.45E+02	4.06E+02	1.82E+03	2.81E-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	8.18E+02	3.77E+03	1.38E+03	9.14E+02	3.72E+03	5.13E-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	4.37E+01	2.46E+02	8.54E+01	5.29E+01	2.52E+02	1.09E-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	1.99E+02	5.94E+02	2.56E+02	2.03E+02	5.32E+02	3.84E-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	7.41E+00	3.48E+01	1.24E+01	8.13E+00	3.52E+01	1.31E-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	4.75E+09	4.75E+09	4.75E+09	4.75E+09	1.57E+08	3.46E-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	6.23E+02	2.93E+03	1.03E+03	6.80E+02	2.96E+03	1.17E-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	4.93E+07	1.47E+08	6.19E+07	4.97E+07	1.37E+08	4.13E-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	2.15E+00	9.97E+00	3.49E+00	2.32E+00	1.01E+01	2.34E-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	3.84E+00	1.51E+01	5.47E+00	3.92E+00	1.53E+01	4.97E-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	1.69E+03	7.42E+03	2.82E+03	1.87E+03	4.19E+03	2.00E-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	4.28E-01	2.07E+00	7.25E-01	4.72E-01	2.09E+00	1.09E-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	3.77E+04	1.03E+05	4.56E+04	3.80E+04	6.41E+04	5.88E-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	1.82E+03	8.04E+03	2.92E+03	1.98E+03	7.81E+03	4.31E-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	7.43E+03	4.27E+04	1.48E+04	9.05E+03	4.28E+04	1.15E-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	3.20E+00	1.80E+01	6.32E+00	3.88E+00	1.34E+01	4.59E-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	8.57E+02	4.51E+03	1.67E+03	1.04E+03	3.38E+03	1.42E-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	1.45E+02	6.99E+02	2.45E+02	1.59E+02	7.00E+02	4.49E-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	3.72E+03	2.23E+04	7.71E+03	4.66E+03	2.21E+04	1.93E-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	4.89E+03	2.87E+04	9.87E+03	6.03E+03	2.81E+04	2.34E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	1.38E+04	6.42E+04	2.29E+04	1.50E+04	6.09E+04	6.24E-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	4.51E+02	2.07E+03	7.30E+02	4.84E+02	2.09E+03	1.62E-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	2.54E+03	1.17E+04	4.16E+03	2.76E+03	1.11E+04	7.77E-11
Krypton (36)	Kr-79	1.36E+00	2.83E-01	8.08E-01	1.24E+00	2.79E-01	1.73E+02	1.3	3.31E+02	1.59E+03	5.57E+02	3.64E+02	1.61E+03	2.93E-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	7.26E+01	3.22E+02	1.13E+02	7.62E+01	2.87E+02	3.46E-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	6.88E+06	2.84E+07	1.02E+07	7.10E+06	2.91E+07	6.43E-10
Krypton (36)	Kr-83m	2.52E-05	2.44E-05	2.52E-05	2.52E-05	4.17E-04	3.32E+03	1.49	2.66E+08	2.74E+08	2.66E+08	2.66E+08	1.61E+07	1.29E-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	2.17E+02	9.53E+02	3.57E+02	2.38E+02	2.39E+02	5.55E-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	5.03E+03	2.02E+04	7.33E+03	5.20E+03	1.91E+04	6.12E-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	2.94E+03	1.65E+04	5.81E+03	3.58E+03	1.50E+04	1.04E-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	4.91E+02	2.99E+03	1.02E+03	6.16E+02	3.07E+03	3.92E-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	4.93E+03	2.32E+04	8.27E+03	5.40E+03	2.24E+04	2.03E-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	3.11E+02	1.67E+03	5.81E+02	3.65E+02	1.67E+03	6.29E-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	4.00E+04	1.92E+05	6.82E+04	4.43E+04	1.76E+05	1.91E-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	1.15E+04	3.72E+04	1.76E+04	1.25E+04	2.19E+04	9.65E-09
Lanthanum (57)	La-137	1.04E-02	8.82E-03	1.04E-02	1.04E-02	2.29E-02	1.16E-05	1.29	2.29E+02	2.70E+02	2.29E+02	2.29E+02	1.04E+02	5.26E-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	4.10E-01	2.30E+00	7.92E-01	4.90E-01	2.34E+00	2.14E+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	3.18E+01	1.79E+02	6.18E+01	3.81E+01	1.80E+02	5.72E-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	1.58E+04	6.88E+04	2.88E+04	1.87E+04	2.76E+04	2.80E-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	6.68E+02	4.07E+03	1.39E+03	8.39E+02	4.10E+03	4.67E-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	1.18E+05	5.41E+05	2.19E+05	1.41E+05	2.97E+05	1.28E-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	8.44E+01	4.45E+02	1.57E+02	9.92E+01	4.46E+02	1.55E-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	2.22E+01	1.32E+02	4.53E+01	2.76E+01	1.36E+02	5.79E-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	2.27E+01	1.10E+02	3.93E+01	2.56E+01	1.08E+02	2.45E-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	9.72E+00	5.09E+01	1.79E+01	1.13E+01	5.13E+01	8.59E-11
Lutetium (71)	Lu-173	3.75E-01	1.17E-01	2.72E-01	3.60E-01	1.35E-01	5.06E-01	1.25	9.03E+00	2.89E+01	1.24E+01	9.40E+00	2.50E+01	5.99E-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	5.67E+00	2.52E+01	9.86E+00	6.58E+00	2.32E+01	9.14E-09
Lutetium (71)	Lu-174m	1.29E-01	4.94E-02	1.01E-01	1.23E-01	6.22E-02	1.78E+00	1.29	4.09E+01	1.06E+02	5.21E+01	4.29E+01	8.46E+01	7.75E-09
Lutetium (71)	Lu-176	2.33E+00	5.39E-01	1.51E+00	2.22E+00	5.33E-01	1.93E-11	1.23	1.15E+00	4.99E+00	1.78E+00	1.21E+00	5.04E+00	2.05E+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	1.04E+05	2.43E+05	1.22E+05	1.04E+05	6.19E+04	2.15E-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	6.83E+02	2.67E+03	9.84E+02	7.04E+02	2.64E+03	6.22E-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	1.12E+00	4.75E+00	1.72E+00	1.18E+00	4.76E+00	2.45E-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	4.68E+04	2.39E+05	8.82E+04	5.56E+04	1.59E+05	1.26E-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	8.12E+03	3.57E+04	1.28E+04	8.66E+03	3.47E+04	1.75E-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	2.33E+04	9.20E+04	3.51E+04	2.44E+04	4.01E+04	6.12E-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	5.93E+03	2.35E+04	8.67E+03	6.18E+03	2.32E+04	2.53E-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	5.52E+03	9.86E+03	6.09E+03	5.52E+03	2.64E+03	6.00E-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	1.05E+02	5.74E+02	1.99E+02	1.24E+02	5.84E+02	1.97E-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	4.06E+03	1.95E+04	6.91E+03	4.49E+03	1.80E+04	5.10E-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	6.76E+00	3.66E+01	1.27E+01	7.92E+00	3.72E+01	1.51E-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	3.65E+03	1.94E+04	6.77E+03	4.26E+03	1.90E+04	2.13E-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	8.97E-01	4.65E+00	1.62E+00	1.03E+00	4.71E+00	1.16E-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	7.08E+02	3.99E+03	1.38E+03	8.52E+02	3.93E+03	3.27E-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	8.53E+03	4.66E+04	1.62E+04	1.01E+04	4.60E+04	6.71E-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	6.87E+02	3.25E+03	1.15E+03	7.56E+02	3.25E+03	1.12E-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	5.19E+03	5.17E+03	5.19E+03	5.19E+03	4.77E+02	4.73E-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	1.96E+02	1.07E+03	3.72E+02	2.32E+02	1.10E+03	3.99E-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	2.99E+02	1.46E+03	5.17E+02	3.34E+02	1.20E+03	6.23E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	1.85E+04	8.95E+04	3.15E+04	2.04E+04	8.64E+04	1.28E-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	2.64E-01	1.39E+00	4.84E-01	3.05E-01	1.42E+00	4.22E-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	4.95E+01	3.12E+02	1.06E+02	6.34E+01	3.22E+02	5.70E-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	3.13E+03	1.60E+04	5.60E+03	3.55E+03	1.58E+04	2.10E-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	4.83E+01	2.82E+02	9.71E+01	5.96E+01	2.89E+02	2.03E-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	3.01E+04	3.01E+04	3.01E+04	3.01E+04	2.78E+03	1.07E-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	3.26E-01	1.68E+00	5.85E-01	3.72E-01	1.71E+00	1.74E-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	4.81E+00	2.47E+01	8.64E+00	5.48E+00	2.50E+01	1.23E-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	5.47E+02	2.36E+03	8.33E+02	5.68E+02	2.32E+03	1.44E-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	5.35E+01	2.76E+02	9.67E+01	6.13E+01	2.81E+02	3.83E-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	3.95E+03	1.97E+04	6.92E+03	4.43E+03	1.87E+04	1.47E-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	2.55E+05	1.30E+06	4.53E+05	2.88E+05	1.31E+06	1.32E-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	1.50E+03	7.96E+03	2.78E+03	1.75E+03	7.83E+03	4.04E-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	1.56E+04	6.77E+04	2.52E+04	1.70E+04	6.26E+04	5.72E-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	3.44E+04	1.04E+05	4.88E+04	3.61E+04	6.89E+04	7.65E-09
Neodymium (60)	Nd-139	2.16E+00	4.46E-01	1.25E+00	1.94E+00	4.75E-01	1.23E+04	1.2	1.63E+04	7.92E+04	2.82E+04	1.82E+04	7.43E+04	3.59E-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	3.52E+02	1.82E+03	6.36E+02	4.05E+02	1.81E+03	8.61E-11
Neodymium (60)	Nd-141	2.87E-01	6.55E-02	1.67E-01	2.54E-01	7.98E-02	2.44E+03	1.24	2.19E+04	9.61E+04	3.76E+04	2.48E+04	7.88E+04	2.46E-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	2.36E+05	1.21E+06	4.22E+05	2.68E+05	1.21E+06	1.84E-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	1.03E+02	4.41E+02	1.64E+02	1.12E+02	3.90E+02	1.28E-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	4.92E+03	2.20E+04	7.92E+03	5.33E+03	1.98E+04	4.06E-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	1.57E+04	7.90E+04	2.78E+04	1.79E+04	7.47E+04	1.57E-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	6.38E+05	3.05E+06	1.08E+06	7.03E+05	2.81E+06	1.85E-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	1.25E+01	6.32E+01	2.21E+01	1.42E+01	6.42E+01	3.29E-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	4.50E+01	2.51E+02	8.69E+01	5.37E+01	2.57E+02	2.96E-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	2.22E+03	1.24E+04	4.31E+03	2.66E+03	1.14E+04	1.16E-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	7.92E+06	1.63E+07	8.93E+06	7.96E+06	8.72E+06	9.12E-06
Neptunium (93)	Np-232	6.58E+00	1.33E+00	3.77E+00	5.84E+00	1.32E+00	2.48E+04	1.22	1.02E+04	5.05E+04	1.78E+04	1.15E+04	5.08E+04	1.85E-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	8.00E+04	2.69E+05	1.05E+05	8.10E+04	2.59E+05	3.59E-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	1.74E+01	9.80E+01	3.39E+01	2.09E+01	9.97E+01	1.37E-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	1.02E+03	2.67E+03	1.25E+03	1.02E+03	8.61E+02	7.29E-07
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	3.19E+01	9.57E+01	4.01E+01	3.20E+01	7.53E+01	4.53E-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	9.32E+01	4.96E+02	1.72E+02	1.08E+02	4.86E+02	3.60E-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	3.77E+02	1.47E+03	5.42E+02	3.90E+02	1.44E+03	1.63E-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	2.00E+03	1.00E+04	3.51E+03	2.26E+03	1.00E+04	1.66E-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	6.51E+04	3.25E+05	1.15E+05	7.39E+04	2.74E+05	6.16E-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	9.05E+04	4.34E+05	1.53E+05	9.98E+04	4.07E+05	1.47E-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	2.63E+05	7.09E+05	3.29E+05	2.72E+05	5.89E+05	5.54E-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	1.41E+03	7.17E+03	2.53E+03	1.62E+03	7.23E+03	1.43E-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	3.39E+02	1.49E+03	5.44E+02	3.66E+02	1.48E+03	4.34E-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	2.13E+00	1.04E+01	3.71E+00	2.39E+00	1.04E+01	2.84E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	1.10E+09	1.10E+09	1.10E+09	1.10E+09	3.43E+07	3.98E-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	1.21E+04	5.78E+04	2.03E+04	1.33E+04	5.86E+04	1.22E-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	1.75E+02	5.17E+02	2.19E+02	1.77E+02	4.78E+02	3.96E-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	6.94E+04	1.54E+05	7.63E+04	6.94E+04	1.28E+05	5.52E-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	1.52E+03	6.38E+03	2.37E+03	1.63E+03	4.63E+03	2.81E-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	2.27E+03	3.42E+03	2.30E+03	2.27E+03	1.90E+03	7.40E-06
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	5.64E+00	2.47E+01	9.43E+00	6.24E+00	1.39E+01	1.84E-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	7.28E+04	3.43E+05	1.23E+05	8.02E+04	3.14E+05	2.91E-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	2.26E+03	3.70E+03	2.72E+03	2.32E+03	4.61E+02	7.91E-09
Phosphorus (15)	P-33	5.02E-05	2.37E-05	4.40E-05	5.00E-05	4.25E-05	9.96E+00	1.25	5.14E+05	1.09E+06	5.86E+05	5.16E+05	6.07E+05	3.31E-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	3.64E+05	1.07E+06	4.46E+05	3.64E+05	9.73E+05	1.68E-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	1.06E+02	5.45E+02	1.91E+02	1.22E+02	5.54E+02	1.70E-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	1.00E+01	5.00E+01	1.76E+01	1.14E+01	5.04E+01	3.08E-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	1.23E+01	5.37E+01	1.93E+01	1.31E+01	4.91E+01	2.60E-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	9.48E+01	4.88E+02	1.70E+02	1.08E+02	4.93E+02	2.21E-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	2.44E+01	1.05E+02	3.76E+01	2.58E+01	1.06E+02	1.18E-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	2.17E+02	1.12E+03	3.90E+02	2.49E+02	1.12E+03	1.09E-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	7.98E+06	2.51E+07	1.27E+07	8.93E+06	6.24E+06	1.16E-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	7.27E+03	3.55E+04	1.25E+04	8.10E+03	3.55E+04	1.19E-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	3.12E+03	1.35E+04	4.90E+03	3.33E+03	1.35E+04	4.74E-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	1.25E+03	6.66E+03	2.33E+03	1.47E+03	6.76E+03	1.20E-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	8.77E+02	3.18E+03	1.22E+03	9.06E+02	3.08E+03	1.21E-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	4.14E+02	1.98E+03	7.04E+02	4.62E+02	2.00E+03	2.50E-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	2.61E+05	2.61E+05	2.61E+05	2.61E+05	8.58E+03	4.43E+01
Lead (82)	Pb-202+D	1.40E+01					2.31E-06	1.23	1.93E-01					3.27E-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	3.67E+02	1.86E+03	6.51E+02	4.16E+02	1.90E+03	8.57E-11
Lead (82)	Pb-203	1.38E+00	3.34E-01	9.12E-01	1.31E+00	3.34E-01	1.17E+02	1.29	2.14E+02	8.84E+02	3.24E+02	2.25E+02	8.84E+02	7.23E-10
Lead (82)	Pb-205	8.19E-06	8.19E-06	8.19E-06	8.19E-06	2.43E-04	4.85E-08	1.57	2.34E+05	2.34E+05	2.34E+05	2.34E+05	7.89E+03	1.92E+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	6.43E+06	1.64E+07	8.13E+06	6.53E+06	1.30E+06	1.40E-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	1.04E+03	1.62E+03	1.05E+03	1.04E+03	8.24E+02	1.36E-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	9.78E+04	4.61E+05	1.68E+05	1.10E+05	2.57E+05	3.97E-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	2.25E+03	9.14E+03	3.33E+03	2.34E+03	9.22E+03	1.62E-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	2.85E+04	1.27E+05	4.53E+04	3.04E+04	1.26E+05	8.70E-10
Palladium (46)	Pd-100	2.89E-01	1.04E-01	2.41E-01	2.89E-01	1.24E-01	6.97E+01	1.32	5.64E+02	1.56E+03	6.77E+02	5.64E+02	1.32E+03	1.57E-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	1.13E+03	5.59E+03	1.96E+03	1.27E+03	5.47E+03	3.03E-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	1.77E+04	2.33E+04	2.01E+04	1.82E+04	3.73E+03	2.37E-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	5.74E+04	1.43E+05	7.30E+04	5.88E+04	2.37E+04	2.68E-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	1.20E+04	5.96E+04	2.11E+04	1.35E+04	5.57E+04	1.89E-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	3.16E+05	1.50E+06	5.41E+05	3.50E+05	1.37E+06	1.61E-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	2.56E+00	1.26E+01	4.52E+00	2.90E+00	1.23E+01	7.44E-10
Promethium (61)	Pm-144	8.65E+00	1.75E+00	4.98E+00	7.72E+00	1.74E+00	6.97E-01	1.19	4.62E-01	2.29E+00	8.04E-01	5.18E-01	2.30E+00	1.85E-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	1.07E+02	1.57E+02	1.10E+02	1.07E+02	8.14E+01	7.70E-07
Promethium (61)	Pm-146	4.12E+00	8.37E-01	2.39E+00	3.69E+00	8.39E-01	1.25E-01	1.2	7.44E-01	3.66E+00	1.29E+00	8.31E-01	3.66E+00	1.68E-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	6.75E+04	1.54E+05	7.92E+04	6.78E+04	8.86E+04	7.28E-05
Promethium (61)	Pm-148	3.49E+00	6.49E-01	1.85E+00	2.97E+00	7.13E-01	4.71E+01	1.16	4.14E+01	2.22E+02	7.79E+01	4.87E+01	2.02E+02	2.52E-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	1.58E+00	7.87E+00	2.76E+00	1.77E+00	7.96E+00	7.40E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	5.31E+03	2.19E+04	8.39E+03	5.69E+03	6.71E+03	1.34E-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	7.60E+02	4.09E+03	1.42E+03	8.92E+02	3.95E+03	9.77E-11
Promethium (61)	Pm-151	1.61E+00	3.52E-01	9.88E-01	1.48E+00	3.71E-01	2.14E+02	1.22	3.49E+02	1.59E+03	5.68E+02	3.79E+02	1.51E+03	4.78E-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	2.83E+03	1.49E+04	5.22E+03	3.30E+03	1.51E+04	1.12E-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	9.79E+02	5.16E+03	1.81E+03	1.14E+03	5.23E+03	1.15E-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	3.63E+02	1.87E+03	6.56E+02	4.18E+02	1.90E+03	1.40E-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	1.31E+05	6.77E+05	2.36E+05	1.50E+05	6.85E+05	2.93E-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	2.78E+09	1.42E+10	4.95E+09	3.17E+09	1.44E+10	2.69E-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	8.17E+14	4.21E+15	1.47E+15	9.32E+14	4.26E+15	2.55E-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	3.64E+13	1.72E+14	6.05E+13	3.97E+13	1.75E+14	1.24E-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	4.41E+12	2.27E+13	7.95E+12	5.03E+12	2.30E+13	1.27E-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	6.70E+09	3.48E+10	1.22E+10	7.67E+09	3.52E+10	2.37E-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	6.81E+03	3.53E+04	1.24E+04	7.84E+03	3.49E+04	6.46E-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	5.01E+03	2.43E+04	8.62E+03	5.59E+03	2.32E+04	2.80E-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	1.58E+05	7.50E+05	2.69E+05	1.76E+05	6.84E+05	1.69E-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	5.99E+02	3.08E+03	1.08E+03	6.85E+02	3.10E+03	5.55E-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	6.34E+03	2.94E+04	1.09E+04	7.07E+03	2.58E+04	1.27E-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	2.53E+03	1.25E+04	4.88E+03	3.07E+03	5.95E+03	2.20E-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	1.89E+04	3.61E+04	2.30E+04	1.93E+04	2.29E+03	2.81E-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	2.53E+05	9.44E+05	4.42E+05	2.96E+05	3.54E+05	3.35E-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	1.03E+07	1.98E+07	1.28E+07	1.09E+07	1.01E+07	5.69E-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	3.17E+04	1.12E+05	5.18E+04	3.55E+04	2.75E+04	8.78E-09
Praseodymium (59)	Pr-147	4.74E+00	9.57E-01	2.69E+00	4.18E+00	1.04E+00	2.68E+04	1.19	1.60E+04	7.91E+04	2.82E+04	1.81E+04	7.24E+04	1.70E-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	2.14E+03	1.04E+04	3.70E+03	2.39E+03	1.05E+04	2.54E-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	8.02E+01	3.01E+02	1.16E+02	8.37E+01	2.90E+02	1.18E-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	9.64E+02	4.18E+03	1.56E+03	1.06E+03	4.06E+03	6.33E-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	1.81E+02	7.24E+02	2.76E+02	1.94E+02	6.95E+02	7.43E-10
Platinum (78)	Pt-193	6.30E-06	6.30E-06	6.30E-06	6.30E-06	1.80E-04	1.39E-02	1.56	3.09E+05	3.09E+05	3.09E+05	3.09E+05	1.08E+04	8.35E-03
Platinum (78)	Pt-193m	2.22E-02	9.34E-03	1.98E-02	2.22E-02	1.09E-02	5.84E+01	1.46	5.55E+03	1.32E+04	6.24E+03	5.55E+03	1.13E+04	3.56E-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	8.45E+02	2.18E+03	9.86E+02	8.45E+02	1.93E+03	5.08E-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	1.01E+04	3.20E+04	1.31E+04	1.03E+04	2.63E+04	1.17E-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	2.91E+04	1.10E+05	4.28E+04	3.06E+04	1.04E+05	2.89E-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	2.90E+04	1.36E+05	4.87E+04	3.19E+04	1.10E+05	9.47E-10
Platinum (78)	Pt-200	2.01E-01	5.84E-02	1.47E-01	1.96E-01	6.37E-02	4.86E+02	1.37	5.60E+03	1.93E+04	7.65E+03	5.76E+03	1.77E+04	4.47E-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	7.39E+03	2.38E+04	9.39E+03	7.39E+03	2.27E+04	4.86E-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	1.10E+05	3.77E+05	1.47E+05	1.13E+05	3.59E+05	3.49E-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	1.32E+04	2.03E+04	1.49E+04	1.34E+04	2.79E+03	2.49E-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	8.47E+01	2.69E+02	1.08E+02	8.48E+01	2.48E+02	6.98E-09
Plutonium (94)	Pu-238	1.16E-04	8.77E-05	1.08E-04	1.16E-04	7.31E-04	7.90E-03	1.42	1.83E+04	2.43E+04	1.98E+04	1.85E+04	2.92E+03	1.07E-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	8.09E+03	2.40E+04	1.13E+04	8.45E+03	6.42E+03	1.30E-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	1.89E+04	2.48E+04	2.01E+04	1.89E+04	3.03E+03	8.32E-02
Plutonium (94)	Pu-241	5.30E-06	1.63E-06	4.10E-06	5.28E-06	2.01E-06	4.81E-02	1.41	4.25E+05	1.38E+06	5.49E+05	4.26E+05	1.12E+06	4.13E-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	2.15E+04	2.93E+04	2.31E+04	2.15E+04	3.66E+03	5.47E+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	4.06E+04	1.24E+05	5.14E+04	4.12E+04	1.09E+05	1.56E-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	8.66E+00	4.96E+01	1.71E+01	1.05E+01	5.06E+01	4.73E-01
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	1.23E+00	6.19E+00	2.19E+00	1.40E+00	5.24E+00	6.74E-02

		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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	6.75E+02	3.25E+03	1.14E+03	7.50E+02	3.16E+03	5.55E-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	1.08E+02	4.06E+02	1.53E+02	1.11E+02	3.89E+02	2.21E-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	3.33E+07	1.52E+08	5.32E+07	3.56E+07	1.55E+08	2.50E-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	9.63E+01	3.78E+02	1.40E+02	1.00E+02	3.76E+02	1.88E-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	4.58E+01	1.95E+02	7.15E+01	4.89E+01	1.48E+02	8.96E-10
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	3.85E+03	1.66E+04	5.88E+03	4.03E+03	1.70E+04	2.42E-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	2.08E+01	1.21E+02	4.18E+01	2.57E+01	1.20E+02	1.31E-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	4.44E+03	6.15E+03	4.47E+03	4.45E+03	3.06E+03	1.13E-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	3.70E+01	1.70E+02	6.13E+01	4.08E+01	1.41E+02	9.46E-10
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	8.63E+01	3.47E+02	1.26E+02	8.92E+01	3.52E+02	8.74E-05
Radium (88)	Ra-226+D	1.06E+01					4.33E-04	1.17	2.62E-01					2.66E-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	2.56E+04	1.14E+05	4.12E+04	2.75E+04	9.47E+04	1.30E-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	5.22E-01	2.74E+00	9.58E-01	6.03E-01	2.69E+00	1.91E-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	5.83E+03	2.79E+04	9.83E+03	6.44E+03	2.68E+04	5.62E-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	2.60E+05	1.23E+06	4.40E+05	2.87E+05	1.14E+06	6.28E-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	1.08E+03	5.09E+03	1.78E+03	1.18E+03	5.06E+03	1.28E-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	1.98E+06	5.57E+06	2.38E+06	1.98E+06	4.10E+06	2.74E-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	1.30E+05	6.20E+05	2.21E+05	1.44E+05	5.69E+05	7.40E-11
Rubidium (37)	Rb-82m	1.69E+01	3.25E+00	9.33E+00	1.47E+01	3.20E+00	9.79E+02	1.19	1.70E+02	8.89E+02	3.09E+02	1.96E+02	9.02E+02	2.77E-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	2.87E+00	1.40E+01	4.90E+00	3.17E+00	1.42E+01	1.58E-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	3.90E+00	2.00E+01	6.96E+00	4.43E+00	2.01E+01	8.23E-11
Rubidium (37)	Rb-86	5.87E-01	1.17E-01	3.19E-01	5.04E-01	1.95E-01	1.36E+01	1.16	7.08E+01	3.54E+02	1.30E+02	8.26E+01	2.13E+02	8.71E-10
Rubidium (37)	Rb-87	1.21E-04	5.24E-05	1.04E-04	1.21E-04	8.52E-05	1.47E-11	1.25	2.14E+04	4.94E+04	2.50E+04	2.14E+04	3.04E+04	2.45E+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	1.59E+04	8.80E+04	3.18E+04	1.95E+04	7.75E+04	1.33E-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	5.71E+03	3.26E+04	1.13E+04	6.95E+03	3.23E+04	4.11E-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	2.25E+04	1.11E+05	4.00E+04	2.59E+04	1.06E+05	2.97E-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	1.15E+04	6.17E+04	2.17E+04	1.37E+04	6.07E+04	1.45E-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	6.73E+04	3.41E+05	1.20E+05	7.71E+04	3.40E+05	1.57E-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	2.02E+02	9.60E+02	3.43E+02	2.25E+02	9.59E+02	2.34E-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	3.84E+00	1.93E+01	6.85E+00	4.39E+00	1.94E+01	2.06E-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	2.66E+00	1.22E+01	4.42E+00	2.95E+00	1.21E+01	6.19E-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	2.26E+03	7.24E+03	2.98E+03	2.29E+03	3.14E+03	1.22E-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	8.54E+01	1.78E+02	9.35E+01	8.54E+01	1.34E+02	8.89E-03
Rhenium (75)	Re-186m+D	9.55E-02					3.47E-06	1.17	2.78E+01					2.90E-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	3.12E+03	1.24E+04	4.97E+03	3.41E+03	5.75E+03	3.19E-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	2.64E+05	6.52E+05	3.05E+05	2.64E+05	5.63E+05	4.91E-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	2.07E+03	8.43E+03	3.11E+03	2.17E+03	6.50E+03	3.04E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	4.99E+01	2.87E+02	9.90E+01	6.07E+01	2.95E+02	3.32E-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	2.49E+00	1.01E+01	3.64E+00	2.57E+00	9.99E+00	2.25E-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	1.02E+02	4.65E+02	1.63E+02	1.09E+02	4.65E+02	3.43E-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	2.71E-01	1.38E+00	4.82E-01	3.07E-01	1.40E+00	2.24E-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	1.64E+00	7.99E+00	2.81E+00	1.82E+00	7.79E+00	2.65E-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	8.57E+07	8.89E+07	8.57E+07	8.57E+07	1.41E+07	2.64E-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	1.18E+03	5.36E+03	1.88E+03	1.26E+03	5.41E+03	1.40E-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	1.68E+06	7.53E+06	2.87E+06	1.88E+06	5.20E+06	4.73E-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	4.76E+02	2.50E+03	8.70E+02	5.50E+02	2.53E+03	3.55E-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	2.85E+04	1.30E+05	4.58E+04	3.05E+04	1.17E+05	3.53E-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	1.38E+01	6.57E+01	2.33E+01	1.53E+01	6.57E+01	1.67E-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	9.85E+02	4.95E+03	1.72E+03	1.11E+03	5.00E+03	1.47E-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	4.24E+11	2.10E+12	7.37E+11	4.73E+11	2.13E+12	2.87E-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	5.21E+07	2.36E+08	8.33E+07	5.57E+07	2.41E+08	4.01E-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	1.89E+07	8.53E+07	3.08E+07	2.05E+07	5.46E+07	1.45E-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	5.23E+08	2.57E+09	9.01E+08	5.84E+08	2.61E+09	5.68E-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	8.61E+04	4.16E+05	1.46E+05	9.50E+04	4.21E+05	5.61E-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	1.74E+01	9.49E+01	3.30E+01	2.06E+01	9.39E+01	1.13E-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	7.12E+00	3.45E+01	1.21E+01	7.86E+00	3.50E+01	2.21E-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	8.75E+02	4.34E+03	1.52E+03	9.79E+02	4.22E+03	1.30E-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	8.52E+02	4.19E+03	1.47E+03	9.48E+02	4.09E+03	1.27E-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	3.18E+00	1.42E+01	5.43E+00	3.56E+00	9.83E+00	9.53E-10
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	6.27E+03	3.09E+04	1.08E+04	6.99E+03	3.11E+04	1.63E-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	1.97E+02	8.49E+02	3.02E+02	2.07E+02	8.54E+02	4.25E-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	6.49E+05	1.14E+06	7.00E+05	6.49E+05	5.11E+05	1.52E-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	6.49E+03	3.14E+04	1.10E+04	7.17E+03	3.08E+04	1.26E-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	5.28E+03	2.90E+04	1.00E+04	6.25E+03	2.90E+04	5.15E-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	9.86E+02	5.21E+03	1.82E+03	1.15E+03	5.28E+03	3.67E-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	7.28E+03	2.93E+04	1.07E+04	7.59E+03	2.78E+04	7.63E-10
Antimony (51)	Sb-118m	1.51E+01	2.82E+00	8.11E+00	1.29E+01	2.79E+00	1.21E+03	1.18	2.36E+02	1.27E+03	4.40E+02	2.76E+02	1.28E+03	4.46E-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	8.20E+04	8.44E+04	8.16E+04	8.20E+04	2.02E+04	1.19E-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	1.09E+02	5.32E+02	1.88E+02	1.22E+02	4.77E+02	2.75E-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	1.15E+00	6.37E+00	2.20E+00	1.36E+00	6.41E+00	6.58E-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	3.43E+05	1.70E+06	5.95E+05	3.83E+05	1.69E+06	3.51E-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	3.02E+09	3.09E+09	3.01E+09	3.02E+09	7.01E+08	4.04E-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	1.40E+00	6.72E+00	2.37E+00	1.54E+00	6.67E+00	1.36E-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	3.72E+00	1.86E+01	6.53E+00	4.18E+00	1.88E+01	4.46E-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	6.38E+03	3.16E+04	1.11E+04	7.13E+03	3.07E+04	8.14E-11
Antimony (51)	Sb-127	3.86E+00	7.76E-01	2.22E+00	3.45E+00	7.89E-01	6.57E+01	1.19	4.87E+01	2.42E+02	8.47E+01	5.45E+01	2.38E+02	1.83E-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	4.84E+02	2.59E+03	8.98E+02	5.64E+02	2.59E+03	8.63E-11
Antimony (51)	Sb-130	1.88E+01	3.66E+00	1.05E+01	1.64E+01	3.66E+00	9.11E+03	1.18	1.43E+03	7.37E+03	2.57E+03	1.64E+03	7.35E+03	3.96E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	4.24E+03	2.34E+04	8.08E+03	5.02E+03	2.32E+04	6.80E-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	7.41E+02	3.54E+03	1.24E+03	8.12E+02	3.53E+03	3.96E-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	3.69E+02	1.92E+03	6.67E+02	4.23E+02	1.89E+03	2.04E-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	1.98E+02	9.10E+02	3.19E+02	2.13E+02	9.32E+02	1.63E-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	8.07E-01	4.32E+00	1.50E+00	9.42E-01	4.41E+00	2.39E-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	4.30E+02	1.68E+03	6.10E+02	4.39E+02	1.70E+03	5.20E-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	2.11E+01	1.16E+02	4.01E+01	2.50E+01	1.18E+02	1.41E-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	5.74E+05	1.10E+06	7.53E+05	6.09E+05	1.74E+05	8.60E-09
Selenium (34)	Se-70	5.32E+00	1.12E+00	3.17E+00	4.83E+00	1.16E+00	8.88E+03	1.25	4.31E+03	2.05E+04	7.23E+03	4.74E+03	1.97E+04	6.59E-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	4.05E+02	1.89E+03	6.72E+02	4.42E+02	1.85E+03	6.76E-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	1.82E+04	8.74E+04	3.08E+04	2.01E+04	8.26E+04	2.76E-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	3.29E+00	1.40E+01	4.98E+00	3.44E+00	1.43E+01	2.26E-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	7.74E+06	3.05E+07	1.11E+07	7.94E+06	3.10E+07	9.23E-10
Selenium (34)	Se-79	1.53E-05	8.69E-06	1.42E-05	1.53E-05	1.91E-05	1.07E-05	1.25	1.70E+05	2.98E+05	1.83E+05	1.70E+05	1.35E+05	2.44E+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	8.61E+05	2.82E+06	1.32E+06	9.27E+05	5.91E+05	6.87E-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	2.80E+05	9.13E+05	3.59E+05	2.80E+05	8.71E+05	6.92E-09
Selenium (34)	Se-83	1.44E+01	2.69E+00	7.74E+00	1.23E+01	2.67E+00	1.62E+04	1.17	3.29E+03	1.76E+04	6.12E+03	3.84E+03	1.77E+04	3.27E-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	3.66E+05	7.53E+05	4.93E+05	3.92E+05	8.69E+04	9.52E-09
Silicon (14)	Si-32	2.97E-05	1.51E-05	2.67E-05	2.97E-05	2.92E-05	1.54E-03	1.25	8.74E+04	1.72E+05	9.72E+04	8.74E+04	8.89E+04	3.52E-03
Silicon (14)	Si-32+D	2.04E-02					1.54E-03	1.25	1.27E+02					5.13E-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	1.33E+04	6.75E+04	2.37E+04	1.52E+04	6.57E+04	1.02E-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	4.09E+03	2.10E+04	7.35E+03	4.68E+03	2.09E+04	6.94E-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	3.43E+04	1.47E+05	5.67E+04	3.79E+04	1.24E+05	1.88E-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	6.38E+01	9.62E+01	6.51E+01	6.38E+01	5.33E+01	2.41E-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	3.35E+06	3.38E+06	3.35E+06	3.35E+06	5.47E+05	1.27E-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	2.36E+03	6.38E+03	2.91E+03	2.38E+03	4.63E+03	5.40E-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	1.18E+05	3.84E+05	1.56E+05	1.20E+05	2.36E+05	2.15E-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	3.49E+03	1.35E+04	5.02E+03	3.60E+03	1.29E+04	1.63E-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	2.68E+03	1.19E+04	4.21E+03	2.83E+03	1.18E+04	3.77E-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	1.04E+04	5.30E+04	1.86E+04	1.19E+04	5.08E+04	2.16E-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	2.15E+02	6.78E+02	3.12E+02	2.24E+02	2.99E+02	2.15E-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	7.66E+01	2.93E+02	1.08E+02	7.81E+01	2.80E+02	9.36E-10
Tin (50)	Sn-119m	2.09E-03	2.03E-03	2.11E-03	2.09E-03	8.72E-03	8.63E-01	1.32	1.64E+03	1.69E+03	1.63E+03	1.64E+03	3.94E+02	4.40E-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	3.40E+06	8.56E+06	4.11E+06	3.42E+06	5.63E+06	3.56E-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	1.64E+03	1.85E+03	1.65E+03	1.64E+03	5.59E+02	3.06E-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	1.96E+03	2.32E+03	1.99E+03	1.96E+03	7.15E+02	3.65E-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	1.32E+02	4.80E+02	2.22E+02	1.51E+02	9.23E+01	1.61E-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	3.97E+04	1.52E+05	5.64E+04	4.06E+04	1.16E+05	1.04E-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	4.13E+01	2.17E+02	7.75E+01	4.86E+01	1.78E+02	3.82E-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	1.88E+01	5.14E+01	2.25E+01	1.87E+01	4.33E+01	6.62E-04
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	3.29E-01	1.61E+00	5.67E-01	3.67E-01	1.56E+00	1.16E-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	7.00E+02	3.83E+03	1.33E+03	8.29E+02	3.84E+03	5.97E-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	5.06E+03	2.37E+04	8.44E+03	5.56E+03	2.29E+04	2.04E-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	7.52E+07	7.52E+07	7.52E+07	7.52E+07	4.00E+06	3.20E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	5.30E+03	2.51E+04	8.92E+03	5.85E+03	2.39E+04	5.83E-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	2.12E+05	2.12E+05	2.12E+05	2.12E+05	1.13E+04	3.34E-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	4.70E+00	2.24E+01	7.99E+00	5.20E+00	2.05E+01	7.40E-11
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	1.12E+02	5.68E+02	1.99E+02	1.27E+02	5.67E+02	9.64E-11
Strontium (38)	Sr-85	2.76E+00	5.71E-01	1.63E+00	2.50E+00	5.65E-01	3.90E+00	1.25	3.58E+00	1.73E+01	6.07E+00	3.95E+00	1.75E+01	1.51E-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	1.32E+04	5.65E+04	2.00E+04	1.37E+04	5.81E+04	4.15E-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	3.44E+03	1.61E+04	5.63E+03	3.71E+03	1.63E+04	2.68E-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	1.00E+03	1.69E+03	1.22E+03	1.03E+03	1.89E+02	3.46E-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	4.06E+03	1.12E+04	5.17E+03	4.12E+03	1.37E+03	2.98E-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	5.36E+01	9.20E+01	6.60E+01	5.53E+01	1.67E+01	3.93E-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	4.62E+02	2.41E+03	8.43E+02	5.31E+02	2.24E+03	1.28E-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	8.50E+02	4.82E+03	1.66E+03	1.02E+03	4.91E+03	6.77E-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	3.16E+03	1.62E+04	5.72E+03	3.64E+03	1.60E+04	1.06E-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	1.50E+03	7.07E+03	2.56E+03	1.68E+03	6.68E+03	3.03E-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	4.56E+03	2.13E+04	7.70E+03	5.06E+03	2.04E+04	3.05E-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	3.06E+02	1.59E+03	5.64E+02	3.59E+02	1.60E+03	1.80E-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	1.50E+02	8.63E+02	2.98E+02	1.83E+02	8.79E+02	6.83E-11
Tantalum (73)	Ta-177	1.57E-01	5.73E-02	1.23E-01	1.51E-01	6.85E-02	1.07E+02	1.27	1.73E+03	4.73E+03	2.20E+03	1.80E+03	3.95E+03	5.52E-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	5.98E+01	1.17E+02	6.37E+01	5.98E+01	9.07E+01	5.46E-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	1.04E+00	4.44E+00	1.61E+00	1.10E+00	4.44E+00	5.26E+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	2.27E+04	4.81E+04	2.49E+04	2.27E+04	3.76E+04	1.06E-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	9.20E-01	4.89E+00	1.71E+00	1.08E+00	4.93E+00	1.48E-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	6.32E+04	2.33E+05	8.89E+04	6.48E+04	2.27E+05	9.70E-10
Tantalum (73)	Ta-183	1.20E+00	3.04E-01	8.11E-01	1.15E+00	3.13E-01	4.96E+01	1.24	1.08E+02	4.24E+02	1.59E+02	1.12E+02	4.12E+02	7.71E-10
Tantalum (73)	Ta-184	8.80E+00	1.80E+00	5.13E+00	7.89E+00	1.81E+00	6.98E+02	1.19	2.19E+02	1.07E+03	3.75E+02	2.44E+02	1.06E+03	1.12E-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	2.45E+04	9.38E+04	3.63E+04	2.59E+04	6.71E+04	1.19E-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	1.13E+04	5.41E+04	1.92E+04	1.26E+04	5.18E+04	1.18E-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	1.20E+03	6.15E+03	2.16E+03	1.37E+03	6.05E+03	9.30E-11
Terbium (65)	Tb-149	9.47E+00	1.77E+00	5.07E+00	8.08E+00	1.75E+00	1.46E+03	1.17	4.61E+02	2.47E+03	8.61E+02	5.41E+02	2.49E+03	9.11E-11
Terbium (65)	Tb-150	9.75E+00	1.88E+00	5.35E+00	8.45E+00	1.89E+00	1.86E+03	1.18	5.60E+02	2.90E+03	1.02E+03	6.47E+02	2.89E+03	8.79E-11
Terbium (65)	Tb-151	4.59E+00	9.72E-01	2.72E+00	4.16E+00	9.78E-01	3.45E+02	1.2	2.11E+02	9.95E+02	3.55E+02	2.33E+02	9.89E+02	1.79E-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	3.10E+02	1.25E+03	4.76E+02	3.32E+02	1.16E+03	8.50E-10
Terbium (65)	Tb-154	1.47E+01	2.50E+00	7.24E+00	1.19E+01	2.43E+00	2.84E+02	1.14	5.73E+01	3.36E+02	1.16E+02	7.08E+01	3.46E+02	6.03E-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	2.90E+02	9.58E+02	3.96E+02	2.98E+02	8.35E+02	1.84E-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	1.32E+01	6.89E+01	2.42E+01	1.53E+01	6.97E+01	8.41E-11
Terbium (65)	Tb-156m	2.97E-02	1.76E-02	2.89E-02	2.97E-02	2.58E-02	2.49E+02	1.27	2.08E+04	3.51E+04	2.14E+04	2.08E+04	2.40E+04	2.54E-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	5.52E+05	1.15E+06	6.16E+05	5.52E+05	8.21E+05	1.38E-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	1.07E+03	1.61E+03	1.08E+03	1.07E+03	9.60E+02	7.03E-05
Terbium (65)	Tb-158	4.46E+00	8.67E-01	2.46E+00	3.86E+00	8.74E-01	4.62E-03	1.18	6.72E-01	3.46E+00	1.22E+00	7.76E-01	3.43E+00	4.46E-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	1.65E+00	8.65E+00	3.02E+00	1.91E+00	8.70E+00	1.46E-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	1.93E+03	3.90E+03	2.13E+03	1.94E+03	2.60E+03	1.65E-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	4.10E+04	1.87E+05	6.59E+04	4.39E+04	1.67E+05	3.13E-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	4.77E+03	2.61E+04	9.14E+03	5.69E+03	2.55E+04	4.81E-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	7.05E+02	4.06E+03	1.39E+03	8.55E+02	4.15E+03	5.77E-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	5.38E+03	3.16E+04	1.08E+04	6.62E+03	3.29E+04	1.16E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	2.35E+02	1.21E+03	4.23E+02	2.69E+02	1.23E+03	3.45E-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	1.91E+03	9.96E+03	3.50E+03	2.21E+03	9.80E+03	4.98E-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	1.90E+02	9.77E+02	3.40E+02	2.17E+02	9.85E+02	1.16E-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	3.23E+00	1.60E+01	5.59E+00	3.62E+00	1.61E+01	1.44E-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	1.20E+01	6.23E+01	2.17E+01	1.38E+01	6.30E+01	3.79E-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	6.64E+04	3.49E+05	1.22E+05	7.73E+04	3.35E+05	1.75E-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	3.87E+03	3.85E+03	3.87E+03	3.87E+03	4.02E+02	2.73E+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	4.43E+03	7.68E+03	5.06E+03	4.42E+03	1.30E+03	2.86E-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	3.63E-01	1.84E+00	6.41E-01	4.10E-01	1.86E+00	4.19E-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	2.39E+04	5.58E+04	2.81E+04	2.40E+04	3.43E+04	1.41E+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	5.08E+03	1.89E+04	7.01E+03	5.14E+03	1.92E+04	9.68E-10
Tellurium (52)	Te-116	1.73E-01	5.17E-02	1.24E-01	1.65E-01	7.07E-02	2.44E+03	1.3	3.35E+04	1.12E+05	4.67E+04	3.50E+04	8.18E+04	3.09E-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	1.32E+01	6.44E+01	2.27E+01	1.46E+01	6.41E+01	2.09E-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	5.43E+00	2.36E+01	8.46E+00	5.76E+00	2.33E+01	7.77E-10
Tellurium (52)	Te-123	4.63E-03	4.42E-03	4.64E-03	4.63E-03	1.66E-02	6.93E-14	1.31	5.02E+02	5.26E+02	5.00E+02	5.02E+02	1.40E+02	1.73E+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	1.06E+01	4.04E+01	1.50E+01	1.08E+01	3.91E+01	1.19E-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	9.32E+02	1.08E+03	9.54E+02	9.32E+02	3.33E+02	5.18E-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	6.77E+04	3.05E+05	1.10E+05	7.33E+04	1.50E+05	2.57E-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	1.45E+03	1.93E+03	1.57E+03	1.47E+03	6.04E+02	1.54E-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	4.61E+04	2.07E+05	7.75E+04	5.10E+04	1.09E+05	2.21E-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	1.05E+02	4.79E+02	1.82E+02	1.18E+02	2.77E+02	3.49E-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	1.78E+04	8.36E+04	3.00E+04	1.98E+04	7.22E+04	3.11E-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	6.61E+01	3.44E+02	1.20E+02	7.60E+01	3.48E+02	8.30E-11
Tellurium (52)	Te-132	9.94E-01	2.39E-01	6.60E-01	9.55E-01	2.47E-01	7.76E+01	1.25	2.01E+02	8.36E+02	3.02E+02	2.09E+02	8.06E+02	6.62E-10
Tellurium (52)	Te-133	5.37E+00	1.05E+00	3.00E+00	4.70E+00	1.12E+00	2.93E+04	1.18	1.65E+04	8.44E+04	2.95E+04	1.89E+04	7.92E+04	1.46E-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	1.34E+03	7.07E+03	2.47E+03	1.55E+03	6.96E+03	5.26E-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	5.27E+03	2.54E+04	8.96E+03	5.84E+03	2.53E+04	1.57E-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	8.91E+05	3.28E+06	1.23E+06	9.13E+05	3.18E+06	3.31E-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	6.52E+01	2.76E+02	9.92E+01	6.84E+01	2.73E+02	2.13E-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	3.56E+02	1.22E+03	4.80E+02	3.63E+02	1.03E+03	4.35E-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	7.77E+00	2.58E+01	1.02E+01	7.87E+00	2.44E+01	3.66E-05
Thorium (90)	Th-229+D	1.48E+00					9.44E-05	1.16	1.81E+00					8.51E-06
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	1.95E+03	5.43E+03	2.42E+03	1.98E+03	2.81E+03	9.69E-02
Thorium (90)	Th-231	3.21E-02	1.16E-02	2.63E-02	3.19E-02	1.81E-02	2.38E+02	1.41	1.61E+04	4.45E+04	1.96E+04	1.62E+04	2.85E+04	3.03E-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	4.57E+03	1.12E+04	5.44E+03	4.61E+03	3.92E+03	4.17E+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	1.12E+03	3.11E+03	1.34E+03	1.12E+03	2.72E+03	4.83E-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	1.79E+02	6.04E+02	2.78E+02	1.97E+02	1.96E+02	7.72E-09
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	8.16E+00	2.05E+01	9.32E+00	8.16E+00	1.86E+01	4.75E-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	2.34E-01	1.19E+00	4.18E-01	2.68E-01	1.16E+00	1.37E-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	1.17E+03	5.67E+03	1.99E+03	1.29E+03	5.55E+03	5.20E-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	7.57E+03	3.58E+04	1.28E+04	8.33E+03	3.61E+04	2.58E-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	2.37E+03	1.15E+04	4.06E+03	2.64E+03	1.15E+04	8.05E-11
Thallium (81)	Tl-195	7.50E+00	1.37E+00	3.94E+00	6.29E+00	1.35E+00	5.23E+03	1.2	1.86E+03	1.02E+04	3.55E+03	2.22E+03	1.03E+04	1.35E-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	2.72E+03	1.29E+04	4.66E+03	3.07E+03	1.28E+04	4.87E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	2.60E+02	1.43E+03	4.98E+02	3.10E+02	1.47E+03	8.71E-11
Thallium (81)	Tl-198m	6.34E+00	1.33E+00	3.77E+00	5.76E+00	1.32E+00	3.25E+03	1.22	1.29E+03	6.14E+03	2.17E+03	1.42E+03	6.20E+03	1.53E-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	1.93E+03	8.02E+03	2.99E+03	2.07E+03	7.90E+03	9.12E-10
Thallium (81)	Tl-200	7.42E+00	1.44E+00	4.12E+00	6.45E+00	1.42E+00	2.33E+02	1.19	8.36E+01	4.30E+02	1.50E+02	9.61E+01	4.36E+02	1.39E-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	7.98E+02	2.28E+03	9.77E+02	8.04E+02	2.10E+03	3.74E-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	2.40E+01	1.08E+02	3.90E+01	2.60E+01	1.09E+02	4.54E-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	6.37E+02	1.50E+03	7.49E+02	6.40E+02	1.96E+02	1.37E-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	1.66E+07	2.80E+07	2.01E+07	1.71E+07	2.96E+06	7.66E-08
Thallium (81)	Tl-207	2.29E-02	8.47E-03	1.54E-02	2.11E-02	6.49E-02	7.64E+04	1.17	9.99E+06	2.71E+07	1.48E+07	1.09E+07	3.53E+06	5.25E-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	1.65E+04	1.01E+05	3.46E+04	2.08E+04	1.04E+05	5.61E-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	4.06E+04	2.24E+05	7.76E+04	4.84E+04	2.22E+05	9.94E-11
Thulium (69)	Tm-162	1.08E+01	1.92E+00	5.52E+00	8.93E+00	1.90E+00	1.68E+04	1.17	4.55E+03	2.56E+04	8.90E+03	5.50E+03	2.58E+04	8.52E-11
Thulium (69)	Tm-166	1.12E+01	2.01E+00	5.80E+00	9.33E+00	1.98E+00	7.88E+02	1.16	2.01E+02	1.12E+03	3.87E+02	2.41E+02	1.13E+03	8.21E-11
Thulium (69)	Tm-167	5.07E-01	1.40E-01	3.52E-01	4.89E-01	1.53E-01	2.74E+01	1.24	1.41E+02	5.11E+02	2.03E+02	1.46E+02	4.67E+02	1.67E-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	4.11E+02	9.36E+02	4.77E+02	4.12E+02	1.88E+02	6.89E-08
Thulium (69)	Tm-171	9.38E-04	4.89E-04	8.86E-04	9.38E-04	6.48E-04	3.61E-01	1.27	3.16E+03	6.08E+03	3.35E+03	3.16E+03	4.58E+03	2.91E-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	9.54E+01	5.28E+02	1.84E+02	1.14E+02	4.88E+02	3.34E-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	1.01E+03	4.67E+03	1.65E+03	1.09E+03	4.52E+03	4.59E-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	1.14E+04	5.79E+04	2.02E+04	1.30E+04	5.63E+04	1.62E-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	6.58E+03	2.22E+04	8.94E+03	6.74E+03	1.44E+04	2.41E-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	6.54E+02	2.04E+03	8.26E+02	6.54E+02	1.81E+03	4.87E-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	2.68E+03	7.01E+03	3.36E+03	2.71E+03	2.25E+03	1.25E-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	1.67E+03	5.80E+03	2.35E+03	1.73E+03	3.02E+03	1.73E-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	6.14E+03	1.35E+04	7.28E+03	6.14E+03	3.08E+03	9.83E-01
Uranium (92)	U-235	6.58E-01	1.65E-01	4.57E-01	6.42E-01	1.63E-01	9.85E-10	1.3	3.66E+00	1.46E+01	5.28E+00	3.76E+00	1.48E+01	1.70E+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	4.42E+00	1.72E+01	6.31E+00	4.53E+00	1.67E+01	2.05E+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	1.19E+04	2.16E+04	1.35E+04	1.19E+04	3.58E+03	1.83E+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	1.83E+02	6.48E+02	2.52E+02	1.88E+02	6.15E+02	2.25E-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	2.64E+04	3.34E+04	2.68E+04	2.64E+04	4.25E+03	7.87E+04
Uranium (92)	U-238+D	1.56E-01					1.55E-10	1.23	1.61E+01					4.78E+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	2.34E+05	7.16E+05	3.11E+05	2.45E+05	3.84E+05	7.02E-09
Uranium (92)	U-240	1.11E-03	8.06E-04	1.08E-03	1.11E-03	3.72E-03	4.31E+02	1.41	8.32E+05	1.14E+06	8.53E+05	8.32E+05	2.47E+05	9.00E-07
Vanadium (23)	V-47	5.50E+00	1.14E+00	3.25E+00	4.98E+00	1.23E+00	1.12E+04	1.2	5.78E+03	2.78E+04	9.80E+03	6.38E+03	2.59E+04	4.72E-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	2.74E+00	1.48E+01	5.12E+00	3.21E+00	1.50E+01	1.64E-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	1.59E+04	4.17E+04	1.88E+04	1.59E+04	3.68E+04	2.05E-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	1.61E+03	7.53E+03	2.72E+03	1.80E+03	7.48E+03	2.05E-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	1.26E+03	2.56E+03	1.36E+03	1.26E+03	2.02E+03	3.74E-08
Tungsten (74)	W-178+D	4.37E-01					1.17E+01	1.19	7.37E+01					2.19E-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	2.88E+05	5.63E+05	3.08E+05	2.88E+05	4.01E+05	1.03E-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	8.97E+01	1.84E+02	9.63E+01	8.97E+01	1.45E+02	1.51E-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	2.19E+04	5.97E+04	2.70E+04	2.21E+04	4.19E+04	2.33E-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	2.58E+02	1.25E+03	4.42E+02	2.87E+02	1.22E+03	3.69E-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	1.11E+03	4.68E+03	1.69E+03	1.16E+03	4.64E+03	1.11E-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	1.10E+04	5.22E+04	1.87E+04	1.22E+04	5.01E+04	2.82E-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	2.36E+03	1.30E+04	4.54E+03	2.83E+03	1.30E+04	6.10E-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)	Soil Volume 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 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	1.75E+07	7.18E+07	2.64E+07	1.85E+07	6.70E+07	4.57E-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	3.38E+03	1.38E+04	5.24E+03	3.58E+03	1.12E+04	2.65E-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	2.38E+03	1.19E+04	4.18E+03	2.70E+03	1.15E+04	1.94E-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	8.02E+02	3.47E+03	1.25E+03	8.53E+02	3.30E+03	5.45E-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	1.48E+01	6.21E+01	2.25E+01	1.55E+01	6.00E+01	5.27E-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	1.32E+03	3.20E+03	1.73E+03	1.35E+03	1.55E+03	1.05E-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	2.62E+03	5.87E+03	3.32E+03	2.67E+03	2.70E+03	3.13E-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	1.35E+03	3.37E+03	1.58E+03	1.35E+03	2.55E+03	7.22E-09
Xenon (54)	Xe-133m	1.18E-01	3.13E-02	7.94E-02	1.14E-01	4.12E-02	1.16E+02	1.28	2.36E+03	8.91E+03	3.52E+03	2.46E+03	6.78E+03	5.27E-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	1.47E+03	6.51E+03	2.29E+03	1.56E+03	6.20E+03	5.79E-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	2.87E+04	1.40E+05	4.91E+04	3.18E+04	1.38E+05	3.16E-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	1.08E+04	6.15E+04	2.13E+04	1.31E+04	6.04E+04	1.12E-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	5.50E+01	2.98E+02	1.03E+02	6.44E+01	3.03E+02	2.23E-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	1.91E+04	8.25E+04	2.93E+04	2.01E+04	8.47E+04	4.20E-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	7.64E+01	3.67E+02	1.29E+02	8.41E+01	3.71E+02	1.71E-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	4.57E-01	2.65E+00	9.12E-01	5.57E-01	2.74E+00	3.29E-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	5.05E+03	8.62E+03	6.24E+03	5.22E+03	1.58E+03	9.30E-09
Yttrium (39)	Y-90m	3.26E+00	7.05E-01	2.00E+00	3.02E+00	6.97E-01	1.90E+03	1.22	1.58E+03	7.33E+03	2.59E+03	1.71E+03	7.42E+03	1.45E-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	3.60E+02	1.00E+03	5.53E+02	4.01E+02	1.56E+02	1.47E-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	7.00E+03	3.44E+04	1.20E+04	7.79E+03	3.47E+04	1.69E-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	3.28E+03	1.59E+04	5.98E+03	3.81E+03	1.17E+04	3.42E-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	3.21E+03	1.44E+04	5.76E+03	3.74E+03	7.81E+03	9.63E-10
Yttrium (39)	Y-94	6.81E+00	1.29E+00	3.64E+00	5.80E+00	1.39E+00	1.91E+04	1.16	8.74E+03	4.62E+04	1.64E+04	1.03E+04	4.28E+04	8.36E-11
Yttrium (39)	Y-95	5.97E+00	9.94E-01	2.83E+00	4.70E+00	1.06E+00	3.40E+04	1.12	1.84E+04	1.11E+05	3.88E+04	2.34E+04	1.04E+05	9.98E-11
Ytterbium (70)	Yb-162	4.20E-01	1.29E-01	3.15E-01	4.12E-01	1.42E-01	1.93E+04	1.25	1.18E+05	3.83E+05	1.57E+05	1.20E+05	3.47E+05	1.92E-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	2.10E+03	4.14E+03	2.26E+03	2.10E+03	3.08E+03	6.33E-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	6.78E+04	2.18E+05	9.13E+04	7.00E+04	1.96E+05	1.06E-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	2.08E+01	7.03E+01	2.86E+01	2.14E+01	6.39E+01	8.64E-10
Ytterbium (70)	Yb-175	1.94E-01	4.38E-02	1.23E-01	1.82E-01	4.36E-02	6.04E+01	1.22	8.53E+02	3.78E+03	1.35E+03	9.11E+02	3.79E+03	4.80E-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	8.87E+03	4.44E+04	1.58E+04	1.02E+04	3.66E+04	9.54E-10
Ytterbium (70)	Yb-178	1.82E-01	3.95E-02	1.12E-01	1.69E-01	4.20E-02	4.92E+03	1.22	7.46E+04	3.43E+05	1.21E+05	8.05E+04	3.23E+05	5.24E-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	7.96E+02	3.84E+03	1.35E+03	8.80E+02	3.86E+03	1.46E-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	4.55E+03	2.20E+04	7.80E+03	5.06E+03	2.06E+04	5.82E-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	1.41E+00	7.68E+00	2.66E+00	1.67E+00	7.82E+00	1.71E-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	6.13E+06	1.19E+07	7.52E+06	6.25E+06	7.40E+05	1.29E-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	5.54E+02	2.63E+03	9.21E+02	6.04E+02	2.67E+03	1.68E-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	5.22E+02	2.55E+03	8.95E+02	5.80E+02	2.50E+03	4.65E-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	5.43E+02	2.05E+03	7.59E+02	5.54E+02	2.07E+03	5.81E-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	6.46E+02	2.85E+03	1.01E+03	6.82E+02	2.85E+03	2.93E-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	3.73E+00	1.75E+01	6.15E+00	4.06E+00	1.77E+01	2.10E-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	3.10E+01	1.61E+02	5.60E+01	3.55E+01	1.63E+02	6.92E-11
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	2.80E+00	1.43E+01	4.97E+00	3.16E+00	1.44E+01	1.31E-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	9.89E+02	5.04E+03	1.81E+03	1.15E+03	3.67E+03	5.18E-10

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-223+D			1.25E-01	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-223+E			1.25E-01	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-224	2.59E-06	4.07E-04	2.07E-01	2.09E+03	1.36E+09	2.11E+07	1.98E+03	3.25E+01
Actinium (89)	Ac-225	8.88E-05	2.74E-02	1.72E-02	2.53E+01	1.36E+09	2.11E+07	3.66E-01	5.84E-03
Actinium (89)	Ac-225+D	8.88E-05	2.74E-02	2.99E-01	2.53E+01	1.36E+09	2.11E+07	3.66E-01	5.84E-03
Actinium (89)	Ac-225+E	8.88E-05	2.74E-02	2.99E-01	2.53E+01	1.36E+09	2.11E+07	3.66E-01	5.84E-03
Actinium (89)	Ac-226	3.70E-05	4.44E-03	1.58E-01	2.09E+02	1.36E+09	2.11E+07	1.79E+01	2.98E-01
Actinium (89)	Ac-227	4.07E-03	8.14E-01	1.65E-04	3.18E-02	1.36E+09	2.11E+07	4.87E-04	7.89E-06
Actinium (89)	Ac-228	1.59E-06	6.29E-05	1.10E+00	9.90E+02	1.36E+09	2.11E+07	5.21E+03	9.93E+01
Silver (47)	Ag-102	1.48E-07	6.29E-08	3.72E+00	2.82E+04	1.36E+09	2.11E+07	8.10E+06	2.13E+06
Silver (47)	Ag-103	1.59E-07	9.62E-08	8.69E-01	5.54E+03	1.36E+09	2.11E+07	1.45E+06	2.95E+05
Silver (47)	Ag-103+D	8.88E-07	1.52E-06	8.80E-01	5.54E+03	1.36E+09	2.11E+07	2.34E+05	2.13E+04
Silver (47)	Ag-104	2.22E-07	1.33E-07	2.94E+00	5.26E+03	1.36E+09	2.11E+07	9.89E+05	2.02E+05
Silver (47)	Ag-104m	2.00E-07	9.25E-08	1.33E+00	1.09E+04	1.36E+09	2.11E+07	2.30E+06	5.69E+05
Silver (47)	Ag-105	1.74E-06	2.70E-06	5.72E-01	6.17E+00	1.36E+09	2.11E+07	1.35E+02	1.33E+01
Silver (47)	Ag-106	1.18E-07	5.55E-08	8.65E-01	1.52E+04	1.36E+09	2.11E+07	5.43E+06	1.33E+06
Silver (47)	Ag-106m	5.55E-06	4.07E-06	3.08E+00	3.01E+01	1.36E+09	2.11E+07	2.23E+02	3.92E+01
Silver (47)	Ag-108			1.05E-01	1.54E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-108m	8.51E-06	2.74E-05	1.81E+00	5.46E-03	1.36E+09	2.11E+07	3.88E+00	2.22E-01
Silver (47)	Ag-108m+D			1.82E+00	5.46E-03	1.36E+09	2.11E+07		
Silver (47)	Ag-108m+E			1.82E+00		1.36E+09	2.11E+07		
Silver (47)	Ag-109m			8.78E-03	5.52E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-110			1.90E-01	8.88E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-110m	1.04E-05	2.81E-05	3.01E+00	1.01E+00	1.36E+09	2.11E+07	5.26E+00	3.40E-01
Silver (47)	Ag-110m+D			3.01E+00	1.01E+00	1.36E+09	2.11E+07		
Silver (47)	Ag-110m+E			3.01E+00		1.36E+09	2.11E+07		
Silver (47)	Ag-111	4.81E-06	5.55E-06	6.16E-02	3.40E+01	1.36E+09	2.11E+07	2.79E+02	3.45E+01
Silver (47)	Ag-112	1.59E-06	5.92E-07	8.71E-01	1.95E+03	1.36E+09	2.11E+07	5.22E+04	1.50E+04
Silver (47)	Ag-115	2.22E-07	9.99E-08	8.75E-01	1.82E+04	1.36E+09	2.11E+07	3.48E+06	8.76E+05
Aluminum (13)	Al-26	1.30E-05	7.40E-05	2.88E+00	9.68E-07	1.36E+09	2.11E+07	2.11E+00	8.34E-02
Aluminum (13)	Al-28			2.00E+00	1.63E+05	1.36E+09	2.11E+07		
Americium (95)	Am-237	6.66E-08	9.25E-08	3.94E-01	4.99E+03	1.36E+09	2.11E+07	2.89E+06	3.10E+05
Americium (95)	Am-238	1.18E-07	3.33E-07	9.65E-01	3.72E+03	1.36E+09	2.11E+07	1.07E+06	6.72E+04
Americium (95)	Am-239	8.88E-07	8.14E-07	2.43E-01	5.10E+02	1.36E+09	2.11E+07	2.32E+04	3.43E+03
Americium (95)	Am-240	2.15E-06	1.59E-06	1.12E+00	1.20E+02	1.36E+09	2.11E+07	2.29E+03	3.99E+02
Americium (95)	Am-241	7.40E-04	1.55E-01	2.72E-02	1.60E-03	1.36E+09	2.11E+07	2.52E-03	4.07E-05
Americium (95)	Am-242	1.11E-06	6.29E-05	1.88E-02	3.79E+02	1.36E+09	2.11E+07	2.11E+03	3.80E+01
Americium (95)	Am-242m	7.03E-04	1.37E-01	2.64E-03	4.56E-03	1.36E+09	2.11E+07	2.85E-03	4.63E-05
Americium (95)	Am-242m+D	7.03E-04	1.37E-01	2.44E-02	4.56E-03	1.36E+09	2.11E+07	2.85E-03	4.63E-05
Americium (95)	Am-242m+E	7.03E-04	1.52E-01	2.50E-02	4.56E-03	1.36E+09	2.11E+07	2.58E-03	4.18E-05
Americium (95)	Am-243	7.40E-04	1.52E-01	5.59E-02	9.39E-05	1.36E+09	2.11E+07	2.57E-03	4.17E-05
Americium (95)	Am-243+D	7.40E-04	1.52E-01	2.36E-01	9.39E-05	1.36E+09	2.11E+07	2.57E-03	4.17E-05
Americium (95)	Am-243+E	7.40E-04	1.52E-01	2.36E-01	9.39E-05	1.36E+09	2.11E+07	2.57E-03	4.17E-05
Americium (95)	Am-244	1.70E-06	7.40E-06	8.87E-01	6.01E+02	1.36E+09	2.11E+07	1.06E+04	4.98E+02
Americium (95)	Am-244m	1.07E-07	3.11E-07	6.48E-02	1.40E+04	1.36E+09	2.11E+07	4.41E+06	2.72E+05
Americium (95)	Am-245	2.29E-07	1.96E-07	4.81E-02	2.96E+03	1.36E+09	2.11E+07	5.25E+05	8.19E+04
Americium (95)	Am-246	2.15E-07	2.44E-07	7.94E-01	9.34E+03	1.36E+09	2.11E+07	1.72E+06	2.15E+05
Americium (95)	Am-246m	1.26E-07	8.14E-08	1.16E+00	1.46E+04	1.36E+09	2.11E+07	4.81E+06	9.28E+05
Argon (18)	Ar-37			0.00E+00	7.22E+00	1.36E+09	2.11E+07		
Argon (18)	Ar-39			2.95E-03	2.58E-03	1.36E+09	2.11E+07		
Argon (18)	Ar-41			1.42E+00	3.32E+03	1.36E+09	2.11E+07		
Arsenic (33)	As-69	2.11E-07	7.77E-08	1.30E+00	2.40E+04	1.36E+09	2.11E+07	4.85E+06	1.41E+06
Arsenic (33)	As-69+D	1.11E-06	1.15E-06	2.28E+00	2.40E+04	1.36E+09	2.11E+07	8.62E+05	1.16E+05
Arsenic (33)	As-70	4.81E-07	2.48E-07	4.55E+00	6.92E+03	1.36E+09	2.11E+07	6.06E+05	1.38E+05
Arsenic (33)	As-71	1.70E-06	1.48E-06	6.33E-01	9.37E+01	1.36E+09	2.11E+07	2.23E+03	3.44E+02
Arsenic (33)	As-71+D			6.33E-01	9.37E+01	1.36E+09	2.11E+07		
Arsenic (33)	As-72	6.66E-06	3.33E-06	2.11E+00	2.33E+02	1.36E+09	2.11E+07	1.48E+03	3.45E+02
Arsenic (33)	As-73	9.62E-07	3.70E-06	6.05E-03	3.15E+00	1.36E+09	2.11E+07	1.07E+02	5.43E+00
Arsenic (33)	As-74	4.81E-06	7.77E-06	8.72E-01	1.42E+01	1.36E+09	2.11E+07	1.12E+02	1.07E+01
Arsenic (33)	As-76	5.92E-06	2.74E-06	6.12E-01	2.31E+02	1.36E+09	2.11E+07	1.65E+03	4.08E+02
Arsenic (33)	As-77	1.48E-06	1.44E-06	1.65E-02	1.56E+02	1.36E+09	2.11E+07	4.25E+03	5.99E+02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Arsenic (33)	As-78	7.77E-07	3.29E-07	1.51E+00	4.02E+03	1.36E+09	2.11E+07	2.20E+05	5.78E+04
Astatine (85)	At-207	8.88E-07	8.51E-06	1.42E+00	3.37E+03	1.36E+09	2.11E+07	8.26E+04	2.47E+03
Astatine (85)	At-211	4.07E-05	4.07E-04	3.87E-02	8.42E+02	1.36E+09	2.11E+07	4.40E+02	1.29E+01
Astatine (85)	At-211+D	4.07E-05	4.07E-04	4.38E-02	8.42E+02	1.36E+09	2.11E+07	4.40E+02	1.29E+01
Astatine (85)	At-211+E	4.07E-05	4.07E-04	7.49E-01	8.42E+02	1.36E+09	2.11E+07	4.40E+02	1.29E+01
Astatine (85)	At-215			2.15E-04	2.19E+11	1.36E+09	2.11E+07		
Astatine (85)	At-216			1.51E-03	7.28E+10	1.36E+09	2.11E+07		
Astatine (85)	At-217			3.42E-04	6.77E+08	1.36E+09	2.11E+07		
Astatine (85)	At-218			4.25E-03	1.09E+07	1.36E+09	2.11E+07		
Gold (79)	Au-193	4.81E-07	4.07E-07	1.66E-01	3.44E+02	1.36E+09	2.11E+07	2.91E+04	4.58E+03
Gold (79)	Au-194	1.55E-06	8.51E-07	1.13E+00	1.54E+02	1.36E+09	2.11E+07	4.15E+03	9.07E+02
Gold (79)	Au-195	9.25E-07	4.07E-06	8.23E-02	1.38E+00	1.36E+09	2.11E+07	5.99E+01	2.78E+00
Gold (79)	Au-195m			2.15E-01	7.17E+05	1.36E+09	2.11E+07		
Gold (79)	Au-198	3.70E-06	2.89E-06	4.75E-01	9.38E+01	1.36E+09	2.11E+07	1.04E+03	1.74E+02
Gold (79)	Au-198m	4.81E-06	6.66E-06	6.10E-01	1.10E+02	1.36E+09	2.11E+07	8.83E+02	9.47E+01
Gold (79)	Au-199	1.63E-06	2.63E-06	9.30E-02	8.06E+01	1.36E+09	2.11E+07	1.87E+03	1.78E+02
Gold (79)	Au-200	2.52E-07	1.22E-07	3.93E-01	7.53E+03	1.36E+09	2.11E+07	1.26E+06	3.02E+05
Gold (79)	Au-200m	4.07E-06	2.52E-06	2.31E+00	3.25E+02	1.36E+09	2.11E+07	3.32E+03	6.64E+02
Gold (79)	Au-201	8.88E-08	6.29E-08	1.05E-01	1.38E+04	1.36E+09	2.11E+07	6.41E+06	1.16E+06
Barium (56)	Ba-126	9.62E-07	3.70E-07	1.76E-01	3.77E+03	1.36E+09	2.11E+07	1.67E+05	4.71E+04
Barium (56)	Ba-128	9.99E-06	4.81E-06	7.91E-02	1.04E+02	1.36E+09	2.11E+07	4.40E+02	1.06E+02
Barium (56)	Ba-131	1.67E-06	2.81E-06	5.01E-01	2.14E+01	1.36E+09	2.11E+07	4.83E+02	4.45E+01
Barium (56)	Ba-131m	1.81E-08	2.74E-08	7.82E-02	2.49E+04	1.36E+09	2.11E+07	5.25E+07	5.27E+06
Barium (56)	Ba-133	5.55E-06	1.15E-05	4.35E-01	6.45E-02	1.36E+09	2.11E+07	6.75E+00	5.33E-01
Barium (56)	Ba-133m	2.00E-06	1.55E-06	6.97E-02	1.56E+02	1.36E+09	2.11E+07	3.20E+03	5.37E+02
Barium (56)	Ba-135m	1.59E-06	1.22E-06	6.28E-02	2.12E+02	1.36E+09	2.11E+07	5.45E+03	9.25E+02
Barium (56)	Ba-137m			6.76E-01	1.43E+05	1.36E+09	2.11E+07		
Barium (56)	Ba-139	4.44E-07	2.07E-07	1.70E-01	4.40E+03	1.36E+09	2.11E+07	4.20E+05	1.03E+05
Barium (56)	Ba-140	9.62E-06	1.89E-05	2.22E-01	1.99E+01	1.36E+09	2.11E+07	7.56E+01	6.21E+00
Barium (56)	Ba-141	2.59E-07	1.18E-07	1.03E+00	1.99E+04	1.36E+09	2.11E+07	3.26E+06	8.12E+05
Barium (56)	Ba-142	1.30E-07	7.77E-08	1.18E+00	3.44E+04	1.36E+09	2.11E+07	1.11E+07	2.26E+06
Beryllium (4)	Be-10	4.07E-06	3.55E-05	3.98E-03	4.33E-07	1.36E+09	2.11E+07	5.60E+00	1.75E-01
Beryllium (4)	Be-7	1.04E-07	1.85E-07	5.51E-02	4.75E+00	1.36E+09	2.11E+07	1.72E+03	1.52E+02
Bismuth (83)	Bi-200	1.89E-07	1.22E-07	2.64E+00	1.00E+04	1.36E+09	2.11E+07	2.20E+06	4.25E+05
Bismuth (83)	Bi-201	4.44E-07	2.44E-07	1.49E+00	3.37E+03	1.36E+09	2.11E+07	3.19E+05	6.94E+04
Bismuth (83)	Bi-202	3.29E-07	2.04E-07	2.96E+00	3.64E+03	1.36E+09	2.11E+07	4.60E+05	9.19E+04
Bismuth (83)	Bi-203	1.78E-06	9.62E-07	2.54E+00	5.16E+02	1.36E+09	2.11E+07	1.22E+04	2.69E+03
Bismuth (83)	Bi-205	3.33E-06	3.44E-06	1.80E+00	1.65E+01	1.36E+09	2.11E+07	1.98E+02	2.67E+01
Bismuth (83)	Bi-206	7.03E-06	6.29E-06	3.57E+00	4.05E+01	1.36E+09	2.11E+07	2.33E+02	3.52E+01
Bismuth (83)	Bi-207	4.81E-06	2.07E-05	1.69E+00	1.82E-02	1.36E+09	2.11E+07	6.35E+00	2.98E-01
Bismuth (83)	Bi-210	4.81E-06	3.44E-04	4.10E-02	5.05E+01	1.36E+09	2.11E+07	5.30E+01	9.26E-01
Bismuth (83)	Bi-210m	5.55E-05	1.26E-02	2.80E-01	2.31E-07	1.36E+09	2.11E+07	3.12E-02	5.03E-04
Bismuth (83)	Bi-210m+D			3.51E-01	2.31E-07	1.36E+09	2.11E+07		
Bismuth (83)	Bi-210m+E			3.51E-01		1.36E+09	2.11E+07		
Bismuth (83)	Bi-211			5.13E-02	1.70E+05	1.36E+09	2.11E+07		
Bismuth (83)	Bi-212	9.62E-07	1.15E-04	2.63E-01	6.02E+03	1.36E+09	2.11E+07	1.99E+04	3.31E+02
Bismuth (83)	Bi-212+D	9.62E-07	1.15E-04	1.51E+00	6.02E+03	1.36E+09	2.11E+07	1.99E+04	3.31E+02
Bismuth (83)	Bi-212+E	9.62E-07	1.15E-04	1.51E+00	6.02E+03	1.36E+09	2.11E+07	1.99E+04	3.31E+02
Bismuth (83)	Bi-213	7.40E-07	1.11E-04	1.96E-01	7.98E+03	1.36E+09	2.11E+07	2.76E+04	4.54E+02
Bismuth (83)	Bi-213+D	9.62E-07	1.11E-04	2.49E-01	7.98E+03	1.36E+09	2.11E+07	2.72E+04	4.54E+02
Bismuth (83)	Bi-213+E	9.62E-07	1.11E-04	2.49E-01	7.98E+03	1.36E+09	2.11E+07	2.72E+04	4.54E+02
Bismuth (83)	Bi-214	4.07E-07	5.18E-05	1.68E+00	1.83E+04	1.36E+09	2.11E+07	1.34E+05	2.23E+03
Bismuth (83)	Bi-214+D	4.07E-07	5.18E-05	1.68E+00	1.83E+04	1.36E+09	2.11E+07	1.34E+05	2.23E+03
Bismuth (83)	Bi-214+E	7.03E-03	1.67E-02	1.73E+00	1.83E+04	1.36E+09	2.11E+07	9.20E+01	6.56E+00
Berkelium (97)	Bk-245	2.11E-06	7.77E-06	2.40E-01	5.12E+01	1.36E+09	2.11E+07	7.70E+02	4.01E+01
Berkelium (97)	Bk-246	1.78E-06	1.22E-06	1.04E+00	1.38E+02	1.36E+09	2.11E+07	3.22E+03	5.93E+02
Berkelium (97)	Bk-247	1.30E-03	2.55E-01	1.10E-01	5.02E-04	1.36E+09	2.11E+07	1.53E-03	2.48E-05
Berkelium (97)	Bk-249	3.59E-06	5.92E-04	6.23E-06	7.90E-01	1.36E+09	2.11E+07	9.44E-01	1.54E-02
Berkelium (97)	Bk-250	5.18E-07	3.70E-06	9.84E-01	1.88E+03	1.36E+09	2.11E+07	9.09E+04	3.16E+03
Bromine (35)	Br-74	3.11E-07	1.41E-07	4.73E+00	1.44E+04	1.36E+09	2.11E+07	1.96E+06	4.93E+05
Bromine (35)	Br-74m	5.18E-07	2.29E-07	4.46E+00	8.78E+03	1.36E+09	2.11E+07	7.18E+05	1.83E+05

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Bromine (35)	Br-75	2.92E-07	1.96E-07	1.42E+00	3.72E+03	1.36E+09	2.11E+07	5.27E+05	9.89E+04
Bromine (35)	Br-76	1.70E-06	1.52E-06	2.85E+00	3.75E+02	1.36E+09	2.11E+07	8.92E+03	1.35E+03
Bromine (35)	Br-77	3.55E-07	3.11E-07	3.49E-01	1.08E+02	1.36E+09	2.11E+07	1.24E+04	1.90E+03
Bromine (35)	Br-80	1.15E-07	3.48E-08	1.21E-01	2.09E+04	1.36E+09	2.11E+07	7.85E+06	2.59E+06
Bromine (35)	Br-80m	4.07E-07	2.81E-07	1.60E-02	1.37E+03	1.36E+09	2.11E+07	1.39E+05	2.56E+04
Bromine (35)	Br-82	2.00E-06	2.33E-06	2.89E+00	1.72E+02	1.36E+09	2.11E+07	3.39E+03	4.16E+02
Bromine (35)	Br-83	1.59E-07	1.78E-07	3.34E-02	2.54E+03	1.36E+09	2.11E+07	6.33E+05	8.03E+04
Bromine (35)	Br-84	3.26E-07	1.37E-07	1.95E+00	1.15E+04	1.36E+09	2.11E+07	1.49E+06	3.95E+05
Carbon (6)	C-11	8.88E-08	8.14E-09	1.18E+00	1.79E+04	1.36E+09	2.11E+07	8.86E+06	5.44E+06
Carbon (6)	C-14	2.15E-06	2.29E-08	1.48E-05	1.21E-04	1.36E+09	2.11E+07	2.07E+01	1.93E+01
Calcium (20)	Ca-41	7.03E-07	3.52E-07	0.00E+00	4.95E-06	1.36E+09	2.11E+07	6.00E+01	1.40E+01
Calcium (20)	Ca-45	2.63E-06	9.99E-06	4.40E-05	1.55E+00	1.36E+09	2.11E+07	2.36E+01	1.20E+00
Calcium (20)	Ca-47	5.92E-06	7.03E-06	1.17E+00	5.58E+01	1.36E+09	2.11E+07	3.71E+02	4.49E+01
Calcium (20)	Ca-49			3.12E+00	4.18E+04	1.36E+09	2.11E+07		
Cadmium (48)	Cd-104	2.00E-07	1.26E-07	2.75E-01	6.31E+03	1.36E+09	2.11E+07	1.31E+06	2.59E+05
Cadmium (48)	Cd-107	2.29E-07	3.07E-07	2.72E-02	9.35E+02	1.36E+09	2.11E+07	1.58E+05	1.74E+04
Cadmium (48)	Cd-109	7.40E-06	2.44E-05	1.94E-02	5.45E-01	1.36E+09	2.11E+07	5.73E+00	3.22E-01
Cadmium (48)	Cd-113	9.25E-05	2.04E-04	6.77E-05	7.45E-17	1.36E+09	2.11E+07	2.60E-01	1.96E-02
Cadmium (48)	Cd-113m	8.51E-05	1.92E-04	2.07E-03	5.10E-02	1.36E+09	2.11E+07	4.30E-01	3.17E-02
Cadmium (48)	Cd-115	5.18E-06	3.63E-06	2.84E-01	1.14E+02	1.36E+09	2.11E+07	9.05E+02	1.65E+02
Cadmium (48)	Cd-115m	1.22E-05	2.29E-05	1.08E-01	5.67E+00	1.36E+09	2.11E+07	1.72E+01	1.46E+00
Cadmium (48)	Cd-117	1.04E-06	5.92E-07	1.21E+00	2.44E+03	1.36E+09	2.11E+07	9.85E+04	2.09E+04
Cadmium (48)	Cd-117m	1.04E-06	7.40E-07	2.16E+00	1.81E+03	1.36E+09	2.11E+07	7.19E+04	1.29E+04
Cerium (58)	Ce-134	9.25E-06	4.81E-06	2.51E-02	8.43E+01	1.36E+09	2.11E+07	3.83E+02	8.71E+01
Cerium (58)	Ce-135	2.92E-06	1.78E-06	1.98E+00	3.45E+02	1.36E+09	2.11E+07	4.92E+03	9.96E+02
Cerium (58)	Ce-137	9.25E-08	3.63E-08	3.48E-02	6.75E+02	1.36E+09	2.11E+07	3.11E+05	8.63E+04
Cerium (58)	Ce-137m	2.00E-06	1.52E-06	5.51E-02	1.76E+02	1.36E+09	2.11E+07	3.63E+03	6.20E+02
Cerium (58)	Ce-139	9.62E-07	6.29E-06	1.67E-01	1.84E+00	1.36E+09	2.11E+07	5.90E+01	2.15E+00
Cerium (58)	Ce-141	2.63E-06	1.18E-05	8.09E-02	7.78E+00	1.36E+09	2.11E+07	8.83E+01	4.03E+00
Cerium (58)	Ce-143	4.07E-06	2.78E-06	3.51E-01	1.84E+02	1.36E+09	2.11E+07	1.87E+03	3.47E+02
Cerium (58)	Ce-144	1.92E-05	1.33E-04	2.15E-02	8.90E-01	1.36E+09	2.11E+07	1.99E+00	7.03E-02
Cerium (58)	Ce-144+D	1.92E-05	1.33E-04	2.11E-01	8.90E-01	1.36E+09	2.11E+07	1.99E+00	7.03E-02
Cerium (58)	Ce-144+E	1.92E-05	1.33E-04	2.11E-01	8.90E-01	1.36E+09	2.11E+07	1.99E+00	7.03E-02
Californium (98)	Cf-244	2.59E-07	5.18E-05	9.56E-04	1.88E+04	1.36E+09	2.11E+07	1.41E+05	2.29E+03
Californium (98)	Cf-246	1.22E-05	1.67E-03	6.69E-04	1.70E+02	1.36E+09	2.11E+07	3.90E+01	6.45E-01
Californium (98)	Cf-248	1.04E-04	3.26E-02	6.51E-04	7.58E-01	1.36E+09	2.11E+07	1.74E-02	2.77E-04
Californium (98)	Cf-249	1.30E-03	2.59E-01	3.68E-01	1.98E-03	1.36E+09	2.11E+07	1.51E-03	2.44E-05
Californium (98)	Cf-250	5.92E-04	1.26E-01	6.21E-04	5.30E-02	1.36E+09	2.11E+07	3.19E-03	5.16E-05
Californium (98)	Cf-251	1.33E-03	2.63E-01	1.32E-01	7.72E-04	1.36E+09	2.11E+07	1.48E-03	2.41E-05
Californium (98)	Cf-252	3.33E-04	7.40E-02	4.97E-01	2.63E-01	1.36E+09	2.11E+07	6.02E-03	9.72E-05
Californium (98)	Cf-253	5.18E-06	4.81E-03	6.03E-05	1.42E+01	1.36E+09	2.11E+07	1.19E+00	1.87E-02
Californium (98)	Cf-254	1.48E-03	1.52E-01	1.81E+01	4.18E+00	1.36E+09	2.11E+07	1.05E-02	1.77E-04
Chlorine (17)	Cl-36	3.44E-06	2.70E-05	1.31E-02	2.30E-06	1.36E+09	2.11E+07	6.96E+00	2.30E-01
Chlorine (17)	Cl-38	4.44E-07	1.67E-07	1.67E+00	9.79E+03	1.36E+09	2.11E+07	9.41E+05	2.70E+05
Chlorine (17)	Cl-39	3.15E-07	1.70E-07	1.65E+00	6.55E+03	1.36E+09	2.11E+07	8.74E+05	1.93E+05
Curium (96)	Cm-238	2.96E-07	1.67E-05	7.66E-02	2.53E+03	1.36E+09	2.11E+07	5.33E+04	9.59E+02
Curium (96)	Cm-240	2.81E-05	1.18E-02	8.97E-04	9.37E+00	1.36E+09	2.11E+07	3.16E-01	5.00E-03
Curium (96)	Cm-241	3.37E-06	1.37E-04	5.43E-01	7.71E+00	1.36E+09	2.11E+07	1.88E+01	3.55E-01
Curium (96)	Cm-242	4.44E-05	1.92E-02	8.19E-04	1.55E+00	1.36E+09	2.11E+07	4.09E-02	6.48E-04
Curium (96)	Cm-243	5.55E-04	1.15E-01	1.38E-01	2.43E-02	1.36E+09	2.11E+07	3.45E-03	5.58E-05
Curium (96)	Cm-244	4.44E-04	9.99E-02	7.52E-04	3.83E-02	1.36E+09	2.11E+07	4.00E-03	6.45E-05
Curium (96)	Cm-245	7.77E-04	1.55E-01	9.39E-02	8.15E-05	1.36E+09	2.11E+07	2.51E-03	4.07E-05
Curium (96)	Cm-246	7.77E-04	1.55E-01	6.72E-04	1.47E-04	1.36E+09	2.11E+07	2.51E-03	4.07E-05
Curium (96)	Cm-247	7.03E-04	1.44E-01	3.49E-01	4.44E-08	1.36E+09	2.11E+07	2.71E-03	4.38E-05
Curium (96)	Cm-247+D			3.76E-01	4.44E-08	1.36E+09	2.11E+07		
Curium (96)	Cm-247+E			3.76E-01		1.36E+09	2.11E+07		
Curium (96)	Cm-248	2.85E-03	5.55E-01	1.42E+00	1.99E-06	1.36E+09	2.11E+07	7.02E-04	1.14E-05
Curium (96)	Cm-249	1.15E-07	1.22E-07	3.87E-02	5.68E+03	1.36E+09	2.11E+07	1.97E+06	2.60E+05
Curium (96)	Cm-250	1.63E-02	3.11E+00	1.05E+01	7.14E-05	1.36E+09	2.11E+07	1.25E-04	2.03E-06
Curium (96)	Cm-250+D	1.63E-02	3.11E+00		7.14E-05	1.36E+09	2.11E+07	1.25E-04	2.03E-06
Curium (96)	Cm-250+E	1.63E-02	3.11E+00	1.08E+01	7.14E-05	1.36E+09	2.11E+07	1.25E-04	2.03E-06

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Cobalt (27)	Co-55	3.70E-06	1.85E-06	2.25E+00	3.46E+02	1.36E+09	2.11E+07	3.94E+03	9.21E+02
Cobalt (27)	Co-56	9.25E-06	1.78E-05	3.77E+00	3.21E+00	1.36E+09	2.11E+07	1.33E+01	1.11E+00
Cobalt (27)	Co-57	7.77E-07	2.04E-06	1.26E-01	9.34E-01	1.36E+09	2.11E+07	6.85E+01	4.54E+00
Cobalt (27)	Co-58	2.74E-06	5.92E-06	1.08E+00	3.57E+00	1.36E+09	2.11E+07	4.83E+01	3.69E+00
Cobalt (27)	Co-58m	8.88E-08	4.81E-08	7.76E-06	6.63E+02	1.36E+09	2.11E+07	3.14E+05	6.91E+04
Cobalt (27)	Co-60	1.26E-05	3.70E-05	2.68E+00	1.31E-01	1.36E+09	2.11E+07	2.86E+00	1.74E-01
Cobalt (27)	Co-60m	6.29E-09	4.44E-09	5.11E-03	3.48E+04	1.36E+09	2.11E+07	2.28E+08	4.13E+07
Cobalt (27)	Co-61	2.74E-07	1.74E-07	1.51E-01	3.68E+03	1.36E+09	2.11E+07	5.59E+05	1.09E+05
Cobalt (27)	Co-62m	1.74E-07	7.40E-08	3.01E+00	2.62E+04	1.36E+09	2.11E+07	6.40E+06	1.68E+06
Chromium (24)	Cr-48	7.40E-07	7.40E-07	4.71E-01	2.64E+02	1.36E+09	2.11E+07	1.43E+04	1.98E+03
Chromium (24)	Cr-49	2.26E-07	1.22E-07	1.25E+00	8.65E+03	1.36E+09	2.11E+07	1.61E+06	3.55E+05
Chromium (24)	Cr-51	1.41E-07	1.18E-07	3.47E-02	9.13E+00	1.36E+09	2.11E+07	2.64E+03	4.17E+02
Cesium (55)	Cs-125	1.30E-07	4.44E-08	7.99E-01	8.09E+03	1.36E+09	2.11E+07	2.68E+06	8.15E+05
Cesium (55)	Cs-126			1.38E+00	2.22E+05	1.36E+09	2.11E+07		
Cesium (55)	Cs-127	8.88E-08	7.40E-08	4.61E-01	9.71E+02	1.36E+09	2.11E+07	4.46E+05	7.09E+04
Cesium (55)	Cs-128			1.11E+00	9.34E+04	1.36E+09	2.11E+07		
Cesium (55)	Cs-129	2.22E-07	1.55E-07	3.06E-01	1.89E+02	1.36E+09	2.11E+07	3.52E+04	6.41E+03
Cesium (55)	Cs-130	1.04E-07	2.89E-08	6.31E-01	1.22E+04	1.36E+09	2.11E+07	5.07E+06	1.77E+06
Cesium (55)	Cs-131	2.15E-07	9.99E-08	2.09E-02	2.61E+01	1.36E+09	2.11E+07	5.15E+03	1.27E+03
Cesium (55)	Cs-132	1.85E-06	8.51E-07	7.81E-01	3.91E+01	1.36E+09	2.11E+07	8.94E+02	2.22E+02
Cesium (55)	Cs-134	7.03E-05	2.44E-05	1.73E+00	3.36E-01	1.36E+09	2.11E+07	7.17E-01	2.16E-01
Cesium (55)	Cs-134m	7.40E-08	5.18E-08	2.63E-02	2.09E+03	1.36E+09	2.11E+07	1.17E+06	2.12E+05
Cesium (55)	Cs-135	7.40E-06	2.55E-06	3.14E-05	3.01E-07	1.36E+09	2.11E+07	5.79E+00	1.75E+00
Cesium (55)	Cs-135m	7.03E-08	4.44E-08	1.76E+00	6.87E+03	1.36E+09	2.11E+07	4.07E+06	7.99E+05
Cesium (55)	Cs-136	1.11E-05	4.44E-06	2.37E+00	1.93E+01	1.36E+09	2.11E+07	7.41E+01	2.03E+01
Cesium (55)	Cs-137	4.81E-05	1.70E-05	3.49E-03	2.31E-02	1.36E+09	2.11E+07	9.00E-01	2.68E-01
Cesium (55)	Cs-137+D	4.81E-05	1.70E-05	6.43E-01	2.31E-02	1.36E+09	2.11E+07	9.00E-01	2.68E-01
Cesium (55)	Cs-137+E	4.81E-05	1.70E-05	6.43E-01	2.31E-02	1.36E+09	2.11E+07	9.00E-01	2.68E-01
Cesium (55)	Cs-138	3.40E-07	8.88E-08	2.64E+00	1.13E+04	1.36E+09	2.11E+07	1.44E+06	5.21E+05
Copper (29)	Cu-60	2.59E-07	1.22E-07	4.25E+00	1.57E+04	1.36E+09	2.11E+07	2.56E+06	6.25E+05
Copper (29)	Cu-61	4.44E-07	2.74E-07	9.58E-01	1.78E+03	1.36E+09	2.11E+07	1.67E+05	3.34E+04
Copper (29)	Cu-62			1.30E+00	3.74E+04	1.36E+09	2.11E+07		
Copper (29)	Cu-64	4.44E-07	4.07E-07	2.14E-01	4.78E+02	1.36E+09	2.11E+07	4.35E+04	6.43E+03
Copper (29)	Cu-66			2.37E-01	7.14E+04	1.36E+09	2.11E+07		
Copper (29)	Cu-67	1.26E-06	2.04E-06	1.23E-01	9.81E+01	1.36E+09	2.11E+07	2.95E+03	2.80E+02
Dysprosium (66)	Dy-155	4.81E-07	2.85E-07	6.28E-01	6.07E+02	1.36E+09	2.11E+07	5.27E+04	1.09E+04
Dysprosium (66)	Dy-157	2.26E-07	1.11E-07	3.89E-01	7.49E+02	1.36E+09	2.11E+07	1.40E+05	3.31E+04
Dysprosium (66)	Dy-159	3.70E-07	1.37E-06	4.52E-02	1.75E+00	1.36E+09	2.11E+07	1.81E+02	9.43E+00
Dysprosium (66)	Dy-165	4.07E-07	2.22E-07	8.06E-02	2.60E+03	1.36E+09	2.11E+07	2.68E+05	5.88E+04
Dysprosium (66)	Dy-166	5.92E-06	7.03E-06	4.10E-02	7.44E+01	1.36E+09	2.11E+07	4.95E+02	5.98E+01
Erbium (68)	Er-161	2.96E-07	1.78E-07	9.98E-01	1.87E+03	1.36E+09	2.11E+07	2.64E+05	5.39E+04
Erbium (68)	Er-165	7.03E-08	2.92E-08	3.78E-02	5.86E+02	1.36E+09	2.11E+07	3.54E+05	9.45E+04
Erbium (68)	Er-169	1.37E-06	3.70E-06	7.88E-05	2.72E+01	1.36E+09	2.11E+07	6.82E+02	4.42E+01
Erbium (68)	Er-171	1.33E-06	8.14E-07	4.49E-01	8.07E+02	1.36E+09	2.11E+07	2.53E+04	5.09E+03
Erbium (68)	Er-172	3.70E-06	4.07E-06	5.79E-01	1.23E+02	1.36E+09	2.11E+07	1.32E+03	1.69E+02
Einsteinium (99)	Es-250	7.77E-08	2.33E-06	4.26E-01	2.89E+03	1.36E+09	2.11E+07	3.87E+05	7.81E+03
Einsteinium (99)	Es-251	6.29E-07	7.77E-06	9.79E-02	1.84E+02	1.36E+09	2.11E+07	5.54E+03	1.48E+02
Einsteinium (99)	Es-253	2.26E-05	9.99E-03	7.74E-04	1.24E+01	1.36E+09	2.11E+07	4.94E-01	7.82E-03
Einsteinium (99)	Es-254	1.04E-04	3.18E-02	1.14E-02	9.17E-01	1.36E+09	2.11E+07	1.90E-02	3.04E-04
Einsteinium (99)	Es-254+D	1.04E-04	3.18E-02	9.95E-01	9.17E-01	1.36E+09	2.11E+07	1.90E-02	3.04E-04
Einsteinium (99)	Es-254+E	7.03E-04	1.59E-01	9.97E-01	9.17E-01	1.36E+09	2.11E+07	3.76E-03	6.07E-05
Einsteinium (99)	Es-254m	1.55E-05	1.74E-03	5.34E-01	1.54E+02	1.36E+09	2.11E+07	3.35E+01	5.61E-01
Europium (63)	Eu-145	2.78E-06	2.04E-06	1.56E+00	4.26E+01	1.36E+09	2.11E+07	6.32E+02	1.11E+02
Europium (63)	Eu-146	4.81E-06	2.96E-06	2.74E+00	5.49E+01	1.36E+09	2.11E+07	4.75E+02	9.52E+01
Europium (63)	Eu-147	1.63E-06	4.07E-06	5.39E-01	1.05E+01	1.36E+09	2.11E+07	2.26E+02	1.55E+01
Europium (63)	Eu-148	4.81E-06	9.62E-06	2.40E+00	4.64E+00	1.36E+09	2.11E+07	3.56E+01	2.88E+00
Europium (63)	Eu-149	3.70E-07	1.07E-06	6.61E-02	2.72E+00	1.36E+09	2.11E+07	2.66E+02	1.64E+01
Europium (63)	Eu-150	4.81E-06	1.96E-04	1.66E+00	2.03E-02	1.36E+09	2.11E+07	1.71E+00	3.25E-02
Europium (63)	Eu-150m	1.41E-06	7.03E-07	7.91E-02	4.81E+02	1.36E+09	2.11E+07	1.44E+04	3.37E+03
Europium (63)	Eu-152	5.18E-06	1.55E-04	1.26E+00	5.20E-02	1.36E+09	2.11E+07	2.06E+00	4.16E-02
Europium (63)	Eu-152m	1.85E-06	8.14E-07	3.91E-01	6.51E+02	1.36E+09	2.11E+07	1.49E+04	3.83E+03

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Europium (63)	Eu-154	7.40E-06	1.96E-04	1.37E+00	7.88E-02	1.36E+09	2.11E+07	1.61E+00	3.34E-02
Europium (63)	Eu-155	1.18E-06	2.55E-05	6.24E-02	1.40E-01	1.36E+09	2.11E+07	1.20E+01	2.64E-01
Europium (63)	Eu-156	8.14E-06	1.26E-05	1.45E+00	1.67E+01	1.36E+09	2.11E+07	7.78E+01	7.67E+00
Europium (63)	Eu-157	2.22E-06	1.04E-06	3.22E-01	4.01E+02	1.36E+09	2.11E+07	7.63E+03	1.88E+03
Europium (63)	Eu-158	3.48E-07	1.74E-07	1.26E+00	7.94E+03	1.36E+09	2.11E+07	9.62E+05	2.25E+05
Fluorine (9)	F-18	1.81E-07	2.07E-07	1.15E+00	3.32E+03	1.36E+09	2.11E+07	7.23E+05	9.01E+04
Iron (26)	Fe-52	5.18E-06	2.22E-06	8.30E-01	7.34E+02	1.36E+09	2.11E+07	6.01E+03	1.57E+03
Iron (26)	Fe-55	1.22E-06	1.41E-06	0.00E+00	2.57E-01	1.36E+09	2.11E+07	3.67E+01	4.54E+00
Iron (26)	Fe-59	6.66E-06	1.37E-05	1.28E+00	5.68E+00	1.36E+09	2.11E+07	3.11E+01	2.46E+00
Iron (26)	Fe-60	4.07E-04	5.18E-04	1.37E-05	6.93E-06	1.36E+09	2.11E+07	9.59E-02	1.10E-02
Iron (26)	Fe-60+D	4.07E-04	5.18E-04	5.12E-03	6.93E-06	1.36E+09	2.11E+07	9.59E-02	1.10E-02
Iron (26)	Fe-60+E	4.07E-04	5.18E-04	5.12E-03	6.93E-06	1.36E+09	2.11E+07	9.59E-02	1.10E-02
Fermium (100)	Fm-252	9.99E-06	1.18E-03	6.31E-04	2.67E+02	1.36E+09	2.11E+07	8.55E+01	1.43E+00
Fermium (100)	Fm-253	3.37E-06	1.48E-03	8.33E-02	8.43E+01	1.36E+09	2.11E+07	2.28E+01	3.60E-01
Fermium (100)	Fm-254	1.63E-06	2.26E-04	6.99E-04	1.87E+03	1.36E+09	2.11E+07	3.18E+03	5.25E+01
Fermium (100)	Fm-255	9.25E-06	9.99E-04	7.34E-03	3.02E+02	1.36E+09	2.11E+07	1.14E+02	1.91E+00
Fermium (100)	Fm-257	5.55E-05	2.63E-02	1.11E-01	2.52E+00	1.36E+09	2.11E+07	4.17E-02	6.59E-04
Francium (87)	Fr-219			3.85E-03	1.04E+09	1.36E+09	2.11E+07		
Francium (87)	Fr-220			1.15E-02	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-220+D			1.52E+00	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-220+E			1.52E+00	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-221			3.31E-02	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-221+D			2.81E-01	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-221+E			2.81E-01	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-222	2.66E-06	5.18E-05	1.02E-01	2.53E+04	1.36E+09	2.11E+07	1.35E+05	3.07E+03
Francium (87)	Fr-223	8.88E-06	3.29E-06	9.06E-02	1.67E+04	1.36E+09	2.11E+07	8.04E+04	2.32E+04
Gallium (31)	Ga-65	1.37E-07	6.29E-08	1.41E+00	2.40E+04	1.36E+09	2.11E+07	7.41E+06	1.84E+06
Gallium (31)	Ga-66	4.44E-06	1.63E-06	2.63E+00	6.46E+02	1.36E+09	2.11E+07	6.22E+03	1.81E+03
Gallium (31)	Ga-67	7.03E-07	8.88E-07	1.65E-01	7.76E+01	1.36E+09	2.11E+07	4.31E+03	4.97E+02
Gallium (31)	Ga-68	3.70E-07	1.81E-07	1.17E+00	5.36E+03	1.36E+09	2.11E+07	6.11E+05	1.45E+05
Gallium (31)	Ga-70	1.15E-07	5.92E-08	9.90E-02	1.72E+04	1.36E+09	2.11E+07	6.32E+06	1.44E+06
Gallium (31)	Ga-72	4.07E-06	1.96E-06	2.89E+00	4.31E+02	1.36E+09	2.11E+07	4.47E+03	1.07E+03
Gallium (31)	Ga-73	9.62E-07	5.18E-07	3.91E-01	1.24E+03	1.36E+09	2.11E+07	5.40E+04	1.19E+04
Gadolinium (64)	Gd-145	1.63E-07	7.40E-08	2.44E+00	1.59E+04	1.36E+09	2.11E+07	4.14E+06	1.04E+06
Gadolinium (64)	Gd-146	3.55E-06	2.37E-05	2.59E-01	5.24E+00	1.36E+09	2.11E+07	3.82E+01	1.38E+00
Gadolinium (64)	Gd-147	2.26E-06	1.48E-06	1.46E+00	1.59E+02	1.36E+09	2.11E+07	2.93E+03	5.60E+02
Gadolinium (64)	Gd-148	2.07E-04	4.07E-02	0.00E+00	7.45E-03	1.36E+09	2.11E+07	9.61E-03	1.56E-04
Gadolinium (64)	Gd-149	1.67E-06	2.70E-06	4.57E-01	2.69E+01	1.36E+09	2.11E+07	6.10E+02	5.79E+01
Gadolinium (64)	Gd-151	7.40E-07	3.18E-06	6.50E-02	2.11E+00	1.36E+09	2.11E+07	9.81E+01	4.62E+00
Gadolinium (64)	Gd-152	1.52E-04	2.96E-02	0.00E+00	6.42E-15	1.36E+09	2.11E+07	1.31E-02	2.13E-04
Gadolinium (64)	Gd-153	9.99E-07	7.77E-06	1.08E-01	1.05E+00	1.36E+09	2.11E+07	3.88E+01	1.29E+00
Gadolinium (64)	Gd-159	1.81E-06	9.99E-07	7.56E-02	3.27E+02	1.36E+09	2.11E+07	7.56E+03	1.65E+03
Germanium (32)	Ge-66	3.70E-07	3.37E-07	7.59E-01	2.67E+03	1.36E+09	2.11E+07	2.92E+05	4.35E+04
Germanium (32)	Ge-67	2.41E-07	9.25E-08	1.70E+00	1.95E+04	1.36E+09	2.11E+07	3.45E+06	9.72E+05
Germanium (32)	Ge-68	4.81E-06	5.18E-05	4.78E-05	8.78E-01	1.36E+09	2.11E+07	6.39E+00	1.81E-01
Germanium (32)	Ge-68+D	4.81E-06	5.18E-05	1.17E+00	8.78E-01	1.36E+09	2.11E+07	6.39E+00	1.81E-01
Germanium (32)	Ge-68+E	4.81E-06	5.18E-05	1.17E+00	8.78E-01	1.36E+09	2.11E+07	6.39E+00	1.81E-01
Germanium (32)	Ge-69	8.88E-07	1.07E-06	9.79E-01	1.55E+02	1.36E+09	2.11E+07	6.88E+03	8.20E+02
Germanium (32)	Ge-71	4.44E-08	4.07E-08	4.84E-05	2.14E+01	1.36E+09	2.11E+07	1.95E+04	2.88E+03
Germanium (32)	Ge-75	1.70E-07	1.33E-07	8.40E-02	4.40E+03	1.36E+09	2.11E+07	1.06E+06	1.77E+05
Germanium (32)	Ge-77	1.22E-06	1.37E-06	1.27E+00	5.37E+02	1.36E+09	2.11E+07	1.74E+04	2.20E+03
Germanium (32)	Ge-78	4.44E-07	3.52E-07	3.12E-01	4.19E+03	1.36E+09	2.11E+07	3.86E+05	6.39E+04
Hydrogen (1)	H-3	1.55E-07	1.52E-07	0.00E+00	5.61E-02	1.36E+09	2.11E+07	2.66E+02	3.74E+01
Hafnium (72)	Hf-170	1.78E-06	1.18E-06	5.96E-01	3.79E+02	1.36E+09	2.11E+07	8.85E+03	1.67E+03
Hafnium (72)	Hf-172	3.70E-06	7.40E-05	1.16E-01	3.71E-01	1.36E+09	2.11E+07	4.52E+00	1.02E-01
Hafnium (72)	Hf-173	8.51E-07	5.92E-07	4.35E-01	2.53E+02	1.36E+09	2.11E+07	1.23E+04	2.24E+03
Hafnium (72)	Hf-175	1.52E-06	4.44E-06	4.03E-01	3.61E+00	1.36E+09	2.11E+07	8.25E+01	5.05E+00
Hafnium (72)	Hf-177m	3.00E-07	3.33E-07	2.45E+00	7.09E+03	1.36E+09	2.11E+07	9.37E+05	1.19E+05
Hafnium (72)	Hf-178m	1.74E-05	4.44E-04	2.59E+00	2.24E-02	1.36E+09	2.11E+07	6.83E-01	1.43E-02
Hafnium (72)	Hf-179m	4.44E-06	1.41E-05	9.83E-01	1.01E+01	1.36E+09	2.11E+07	7.50E+01	4.34E+00
Hafnium (72)	Hf-180m	6.29E-07	4.81E-07	1.10E+00	1.10E+03	1.36E+09	2.11E+07	7.20E+04	1.22E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Hafnium (72)	Hf-181	4.07E-06	1.85E-05	6.13E-01	5.97E+00	1.36E+09	2.11E+07	4.37E+01	1.98E+00
Hafnium (72)	Hf-182	1.11E-05	4.81E-04	2.60E-01	7.70E-08	1.36E+09	2.11E+07	7.00E-01	1.31E-02
Hafnium (72)	Hf-182+D				7.70E-08	1.36E+09	2.11E+07		
Hafnium (72)	Hf-182+E	1.67E-05	4.81E-04	1.66E+00	7.70E-08	1.36E+09	2.11E+07	6.43E-01	1.31E-02
Hafnium (72)	Hf-182m	1.55E-07	1.70E-07	1.02E+00	5.92E+03	1.36E+09	2.11E+07	1.51E+06	1.95E+05
Hafnium (72)	Hf-183	2.70E-07	2.11E-07	8.78E-01	5.69E+03	1.36E+09	2.11E+07	8.63E+05	1.44E+05
Hafnium (72)	Hf-184	1.92E-06	1.22E-06	2.87E-01	1.47E+03	1.36E+09	2.11E+07	3.18E+04	6.24E+03
Mercury (80)	Hg-193	3.03E-07	2.78E-07	2.10E-01	1.73E+03	1.36E+09	2.11E+07	2.31E+05	3.42E+04
Mercury (80)	Hg-193m	1.48E-06	9.62E-07	1.13E+00	5.47E+02	1.36E+09	2.11E+07	1.53E+04	2.95E+03
Mercury (80)	Hg-194	5.18E-06	3.07E-05	2.61E-04	2.67E-03	1.36E+09	2.11E+07	5.22E+00	2.01E-01
Mercury (80)	Hg-194+D	6.66E-06	3.07E-05	1.13E+00	2.67E-03	1.36E+09	2.11E+07	4.45E+00	2.00E-01
Mercury (80)	Hg-194+E	6.66E-06	3.07E-05	1.13E+00	2.67E-03	1.36E+09	2.11E+07	4.45E+00	2.00E-01
Mercury (80)	Hg-195	3.59E-07	2.70E-07	2.16E-01	6.13E+02	1.36E+09	2.11E+07	7.02E+04	1.21E+04
Mercury (80)	Hg-195m	2.07E-06	1.96E-06	2.25E-01	1.46E+02	1.36E+09	2.11E+07	2.84E+03	4.09E+02
Mercury (80)	Hg-197	8.51E-07	1.11E-06	6.76E-02	9.47E+01	1.36E+09	2.11E+07	4.33E+03	4.87E+02
Mercury (80)	Hg-197m	1.74E-06	1.96E-06	9.48E-02	2.55E+02	1.36E+09	2.11E+07	5.81E+03	7.31E+02
Mercury (80)	Hg-199m	1.15E-07	1.18E-07	1.95E-01	8.55E+03	1.36E+09	2.11E+07	2.98E+06	4.02E+05
Mercury (80)	Hg-203	2.00E-06	8.88E-06	2.59E-01	5.43E+00	1.36E+09	2.11E+07	8.17E+01	3.76E+00
Holmium (67)	Ho-155	1.37E-07	7.40E-08	4.54E-01	7.59E+03	1.36E+09	2.11E+07	2.33E+06	5.14E+05
Holmium (67)	Ho-157	2.41E-08	1.55E-08	5.38E-01	2.89E+04	1.36E+09	2.11E+07	4.99E+07	9.64E+06
Holmium (67)	Ho-159	2.92E-08	2.26E-08	3.90E-01	1.10E+04	1.36E+09	2.11E+07	1.55E+07	2.61E+06
Holmium (67)	Ho-161	4.81E-08	2.22E-08	6.00E-02	2.43E+03	1.36E+09	2.11E+07	2.14E+06	5.29E+05
Holmium (67)	Ho-162	1.22E-08	1.04E-08	1.81E-01	2.43E+04	1.36E+09	2.11E+07	8.09E+07	1.27E+07
Holmium (67)	Ho-162m	9.62E-08	7.77E-08	6.19E-01	5.36E+03	1.36E+09	2.11E+07	2.27E+06	3.71E+05
Holmium (67)	Ho-164	3.52E-08	3.11E-08	3.94E-02	1.26E+04	1.36E+09	2.11E+07	1.45E+07	2.20E+06
Holmium (67)	Ho-164m	5.92E-08	4.44E-08	4.55E-02	9.71E+03	1.36E+09	2.11E+07	6.74E+06	1.16E+06
Holmium (67)	Ho-166	5.18E-06	2.41E-06	1.23E-01	2.27E+02	1.36E+09	2.11E+07	1.85E+03	4.56E+02
Holmium (67)	Ho-166m	7.40E-06	4.44E-04	1.93E+00	5.78E-04	1.36E+09	2.11E+07	7.97E-01	1.42E-02
Holmium (67)	Ho-167	3.07E-07	2.63E-07	4.10E-01	1.96E+03	1.36E+09	2.11E+07	2.59E+05	4.04E+04
Iodine (53)	I-120	1.26E-06	7.40E-07	3.06E+00	4.50E+03	1.36E+09	2.11E+07	1.49E+05	3.10E+04
Iodine (53)	I-120m	7.77E-07	3.70E-07	5.85E+00	6.87E+03	1.36E+09	2.11E+07	3.74E+05	9.05E+04
Iodine (53)	I-121	3.03E-07	2.07E-07	4.62E-01	2.86E+03	1.36E+09	2.11E+07	3.90E+05	7.24E+04
Iodine (53)	I-122			1.19E+00	1.01E+05	1.36E+09	2.11E+07		
Iodine (53)	I-123	7.77E-07	5.55E-07	1.79E-01	4.60E+02	1.36E+09	2.11E+07	2.44E+04	4.37E+03
Iodine (53)	I-124	4.81E-05	3.40E-05	1.21E+00	6.05E+01	1.36E+09	2.11E+07	5.19E+01	9.36E+00
Iodine (53)	I-125	5.55E-05	4.07E-05	3.66E-02	4.21E+00	1.36E+09	2.11E+07	3.17E+00	5.56E-01
Iodine (53)	I-126	1.07E-04	7.40E-05	5.16E-01	1.94E+01	1.36E+09	2.11E+07	7.48E+00	1.38E+00
Iodine (53)	I-128	1.70E-07	4.81E-08	2.00E-01	1.46E+04	1.36E+09	2.11E+07	3.69E+06	1.27E+06
Iodine (53)	I-129	4.07E-04	2.74E-04	2.28E-02	4.41E-08	1.36E+09	2.11E+07	1.02E-01	1.91E-02
Iodine (53)	I-130	7.40E-06	5.18E-06	2.39E+00	4.91E+02	1.36E+09	2.11E+07	2.74E+03	4.99E+02
Iodine (53)	I-131	8.14E-05	5.55E-05	4.25E-01	3.15E+01	1.36E+09	2.11E+07	1.60E+01	2.97E+00
Iodine (53)	I-132	1.07E-06	7.03E-07	2.57E+00	2.64E+03	1.36E+09	2.11E+07	1.02E+05	1.95E+04
Iodine (53)	I-132m	8.14E-07	5.92E-07	3.63E-01	4.36E+03	1.36E+09	2.11E+07	2.20E+05	3.89E+04
Iodine (53)	I-133	1.59E-05	1.15E-05	7.20E-01	2.92E+02	1.36E+09	2.11E+07	7.56E+02	1.34E+02
Iodine (53)	I-134	4.07E-07	1.85E-07	2.95E+00	6.92E+03	1.36E+09	2.11E+07	7.20E+05	1.80E+05
Iodine (53)	I-135	3.44E-06	2.52E-06	1.72E+00	9.18E+02	1.36E+09	2.11E+07	1.10E+04	1.93E+03
Indium (49)	In-109	2.44E-07	1.55E-07	7.28E-01	1.45E+03	1.36E+09	2.11E+07	2.46E+05	4.81E+04
Indium (49)	In-110	8.88E-07	4.81E-07	3.36E+00	1.24E+03	1.36E+09	2.11E+07	5.86E+04	1.29E+04
Indium (49)	In-110m	3.70E-07	1.74E-07	1.79E+00	5.27E+03	1.36E+09	2.11E+07	6.02E+05	1.47E+05
Indium (49)	In-111	1.07E-06	8.51E-07	4.29E-01	8.94E+01	1.36E+09	2.11E+07	3.41E+03	5.63E+02
Indium (49)	In-112	3.70E-08	2.74E-08	3.20E-01	2.53E+04	1.36E+09	2.11E+07	2.81E+07	4.90E+06
Indium (49)	In-113m	1.04E-07	7.40E-08	2.84E-01	3.66E+03	1.36E+09	2.11E+07	1.46E+06	2.61E+05
Indium (49)	In-114			3.22E-03	3.04E+05	1.36E+09	2.11E+07		
Indium (49)	In-114m	1.52E-05	2.26E-05	1.01E-01	5.11E+00	1.36E+09	2.11E+07	1.30E+01	1.32E+00
Indium (49)	In-114m+D	1.52E-05	4.44E-05	1.04E-01	5.11E+00	1.36E+09	2.11E+07	1.14E+01	6.98E-01
Indium (49)	In-114m+E	1.52E-05	4.44E-05	1.04E-01	5.11E+00	1.36E+09	2.11E+07	1.14E+01	6.98E-01
Indium (49)	In-115	1.18E-04	5.92E-04	4.17E-04	1.36E-16	1.36E+09	2.11E+07	2.97E-01	1.27E-02
Indium (49)	In-115m	3.18E-07	2.18E-07	1.76E-01	1.35E+03	1.36E+09	2.11E+07	1.76E+05	3.25E+04
Indium (49)	In-116m	2.37E-07	1.67E-07	2.66E+00	6.73E+03	1.36E+09	2.11E+07	1.17E+06	2.13E+05
Indium (49)	In-117	1.15E-07	1.07E-07	7.75E-01	8.32E+03	1.36E+09	2.11E+07	2.92E+06	4.26E+05
Indium (49)	In-117m	4.44E-07	2.66E-07	1.46E-01	3.13E+03	1.36E+09	2.11E+07	2.94E+05	6.00E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Indium (49)	In-119			9.36E-01	1.52E+05	1.36E+09	2.11E+07		
Indium (49)	In-119m	1.74E-07	6.29E-08	1.52E-01	2.02E+04	1.36E+09	2.11E+07	4.98E+06	1.46E+06
Iridium (77)	Ir-182	1.78E-07	8.51E-08	1.56E+00	2.43E+04	1.36E+09	2.11E+07	5.78E+06	1.39E+06
Iridium (77)	Ir-184	6.29E-07	4.07E-07	2.08E+00	2.01E+03	1.36E+09	2.11E+07	1.33E+05	2.56E+04
Iridium (77)	Ir-185	9.62E-07	6.66E-07	6.22E-01	4.34E+02	1.36E+09	2.11E+07	1.86E+04	3.42E+03
Iridium (77)	Ir-186	1.81E-06	1.15E-06	1.76E+00	3.84E+02	1.36E+09	2.11E+07	8.81E+03	1.73E+03
Iridium (77)	Ir-186m	2.26E-07	1.55E-07	1.07E+00	3.47E+03	1.36E+09	2.11E+07	6.35E+05	1.17E+05
Iridium (77)	Ir-187	4.44E-07	2.74E-07	3.93E-01	5.78E+02	1.36E+09	2.11E+07	5.42E+04	1.09E+04
Iridium (77)	Ir-188	2.33E-06	1.48E-06	1.66E+00	1.46E+02	1.36E+09	2.11E+07	2.61E+03	5.11E+02
Iridium (77)	Ir-189	8.88E-07	1.92E-06	8.16E-02	1.90E+01	1.36E+09	2.11E+07	7.70E+02	5.87E+01
Iridium (77)	Ir-190	4.44E-06	7.77E-06	1.59E+00	2.09E+01	1.36E+09	2.11E+07	1.76E+02	1.57E+01
Iridium (77)	Ir-190m			6.21E-05	5.06E+03	1.36E+09	2.11E+07		
Iridium (77)	Ir-190n			1.72E+00	1.96E+03	1.36E+09	2.11E+07		
Iridium (77)	Ir-191m			7.39E-02	4.42E+06	1.36E+09	2.11E+07		
Iridium (77)	Ir-192	5.18E-06	1.92E-05	9.07E-01	3.42E+00	1.36E+09	2.11E+07	2.16E+01	1.12E+00
Iridium (77)	Ir-192m	1.15E-06	2.15E-05	1.72E-01	2.88E-03	1.36E+09	2.11E+07	1.28E+01	2.93E-01
Iridium (77)	Ir-194	4.81E-06	1.92E-06	2.11E-01	3.17E+02	1.36E+09	2.11E+07	2.81E+03	7.69E+02
Iridium (77)	Ir-194m	7.77E-06	3.33E-05	2.60E+00	1.48E+00	1.36E+09	2.11E+07	7.47E+00	3.52E-01
Iridium (77)	Ir-195	3.70E-07	2.48E-07	8.60E-02	2.43E+03	1.36E+09	2.11E+07	2.72E+05	5.11E+04
Iridium (77)	Ir-195m	7.77E-07	5.92E-07	4.64E-01	1.60E+03	1.36E+09	2.11E+07	8.44E+04	1.44E+04
Potassium (19)	K-38			3.47E+00	4.77E+04	1.36E+09	2.11E+07		
Potassium (19)	K-40	2.29E-05	7.77E-06	2.38E-01	5.41E-10	1.36E+09	2.11E+07	1.87E+00	5.73E-01
Potassium (19)	K-42	1.59E-06	4.44E-07	4.64E-01	4.91E+02	1.36E+09	2.11E+07	1.33E+04	4.63E+03
Potassium (19)	K-43	9.25E-07	5.18E-07	1.10E+00	2.69E+02	1.36E+09	2.11E+07	1.22E+04	2.62E+03
Potassium (19)	K-44	3.11E-07	7.40E-08	2.47E+00	1.65E+04	1.36E+09	2.11E+07	2.29E+06	8.81E+05
Potassium (19)	K-45	2.00E-07	5.55E-08	2.05E+00	1.82E+04	1.36E+09	2.11E+07	3.93E+06	1.37E+06
Krypton (36)	Kr-74			1.40E+00	3.17E+04	1.36E+09	2.11E+07		
Krypton (36)	Kr-76			4.70E-01	4.10E+02	1.36E+09	2.11E+07		
Krypton (36)	Kr-77			1.21E+00	4.88E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-79			2.79E-01	1.73E+02	1.36E+09	2.11E+07		
Krypton (36)	Kr-81			6.99E-03	3.30E-06	1.36E+09	2.11E+07		
Krypton (36)	Kr-81m			1.38E-01	1.68E+06	1.36E+09	2.11E+07		
Krypton (36)	Kr-83m			4.17E-04	3.32E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-85			1.23E-02	6.46E-02	1.36E+09	2.11E+07		
Krypton (36)	Kr-85m			1.83E-01	1.36E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-87			9.80E-01	4.77E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-88			2.02E+00	2.14E+03	1.36E+09	2.11E+07		
Lanthanum (57)	La-131	1.30E-07	8.51E-08	7.64E-01	6.17E+03	1.36E+09	2.11E+07	1.98E+06	3.77E+05
Lanthanum (57)	La-132	1.44E-06	5.92E-07	2.22E+00	1.26E+03	1.36E+09	2.11E+07	3.73E+04	1.00E+04
Lanthanum (57)	La-134			8.75E-01	5.46E+04	1.36E+09	2.11E+07		
Lanthanum (57)	La-135	1.11E-07	5.18E-08	3.55E-02	3.11E+02	1.36E+09	2.11E+07	1.19E+05	2.91E+04
Lanthanum (57)	La-137	3.00E-07	1.33E-05	2.29E-02	1.16E-05	1.36E+09	2.11E+07	2.54E+01	4.73E-01
Lanthanum (57)	La-138	4.07E-06	2.37E-04	1.32E+00	5.13E-12	1.36E+09	2.11E+07	1.49E+00	2.67E-02
Lanthanum (57)	La-140	7.40E-06	4.07E-06	2.52E+00	1.51E+02	1.36E+09	2.11E+07	8.54E+02	1.86E+02
Lanthanum (57)	La-141	1.33E-06	5.55E-07	1.77E-01	1.54E+03	1.36E+09	2.11E+07	4.93E+04	1.31E+04
Lanthanum (57)	La-142	6.66E-07	3.29E-07	2.91E+00	3.94E+03	1.36E+09	2.11E+07	2.49E+05	5.87E+04
Lanthanum (57)	La-143	2.07E-07	7.77E-08	2.65E-01	2.56E+04	1.36E+09	2.11E+07	5.27E+06	1.51E+06
Lutetium (71)	Lu-169	1.70E-06	1.30E-06	1.12E+00	1.78E+02	1.36E+09	2.11E+07	4.30E+03	7.34E+02
Lutetium (71)	Lu-170	3.66E-06	2.33E-06	2.56E+00	1.26E+02	1.36E+09	2.11E+07	1.44E+03	2.81E+02
Lutetium (71)	Lu-171	2.48E-06	2.96E-06	7.63E-01	3.08E+01	1.36E+09	2.11E+07	4.88E+02	5.88E+01
Lutetium (71)	Lu-172	4.81E-06	5.18E-06	2.05E+00	3.78E+01	1.36E+09	2.11E+07	3.12E+02	4.07E+01
Lutetium (71)	Lu-173	9.62E-07	8.14E-06	1.35E-01	5.06E-01	1.36E+09	2.11E+07	3.06E+01	9.74E-01
Lutetium (71)	Lu-174	9.99E-07	1.55E-05	1.31E-01	2.09E-01	1.36E+09	2.11E+07	1.83E+01	4.47E-01
Lutetium (71)	Lu-174m	1.96E-06	1.37E-05	6.22E-02	1.78E+00	1.36E+09	2.11E+07	2.76E+01	9.70E-01
Lutetium (71)	Lu-176	6.66E-06	2.59E-04	5.33E-01	1.93E-11	1.36E+09	2.11E+07	1.27E+00	2.43E-02
Lutetium (71)	Lu-176m	6.29E-07	4.07E-07	6.54E-02	1.65E+03	1.36E+09	2.11E+07	1.09E+05	2.10E+04
Lutetium (71)	Lu-177	1.96E-06	4.07E-06	3.75E-02	3.77E+01	1.36E+09	2.11E+07	6.97E+02	5.48E+01
Lutetium (71)	Lu-177m	6.29E-06	4.81E-05	1.09E+00	1.57E+00	1.36E+09	2.11E+07	7.65E+00	2.56E-01
Lutetium (71)	Lu-178	1.74E-07	8.88E-08	2.51E-01	1.28E+04	1.36E+09	2.11E+07	3.11E+06	7.15E+05
Lutetium (71)	Lu-178m	1.41E-07	1.18E-07	1.26E+00	1.60E+04	1.36E+09	2.11E+07	4.65E+06	7.33E+05
Lutetium (71)	Lu-179	7.77E-07	4.07E-07	8.95E-02	1.32E+03	1.36E+09	2.11E+07	7.16E+04	1.62E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Mendelevium (101)	Md-257	4.44E-07	9.25E-05	1.18E-01	1.17E+03	1.36E+09	2.11E+07	4.93E+03	7.98E+01
Mendelevium (101)	Md-258	4.81E-05	2.18E-02	3.87E-03	4.60E+00	1.36E+09	2.11E+07	8.51E-02	1.35E-03
Magnesium (12)	Mg-28	8.14E-06	4.44E-06	1.47E+00	2.90E+02	1.36E+09	2.11E+07	1.50E+03	3.28E+02
Manganese (25)	Mn-51	3.44E-07	1.52E-07	1.25E+00	7.88E+03	1.36E+09	2.11E+07	9.72E+05	2.49E+05
Manganese (25)	Mn-52	6.66E-06	5.18E-06	3.76E+00	4.52E+01	1.36E+09	2.11E+07	2.78E+02	4.67E+01
Manganese (25)	Mn-52m	2.55E-07	1.07E-07	2.75E+00	1.73E+04	1.36E+09	2.11E+07	2.87E+06	7.60E+05
Manganese (25)	Mn-53	1.11E-07	2.00E-07	0.00E+00	1.87E-07	1.36E+09	2.11E+07	3.35E+02	2.93E+01
Manganese (25)	Mn-54	2.63E-06	5.55E-06	9.23E-01	8.09E-01	1.36E+09	2.11E+07	2.01E+01	1.56E+00
Manganese (25)	Mn-56	9.25E-07	4.44E-07	1.89E+00	2.35E+03	1.36E+09	2.11E+07	1.07E+05	2.59E+04
Molybdenum (42)	Mo-101	1.52E-07	9.25E-08	1.53E+00	2.49E+04	1.36E+09	2.11E+07	6.84E+06	1.38E+06
Molybdenum (42)	Mo-90	8.14E-07	1.26E-06	9.08E-01	1.07E+03	1.36E+09	2.11E+07	5.00E+04	4.93E+03
Molybdenum (42)	Mo-93	1.15E-05	2.18E-06	4.53E-03	1.98E-04	1.36E+09	2.11E+07	3.80E+00	1.66E+00
Molybdenum (42)	Mo-93m	4.07E-07	5.92E-07	2.42E+00	8.86E+02	1.36E+09	2.11E+07	8.35E+04	8.63E+03
Molybdenum (42)	Mo-99	2.22E-06	3.29E-06	2.08E-01	9.20E+01	1.36E+09	2.11E+07	1.59E+03	1.61E+02
Nitrogen (7)	N-13			1.20E+00	3.66E+04	1.36E+09	2.11E+07		
Sodium (11)	Na-22	1.18E-05	4.81E-06	2.39E+00	2.66E-01	1.36E+09	2.11E+07	4.09E+00	1.11E+00
Sodium (11)	Na-24	1.59E-06	9.99E-07	4.19E+00	4.05E+02	1.36E+09	2.11E+07	1.06E+04	2.09E+03
Niobium (41)	Nb-88	2.33E-07	9.99E-08	4.69E+00	2.55E+04	1.36E+09	2.11E+07	4.64E+06	1.21E+06
Niobium (41)	Nb-89	9.99E-07	4.07E-07	1.62E+00	2.99E+03	1.36E+09	2.11E+07	1.27E+05	3.44E+04
Niobium (41)	Nb-89m	5.18E-07	2.52E-07	2.26E+00	5.52E+03	1.36E+09	2.11E+07	4.50E+05	1.07E+05
Niobium (41)	Nb-90	4.44E-06	2.33E-06	4.42E+00	4.16E+02	1.36E+09	2.11E+07	3.94E+03	8.88E+02
Niobium (41)	Nb-93m	4.44E-07	1.89E-06	7.96E-04	5.10E-02	1.36E+09	2.11E+07	7.02E+01	3.33E+00
Niobium (41)	Nb-94	6.29E-06	4.07E-05	1.74E+00	3.41E-05	1.36E+09	2.11E+07	4.14E+00	1.52E-01
Niobium (41)	Nb-95	2.15E-06	5.55E-06	8.50E-01	7.20E+00	1.36E+09	2.11E+07	1.16E+02	7.78E+00
Niobium (41)	Nb-95m	2.07E-06	2.92E-06	6.90E-02	7.01E+01	1.36E+09	2.11E+07	1.30E+03	1.38E+02
Niobium (41)	Nb-96	4.07E-06	2.33E-06	2.73E+00	2.60E+02	1.36E+09	2.11E+07	2.67E+03	5.65E+02
Niobium (41)	Nb-97	2.52E-07	1.59E-07	7.88E-01	5.05E+03	1.36E+09	2.11E+07	8.35E+05	1.64E+05
Niobium (41)	Nb-97m			8.11E-01	3.64E+05	1.36E+09	2.11E+07		
Niobium (41)	Nb-98	4.07E-07	2.07E-07	2.77E+00	7.07E+03	1.36E+09	2.11E+07	7.32E+05	1.69E+05
Neodymium (60)	Nd-136	3.66E-07	1.89E-07	3.19E-01	7.19E+03	1.36E+09	2.11E+07	8.26E+05	1.89E+05
Neodymium (60)	Nd-138	2.37E-06	8.51E-07	4.38E-02	1.20E+03	1.36E+09	2.11E+07	2.18E+04	6.41E+03
Neodymium (60)	Nd-139	7.40E-08	3.66E-08	4.75E-01	1.23E+04	1.36E+09	2.11E+07	6.99E+06	1.65E+06
Neodymium (60)	Nd-139m	9.25E-07	5.55E-07	1.73E+00	1.10E+03	1.36E+09	2.11E+07	4.98E+04	1.02E+04
Neodymium (60)	Nd-141	3.07E-08	1.78E-08	7.98E-02	2.44E+03	1.36E+09	2.11E+07	3.32E+06	6.97E+05
Neodymium (60)	Nd-141m			8.54E-01	3.50E+05	1.36E+09	2.11E+07		
Neodymium (60)	Nd-147	4.07E-06	7.77E-06	1.63E-01	2.30E+01	1.36E+09	2.11E+07	2.08E+02	1.75E+01
Neodymium (60)	Nd-149	4.44E-07	3.11E-07	4.74E-01	3.51E+03	1.36E+09	2.11E+07	3.26E+05	5.94E+04
Neodymium (60)	Nd-151	1.11E-07	6.29E-08	1.08E+00	2.93E+04	1.36E+09	2.11E+07	1.10E+07	2.35E+06
Neon (10)	Ne-19			1.28E+00	1.27E+06	1.36E+09	2.11E+07		
Nickel (28)	Ni-56	3.18E-06	3.22E-06	1.89E+00	4.15E+01	1.36E+09	2.11E+07	5.22E+02	7.14E+01
Nickel (28)	Ni-57	3.22E-06	1.85E-06	2.05E+00	1.68E+02	1.36E+09	2.11E+07	2.19E+03	4.61E+02
Nickel (28)	Ni-59	2.33E-07	4.81E-07	0.00E+00	9.24E-06	1.36E+09	2.11E+07	1.56E+02	1.23E+01
Nickel (28)	Ni-63	5.55E-07	1.78E-06	0.00E+00	7.22E-03	1.36E+09	2.11E+07	5.96E+01	3.42E+00
Nickel (28)	Ni-65	6.66E-07	3.15E-07	6.64E-01	2.41E+03	1.36E+09	2.11E+07	1.53E+05	3.72E+04
Nickel (28)	Ni-66	1.11E-05	5.92E-06	3.30E-05	1.11E+02	1.36E+09	2.11E+07	4.21E+02	9.38E+01
Neptunium (93)	Np-232	3.59E-08	1.85E-07	1.32E+00	2.48E+04	1.36E+09	2.11E+07	1.96E+07	8.25E+05
Neptunium (93)	Np-233	8.14E-09	5.92E-09	9.09E-02	1.01E+04	1.36E+09	2.11E+07	5.09E+07	8.99E+06
Neptunium (93)	Np-234	3.00E-06	1.96E-06	1.53E+00	5.75E+01	1.36E+09	2.11E+07	7.96E+02	1.52E+02
Neptunium (93)	Np-235	1.96E-07	1.55E-06	3.34E-03	6.39E-01	1.36E+09	2.11E+07	1.65E+02	5.41E+00
Neptunium (93)	Np-236	6.29E-05	1.18E-02	1.30E-01	6.03E-06	1.36E+09	2.11E+07	3.28E-02	5.34E-04
Neptunium (93)	Np-236m			5.11E-02	2.70E+02	1.36E+09	2.11E+07		
Neptunium (93)	Np-237	4.07E-04	8.51E-02	2.94E-02	3.24E-07	1.36E+09	2.11E+07	4.59E-03	7.43E-05
Neptunium (93)	Np-237+D				3.24E-07	1.36E+09	2.11E+07		
Neptunium (93)	Np-237+E	4.07E-04	8.51E-02	2.46E-01	3.24E-07	1.36E+09	2.11E+07	4.59E-03	7.43E-05
Neptunium (93)	Np-238	3.37E-06	7.77E-06	6.23E-01	1.19E+02	1.36E+09	2.11E+07	1.26E+03	9.16E+01
Neptunium (93)	Np-239	2.96E-06	3.44E-06	1.80E-01	1.07E+02	1.36E+09	2.11E+07	1.43E+03	1.76E+02
Neptunium (93)	Np-240	3.03E-07	3.15E-07	1.45E+00	5.60E+03	1.36E+09	2.11E+07	7.38E+05	9.91E+04
Neptunium (93)	Np-240m			4.52E-01	4.92E+04	1.36E+09	2.11E+07		
Oxygen (8)	O-15			1.25E+00	1.79E+05	1.36E+09	2.11E+07		
Osmium (76)	Os-180	6.29E-08	5.18E-08	6.29E-02	1.66E+04	1.36E+09	2.11E+07	1.07E+07	1.72E+06
Osmium (76)	Os-181	3.29E-07	2.29E-07	1.32E+00	3.47E+03	1.36E+09	2.11E+07	4.35E+05	7.94E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Osmium (76)	Os-182	2.07E-06	1.33E-06	4.74E-01	2.76E+02	1.36E+09	2.11E+07	5.53E+03	1.07E+03
Osmium (76)	Os-185	1.89E-06	4.81E-06	7.95E-01	2.69E+00	1.36E+09	2.11E+07	5.32E+01	3.60E+00
Osmium (76)	Os-189m	6.66E-08	1.85E-08	5.64E-05	1.01E+03	1.36E+09	2.11E+07	6.55E+05	2.29E+05
Osmium (76)	Os-190m			1.76E+00	3.68E+04	1.36E+09	2.11E+07		
Osmium (76)	Os-191	2.11E-06	6.29E-06	7.88E-02	1.64E+01	1.36E+09	2.11E+07	2.61E+02	1.58E+01
Osmium (76)	Os-191m	3.55E-07	5.18E-07	7.47E-03	4.66E+02	1.36E+09	2.11E+07	5.03E+04	5.18E+03
Osmium (76)	Os-193	3.00E-06	1.78E-06	1.12E-01	2.02E+02	1.36E+09	2.11E+07	2.82E+03	5.81E+02
Osmium (76)	Os-194	8.88E-06	7.77E-05	1.11E-03	1.16E-01	1.36E+09	2.11E+07	2.71E+00	8.48E-02
Osmium (76)	Os-194+D	1.37E-05	7.77E-05	2.12E-01	1.16E-01	1.36E+09	2.11E+07	2.12E+00	8.41E-02
Osmium (76)	Os-194+E	1.37E-05	7.77E-05	2.12E-01	1.16E-01	1.36E+09	2.11E+07	2.12E+00	8.41E-02
Phosphorus (15)	P-30			1.32E+00	1.46E+05	1.36E+09	2.11E+07		
Phosphorus (15)	P-32	8.88E-06	1.26E-05	9.94E-02	1.77E+01	1.36E+09	2.11E+07	7.67E+01	8.09E+00
Phosphorus (15)	P-33	8.88E-07	5.55E-06	4.25E-05	9.96E+00	1.36E+09	2.11E+07	2.96E+02	1.11E+01
Protactinium (91)	Pa-227	1.67E-06	2.74E-04	2.11E-02	9.51E+03	1.36E+09	2.11E+07	1.34E+04	2.20E+02
Protactinium (91)	Pa-228	2.89E-06	2.37E-04	1.23E+00	2.76E+02	1.36E+09	2.11E+07	4.27E+02	7.36E+00
Protactinium (91)	Pa-230	3.40E-06	2.26E-03	7.08E-01	1.45E+01	1.36E+09	2.11E+07	2.59E+00	4.07E-02
Protactinium (91)	Pa-231	2.63E-03	5.18E-01	4.41E-02	2.12E-05	1.36E+09	2.11E+07	7.52E-04	1.22E-05
Protactinium (91)	Pa-232	2.66E-06	3.70E-05	1.03E+00	1.93E+02	1.36E+09	2.11E+07	1.28E+03	3.27E+01
Protactinium (91)	Pa-233	3.22E-06	1.22E-05	2.17E-01	9.37E+00	1.36E+09	2.11E+07	9.15E+01	4.68E+00
Protactinium (91)	Pa-234	1.89E-06	1.41E-06	2.10E+00	9.06E+02	1.36E+09	2.11E+07	1.97E+04	3.42E+03
Protactinium (91)	Pa-234m			1.26E-01	3.11E+05	1.36E+09	2.11E+07		
Lead (82)	Pb-195m	1.07E-07	9.25E-08	1.77E+00	2.31E+04	1.36E+09	2.11E+07	8.73E+06	1.35E+06
Lead (82)	Pb-198	3.70E-07	2.44E-07	4.74E-01	2.53E+03	1.36E+09	2.11E+07	2.83E+05	5.39E+04
Lead (82)	Pb-199	2.00E-07	1.33E-07	1.59E+00	4.05E+03	1.36E+09	2.11E+07	8.39E+05	1.58E+05
Lead (82)	Pb-200	1.48E-06	1.22E-06	2.17E-01	2.82E+02	1.36E+09	2.11E+07	7.78E+03	1.25E+03
Lead (82)	Pb-201	5.92E-07	4.07E-07	8.26E-01	6.46E+02	1.36E+09	2.11E+07	4.51E+04	8.32E+03
Lead (82)	Pb-202	3.26E-05	2.33E-05	2.23E-04	2.31E-06	1.36E+09	2.11E+07	1.27E+00	2.26E-01
Lead (82)	Pb-202+D	3.26E-05	2.33E-05		2.31E-06	1.36E+09	2.11E+07	1.27E+00	2.26E-01
Lead (82)	Pb-202+E	3.26E-05	2.33E-05	5.13E-01	2.31E-06	1.36E+09	2.11E+07	1.27E+00	2.26E-01
Lead (82)	Pb-202m	4.81E-07	3.52E-07	2.25E+00	1.68E+03	1.36E+09	2.11E+07	1.44E+05	2.53E+04
Lead (82)	Pb-203	8.88E-07	7.40E-07	3.34E-01	1.17E+02	1.36E+09	2.11E+07	5.35E+03	8.52E+02
Lead (82)	Pb-205	1.04E-06	9.25E-07	2.43E-04	4.85E-08	1.36E+09	2.11E+07	3.91E+01	5.90E+00
Lead (82)	Pb-209	2.11E-07	2.07E-07	3.72E-03	1.87E+03	1.36E+09	2.11E+07	3.55E+05	4.98E+04
Lead (82)	Pb-210	2.55E-03	4.07E-03	2.49E-03	3.11E-02	1.36E+09	2.11E+07	1.51E-02	1.45E-03
Lead (82)	Pb-211	6.66E-07	4.07E-05	1.11E-01	1.01E+04	1.36E+09	2.11E+07	8.79E+04	1.56E+03
Lead (82)	Pb-212	2.22E-05	6.29E-04	1.58E-01	5.71E+02	1.36E+09	2.11E+07	2.79E+02	5.71E+00
Lead (82)	Pb-214	5.18E-07	5.18E-05	2.80E-01	1.36E+04	1.36E+09	2.11E+07	9.80E+04	1.66E+03
Palladium (46)	Pd-100	3.48E-06	2.96E-06	1.24E-01	6.97E+01	1.36E+09	2.11E+07	8.15E+02	1.28E+02
Palladium (46)	Pd-101	3.48E-07	2.18E-07	3.61E-01	7.34E+02	1.36E+09	2.11E+07	8.78E+04	1.73E+04
Palladium (46)	Pd-103	7.03E-07	1.41E-06	8.95E-03	1.49E+01	1.36E+09	2.11E+07	7.74E+02	6.27E+01
Palladium (46)	Pd-107	1.37E-07	3.15E-07	0.00E+00	1.07E-07	1.36E+09	2.11E+07	2.60E+02	1.89E+01
Palladium (46)	Pd-109	2.04E-06	1.26E-06	4.35E-02	4.52E+02	1.36E+09	2.11E+07	9.25E+03	1.85E+03
Promethium (61)	Pm-141	1.33E-07	5.18E-08	9.02E-01	1.74E+04	1.36E+09	2.11E+07	5.58E+06	1.56E+06
Promethium (61)	Pm-142			1.12E+00	5.40E+05	1.36E+09	2.11E+07		
Promethium (61)	Pm-143	8.51E-07	5.55E-06	3.47E-01	9.55E-01	1.36E+09	2.11E+07	4.74E+01	1.73E+00
Promethium (61)	Pm-144	3.59E-06	3.03E-05	1.74E+00	6.97E-01	1.36E+09	2.11E+07	8.95E+00	2.85E-01
Promethium (61)	Pm-145	4.07E-07	1.33E-05	3.05E-02	3.92E-02	1.36E+09	2.11E+07	2.44E+01	4.82E-01
Promethium (61)	Pm-146	3.33E-06	7.77E-05	8.39E-01	1.25E-01	1.36E+09	2.11E+07	4.01E+00	8.61E-02
Promethium (61)	Pm-147	9.62E-07	1.85E-05	3.27E-05	2.64E-01	1.36E+09	2.11E+07	1.70E+01	3.86E-01
Promethium (61)	Pm-148	9.99E-06	7.40E-06	7.13E-01	4.71E+01	1.36E+09	2.11E+07	1.94E+02	3.38E+01
Promethium (61)	Pm-148m	6.29E-06	1.89E-05	2.23E+00	6.12E+00	1.36E+09	2.11E+07	3.27E+01	1.96E+00
Promethium (61)	Pm-149	3.66E-06	2.48E-06	4.71E-02	1.14E+02	1.36E+09	2.11E+07	1.29E+03	2.41E+02
Promethium (61)	Pm-150	9.62E-07	4.44E-07	1.65E+00	2.27E+03	1.36E+09	2.11E+07	9.96E+04	2.47E+04
Promethium (61)	Pm-151	2.70E-06	1.59E-06	3.71E-01	2.14E+02	1.36E+09	2.11E+07	3.31E+03	6.85E+02
Polonium (84)	Po-203	1.70E-07	1.30E-07	1.79E+00	9.92E+03	1.36E+09	2.11E+07	2.39E+06	4.08E+05
Polonium (84)	Po-205	2.15E-07	2.41E-07	1.72E+00	3.37E+03	1.36E+09	2.11E+07	6.22E+05	7.87E+04
Polonium (84)	Po-207	4.07E-07	2.89E-07	1.45E+00	1.04E+03	1.36E+09	2.11E+07	1.05E+05	1.90E+04
Polonium (84)	Po-210	4.44E-03	1.22E-02	9.44E-06	1.83E+00	1.36E+09	2.11E+07	1.68E-02	1.07E-03
Polonium (84)	Po-211			8.66E-03	4.24E+07	1.36E+09	2.11E+07		
Polonium (84)	Po-212			0.00E+00	7.17E+13	1.36E+09	2.11E+07		
Polonium (84)	Po-213			0.00E+00	5.20E+12	1.36E+09	2.11E+07		

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Polonium (84)	Po-214			9.25E-05	1.33E+11	1.36E+09	2.11E+07		
Polonium (84)	Po-215			1.96E-04	1.23E+10	1.36E+09	2.11E+07		
Polonium (84)	Po-216			1.88E-05	1.46E+08	1.36E+09	2.11E+07		
Polonium (84)	Po-218			1.01E-05	1.19E+05	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-136	1.22E-07	4.81E-08	2.38E+00	2.78E+04	1.36E+09	2.11E+07	9.70E+06	2.69E+06
Praseodymium (59)	Pr-137	1.48E-07	7.40E-08	5.80E-01	4.76E+03	1.36E+09	2.11E+07	1.35E+06	3.16E+05
Praseodymium (59)	Pr-138			1.05E+00	2.51E+05	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-138m	4.81E-07	2.66E-07	2.74E+00	2.89E+03	1.36E+09	2.11E+07	2.52E+05	5.46E+04
Praseodymium (59)	Pr-139	1.15E-07	6.66E-08	1.37E-01	1.35E+03	1.36E+09	2.11E+07	4.91E+05	1.03E+05
Praseodymium (59)	Pr-142	4.81E-06	1.92E-06	1.72E-01	3.17E+02	1.36E+09	2.11E+07	2.81E+03	7.70E+02
Praseodymium (59)	Pr-142m	6.29E-08	2.44E-08	0.00E+00	2.49E+04	1.36E+09	2.11E+07	1.69E+07	4.73E+06
Praseodymium (59)	Pr-143	4.44E-06	8.14E-06	2.40E-02	1.87E+01	1.36E+09	2.11E+07	1.56E+02	1.35E+01
Praseodymium (59)	Pr-144	1.85E-07	6.66E-08	1.90E-01	2.11E+04	1.36E+09	2.11E+07	4.87E+06	1.43E+06
Praseodymium (59)	Pr-144m			1.23E-02	5.06E+04	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-145	1.44E-06	5.92E-07	1.09E-01	1.02E+03	1.36E+09	2.11E+07	2.99E+04	8.05E+03
Praseodymium (59)	Pr-147	1.22E-07	6.66E-08	1.04E+00	2.68E+04	1.36E+09	2.11E+07	9.20E+06	2.02E+06
Platinum (78)	Pt-186	3.44E-07	1.22E-07	8.17E-01	3.04E+03	1.36E+09	2.11E+07	3.77E+05	1.12E+05
Platinum (78)	Pt-188	2.81E-06	1.55E-06	2.12E-01	2.48E+01	1.36E+09	2.11E+07	3.70E+02	8.03E+01
Platinum (78)	Pt-189	4.44E-07	1.41E-07	3.49E-01	5.58E+02	1.36E+09	2.11E+07	5.40E+04	1.73E+04
Platinum (78)	Pt-191	1.26E-06	4.07E-07	3.24E-01	9.03E+01	1.36E+09	2.11E+07	3.08E+03	9.75E+02
Platinum (78)	Pt-193	1.15E-07	7.77E-08	1.80E-04	1.39E-02	1.36E+09	2.11E+07	3.63E+02	6.78E+01
Platinum (78)	Pt-193m	1.67E-06	4.44E-07	1.09E-02	5.84E+01	1.36E+09	2.11E+07	1.52E+03	5.43E+02
Platinum (78)	Pt-195m	2.33E-06	6.66E-07	7.22E-02	6.29E+01	1.36E+09	2.11E+07	1.16E+03	3.99E+02
Platinum (78)	Pt-197	1.48E-06	3.15E-07	2.79E-02	3.32E+02	1.36E+09	2.11E+07	9.74E+03	4.00E+03
Platinum (78)	Pt-197m	3.11E-07	8.88E-08	8.50E-02	3.86E+03	1.36E+09	2.11E+07	5.35E+05	1.83E+05
Platinum (78)	Pt-199	1.44E-07	4.44E-08	2.88E-01	1.18E+04	1.36E+09	2.11E+07	3.52E+06	1.15E+06
Platinum (78)	Pt-200	4.44E-06	8.14E-07	6.37E-02	4.86E+02	1.36E+09	2.11E+07	4.77E+03	2.12E+03
Plutonium (94)	Pu-234	5.92E-07	7.77E-05	6.75E-02	6.90E+02	1.36E+09	2.11E+07	3.38E+03	5.61E+01
Plutonium (94)	Pu-235	7.77E-09	5.18E-09	9.34E-02	1.44E+04	1.36E+09	2.11E+07	7.68E+07	1.45E+07
Plutonium (94)	Pu-236	3.22E-04	7.40E-02	8.58E-04	2.43E-01	1.36E+09	2.11E+07	5.97E-03	9.62E-05
Plutonium (94)	Pu-237	3.70E-07	1.30E-06	4.96E-02	5.58E+00	1.36E+09	2.11E+07	4.87E+02	2.63E+01
Plutonium (94)	Pu-238	8.51E-04	1.70E-01	7.31E-04	7.90E-03	1.36E+09	2.11E+07	2.30E-03	3.73E-05
Plutonium (94)	Pu-239	9.25E-04	1.85E-01	3.31E-04	2.88E-05	1.36E+09	2.11E+07	2.11E-03	3.42E-05
Plutonium (94)	Pu-240	9.25E-04	1.85E-01	7.01E-04	1.06E-04	1.36E+09	2.11E+07	2.11E-03	3.42E-05
Plutonium (94)	Pu-241	1.78E-05	3.33E-03	2.01E-06	4.81E-02	1.36E+09	2.11E+07	1.20E-01	1.94E-03
Plutonium (94)	Pu-242	8.88E-04	1.78E-01	5.81E-04	1.84E-06	1.36E+09	2.11E+07	2.20E-03	3.56E-05
Plutonium (94)	Pu-243	3.15E-07	3.07E-07	2.65E-02	1.22E+03	1.36E+09	2.11E+07	1.56E+05	2.20E+04
Plutonium (94)	Pu-244	8.88E-04	1.74E-01	2.36E-02	8.66E-09	1.36E+09	2.11E+07	2.24E-03	3.64E-05
Plutonium (94)	Pu-244+D	8.88E-04	1.74E-01	4.78E-01	8.66E-09	1.36E+09	2.11E+07	2.24E-03	3.64E-05
Plutonium (94)	Pu-244+E	8.88E-04	1.74E-01	4.78E-01	8.66E-09	1.36E+09	2.11E+07	2.24E-03	3.64E-05
Plutonium (94)	Pu-245	2.66E-06	1.48E-06	4.74E-01	5.78E+02	1.36E+09	2.11E+07	9.09E+03	1.97E+03
Plutonium (94)	Pu-246	1.22E-05	2.74E-05	1.44E-01	2.33E+01	1.36E+09	2.11E+07	6.82E+01	5.07E+00
Radium (88)	Ra-222			1.01E-02	5.75E+05	1.36E+09	2.11E+07		
Radium (88)	Ra-223	3.70E-04	2.74E-02	1.41E-01	2.21E+01	1.36E+09	2.11E+07	2.93E-01	5.10E-03
Radium (88)	Ra-223+D	3.70E-04	2.74E-02	4.29E-01	2.21E+01	1.36E+09	2.11E+07	2.93E-01	5.10E-03
Radium (88)	Ra-223+E	3.70E-04	2.74E-02	4.29E-01	2.21E+01	1.36E+09	2.11E+07	2.93E-01	5.10E-03
Radium (88)	Ra-224	2.41E-04	1.11E-02	1.07E-02	6.91E+01	1.36E+09	2.11E+07	2.12E+00	3.93E-02
Radium (88)	Ra-224+D	2.41E-04	1.11E-02	1.68E+00	6.91E+01	1.36E+09	2.11E+07	2.12E+00	3.93E-02
Radium (88)	Ra-224+E	2.41E-04	1.11E-02	1.68E+00	6.91E+01	1.36E+09	2.11E+07	2.12E+00	3.93E-02
Radium (88)	Ra-225	3.66E-04	2.33E-02	1.25E-02	1.71E+01	1.36E+09	2.11E+07	2.61E-01	4.63E-03
Radium (88)	Ra-225+D	4.44E-04	5.18E-02	3.12E-01	1.71E+01	1.36E+09	2.11E+07	1.25E-01	2.08E-03
Radium (88)	Ra-225+E	4.44E-04	5.18E-02	3.12E-01	1.71E+01	1.36E+09	2.11E+07	1.25E-01	2.08E-03
Radium (88)	Ra-226	1.04E-03	1.30E-02	7.13E-03	4.33E-04	1.36E+09	2.11E+07	1.82E-02	4.83E-04
Radium (88)	Ra-226+D	1.04E-03	1.30E-02		4.33E-04	1.36E+09	2.11E+07	1.82E-02	4.83E-04
Radium (88)	Ra-226+E	1.04E-03	1.30E-02	1.97E+00	4.33E-04	1.36E+09	2.11E+07	1.82E-02	4.83E-04
Radium (88)	Ra-227	3.00E-07	1.04E-06	2.12E-01	8.63E+03	1.36E+09	2.11E+07	9.30E+05	5.06E+04
Radium (88)	Ra-227+D				8.63E+03	1.36E+09	2.11E+07		
Radium (88)	Ra-228	2.55E-03	9.62E-03	0.00E+00	1.21E-01	1.36E+09	2.11E+07	1.31E-02	6.73E-04
Radium (88)	Ra-228+D	3.07E-03	1.70E-01	1.10E+00	1.21E-01	1.36E+09	2.11E+07	2.18E-03	3.94E-05
Radium (88)	Ra-228+E	3.07E-03	1.70E-01	2.78E+00	1.21E-01	1.36E+09	2.11E+07	2.18E-03	3.94E-05
Rubidium (37)	Rb-79	1.85E-07	5.92E-08	1.61E+00	1.59E+04	1.36E+09	2.11E+07	3.69E+06	1.18E+06

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-80			1.61E+00	6.43E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-81	2.00E-07	1.26E-07	6.98E-01	1.33E+03	1.36E+09	2.11E+07	2.76E+05	5.44E+04
Rubidium (37)	Rb-81m	3.59E-08	2.59E-08	5.73E-03	1.14E+04	1.36E+09	2.11E+07	1.31E+07	2.32E+06
Rubidium (37)	Rb-82			1.40E+00	2.80E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-82m	4.81E-07	4.07E-07	3.20E+00	9.79E+02	1.36E+09	2.11E+07	8.28E+04	1.30E+04
Rubidium (37)	Rb-83	7.03E-06	2.55E-06	5.55E-01	2.93E+00	1.36E+09	2.11E+07	1.88E+01	5.52E+00
Rubidium (37)	Rb-84	1.04E-05	3.70E-06	1.02E+00	7.72E+00	1.36E+09	2.11E+07	3.19E+01	9.44E+00
Rubidium (37)	Rb-86	1.04E-05	3.44E-06	1.95E-01	1.36E+01	1.36E+09	2.11E+07	5.61E+01	1.74E+01
Rubidium (37)	Rb-87	5.55E-06	1.85E-06	8.52E-05	1.47E-11	1.36E+09	2.11E+07	7.73E+00	2.40E+00
Rubidium (37)	Rb-88	3.33E-07	5.92E-08	8.65E-01	2.05E+04	1.36E+09	2.11E+07	2.68E+06	1.21E+06
Rubidium (37)	Rb-89	1.74E-07	5.18E-08	2.30E+00	2.40E+04	1.36E+09	2.11E+07	5.93E+06	1.98E+06
Rhenium (75)	Re-177	8.14E-08	5.18E-08	6.94E-01	2.60E+04	1.36E+09	2.11E+07	1.33E+07	2.60E+06
Rhenium (75)	Re-178	9.25E-08	5.18E-08	1.34E+00	2.76E+04	1.36E+09	2.11E+07	1.25E+07	2.69E+06
Rhenium (75)	Re-180			1.31E+00	1.50E+05	1.36E+09	2.11E+07		
Rhenium (75)	Re-181	1.55E-06	9.25E-07	8.40E-01	3.04E+02	1.36E+09	2.11E+07	8.15E+03	1.68E+03
Rhenium (75)	Re-182	5.18E-06	4.44E-06	2.02E+00	9.49E+01	1.36E+09	2.11E+07	7.44E+02	1.16E+02
Rhenium (75)	Re-182m	9.99E-07	7.40E-07	1.26E+00	4.78E+02	1.36E+09	2.11E+07	1.97E+04	3.43E+03
Rhenium (75)	Re-184	3.70E-06	7.03E-06	9.77E-01	6.66E+00	1.36E+09	2.11E+07	6.63E+01	5.58E+00
Rhenium (75)	Re-184m	5.55E-06	2.41E-05	4.19E-01	1.53E+00	1.36E+09	2.11E+07	1.06E+01	4.98E-01
Rhenium (75)	Re-186	5.55E-06	4.07E-06	5.16E-02	6.70E+01	1.36E+09	2.11E+07	4.97E+02	8.72E+01
Rhenium (75)	Re-186m	8.14E-06	4.44E-05	1.49E-02	3.47E-06	1.36E+09	2.11E+07	3.42E+00	1.39E-01
Rhenium (75)	Re-186m+D	1.37E-05	4.44E-05		3.47E-06	1.36E+09	2.11E+07	2.40E+00	1.37E-01
Rhenium (75)	Re-186m+E	1.37E-05	4.44E-05	6.65E-02	3.47E-06	1.36E+09	2.11E+07	2.40E+00	1.37E-01
Rhenium (75)	Re-187	1.89E-08	2.33E-08	0.00E+00	1.39E-11	1.36E+09	2.11E+07	2.08E+03	2.43E+02
Rhenium (75)	Re-188	5.18E-06	2.00E-06	1.69E-01	3.58E+02	1.36E+09	2.11E+07	2.94E+03	8.27E+02
Rhenium (75)	Re-188m	1.11E-07	4.81E-08	7.90E-02	1.96E+04	1.36E+09	2.11E+07	7.49E+06	1.94E+06
Rhenium (75)	Re-189	2.89E-06	1.59E-06	9.81E-02	2.50E+02	1.36E+09	2.11E+07	3.63E+03	7.90E+02
Rhodium (45)	Rh-100	2.63E-06	1.26E-06	2.91E+00	2.92E+02	1.36E+09	2.11E+07	4.69E+03	1.13E+03
Rhodium (45)	Rh-101	2.04E-06	8.51E-06	2.80E-01	2.17E-01	1.36E+09	2.11E+07	1.67E+01	8.00E-01
Rhodium (45)	Rh-101m	8.14E-07	7.03E-07	3.30E-01	5.83E+01	1.36E+09	2.11E+07	2.91E+03	4.50E+02
Rhodium (45)	Rh-102	9.62E-06	2.55E-05	2.36E+00	2.39E-01	1.36E+09	2.11E+07	4.03E+00	2.64E-01
Rhodium (45)	Rh-102m	4.44E-06	1.48E-05	5.57E-01	1.22E+00	1.36E+09	2.11E+07	1.27E+01	7.10E-01
Rhodium (45)	Rh-103m	1.41E-08	9.25E-09	1.03E-03	6.49E+03	1.36E+09	2.11E+07	1.91E+07	3.65E+06
Rhodium (45)	Rh-105	1.37E-06	1.18E-06	8.66E-02	1.72E+02	1.36E+09	2.11E+07	5.09E+03	7.88E+02
Rhodium (45)	Rh-106			4.03E-01	7.31E+05	1.36E+09	2.11E+07		
Rhodium (45)	Rh-106m	5.92E-07	4.07E-07	3.21E+00	2.76E+03	1.36E+09	2.11E+07	1.93E+05	3.55E+04
Rhodium (45)	Rh-107	8.88E-08	5.92E-08	3.94E-01	1.68E+04	1.36E+09	2.11E+07	7.83E+06	1.48E+06
Rhodium (45)	Rh-99	1.89E-06	2.85E-06	6.61E-01	1.58E+01	1.36E+09	2.11E+07	3.20E+02	3.21E+01
Rhodium (45)	Rh-99m	2.44E-07	1.44E-07	7.46E-01	1.29E+03	1.36E+09	2.11E+07	2.21E+05	4.56E+04
Radon (86)	Rn-218			8.46E-04	6.24E+08	1.36E+09	2.11E+07		
Radon (86)	Rn-219			6.16E-02	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-219+D			2.89E-01	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-219+E			2.89E-01	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-220			4.31E-04	3.93E+05	1.36E+09	2.11E+07		
Radon (86)	Rn-222			4.46E-04	6.62E+01	1.36E+09	2.11E+07		
Radon (86)	Rn-222+D			1.96E+00	6.62E+01	1.36E+09	2.11E+07		
Radon (86)	Rn-222+E			2.01E+00	6.62E+01	1.36E+09	2.11E+07		
Ruthenium (44)	Ru-103	2.70E-06	8.88E-06	5.24E-01	6.44E+00	1.36E+09	2.11E+07	7.81E+01	4.40E+00
Ruthenium (44)	Ru-105	9.62E-07	6.29E-07	9.13E-01	1.37E+03	1.36E+09	2.11E+07	5.90E+04	1.13E+04
Ruthenium (44)	Ru-105+D	2.33E-06	1.81E-06	9.99E-01	1.37E+03	1.36E+09	2.11E+07	2.40E+04	4.03E+03
Ruthenium (44)	Ru-106	2.59E-05	1.04E-04	0.00E+00	6.87E-01	1.36E+09	2.11E+07	1.65E+00	8.15E-02
Ruthenium (44)	Ru-106+D	2.59E-05	1.04E-04	4.03E-01	6.87E-01	1.36E+09	2.11E+07	1.65E+00	8.15E-02
Ruthenium (44)	Ru-106+E	2.59E-05	1.04E-04	4.03E-01	6.87E-01	1.36E+09	2.11E+07	1.65E+00	8.15E-02
Ruthenium (44)	Ru-94	3.48E-07	1.55E-07	5.84E-01	7.03E+03	1.36E+09	2.11E+07	8.57E+05	2.17E+05
Ruthenium (44)	Ru-97	5.55E-07	3.70E-07	2.52E-01	8.72E+01	1.36E+09	2.11E+07	6.51E+03	1.23E+03
Sulfur (16)	S-35	2.85E-06	5.18E-06	1.55E-05	2.89E+00	1.36E+09	2.11E+07	3.99E+01	3.47E+00
Antimony (51)	Sb-115	8.88E-08	4.81E-08	1.04E+00	1.15E+04	1.36E+09	2.11E+07	5.41E+06	1.19E+06
Antimony (51)	Sb-116	9.62E-08	4.81E-08	2.37E+00	2.31E+04	1.36E+09	2.11E+07	1.01E+07	2.36E+06
Antimony (51)	Sb-116m	2.48E-07	1.74E-07	3.42E+00	6.04E+03	1.36E+09	2.11E+07	1.01E+06	1.83E+05
Antimony (51)	Sb-117	6.66E-08	5.92E-08	1.93E-01	2.17E+03	1.36E+09	2.11E+07	1.32E+06	2.00E+05
Antimony (51)	Sb-118m	7.77E-07	4.44E-07	2.79E+00	1.21E+03	1.36E+09	2.11E+07	6.54E+04	1.39E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Antimony (51)	Sb-119	2.96E-07	1.30E-07	1.82E-02	1.59E+02	1.36E+09	2.11E+07	2.28E+04	5.87E+03
Antimony (51)	Sb-120	5.18E-08	2.59E-08	5.45E-01	2.29E+04	1.36E+09	2.11E+07	1.87E+07	4.36E+06
Antimony (51)	Sb-120m	4.44E-06	3.70E-06	2.66E+00	4.39E+01	1.36E+09	2.11E+07	4.03E+02	6.41E+01
Antimony (51)	Sb-122	6.29E-06	3.70E-06	5.66E-01	9.37E+01	1.36E+09	2.11E+07	6.22E+02	1.29E+02
Antimony (51)	Sb-124	9.25E-06	2.37E-05	1.98E+00	4.20E+00	1.36E+09	2.11E+07	1.60E+01	1.08E+00
Antimony (51)	Sb-124m			4.01E-01	2.35E+05	1.36E+09	2.11E+07		
Antimony (51)	Sb-124n	2.96E-08	2.00E-08	5.92E-05	1.80E+04	1.36E+09	2.11E+07	2.52E+07	4.72E+06
Antimony (51)	Sb-125	4.07E-06	1.78E-05	4.77E-01	2.50E-01	1.36E+09	2.11E+07	8.36E+00	3.90E-01
Antimony (51)	Sb-126	8.88E-06	1.04E-05	3.17E+00	2.04E+01	1.36E+09	2.11E+07	9.06E+01	1.11E+01
Antimony (51)	Sb-126m	1.33E-07	7.03E-08	1.81E+00	1.92E+04	1.36E+09	2.11E+07	6.05E+06	1.36E+06
Antimony (51)	Sb-127	6.29E-06	6.29E-06	7.89E-01	6.57E+01	1.36E+09	2.11E+07	4.19E+02	5.78E+01
Antimony (51)	Sb-128	2.81E-06	1.48E-06	3.48E+00	6.74E+02	1.36E+09	2.11E+07	1.01E+04	2.27E+03
Antimony (51)	Sb-128m	1.22E-07	5.18E-08	2.32E+00	3.50E+04	1.36E+09	2.11E+07	1.22E+07	3.20E+06
Antimony (51)	Sb-129	1.55E-06	8.51E-07	1.60E+00	1.41E+03	1.36E+09	2.11E+07	3.79E+04	8.29E+03
Antimony (51)	Sb-130	3.37E-07	1.89E-07	3.66E+00	9.11E+03	1.36E+09	2.11E+07	1.13E+06	2.43E+05
Antimony (51)	Sb-131	3.70E-07	1.63E-07	2.07E+00	1.58E+04	1.36E+09	2.11E+07	1.82E+06	4.65E+05
Scandium (21)	Sc-43	7.03E-07	4.07E-07	1.25E+00	1.56E+03	1.36E+09	2.11E+07	9.28E+04	1.95E+04
Scandium (21)	Sc-44	1.30E-06	6.66E-07	2.43E+00	1.55E+03	1.36E+09	2.11E+07	5.02E+04	1.15E+04
Scandium (21)	Sc-44m	8.88E-06	5.18E-06	3.06E-01	1.04E+02	1.36E+09	2.11E+07	4.88E+02	1.02E+02
Scandium (21)	Sc-46	5.55E-06	2.52E-05	2.19E+00	3.02E+00	1.36E+09	2.11E+07	1.70E+01	7.74E-01
Scandium (21)	Sc-47	2.00E-06	2.70E-06	1.16E-01	7.55E+01	1.36E+09	2.11E+07	1.46E+03	1.60E+02
Scandium (21)	Sc-48	6.29E-06	4.07E-06	3.63E+00	1.39E+02	1.36E+09	2.11E+07	9.17E+02	1.77E+02
Scandium (21)	Sc-49	3.03E-07	1.48E-07	1.19E-01	6.35E+03	1.36E+09	2.11E+07	8.83E+05	2.10E+05
Selenium (34)	Se-70	4.44E-07	1.55E-07	1.16E+00	8.88E+03	1.36E+09	2.11E+07	8.57E+05	2.57E+05
Selenium (34)	Se-73	7.77E-07	2.96E-07	1.25E+00	8.49E+02	1.36E+09	2.11E+07	4.66E+04	1.32E+04
Selenium (34)	Se-73m	1.04E-07	3.40E-08	2.94E-01	9.34E+03	1.36E+09	2.11E+07	3.87E+06	1.21E+06
Selenium (34)	Se-75	9.62E-06	3.70E-06	4.21E-01	2.11E+00	1.36E+09	2.11E+07	1.07E+01	3.00E+00
Selenium (34)	Se-77m			9.07E-02	1.25E+06	1.36E+09	2.11E+07		
Selenium (34)	Se-79	1.07E-05	4.07E-06	1.91E-05	1.07E-05	1.36E+09	2.11E+07	3.98E+00	1.13E+00
Selenium (34)	Se-81	9.99E-08	2.96E-08	9.50E-02	1.97E+04	1.36E+09	2.11E+07	8.49E+06	2.84E+06
Selenium (34)	Se-81m	1.96E-07	5.92E-08	1.47E-02	6.36E+03	1.36E+09	2.11E+07	1.40E+06	4.62E+05
Selenium (34)	Se-83	1.74E-07	6.66E-08	2.67E+00	1.62E+04	1.36E+09	2.11E+07	3.97E+06	1.12E+06
Silicon (14)	Si-31	5.92E-07	2.74E-07	8.33E-02	2.32E+03	1.36E+09	2.11E+07	1.66E+05	4.09E+04
Silicon (14)	Si-32	2.07E-06	6.29E-05	2.92E-05	1.54E-03	1.36E+09	2.11E+07	4.98E+00	1.00E-01
Silicon (14)	Si-32+D	1.11E-05	7.40E-05		1.54E-03	1.36E+09	2.11E+07	2.32E+00	8.38E-02
Silicon (14)	Si-32+E	1.11E-05	7.40E-05	9.94E-02	1.54E-03	1.36E+09	2.11E+07	2.32E+00	8.38E-02
Samarium (62)	Sm-141	1.44E-07	5.55E-08	1.62E+00	3.57E+04	1.36E+09	2.11E+07	1.06E+07	2.97E+06
Samarium (62)	Sm-141m	2.41E-07	1.18E-07	2.21E+00	1.61E+04	1.36E+09	2.11E+07	2.83E+06	6.68E+05
Samarium (62)	Sm-142	7.03E-07	2.63E-07	1.04E-01	5.02E+03	1.36E+09	2.11E+07	3.05E+05	8.76E+04
Samarium (62)	Sm-145	7.77E-07	5.92E-06	6.49E-02	7.44E-01	1.36E+09	2.11E+07	4.43E+01	1.49E+00
Samarium (62)	Sm-146	2.00E-04	4.07E-02	0.00E+00	6.73E-09	1.36E+09	2.11E+07	9.59E-03	1.55E-04
Samarium (62)	Sm-147	1.81E-04	3.55E-02	0.00E+00	6.54E-12	1.36E+09	2.11E+07	1.10E-02	1.78E-04
Samarium (62)	Sm-151	3.63E-07	1.48E-05	4.13E-06	7.70E-03	1.36E+09	2.11E+07	2.26E+01	4.28E-01
Samarium (62)	Sm-153	2.74E-06	2.33E-06	7.12E-02	1.30E+02	1.36E+09	2.11E+07	1.93E+03	3.02E+02
Samarium (62)	Sm-155	1.07E-07	6.29E-08	1.82E-01	1.65E+04	1.36E+09	2.11E+07	6.42E+06	1.33E+06
Samarium (62)	Sm-156	9.25E-07	8.14E-07	1.31E-01	6.46E+02	1.36E+09	2.11E+07	2.83E+04	4.32E+03
Tin (50)	Sn-110	1.30E-06	5.92E-07	3.23E-01	1.52E+03	1.36E+09	2.11E+07	4.96E+04	1.24E+04
Tin (50)	Sn-111	8.51E-08	4.81E-08	5.85E-01	1.03E+04	1.36E+09	2.11E+07	5.08E+06	1.08E+06
Tin (50)	Sn-113	2.70E-06	9.99E-06	1.90E-02	2.20E+00	1.36E+09	2.11E+07	2.90E+01	1.51E+00
Tin (50)	Sn-117m	2.63E-06	8.88E-06	1.63E-01	1.86E+01	1.36E+09	2.11E+07	2.30E+02	1.27E+01
Tin (50)	Sn-119m	1.26E-06	8.14E-06	8.72E-03	8.63E-01	1.36E+09	2.11E+07	3.09E+01	1.14E+00
Tin (50)	Sn-121	8.51E-07	8.51E-07	1.03E-04	2.24E+02	1.36E+09	2.11E+07	1.06E+04	1.46E+03
Tin (50)	Sn-121m	1.41E-06	1.67E-05	4.20E-03	1.26E-02	1.36E+09	2.11E+07	1.39E+01	3.78E-01
Tin (50)	Sn-121m+D	2.07E-06	1.67E-05	4.28E-03	1.26E-02	1.36E+09	2.11E+07	1.15E+01	3.76E-01
Tin (50)	Sn-121m+E	2.07E-06	1.67E-05	4.28E-03	1.26E-02	1.36E+09	2.11E+07	1.15E+01	3.76E-01
Tin (50)	Sn-123	7.77E-06	3.00E-05	7.59E-02	1.96E+00	1.36E+09	2.11E+07	9.18E+00	4.64E-01
Tin (50)	Sn-123m	1.41E-07	9.99E-08	2.02E-01	9.09E+03	1.36E+09	2.11E+07	2.67E+06	4.79E+05
Tin (50)	Sn-125	1.15E-05	1.15E-05	4.46E-01	2.62E+01	1.36E+09	2.11E+07	9.17E+01	1.27E+01
Tin (50)	Sn-126	1.74E-05	1.04E-04	5.62E-02	6.93E-06	1.36E+09	2.11E+07	1.55E+00	5.96E-02
Tin (50)	Sn-126+D	1.74E-05	1.04E-04	1.87E+00	6.93E-06	1.36E+09	2.11E+07	1.55E+00	5.96E-02
Tin (50)	Sn-126+E	1.74E-05	1.04E-04	2.31E+00	6.93E-06	1.36E+09	2.11E+07	1.55E+00	5.96E-02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Tin (50)	Sn-127	7.40E-07	4.81E-07	2.10E+00	2.89E+03	1.36E+09	2.11E+07	1.62E+05	3.12E+04
Tin (50)	Sn-128	5.55E-07	3.40E-07	7.29E-01	6.16E+03	1.36E+09	2.11E+07	4.63E+05	9.30E+04
Strontium (38)	Sr-80	1.26E-06	4.81E-07	1.87E-03	3.64E+03	1.36E+09	2.11E+07	1.24E+05	3.49E+04
Strontium (38)	Sr-81	2.85E-07	1.30E-07	1.67E+00	1.43E+04	1.36E+09	2.11E+07	2.12E+06	5.31E+05
Strontium (38)	Sr-82	2.26E-05	3.29E-05	1.83E-03	1.01E+01	1.36E+09	2.11E+07	1.72E+01	1.77E+00
Strontium (38)	Sr-82+D	2.26E-05	3.29E-05	1.40E+00	1.01E+01	1.36E+09	2.11E+07	1.72E+01	1.77E+00
Strontium (38)	Sr-82+E	2.26E-05	3.29E-05	1.40E+00	1.01E+01	1.36E+09	2.11E+07	1.72E+01	1.77E+00
Strontium (38)	Sr-83	1.81E-06	1.15E-06	8.88E-01	1.87E+02	1.36E+09	2.11E+07	4.30E+03	8.44E+02
Strontium (38)	Sr-85	2.07E-06	2.37E-06	5.65E-01	3.90E+00	1.36E+09	2.11E+07	7.59E+01	9.46E+00
Strontium (38)	Sr-85m	2.26E-08	1.52E-08	2.36E-01	5.24E+03	1.36E+09	2.11E+07	9.62E+06	1.80E+06
Strontium (38)	Sr-87m	1.11E-07	7.40E-08	3.55E-01	2.16E+03	1.36E+09	2.11E+07	8.08E+05	1.52E+05
Strontium (38)	Sr-89	9.62E-06	2.26E-05	8.01E-02	5.01E+00	1.36E+09	2.11E+07	1.86E+01	1.33E+00
Strontium (38)	Sr-90	1.04E-04	1.33E-04	1.91E-03	2.38E-02	1.36E+09	2.11E+07	3.81E-01	4.33E-02
Strontium (38)	Sr-90+D	1.04E-04	1.33E-04	1.31E-01	2.38E-02	1.36E+09	2.11E+07	3.81E-01	4.33E-02
Strontium (38)	Sr-90+E	1.04E-04	1.33E-04	1.31E-01	2.38E-02	1.36E+09	2.11E+07	3.81E-01	4.33E-02
Strontium (38)	Sr-91	2.41E-06	1.37E-06	8.48E-01	6.39E+02	1.36E+09	2.11E+07	1.11E+04	2.36E+03
Strontium (38)	Sr-92	1.59E-06	7.77E-07	1.44E+00	2.24E+03	1.36E+09	2.11E+07	5.94E+04	1.41E+04
Tantalum (73)	Ta-172	1.96E-07	1.22E-07	1.74E+00	9.90E+03	1.36E+09	2.11E+07	2.10E+06	4.17E+05
Tantalum (73)	Ta-173	7.03E-07	4.07E-07	6.71E-01	1.66E+03	1.36E+09	2.11E+07	9.89E+04	2.08E+04
Tantalum (73)	Ta-174	2.11E-07	1.52E-07	7.18E-01	5.06E+03	1.36E+09	2.11E+07	9.89E+05	1.76E+05
Tantalum (73)	Ta-175	7.77E-07	4.44E-07	9.91E-01	5.78E+02	1.36E+09	2.11E+07	3.11E+04	6.60E+03
Tantalum (73)	Ta-176	1.15E-06	7.03E-07	2.25E+00	7.51E+02	1.36E+09	2.11E+07	2.73E+04	5.49E+03
Tantalum (73)	Ta-177	4.07E-07	3.55E-07	6.85E-02	1.07E+02	1.36E+09	2.11E+07	1.07E+04	1.64E+03
Tantalum (73)	Ta-178			1.12E-01	3.91E+04	1.36E+09	2.11E+07		
Tantalum (73)	Ta-178m	2.66E-07	2.41E-07	1.11E+00	2.76E+03	1.36E+09	2.11E+07	4.19E+05	6.27E+04
Tantalum (73)	Ta-179	2.41E-07	8.14E-07	3.21E-02	3.80E-01	1.36E+09	2.11E+07	1.62E+02	8.97E+00
Tantalum (73)	Ta-180	3.11E-06	2.37E-05	6.05E-01	6.93E-14	1.36E+09	2.11E+07	7.82E+00	2.62E-01
Tantalum (73)	Ta-180m	2.00E-07	1.63E-07	4.94E-02	7.49E+02	1.36E+09	2.11E+07	1.53E+05	2.48E+04
Tantalum (73)	Ta-182	5.55E-06	2.81E-05	1.40E+00	2.20E+00	1.36E+09	2.11E+07	1.28E+01	5.41E-01
Tantalum (73)	Ta-182m	4.44E-08	7.40E-08	2.63E-01	2.30E+04	1.36E+09	2.11E+07	1.95E+07	1.81E+06
Tantalum (73)	Ta-183	4.81E-06	7.03E-06	3.13E-01	4.96E+01	1.36E+09	2.11E+07	3.95E+02	4.07E+01
Tantalum (73)	Ta-184	2.52E-06	1.52E-06	1.81E+00	6.98E+02	1.36E+09	2.11E+07	1.16E+04	2.35E+03
Tantalum (73)	Ta-185	2.52E-07	1.67E-07	2.92E-01	7.43E+03	1.36E+09	2.11E+07	1.22E+06	2.32E+05
Tantalum (73)	Ta-186	1.22E-07	6.29E-08	1.84E+00	3.47E+04	1.36E+09	2.11E+07	1.20E+07	2.73E+06
Terbium (65)	Tb-147	5.92E-07	2.81E-07	1.81E+00	3.68E+03	1.36E+09	2.11E+07	2.63E+05	6.37E+04
Terbium (65)	Tb-149	9.25E-07	1.81E-05	1.75E+00	1.46E+03	1.36E+09	2.11E+07	2.24E+04	5.07E+02
Terbium (65)	Tb-150	9.25E-07	4.07E-07	1.89E+00	1.86E+03	1.36E+09	2.11E+07	8.51E+04	2.18E+04
Terbium (65)	Tb-151	1.26E-06	8.51E-07	9.78E-01	3.45E+02	1.36E+09	2.11E+07	1.13E+04	2.12E+03
Terbium (65)	Tb-153	9.25E-07	7.03E-07	2.44E-01	1.08E+02	1.36E+09	2.11E+07	4.80E+03	8.19E+02
Terbium (65)	Tb-154	2.41E-06	1.33E-06	2.43E+00	2.84E+02	1.36E+09	2.11E+07	4.94E+03	1.07E+03
Terbium (65)	Tb-155	7.77E-07	8.14E-07	1.46E-01	4.75E+01	1.36E+09	2.11E+07	2.44E+03	3.25E+02
Terbium (65)	Tb-156	4.44E-06	4.44E-06	1.97E+00	4.74E+01	1.36E+09	2.11E+07	4.28E+02	5.91E+01
Terbium (65)	Tb-156m	6.29E-07	7.77E-07	2.58E-02	2.49E+02	1.36E+09	2.11E+07	1.55E+04	1.82E+03
Terbium (65)	Tb-156n	3.00E-07	3.55E-07	3.68E-03	1.21E+03	1.36E+09	2.11E+07	1.59E+05	1.93E+04
Terbium (65)	Tb-157	1.26E-07	4.44E-06	2.57E-03	4.62E-03	1.36E+09	2.11E+07	7.31E+01	1.42E+00
Terbium (65)	Tb-158	4.07E-06	1.70E-04	8.74E-01	4.62E-03	1.36E+09	2.11E+07	1.97E+00	3.71E-02
Terbium (65)	Tb-160	5.92E-06	2.59E-05	1.24E+00	3.50E+00	1.36E+09	2.11E+07	1.83E+01	8.54E-01
Terbium (65)	Tb-161	2.66E-06	4.81E-06	3.44E-02	3.66E+01	1.36E+09	2.11E+07	5.10E+02	4.46E+01
Technetium (43)	Tc-101	7.03E-08	4.44E-08	4.26E-01	2.57E+04	1.36E+09	2.11E+07	1.52E+07	2.98E+06
Technetium (43)	Tc-104	2.96E-07	1.04E-07	2.28E+00	2.00E+04	1.36E+09	2.11E+07	2.89E+06	8.69E+05
Technetium (43)	Tc-93	2.04E-07	1.30E-07	1.54E+00	2.21E+03	1.36E+09	2.11E+07	4.51E+05	8.81E+04
Technetium (43)	Tc-93m	9.25E-08	6.29E-08	7.35E-01	8.37E+03	1.36E+09	2.11E+07	3.75E+06	6.96E+05
Technetium (43)	Tc-94	7.40E-07	4.44E-07	2.95E+00	1.24E+03	1.36E+09	2.11E+07	7.01E+04	1.43E+04
Technetium (43)	Tc-94m	3.70E-07	1.67E-07	2.12E+00	7.00E+03	1.36E+09	2.11E+07	8.02E+05	2.02E+05
Technetium (43)	Tc-95	6.66E-07	3.70E-07	8.75E-01	3.04E+02	1.36E+09	2.11E+07	1.91E+04	4.13E+03
Technetium (43)	Tc-95m	2.07E-06	3.26E-06	7.38E-01	4.15E+00	1.36E+09	2.11E+07	7.72E+01	7.51E+00
Technetium (43)	Tc-96	4.07E-06	2.52E-06	2.77E+00	5.91E+01	1.36E+09	2.11E+07	6.05E+02	1.21E+02
Technetium (43)	Tc-96m	4.44E-08	2.74E-08	5.25E-02	7.07E+03	1.36E+09	2.11E+07	6.63E+06	1.33E+06
Technetium (43)	Tc-97	2.52E-07	8.14E-07	5.43E-03	2.67E-07	1.36E+09	2.11E+07	1.31E+02	7.44E+00
Technetium (43)	Tc-97m	2.04E-06	1.18E-05	5.19E-03	2.91E+00	1.36E+09	2.11E+07	4.11E+01	1.60E+00
Technetium (43)	Tc-98	7.40E-06	3.07E-05	1.58E+00	1.65E-07	1.36E+09	2.11E+07	4.14E+00	1.99E-01

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Technetium (43)	Tc-99	2.37E-06	1.48E-05	7.55E-05	3.25E-06	1.36E+09	2.11E+07	1.12E+01	4.18E-01
Technetium (43)	Tc-99m	8.14E-08	7.03E-08	1.33E-01	1.01E+03	1.36E+09	2.11E+07	5.03E+05	7.79E+04
Tellurium (52)	Te-116	6.29E-07	3.70E-07	7.07E-02	2.44E+03	1.36E+09	2.11E+07	1.62E+05	3.36E+04
Tellurium (52)	Te-121	1.59E-06	1.41E-06	6.38E-01	1.49E+01	1.36E+09	2.11E+07	3.79E+02	5.77E+01
Tellurium (52)	Te-121m	8.51E-06	1.55E-05	2.31E-01	1.64E+00	1.36E+09	2.11E+07	8.87E+00	7.69E-01
Tellurium (52)	Te-123	1.63E-05	7.03E-06	1.66E-02	6.93E-14	1.36E+09	2.11E+07	2.61E+00	6.77E-01
Tellurium (52)	Te-123m	5.18E-06	1.48E-05	1.54E-01	2.11E+00	1.36E+09	2.11E+07	1.57E+01	9.79E-01
Tellurium (52)	Te-125m	3.22E-06	1.26E-05	3.10E-02	4.36E+00	1.36E+09	2.11E+07	4.28E+01	2.14E+00
Tellurium (52)	Te-127	6.29E-07	4.81E-07	1.20E-02	6.49E+02	1.36E+09	2.11E+07	4.23E+04	7.20E+03
Tellurium (52)	Te-127m	8.51E-06	2.74E-05	9.99E-03	2.32E+00	1.36E+09	2.11E+07	9.95E+00	5.69E-01
Tellurium (52)	Te-129	2.33E-07	1.37E-07	1.33E-01	5.23E+03	1.36E+09	2.11E+07	9.38E+05	1.95E+05
Tellurium (52)	Te-129m	1.11E-05	2.44E-05	6.65E-02	7.53E+00	1.36E+09	2.11E+07	2.43E+01	1.83E+00
Tellurium (52)	Te-131	3.22E-07	1.04E-07	5.53E-01	1.46E+04	1.36E+09	2.11E+07	1.94E+06	6.17E+05
Tellurium (52)	Te-131m	7.03E-06	3.48E-06	1.56E+00	2.02E+02	1.36E+09	2.11E+07	1.21E+03	2.86E+02
Tellurium (52)	Te-132	1.41E-05	7.40E-06	2.47E-01	7.76E+01	1.36E+09	2.11E+07	2.32E+02	5.22E+01
Tellurium (52)	Te-133	2.66E-07	7.40E-08	1.12E+00	2.93E+04	1.36E+09	2.11E+07	4.74E+06	1.65E+06
Tellurium (52)	Te-133m	1.04E-06	3.22E-07	2.61E+00	6.57E+03	1.36E+09	2.11E+07	2.73E+05	8.86E+04
Tellurium (52)	Te-134	4.07E-07	2.44E-07	9.90E-01	8.71E+03	1.36E+09	2.11E+07	8.93E+05	1.82E+05
()	Test Isotope					1.36E+09	2.11E+07		
Thorium (90)	Th-226	1.30E-06	2.26E-04	8.46E-03	1.18E+04	1.36E+09	2.11E+07	2.02E+04	3.30E+02
Thorium (90)	Th-227	3.26E-05	3.70E-02	1.14E-01	1.35E+01	1.36E+09	2.11E+07	1.48E-01	2.31E-03
Thorium (90)	Th-228	2.66E-04	1.48E-01	2.49E-03	3.62E-01	1.36E+09	2.11E+07	3.23E-03	5.09E-05
Thorium (90)	Th-229	1.81E-03	2.63E-01	9.21E-02	9.44E-05	1.36E+09	2.11E+07	1.46E-03	2.41E-05
Thorium (90)	Th-229+D	2.26E-03	3.15E-01		9.44E-05	1.36E+09	2.11E+07	1.22E-03	2.01E-05
Thorium (90)	Th-229+E	2.26E-03	3.15E-01	4.04E-01	9.44E-05	1.36E+09	2.11E+07	1.22E-03	2.01E-05
Thorium (90)	Th-230	7.77E-04	5.18E-02	7.43E-04	9.00E-06	1.36E+09	2.11E+07	6.92E-03	1.22E-04
Thorium (90)	Th-231	1.26E-06	1.22E-06	1.81E-02	2.38E+02	1.36E+09	2.11E+07	7.60E+03	1.07E+03
Thorium (90)	Th-232	8.51E-04	9.25E-02	5.31E-04	4.93E-11	1.36E+09	2.11E+07	4.07E-03	6.83E-05
Thorium (90)	Th-232+D				4.93E-11	1.36E+09	2.11E+07		
Thorium (90)	Th-234	1.26E-05	2.85E-05	8.74E-03	1.05E+01	1.36E+09	2.11E+07	2.97E+01	2.19E+00
Thorium (90)	Th-234+D	1.26E-05	2.85E-05	1.41E-01	1.05E+01	1.36E+09	2.11E+07	2.97E+01	2.19E+00
Thorium (90)	Th-234+E	1.26E-05	2.85E-05	1.41E-01	1.05E+01	1.36E+09	2.11E+07	2.97E+01	2.19E+00
Titanium (22)	Ti-44	2.15E-05	1.55E-04	1.38E-01	1.47E-02	1.36E+09	2.11E+07	1.17E+00	4.02E-02
Titanium (22)	Ti-44+D	2.15E-05	1.55E-04	2.57E+00	1.47E-02	1.36E+09	2.11E+07	1.17E+00	4.02E-02
Titanium (22)	Ti-44+E	2.15E-05	1.55E-04	2.57E+00	1.47E-02	1.36E+09	2.11E+07	1.17E+00	4.02E-02
Titanium (22)	Ti-45	5.55E-07	3.26E-07	1.01E+00	1.97E+03	1.36E+09	2.11E+07	1.48E+05	3.08E+04
Thallium (81)	Tl-194	3.00E-08	1.63E-08	8.58E-01	1.10E+04	1.36E+09	2.11E+07	1.55E+07	3.40E+06
Thallium (81)	Tl-194m	1.48E-07	7.03E-08	2.60E+00	1.11E+04	1.36E+09	2.11E+07	3.17E+06	7.69E+05
Thallium (81)	Tl-195	9.99E-08	5.55E-08	1.35E+00	5.23E+03	1.36E+09	2.11E+07	2.20E+06	4.75E+05
Thallium (81)	Tl-197	8.51E-08	5.18E-08	4.40E-01	2.14E+03	1.36E+09	2.11E+07	1.05E+06	2.12E+05
Thallium (81)	Tl-198	2.70E-07	2.22E-07	2.12E+00	1.15E+03	1.36E+09	2.11E+07	1.73E+05	2.78E+04
Thallium (81)	Tl-198m	2.00E-07	1.37E-07	1.32E+00	3.25E+03	1.36E+09	2.11E+07	6.72E+05	1.24E+05
Thallium (81)	Tl-199	9.62E-08	7.03E-08	2.65E-01	8.18E+02	1.36E+09	2.11E+07	3.50E+05	6.16E+04
Thallium (81)	Tl-200	7.40E-07	4.81E-07	1.42E+00	2.33E+02	1.36E+09	2.11E+07	1.30E+04	2.51E+03
Thallium (81)	Tl-201	3.52E-07	1.63E-07	9.29E-02	8.31E+01	1.36E+09	2.11E+07	1.00E+04	2.47E+03
Thallium (81)	Tl-202	1.67E-06	7.03E-07	5.13E-01	2.07E+01	1.36E+09	2.11E+07	5.28E+02	1.39E+02
Thallium (81)	Tl-204	4.44E-06	1.44E-06	1.26E-02	1.83E-01	1.36E+09	2.11E+07	1.06E+01	3.34E+00
Thallium (81)	Tl-206			7.08E-02	8.67E+04	1.36E+09	2.11E+07		
Thallium (81)	Tl-207			6.49E-02	7.64E+04	1.36E+09	2.11E+07		
Thallium (81)	Tl-208			3.47E+00	1.19E+05	1.36E+09	2.11E+07		
Thallium (81)	Tl-209			2.24E+00	1.66E+05	1.36E+09	2.11E+07		
Thulium (69)	Tm-162	1.07E-07	5.92E-08	1.90E+00	1.68E+04	1.36E+09	2.11E+07	6.56E+06	1.43E+06
Thulium (69)	Tm-166	1.04E-06	6.29E-07	1.98E+00	7.88E+02	1.36E+09	2.11E+07	3.17E+04	6.42E+03
Thulium (69)	Tm-167	2.07E-06	4.07E-06	1.53E-01	2.74E+01	1.36E+09	2.11E+07	4.84E+02	3.97E+01
Thulium (69)	Tm-170	4.81E-06	2.59E-05	3.08E-02	1.97E+00	1.36E+09	2.11E+07	1.33E+01	5.44E-01
Thulium (69)	Tm-171	4.07E-07	5.18E-06	6.48E-04	3.61E-01	1.36E+09	2.11E+07	5.45E+01	1.44E+00
Thulium (69)	Tm-172	6.29E-06	4.07E-06	5.68E-01	9.55E+01	1.36E+09	2.11E+07	6.30E+02	1.22E+02
Thulium (69)	Tm-173	1.15E-06	6.66E-07	4.53E-01	7.37E+02	1.36E+09	2.11E+07	2.68E+04	5.62E+03
Thulium (69)	Tm-175	9.99E-08	6.66E-08	1.21E+00	2.40E+04	1.36E+09	2.11E+07	9.94E+06	1.88E+06
Uranium (92)	U-230	2.07E-04	4.81E-02	1.81E-03	1.22E+01	1.36E+09	2.11E+07	9.92E-02	1.60E-03
Uranium (92)	U-231	1.04E-06	1.74E-06	7.47E-02	6.02E+01	1.36E+09	2.11E+07	2.18E+03	2.02E+02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Uranium (92)	U-232	1.22E-03	2.89E-02	9.42E-04	9.63E-03	1.36E+09	2.11E+07	1.02E-02	2.19E-04
Uranium (92)	U-233	1.89E-04	1.33E-02	6.99E-04	4.37E-06	1.36E+09	2.11E+07	2.71E-02	4.74E-04
Uranium (92)	U-234	1.81E-04	1.30E-02	6.84E-04	2.83E-06	1.36E+09	2.11E+07	2.79E-02	4.88E-04
Uranium (92)	U-235	1.74E-04	1.15E-02	1.63E-01	9.85E-10	1.36E+09	2.11E+07	3.12E-02	5.50E-04
Uranium (92)	U-235+D			1.82E-01	9.85E-10	1.36E+09	2.11E+07		
Uranium (92)	U-235+E			1.82E-01	9.85E-10	1.36E+09	2.11E+07		
Uranium (92)	U-236	1.74E-04	1.18E-02	5.87E-04	2.96E-08	1.36E+09	2.11E+07	3.04E-02	5.33E-04
Uranium (92)	U-237	2.81E-06	6.29E-06	1.44E-01	3.75E+01	1.36E+09	2.11E+07	4.76E+02	3.54E+01
Uranium (92)	U-238	1.67E-04	1.07E-02	4.94E-04	1.55E-10	1.36E+09	2.11E+07	3.33E-02	5.88E-04
Uranium (92)	U-238+D	1.67E-04	1.07E-02		1.55E-10	1.36E+09	2.11E+07	3.33E-02	5.88E-04
Uranium (92)	U-238+E	1.67E-04	1.07E-02	1.41E-01	1.55E-10	1.36E+09	2.11E+07	3.33E-02	5.88E-04
Uranium (92)	U-239	9.99E-08	8.14E-08	9.63E-02	1.55E+04	1.36E+09	2.11E+07	6.32E+06	1.02E+06
Uranium (92)	U-240	4.07E-06	1.96E-06	3.72E-03	4.31E+02	1.36E+09	2.11E+07	4.47E+03	1.07E+03
Vanadium (23)	V-47	2.33E-07	1.07E-07	1.23E+00	1.12E+04	1.36E+09	2.11E+07	2.03E+06	5.03E+05
Vanadium (23)	V-48	7.40E-06	8.88E-06	3.17E+00	1.56E+01	1.36E+09	2.11E+07	8.27E+01	9.92E+00
Vanadium (23)	V-49	6.66E-08	1.26E-07	0.00E+00	7.67E-01	1.36E+09	2.11E+07	7.92E+02	6.70E+01
Tungsten (74)	W-176	3.70E-07	1.52E-07	1.80E-01	2.64E+03	1.36E+09	2.11E+07	3.03E+05	8.17E+04
Tungsten (74)	W-177	2.15E-07	8.88E-08	9.78E-01	2.70E+03	1.36E+09	2.11E+07	5.35E+05	1.43E+05
Tungsten (74)	W-178	8.14E-07	2.66E-07	1.33E-02	1.17E+01	1.36E+09	2.11E+07	6.15E+02	1.93E+02
Tungsten (74)	W-178+D	8.14E-07	2.66E-07		1.17E+01	1.36E+09	2.11E+07	6.15E+02	1.93E+02
Tungsten (74)	W-178+E	8.14E-07	2.66E-07		1.17E+01	1.36E+09	2.11E+07	6.15E+02	1.93E+02
Tungsten (74)	W-179	1.22E-08	3.40E-09	5.81E-02	9.71E+03	1.36E+09	2.11E+07	3.43E+07	1.20E+07
Tungsten (74)	W-181	2.81E-07	9.99E-08	4.01E-02	2.09E+00	1.36E+09	2.11E+07	3.63E+02	1.08E+02
Tungsten (74)	W-185	1.63E-06	4.44E-07	2.00E-04	3.37E+00	1.36E+09	2.11E+07	9.25E+01	3.27E+01
Tungsten (74)	W-187	2.33E-06	7.03E-07	5.46E-01	2.54E+02	1.36E+09	2.11E+07	4.69E+03	1.55E+03
Tungsten (74)	W-188	7.77E-06	2.11E-06	2.12E-03	3.64E+00	1.36E+09	2.11E+07	2.08E+01	7.36E+00
Xenon (54)	Xe-120			4.68E-01	9.11E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-121			1.97E+00	9.08E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-122			7.04E-02	3.02E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-123			7.04E-01	2.92E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-125			2.88E-01	3.57E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-127			2.99E-01	6.95E+00	1.36E+09	2.11E+07		
Xenon (54)	Xe-129m			4.85E-02	3.16E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-131m			1.87E-02	2.13E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-133			4.61E-02	4.82E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-133m			4.12E-02	1.16E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-135			2.92E-01	6.68E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-135m			4.89E-01	2.38E+04	1.36E+09	2.11E+07		
Xenon (54)	Xe-138			1.25E+00	2.57E+04	1.36E+09	2.11E+07		
Yttrium (39)	Y-86	3.55E-06	1.67E-06	3.89E+00	4.12E+02	1.36E+09	2.11E+07	4.90E+03	1.20E+03
Yttrium (39)	Y-86m	2.07E-07	9.99E-08	2.38E-01	7.59E+03	1.36E+09	2.11E+07	1.55E+06	3.71E+05
Yttrium (39)	Y-87	2.04E-06	1.37E-06	5.03E-01	7.56E+01	1.36E+09	2.11E+07	1.54E+03	2.88E+02
Yttrium (39)	Y-88	4.81E-06	1.52E-05	2.81E+00	2.37E+00	1.36E+09	2.11E+07	1.80E+01	1.04E+00
Yttrium (39)	Y-90	9.99E-06	5.18E-06	1.28E-01	9.49E+01	1.36E+09	2.11E+07	3.99E+02	9.09E+01
Yttrium (39)	Y-90m	6.29E-07	3.52E-07	6.97E-01	1.90E+03	1.36E+09	2.11E+07	1.27E+05	2.73E+04
Yttrium (39)	Y-91	8.88E-06	2.63E-05	8.71E-02	4.32E+00	1.36E+09	2.11E+07	1.66E+01	1.01E+00
Yttrium (39)	Y-91m	4.07E-08	3.70E-08	5.95E-01	7.33E+03	1.36E+09	2.11E+07	7.28E+06	1.08E+06
Yttrium (39)	Y-92	1.81E-06	6.29E-07	4.47E-01	1.71E+03	1.36E+09	2.11E+07	4.05E+04	1.22E+04
Yttrium (39)	Y-93	4.44E-06	1.48E-06	2.45E-01	6.01E+02	1.36E+09	2.11E+07	5.81E+03	1.80E+03
Yttrium (39)	Y-94	3.00E-07	9.99E-08	1.39E+00	1.91E+04	1.36E+09	2.11E+07	2.73E+06	8.46E+05
Yttrium (39)	Y-95	1.70E-07	5.55E-08	1.06E+00	3.40E+04	1.36E+09	2.11E+07	8.58E+06	2.70E+06
Ytterbium (70)	Yb-162	8.51E-08	4.81E-08	1.42E-01	1.93E+04	1.36E+09	2.11E+07	9.48E+06	2.02E+06
Ytterbium (70)	Yb-166	3.52E-06	2.66E-06	8.68E-02	1.07E+02	1.36E+09	2.11E+07	1.25E+03	2.14E+02
Ytterbium (70)	Yb-167	2.48E-08	2.41E-08	2.77E-01	2.08E+04	1.36E+09	2.11E+07	3.37E+07	4.77E+06
Ytterbium (70)	Yb-169	2.63E-06	9.25E-06	3.24E-01	7.90E+00	1.36E+09	2.11E+07	9.66E+01	5.20E+00
Ytterbium (70)	Yb-175	1.63E-06	2.41E-06	4.36E-02	6.04E+01	1.36E+09	2.11E+07	1.42E+03	1.45E+02
Ytterbium (70)	Yb-177	3.26E-07	2.37E-07	2.53E-01	3.20E+03	1.36E+09	2.11E+07	4.04E+05	7.14E+04
Ytterbium (70)	Yb-178	4.44E-07	2.59E-07	4.20E-02	4.92E+03	1.36E+09	2.11E+07	4.63E+05	9.67E+04
Zinc (30)	Zn-62	3.48E-06	1.85E-06	4.84E-01	6.56E+02	1.36E+09	2.11E+07	7.92E+03	1.77E+03
Zinc (30)	Zn-63	2.92E-07	1.30E-07	1.35E+00	9.56E+03	1.36E+09	2.11E+07	1.39E+06	3.53E+05
Zinc (30)	Zn-65	1.44E-05	5.92E-06	6.31E-01	1.04E+00	1.36E+09	2.11E+07	4.74E+00	1.27E+00

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Zinc (30)	Zn-69	1.15E-07	9.62E-08	2.43E-02	6.39E+03	1.36E+09	2.11E+07	2.27E+06	3.59E+05
Zinc (30)	Zn-69m	1.22E-06	8.88E-07	4.64E-01	4.41E+02	1.36E+09	2.11E+07	1.49E+04	2.63E+03
Zinc (30)	Zn-71m	8.88E-07	5.55E-07	1.80E+00	1.55E+03	1.36E+09	2.11E+07	7.26E+04	1.44E+04
Zinc (30)	Zn-72	5.18E-06	4.44E-06	1.56E-01	1.31E+02	1.36E+09	2.11E+07	1.02E+03	1.60E+02
Zirconium (40)	Zr-86	3.18E-06	1.55E-06	2.99E-01	3.68E+02	1.36E+09	2.11E+07	4.88E+03	1.16E+03
Zirconium (40)	Zr-88	1.67E-06	9.62E-06	4.40E-01	3.03E+00	1.36E+09	2.11E+07	5.22E+01	2.05E+00
Zirconium (40)	Zr-89	2.92E-06	1.92E-06	1.28E+00	7.74E+01	1.36E+09	2.11E+07	1.10E+03	2.09E+02
Zirconium (40)	Zr-93	4.07E-06	3.70E-05	0.00E+00	4.53E-07	1.36E+09	2.11E+07	5.49E+00	1.68E-01
Zirconium (40)	Zr-95	3.52E-06	1.78E-05	8.22E-01	3.95E+00	1.36E+09	2.11E+07	3.29E+01	1.40E+00
Zirconium (40)	Zr-97	7.77E-06	3.40E-06	2.92E-01	3.59E+02	1.36E+09	2.11E+07	1.96E+03	5.04E+02

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Actinium (89)	Ac-223+D	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	0.907	1.66E+05	6.66E+06	2.87E+07	1.06E+07	7.15E+06	1.60E+07	1.74E-08
Actinium (89)	Ac-223+E	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	0.907	1.66E+05	6.66E+06	2.87E+07	1.06E+07	7.15E+06	1.60E+07	1.74E-08
Actinium (89)	Ac-224	7.72E-01	2.05E-01	5.50E-01	7.53E-01	2.07E-01	1	2.09E+03	2.97E+04	1.12E+05	4.17E+04	3.04E+04	1.11E+05	6.16E-09
Actinium (89)	Ac-225	5.76E-02	1.64E-02	4.25E-02	5.65E-02	1.72E-02	0.978	2.53E+01	4.91E+03	1.72E+04	6.66E+03	5.01E+03	1.65E+04	8.48E-08
Actinium (89)	Ac-225+D	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	0.963	2.53E+01	2.43E+02	1.13E+03	4.05E+02	2.69E+02	9.63E+02	4.20E-09
Actinium (89)	Ac-225+E	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	0.963	2.53E+01	2.43E+02	1.13E+03	4.05E+02	2.69E+02	9.63E+02	4.20E-09
Actinium (89)	Ac-226	5.67E-01	1.40E-01	3.86E-01	5.48E-01	1.58E-01	1	2.09E+02	4.04E+03	1.64E+04	5.94E+03	4.18E+03	1.45E+04	8.47E-09
Actinium (89)	Ac-227	4.46E-04	1.31E-04	3.36E-04	4.40E-04	1.65E-04	1	3.18E-02	2.50E+04	8.46E+04	3.31E+04	2.53E+04	6.76E+04	3.45E-04
Actinium (89)	Ac-228	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	0.969	9.90E+02	1.98E+03	1.04E+04	3.64E+03	2.29E+03	1.02E+04	8.85E-10
Silver (47)	Ag-102	2.00E+01	3.71E+00	1.07E+01	1.71E+01	3.72E+00	0.833	2.82E+04	1.86E+04	1.00E+05	3.47E+04	2.18E+04	9.97E+04	1.30E-10
Silver (47)	Ag-103	4.18E+00	8.47E-01	2.41E+00	3.73E+00	8.69E-01	0.938	5.54E+03	1.55E+04	7.64E+04	2.69E+04	1.74E+04	7.44E+04	5.58E-10
Silver (47)	Ag-103+D	4.18E+00	8.49E-01	2.41E+00	3.73E+00	8.80E-01	0.938	5.54E+03	1.55E+04	7.63E+04	2.69E+04	1.74E+04	7.36E+04	5.58E-10
Silver (47)	Ag-104	1.56E+01	2.98E+00	8.56E+00	1.36E+01	2.94E+00	0.867	5.26E+03	4.25E+03	2.23E+04	7.77E+03	4.90E+03	2.26E+04	1.63E-10
Silver (47)	Ag-104m	6.88E+00	1.31E+00	3.75E+00	5.93E+00	1.33E+00	0.856	1.09E+04	2.02E+04	1.06E+05	3.71E+04	2.35E+04	1.05E+05	3.75E-10
Silver (47)	Ag-105	2.70E+00	5.73E-01	1.63E+00	2.48E+00	5.72E-01	0.905	6.17E+00	2.77E+01	1.31E+02	4.60E+01	3.02E+01	1.31E+02	9.14E-10
Silver (47)	Ag-106	3.90E+00	8.09E-01	2.29E+00	3.52E+00	8.65E-01	0.916	1.52E+04	4.66E+04	2.25E+05	7.92E+04	5.16E+04	2.10E+05	6.31E-10
Silver (47)	Ag-106m	1.64E+01	3.13E+00	9.01E+00	1.42E+01	3.08E+00	0.881	3.01E+01	2.29E+01	1.19E+02	4.15E+01	2.63E+01	1.21E+02	1.56E-10
Silver (47)	Ag-108	1.14E-01	2.98E-02	7.03E-02	1.04E-01	1.05E-01	0.878	1.54E+05	1.68E+07	6.42E+07	2.73E+07	1.85E+07	1.83E+07	2.29E-08
Silver (47)	Ag-108m	9.01E+00	1.82E+00	5.20E+00	8.08E+00	1.81E+00	0.88	5.46E-03	1.39E+00	6.84E+00	2.40E+00	1.55E+00	6.90E+00	5.32E-08
Silver (47)	Ag-108m+D	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	0.88	5.46E-03	1.38E+00	6.83E+00	2.40E+00	1.55E+00	6.85E+00	5.31E-08
Silver (47)	Ag-108m+E	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	0.88							
Silver (47)	Ag-109m	1.02E-02	4.16E-03	8.60E-03	1.02E-02	8.78E-03	0.995	5.52E+05	5.94E+08	1.46E+09	7.06E+08	5.93E+08	6.92E+08	2.28E-07
Silver (47)	Ag-110	2.37E-01	6.99E-02	1.48E-01	2.14E-01	1.90E-01	0.87	8.88E+05	4.72E+07	1.60E+08	7.53E+07	5.21E+07	5.88E+07	1.13E-08
Silver (47)	Ag-110m	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918	1.01E+00	1.17E+00	6.20E+00	2.15E+00	1.35E+00	6.30E+00	2.47E-10
Silver (47)	Ag-110m+D	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918	1.01E+00	1.17E+00	6.20E+00	2.15E+00	1.35E+00	6.30E+00	2.47E-10
Silver (47)	Ag-110m+E	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918							
Silver (47)	Ag-111	1.40E-01	3.19E-02	8.78E-02	1.31E-01	6.16E-02	0.902	3.40E+01	2.95E+03	1.29E+04	4.69E+03	3.15E+03	6.69E+03	1.87E-08
Silver (47)	Ag-112	4.05E+00	7.70E-01	2.16E+00	3.43E+00	8.71E-01	0.871	1.95E+03	6.04E+03	3.18E+04	1.13E+04	7.13E+03	2.81E+04	6.75E-10
Silver (47)	Ag-115	4.31E+00	7.96E-01	2.26E+00	3.62E+00	8.75E-01	0.878	1.82E+04	5.27E+04	2.85E+05	1.01E+05	6.28E+04	2.60E+05	6.46E-10
Aluminum (13)	Al-26	1.65E+01	2.93E+00	8.47E+00	1.37E+01	2.88E+00	0.845	9.68E-07	7.86E-01	4.43E+00	1.53E+00	9.45E-01	4.50E+00	4.10E-05
Aluminum (13)	Al-28	1.16E+01	1.94E+00	5.61E+00	9.29E+00	2.00E+00	0.814	1.63E+05	1.89E+05	1.13E+06	3.90E+05	2.36E+05	1.10E+06	6.32E-11
Americium (95)	Am-237	1.71E+00	3.95E-01	1.10E+00	1.60E+00	3.94E-01	0.945	4.99E+03	3.38E+04	1.46E+05	5.27E+04	3.61E+04	1.47E+05	3.12E-09
Americium (95)	Am-238	5.02E+00	9.74E-01	2.78E+00	4.35E+00	9.65E-01	0.95	3.72E+03	8.54E+03	4.40E+04	1.54E+04	9.86E+03	4.44E+04	1.06E-09
Americium (95)	Am-239	8.82E-01	2.37E-01	6.32E-01	8.62E-01	2.43E-01	0.999	5.10E+02	6.34E+03	2.36E+04	8.84E+03	6.49E+03	2.30E+04	5.76E-09
Americium (95)	Am-240	5.84E+00	1.13E+00	3.21E+00	5.07E+00	1.12E+00	0.966	1.20E+02	2.32E+02	1.20E+03	4.22E+02	2.67E+02	1.21E+03	9.04E-10
Americium (95)	Am-241	3.71E-02	1.84E-02	3.45E-02	3.71E-02	2.72E-02	0.965	1.60E-03	3.06E+02	6.19E+02	3.29E+02	3.06E+02	4.18E+02	8.92E-05
Americium (95)	Am-242	4.48E-02	1.40E-02	3.51E-02	4.48E-02	1.88E-02	0.998	3.79E+02	9.29E+04	2.98E+05	1.19E+05	9.29E+04	2.21E+05	1.15E-07
Americium (95)	Am-242m	1.44E-03	6.47E-04	1.19E-03	1.43E-03	2.64E-03	0.999	4.56E-03	7.64E+03	1.70E+04	9.25E+03	7.69E+03	4.17E+03	7.30E-04
Americium (95)	Am-242m+D	6.15E-02	1.74E-02	4.44E-02	5.93E-02	2.44E-02	0.998	4.56E-03	1.79E+02	6.31E+02	2.48E+02	1.85E+02	4.51E+02	1.71E-05
Americium (95)	Am-242m+E	6.15E-02	1.75E-02	4.44E-02	5.95E-02	2.50E-02	0.998	4.56E-03	1.79E+02	6.28E+02	2.48E+02	1.85E+02	4.40E+02	1.71E-05
Americium (95)	Am-243	1.24E-01	4.90E-02	1.08E-01	1.24E-01	5.59E-02	0.954	9.39E-05	9.26E+01	2.34E+02	1.06E+02	9.26E+01	2.05E+02	4.65E-04
Americium (95)	Am-243+D	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	0.958	9.39E-05	1.41E+01	5.07E+01	1.95E+01	1.45E+01	4.85E+01	7.06E-05
Americium (95)	Am-243+E	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	0.958	9.39E-05	1.41E+01	5.07E+01	1.95E+01	1.45E+01	4.85E+01	7.06E-05
Americium (95)	Am-244	4.48E+00	8.84E-01	2.52E+00	3.95E+00	8.87E-01	0.877	6.01E+02	1.68E+03	8.49E+03	2.98E+03	1.90E+03	8.46E+03	1.32E-09
Americium (95)	Am-244m	1.07E-02	6.51E-03	8.95E-03	1.05E-02	6.48E-02	0.999	1.40E+04	1.43E+07	2.36E+07	1.72E+07	1.47E+07	2.37E+06	4.84E-07
Americium (95)	Am-245	1.33E-01	3.43E-02	9.21E-02	1.29E-01	4.81E-02	0.926	2.96E+03	2.63E+05	1.02E+06	3.80E+05	2.72E+05	7.28E+05	4.23E-08
Americium (95)	Am-246	3.67E+00	7.61E-01	2.14E+00	3.30E+00	7.94E-01	0.933	9.34E+03	2.98E+04	1.44E+05	5.11E+04	3.32E+04	1.38E+05	1.52E-09
Americium (95)	Am-246m	6.01E+00	1.13E+00	3.25E+00	5.17E+00	1.16E+00	0.979	1.46E+04	2.71E+04	1.44E+05	5.02E+04	3.15E+04	1.40E+05	8.89E-10
Argon (18)	Ar-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.22E+00						
Argon (18)	Ar-39	8.02E-04	2.95E-04	6.29E-04	7.89E-04	2.95E-03	0.927	2.58E-03	1.47E+04	4.01E+04	1.88E+04	1.50E+04	4.01E+03	4.33E-04
Argon (18)	Ar-41	7.93E+00	1.41E+00	4.08E+00	6.62E+00	1.42E+00	0.833	3.32E+03	5.51E+03	3.09E+04	1.07E+04	6.60E+03	3.07E+04	1.32E-10
Arsenic (33)	As-69	5.60E+00	1.19E+00	3.32E+00	5.09E+00	1.30E+00	0.883	2.40E+04	5.31E+04	2.51E+05	8.95E+04	5.84E+04	2.29E+05	2.97E-10
Arsenic (33)	As-69+D	1.06E+01	2.16E+00	6.12E+00	9.49E+00	2.28E+00	0.925	2.40E+04	2.67E+04	1.31E+05	4.64E+04	2.99E+04	1.25E+05	1.49E-10
Arsenic (33)	As-70	2.44E+01	4.55E+00	1.31E+01	2.09E+01	4.55E+00	0.87	6.92E+03	3.57E+03	1.92E+04	6.66E+03	4.17E+03	1.91E+04	7.00E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Arsenic (33)	As-71	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	0.884	9.37E+01	3.89E+02	1.82E+03	6.41E+02	4.23E+02	1.83E+03	5.72E-10
Arsenic (33)	As-71+D	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	0.884	9.37E+01	3.89E+02	1.82E+03	6.41E+02	4.23E+02	1.83E+03	5.72E-10
Arsenic (33)	As-72	1.03E+01	2.03E+00	5.80E+00	9.08E+00	2.11E+00	0.863	2.33E+02	2.87E+02	1.46E+03	5.11E+02	3.26E+02	1.40E+03	1.72E-10
Arsenic (33)	As-73	7.83E-03	4.31E-03	7.52E-03	7.83E-03	6.05E-03	0.994	3.15E+00	4.63E+03	8.42E+03	4.82E+03	4.63E+03	6.00E+03	2.08E-07
Arsenic (33)	As-74	4.21E+00	8.60E-01	2.44E+00	3.79E+00	8.72E-01	0.877	1.42E+01	4.22E+01	2.07E+02	7.28E+01	4.70E+01	2.04E+02	4.25E-10
Arsenic (33)	As-76	2.54E+00	5.13E-01	1.42E+00	2.22E+00	6.12E-01	0.875	2.31E+02	1.14E+03	5.63E+03	2.03E+03	1.30E+03	4.72E+03	7.28E-10
Arsenic (33)	As-77	4.53E-02	1.03E-02	2.87E-02	4.25E-02	1.65E-02	0.9	1.56E+02	4.20E+04	1.86E+05	6.63E+04	4.48E+04	1.16E+05	4.01E-08
Arsenic (33)	As-78	7.63E+00	1.43E+00	4.05E+00	6.49E+00	1.51E+00	0.858	4.02E+03	6.72E+03	3.59E+04	1.27E+04	7.90E+03	3.40E+04	2.53E-10
Astatine (85)	At-207	7.61E+00	1.45E+00	4.14E+00	6.55E+00	1.42E+00	0.934	3.37E+03	5.20E+03	2.73E+04	9.55E+03	6.04E+03	2.78E+04	6.19E-10
Astatine (85)	At-211	1.03E-01	3.60E-02	8.41E-02	1.02E-01	3.87E-02	1	8.42E+02	8.95E+04	2.56E+05	1.10E+05	9.05E+04	2.38E+05	4.35E-08
Astatine (85)	At-211+D	1.29E-01	4.10E-02	9.88E-02	1.25E-01	4.38E-02	0.985	8.42E+02	7.25E+04	2.28E+05	9.46E+04	7.50E+04	2.14E+05	3.53E-08
Astatine (85)	At-211+E	3.82E+00	7.52E-01	2.14E+00	3.32E+00	7.49E-01	0.985	8.42E+02	2.45E+03	1.24E+04	4.36E+03	2.82E+03	1.25E+04	1.19E-09
Astatine (85)	At-215	1.02E-03	2.18E-04	6.21E-04	9.44E-04	2.15E-04	0.894	2.19E+11	2.62E+15	1.23E+16	4.31E+15	2.84E+15	1.25E+16	5.00E-06
Astatine (85)	At-216	3.99E-03	1.41E-03	3.32E-03	3.99E-03	1.51E-03	0.954	7.28E+10	2.10E+14	5.94E+14	2.52E+14	2.10E+14	5.55E+14	1.21E-06
Astatine (85)	At-217	1.65E-03	3.47E-04	9.81E-04	1.50E-03	3.42E-04	0.889	6.77E+08	5.04E+12	2.40E+13	8.50E+12	5.55E+12	2.44E+13	3.14E-06
Astatine (85)	At-218	4.87E-03	2.70E-03	4.66E-03	4.87E-03	4.25E-03	0.995	1.09E+07	2.47E+10	4.45E+10	2.58E+10	2.47E+10	2.83E+10	9.56E-07
Gold (79)	Au-193	5.48E-01	1.57E-01	3.94E-01	5.28E-01	1.66E-01	0.95	3.44E+02	7.23E+03	2.53E+04	1.01E+04	7.51E+03	2.39E+04	7.87E-09
Gold (79)	Au-194	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	1.54E+02	2.86E+02	1.52E+03	5.34E+02	3.36E+02	1.55E+03	7.01E-10
Gold (79)	Au-195	1.81E-01	7.24E-02	1.58E-01	1.81E-01	8.23E-02	0.96	1.38E+00	1.16E+02	2.91E+02	1.34E+02	1.16E+02	2.56E+02	3.18E-08
Gold (79)	Au-195m	9.33E-01	2.18E-01	6.10E-01	8.90E-01	2.15E-01	0.917	7.17E+05	9.18E+06	3.92E+07	1.40E+07	9.62E+06	3.98E+07	4.85E-09
Gold (79)	Au-198	2.16E+00	4.59E-01	1.31E+00	1.98E+00	4.75E-01	0.892	9.38E+01	5.32E+02	2.51E+03	8.81E+02	5.83E+02	2.42E+03	2.18E-09
Gold (79)	Au-198m	2.41E+00	6.12E-01	1.66E+00	2.33E+00	6.10E-01	0.922	1.10E+02	5.43E+02	2.14E+03	7.86E+02	5.60E+02	2.14E+03	1.90E-09
Gold (79)	Au-199	3.54E-01	9.34E-02	2.52E-01	3.47E-01	9.30E-02	0.93	8.06E+01	2.68E+03	1.02E+04	3.77E+03	2.74E+03	1.02E+04	1.28E-08
Gold (79)	Au-200	1.63E+00	3.17E-01	8.90E-01	1.40E+00	3.93E-01	0.897	7.53E+03	5.64E+04	2.90E+05	1.03E+05	6.54E+04	2.34E+05	2.91E-09
Gold (79)	Au-200m	1.13E+01	2.33E+00	6.68E+00	1.03E+01	2.31E+00	0.978	3.25E+02	3.21E+02	1.56E+03	5.44E+02	3.54E+02	1.57E+03	3.83E-10
Gold (79)	Au-201	2.89E-01	6.32E-02	1.73E-01	2.63E-01	1.05E-01	0.902	1.38E+04	5.79E+05	2.65E+06	9.66E+05	6.37E+05	1.59E+06	1.64E-08
Barium (56)	Ba-126	7.37E-01	1.64E-01	4.55E-01	6.83E-01	1.76E-01	0.94	3.77E+03	5.97E+04	2.67E+05	9.66E+04	6.44E+04	2.50E+05	3.87E-09
Barium (56)	Ba-128	2.67E-01	6.60E-02	1.75E-01	2.54E-01	7.91E-02	0.966	1.04E+02	4.42E+03	1.79E+04	6.76E+03	4.65E+03	1.49E+04	1.06E-08
Barium (56)	Ba-131	2.24E+00	4.90E-01	1.37E+00	2.05E+00	5.01E-01	0.905	2.14E+01	1.16E+02	5.29E+02	1.89E+02	1.26E+02	5.18E+02	1.37E-09
Barium (56)	Ba-131m	2.16E-01	6.88E-02	1.68E-01	2.14E-01	7.82E-02	0.954	2.49E+04	1.32E+06	4.16E+06	1.70E+06	1.34E+06	3.66E+06	1.35E-08
Barium (56)	Ba-133	1.82E+00	4.18E-01	1.15E+00	1.70E+00	4.35E-01	0.912	6.45E-02	6.82E+00	2.97E+01	1.08E+01	7.27E+00	2.85E+01	2.73E-08
Barium (56)	Ba-133m	2.50E-01	6.06E-02	1.62E-01	2.37E-01	6.97E-02	0.962	1.56E+02	7.11E+03	2.93E+04	1.09E+04	7.50E+03	2.55E+04	1.18E-08
Barium (56)	Ba-135m	2.16E-01	5.35E-02	1.42E-01	2.07E-01	6.28E-02	0.961	2.12E+02	1.11E+04	4.50E+04	1.70E+04	1.16E+04	3.84E+04	1.38E-08
Barium (56)	Ba-137m	3.38E+00	6.71E-01	1.92E+00	3.00E+00	6.76E-01	0.877	1.43E+05	5.28E+05	2.65E+06	9.28E+05	5.93E+05	2.64E+06	9.83E-10
Barium (56)	Ba-139	2.24E-01	6.68E-02	1.55E-01	2.13E-01	1.70E-01	0.909	4.40E+03	2.37E+05	7.95E+05	3.43E+05	2.50E+05	3.11E+05	1.45E-08
Barium (56)	Ba-140	9.60E-01	2.03E-01	5.73E-01	8.77E-01	2.22E-01	0.888	1.99E+01	2.55E+02	1.20E+03	4.28E+02	2.79E+02	1.10E+03	3.49E-09
Barium (56)	Ba-141	4.76E+00	9.57E-01	2.70E+00	4.20E+00	1.03E+00	0.894	1.99E+04	5.13E+04	2.55E+05	9.03E+04	5.82E+04	2.36E+05	7.05E-10
Barium (56)	Ba-142	6.04E+00	1.16E+00	3.32E+00	5.24E+00	1.18E+00	0.905	3.44E+04	6.88E+04	3.58E+05	1.25E+05	7.93E+04	3.53E+05	5.52E-10
Beryllium (4)	Be-10	1.00E-03	3.66E-04	7.85E-04	9.88E-04	3.98E-03	0.927	4.33E-07	1.18E+04	3.23E+04	1.50E+04	1.20E+04	2.97E+03	5.27E-01
Beryllium (4)	Be-7	2.69E-01	5.60E-02	1.59E-01	2.44E-01	5.51E-02	0.886	4.75E+00	2.20E+02	1.06E+03	3.71E+02	2.42E+02	1.07E+03	6.31E-10
Bismuth (83)	Bi-200	1.33E+01	2.67E+00	7.59E+00	1.18E+01	2.64E+00	0.924	1.00E+04	8.94E+03	4.45E+04	1.56E+04	1.01E+04	4.50E+04	3.47E-10
Bismuth (83)	Bi-201	7.55E+00	1.48E+00	4.20E+00	6.58E+00	1.49E+00	0.867	3.37E+03	5.64E+03	2.88E+04	1.02E+04	6.47E+03	2.85E+04	6.52E-10
Bismuth (83)	Bi-202	1.55E+01	3.00E+00	8.60E+00	1.35E+01	2.96E+00	0.951	3.64E+03	2.70E+03	1.39E+04	4.87E+03	3.10E+03	1.41E+04	2.91E-10
Bismuth (83)	Bi-203	1.44E+01	2.59E+00	7.48E+00	1.20E+01	2.54E+00	0.951	5.16E+02	4.13E+02	2.29E+03	7.95E+02	4.94E+02	2.34E+03	3.15E-10
Bismuth (83)	Bi-205	1.02E+01	1.84E+00	5.28E+00	8.50E+00	1.80E+00	0.962	1.65E+01	1.85E+01	1.02E+02	3.56E+01	2.21E+01	1.05E+02	4.45E-10
Bismuth (83)	Bi-206	1.90E+01	3.62E+00	1.04E+01	1.64E+01	3.57E+00	0.94	4.05E+01	2.48E+01	1.30E+02	4.54E+01	2.88E+01	1.32E+02	2.45E-10
Bismuth (83)	Bi-207	8.82E+00	1.70E+00	4.87E+00	7.67E+00	1.69E+00	0.865	1.82E-02	1.45E+00	7.49E+00	2.62E+00	1.67E+00	7.55E+00	3.19E-08
Bismuth (83)	Bi-210	5.45E-03	3.15E-03	4.53E-03	5.35E-03	4.10E-02	0.927	5.05E+01	1.09E+05	1.89E+05	1.32E+05	1.11E+05	1.46E+04	8.84E-07
Bismuth (83)	Bi-210m	1.27E+00	2.85E-01	8.09E-01	1.20E+00	2.80E-01	0.906	2.31E-07	9.50E+00	4.24E+01	1.49E+01	1.01E+01	4.32E+01	1.68E-02
Bismuth (83)	Bi-210m+D	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	0.906	2.31E-07	9.41E+00	4.13E+01	1.47E+01	9.97E+00	3.44E+01	1.66E-02
Bismuth (83)	Bi-210m+E	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	0.906							
Bismuth (83)	Bi-211	2.37E-01	5.22E-02	1.48E-01	2.22E-01	5.13E-02	0.903	1.70E+05	8.71E+06	3.95E+07	1.40E+07	9.30E+06	4.02E+07	2.10E-08
Bismuth (83)	Bi-212	1.11E+00	2.14E-01	6.02E-01	9.55E-01	2.63E-01	0.991	6.02E+03	5.98E+04	3.10E+05	1.10E+05	6.96E+04	2.53E+05	4.09E-09
Bismuth (83)	Bi-212+D	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	0.896	6.02E+03	8.21E+03	4.92E+04	1.70E+04	1.02E+04	4.88E+04	5.62E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Bismuth (83)	Bi-212+E	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	0.896	6.02E+03	8.21E+03	4.92E+04	1.70E+04	1.02E+04	4.88E+04	5.62E-10
Bismuth (83)	Bi-213	7.16E-01	1.54E-01	4.33E-01	6.55E-01	1.96E-01	1	7.98E+03	1.22E+05	5.66E+05	2.02E+05	1.33E+05	4.46E+05	6.32E-09
Bismuth (83)	Bi-213+D	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	0.968	7.98E+03	9.20E+04	4.44E+05	1.58E+05	1.03E+05	3.63E+05	4.77E-09
Bismuth (83)	Bi-213+E	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	0.968	7.98E+03	9.20E+04	4.44E+05	1.58E+05	1.03E+05	3.63E+05	4.77E-09
Bismuth (83)	Bi-214	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	0.925	1.83E+04	2.32E+04	1.31E+05	4.52E+04	2.79E+04	1.29E+05	5.27E-10
Bismuth (83)	Bi-214+D	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	0.925	1.83E+04	2.32E+04	1.31E+05	4.52E+04	2.79E+04	1.29E+05	5.27E-10
Bismuth (83)	Bi-214+E	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.73E+00	0.925	1.83E+04	2.32E+04	1.30E+05	4.52E+04	2.79E+04	1.25E+05	5.27E-10
Berkelium (97)	Bk-245	9.03E-01	2.37E-01	6.38E-01	8.78E-01	2.40E-01	0.998	5.12E+01	6.22E+02	2.37E+03	8.81E+02	6.40E+02	2.34E+03	5.78E-09
Berkelium (97)	Bk-246	5.32E+00	1.04E+00	2.97E+00	4.64E+00	1.04E+00	0.88	1.38E+02	3.24E+02	1.65E+03	5.80E+02	3.70E+02	1.66E+03	1.12E-09
Berkelium (97)	Bk-247	3.95E-01	1.08E-01	2.83E-01	3.84E-01	1.10E-01	0.928	5.02E-04	2.99E+01	1.09E+02	4.16E+01	3.07E+01	1.07E+02	2.85E-05
Berkelium (97)	Bk-249	3.75E-06	2.31E-06	3.47E-06	3.73E-06	6.23E-06	0.911	7.90E-01	4.64E+06	7.52E+06	5.01E+06	4.66E+06	2.79E+06	2.84E-03
Berkelium (97)	Bk-250	5.24E+00	9.83E-01	2.83E+00	4.51E+00	9.84E-01	0.851	1.88E+03	4.63E+03	2.47E+04	8.55E+03	5.37E+03	2.46E+04	1.19E-09
Bromine (35)	Br-74	2.89E+01	4.83E+00	1.40E+01	2.31E+01	4.73E+00	0.848	1.44E+04	6.43E+03	3.85E+04	1.32E+04	8.04E+03	3.93E+04	6.41E-11
Bromine (35)	Br-74m	2.50E+01	4.48E+00	1.29E+01	2.09E+01	4.46E+00	0.867	8.78E+03	4.44E+03	2.48E+04	8.59E+03	5.31E+03	2.49E+04	7.26E-11
Bromine (35)	Br-75	6.56E+00	1.38E+00	3.92E+00	5.99E+00	1.42E+00	0.884	3.72E+03	7.01E+03	3.34E+04	1.18E+04	7.69E+03	3.23E+04	2.75E-10
Bromine (35)	Br-76	1.61E+01	2.87E+00	8.32E+00	1.34E+01	2.85E+00	0.884	3.75E+02	2.88E+02	1.62E+03	5.58E+02	3.46E+02	1.63E+03	1.13E-10
Bromine (35)	Br-77	1.69E+00	3.54E-01	1.01E+00	1.54E+00	3.49E-01	0.922	1.08E+02	7.64E+02	3.63E+03	1.27E+03	8.36E+02	3.69E+03	1.05E-09
Bromine (35)	Br-80	4.48E-01	9.19E-02	2.59E-01	4.01E-01	1.21E-01	0.888	2.09E+04	5.77E+05	2.81E+06	9.96E+05	6.44E+05	2.13E+06	4.28E-09
Bromine (35)	Br-80m	8.88E-03	6.86E-03	8.86E-03	8.88E-03	1.60E-02	0.995	1.37E+03	1.70E+06	2.20E+06	1.71E+06	1.70E+06	9.45E+05	1.92E-07
Bromine (35)	Br-82	1.54E+01	2.95E+00	8.49E+00	1.34E+01	2.89E+00	0.865	1.72E+02	1.41E+02	7.39E+02	2.57E+02	1.62E+02	7.52E+02	1.30E-10
Bromine (35)	Br-83	4.44E-02	1.01E-02	2.67E-02	4.03E-02	3.34E-02	0.881	2.54E+03	7.11E+05	3.13E+06	1.18E+06	7.84E+05	9.46E+05	4.51E-08
Bromine (35)	Br-84	1.16E+01	1.94E+00	5.58E+00	9.25E+00	1.95E+00	0.849	1.15E+04	1.27E+04	7.62E+04	2.65E+04	1.60E+04	7.58E+04	1.81E-10
Carbon (6)	C-11	5.60E+00	1.16E+00	3.30E+00	5.07E+00	1.18E+00	0.883	1.79E+04	3.96E+04	1.91E+05	6.71E+04	4.37E+04	1.88E+05	4.73E-11
Carbon (6)	C-14	1.10E-05	6.43E-06	1.03E-05	1.10E-05	1.48E-05	0.927	1.21E-04	1.08E+06	1.84E+06	1.15E+06	1.08E+06	7.97E+05	2.42E-01
Calcium (20)	Ca-41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	4.95E-06						
Calcium (20)	Ca-45	5.32E-05	2.48E-05	4.66E-05	5.32E-05	4.40E-05	1	1.55E+00	4.06E+05	8.69E+05	4.62E+05	4.06E+05	4.90E+05	2.28E-05
Calcium (20)	Ca-47	6.51E+00	1.17E+00	3.38E+00	5.46E+00	1.17E+00	0.836	5.58E+01	1.12E+02	6.24E+02	2.17E+02	1.34E+02	6.27E+02	1.84E-10
Calcium (20)	Ca-49	2.16E+01	3.21E+00	9.47E+00	1.62E+01	3.12E+00	0.778	4.18E+04	2.72E+04	1.83E+05	6.21E+04	3.62E+04	1.89E+05	6.19E-11
Cadmium (48)	Cd-104	1.22E+00	2.63E-01	7.27E-01	1.10E+00	2.75E-01	0.932	6.31E+03	6.07E+04	2.82E+05	1.02E+05	6.75E+04	2.69E+05	1.94E-09
Cadmium (48)	Cd-107	4.49E-02	1.32E-02	3.02E-02	4.20E-02	2.72E-02	0.975	9.35E+02	2.34E+05	7.97E+05	3.48E+05	2.50E+05	3.86E+05	5.19E-08
Cadmium (48)	Cd-109	1.22E-02	6.10E-03	1.06E-02	1.22E-02	1.94E-02	0.996	5.45E-01	1.17E+03	2.34E+03	1.35E+03	1.17E+03	7.36E+02	4.54E-07
Cadmium (48)	Cd-113	9.77E-05	4.18E-05	8.30E-05	9.74E-05	6.77E-05	0.927	7.45E-17	8.11E+04	1.90E+05	9.55E+04	8.14E+04	1.17E+05	2.39E+11
Cadmium (48)	Cd-113m	6.01E-04	2.24E-04	4.74E-04	5.93E-04	2.07E-03	0.927	5.10E-02	2.02E+04	5.41E+04	2.56E+04	2.04E+04	5.87E+03	8.68E-05
Cadmium (48)	Cd-115	1.27E+00	2.65E-01	7.52E-01	1.16E+00	2.84E-01	0.886	1.14E+02	1.10E+03	5.30E+03	1.87E+03	1.21E+03	4.95E+03	2.17E-09
Cadmium (48)	Cd-115m	1.47E-01	3.41E-02	8.36E-02	1.28E-01	1.08E-01	0.843	5.67E+00	5.02E+02	2.17E+03	8.85E+02	5.79E+02	6.86E+02	1.98E-08
Cadmium (48)	Cd-117	6.51E+00	1.20E+00	3.47E+00	5.54E+00	1.21E+00	0.902	2.44E+03	4.55E+03	2.46E+04	8.53E+03	5.34E+03	2.44E+04	4.23E-10
Cadmium (48)	Cd-117m	1.28E+01	2.22E+00	6.43E+00	1.05E+01	2.16E+00	0.879	1.81E+03	1.76E+03	1.01E+04	3.50E+03	2.14E+03	1.04E+04	2.21E-10
Cerium (58)	Ce-134	1.26E-02	1.03E-02	1.26E-02	1.26E-02	2.51E-02	0.976	8.43E+01	7.51E+04	9.17E+04	7.54E+04	7.51E+04	3.77E+04	2.32E-07
Cerium (58)	Ce-135	9.74E+00	2.00E+00	5.73E+00	8.80E+00	1.98E+00	0.91	3.45E+02	4.26E+02	2.08E+03	7.25E+02	4.71E+02	2.09E+03	3.24E-10
Cerium (58)	Ce-137	5.84E-02	2.00E-02	3.99E-02	5.43E-02	3.48E-02	0.97	6.75E+02	1.30E+05	3.82E+05	1.91E+05	1.40E+05	2.19E+05	5.14E-08
Cerium (58)	Ce-137m	1.76E-01	4.51E-02	1.15E-01	1.66E-01	5.51E-02	0.944	1.76E+02	1.16E+04	4.54E+04	1.78E+04	1.23E+04	3.72E+04	1.75E-08
Cerium (58)	Ce-139	5.78E-01	1.54E-01	4.08E-01	5.67E-01	1.67E-01	0.949	1.84E+00	4.36E+01	1.64E+02	6.17E+01	4.45E+01	1.51E+02	6.40E-09
Cerium (58)	Ce-141	2.89E-01	7.83E-02	2.09E-01	2.85E-01	8.09E-02	0.938	7.78E+00	3.14E+02	1.16E+03	4.35E+02	3.19E+02	1.12E+03	1.11E-08
Cerium (58)	Ce-143	1.38E+00	3.04E-01	8.39E-01	1.26E+00	3.51E-01	0.904	1.84E+02	1.62E+03	7.33E+03	2.66E+03	1.76E+03	6.34E+03	2.44E-09
Cerium (58)	Ce-144	6.45E-02	1.94E-02	4.87E-02	6.40E-02	2.15E-02	0.935	8.90E-01	2.74E+02	9.12E+02	3.63E+02	2.76E+02	8.24E+02	8.61E-08
Cerium (58)	Ce-144+D	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	0.881	8.90E-01	5.65E+01	2.06E+02	9.32E+01	6.45E+01	8.88E+01	1.78E-08
Cerium (58)	Ce-144+E	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	0.881	8.90E-01	5.65E+01	2.06E+02	9.32E+01	6.45E+01	8.88E+01	1.78E-08
Californium (98)	Cf-244	1.27E-04	1.24E-04	1.27E-04	1.27E-04	9.56E-04	0.999	1.88E+04	1.62E+09	1.66E+09	1.62E+09	1.62E+09	2.15E+08	4.09E-05
Californium (98)	Cf-246	1.45E-04	1.02E-04	1.32E-04	1.45E-04	6.69E-04	0.998	1.70E+02	1.28E+07	1.82E+07	1.42E+07	1.29E+07	2.79E+06	3.60E-05
Californium (98)	Cf-248	8.75E-05	8.52E-05	8.75E-05	8.75E-05	6.51E-04	0.999	7.58E-01	1.79E+05	1.83E+05	1.79E+05	1.79E+05	2.40E+04	1.13E-04
Californium (98)	Cf-249	1.72E+00	3.73E-01	1.06E+00	1.59E+00	3.68E-01	0.962	1.98E-03	6.63E+00	3.05E+01	1.08E+01	7.15E+00	3.10E+01	1.62E-06
Californium (98)	Cf-250	8.30E-05	8.09E-05	8.30E-05	8.30E-05	6.21E-04	0.999	5.30E-02	1.36E+05	1.39E+05	1.36E+05	1.36E+05	1.81E+04	1.24E-03
Californium (98)	Cf-251	4.79E-01	1.28E-01	3.43E-01	4.70E-01	1.32E-01	0.955	7.72E-04	2.39E+01	8.98E+01	3.34E+01	2.44E+01	8.70E+01	1.51E-05
Californium (98)	Cf-252	2.95E+00	5.13E-01	1.49E+00	2.42E+00	4.97E-01	1.69	2.63E-01	2.50E+00	1.44E+01	4.94E+00	3.04E+00	1.48E+01	4.65E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Californium (98)	Cf-253	6.53E-05	3.00E-05	5.67E-05	6.51E-05	6.03E-05	0.998	1.42E+01	2.39E+06	5.19E+06	2.75E+06	2.39E+06	2.58E+06	8.25E-05
Californium (98)	Cf-254	1.08E+02	1.88E+01	5.45E+01	8.86E+01	1.81E+01	1.68	4.18E+00	2.57E-01	1.47E+00	5.08E-01	3.12E-01	1.53E+00	3.03E-11
Chlorine (17)	Cl-36	2.48E-03	9.08E-04	1.81E-03	2.39E-03	1.31E-02	0.883	2.30E-06	5.00E+03	1.37E+04	6.84E+03	5.19E+03	9.49E+02	1.52E-01
Chlorine (17)	Cl-38	9.85E+00	1.64E+00	4.72E+00	7.83E+00	1.67E+00	0.807	9.79E+03	1.35E+04	8.11E+04	2.81E+04	1.70E+04	7.96E+04	1.02E-10
Chlorine (17)	Cl-39	8.82E+00	1.59E+00	4.59E+00	7.39E+00	1.65E+00	0.834	6.55E+03	9.75E+03	5.41E+04	1.87E+04	1.16E+04	5.23E+04	1.13E-10
Curium (96)	Cm-238	2.44E-01	7.37E-02	1.88E-01	2.42E-01	7.66E-02	0.958	2.53E+03	1.18E+05	3.92E+05	1.53E+05	1.19E+05	3.78E+05	2.16E-08
Curium (96)	Cm-240	1.12E-04	1.06E-04	1.12E-04	1.12E-04	8.97E-04	0.999	9.37E+00	9.15E+05	9.66E+05	9.16E+05	9.15E+05	1.14E+05	4.55E-05
Curium (96)	Cm-241	2.44E+00	5.41E-01	1.51E+00	2.26E+00	5.43E-01	0.999	7.71E+00	3.46E+01	1.56E+02	5.58E+01	3.75E+01	1.56E+02	2.10E-09
Curium (96)	Cm-242	1.28E-04	1.02E-04	1.19E-04	1.27E-04	8.19E-04	0.999	1.55E+00	1.68E+05	2.11E+05	1.82E+05	1.70E+05	2.64E+04	5.09E-05
Curium (96)	Cm-243	5.33E-01	1.35E-01	3.69E-01	5.17E-01	1.38E-01	0.949	2.43E-02	2.19E+01	8.63E+01	3.16E+01	2.26E+01	8.48E+01	4.25E-07
Curium (96)	Cm-244	8.93E-05	8.62E-05	8.93E-05	8.93E-05	7.52E-04	0.999	3.83E-02	1.25E+05	1.30E+05	1.25E+05	1.25E+05	1.49E+04	1.55E-03
Curium (96)	Cm-245	3.06E-01	8.99E-02	2.33E-01	3.04E-01	9.39E-02	0.952	8.15E-05	3.76E+01	1.28E+02	4.93E+01	3.78E+01	1.22E+02	2.19E-04
Curium (96)	Cm-246	8.28E-05	7.89E-05	8.26E-05	8.28E-05	6.72E-04	0.999	1.47E-04	1.32E+05	1.39E+05	1.33E+05	1.32E+05	1.63E+04	4.31E-01
Curium (96)	Cm-247	1.65E+00	3.54E-01	1.01E+00	1.53E+00	3.49E-01	0.925	4.44E-08	7.16E+00	3.34E+01	1.17E+01	7.75E+00	3.39E+01	7.73E-02
Curium (96)	Cm-247+D	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	0.925	4.44E-08	6.87E+00	3.13E+01	1.11E+01	7.41E+00	3.15E+01	7.41E-02
Curium (96)	Cm-247+E	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	0.925							
Curium (96)	Cm-248	8.47E+00	1.47E+00	4.27E+00	6.96E+00	1.42E+00	1.68	1.99E-06	7.70E-01	4.42E+00	1.53E+00	9.37E-01	4.58E+00	1.86E-04
Curium (96)	Cm-249	1.07E-01	2.26E-02	6.32E-02	9.70E-02	3.87E-02	0.909	5.68E+03	6.37E+05	3.03E+06	1.08E+06	7.05E+05	1.77E+06	5.42E-08
Curium (96)	Cm-250	6.25E+01	1.09E+01	3.15E+01	5.13E+01	1.05E+01	1.68	7.14E-05	1.04E-01	5.99E-01	2.07E-01	1.27E-01	6.20E-01	7.08E-07
Curium (96)	Cm-250+D	1.63E+00					1.68	7.14E-05	3.99E+00					2.71E-05
Curium (96)	Cm-250+E	6.42E+01	1.12E+01	3.25E+01	5.28E+01	1.08E+01	1.68	7.14E-05	1.02E-01	5.82E-01	2.01E-01	1.23E-01	6.01E-01	6.90E-07
Cobalt (27)	Co-55	1.15E+01	2.24E+00	6.42E+00	1.01E+01	2.25E+00	0.848	3.46E+02	3.88E+02	2.00E+03	6.97E+02	4.43E+02	1.98E+03	1.20E-10
Cobalt (27)	Co-56	2.24E+01	3.88E+00	1.12E+01	1.83E+01	3.77E+00	0.823	3.21E+00	1.99E+00	1.15E+01	3.96E+00	2.43E+00	1.18E+01	6.73E-11
Cobalt (27)	Co-57	4.55E-01	1.28E-01	3.38E-01	4.49E-01	1.26E-01	0.971	9.34E-01	3.81E+01	1.36E+02	5.14E+01	3.86E+01	1.38E+02	4.52E-09
Cobalt (27)	Co-58	5.60E+00	1.09E+00	3.13E+00	4.92E+00	1.08E+00	0.863	3.57E+00	8.34E+00	4.26E+01	1.49E+01	9.47E+00	4.32E+01	2.63E-10
Cobalt (27)	Co-58m	1.78E-06	1.74E-06	1.78E-06	1.78E-06	7.76E-06	0.994	6.63E+02	4.12E+09	4.20E+09	4.10E+09	4.12E+09	9.42E+08	6.98E-04
Cobalt (27)	Co-60	1.54E+01	2.74E+00	7.96E+00	1.29E+01	2.68E+00	0.834	1.31E-01	9.11E-01	5.11E+00	1.76E+00	1.09E+00	5.22E+00	8.06E-10
Cobalt (27)	Co-60m	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.11E-03	0.925	3.48E+04	1.78E+07	8.66E+07	3.24E+07	2.10E+07	8.06E+07	5.96E-08
Cobalt (27)	Co-61	3.17E-01	9.25E-02	2.18E-01	2.93E-01	1.51E-01	0.938	3.68E+03	1.35E+05	4.64E+05	1.97E+05	1.47E+05	2.85E+05	4.36E-09
Cobalt (27)	Co-62m	1.68E+01	2.97E+00	8.58E+00	1.39E+01	3.01E+00	0.828	2.62E+04	2.06E+04	1.17E+05	4.04E+04	2.49E+04	1.15E+05	9.48E-11
Chromium (24)	Cr-48	2.05E+00	4.81E-01	1.34E+00	1.94E+00	4.71E-01	0.913	2.64E+02	1.55E+03	6.59E+03	2.36E+03	1.63E+03	6.73E+03	5.45E-10
Chromium (24)	Cr-49	5.58E+00	1.19E+00	3.36E+00	5.09E+00	1.25E+00	0.892	8.65E+03	1.91E+04	8.91E+04	3.16E+04	2.09E+04	8.51E+04	2.09E-10
Chromium (24)	Cr-51	1.62E-01	3.54E-02	1.01E-01	1.52E-01	3.47E-02	0.903	9.13E+00	6.86E+02	3.12E+03	1.09E+03	7.30E+02	3.19E+03	7.43E-09
Cesium (55)	Cs-125	3.67E+00	7.59E-01	2.14E+00	3.32E+00	7.99E-01	0.878	8.09E+03	2.75E+04	1.33E+05	4.71E+04	3.04E+04	1.26E+05	8.23E-10
Cesium (55)	Cs-126	6.01E+00	1.28E+00	3.58E+00	5.46E+00	1.38E+00	0.887	2.22E+05	4.57E+05	2.14E+06	7.66E+05	5.02E+05	1.99E+06	5.03E-10
Cesium (55)	Cs-127	2.13E+00	4.53E-01	1.28E+00	1.94E+00	4.61E-01	0.898	9.71E+02	5.57E+03	2.61E+04	9.27E+03	6.11E+03	2.57E+04	1.41E-09
Cesium (55)	Cs-128	4.96E+00	1.04E+00	2.93E+00	4.49E+00	1.11E+00	0.885	9.34E+04	2.33E+05	1.11E+06	3.95E+05	2.57E+05	1.04E+06	6.19E-10
Cesium (55)	Cs-129	1.33E+00	2.91E-01	8.11E-01	1.23E+00	3.06E-01	0.898	1.89E+02	1.74E+03	7.94E+03	2.85E+03	1.88E+03	7.55E+03	2.30E-09
Cesium (55)	Cs-130	2.80E+00	5.82E-01	1.64E+00	2.54E+00	6.31E-01	0.89	1.22E+04	5.36E+04	2.58E+05	9.12E+04	5.91E+04	2.37E+05	1.11E-09
Cesium (55)	Cs-131	7.83E-03	7.03E-03	7.83E-03	7.83E-03	2.09E-02	0.983	2.61E+01	3.71E+04	4.14E+04	3.71E+04	3.71E+04	1.39E+04	3.61E-07
Cesium (55)	Cs-132	3.88E+00	7.78E-01	2.22E+00	3.45E+00	7.81E-01	0.871	3.91E+01	1.27E+02	6.31E+02	2.21E+02	1.42E+02	6.29E+02	8.30E-10
Cesium (55)	Cs-134	8.90E+00	1.75E+00	5.02E+00	7.85E+00	1.73E+00	0.865	3.36E-01	1.68E+00	8.51E+00	2.97E+00	1.90E+00	8.63E+00	1.30E-09
Cesium (55)	Cs-134m	6.49E-02	2.05E-02	4.92E-02	6.43E-02	2.63E-02	0.971	2.09E+03	3.64E+05	1.15E+06	4.79E+05	3.67E+05	8.99E+05	4.52E-08
Cesium (55)	Cs-135	3.21E-05	1.62E-05	2.89E-05	3.21E-05	3.14E-05	0.927	3.01E-07	3.68E+05	7.27E+05	4.09E+05	3.68E+05	3.76E+05	3.20E+02
Cesium (55)	Cs-135m	9.19E+00	1.78E+00	5.11E+00	8.04E+00	1.76E+00	0.861	6.87E+03	9.51E+03	4.91E+04	1.71E+04	1.09E+04	4.96E+04	3.62E-10
Cesium (55)	Cs-136	1.25E+01	2.41E+00	6.90E+00	1.09E+01	2.37E+00	0.856	1.93E+01	1.97E+01	1.03E+02	3.58E+01	2.27E+01	1.04E+02	2.70E-10
Cesium (55)	Cs-137	8.34E-04	3.86E-04	6.75E-04	8.21E-04	3.49E-03	0.927	2.31E-02	1.43E+04	3.10E+04	1.77E+04	1.46E+04	3.42E+03	1.65E-04
Cesium (55)	Cs-137+D	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	0.877	2.31E-02	3.96E+00	1.99E+01	6.95E+00	4.46E+00	1.96E+01	4.56E-08
Cesium (55)	Cs-137+E	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	0.877	2.31E-02	3.96E+00	1.99E+01	6.95E+00	4.46E+00	1.96E+01	4.56E-08
Cesium (55)	Cs-138	1.48E+01	2.59E+00	7.50E+00	1.22E+01	2.64E+00	0.885	1.13E+04	9.48E+03	5.40E+04	1.87E+04	1.15E+04	5.31E+04	2.24E-10
Copper (29)	Cu-60	2.39E+01	4.27E+00	1.23E+01	2.00E+01	4.25E+00	0.832	1.57E+04	8.66E+03	4.84E+04	1.67E+04	1.04E+04	4.86E+04	6.42E-11
Copper (29)	Cu-61	4.57E+00	9.38E-01	2.67E+00	4.12E+00	9.58E-01	0.851	1.78E+03	5.02E+03	2.44E+04	8.59E+03	5.56E+03	2.39E+04	3.33E-10
Copper (29)	Cu-62	5.60E+00	1.18E+00	3.30E+00	5.07E+00	1.30E+00	0.882	3.74E+04	8.30E+04	3.93E+05	1.41E+05	9.15E+04	3.58E+05	2.67E-10
Copper (29)	Cu-64	1.04E+00	2.14E-01	6.12E-01	9.44E-01	2.14E-01	0.882	4.78E+02	5.68E+03	2.77E+04	9.70E+03	6.29E+03	2.78E+04	1.48E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Copper (29)	Cu-66	5.58E-01	1.24E-01	3.11E-01	4.81E-01	2.37E-01	0.846	7.14E+04	1.66E+06	7.48E+06	2.97E+06	1.92E+06	3.90E+06	2.97E-09
Copper (29)	Cu-67	4.87E-01	1.24E-01	3.39E-01	4.74E-01	1.23E-01	0.924	9.81E+01	2.39E+03	9.36E+03	3.43E+03	2.46E+03	9.49E+03	3.17E-09
Dysprosium (66)	Dy-155	3.06E+00	6.23E-01	1.75E+00	2.70E+00	6.28E-01	0.916	6.07E+02	2.37E+03	1.17E+04	4.14E+03	2.68E+03	1.16E+04	1.18E-09
Dysprosium (66)	Dy-157	1.67E+00	3.82E-01	1.06E+00	1.57E+00	3.89E-01	0.904	7.49E+02	5.43E+03	2.37E+04	8.57E+03	5.79E+03	2.34E+04	2.21E-09
Dysprosium (66)	Dy-159	4.46E-02	2.82E-02	4.38E-02	4.46E-02	4.52E-02	0.96	1.75E+00	5.42E+02	8.58E+02	5.52E+02	5.42E+02	5.35E+02	9.55E-08
Dysprosium (66)	Dy-165	1.23E-01	3.13E-02	7.76E-02	1.12E-01	8.06E-02	0.94	2.60E+03	2.47E+05	9.67E+05	3.91E+05	2.69E+05	3.76E+05	3.03E-08
Dysprosium (66)	Dy-166	7.93E-02	3.19E-02	6.51E-02	7.76E-02	4.10E-02	0.944	7.44E+01	1.09E+04	2.71E+04	1.33E+04	1.11E+04	2.11E+04	4.71E-08
Erbium (68)	Er-161	5.11E+00	1.00E+00	2.83E+00	4.44E+00	9.98E-01	0.942	1.87E+03	4.26E+03	2.18E+04	7.68E+03	4.91E+03	2.18E+04	7.11E-10
Erbium (68)	Er-165	4.21E-02	2.54E-02	4.10E-02	4.21E-02	3.78E-02	0.957	5.86E+02	1.59E+05	2.64E+05	1.63E+05	1.59E+05	1.77E+05	8.69E-08
Erbium (68)	Er-169	1.20E-04	4.98E-05	1.01E-04	1.20E-04	7.88E-05	0.927	2.72E+01	2.67E+06	6.45E+06	3.17E+06	2.68E+06	4.08E+06	3.22E-05
Erbium (68)	Er-171	1.81E+00	4.18E-01	1.16E+00	1.70E+00	4.49E-01	0.905	8.07E+02	5.40E+03	2.34E+04	8.43E+03	5.74E+03	2.17E+04	2.22E-09
Erbium (68)	Er-172	2.76E+00	5.82E-01	1.64E+00	2.50E+00	5.79E-01	0.928	1.23E+02	5.26E+02	2.50E+03	8.86E+02	5.81E+02	2.51E+03	1.43E-09
Einsteinium (99)	Es-250	2.11E+00	4.27E-01	1.20E+00	1.86E+00	4.26E-01	0.888	2.89E+03	1.69E+04	8.35E+04	2.96E+04	1.92E+04	8.37E+04	2.84E-09
Einsteinium (99)	Es-251	3.26E-01	9.38E-02	2.46E-01	3.25E-01	9.79E-02	0.948	1.84E+02	6.51E+03	2.27E+04	8.63E+03	6.55E+03	2.17E+04	1.72E-08
Einsteinium (99)	Es-253	1.61E-03	4.14E-04	1.04E-03	1.50E-03	7.74E-04	0.995	1.24E+01	8.46E+04	3.28E+05	1.31E+05	9.05E+04	1.76E+05	3.36E-06
Einsteinium (99)	Es-254	1.13E-02	4.16E-03	8.47E-03	1.09E-02	1.14E-02	0.995	9.17E-01	1.49E+03	4.04E+03	1.99E+03	1.54E+03	1.48E+03	7.98E-07
Einsteinium (99)	Es-254+D	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.95E-01	0.853	9.17E-01	3.73E+00	1.99E+01	6.92E+00	4.33E+00	1.97E+01	2.00E-09
Einsteinium (99)	Es-254+E	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.97E-01	0.853	9.17E-01	3.73E+00	1.99E+01	6.92E+00	4.33E+00	1.97E+01	2.00E-09
Einsteinium (99)	Es-254m	2.63E+00	5.24E-01	1.50E+00	2.33E+00	5.34E-01	0.995	1.54E+02	6.46E+02	3.24E+03	1.13E+03	7.29E+02	3.18E+03	2.06E-09
Europium (63)	Eu-145	8.65E+00	1.59E+00	4.55E+00	7.31E+00	1.56E+00	0.875	4.26E+01	6.16E+01	3.36E+02	1.17E+02	7.29E+01	3.41E+02	4.07E-10
Europium (63)	Eu-146	1.45E+01	2.78E+00	7.96E+00	1.26E+01	2.74E+00	0.871	5.49E+01	4.75E+01	2.48E+02	8.66E+01	5.48E+01	2.52E+02	2.45E-10
Europium (63)	Eu-147	2.56E+00	5.30E-01	1.47E+00	2.28E+00	5.39E-01	0.866	1.05E+01	5.22E+01	2.52E+02	9.05E+01	5.86E+01	2.47E+02	1.41E-09
Europium (63)	Eu-148	1.23E+01	2.42E+00	6.92E+00	1.09E+01	2.40E+00	0.914	4.64E+00	4.55E+00	2.32E+01	8.11E+00	5.17E+00	2.34E+01	2.82E-10
Europium (63)	Eu-149	1.83E-01	5.20E-02	1.23E-01	1.73E-01	6.61E-02	0.924	2.72E+00	1.88E+02	6.63E+02	2.81E+02	2.00E+02	5.22E+02	2.00E-08
Europium (63)	Eu-150	8.15E+00	1.66E+00	4.74E+00	7.31E+00	1.66E+00	0.901	2.03E-02	1.51E+00	7.38E+00	2.59E+00	1.68E+00	7.41E+00	2.16E-08
Europium (63)	Eu-150m	2.46E-01	5.24E-02	1.45E-01	2.20E-01	7.91E-02	0.856	4.81E+02	2.50E+04	1.17E+05	4.25E+04	2.80E+04	7.78E+04	1.51E-08
Europium (63)	Eu-152	6.60E+00	1.26E+00	3.60E+00	5.69E+00	1.26E+00	0.919	5.20E-02	1.85E+00	9.70E+00	3.40E+00	2.15E+00	9.70E+00	1.05E-08
Europium (63)	Eu-152m	1.66E+00	3.30E-01	9.23E-01	1.45E+00	3.91E-01	0.91	6.51E+02	4.72E+03	2.37E+04	8.49E+03	5.42E+03	2.00E+04	2.14E-09
Europium (63)	Eu-154	7.25E+00	1.37E+00	3.92E+00	6.23E+00	1.37E+00	0.935	7.88E-02	1.68E+00	8.90E+00	3.11E+00	1.96E+00	8.92E+00	6.37E-09
Europium (63)	Eu-155	1.62E-01	5.63E-02	1.32E-01	1.62E-01	6.24E-02	0.941	1.40E-01	7.72E+01	2.21E+02	9.47E+01	7.72E+01	2.00E+02	1.66E-07
Europium (63)	Eu-156	8.21E+00	1.45E+00	4.20E+00	6.81E+00	1.45E+00	0.897	1.67E+01	2.48E+01	1.40E+02	4.84E+01	2.99E+01	1.40E+02	4.50E-10
Europium (63)	Eu-157	1.22E+00	2.78E-01	7.50E-01	1.12E+00	3.22E-01	0.895	4.01E+02	4.03E+03	1.76E+04	6.54E+03	4.38E+03	1.52E+04	3.07E-09
Europium (63)	Eu-158	6.30E+00	1.19E+00	3.38E+00	5.37E+00	1.26E+00	0.856	7.94E+03	1.61E+04	8.56E+04	3.01E+04	1.89E+04	8.05E+04	6.22E-10
Fluorine (9)	F-18	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.15E+00	0.883	3.32E+03	7.33E+03	3.55E+04	1.25E+04	8.08E+03	3.59E+04	7.72E-11
Iron (26)	Fe-52	3.86E+00	8.32E-01	2.35E+00	3.56E+00	8.30E-01	0.896	7.34E+02	2.32E+03	1.08E+04	3.82E+03	2.52E+03	1.08E+04	3.19E-10
Iron (26)	Fe-55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	2.57E-01						
Iron (26)	Fe-59	7.24E+00	1.31E+00	3.79E+00	6.10E+00	1.28E+00	0.839	5.68E+00	1.03E+01	5.68E+01	1.96E+01	1.22E+01	5.80E+01	2.07E-10
Iron (26)	Fe-60	9.03E-06	5.58E-06	8.58E-06	9.03E-06	1.37E-05	0.927	6.93E-06	1.31E+06	2.12E+06	1.38E+06	1.31E+06	8.65E+05	2.20E+01
Iron (26)	Fe-60+D	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	0.925	6.93E-06	5.12E+02	2.49E+03	9.31E+02	6.05E+02	2.31E+03	8.60E-03
Iron (26)	Fe-60+E	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	0.925	6.93E-06	5.12E+02	2.49E+03	9.31E+02	6.05E+02	2.31E+03	8.60E-03
Fermium (100)	Fm-252	9.42E-05	9.25E-05	9.42E-05	9.42E-05	6.31E-04	0.998	2.67E+02	3.12E+07	3.17E+07	3.12E+07	3.12E+07	4.65E+06	5.70E-05
Fermium (100)	Fm-253	2.87E-01	8.04E-02	2.13E-01	2.83E-01	8.33E-02	0.996	8.43E+01	3.23E+03	1.15E+04	4.36E+03	3.27E+03	1.11E+04	1.88E-08
Fermium (100)	Fm-254	1.88E-04	1.26E-04	1.70E-04	1.88E-04	6.99E-04	0.997	1.87E+03	1.09E+08	1.63E+08	1.21E+08	1.09E+08	2.94E+07	2.87E-05
Fermium (100)	Fm-255	5.22E-03	2.31E-03	4.40E-03	5.18E-03	7.34E-03	0.991	3.02E+02	6.40E+05	1.45E+06	7.59E+05	6.45E+05	4.55E+05	1.05E-06
Fermium (100)	Fm-257	3.90E-01	1.06E-01	2.83E-01	3.84E-01	1.11E-01	0.939	2.52E+00	8.19E+01	3.00E+02	1.13E+02	8.31E+01	2.88E+02	1.62E-08
Francium (87)	Fr-219	1.81E-02	3.92E-03	1.11E-02	1.67E-02	3.85E-03	0.897	1.04E+09	7.03E+11	3.24E+12	1.15E+12	7.61E+11	3.30E+12	2.87E-07
Francium (87)	Fr-220	4.14E-02	1.12E-02	3.00E-02	4.07E-02	1.15E-02	0.968	7.98E+05	2.18E+08	8.04E+08	3.00E+08	2.22E+08	7.83E+08	1.17E-07
Francium (87)	Fr-220+D	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	0.896	7.98E+05	1.08E+06	6.47E+06	2.22E+06	1.35E+06	6.43E+06	5.80E-10
Francium (87)	Fr-220+E	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	0.896	7.98E+05	1.08E+06	6.47E+06	2.22E+06	1.35E+06	6.43E+06	5.80E-10
Francium (87)	Fr-221	1.41E-01	3.38E-02	9.44E-02	1.36E-01	3.31E-02	0.919	7.59E+04	6.41E+06	2.68E+07	9.58E+06	6.66E+06	2.73E+07	3.62E-08
Francium (87)	Fr-221+D	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	0.972	7.59E+04	7.60E+05	3.61E+06	1.28E+06	8.43E+05	3.04E+06	4.30E-09
Francium (87)	Fr-221+E	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	0.972	7.59E+04	7.60E+05	3.61E+06	1.28E+06	8.43E+05	3.04E+06	4.30E-09
Francium (87)	Fr-222	2.44E-02	1.47E-02	2.01E-02	2.37E-02	1.02E-01	0.927	2.53E+04	1.22E+07	2.03E+07	1.48E+07	1.26E+07	2.93E+06	2.08E-07
Francium (87)	Fr-223	1.81E-01	5.39E-02	1.29E-01	1.72E-01	9.06E-02	0.961	1.67E+04	1.05E+06	3.53E+06	1.48E+06	1.11E+06	2.10E+06	2.73E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Gallium (31)	Ga-65	6.38E+00	1.34E+00	3.77E+00	5.76E+00	1.41E+00	0.865	2.40E+04	4.76E+04	2.27E+05	8.05E+04	5.26E+04	2.15E+05	2.50E-10
Gallium (31)	Ga-66	1.57E+01	2.67E+00	7.70E+00	1.26E+01	2.63E+00	0.843	6.46E+02	5.34E+02	3.15E+03	1.09E+03	6.63E+02	3.19E+03	1.06E-10
Gallium (31)	Ga-67	6.81E-01	1.67E-01	4.57E-01	6.51E-01	1.65E-01	0.915	7.76E+01	1.36E+03	5.57E+03	2.03E+03	1.43E+03	5.64E+03	2.29E-09
Gallium (31)	Ga-68	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	5.36E+03	1.27E+04	6.11E+04	2.15E+04	1.40E+04	5.72E+04	3.12E-10
Gallium (31)	Ga-70	6.21E-02	1.92E-02	3.88E-02	5.56E-02	9.90E-02	0.864	1.72E+04	3.51E+06	1.14E+07	5.63E+06	3.93E+06	2.21E+06	2.77E-08
Gallium (31)	Ga-72	1.69E+01	2.95E+00	8.54E+00	1.39E+01	2.89E+00	0.871	4.31E+02	3.20E+02	1.84E+03	6.34E+02	3.89E+02	1.87E+03	1.04E-10
Gallium (31)	Ga-73	1.58E+00	3.51E-01	9.90E-01	1.48E+00	3.91E-01	0.929	1.24E+03	9.20E+03	4.16E+04	1.47E+04	9.84E+03	3.73E+04	1.05E-09
Gadolinium (64)	Gd-145	1.40E+01	2.46E+00	7.09E+00	1.15E+01	2.44E+00	0.814	1.59E+04	1.53E+04	8.69E+04	3.02E+04	1.86E+04	8.77E+04	2.70E-10
Gadolinium (64)	Gd-146	7.18E-01	2.26E-01	5.46E-01	7.11E-01	2.59E-01	0.943	5.24E+00	8.51E+01	2.71E+02	1.12E+02	8.60E+01	2.36E+02	4.61E-09
Gadolinium (64)	Gd-147	7.37E+00	1.47E+00	4.20E+00	6.51E+00	1.46E+00	0.911	1.59E+02	2.60E+02	1.30E+03	4.56E+02	2.94E+02	1.31E+03	4.65E-10
Gadolinium (64)	Gd-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.45E-03						
Gadolinium (64)	Gd-149	2.00E+00	4.46E-01	1.23E+00	1.84E+00	4.57E-01	0.892	2.69E+01	1.66E+02	7.41E+02	2.69E+02	1.80E+02	7.22E+02	1.78E-09
Gadolinium (64)	Gd-151	1.55E-01	5.02E-02	1.13E-01	1.51E-01	6.50E-02	0.93	2.11E+00	1.82E+02	5.63E+02	2.49E+02	1.88E+02	4.35E+02	2.53E-08
Gadolinium (64)	Gd-152	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.42E-15						
Gadolinium (64)	Gd-153	2.13E-01	8.37E-02	1.78E-01	2.13E-01	1.08E-01	0.945	1.05E+00	8.79E+01	2.23E+02	1.05E+02	8.79E+01	1.74E+02	2.50E-08
Gadolinium (64)	Gd-159	2.20E-01	5.28E-02	1.40E-01	2.07E-01	7.56E-02	0.9	3.27E+02	1.81E+04	7.54E+04	2.83E+04	1.92E+04	5.26E+04	1.71E-08
Germanium (32)	Ge-66	3.60E+00	7.59E-01	2.14E+00	3.28E+00	7.59E-01	0.915	2.67E+03	8.89E+03	4.22E+04	1.49E+04	9.75E+03	4.22E+04	4.26E-10
Germanium (32)	Ge-67	7.85E+00	1.62E+00	4.55E+00	7.01E+00	1.70E+00	0.843	1.95E+04	3.22E+04	1.56E+05	5.56E+04	3.61E+04	1.48E+05	2.15E-10
Germanium (32)	Ge-68	1.29E-06	1.29E-06	1.29E-06	1.29E-06	4.78E-05	1	8.78E-01	1.27E+07	1.27E+07	1.27E+07	1.27E+07	3.44E+05	1.91E-03
Germanium (32)	Ge-68+D	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	8.78E-01	3.56E+00	1.71E+01	6.04E+00	3.93E+00	1.60E+01	5.34E-10
Germanium (32)	Ge-68+E	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	8.78E-01	3.56E+00	1.71E+01	6.04E+00	3.93E+00	1.60E+01	5.34E-10
Germanium (32)	Ge-69	5.02E+00	9.77E-01	2.80E+00	4.40E+00	9.79E-01	0.846	1.55E+02	4.01E+02	2.06E+03	7.19E+02	4.57E+02	2.06E+03	3.45E-10
Germanium (32)	Ge-71	1.31E-06	1.31E-06	1.31E-06	1.31E-06	4.84E-05	1	2.14E+01	1.79E+08	1.79E+08	1.79E+08	1.79E+08	4.85E+06	1.15E-03
Germanium (32)	Ge-75	1.76E-01	4.18E-02	1.14E-01	1.67E-01	8.40E-02	0.909	4.40E+03	3.01E+05	1.27E+06	4.65E+05	3.17E+05	6.31E+05	9.96E-09
Germanium (32)	Ge-77	6.06E+00	1.22E+00	3.49E+00	5.39E+00	1.27E+00	0.898	5.37E+02	1.08E+03	5.36E+03	1.88E+03	1.22E+03	5.15E+03	3.01E-10
Germanium (32)	Ge-78	1.40E+00	3.11E-01	8.90E-01	1.32E+00	3.12E-01	0.909	4.19E+03	3.62E+04	1.62E+05	5.67E+04	3.82E+04	1.62E+05	1.31E-09
Hydrogen (1)	H-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	5.61E-02						
Hafnium (72)	Hf-170	2.57E+00	5.86E-01	1.60E+00	2.37E+00	5.96E-01	0.949	3.79E+02	1.70E+03	7.47E+03	2.74E+03	1.85E+03	7.34E+03	1.48E-09
Hafnium (72)	Hf-172	2.14E-01	9.19E-02	1.87E-01	2.14E-01	1.16E-01	0.947	3.71E-01	6.45E+01	1.50E+02	7.42E+01	6.45E+01	1.20E+02	5.81E-08
Hafnium (72)	Hf-173	1.71E+00	4.27E-01	1.14E+00	1.62E+00	4.35E-01	0.913	2.53E+02	1.78E+03	7.10E+03	2.65E+03	1.87E+03	6.97E+03	2.36E-09
Hafnium (72)	Hf-175	1.72E+00	3.97E-01	1.09E+00	1.61E+00	4.03E-01	0.903	3.61E+00	2.62E+01	1.13E+02	4.13E+01	2.80E+01	1.12E+02	2.46E-09
Hafnium (72)	Hf-177m	1.09E+01	2.48E+00	6.92E+00	1.02E+01	2.45E+00	0.92	7.09E+03	7.77E+03	3.40E+04	1.22E+04	8.27E+03	3.44E+04	3.77E-10
Hafnium (72)	Hf-178m	1.21E+01	2.63E+00	7.40E+00	1.12E+01	2.59E+00	0.888	2.24E-02	1.03E+00	4.74E+00	1.68E+00	1.12E+00	4.81E+00	1.59E-08
Hafnium (72)	Hf-179m	4.33E+00	9.85E-01	2.74E+00	4.05E+00	9.83E-01	0.896	1.01E+01	2.85E+01	1.25E+02	4.49E+01	3.04E+01	1.25E+02	9.81E-10
Hafnium (72)	Hf-180m	4.98E+00	1.11E+00	3.11E+00	4.63E+00	1.10E+00	0.902	1.10E+03	2.69E+03	1.21E+04	4.30E+03	2.90E+03	1.21E+04	8.51E-10
Hafnium (72)	Hf-181	2.82E+00	6.17E-01	1.73E+00	2.61E+00	6.13E-01	0.893	5.97E+00	2.60E+01	1.19E+02	4.23E+01	2.81E+01	1.20E+02	1.53E-09
Hafnium (72)	Hf-182	1.15E+00	2.65E-01	7.46E-01	1.09E+00	2.60E-01	0.911	7.70E-08	1.04E+01	4.54E+01	1.61E+01	1.10E+01	4.62E+01	4.79E-02
Hafnium (72)	Hf-182+D						0.911	7.70E-08						
Hafnium (72)	Hf-182+E	8.65E+00	1.68E+00	4.77E+00	7.50E+00	1.66E+00	0.911	7.70E-08	1.39E+00	7.17E+00	2.52E+00	1.60E+00	7.25E+00	6.37E-03
Hafnium (72)	Hf-182m	4.81E+00	1.03E+00	2.89E+00	4.36E+00	1.02E+00	0.942	5.92E+03	1.43E+04	6.70E+04	2.38E+04	1.58E+04	6.72E+04	8.53E-10
Hafnium (72)	Hf-183	4.14E+00	8.37E-01	2.37E+00	3.67E+00	8.78E-01	0.866	5.69E+03	1.74E+04	8.59E+04	3.04E+04	1.96E+04	8.20E+04	1.08E-09
Hafnium (72)	Hf-184	1.10E+00	2.65E-01	7.27E-01	1.05E+00	2.87E-01	0.917	1.47E+03	1.60E+04	6.64E+04	2.42E+04	1.68E+04	6.13E+04	3.88E-09
Mercury (80)	Hg-193	7.09E-01	2.00E-01	5.07E-01	6.84E-01	2.10E-01	0.938	1.73E+03	2.86E+04	1.01E+05	3.99E+04	2.96E+04	9.64E+04	6.17E-09
Mercury (80)	Hg-193m	5.67E+00	1.14E+00	3.23E+00	5.00E+00	1.13E+00	0.965	5.47E+02	1.09E+03	5.44E+03	1.92E+03	1.24E+03	5.50E+03	7.50E-10
Mercury (80)	Hg-194	1.06E-05	1.06E-05	1.06E-05	1.06E-05	2.61E-04	1	2.67E-03	1.03E+06	1.03E+06	1.03E+06	1.03E+06	4.19E+04	1.45E-01
Mercury (80)	Hg-194+D	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	2.67E-03	1.87E+00	9.93E+00	3.48E+00	2.19E+00	1.01E+01	2.63E-07
Mercury (80)	Hg-194+E	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	2.67E-03	1.87E+00	9.93E+00	3.48E+00	2.19E+00	1.01E+01	2.63E-07
Mercury (80)	Hg-195	9.23E-01	2.09E-01	5.60E-01	8.26E-01	2.16E-01	0.951	6.13E+02	7.65E+03	3.38E+04	1.26E+04	8.55E+03	3.27E+04	4.72E-09
Mercury (80)	Hg-195m	9.70E-01	2.24E-01	6.14E-01	9.01E-01	2.25E-01	0.998	1.46E+02	1.65E+03	7.15E+03	2.61E+03	1.78E+03	7.11E+03	4.28E-09
Mercury (80)	Hg-197	1.50E-01	5.99E-02	1.31E-01	1.50E-01	6.76E-02	0.965	9.47E+01	7.18E+03	1.80E+04	8.23E+03	7.18E+03	1.59E+04	2.90E-08
Mercury (80)	Hg-197m	3.19E-01	9.23E-02	2.37E-01	3.13E-01	9.48E-02	0.969	2.55E+02	9.04E+03	3.12E+04	1.22E+04	9.20E+03	3.04E+04	1.35E-08
Mercury (80)	Hg-199m	7.35E-01	1.92E-01	5.11E-01	7.09E-01	1.95E-01	0.932	8.55E+03	1.37E+05	5.23E+05	1.97E+05	1.42E+05	5.15E+05	6.17E-09
Mercury (80)	Hg-203	1.17E+00	2.65E-01	7.48E-01	1.10E+00	2.59E-01	0.911	5.43E+00	5.62E+01	2.47E+02	8.76E+01	5.94E+01	2.53E+02	4.08E-09
Holmium (67)	Ho-155	1.92E+00	4.21E-01	1.17E+00	1.76E+00	4.54E-01	0.926	7.59E+03	4.67E+04	2.13E+05	7.70E+04	5.11E+04	1.98E+05	1.85E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Holmium (67)	Ho-157	2.33E+00	5.17E-01	1.41E+00	2.11E+00	5.38E-01	0.923	2.89E+04	1.47E+05	6.64E+05	2.43E+05	1.63E+05	6.37E+05	1.55E-09
Holmium (67)	Ho-159	1.47E+00	3.69E-01	9.68E-01	1.38E+00	3.90E-01	0.927	1.10E+04	8.88E+04	3.53E+05	1.35E+05	9.46E+04	3.34E+05	2.48E-09
Holmium (67)	Ho-161	7.50E-02	3.92E-02	6.84E-02	7.48E-02	6.00E-02	0.957	2.43E+03	3.71E+05	7.09E+05	4.06E+05	3.72E+05	4.63E+05	4.77E-08
Holmium (67)	Ho-162	7.57E-01	1.65E-01	4.36E-01	6.62E-01	1.81E-01	0.879	2.43E+04	4.00E+05	1.83E+06	6.93E+05	4.57E+05	1.67E+06	5.17E-09
Holmium (67)	Ho-162m	3.08E+00	6.12E-01	1.71E+00	2.67E+00	6.19E-01	0.924	5.36E+03	2.06E+04	1.04E+05	3.70E+04	2.38E+04	1.03E+05	1.21E-09
Holmium (67)	Ho-164	3.80E-02	2.09E-02	3.58E-02	3.80E-02	3.94E-02	0.95	1.26E+04	3.81E+06	6.93E+06	4.04E+06	3.81E+06	3.67E+06	9.64E-08
Holmium (67)	Ho-164m	5.02E-02	3.00E-02	4.87E-02	5.02E-02	4.55E-02	0.957	9.71E+03	2.22E+06	3.70E+06	2.28E+06	2.22E+06	2.44E+06	7.26E-08
Holmium (67)	Ho-166	1.56E-01	4.10E-02	9.27E-02	1.35E-01	1.23E-01	0.897	2.27E+02	1.77E+04	6.74E+04	2.98E+04	2.05E+04	2.26E+04	2.52E-08
Holmium (67)	Ho-166m	9.64E+00	1.94E+00	5.56E+00	8.60E+00	1.93E+00	0.903	5.78E-04	1.26E+00	6.25E+00	2.18E+00	1.41E+00	6.30E+00	7.02E-07
Holmium (67)	Ho-167	1.83E+00	4.07E-01	1.15E+00	1.71E+00	4.10E-01	0.9	1.96E+03	1.30E+04	5.86E+04	2.08E+04	1.39E+04	5.82E+04	2.15E-09
Iodine (53)	I-120	1.66E+01	3.02E+00	8.67E+00	1.39E+01	3.06E+00	0.878	4.50E+03	3.38E+03	1.86E+04	6.47E+03	4.03E+03	1.83E+04	1.75E-10
Iodine (53)	I-120m	3.17E+01	5.87E+00	1.69E+01	2.70E+01	5.85E+00	0.857	6.87E+03	2.77E+03	1.49E+04	5.20E+03	3.25E+03	1.50E+04	9.38E-11
Iodine (53)	I-121	2.07E+00	4.51E-01	1.28E+00	1.92E+00	4.62E-01	0.892	2.86E+03	1.70E+04	7.79E+04	2.76E+04	1.83E+04	7.61E+04	1.39E-09
Iodine (53)	I-122	5.28E+00	1.10E+00	3.10E+00	4.76E+00	1.19E+00	0.875	1.01E+05	2.39E+05	1.15E+06	4.07E+05	2.65E+05	1.06E+06	5.61E-10
Iodine (53)	I-123	6.51E-01	1.67E-01	4.49E-01	6.30E-01	1.79E-01	0.956	4.60E+02	8.09E+03	3.16E+04	1.17E+04	8.36E+03	2.95E+04	4.20E-09
Iodine (53)	I-124	6.38E+00	1.21E+00	3.47E+00	5.50E+00	1.21E+00	0.875	6.05E+01	1.19E+02	6.27E+02	2.18E+02	1.38E+02	6.24E+02	4.72E-10
Iodine (53)	I-125	1.19E-02	1.10E-02	1.19E-02	1.19E-02	3.66E-02	0.986	4.21E+00	4.00E+03	4.32E+03	4.00E+03	4.00E+03	1.29E+03	2.31E-07
Iodine (53)	I-126	2.46E+00	5.05E-01	1.44E+00	2.22E+00	5.16E-01	0.881	1.94E+01	9.81E+01	4.78E+02	1.68E+02	1.09E+02	4.68E+02	1.23E-09
Iodine (53)	I-128	4.81E-01	1.11E-01	2.93E-01	4.40E-01	2.00E-01	0.89	1.46E+04	3.73E+05	1.61E+06	6.12E+05	4.07E+05	8.99E+05	6.35E-09
Iodine (53)	I-129	9.53E-03	8.21E-03	9.53E-03	9.53E-03	2.28E-02	0.98	4.41E-08	1.17E+03	1.36E+03	1.17E+03	1.17E+03	4.91E+02	6.65E+00
Iodine (53)	I-130	1.21E+01	2.41E+00	6.90E+00	1.08E+01	2.39E+00	0.872	4.91E+02	5.09E+02	2.56E+03	8.94E+02	5.72E+02	2.58E+03	2.61E-10
Iodine (53)	I-131	2.01E+00	4.31E-01	1.22E+00	1.85E+00	4.25E-01	0.891	3.15E+01	1.92E+02	8.97E+02	3.16E+02	2.09E+02	9.10E+02	1.55E-09
Iodine (53)	I-132	1.32E+01	2.56E+00	7.35E+00	1.16E+01	2.57E+00	0.892	2.64E+03	2.45E+03	1.27E+04	4.41E+03	2.80E+03	1.26E+04	2.37E-10
Iodine (53)	I-132m	1.75E+00	3.54E-01	1.01E+00	1.56E+00	3.63E-01	0.874	4.36E+03	3.12E+04	1.54E+05	5.42E+04	3.49E+04	1.50E+05	1.83E-09
Iodine (53)	I-133	3.41E+00	6.88E-01	1.96E+00	3.04E+00	7.20E-01	0.881	2.92E+02	1.06E+03	5.27E+03	1.85E+03	1.19E+03	5.04E+03	9.40E-10
Iodine (53)	I-134	1.55E+01	2.93E+00	8.43E+00	1.34E+01	2.95E+00	0.879	6.92E+03	5.57E+03	2.95E+04	1.02E+04	6.45E+03	2.92E+04	2.09E-10
Iodine (53)	I-135	9.72E+00	1.73E+00	5.00E+00	8.11E+00	1.72E+00	0.9	9.18E+02	1.15E+03	6.47E+03	2.24E+03	1.38E+03	6.51E+03	3.28E-10
Indium (49)	In-109	3.62E+00	7.29E-01	2.09E+00	3.23E+00	7.28E-01	0.899	1.45E+03	4.87E+03	2.41E+04	8.43E+03	5.46E+03	2.42E+04	7.12E-10
Indium (49)	In-110	1.76E+01	3.39E+00	9.75E+00	1.54E+01	3.36E+00	0.871	1.24E+03	8.85E+02	4.59E+03	1.60E+03	1.01E+03	4.63E+03	1.52E-10
Indium (49)	In-110m	8.95E+00	1.75E+00	4.98E+00	7.83E+00	1.79E+00	0.874	5.27E+03	7.38E+03	3.78E+04	1.33E+04	8.43E+03	3.70E+04	2.99E-10
Indium (49)	In-111	1.81E+00	4.29E-01	1.20E+00	1.74E+00	4.29E-01	0.952	8.94E+01	5.69E+02	2.40E+03	8.55E+02	5.92E+02	2.39E+03	1.37E-09
Indium (49)	In-112	1.45E+00	3.00E-01	8.50E-01	1.31E+00	3.20E-01	0.931	2.53E+04	2.05E+05	9.91E+05	3.50E+05	2.27E+05	9.30E+05	1.76E-09
Indium (49)	In-113m	1.33E+00	2.85E-01	8.13E-01	1.23E+00	2.84E-01	0.932	3.66E+03	3.23E+04	1.51E+05	5.29E+04	3.49E+04	1.52E+05	1.93E-09
Indium (49)	In-114	1.68E-02	3.04E-03	8.73E-03	1.41E-02	3.22E-03	0.869	3.04E+05	2.28E+08	1.26E+09	4.39E+08	2.72E+08	1.19E+09	1.66E-07
Indium (49)	In-114m	4.51E-01	9.70E-02	2.72E-01	4.12E-01	1.01E-01	0.946	5.11E+00	1.32E+02	6.13E+02	2.19E+02	1.44E+02	5.91E+02	5.71E-09
Indium (49)	In-114m+D	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	0.946	5.11E+00	1.27E+02	5.95E+02	2.13E+02	1.40E+02	5.73E+02	5.50E-09
Indium (49)	In-114m+E	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	0.946	5.11E+00	1.27E+02	5.95E+02	2.13E+02	1.40E+02	5.73E+02	5.50E-09
Indium (49)	In-115	3.54E-04	1.30E-04	2.83E-04	3.51E-04	4.17E-04	0.927	1.36E-16	4.08E+04	1.11E+05	5.10E+04	4.12E+04	3.47E+04	6.70E+10
Indium (49)	In-115m	7.93E-01	1.74E-01	4.94E-01	7.40E-01	1.76E-01	0.917	1.35E+03	2.04E+04	9.29E+04	3.27E+04	2.18E+04	9.17E+04	3.36E-09
Indium (49)	In-116m	1.52E+01	2.70E+00	7.85E+00	1.27E+01	2.66E+00	0.892	6.73E+03	5.44E+03	3.05E+04	1.05E+04	6.50E+03	3.10E+04	1.82E-10
Indium (49)	In-117	3.64E+00	7.76E-01	2.20E+00	3.34E+00	7.75E-01	0.897	8.32E+03	2.79E+04	1.31E+05	4.61E+04	3.04E+04	1.31E+05	7.62E-10
Indium (49)	In-117m	4.29E-01	1.02E-01	2.80E-01	4.07E-01	1.46E-01	0.923	3.13E+03	8.65E+04	3.62E+05	1.33E+05	9.12E+04	2.54E+05	6.28E-09
Indium (49)	In-119	4.42E+00	8.71E-01	2.48E+00	3.90E+00	9.36E-01	0.871	1.52E+05	4.32E+05	2.19E+06	7.69E+05	4.89E+05	2.04E+06	6.57E-10
Indium (49)	In-119m	9.03E-02	3.73E-02	6.30E-02	8.37E-02	1.52E-01	0.93	2.02E+04	2.64E+06	6.39E+06	3.78E+06	2.85E+06	1.57E+06	3.01E-08
Iridium (77)	Ir-182	7.35E+00	1.52E+00	4.27E+00	6.56E+00	1.56E+00	0.928	2.43E+04	3.90E+04	1.89E+05	6.71E+04	4.36E+04	1.83E+05	5.67E-10
Iridium (77)	Ir-184	1.08E+01	2.09E+00	5.97E+00	9.36E+00	2.08E+00	0.944	2.01E+03	2.16E+03	1.12E+04	3.91E+03	2.49E+03	1.12E+04	3.83E-10
Iridium (77)	Ir-185	3.34E+00	6.25E-01	1.76E+00	2.80E+00	6.22E-01	0.953	4.34E+02	1.49E+03	7.97E+03	2.83E+03	1.78E+03	8.01E+03	1.24E-09
Iridium (77)	Ir-186	9.25E+00	1.79E+00	5.11E+00	8.00E+00	1.76E+00	0.942	3.84E+02	4.83E+02	2.49E+03	8.74E+02	5.58E+02	2.53E+03	4.54E-10
Iridium (77)	Ir-186m	5.28E+00	1.06E+00	3.00E+00	4.64E+00	1.07E+00	0.878	3.47E+03	8.20E+03	4.08E+04	1.44E+04	9.32E+03	4.05E+04	8.53E-10
Iridium (77)	Ir-187	1.79E+00	3.88E-01	1.06E+00	1.60E+00	3.93E-01	0.958	5.78E+02	3.69E+03	1.70E+04	6.23E+03	4.13E+03	1.68E+04	2.32E-09
Iridium (77)	Ir-188	9.55E+00	1.70E+00	4.89E+00	7.89E+00	1.66E+00	0.908	1.46E+02	1.85E+02	1.04E+03	3.61E+02	2.24E+02	1.06E+03	4.61E-10
Iridium (77)	Ir-189	2.18E-01	7.31E-02	1.70E-01	2.14E-01	8.16E-02	0.954	1.90E+01	1.00E+03	2.99E+03	1.29E+03	1.02E+03	2.68E+03	1.93E-08
Iridium (77)	Ir-190	7.53E+00	1.60E+00	4.51E+00	6.86E+00	1.59E+00	0.928	2.09E+01	3.27E+01	1.54E+02	5.47E+01	3.59E+01	1.55E+02	5.77E-10
Iridium (77)	Ir-190m	2.05E-06	2.05E-06	2.05E-06	2.05E-06	6.21E-05	1	5.06E+03	2.70E+10	2.70E+10	2.70E+10	2.70E+10	8.92E+08	1.97E-03

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Iridium (77)	Ir-190n	8.15E+00	1.73E+00	4.90E+00	7.46E+00	1.72E+00	0.955	1.96E+03	2.76E+03	1.30E+04	4.58E+03	3.01E+03	1.31E+04	5.19E-10
Iridium (77)	Ir-191m	2.05E-01	6.86E-02	1.63E-01	2.03E-01	7.39E-02	0.945	4.42E+06	2.50E+08	7.47E+08	3.14E+08	2.52E+08	6.94E+08	2.09E-08
Iridium (77)	Ir-192	4.27E+00	9.19E-01	2.63E+00	3.95E+00	9.07E-01	0.957	3.42E+00	9.47E+00	4.40E+01	1.54E+01	1.02E+01	4.46E+01	1.03E-09
Iridium (77)	Ir-192m	6.86E-01	1.75E-01	4.81E-01	6.71E-01	1.72E-01	0.925	2.88E-03	1.73E+01	6.78E+01	2.46E+01	1.77E+01	6.91E+01	2.24E-06
Iridium (77)	Ir-194	5.24E-01	1.19E-01	3.13E-01	4.74E-01	2.11E-01	0.902	3.17E+02	7.34E+03	3.23E+04	1.23E+04	8.12E+03	1.82E+04	8.72E-09
Iridium (77)	Ir-194m	1.27E+01	2.63E+00	7.52E+00	1.15E+01	2.60E+00	0.881	1.48E+00	1.87E+00	9.05E+00	3.17E+00	2.06E+00	9.15E+00	4.76E-10
Iridium (77)	Ir-195	1.46E-01	5.37E-02	1.21E-01	1.45E-01	8.60E-02	0.954	2.43E+03	1.91E+05	5.19E+05	2.31E+05	1.92E+05	3.24E+05	2.97E-08
Iridium (77)	Ir-195m	2.00E+00	4.51E-01	1.24E+00	1.84E+00	4.64E-01	0.998	1.60E+03	8.78E+03	3.88E+04	1.41E+04	9.54E+03	3.77E+04	2.08E-09
Potassium (19)	K-38	2.00E+01	3.47E+00	1.00E+01	1.64E+01	3.47E+00	0.844	4.77E+04	3.10E+04	1.78E+05	6.17E+04	3.78E+04	1.79E+05	4.79E-11
Potassium (19)	K-40	9.94E-01	1.77E-01	5.04E-01	8.21E-01	2.38E-01	0.826	5.41E-10	1.33E+01	7.48E+01	2.63E+01	1.62E+01	5.57E+01	1.91E+00
Potassium (19)	K-42	1.84E+00	3.49E-01	9.42E-01	1.52E+00	4.64E-01	0.823	4.91E+02	3.56E+03	1.87E+04	6.94E+03	4.31E+03	1.41E+04	5.91E-10
Potassium (19)	K-43	5.32E+00	1.10E+00	3.13E+00	4.83E+00	1.10E+00	0.878	2.69E+02	6.30E+02	3.05E+03	1.07E+03	6.94E+02	3.05E+03	1.96E-10
Potassium (19)	K-44	1.47E+01	2.46E+00	7.11E+00	1.17E+01	2.47E+00	0.799	1.65E+04	1.53E+04	9.16E+04	3.17E+04	1.92E+04	9.12E+04	7.95E-11
Potassium (19)	K-45	1.18E+01	2.01E+00	5.86E+00	9.59E+00	2.05E+00	0.833	1.82E+04	2.02E+04	1.19E+05	4.09E+04	2.50E+04	1.17E+05	9.71E-11
Krypton (36)	Kr-74	6.19E+00	1.33E+00	3.73E+00	5.67E+00	1.40E+00	0.923	3.17E+04	6.07E+04	2.83E+05	1.01E+05	6.63E+04	2.68E+05	2.75E-10
Krypton (36)	Kr-76	2.18E+00	4.76E-01	1.35E+00	2.03E+00	4.70E-01	0.971	4.10E+02	2.12E+03	9.73E+03	3.43E+03	2.28E+03	9.84E+03	7.62E-10
Krypton (36)	Kr-77	5.32E+00	1.15E+00	3.25E+00	4.89E+00	1.21E+00	0.894	4.88E+03	1.12E+04	5.19E+04	1.84E+04	1.22E+04	4.92E+04	3.44E-10
Krypton (36)	Kr-79	1.36E+00	2.83E-01	8.08E-01	1.24E+00	2.79E-01	0.893	1.73E+02	1.56E+03	7.49E+03	2.63E+03	1.72E+03	7.62E+03	1.38E-09
Krypton (36)	Kr-81	2.76E-02	6.23E-03	1.77E-02	2.63E-02	6.99E-03	0.999	3.30E-06	3.97E+02	1.76E+03	6.20E+02	4.17E+02	1.57E+03	1.89E-02
Krypton (36)	Kr-81m	5.84E-01	1.41E-01	3.95E-01	5.65E-01	1.38E-01	0.968	1.68E+06	3.26E+07	1.35E+08	4.81E+07	3.37E+07	1.38E+08	3.05E-09
Krypton (36)	Kr-83m	2.52E-05	2.44E-05	2.52E-05	2.52E-05	4.17E-04	1	3.32E+03	1.44E+09	1.49E+09	1.44E+09	1.44E+09	8.72E+07	7.00E-05
Krypton (36)	Kr-85	1.35E-02	3.08E-03	8.21E-03	1.23E-02	1.23E-02	0.884	6.46E-02	9.49E+02	4.16E+03	1.56E+03	1.04E+03	1.04E+03	2.42E-06
Krypton (36)	Kr-85m	6.96E-01	1.73E-01	4.77E-01	6.73E-01	1.83E-01	0.928	1.36E+03	2.30E+04	9.25E+04	3.35E+04	2.37E+04	8.73E+04	2.80E-09
Krypton (36)	Kr-87	5.02E+00	8.95E-01	2.54E+00	4.12E+00	9.80E-01	0.849	4.77E+03	1.23E+04	6.88E+04	2.43E+04	1.49E+04	6.28E+04	4.34E-10
Krypton (36)	Kr-88	1.26E+01	2.07E+00	6.06E+00	1.01E+01	2.02E+00	0.916	2.14E+03	2.03E+03	1.23E+04	4.22E+03	2.54E+03	1.27E+04	1.62E-10
Lanthanum (57)	La-131	3.47E+00	7.39E-01	2.07E+00	3.17E+00	7.64E-01	0.896	6.17E+03	2.17E+04	1.02E+05	3.64E+04	2.38E+04	9.87E+04	8.96E-10
Lanthanum (57)	La-132	1.19E+01	2.22E+00	6.36E+00	1.01E+01	2.22E+00	0.879	1.26E+03	1.32E+03	7.10E+03	2.48E+03	1.56E+03	7.11E+03	2.68E-10
Lanthanum (57)	La-134	3.84E+00	8.02E-01	2.26E+00	3.47E+00	8.75E-01	0.89	5.46E+04	1.75E+05	8.38E+05	2.98E+05	1.94E+05	7.68E+05	8.33E-10
Lanthanum (57)	La-135	6.77E-02	2.09E-02	4.42E-02	6.21E-02	3.55E-02	0.943	3.11E+02	5.34E+04	1.73E+05	8.18E+04	5.82E+04	1.02E+05	4.49E-08
Lanthanum (57)	La-137	1.04E-02	8.82E-03	1.04E-02	1.04E-02	2.29E-02	0.978	1.16E-05	1.07E+03	1.27E+03	1.07E+03	1.07E+03	4.89E+02	2.47E-02
Lanthanum (57)	La-138	7.53E+00	1.34E+00	3.90E+00	6.30E+00	1.32E+00	0.842	5.13E-12	1.73E+00	9.67E+00	3.34E+00	2.06E+00	9.86E+00	9.00E+01
Lanthanum (57)	La-140	1.43E+01	2.54E+00	7.33E+00	1.19E+01	2.52E+00	0.868	1.51E+02	1.33E+02	7.50E+02	2.59E+02	1.60E+02	7.54E+02	2.40E-10
Lanthanum (57)	La-141	3.10E-01	7.11E-02	1.70E-01	2.61E-01	1.77E-01	0.829	1.54E+03	6.59E+04	2.87E+05	1.20E+05	7.81E+04	1.15E+05	1.17E-08
Lanthanum (57)	La-142	1.78E+01	2.93E+00	8.56E+00	1.42E+01	2.91E+00	0.88	3.94E+03	2.75E+03	1.67E+04	5.72E+03	3.45E+03	1.69E+04	1.92E-10
Lanthanum (57)	La-143	6.64E-01	1.45E-01	3.58E-01	5.58E-01	2.65E-01	0.853	2.56E+04	4.95E+05	2.26E+06	9.18E+05	5.89E+05	1.24E+06	5.36E-09
Lutetium (71)	Lu-169	5.89E+00	1.12E+00	3.17E+00	5.02E+00	1.12E+00	0.922	1.78E+02	3.59E+02	1.89E+03	6.68E+02	4.22E+02	1.90E+03	6.61E-10
Lutetium (71)	Lu-170	1.56E+01	2.63E+00	7.65E+00	1.26E+01	2.56E+00	0.941	1.26E+02	9.43E+01	5.60E+02	1.92E+02	1.17E+02	5.76E+02	2.46E-10
Lutetium (71)	Lu-171	3.62E+00	7.50E-01	2.09E+00	3.21E+00	7.63E-01	0.941	3.08E+01	9.90E+01	4.78E+02	1.71E+02	1.12E+02	4.69E+02	1.07E-09
Lutetium (71)	Lu-172	1.08E+01	2.07E+00	5.89E+00	9.33E+00	2.05E+00	0.92	3.78E+01	4.15E+01	2.17E+02	7.62E+01	4.82E+01	2.19E+02	3.67E-10
Lutetium (71)	Lu-173	3.75E-01	1.17E-01	2.72E-01	3.60E-01	1.35E-01	0.907	5.06E-01	4.10E+01	1.31E+02	5.65E+01	4.27E+01	1.14E+02	2.72E-08
Lutetium (71)	Lu-174	5.35E-01	1.20E-01	3.08E-01	4.61E-01	1.31E-01	0.917	2.09E-01	2.47E+01	1.10E+02	4.30E+01	2.87E+01	1.01E+02	3.99E-08
Lutetium (71)	Lu-174m	1.29E-01	4.94E-02	1.01E-01	1.23E-01	6.22E-02	0.948	1.78E+00	1.92E+02	5.01E+02	2.45E+02	2.02E+02	3.98E+02	3.64E-08
Lutetium (71)	Lu-176	2.33E+00	5.39E-01	1.51E+00	2.22E+00	5.33E-01	0.912	1.93E-11	5.15E+00	2.23E+01	7.94E+00	5.41E+00	2.25E+01	9.14E+01
Lutetium (71)	Lu-176m	3.90E-02	1.67E-02	3.32E-02	3.90E-02	6.54E-02	0.947	1.65E+03	4.89E+05	1.15E+06	5.75E+05	4.89E+05	2.92E+05	1.01E-07
Lutetium (71)	Lu-177	1.45E-01	3.71E-02	1.01E-01	1.41E-01	3.75E-02	0.923	3.77E+01	3.09E+03	1.20E+04	4.45E+03	3.18E+03	1.19E+04	2.81E-08
Lutetium (71)	Lu-177m	4.61E+00	1.09E+00	3.00E+00	4.36E+00	1.09E+00	0.941	1.57E+00	5.01E+00	2.12E+01	7.69E+00	5.29E+00	2.12E+01	1.09E-09
Lutetium (71)	Lu-178	8.50E-01	1.66E-01	4.51E-01	7.16E-01	2.51E-01	0.836	1.28E+04	1.98E+05	1.01E+06	3.72E+05	2.35E+05	6.70E+05	5.32E-09
Lutetium (71)	Lu-178m	5.39E+00	1.23E+00	3.43E+00	5.05E+00	1.26E+00	0.904	1.60E+04	3.61E+04	1.58E+05	5.66E+04	3.85E+04	1.54E+05	7.76E-10
Lutetium (71)	Lu-179	1.54E-01	3.90E-02	1.02E-01	1.47E-01	8.95E-02	0.905	1.32E+03	1.04E+05	4.11E+05	1.57E+05	1.09E+05	1.79E+05	2.73E-08
Mendelevium (101)	Md-257	4.61E-01	1.16E-01	3.15E-01	4.42E-01	1.18E-01	0.995	1.17E+03	2.79E+04	1.11E+05	4.08E+04	2.91E+04	1.09E+05	1.19E-08
Mendelevium (101)	Md-258	1.86E-03	1.04E-03	1.68E-03	1.86E-03	3.87E-03	0.996	4.60E+00	2.75E+04	4.92E+04	3.04E+04	2.75E+04	1.32E+04	2.99E-06
Magnesium (12)	Mg-28	8.15E+00	1.50E+00	4.31E+00	6.92E+00	1.47E+00	0.872	2.90E+02	4.47E+02	2.44E+03	8.46E+02	5.27E+02	2.48E+03	8.37E-11
Manganese (25)	Mn-51	5.52E+00	1.15E+00	3.25E+00	5.00E+00	1.25E+00	0.882	7.88E+03	1.77E+04	8.49E+04	3.02E+04	1.96E+04	7.84E+04	2.23E-10
Manganese (25)	Mn-52	2.07E+01	3.82E+00	1.10E+01	1.77E+01	3.76E+00	0.836	4.52E+01	2.86E+01	1.55E+02	5.37E+01	3.36E+01	1.58E+02	6.38E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Manganese (25)	Mn-52m	1.44E+01	2.70E+00	7.74E+00	1.23E+01	2.75E+00	0.848	1.73E+04	1.55E+04	8.24E+04	2.88E+04	1.81E+04	8.09E+04	9.06E-11
Manganese (25)	Mn-53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.87E-07						
Manganese (25)	Mn-54	4.85E+00	9.36E-01	2.69E+00	4.23E+00	9.23E-01	0.858	8.09E-01	3.84E+00	1.99E+01	6.93E+00	4.40E+00	2.02E+01	4.97E-10
Manganese (25)	Mn-56	1.05E+01	1.87E+00	5.37E+00	8.73E+00	1.89E+00	0.827	2.35E+03	2.97E+03	1.67E+04	5.80E+03	3.57E+03	1.65E+04	1.37E-10
Molybdenum (42)	Mo-101	8.24E+00	1.51E+00	4.35E+00	6.98E+00	1.53E+00	0.917	2.49E+04	3.61E+04	1.97E+05	6.85E+04	4.27E+04	1.95E+05	2.84E-10
Molybdenum (42)	Mo-90	4.29E+00	9.06E-01	2.57E+00	3.90E+00	9.08E-01	0.884	1.07E+03	3.09E+03	1.46E+04	5.15E+03	3.40E+03	1.46E+04	5.04E-10
Molybdenum (42)	Mo-93	4.16E-04	4.18E-04	4.16E-04	4.16E-04	4.53E-03	1	1.98E-04	2.63E+04	2.62E+04	2.63E+04	2.63E+04	2.42E+03	2.40E-02
Molybdenum (42)	Mo-93m	1.36E+01	2.48E+00	7.14E+00	1.15E+01	2.42E+00	0.861	8.86E+02	8.31E+02	4.54E+03	1.58E+03	9.83E+02	4.67E+03	1.69E-10
Molybdenum (42)	Mo-99	8.34E-01	1.71E-01	4.81E-01	7.44E-01	2.08E-01	0.929	9.20E+01	1.30E+03	6.35E+03	2.25E+03	1.46E+03	5.22E+03	2.72E-09
Nitrogen (7)	N-13	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.20E+00	0.883	3.66E+04	8.07E+04	3.91E+05	1.37E+05	8.90E+04	3.77E+05	5.57E-11
Sodium (11)	Na-22	1.29E+01	2.44E+00	7.01E+00	1.11E+01	2.39E+00	0.861	2.66E-01	1.12E+00	5.93E+00	2.07E+00	1.30E+00	6.06E+00	1.80E-10
Sodium (11)	Na-24	2.72E+01	4.33E+00	1.27E+01	2.13E+01	4.19E+00	0.806	4.05E+02	2.02E+02	1.27E+03	4.34E+02	2.59E+02	1.31E+03	2.32E-11
Niobium (41)	Nb-88	2.37E+01	4.64E+00	1.33E+01	2.09E+01	4.69E+00	0.871	2.55E+04	1.35E+04	6.90E+04	2.41E+04	1.53E+04	6.83E+04	9.06E-11
Niobium (41)	Nb-89	8.32E+00	1.56E+00	4.46E+00	7.09E+00	1.62E+00	0.885	2.99E+03	4.44E+03	2.36E+04	8.29E+03	5.21E+03	2.28E+04	2.57E-10
Niobium (41)	Nb-89m	1.07E+01	2.20E+00	6.25E+00	9.64E+00	2.26E+00	0.89	5.52E+03	6.36E+03	3.09E+04	1.09E+04	7.04E+03	3.00E+04	1.99E-10
Niobium (41)	Nb-90	2.65E+01	4.53E+00	1.32E+01	2.14E+01	4.42E+00	0.851	4.16E+02	2.02E+02	1.18E+03	4.06E+02	2.49E+02	1.21E+03	8.48E-11
Niobium (41)	Nb-93m	7.35E-05	7.35E-05	7.35E-05	7.35E-05	7.96E-04	1	5.10E-02	1.53E+05	1.53E+05	1.53E+05	1.53E+05	1.41E+04	5.41E-04
Niobium (41)	Nb-94	9.10E+00	1.77E+00	5.07E+00	7.98E+00	1.74E+00	0.861	3.41E-05	1.40E+00	7.19E+00	2.51E+00	1.59E+00	7.31E+00	7.47E-06
Niobium (41)	Nb-95	4.42E+00	8.62E-01	2.46E+00	3.88E+00	8.50E-01	0.863	7.20E+00	2.07E+01	1.06E+02	3.71E+01	2.36E+01	1.08E+02	5.30E-10
Niobium (41)	Nb-95m	2.93E-01	6.79E-02	1.92E-01	2.82E-01	6.90E-02	0.988	7.01E+01	2.65E+03	1.14E+04	4.04E+03	2.76E+03	1.13E+04	6.98E-09
Niobium (41)	Nb-96	1.44E+01	2.78E+00	7.94E+00	1.25E+01	2.73E+00	0.866	2.60E+02	2.29E+02	1.18E+03	4.14E+02	2.62E+02	1.20E+03	1.64E-10
Niobium (41)	Nb-97	3.73E+00	7.46E-01	2.13E+00	3.32E+00	7.88E-01	0.87	5.05E+03	1.70E+04	8.52E+04	2.99E+04	1.92E+04	8.07E+04	6.35E-10
Niobium (41)	Nb-97m	4.18E+00	8.21E-01	2.35E+00	3.69E+00	8.11E-01	0.87	3.64E+05	1.10E+06	5.59E+06	1.95E+06	1.24E+06	5.65E+06	5.67E-10
Niobium (41)	Nb-98	1.44E+01	2.72E+00	7.80E+00	1.24E+01	2.77E+00	0.84	7.07E+03	6.39E+03	3.39E+04	1.18E+04	7.43E+03	3.33E+04	1.72E-10
Neodymium (60)	Nd-136	1.28E+00	2.95E-01	7.93E-01	1.17E+00	3.19E-01	0.884	7.19E+03	6.96E+04	3.02E+05	1.12E+05	7.59E+04	2.80E+05	2.55E-09
Neodymium (60)	Nd-138	8.77E-02	2.89E-02	6.17E-02	8.36E-02	4.38E-02	0.945	1.20E+03	1.59E+05	4.83E+05	2.26E+05	1.67E+05	3.19E+05	3.54E-08
Neodymium (60)	Nd-139	2.16E+00	4.46E-01	1.25E+00	1.94E+00	4.75E-01	0.87	1.23E+04	7.13E+04	3.46E+05	1.23E+05	7.96E+04	3.25E+05	1.57E-09
Neodymium (60)	Nd-139m	8.90E+00	1.73E+00	4.92E+00	7.74E+00	1.73E+00	0.898	1.10E+03	1.51E+03	7.80E+03	2.73E+03	1.74E+03	7.79E+03	3.70E-10
Neodymium (60)	Nd-141	2.87E-01	6.55E-02	1.67E-01	2.54E-01	7.98E-02	0.942	2.44E+03	9.87E+04	4.33E+05	1.69E+05	1.12E+05	3.55E+05	1.11E-08
Neodymium (60)	Nd-141m	4.36E+00	8.54E-01	2.44E+00	3.84E+00	8.54E-01	0.865	3.50E+05	1.02E+06	5.19E+06	1.81E+06	1.15E+06	5.19E+06	7.94E-10
Neodymium (60)	Nd-147	6.17E-01	1.45E-01	3.88E-01	5.69E-01	1.63E-01	0.89	2.30E+01	4.59E+02	1.96E+03	7.31E+02	4.98E+02	1.73E+03	5.68E-09
Neodymium (60)	Nd-149	1.90E+00	4.25E-01	1.18E+00	1.76E+00	4.74E-01	0.927	3.51E+03	2.18E+04	9.75E+04	3.51E+04	2.36E+04	8.75E+04	1.80E-09
Neodymium (60)	Nd-151	5.13E+00	1.02E+00	2.89E+00	4.49E+00	1.08E+00	0.928	2.93E+04	6.74E+04	3.39E+05	1.20E+05	7.69E+04	3.21E+05	6.74E-10
Neon (10)	Ne-19	5.65E+00	1.18E+00	3.34E+00	5.13E+00	1.28E+00	0.883	1.27E+06	2.79E+06	1.33E+07	4.71E+06	3.07E+06	1.23E+07	8.09E-11
Nickel (28)	Ni-56	9.68E+00	1.92E+00	5.48E+00	8.54E+00	1.89E+00	0.869	4.15E+01	5.40E+01	2.72E+02	9.53E+01	6.12E+01	2.76E+02	1.41E-10
Nickel (28)	Ni-57	1.17E+01	2.11E+00	6.08E+00	9.83E+00	2.05E+00	0.829	1.68E+02	1.89E+02	1.05E+03	3.66E+02	2.26E+02	1.08E+03	1.25E-10
Nickel (28)	Ni-59	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	9.24E-06						
Nickel (28)	Ni-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.22E-03						
Nickel (28)	Ni-65	3.41E+00	6.12E-01	1.76E+00	2.85E+00	6.64E-01	0.831	2.41E+03	9.30E+03	5.19E+04	1.81E+04	1.11E+04	4.78E+04	4.87E-10
Nickel (28)	Ni-66	3.64E-05	1.77E-05	3.23E-05	3.62E-05	3.30E-05	0.927	1.11E+02	3.61E+07	7.42E+07	4.07E+07	3.63E+07	3.98E+07	4.16E-05
Neptunium (93)	Np-232	6.58E+00	1.33E+00	3.77E+00	5.84E+00	1.32E+00	0.916	2.48E+04	4.50E+04	2.23E+05	7.86E+04	5.07E+04	2.25E+05	8.17E-10
Neptunium (93)	Np-233	2.95E-01	8.77E-02	2.24E-01	2.91E-01	9.09E-02	0.951	1.01E+04	3.93E+05	1.32E+06	5.18E+05	3.98E+05	1.27E+06	1.77E-08
Neptunium (93)	Np-234	8.77E+00	1.56E+00	4.49E+00	7.27E+00	1.53E+00	0.966	5.75E+01	7.43E+01	4.19E+02	1.45E+02	8.96E+01	4.26E+02	5.87E-10
Neptunium (93)	Np-235	2.82E-03	1.07E-03	2.29E-03	2.82E-03	3.34E-03	1	6.39E-01	5.26E+03	1.38E+04	6.46E+03	5.26E+03	4.44E+03	3.76E-06
Neptunium (93)	Np-236	4.16E-01	1.22E-01	3.15E-01	4.12E-01	1.30E-01	0.999	6.03E-06	2.64E+01	9.01E+01	3.48E+01	2.66E+01	8.46E+01	2.00E-03
Neptunium (93)	Np-236m	1.72E-01	4.87E-02	1.25E-01	1.66E-01	5.11E-02	0.999	2.70E+02	1.72E+04	6.08E+04	2.36E+04	1.78E+04	5.79E+04	2.93E-08
Neptunium (93)	Np-237	6.94E-02	2.31E-02	5.52E-02	6.92E-02	2.94E-02	0.973	3.24E-07	1.62E+02	4.87E+02	2.04E+02	1.63E+02	3.83E+02	2.30E-01
Neptunium (93)	Np-237+D						0.973	3.24E-07						
Neptunium (93)	Np-237+E	1.01E+00	2.41E-01	6.66E-01	9.59E-01	2.46E-01	0.973	3.24E-07	1.12E+01	4.68E+01	1.69E+01	1.17E+01	4.57E+01	1.58E-02
Neptunium (93)	Np-238	3.25E+00	6.10E-01	1.75E+00	2.80E+00	6.23E-01	0.995	1.19E+02	4.05E+02	2.16E+03	7.49E+02	4.70E+02	2.11E+03	1.57E-09
Neptunium (93)	Np-239	6.88E-01	1.77E-01	4.79E-01	6.66E-01	1.80E-01	0.945	1.07E+02	1.81E+03	7.04E+03	2.60E+03	1.87E+03	6.93E+03	7.81E-09
Neptunium (93)	Np-240	7.25E+00	1.45E+00	4.12E+00	6.42E+00	1.45E+00	0.954	5.60E+03	8.87E+03	4.45E+04	1.56E+04	1.00E+04	4.44E+04	7.37E-10
Neptunium (93)	Np-240m	1.90E+00	3.80E-01	1.07E+00	1.68E+00	4.52E-01	0.97	4.92E+04	2.92E+05	1.46E+06	5.17E+05	3.31E+05	1.23E+06	2.76E-09
Oxygen (8)	O-15	5.61E+00	1.17E+00	3.32E+00	5.09E+00	1.25E+00	0.883	1.79E+05	3.95E+05	1.90E+06	6.68E+05	4.35E+05	1.78E+06	6.43E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Osmium (76)	Os-180	1.41E-01	5.22E-02	1.13E-01	1.36E-01	6.29E-02	0.97	1.66E+04	1.33E+06	3.58E+06	1.66E+06	1.37E+06	2.97E+06	2.80E-08
Osmium (76)	Os-181	6.75E+00	1.33E+00	3.77E+00	5.87E+00	1.32E+00	0.918	3.47E+03	6.13E+03	3.11E+04	1.10E+04	7.04E+03	3.14E+04	6.21E-10
Osmium (76)	Os-182	2.07E+00	4.70E-01	1.29E+00	1.92E+00	4.74E-01	0.95	2.76E+02	1.54E+03	6.77E+03	2.46E+03	1.66E+03	6.71E+03	1.97E-09
Osmium (76)	Os-185	3.90E+00	7.96E-01	2.24E+00	3.47E+00	7.95E-01	0.871	2.69E+00	9.31E+00	4.56E+01	1.62E+01	1.05E+01	4.57E+01	1.24E-09
Osmium (76)	Os-189m	1.76E-06	1.76E-06	1.76E-06	1.76E-06	5.64E-05	1	1.01E+03	6.29E+09	6.29E+09	6.29E+09	6.29E+09	1.97E+08	2.28E-03
Osmium (76)	Os-190m	8.50E+00	1.78E+00	5.09E+00	7.76E+00	1.76E+00	0.887	3.68E+04	5.34E+04	2.54E+05	8.92E+04	5.85E+04	2.58E+05	5.35E-10
Osmium (76)	Os-191	2.14E-01	7.27E-02	1.72E-01	2.13E-01	7.88E-02	0.945	1.64E+01	8.87E+02	2.62E+03	1.11E+03	8.95E+02	2.42E+03	2.00E-08
Osmium (76)	Os-191m	1.38E-02	6.21E-03	1.26E-02	1.38E-02	7.47E-03	0.98	4.66E+02	3.77E+05	8.38E+05	4.14E+05	3.77E+05	6.97E+05	3.00E-07
Osmium (76)	Os-193	3.41E-01	8.11E-02	2.18E-01	3.17E-01	1.12E-01	0.939	2.02E+02	6.91E+03	2.91E+04	1.08E+04	7.44E+03	2.11E+04	1.28E-08
Osmium (76)	Os-194	9.31E-04	6.17E-04	9.18E-04	9.31E-04	1.11E-03	0.994	1.16E-01	1.25E+04	1.89E+04	1.27E+04	1.25E+04	1.05E+04	4.09E-05
Osmium (76)	Os-194+D	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	0.903	1.16E-01	2.45E+01	1.07E+02	4.10E+01	2.71E+01	6.05E+01	7.99E-08
Osmium (76)	Os-194+E	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	0.903	1.16E-01	2.45E+01	1.07E+02	4.10E+01	2.71E+01	6.05E+01	7.99E-08
Phosphorus (15)	P-30	5.69E+00	1.21E+00	3.38E+00	5.17E+00	1.32E+00	0.883	1.46E+05	3.18E+05	1.50E+06	5.35E+05	3.50E+05	1.37E+06	1.27E-10
Phosphorus (15)	P-32	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	0.927	1.77E+01	1.03E+04	1.69E+04	1.24E+04	1.06E+04	2.10E+03	3.61E-08
Phosphorus (15)	P-33	5.02E-05	2.37E-05	4.40E-05	5.00E-05	4.25E-05	0.927	9.96E+00	2.34E+06	4.97E+06	2.67E+06	2.35E+06	2.77E+06	1.51E-05
Protactinium (91)	Pa-227	5.65E-02	1.92E-02	4.61E-02	5.65E-02	2.11E-02	1	9.51E+03	1.84E+06	5.42E+06	2.26E+06	1.84E+06	4.93E+06	8.54E-08
Protactinium (91)	Pa-228	6.38E+00	1.24E+00	3.54E+00	5.54E+00	1.23E+00	1	2.76E+02	4.74E+02	2.43E+03	8.53E+02	5.45E+02	2.47E+03	7.60E-10
Protactinium (91)	Pa-230	3.56E+00	7.14E-01	2.03E+00	3.13E+00	7.08E-01	1	1.45E+01	4.47E+01	2.23E+02	7.83E+01	5.08E+01	2.25E+02	1.37E-09
Protactinium (91)	Pa-231	1.76E-01	4.03E-02	1.12E-01	1.66E-01	4.41E-02	0.994	2.12E-05	6.26E+01	2.73E+02	9.81E+01	6.64E+01	2.50E+02	1.33E-03
Protactinium (91)	Pa-232	5.35E+00	1.04E+00	2.98E+00	4.68E+00	1.03E+00	0.952	1.93E+02	4.15E+02	2.13E+03	7.44E+02	4.74E+02	2.16E+03	9.67E-10
Protactinium (91)	Pa-233	9.40E-01	2.18E-01	6.10E-01	8.90E-01	2.17E-01	0.951	9.37E+00	1.15E+02	4.94E+02	1.77E+02	1.21E+02	4.97E+02	5.54E-09
Protactinium (91)	Pa-234	1.09E+01	2.11E+00	6.04E+00	9.47E+00	2.10E+00	0.957	9.06E+02	9.53E+02	4.92E+03	1.72E+03	1.09E+03	4.94E+03	4.78E-10
Protactinium (91)	Pa-234m	9.85E-02	3.13E-02	6.21E-02	8.80E-02	1.26E-01	0.999	3.11E+05	3.47E+07	1.09E+08	5.49E+07	3.88E+07	2.71E+07	5.05E-08
Lead (82)	Pb-195m	8.67E+00	1.78E+00	5.04E+00	7.78E+00	1.77E+00	0.902	2.31E+04	3.23E+04	1.57E+05	5.56E+04	3.60E+04	1.58E+05	5.30E-10
Lead (82)	Pb-198	2.05E+00	4.74E-01	1.31E+00	1.92E+00	4.74E-01	0.936	2.53E+03	1.44E+04	6.25E+04	2.27E+04	1.54E+04	6.25E+04	2.19E-09
Lead (82)	Pb-199	8.56E+00	1.61E+00	4.61E+00	7.31E+00	1.59E+00	0.958	4.05E+03	5.40E+03	2.87E+04	1.00E+04	6.33E+03	2.91E+04	5.16E-10
Lead (82)	Pb-200	7.63E-01	2.11E-01	5.46E-01	7.39E-01	2.17E-01	0.939	2.82E+02	4.32E+03	1.56E+04	6.03E+03	4.46E+03	1.52E+04	5.93E-09
Lead (82)	Pb-201	3.99E+00	8.34E-01	2.35E+00	3.58E+00	8.26E-01	0.96	6.46E+02	1.85E+03	8.84E+03	3.13E+03	2.06E+03	8.92E+03	1.11E-09
Lead (82)	Pb-202	7.33E-06	7.33E-06	7.33E-06	7.33E-06	2.23E-04	1	2.31E-06	1.49E+06	1.49E+06	1.49E+06	1.49E+06	4.91E+04	2.53E+02
Lead (82)	Pb-202+D	1.40E+01					0.906	2.31E-06	8.63E-01					1.46E-04
Lead (82)	Pb-202+E	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	0.906	2.31E-06	5.18E+00	2.35E+01	8.45E+00	5.64E+00	2.35E+01	8.80E-04
Lead (82)	Pb-202m	1.17E+01	2.29E+00	6.56E+00	1.03E+01	2.25E+00	0.994	1.68E+03	1.58E+03	8.05E+03	2.81E+03	1.80E+03	8.20E+03	3.70E-10
Lead (82)	Pb-203	1.38E+00	3.34E-01	9.12E-01	1.31E+00	3.34E-01	0.921	1.17E+02	1.01E+03	4.15E+03	1.52E+03	1.06E+03	4.15E+03	3.40E-09
Lead (82)	Pb-205	8.19E-06	8.19E-06	8.19E-06	8.19E-06	2.43E-04	1	4.85E-08	1.34E+06	1.34E+06	1.34E+06	1.34E+06	4.51E+04	1.10E+04
Lead (82)	Pb-209	7.52E-04	2.95E-04	5.95E-04	7.40E-04	3.72E-03	0.927	1.87E+03	2.93E+07	7.48E+07	3.71E+07	2.98E+07	5.92E+06	6.37E-06
Lead (82)	Pb-210	1.98E-03	1.26E-03	1.96E-03	1.98E-03	2.49E-03	0.996	3.11E-02	5.65E+03	8.84E+03	5.70E+03	5.65E+03	4.49E+03	7.41E-05
Lead (82)	Pb-211	2.91E-01	6.17E-02	1.69E-01	2.59E-01	1.11E-01	0.894	1.01E+04	4.25E+05	2.00E+06	7.31E+05	4.77E+05	1.11E+06	1.72E-08
Lead (82)	Pb-212	6.45E-01	1.59E-01	4.36E-01	6.21E-01	1.58E-01	0.919	5.71E+02	1.05E+04	4.28E+04	1.56E+04	1.09E+04	4.32E+04	7.60E-09
Lead (82)	Pb-214	1.24E+00	2.78E-01	7.80E-01	1.16E+00	2.80E-01	0.929	1.36E+04	1.29E+05	5.76E+05	2.05E+05	1.38E+05	5.72E+05	3.95E-09
Palladium (46)	Pd-100	2.89E-01	1.04E-01	2.41E-01	2.89E-01	1.24E-01	0.973	6.97E+01	2.71E+03	7.52E+03	3.26E+03	2.71E+03	6.34E+03	7.55E-09
Palladium (46)	Pd-101	1.74E+00	3.52E-01	1.01E+00	1.55E+00	3.61E-01	0.893	7.34E+02	5.18E+03	2.55E+04	8.95E+03	5.79E+03	2.50E+04	1.38E-09
Palladium (46)	Pd-103	1.88E-03	1.43E-03	1.66E-03	1.84E-03	8.95E-03	0.998	1.49E+01	8.69E+04	1.14E+05	9.85E+04	8.90E+04	1.83E+04	1.16E-06
Palladium (46)	Pd-107	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.07E-07						
Palladium (46)	Pd-109	1.80E-02	7.22E-03	1.41E-02	1.75E-02	4.35E-02	0.992	4.52E+02	2.78E+05	6.91E+05	3.53E+05	2.84E+05	1.15E+05	1.30E-07
Promethium (61)	Pm-141	4.18E+00	8.43E-01	2.39E+00	3.71E+00	9.02E-01	0.877	1.74E+04	5.21E+04	2.58E+05	9.12E+04	5.86E+04	2.41E+05	8.18E-10
Promethium (61)	Pm-142	4.89E+00	1.03E+00	2.85E+00	4.40E+00	1.12E+00	0.88	5.40E+05	1.37E+06	6.55E+06	2.35E+06	1.53E+06	5.98E+06	7.02E-10
Promethium (61)	Pm-143	1.66E+00	3.36E-01	9.40E-01	1.47E+00	3.47E-01	0.918	9.55E-01	1.12E+01	5.51E+01	1.97E+01	1.26E+01	5.34E+01	3.24E-09
Promethium (61)	Pm-144	8.65E+00	1.75E+00	4.98E+00	7.72E+00	1.74E+00	0.875	6.97E-01	2.01E+00	9.95E+00	3.49E+00	2.25E+00	9.99E+00	8.05E-10
Promethium (61)	Pm-145	2.31E-02	1.58E-02	2.26E-02	2.31E-02	3.05E-02	0.968	3.92E-02	4.99E+02	7.31E+02	5.11E+02	4.99E+02	3.79E+02	3.58E-06
Promethium (61)	Pm-146	4.12E+00	8.37E-01	2.39E+00	3.69E+00	8.39E-01	0.873	1.25E-01	3.24E+00	1.59E+01	5.59E+00	3.61E+00	1.59E+01	7.32E-09
Promethium (61)	Pm-147	4.29E-05	1.88E-05	3.66E-05	4.27E-05	3.27E-05	0.942	2.64E-01	3.08E+05	7.02E+05	3.62E+05	3.10E+05	4.05E+05	3.33E-04
Promethium (61)	Pm-148	3.49E+00	6.49E-01	1.85E+00	2.97E+00	7.13E-01	0.845	4.71E+01	1.75E+02	9.40E+02	3.29E+02	2.06E+02	8.56E+02	1.07E-09
Promethium (61)	Pm-148m	1.12E+01	2.26E+00	6.43E+00	1.00E+01	2.23E+00	0.875	6.12E+00	6.83E+00	3.40E+01	1.19E+01	7.66E+00	3.45E+01	3.20E-10
Promethium (61)	Pm-149	5.95E-02	1.45E-02	3.77E-02	5.56E-02	4.71E-02	0.898	1.14E+02	2.34E+04	9.65E+04	3.70E+04	2.51E+04	2.96E+04	5.93E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Promethium (61)	Pm-150	8.56E+00	1.59E+00	4.57E+00	7.29E+00	1.65E+00	0.899	2.27E+03	3.22E+03	1.73E+04	6.04E+03	3.78E+03	1.68E+04	4.14E-10
Promethium (61)	Pm-151	1.61E+00	3.52E-01	9.88E-01	1.48E+00	3.71E-01	0.939	2.14E+02	1.55E+03	7.07E+03	2.52E+03	1.68E+03	6.72E+03	2.12E-09
Polonium (84)	Po-203	9.53E+00	1.80E+00	5.17E+00	8.17E+00	1.79E+00	0.935	9.92E+03	1.22E+04	6.44E+04	2.25E+04	1.42E+04	6.51E+04	4.84E-10
Polonium (84)	Po-205	9.16E+00	1.74E+00	4.96E+00	7.87E+00	1.72E+00	0.955	3.37E+03	4.22E+03	2.23E+04	7.79E+03	4.91E+03	2.25E+04	4.98E-10
Polonium (84)	Po-207	7.59E+00	1.47E+00	4.20E+00	6.58E+00	1.45E+00	0.955	1.04E+03	1.57E+03	8.12E+03	2.84E+03	1.81E+03	8.25E+03	6.07E-10
Polonium (84)	Po-210	4.92E-05	9.55E-06	2.74E-05	4.31E-05	9.44E-06	0.86	1.83E+00	5.63E+05	2.90E+06	1.01E+06	6.44E+05	2.94E+06	1.26E-04
Polonium (84)	Po-211	4.48E-02	8.77E-03	2.52E-02	3.94E-02	8.66E-03	0.865	4.24E+07	1.20E+10	6.12E+10	2.13E+10	1.36E+10	6.19E+10	1.16E-07
Polonium (84)	Po-212	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.17E+13						
Polonium (84)	Po-213	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	5.20E+12						
Polonium (84)	Po-214	4.83E-04	9.36E-05	2.69E-04	4.23E-04	9.25E-05	0.861	1.33E+11	3.50E+15	1.81E+16	6.30E+15	4.00E+15	1.83E+16	1.09E-05
Polonium (84)	Po-215	9.44E-04	2.00E-04	5.69E-04	8.67E-04	1.96E-04	0.89	1.23E+10	1.60E+14	7.57E+14	2.66E+14	1.74E+14	7.70E+14	5.44E-06
Polonium (84)	Po-216	9.81E-05	1.90E-05	5.45E-05	8.60E-05	1.88E-05	0.86	1.46E+08	1.89E+13	9.75E+13	3.41E+13	2.16E+13	9.87E+13	5.44E-05
Polonium (84)	Po-218	5.32E-05	1.02E-05	2.93E-05	4.64E-05	1.01E-05	0.858	1.19E+05	2.87E+10	1.49E+11	5.21E+10	3.28E+10	1.51E+11	1.02E-04
Praseodymium (59)	Pr-136	1.22E+01	2.35E+00	6.71E+00	1.06E+01	2.38E+00	0.855	2.78E+04	2.92E+04	1.52E+05	5.30E+04	3.36E+04	1.50E+05	2.77E-10
Praseodymium (59)	Pr-137	2.69E+00	5.54E-01	1.56E+00	2.41E+00	5.80E-01	0.885	4.76E+03	2.19E+04	1.06E+05	3.77E+04	2.45E+04	1.01E+05	1.22E-09
Praseodymium (59)	Pr-138	4.53E+00	9.57E-01	2.67E+00	4.08E+00	1.05E+00	0.879	2.51E+05	6.90E+05	3.27E+06	1.17E+06	7.66E+05	2.99E+06	7.36E-10
Praseodymium (59)	Pr-138m	1.42E+01	2.76E+00	7.89E+00	1.24E+01	2.74E+00	0.868	2.89E+03	2.57E+03	1.32E+04	4.62E+03	2.94E+03	1.33E+04	2.38E-10
Praseodymium (59)	Pr-139	5.56E-01	1.20E-01	3.25E-01	4.98E-01	1.37E-01	0.937	1.35E+03	2.83E+04	1.31E+05	4.85E+04	3.16E+04	1.15E+05	5.67E-09
Praseodymium (59)	Pr-142	4.03E-01	8.17E-02	2.09E-01	3.32E-01	1.72E-01	0.821	3.17E+02	1.05E+04	5.18E+04	2.03E+04	1.27E+04	2.47E+04	9.12E-09
Praseodymium (59)	Pr-142m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	2.49E+04						
Praseodymium (59)	Pr-143	2.91E-03	1.52E-03	2.39E-03	2.85E-03	2.40E-02	0.864	1.87E+01	8.13E+04	1.55E+05	9.90E+04	8.29E+04	9.83E+03	1.21E-06
Praseodymium (59)	Pr-144	2.67E-01	7.14E-02	1.52E-01	2.28E-01	1.90E-01	0.821	2.11E+04	1.05E+06	3.94E+06	1.85E+06	1.24E+06	1.48E+06	1.40E-08
Praseodymium (59)	Pr-144m	1.20E-02	6.23E-03	9.66E-03	1.14E-02	1.23E-02	0.964	5.06E+04	4.79E+07	9.23E+07	5.95E+07	5.06E+07	4.69E+07	2.65E-07
Praseodymium (59)	Pr-145	9.51E-02	2.69E-02	5.82E-02	8.49E-02	1.09E-01	0.86	1.02E+03	1.36E+05	4.81E+05	2.22E+05	1.52E+05	1.18E+05	3.77E-08
Praseodymium (59)	Pr-147	4.74E+00	9.57E-01	2.69E+00	4.18E+00	1.04E+00	0.896	2.68E+04	6.91E+04	3.42E+05	1.22E+05	7.83E+04	3.13E+05	7.36E-10
Platinum (78)	Pt-186	4.01E+00	8.21E-01	2.31E+00	3.58E+00	8.17E-01	0.887	3.04E+03	9.35E+03	4.57E+04	1.62E+04	1.05E+04	4.59E+04	1.11E-09
Platinum (78)	Pt-188	7.68E-01	2.05E-01	5.32E-01	7.37E-01	2.12E-01	0.928	2.48E+01	3.81E+02	1.43E+03	5.51E+02	3.97E+02	1.38E+03	5.60E-09
Platinum (78)	Pt-189	1.47E+00	3.39E-01	9.08E-01	1.33E+00	3.49E-01	0.947	5.58E+02	4.39E+03	1.90E+04	7.11E+03	4.84E+03	1.85E+04	2.89E-09
Platinum (78)	Pt-191	1.24E+00	3.11E-01	8.17E-01	1.16E+00	3.24E-01	0.945	9.03E+01	8.41E+02	3.36E+03	1.28E+03	9.02E+02	3.23E+03	3.45E-09
Platinum (78)	Pt-193	6.30E-06	6.30E-06	6.30E-06	6.30E-06	1.80E-04	1	1.39E-02	1.75E+06	1.75E+06	1.75E+06	1.75E+06	6.14E+04	4.73E-02
Platinum (78)	Pt-193m	2.22E-02	9.34E-03	1.98E-02	2.22E-02	1.09E-02	0.976	5.84E+01	2.95E+04	7.01E+04	3.32E+04	2.95E+04	6.03E+04	1.89E-07
Platinum (78)	Pt-195m	1.65E-01	6.40E-02	1.42E-01	1.65E-01	7.22E-02	0.955	6.29E+01	4.37E+03	1.13E+04	5.10E+03	4.37E+03	9.99E+03	2.63E-08
Platinum (78)	Pt-197	7.25E-02	2.29E-02	5.61E-02	7.14E-02	2.79E-02	0.961	3.32E+02	5.21E+04	1.65E+05	6.73E+04	5.29E+04	1.36E+05	6.00E-08
Platinum (78)	Pt-197m	3.04E-01	8.08E-02	2.07E-01	2.89E-01	8.50E-02	0.959	3.86E+03	1.45E+05	5.46E+05	2.13E+05	1.52E+05	5.19E+05	1.44E-08
Platinum (78)	Pt-199	1.10E+00	2.33E-01	6.53E-01	9.96E-01	2.88E-01	0.927	1.18E+04	1.27E+05	5.99E+05	2.14E+05	1.40E+05	4.85E+05	4.16E-09
Platinum (78)	Pt-200	2.01E-01	5.84E-02	1.47E-01	1.96E-01	6.37E-02	0.95	4.86E+02	2.78E+04	9.59E+04	3.80E+04	2.86E+04	8.79E+04	2.22E-08
Plutonium (94)	Pu-234	2.07E-01	6.43E-02	1.63E-01	2.07E-01	6.75E-02	0.999	6.90E+02	3.65E+04	1.18E+05	4.64E+04	3.65E+04	1.12E+05	2.40E-08
Plutonium (94)	Pu-235	3.04E-01	8.88E-02	2.28E-01	2.97E-01	9.34E-02	0.955	1.44E+04	5.43E+05	1.86E+06	7.26E+05	5.57E+05	1.77E+06	1.72E-08
Plutonium (94)	Pu-236	1.81E-04	1.18E-04	1.61E-04	1.79E-04	8.58E-04	0.999	2.43E-01	6.83E+04	1.05E+05	7.67E+04	6.90E+04	1.44E+04	1.29E-04
Plutonium (94)	Pu-237	1.45E-01	4.57E-02	1.14E-01	1.45E-01	4.96E-02	0.999	5.58E+00	4.24E+02	1.34E+03	5.38E+02	4.24E+02	1.24E+03	3.49E-08
Plutonium (94)	Pu-238	1.16E-04	8.77E-05	1.08E-04	1.16E-04	7.31E-04	0.999	7.90E-03	9.46E+04	1.26E+05	1.02E+05	9.52E+04	1.51E+04	5.53E-03
Plutonium (94)	Pu-239	2.63E-04	8.88E-05	1.88E-04	2.52E-04	3.31E-04	0.999	2.88E-05	4.17E+04	1.23E+05	5.82E+04	4.35E+04	3.31E+04	6.71E-01
Plutonium (94)	Pu-240	1.12E-04	8.58E-05	1.06E-04	1.12E-04	7.01E-04	0.999	1.06E-04	9.76E+04	1.28E+05	1.04E+05	9.76E+04	1.56E+04	4.29E-01
Plutonium (94)	Pu-241	5.30E-06	1.63E-06	4.10E-06	5.28E-06	2.01E-06	0.974	4.81E-02	2.17E+06	7.06E+06	2.81E+06	2.18E+06	5.74E+06	2.11E-02
Plutonium (94)	Pu-242	9.90E-05	7.25E-05	9.21E-05	9.90E-05	5.81E-04	0.999	1.84E-06	1.11E+05	1.51E+05	1.19E+05	1.11E+05	1.89E+04	2.82E+01
Plutonium (94)	Pu-243	7.11E-02	2.33E-02	5.61E-02	7.01E-02	2.65E-02	0.952	1.22E+03	1.98E+05	6.04E+05	2.51E+05	2.01E+05	5.32E+05	7.63E-08
Plutonium (94)	Pu-244	1.38E-01	2.41E-02	6.96E-02	1.13E-01	2.36E-02	1.78	8.66E-09	4.47E+01	2.56E+02	8.84E+01	5.44E+01	2.61E+02	2.44E+00
Plutonium (94)	Pu-244+D	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	0.973	8.66E-09	5.54E+00	2.78E+01	9.84E+00	6.29E+00	2.35E+01	3.03E-01
Plutonium (94)	Pu-244+E	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	0.973	8.66E-09	5.54E+00	2.78E+01	9.84E+00	6.29E+00	2.35E+01	3.03E-01
Plutonium (94)	Pu-245	2.22E+00	4.61E-01	1.31E+00	2.00E+00	4.74E-01	0.95	5.78E+02	3.00E+03	1.45E+04	5.09E+03	3.34E+03	1.41E+04	2.47E-09
Plutonium (94)	Pu-246	5.17E-01	1.38E-01	3.66E-01	5.04E-01	1.44E-01	0.955	2.33E+01	5.17E+02	1.94E+03	7.31E+02	5.31E+02	1.86E+03	1.06E-08
Radium (88)	Ra-222	4.70E-02	1.03E-02	2.95E-02	4.40E-02	1.01E-02	0.903	5.75E+05	1.48E+08	6.75E+08	2.37E+08	1.58E+08	6.90E+08	1.11E-07
Radium (88)	Ra-223	5.52E-01	1.41E-01	3.79E-01	5.30E-01	1.41E-01	0.958	2.21E+01	4.58E+02	1.80E+03	6.68E+02	4.77E+02	1.79E+03	8.96E-09
Radium (88)	Ra-223+D	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	0.945	2.21E+01	1.84E+02	7.85E+02	2.88E+02	1.97E+02	5.97E+02	3.61E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Radium (88)	Ra-223+E	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	0.945	2.21E+01	1.84E+02	7.85E+02	2.88E+02	1.97E+02	5.97E+02	3.61E-09
Radium (88)	Ra-224	4.72E-02	1.09E-02	3.10E-02	4.51E-02	1.07E-02	0.916	6.91E+01	1.75E+04	7.56E+04	2.67E+04	1.83E+04	7.74E+04	1.10E-07
Radium (88)	Ra-224+D	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	0.898	6.91E+01	8.72E+01	5.06E+02	1.75E+02	1.08E+02	5.01E+02	5.49E-10
Radium (88)	Ra-224+E	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	0.898	6.91E+01	8.72E+01	5.06E+02	1.75E+02	1.08E+02	5.01E+02	5.49E-10
Radium (88)	Ra-225	8.60E-03	6.21E-03	8.54E-03	8.58E-03	1.25E-02	0.977	1.71E+01	2.23E+04	3.08E+04	2.24E+04	2.23E+04	1.53E+04	5.69E-07
Radium (88)	Ra-225+D	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	0.964	1.71E+01	1.63E+02	7.49E+02	2.70E+02	1.80E+02	6.23E+02	4.17E-09
Radium (88)	Ra-225+E	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	0.964	1.71E+01	1.63E+02	7.49E+02	2.70E+02	1.80E+02	6.23E+02	4.17E-09
Radium (88)	Ra-226	2.91E-02	7.24E-03	2.00E-02	2.82E-02	7.13E-03	0.928	4.33E-04	4.06E+02	1.63E+03	5.91E+02	4.19E+02	1.66E+03	4.11E-04
Radium (88)	Ra-226+D	1.06E+01					0.926	4.33E-04	1.11E+00					1.13E-06
Radium (88)	Ra-226+E	1.06E+01	1.94E+00	5.60E+00	8.95E+00	1.97E+00	0.926	4.33E-04	1.11E+00	6.10E+00	2.11E+00	1.32E+00	6.00E+00	1.13E-06
Radium (88)	Ra-227	7.87E-01	1.76E-01	4.89E-01	7.31E-01	2.12E-01	0.979	8.63E+03	1.23E+05	5.49E+05	1.98E+05	1.32E+05	4.55E+05	6.26E-09
Radium (88)	Ra-227+D						0.979	8.63E+03						
Radium (88)	Ra-228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.21E-01						
Radium (88)	Ra-228+D	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	0.926	1.21E-01	2.22E+00	1.17E+01	4.08E+00	2.57E+00	1.15E+01	8.15E-09
Radium (88)	Ra-228+E	1.53E+01	2.74E+00	7.89E+00	1.27E+01	2.78E+00	0.926	1.21E-01	8.20E-01	4.58E+00	1.59E+00	9.85E-01	4.52E+00	3.01E-09
Rubidium (37)	Rb-79	7.39E+00	1.54E+00	4.38E+00	6.70E+00	1.61E+00	0.914	1.59E+04	2.58E+04	1.23E+05	4.35E+04	2.85E+04	1.18E+05	2.49E-10
Rubidium (37)	Rb-80	7.03E+00	1.49E+00	4.16E+00	6.38E+00	1.61E+00	0.883	6.43E+05	1.13E+06	5.34E+06	1.92E+06	1.25E+06	4.95E+06	2.74E-10
Rubidium (37)	Rb-81	3.26E+00	6.94E-01	1.98E+00	3.00E+00	6.98E-01	0.902	1.33E+03	4.93E+03	2.32E+04	8.14E+03	5.36E+03	2.31E+04	5.85E-10
Rubidium (37)	Rb-81m	1.18E-02	4.21E-03	9.85E-03	1.18E-02	5.73E-03	0.999	1.14E+04	1.06E+07	2.96E+07	1.27E+07	1.06E+07	2.18E+07	1.46E-07
Rubidium (37)	Rb-82	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	2.80E+05	5.68E+05	2.70E+06	9.65E+05	6.27E+05	2.48E+06	3.23E-10
Rubidium (37)	Rb-82m	1.69E+01	3.25E+00	9.33E+00	1.47E+01	3.20E+00	0.862	9.79E+02	7.34E+02	3.83E+03	1.33E+03	8.44E+02	3.89E+03	1.19E-10
Rubidium (37)	Rb-83	2.74E+00	5.63E-01	1.61E+00	2.48E+00	5.55E-01	0.944	2.93E+00	1.31E+01	6.38E+01	2.24E+01	1.45E+01	6.47E+01	7.20E-10
Rubidium (37)	Rb-84	5.26E+00	1.03E+00	2.95E+00	4.63E+00	1.02E+00	0.94	7.72E+00	1.71E+01	8.77E+01	3.05E+01	1.94E+01	8.82E+01	3.61E-10
Rubidium (37)	Rb-86	5.87E-01	1.17E-01	3.19E-01	5.04E-01	1.95E-01	0.844	1.36E+01	2.99E+02	1.50E+03	5.51E+02	3.49E+02	9.02E+02	3.69E-09
Rubidium (37)	Rb-87	1.21E-04	5.24E-05	1.04E-04	1.21E-04	8.52E-05	0.927	1.47E-11	9.74E+04	2.25E+05	1.14E+05	9.77E+04	1.39E+05	1.12E+06
Rubidium (37)	Rb-88	4.21E+00	7.61E-01	2.11E+00	3.43E+00	8.65E-01	0.809	2.05E+04	6.57E+04	3.64E+05	1.31E+05	8.07E+04	3.20E+05	5.48E-10
Rubidium (37)	Rb-89	1.30E+01	2.28E+00	6.56E+00	1.07E+01	2.30E+00	0.847	2.40E+04	2.38E+04	1.36E+05	4.72E+04	2.90E+04	1.35E+05	1.72E-10
Rhenium (75)	Re-177	3.28E+00	6.66E-01	1.85E+00	2.85E+00	6.94E-01	0.89	2.60E+04	9.75E+04	4.81E+05	1.73E+05	1.12E+05	4.61E+05	1.29E-09
Rhenium (75)	Re-178	7.05E+00	1.32E+00	3.75E+00	5.95E+00	1.34E+00	0.873	2.76E+04	4.91E+04	2.62E+05	9.23E+04	5.82E+04	2.58E+05	6.15E-10
Rhenium (75)	Re-180	6.60E+00	1.31E+00	3.69E+00	5.76E+00	1.31E+00	0.859	1.50E+05	2.89E+05	1.46E+06	5.17E+05	3.32E+05	1.46E+06	6.74E-10
Rhenium (75)	Re-181	3.99E+00	8.39E-01	2.35E+00	3.58E+00	8.40E-01	0.945	3.04E+02	8.81E+02	4.19E+03	1.50E+03	9.82E+02	4.19E+03	1.02E-09
Rhenium (75)	Re-182	1.03E+01	2.03E+00	5.76E+00	8.93E+00	2.02E+00	0.94	9.49E+01	1.08E+02	5.44E+02	1.92E+02	1.24E+02	5.47E+02	4.01E-10
Rhenium (75)	Re-182m	6.70E+00	1.27E+00	3.60E+00	5.69E+00	1.26E+00	0.926	4.78E+02	8.44E+02	4.45E+03	1.57E+03	9.94E+02	4.48E+03	6.24E-10
Rhenium (75)	Re-184	4.92E+00	9.79E-01	2.76E+00	4.31E+00	9.77E-01	0.897	6.66E+00	1.65E+01	8.31E+01	2.95E+01	1.89E+01	8.33E+01	8.86E-10
Rhenium (75)	Re-184m	1.90E+00	4.16E-01	1.14E+00	1.72E+00	4.19E-01	0.952	1.53E+00	1.18E+01	5.41E+01	1.97E+01	1.31E+01	5.37E+01	2.75E-09
Rhenium (75)	Re-186	7.18E-02	2.24E-02	5.45E-02	7.07E-02	5.16E-02	0.954	6.70E+01	1.07E+04	3.43E+04	1.41E+04	1.09E+04	1.49E+04	5.77E-08
Rhenium (75)	Re-186m	2.35E-02	1.13E-02	2.14E-02	2.35E-02	1.49E-02	0.985	3.47E-06	4.73E+02	9.85E+02	5.18E+02	4.73E+02	7.44E+02	4.93E-02
Rhenium (75)	Re-186m+D	9.55E-02					0.973	3.47E-06	1.18E+02					1.23E-02
Rhenium (75)	Re-186m+E	9.53E-02	3.36E-02	7.59E-02	9.42E-02	6.65E-02	0.973	3.47E-06	1.18E+02	3.35E+02	1.48E+02	1.19E+02	1.69E+02	1.23E-02
Rhenium (75)	Re-187	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.39E-11						
Rhenium (75)	Re-188	3.11E-01	7.87E-02	1.96E-01	2.85E-01	1.69E-01	0.903	3.58E+02	1.39E+04	5.51E+04	2.21E+04	1.52E+04	2.56E+04	1.42E-08
Rhenium (75)	Re-188m	1.69E-01	6.83E-02	1.46E-01	1.68E-01	7.90E-02	0.953	1.96E+04	1.33E+06	3.30E+06	1.54E+06	1.34E+06	2.85E+06	2.48E-08
Rhenium (75)	Re-189	3.08E-01	7.57E-02	2.05E-01	2.95E-01	9.81E-02	0.921	2.50E+02	9.65E+03	3.92E+04	1.45E+04	1.01E+04	3.03E+04	1.42E-08
Rhodium (45)	Rh-100	1.72E+01	2.98E+00	8.65E+00	1.41E+01	2.91E+00	0.886	2.92E+02	2.10E+02	1.21E+03	4.17E+02	2.55E+02	1.24E+03	1.40E-10
Rhodium (45)	Rh-101	1.12E+00	2.78E-01	7.68E-01	1.09E+00	2.80E-01	0.931	2.17E-01	1.17E+01	4.71E+01	1.70E+01	1.20E+01	4.67E+01	1.05E-08
Rhodium (45)	Rh-101m	1.51E+00	3.30E-01	9.42E-01	1.41E+00	3.30E-01	0.907	5.83E+01	4.68E+02	2.13E+03	7.47E+02	4.99E+02	2.13E+03	1.57E-09
Rhodium (45)	Rh-102	1.22E+01	2.39E+00	6.84E+00	1.07E+01	2.36E+00	0.861	2.39E-01	1.18E+00	5.99E+00	2.09E+00	1.33E+00	6.07E+00	9.74E-10
Rhodium (45)	Rh-102m	2.65E+00	5.43E-01	1.54E+00	2.39E+00	5.57E-01	0.987	1.22E+00	7.26E+00	3.54E+01	1.24E+01	8.05E+00	3.45E+01	1.18E-09
Rhodium (45)	Rh-103m	1.70E-04	1.63E-04	1.70E-04	1.70E-04	1.03E-03	0.998	6.49E+03	4.20E+08	4.36E+08	4.20E+08	4.20E+08	6.89E+07	1.29E-05
Rhodium (45)	Rh-105	3.97E-01	8.75E-02	2.50E-01	3.73E-01	8.66E-02	0.905	1.72E+02	5.23E+03	2.37E+04	8.31E+03	5.57E+03	2.40E+04	6.21E-09
Rhodium (45)	Rh-106	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	7.31E+05	7.29E+06	3.26E+07	1.24E+07	8.14E+06	2.25E+07	2.05E-09
Rhodium (45)	Rh-106m	1.71E+01	3.25E+00	9.34E+00	1.48E+01	3.21E+00	0.87	2.76E+03	2.04E+03	1.07E+04	3.72E+03	2.35E+03	1.08E+04	1.52E-10
Rhodium (45)	Rh-107	1.62E+00	3.56E-01	1.01E+00	1.51E+00	3.94E-01	0.9	1.68E+04	1.26E+05	5.73E+05	2.03E+05	1.35E+05	5.18E+05	1.56E-09
Rhodium (45)	Rh-99	3.15E+00	6.60E-01	1.86E+00	2.83E+00	6.61E-01	0.891	1.58E+01	6.16E+01	2.94E+02	1.04E+02	6.85E+01	2.94E+02	7.49E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Rhodium (45)	Rh-99m	3.79E+00	7.53E-01	2.16E+00	3.36E+00	7.46E-01	0.859	1.29E+03	4.35E+03	2.19E+04	7.61E+03	4.90E+03	2.21E+04	6.47E-10
Radon (86)	Rn-218	4.25E-03	8.56E-04	2.44E-03	3.80E-03	8.46E-04	0.875	6.24E+08	1.84E+12	9.13E+12	3.20E+12	2.05E+12	9.24E+12	1.24E-06
Radon (86)	Rn-219	2.85E-01	6.29E-02	1.78E-01	2.67E-01	6.16E-02	0.911	5.52E+06	2.32E+08	1.06E+09	3.72E+08	2.49E+08	1.08E+09	1.79E-08
Radon (86)	Rn-219+D	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	0.931	5.52E+06	7.75E+07	3.50E+08	1.27E+08	8.43E+07	2.24E+08	5.97E-09
Radon (86)	Rn-219+E	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	0.931	5.52E+06	7.75E+07	3.50E+08	1.27E+08	8.43E+07	2.24E+08	5.97E-09
Radon (86)	Rn-220	2.14E-03	4.36E-04	1.25E-03	1.92E-03	4.31E-04	0.88	3.93E+05	2.28E+09	1.12E+10	3.93E+09	2.55E+09	1.14E+10	2.48E-06
Radon (86)	Rn-222	2.18E-03	4.51E-04	1.29E-03	1.98E-03	4.46E-04	0.883	6.62E+01	3.76E+05	1.82E+06	6.37E+05	4.15E+05	1.84E+06	2.45E-06
Radon (86)	Rn-222+D	1.06E+01	1.94E+00	5.58E+00	8.91E+00	1.96E+00	0.926	6.62E+01	7.40E+01	4.03E+02	1.40E+02	8.78E+01	3.99E+02	4.82E-10
Radon (86)	Rn-222+E	1.06E+01	1.94E+00	5.58E+00	8.93E+00	2.01E+00	0.926	6.62E+01	7.40E+01	4.03E+02	1.40E+02	8.76E+01	3.90E+02	4.82E-10
Ruthenium (44)	Ru-103	2.57E+00	5.32E-01	1.51E+00	2.33E+00	5.24E-01	0.882	6.44E+00	3.11E+01	1.51E+02	5.29E+01	3.43E+01	1.53E+02	9.66E-10
Ruthenium (44)	Ru-105	4.40E+00	8.88E-01	2.54E+00	3.94E+00	9.13E-01	0.898	1.37E+03	3.79E+03	1.88E+04	6.57E+03	4.24E+03	1.83E+04	5.64E-10
Ruthenium (44)	Ru-105+D	4.79E+00	9.75E-01	2.78E+00	4.31E+00	9.99E-01	0.991	1.37E+03	3.15E+03	1.55E+04	5.44E+03	3.51E+03	1.51E+04	4.70E-10
Ruthenium (44)	Ru-106	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.87E-01						
Ruthenium (44)	Ru-106+D	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	6.87E-01	1.38E+01	6.17E+01	2.35E+01	1.54E+01	4.26E+01	4.13E-09
Ruthenium (44)	Ru-106+E	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	6.87E-01	1.38E+01	6.17E+01	2.35E+01	1.54E+01	4.26E+01	4.13E-09
Ruthenium (44)	Ru-94	2.89E+00	5.87E-01	1.68E+00	2.59E+00	5.84E-01	0.951	7.03E+03	2.80E+04	1.38E+05	4.82E+04	3.12E+04	1.39E+05	7.27E-10
Ruthenium (44)	Ru-97	1.09E+00	2.54E-01	7.14E-01	1.04E+00	2.52E-01	0.949	8.72E+01	9.21E+02	3.97E+03	1.41E+03	9.65E+02	3.99E+03	1.99E-09
Sulfur (16)	S-35	1.22E-05	6.96E-06	1.13E-05	1.22E-05	1.55E-05	0.927	2.89E+00	2.96E+06	5.20E+06	3.19E+06	2.96E+06	2.33E+06	6.95E-05
Antimony (51)	Sb-115	4.94E+00	1.02E+00	2.91E+00	4.48E+00	1.04E+00	0.891	1.15E+04	2.85E+04	1.38E+05	4.84E+04	3.14E+04	1.35E+05	5.55E-10
Antimony (51)	Sb-116	1.30E+01	2.37E+00	6.84E+00	1.10E+01	2.37E+00	0.867	2.31E+04	2.23E+04	1.23E+05	4.25E+04	2.65E+04	1.23E+05	2.18E-10
Antimony (51)	Sb-116m	1.83E+01	3.47E+00	9.94E+00	1.58E+01	3.42E+00	0.856	6.04E+03	4.21E+03	2.23E+04	7.77E+03	4.90E+03	2.26E+04	1.57E-10
Antimony (51)	Sb-117	7.35E-01	1.83E-01	4.98E-01	7.05E-01	1.93E-01	0.962	2.17E+03	3.36E+04	1.35E+05	4.96E+04	3.50E+04	1.28E+05	3.52E-09
Antimony (51)	Sb-118m	1.51E+01	2.82E+00	8.11E+00	1.29E+01	2.79E+00	0.87	1.21E+03	1.01E+03	5.43E+03	1.88E+03	1.18E+03	5.48E+03	1.91E-10
Antimony (51)	Sb-119	4.48E-03	4.35E-03	4.49E-03	4.48E-03	1.82E-02	0.992	1.59E+02	3.93E+05	4.05E+05	3.91E+05	3.93E+05	9.66E+04	5.69E-07
Antimony (51)	Sb-120	2.44E+00	5.07E-01	1.43E+00	2.20E+00	5.45E-01	0.927	2.29E+04	1.11E+05	5.34E+05	1.89E+05	1.23E+05	4.97E+05	1.13E-09
Antimony (51)	Sb-120m	1.43E+01	2.70E+00	7.74E+00	1.23E+01	2.66E+00	0.88	4.39E+01	3.83E+01	2.02E+02	7.06E+01	4.46E+01	2.05E+02	2.03E-10
Antimony (51)	Sb-122	2.48E+00	5.07E-01	1.44E+00	2.22E+00	5.66E-01	0.875	9.37E+01	4.73E+02	2.31E+03	8.16E+02	5.28E+02	2.07E+03	1.19E-09
Antimony (51)	Sb-124	1.11E+01	2.00E+00	5.78E+00	9.33E+00	1.98E+00	0.871	4.20E+00	4.85E+00	2.69E+01	9.28E+00	5.75E+00	2.70E+01	2.78E-10
Antimony (51)	Sb-124m	1.98E+00	3.99E-01	1.14E+00	1.77E+00	4.01E-01	0.875	2.35E+05	1.49E+06	7.37E+06	2.58E+06	1.67E+06	7.33E+06	1.52E-09
Antimony (51)	Sb-124n	1.37E-05	1.34E-05	1.38E-05	1.37E-05	5.92E-05	0.993	1.80E+04	1.45E+10	1.48E+10	1.44E+10	1.45E+10	3.36E+09	1.94E-04
Antimony (51)	Sb-125	2.28E+00	4.74E-01	1.34E+00	2.07E+00	4.77E-01	0.881	2.50E-01	6.17E+00	2.97E+01	1.04E+01	6.79E+00	2.94E+01	5.99E-09
Antimony (51)	Sb-126	1.60E+01	3.21E+00	9.14E+00	1.43E+01	3.17E+00	0.866	2.04E+01	1.61E+01	8.04E+01	2.82E+01	1.81E+01	8.13E+01	1.93E-10
Antimony (51)	Sb-126m	8.71E+00	1.76E+00	5.02E+00	7.80E+00	1.81E+00	0.872	1.92E+04	2.76E+04	1.37E+05	4.80E+04	3.09E+04	1.33E+05	3.53E-10
Antimony (51)	Sb-127	3.86E+00	7.76E-01	2.22E+00	3.45E+00	7.89E-01	0.883	6.57E+01	2.11E+02	1.05E+03	3.67E+02	2.36E+02	1.03E+03	7.92E-10
Antimony (51)	Sb-128	1.76E+01	3.49E+00	9.98E+00	1.56E+01	3.48E+00	0.885	6.74E+02	4.73E+02	2.39E+03	8.36E+02	5.35E+02	2.40E+03	1.74E-10
Antimony (51)	Sb-128m	1.13E+01	2.26E+00	6.43E+00	1.00E+01	2.32E+00	0.863	3.50E+04	3.93E+04	1.97E+05	6.91E+04	4.43E+04	1.91E+05	2.79E-10
Antimony (51)	Sb-129	8.54E+00	1.60E+00	4.61E+00	7.33E+00	1.60E+00	0.875	1.41E+03	2.06E+03	1.10E+04	3.82E+03	2.40E+03	1.10E+04	3.67E-10
Antimony (51)	Sb-130	1.88E+01	3.66E+00	1.05E+01	1.64E+01	3.66E+00	0.863	9.11E+03	6.13E+03	3.16E+04	1.10E+04	7.02E+03	3.15E+04	1.70E-10
Antimony (51)	Sb-131	1.13E+01	2.05E+00	5.93E+00	9.55E+00	2.07E+00	0.858	1.58E+04	1.79E+04	9.85E+04	3.41E+04	2.12E+04	9.78E+04	2.87E-10
Scandium (21)	Sc-43	5.95E+00	1.24E+00	3.54E+00	5.43E+00	1.25E+00	0.886	1.56E+03	3.24E+03	1.55E+04	5.44E+03	3.55E+03	1.54E+04	1.73E-10
Scandium (21)	Sc-44	1.24E+01	2.39E+00	6.86E+00	1.08E+01	2.43E+00	0.863	1.55E+03	1.58E+03	8.22E+03	2.86E+03	1.81E+03	8.08E+03	8.72E-11
Scandium (21)	Sc-44m	1.44E+00	3.13E-01	8.93E-01	1.34E+00	3.06E-01	0.902	1.04E+02	8.71E+02	4.01E+03	1.41E+03	9.38E+02	4.11E+03	7.18E-10
Scandium (21)	Sc-46	1.20E+01	2.24E+00	6.43E+00	1.03E+01	2.19E+00	0.847	3.02E+00	3.43E+00	1.83E+01	6.37E+00	4.00E+00	1.87E+01	1.01E-10
Scandium (21)	Sc-47	4.61E-01	1.18E-01	3.25E-01	4.51E-01	1.16E-01	0.926	7.55E+01	1.94E+03	7.57E+03	2.75E+03	1.98E+03	7.67E+03	2.34E-09
Scandium (21)	Sc-48	2.03E+01	3.69E+00	1.07E+01	1.72E+01	3.63E+00	0.84	1.39E+02	8.91E+01	4.90E+02	1.69E+02	1.05E+02	4.99E+02	5.97E-11
Scandium (21)	Sc-49	3.60E-02	1.88E-02	2.74E-02	3.39E-02	1.19E-01	0.815	6.35E+03	2.37E+06	4.53E+06	3.11E+06	2.51E+06	7.16E+05	3.55E-08
Selenium (34)	Se-70	5.32E+00	1.12E+00	3.17E+00	4.83E+00	1.16E+00	0.936	8.88E+03	1.96E+04	9.29E+04	3.28E+04	2.15E+04	8.92E+04	2.99E-10
Selenium (34)	Se-73	5.69E+00	1.22E+00	3.43E+00	5.22E+00	1.25E+00	0.905	8.49E+02	1.81E+03	8.42E+03	2.99E+03	1.97E+03	8.23E+03	3.01E-10
Selenium (34)	Se-73m	1.33E+00	2.78E-01	7.87E-01	1.21E+00	2.94E-01	0.941	9.34E+03	8.15E+04	3.91E+05	1.38E+05	8.98E+04	3.70E+05	1.24E-09
Selenium (34)	Se-75	1.83E+00	4.29E-01	1.20E+00	1.75E+00	4.21E-01	0.918	2.11E+00	1.57E+01	6.68E+01	2.38E+01	1.64E+01	6.80E+01	1.08E-09
Selenium (34)	Se-77m	3.64E-01	9.23E-02	2.54E-01	3.54E-01	9.07E-02	0.98	1.25E+06	3.85E+07	1.52E+08	5.52E+07	3.95E+07	1.54E+08	4.59E-09
Selenium (34)	Se-79	1.53E-05	8.69E-06	1.42E-05	1.53E-05	1.91E-05	0.927	1.07E-05	7.73E+05	1.36E+06	8.32E+05	7.73E+05	6.17E+05	1.11E+01
Selenium (34)	Se-81	6.53E-02	2.00E-02	4.27E-02	6.06E-02	9.50E-02	0.878	1.97E+04	3.76E+06	1.23E+07	5.75E+06	4.05E+06	2.58E+06	3.00E-08
Selenium (34)	Se-81m	4.57E-02	1.40E-02	3.56E-02	4.57E-02	1.47E-02	0.987	6.36E+03	1.54E+06	5.03E+06	1.98E+06	1.54E+06	4.80E+06	3.82E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Selenium (34)	Se-83	1.44E+01	2.69E+00	7.74E+00	1.23E+01	2.67E+00	0.881	1.62E+04	1.40E+04	7.49E+04	2.60E+04	1.63E+04	7.53E+04	1.39E-10
Silicon (14)	Si-31	1.98E-02	9.62E-03	1.47E-02	1.85E-02	8.33E-02	0.834	2.32E+03	1.54E+06	3.16E+06	2.07E+06	1.64E+06	3.65E+05	3.99E-08
Silicon (14)	Si-32	2.97E-05	1.51E-05	2.67E-05	2.97E-05	2.92E-05	0.927	1.54E-03	3.99E+05	7.85E+05	4.43E+05	3.99E+05	4.05E+05	1.61E-02
Silicon (14)	Si-32+D	2.04E-02					0.928	1.54E-03	5.80E+02					2.34E-05
Silicon (14)	Si-32+E	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	0.928	1.54E-03	5.81E+02	9.52E+02	6.99E+02	5.97E+02	1.19E+02	2.34E-05
Samarium (62)	Sm-141	8.00E+00	1.58E+00	4.49E+00	7.03E+00	1.62E+00	0.851	3.57E+04	5.74E+04	2.91E+05	1.02E+05	6.54E+04	2.83E+05	4.40E-10
Samarium (62)	Sm-141m	1.13E+01	2.20E+00	6.29E+00	9.87E+00	2.21E+00	0.89	1.61E+04	1.75E+04	9.01E+04	3.15E+04	2.01E+04	8.99E+04	2.98E-10
Samarium (62)	Sm-142	3.79E-01	8.84E-02	2.29E-01	3.43E-01	1.04E-01	0.944	5.02E+03	1.54E+05	6.59E+05	2.54E+05	1.70E+05	5.58E+05	8.44E-09
Samarium (62)	Sm-145	5.43E-02	3.60E-02	5.32E-02	5.43E-02	6.49E-02	0.965	7.44E-01	2.96E+02	4.47E+02	3.03E+02	2.96E+02	2.48E+02	1.12E-07
Samarium (62)	Sm-146	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.73E-09						
Samarium (62)	Sm-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.54E-12						
Samarium (62)	Sm-151	6.75E-07	6.68E-07	6.75E-07	6.75E-07	4.13E-06	0.998	7.70E-03	1.63E+07	1.65E+07	1.63E+07	1.63E+07	2.67E+06	6.21E-01
Samarium (62)	Sm-153	1.39E-01	5.17E-02	1.13E-01	1.39E-01	7.12E-02	0.94	1.30E+02	1.09E+04	2.93E+04	1.34E+04	1.09E+04	2.13E+04	2.48E-08
Samarium (62)	Sm-155	3.66E-01	1.12E-01	2.76E-01	3.60E-01	1.82E-01	0.925	1.65E+04	5.34E+05	1.74E+06	7.07E+05	5.42E+05	1.07E+06	9.74E-09
Samarium (62)	Sm-156	4.83E-01	1.25E-01	3.36E-01	4.68E-01	1.31E-01	0.924	6.46E+02	1.58E+04	6.12E+04	2.28E+04	1.63E+04	5.86E+04	7.43E-09
Tin (50)	Sn-110	1.43E+00	3.21E-01	9.08E-01	1.35E+00	3.23E-01	0.956	1.52E+03	1.22E+04	5.42E+04	1.91E+04	1.29E+04	5.38E+04	1.71E-09
Tin (50)	Sn-111	2.87E+00	5.61E-01	1.60E+00	2.50E+00	5.85E-01	0.871	1.03E+04	4.52E+04	2.31E+05	8.11E+04	5.19E+04	2.22E+05	9.43E-10
Tin (50)	Sn-113	2.65E-02	8.39E-03	1.82E-02	2.54E-02	1.90E-02	0.992	2.20E+00	1.03E+03	3.25E+03	1.50E+03	1.08E+03	1.43E+03	1.03E-07
Tin (50)	Sn-117m	5.97E-01	1.56E-01	4.21E-01	5.86E-01	1.63E-01	0.961	1.86E+01	3.55E+02	1.36E+03	5.02E+02	3.62E+02	1.30E+03	4.33E-09
Tin (50)	Sn-119m	2.09E-03	2.03E-03	2.11E-03	2.09E-03	8.72E-03	0.992	8.63E-01	7.89E+03	8.11E+03	7.82E+03	7.89E+03	1.89E+03	2.11E-06
Tin (50)	Sn-121	1.71E-04	6.79E-05	1.41E-04	1.70E-04	1.03E-04	0.927	2.24E+02	1.55E+07	3.90E+07	1.87E+07	1.56E+07	2.57E+07	1.62E-05
Tin (50)	Sn-121m	1.43E-03	1.27E-03	1.42E-03	1.43E-03	4.20E-03	0.986	1.26E-02	7.81E+03	8.81E+03	7.84E+03	7.81E+03	2.66E+03	1.46E-04
Tin (50)	Sn-121m+D	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	0.986	1.26E-02	7.15E+03	8.46E+03	7.28E+03	7.15E+03	2.61E+03	1.33E-04
Tin (50)	Sn-121m+E	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	0.986	1.26E-02	7.15E+03	8.46E+03	7.28E+03	7.15E+03	2.61E+03	1.33E-04
Tin (50)	Sn-123	5.30E-02	1.46E-02	3.15E-02	4.64E-02	7.59E-02	0.843	1.96E+00	5.59E+02	2.03E+03	9.39E+02	6.38E+02	3.90E+02	6.82E-08
Tin (50)	Sn-123m	5.91E-01	1.54E-01	4.16E-01	5.78E-01	2.02E-01	0.936	9.09E+03	1.80E+05	6.91E+05	2.56E+05	1.84E+05	5.27E+05	4.72E-09
Tin (50)	Sn-125	1.92E+00	3.66E-01	1.02E+00	1.63E+00	4.46E-01	0.857	2.62E+01	1.75E+02	9.17E+02	3.27E+02	2.05E+02	7.52E+02	1.61E-09
Tin (50)	Sn-126	1.30E-01	4.74E-02	1.09E-01	1.30E-01	5.62E-02	0.957	6.93E-06	8.81E+01	2.42E+02	1.05E+02	8.80E+01	2.03E+02	3.11E-03
Tin (50)	Sn-126+D	8.84E+00	1.81E+00	5.13E+00	7.93E+00	1.87E+00	0.874	6.93E-06	1.42E+00	6.94E+00	2.44E+00	1.58E+00	6.71E+00	5.00E-05
Tin (50)	Sn-126+E	1.11E+01	2.26E+00	6.42E+00	9.92E+00	2.31E+00	0.874	6.93E-06	1.13E+00	5.55E+00	1.95E+00	1.26E+00	5.42E+00	3.99E-05
Tin (50)	Sn-127	1.15E+01	2.11E+00	6.08E+00	9.74E+00	2.10E+00	0.928	2.89E+03	2.96E+03	1.62E+04	5.61E+03	3.50E+03	1.62E+04	2.52E-10
Tin (50)	Sn-128	3.30E+00	7.03E-01	1.98E+00	3.00E+00	7.29E-01	0.904	6.16E+03	2.26E+04	1.06E+05	3.78E+04	2.49E+04	1.02E+05	9.11E-10
Strontium (38)	Sr-80	9.94E-05	9.94E-05	9.94E-05	9.94E-05	1.87E-03	1	3.64E+03	4.01E+08	4.01E+08	4.01E+08	4.01E+08	2.14E+07	1.71E-05
Strontium (38)	Sr-81	7.53E+00	1.59E+00	4.48E+00	6.83E+00	1.67E+00	0.895	1.43E+04	2.32E+04	1.10E+05	3.90E+04	2.56E+04	1.05E+05	2.55E-10
Strontium (38)	Sr-82	9.77E-05	9.77E-05	9.77E-05	9.77E-05	1.83E-03	1	1.01E+01	1.13E+06	1.13E+06	1.13E+06	1.13E+06	6.05E+04	1.78E-05
Strontium (38)	Sr-82+D	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	1.01E+01	2.05E+01	9.76E+01	3.49E+01	2.27E+01	8.96E+01	3.23E-10
Strontium (38)	Sr-82+E	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	1.01E+01	2.05E+01	9.76E+01	3.49E+01	2.27E+01	8.96E+01	3.23E-10
Strontium (38)	Sr-83	4.49E+00	8.88E-01	2.54E+00	3.97E+00	8.88E-01	0.906	1.87E+02	5.04E+02	2.55E+03	8.93E+02	5.70E+02	2.55E+03	4.33E-10
Strontium (38)	Sr-85	2.76E+00	5.71E-01	1.63E+00	2.50E+00	5.65E-01	0.968	3.90E+00	1.63E+01	7.89E+01	2.77E+01	1.80E+01	7.97E+01	6.90E-10
Strontium (38)	Sr-85m	1.04E+00	2.42E-01	6.86E-01	9.98E-01	2.36E-01	0.921	5.24E+03	6.00E+04	2.57E+05	9.08E+04	6.24E+04	2.64E+05	1.89E-09
Strontium (38)	Sr-87m	1.68E+00	3.60E-01	1.03E+00	1.56E+00	3.55E-01	0.917	2.16E+03	1.53E+04	7.18E+04	2.51E+04	1.66E+04	7.28E+04	1.20E-09
Strontium (38)	Sr-89	1.51E-02	8.97E-03	1.24E-02	1.47E-02	8.01E-02	0.856	5.01E+00	4.28E+03	7.19E+03	5.19E+03	4.39E+03	8.06E+02	1.47E-07
Strontium (38)	Sr-90	6.45E-04	2.35E-04	5.07E-04	6.36E-04	1.91E-03	0.927	2.38E-02	1.85E+04	5.09E+04	2.36E+04	1.88E+04	6.25E+03	1.36E-04
Strontium (38)	Sr-90+D	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	1	2.38E-02	2.73E+02	4.68E+02	3.36E+02	2.82E+02	8.48E+01	2.00E-06
Strontium (38)	Sr-90+E	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	1	2.38E-02	2.73E+02	4.68E+02	3.36E+02	2.82E+02	8.48E+01	2.00E-06
Strontium (38)	Sr-91	4.12E+00	7.91E-01	2.26E+00	3.58E+00	8.48E-01	0.862	6.39E+02	1.97E+03	1.03E+04	3.60E+03	2.27E+03	9.57E+03	5.44E-10
Strontium (38)	Sr-92	8.30E+00	1.46E+00	4.25E+00	6.90E+00	1.44E+00	0.831	2.24E+03	3.56E+03	2.02E+04	6.94E+03	4.28E+03	2.06E+04	2.83E-10
Tantalum (73)	Ta-172	8.78E+00	1.71E+00	4.85E+00	7.61E+00	1.74E+00	0.913	9.90E+03	1.35E+04	6.95E+04	2.45E+04	1.56E+04	6.83E+04	4.56E-10
Tantalum (73)	Ta-173	2.98E+00	6.34E-01	1.75E+00	2.67E+00	6.71E-01	0.93	1.66E+03	6.56E+03	3.09E+04	1.12E+04	7.34E+03	2.92E+04	1.32E-09
Tantalum (73)	Ta-174	3.21E+00	6.86E-01	1.90E+00	2.89E+00	7.18E-01	0.865	5.06E+03	2.00E+04	9.33E+04	3.37E+04	2.22E+04	8.92E+04	1.33E-09
Tantalum (73)	Ta-175	5.18E+00	9.96E-01	2.82E+00	4.42E+00	9.91E-01	0.934	5.78E+02	1.31E+03	6.81E+03	2.41E+03	1.53E+03	6.84E+03	7.68E-10
Tantalum (73)	Ta-176	1.32E+01	2.29E+00	6.64E+00	1.08E+01	2.25E+00	0.941	7.51E+02	6.64E+02	3.81E+03	1.32E+03	8.08E+02	3.88E+03	3.02E-10
Tantalum (73)	Ta-177	1.57E-01	5.73E-02	1.23E-01	1.51E-01	6.85E-02	0.941	1.07E+02	7.95E+03	2.18E+04	1.01E+04	8.27E+03	1.82E+04	2.55E-08
Tantalum (73)	Ta-178	4.16E-01	1.02E-01	2.52E-01	3.62E-01	1.12E-01	0.905	3.91E+04	1.14E+06	4.65E+06	1.88E+06	1.31E+06	4.22E+06	1.00E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Tantalum (73)	Ta-178m	4.79E+00	1.11E+00	3.06E+00	4.49E+00	1.11E+00	0.906	2.76E+03	6.96E+03	3.00E+04	1.09E+04	7.42E+03	3.00E+04	8.71E-10
Tantalum (73)	Ta-179	4.87E-02	2.48E-02	4.57E-02	4.87E-02	3.21E-02	0.959	3.80E-01	2.82E+02	5.53E+02	3.00E+02	2.82E+02	4.28E+02	2.57E-07
Tantalum (73)	Ta-180	2.57E+00	6.04E-01	1.67E+00	2.44E+00	6.05E-01	0.912	6.93E-14	4.67E+00	1.99E+01	7.18E+00	4.92E+00	1.99E+01	2.35E+04
Tantalum (73)	Ta-180m	8.17E-02	3.86E-02	7.46E-02	8.17E-02	4.94E-02	0.946	7.49E+02	1.06E+05	2.25E+05	1.16E+05	1.06E+05	1.76E+05	4.95E-08
Tantalum (73)	Ta-182	7.50E+00	1.41E+00	4.03E+00	6.40E+00	1.40E+00	0.925	2.20E+00	3.91E+00	2.07E+01	7.27E+00	4.58E+00	2.09E+01	6.27E-10
Tantalum (73)	Ta-182m	9.42E-01	2.56E-01	6.70E-01	9.18E-01	2.63E-01	0.928	2.30E+04	2.88E+05	1.06E+06	4.05E+05	2.96E+05	1.03E+06	4.42E-09
Tantalum (73)	Ta-183	1.20E+00	3.04E-01	8.11E-01	1.15E+00	3.13E-01	0.932	4.96E+01	4.87E+02	1.92E+03	7.18E+02	5.09E+02	1.86E+03	3.49E-09
Tantalum (73)	Ta-184	8.80E+00	1.80E+00	5.13E+00	7.89E+00	1.81E+00	0.914	6.98E+02	9.50E+02	4.64E+03	1.63E+03	1.06E+03	4.62E+03	4.86E-10
Tantalum (73)	Ta-185	7.98E-01	2.09E-01	5.39E-01	7.57E-01	2.92E-01	0.923	7.43E+03	1.10E+05	4.22E+05	1.64E+05	1.16E+05	3.02E+05	5.34E-09
Tantalum (73)	Ta-186	8.43E+00	1.76E+00	4.98E+00	7.61E+00	1.84E+00	0.913	3.47E+04	4.94E+04	2.36E+05	8.36E+04	5.47E+04	2.26E+05	5.13E-10
Terbium (65)	Tb-147	9.12E+00	1.78E+00	5.05E+00	7.96E+00	1.81E+00	0.859	3.68E+03	5.14E+03	2.64E+04	9.28E+03	5.89E+03	2.59E+04	3.99E-10
Terbium (65)	Tb-149	9.47E+00	1.77E+00	5.07E+00	8.08E+00	1.75E+00	0.863	1.46E+03	1.96E+03	1.05E+04	3.66E+03	2.30E+03	1.06E+04	3.87E-10
Terbium (65)	Tb-150	9.75E+00	1.88E+00	5.35E+00	8.45E+00	1.89E+00	0.868	1.86E+03	2.40E+03	1.24E+04	4.38E+03	2.77E+03	1.24E+04	3.76E-10
Terbium (65)	Tb-151	4.59E+00	9.72E-01	2.72E+00	4.16E+00	9.78E-01	0.892	3.45E+02	9.23E+02	4.36E+03	1.56E+03	1.02E+03	4.33E+03	7.84E-10
Terbium (65)	Tb-153	9.18E-01	2.28E-01	5.97E-01	8.56E-01	2.44E-01	0.931	1.08E+02	1.39E+03	5.59E+03	2.13E+03	1.49E+03	5.21E+03	3.81E-09
Terbium (65)	Tb-154	1.47E+01	2.50E+00	7.24E+00	1.19E+01	2.43E+00	0.889	2.84E+02	2.38E+02	1.40E+03	4.83E+02	2.94E+02	1.44E+03	2.51E-10
Terbium (65)	Tb-155	4.20E-01	1.27E-01	3.08E-01	4.08E-01	1.46E-01	0.937	4.75E+01	1.32E+03	4.37E+03	1.81E+03	1.36E+03	3.81E+03	8.38E-09
Terbium (65)	Tb-156	1.04E+01	2.00E+00	5.69E+00	8.99E+00	1.97E+00	0.883	4.74E+01	5.62E+01	2.94E+02	1.03E+02	6.53E+01	2.98E+02	3.59E-10
Terbium (65)	Tb-156m	2.97E-02	1.76E-02	2.89E-02	2.97E-02	2.58E-02	0.957	2.49E+02	9.60E+04	1.62E+05	9.85E+04	9.60E+04	1.10E+05	1.17E-07
Terbium (65)	Tb-156n	5.46E-03	2.63E-03	4.90E-03	5.46E-03	3.68E-03	0.955	1.21E+03	2.55E+06	5.29E+06	2.84E+06	2.55E+06	3.79E+06	6.35E-07
Terbium (65)	Tb-157	2.31E-03	1.53E-03	2.28E-03	2.31E-03	2.57E-03	0.962	4.62E-03	4.93E+03	7.47E+03	5.01E+03	4.93E+03	4.44E+03	3.25E-04
Terbium (65)	Tb-158	4.46E+00	8.67E-01	2.46E+00	3.86E+00	8.74E-01	0.854	4.62E-03	2.88E+00	1.48E+01	5.22E+00	3.33E+00	1.47E+01	1.91E-07
Terbium (65)	Tb-160	6.53E+00	1.24E+00	3.56E+00	5.63E+00	1.24E+00	0.861	3.50E+00	7.03E+00	3.69E+01	1.29E+01	8.15E+00	3.71E+01	6.24E-10
Terbium (65)	Tb-161	4.64E-02	2.29E-02	4.20E-02	4.61E-02	3.44E-02	0.954	3.66E+01	9.05E+03	1.83E+04	1.00E+04	9.12E+03	1.22E+04	7.72E-08
Technetium (43)	Tc-101	1.73E+00	3.80E-01	1.08E+00	1.62E+00	4.26E-01	0.894	2.57E+04	1.82E+05	8.26E+05	2.91E+05	1.94E+05	7.38E+05	1.39E-09
Technetium (43)	Tc-104	1.22E+01	2.22E+00	6.34E+00	1.02E+01	2.28E+00	0.898	2.00E+04	2.01E+04	1.10E+05	3.85E+04	2.40E+04	1.07E+05	2.02E-10
Technetium (43)	Tc-93	9.06E+00	1.58E+00	4.59E+00	7.48E+00	1.54E+00	0.891	2.21E+03	2.99E+03	1.72E+04	5.91E+03	3.63E+03	1.76E+04	2.45E-10
Technetium (43)	Tc-93m	4.49E+00	7.65E-01	2.24E+00	3.66E+00	7.35E-01	0.898	8.37E+03	2.27E+04	1.34E+05	4.56E+04	2.79E+04	1.39E+05	4.90E-10
Technetium (43)	Tc-94	1.54E+01	2.98E+00	8.56E+00	1.35E+01	2.95E+00	0.87	1.24E+03	1.02E+03	5.24E+03	1.83E+03	1.16E+03	5.30E+03	1.49E-10
Technetium (43)	Tc-94m	1.09E+01	2.09E+00	5.95E+00	9.42E+00	2.12E+00	0.859	7.00E+03	8.21E+03	4.27E+04	1.50E+04	9.48E+03	4.20E+04	2.14E-10
Technetium (43)	Tc-95	4.53E+00	8.82E-01	2.54E+00	3.97E+00	8.75E-01	0.877	3.04E+02	8.36E+02	4.30E+03	1.49E+03	9.54E+02	4.33E+03	5.08E-10
Technetium (43)	Tc-95m	3.67E+00	7.44E-01	2.13E+00	3.28E+00	7.38E-01	0.873	4.15E+00	1.44E+01	7.10E+01	2.49E+01	1.61E+01	7.17E+01	6.39E-10
Technetium (43)	Tc-96	1.45E+01	2.80E+00	8.02E+00	1.27E+01	2.77E+00	0.86	5.91E+01	5.19E+01	2.69E+02	9.38E+01	5.94E+01	2.72E+02	1.63E-10
Technetium (43)	Tc-96m	2.65E-01	5.04E-02	1.44E-01	2.28E-01	5.25E-02	0.938	7.07E+03	3.12E+05	1.64E+06	5.74E+05	3.63E+05	1.57E+06	8.21E-09
Technetium (43)	Tc-97	5.63E-04	5.67E-04	5.63E-04	5.63E-04	5.43E-03	1	2.67E-07	1.94E+04	1.93E+04	1.94E+04	1.94E+04	2.02E+03	1.37E+01
Technetium (43)	Tc-97m	1.53E-03	8.82E-04	1.34E-03	1.53E-03	5.19E-03	0.999	2.91E+00	2.20E+04	3.82E+04	2.52E+04	2.20E+04	6.49E+03	1.43E-06
Technetium (43)	Tc-98	8.06E+00	1.59E+00	4.57E+00	7.14E+00	1.58E+00	0.867	1.65E-07	1.57E+00	7.93E+00	2.76E+00	1.77E+00	8.02E+00	1.81E-03
Technetium (43)	Tc-99	1.08E-04	4.64E-05	9.21E-05	1.08E-04	7.55E-05	0.927	3.25E-06	1.09E+05	2.54E+05	1.28E+05	1.10E+05	1.56E+05	6.45E+00
Technetium (43)	Tc-99m	5.02E-01	1.35E-01	3.64E-01	4.96E-01	1.33E-01	0.946	1.01E+03	2.33E+04	8.67E+04	3.21E+04	2.35E+04	8.77E+04	4.43E-09
Tellurium (52)	Te-116	1.73E-01	5.17E-02	1.24E-01	1.65E-01	7.07E-02	0.98	2.44E+03	1.58E+05	5.27E+05	2.20E+05	1.65E+05	3.85E+05	1.46E-08
Tellurium (52)	Te-121	3.10E+00	6.36E-01	1.81E+00	2.80E+00	6.38E-01	0.902	1.49E+01	5.83E+01	2.84E+02	1.00E+02	6.46E+01	2.83E+02	9.21E-10
Tellurium (52)	Te-121m	9.90E-01	2.28E-01	6.36E-01	9.34E-01	2.31E-01	0.917	1.64E+00	2.46E+01	1.07E+02	3.82E+01	2.60E+01	1.05E+02	3.51E-09
Tellurium (52)	Te-123	4.63E-03	4.42E-03	4.64E-03	4.63E-03	1.66E-02	0.989	6.93E-14	2.39E+03	2.51E+03	2.38E+03	2.39E+03	6.68E+02	8.25E+06
Tellurium (52)	Te-123m	5.71E-01	1.49E-01	4.03E-01	5.60E-01	1.54E-01	0.951	2.11E+00	4.85E+01	1.86E+02	6.87E+01	4.95E+01	1.80E+02	5.48E-09
Tellurium (52)	Te-125m	1.11E-02	9.59E-03	1.08E-02	1.11E-02	3.10E-02	0.986	4.36E+00	4.42E+03	5.12E+03	4.53E+03	4.42E+03	1.58E+03	2.46E-07
Tellurium (52)	Te-127	2.67E-02	5.91E-03	1.64E-02	2.46E-02	1.20E-02	0.894	6.49E+02	2.98E+05	1.35E+06	4.85E+05	3.23E+05	6.62E+05	1.13E-07
Tellurium (52)	Te-127m	4.16E-03	3.13E-03	3.84E-03	4.10E-03	9.99E-03	0.983	2.32E+00	6.89E+03	9.15E+03	7.46E+03	6.99E+03	2.87E+03	7.32E-07
Tellurium (52)	Te-129	3.13E-01	6.98E-02	1.87E-01	2.83E-01	1.33E-01	0.889	5.23E+03	2.06E+05	9.24E+05	3.46E+05	2.27E+05	4.85E+05	9.84E-09
Tellurium (52)	Te-129m	1.75E-01	3.84E-02	1.01E-01	1.56E-01	6.65E-02	0.985	7.53E+00	4.78E+02	2.18E+03	8.25E+02	5.36E+02	1.26E+03	1.59E-08
Tellurium (52)	Te-131	2.24E+00	4.77E-01	1.33E+00	2.01E+00	5.53E-01	0.917	1.46E+04	7.77E+04	3.64E+05	1.31E+05	8.64E+04	3.15E+05	1.36E-09
Tellurium (52)	Te-131m	8.24E+00	1.58E+00	4.53E+00	7.16E+00	1.56E+00	0.949	2.02E+02	2.83E+02	1.48E+03	5.15E+02	3.26E+02	1.49E+03	3.56E-10
Tellurium (52)	Te-132	9.94E-01	2.39E-01	6.60E-01	9.55E-01	2.47E-01	0.936	7.76E+01	9.14E+02	3.80E+03	1.38E+03	9.51E+02	3.67E+03	3.01E-09
Tellurium (52)	Te-133	5.37E+00	1.05E+00	3.00E+00	4.70E+00	1.12E+00	0.842	2.93E+04	7.08E+04	3.62E+05	1.27E+05	8.10E+04	3.40E+05	6.25E-10
Tellurium (52)	Te-133m	1.36E+01	2.57E+00	7.39E+00	1.17E+01	2.61E+00	0.927	6.57E+03	5.72E+03	3.02E+04	1.05E+04	6.63E+03	2.97E+04	2.25E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Tellurium (52)	Te-134	4.76E+00	9.87E-01	2.80E+00	4.29E+00	9.90E-01	0.872	8.71E+03	2.30E+04	1.11E+05	3.91E+04	2.55E+04	1.11E+05	6.87E-10
()	Test Isotope													
Thorium (90)	Th-226	3.02E-02	8.21E-03	2.18E-02	2.95E-02	8.46E-03	0.947	1.18E+04	4.51E+06	1.66E+07	6.25E+06	4.63E+06	1.61E+07	1.68E-07
Thorium (90)	Th-227	4.79E-01	1.13E-01	3.15E-01	4.57E-01	1.14E-01	0.971	1.35E+01	3.18E+02	1.34E+03	4.84E+02	3.34E+02	1.33E+03	1.04E-08
Thorium (90)	Th-228	7.16E-03	2.09E-03	5.32E-03	7.03E-03	2.49E-03	0.98	3.62E-01	1.86E+03	6.38E+03	2.51E+03	1.89E+03	5.36E+03	2.27E-06
Thorium (90)	Th-229	2.89E-01	8.69E-02	2.20E-01	2.85E-01	9.21E-02	0.959	9.44E-05	3.95E+01	1.31E+02	5.19E+01	4.00E+01	1.24E+02	1.86E-04
Thorium (90)	Th-229+D	1.48E+00					0.972	9.44E-05	7.61E+00					3.58E-05
Thorium (90)	Th-229+E	1.48E+00	3.47E-01	9.38E-01	1.37E+00	4.04E-01	0.972	9.44E-05	7.62E+00	3.25E+01	1.20E+01	8.25E+00	2.79E+01	3.59E-05
Thorium (90)	Th-230	1.07E-03	3.84E-04	8.62E-04	1.06E-03	7.43E-04	0.997	9.00E-06	1.03E+04	2.86E+04	1.27E+04	1.04E+04	1.48E+04	5.10E-01
Thorium (90)	Th-231	3.21E-02	1.16E-02	2.63E-02	3.19E-02	1.81E-02	0.985	2.38E+02	8.24E+04	2.28E+05	1.01E+05	8.29E+04	1.46E+05	1.55E-07
Thorium (90)	Th-232	4.55E-04	1.87E-04	3.82E-04	4.51E-04	5.31E-04	0.998	4.93E-11	2.41E+04	5.88E+04	2.87E+04	2.43E+04	2.07E+04	2.20E+05
Thorium (90)	Th-232+D						0.998	4.93E-11						
Thorium (90)	Th-234	2.13E-02	7.63E-03	1.77E-02	2.13E-02	8.74E-03	0.957	1.05E+01	5.65E+03	1.57E+04	6.79E+03	5.65E+03	1.37E+04	2.44E-07
Thorium (90)	Th-234+D	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.991	1.05E+01	7.47E+02	2.53E+03	1.16E+03	8.26E+02	8.21E+02	3.23E-08
Thorium (90)	Th-234+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.991	1.05E+01	7.47E+02	2.53E+03	1.16E+03	8.26E+02	8.21E+02	3.23E-08
Titanium (22)	Ti-44	3.13E-01	1.24E-01	2.74E-01	3.13E-01	1.38E-01	0.945	1.47E-02	3.73E+01	9.38E+01	4.26E+01	3.73E+01	8.48E+01	2.17E-07
Titanium (22)	Ti-44+D	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	0.871	1.47E-02	9.94E-01	5.03E+00	1.77E+00	1.14E+00	4.93E+00	5.79E-09
Titanium (22)	Ti-44+E	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	0.871	1.47E-02	9.94E-01	5.03E+00	1.77E+00	1.14E+00	4.93E+00	5.79E-09
Titanium (22)	Ti-45	4.77E+00	9.88E-01	2.82E+00	4.35E+00	1.01E+00	0.882	1.97E+03	5.13E+03	2.48E+04	8.69E+03	5.63E+03	2.42E+04	2.27E-10
Thallium (81)	Tl-194	4.08E+00	8.63E-01	2.42E+00	3.71E+00	8.58E-01	0.886	1.10E+04	3.34E+04	1.58E+05	5.63E+04	3.68E+04	1.59E+05	1.14E-09
Thallium (81)	Tl-194m	1.26E+01	2.61E+00	7.39E+00	1.14E+01	2.60E+00	0.927	1.11E+04	1.04E+04	5.02E+04	1.78E+04	1.15E+04	5.04E+04	3.52E-10
Thallium (81)	Tl-195	7.50E+00	1.37E+00	3.94E+00	6.29E+00	1.35E+00	0.944	5.23E+03	8.10E+03	4.43E+04	1.54E+04	9.66E+03	4.48E+04	5.85E-10
Thallium (81)	Tl-197	2.07E+00	4.38E-01	1.21E+00	1.83E+00	4.40E-01	0.934	2.14E+03	1.21E+04	5.72E+04	2.07E+04	1.37E+04	5.70E+04	2.16E-09
Thallium (81)	Tl-198	1.20E+01	2.18E+00	6.27E+00	1.01E+01	2.12E+00	0.948	1.15E+03	1.10E+03	6.06E+03	2.11E+03	1.31E+03	6.23E+03	3.69E-10
Thallium (81)	Tl-198m	6.34E+00	1.33E+00	3.77E+00	5.76E+00	1.32E+00	0.981	3.25E+03	5.71E+03	2.72E+04	9.62E+03	6.29E+03	2.75E+04	6.76E-10
Thallium (81)	Tl-199	1.08E+00	2.61E-01	7.01E-01	1.01E+00	2.65E-01	0.931	8.18E+02	8.88E+03	3.69E+04	1.37E+04	9.54E+03	3.63E+04	4.19E-09
Thallium (81)	Tl-200	7.42E+00	1.44E+00	4.12E+00	6.45E+00	1.42E+00	0.952	2.33E+02	3.60E+02	1.86E+03	6.49E+02	4.15E+02	1.88E+03	6.01E-10
Thallium (81)	Tl-201	2.44E-01	8.54E-02	2.00E-01	2.42E-01	9.29E-02	0.944	8.31E+01	3.95E+03	1.13E+04	4.83E+03	3.98E+03	1.04E+04	1.85E-08
Thallium (81)	Tl-202	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	0.906	2.07E+01	1.07E+02	4.86E+02	1.75E+02	1.17E+02	4.87E+02	2.03E-09
Thallium (81)	Tl-204	3.88E-03	1.65E-03	3.30E-03	3.86E-03	1.26E-02	0.963	1.83E-01	3.21E+03	7.54E+03	3.77E+03	3.22E+03	9.87E+02	6.93E-06
Thallium (81)	Tl-206	1.26E-02	7.48E-03	1.04E-02	1.23E-02	7.08E-02	0.934	8.67E+04	8.06E+07	1.36E+08	9.75E+07	8.29E+07	1.44E+07	3.72E-07
Thallium (81)	Tl-207	2.29E-02	8.47E-03	1.54E-02	2.11E-02	6.49E-02	0.855	7.64E+04	4.26E+07	1.16E+08	6.33E+07	4.64E+07	1.51E+07	2.24E-07
Thallium (81)	Tl-208	2.18E+01	3.56E+00	1.04E+01	1.73E+01	3.47E+00	0.879	1.19E+05	6.77E+04	4.15E+05	1.42E+05	8.53E+04	4.26E+05	2.30E-10
Thallium (81)	Tl-209	1.22E+01	2.22E+00	6.40E+00	1.03E+01	2.24E+00	0.865	1.66E+05	1.71E+05	9.44E+05	3.28E+05	2.04E+05	9.35E+05	4.20E-10
Thulium (69)	Tm-162	1.08E+01	1.92E+00	5.52E+00	8.93E+00	1.90E+00	0.883	1.68E+04	1.93E+04	1.08E+05	3.77E+04	2.33E+04	1.09E+05	3.61E-10
Thulium (69)	Tm-166	1.12E+01	2.01E+00	5.80E+00	9.33E+00	1.98E+00	0.912	7.88E+02	8.47E+02	4.70E+03	1.63E+03	1.02E+03	4.77E+03	3.46E-10
Thulium (69)	Tm-167	5.07E-01	1.40E-01	3.52E-01	4.89E-01	1.53E-01	0.928	2.74E+01	6.37E+02	2.31E+03	9.16E+02	6.61E+02	2.11E+03	7.54E-09
Thulium (69)	Tm-170	1.41E-02	6.17E-03	1.21E-02	1.40E-02	3.08E-02	0.944	1.97E+00	1.89E+03	4.30E+03	2.19E+03	1.89E+03	8.61E+02	3.16E-07
Thulium (69)	Tm-171	9.38E-04	4.89E-04	8.86E-04	9.38E-04	6.48E-04	0.953	3.61E-01	1.46E+04	2.80E+04	1.55E+04	1.46E+04	2.11E+04	1.34E-05
Thulium (69)	Tm-172	2.91E+00	5.26E-01	1.51E+00	2.42E+00	5.68E-01	0.898	9.55E+01	4.00E+02	2.21E+03	7.73E+02	4.80E+02	2.05E+03	1.40E-09
Thulium (69)	Tm-173	2.03E+00	4.38E-01	1.24E+00	1.88E+00	4.53E-01	0.895	7.37E+02	4.43E+03	2.06E+04	7.25E+03	4.79E+03	1.99E+04	2.02E-09
Thulium (69)	Tm-175	5.99E+00	1.18E+00	3.38E+00	5.26E+00	1.21E+00	0.892	2.40E+04	4.91E+04	2.49E+05	8.71E+04	5.59E+04	2.42E+05	6.96E-10
Uranium (92)	U-230	3.95E-03	1.17E-03	2.91E-03	3.86E-03	1.81E-03	0.987	1.22E+01	3.41E+04	1.15E+05	4.64E+04	3.49E+04	7.46E+04	1.25E-06
Uranium (92)	U-231	2.07E-01	6.64E-02	1.64E-01	2.07E-01	7.47E-02	0.961	6.02E+01	3.31E+03	1.03E+04	4.19E+03	3.31E+03	9.19E+03	2.47E-08
Uranium (92)	U-232	7.91E-04	3.02E-04	6.30E-04	7.81E-04	9.42E-04	0.997	9.63E-03	1.40E+04	3.65E+04	1.75E+04	1.41E+04	1.17E+04	6.53E-04
Uranium (92)	U-233	1.26E-03	3.64E-04	8.97E-04	1.22E-03	6.99E-04	0.998	4.37E-06	8.69E+03	3.02E+04	1.22E+04	8.98E+03	1.57E+04	8.99E-01
Uranium (92)	U-234	3.43E-04	1.56E-04	2.89E-04	3.43E-04	6.84E-04	0.998	2.83E-06	3.20E+04	7.04E+04	3.80E+04	3.20E+04	1.60E+04	5.12E+00
Uranium (92)	U-235	6.58E-01	1.65E-01	4.57E-01	6.42E-01	1.63E-01	0.96	9.85E-10	1.73E+01	6.90E+01	2.50E+01	1.78E+01	6.98E+01	8.02E+00
Uranium (92)	U-235+D	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	0.96	9.85E-10	1.65E+01	6.45E+01	2.36E+01	1.69E+01	6.27E+01	7.65E+00
Uranium (92)	U-235+E	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	0.96	9.85E-10	1.65E+01	6.45E+01	2.36E+01	1.69E+01	6.27E+01	
Uranium (92)	U-236	1.77E-04	9.72E-05	1.56E-04	1.77E-04	5.87E-04	0.999	2.96E-08	6.18E+04	1.13E+05	7.03E+04	6.19E+04	1.87E+04	9.56E+02
Uranium (92)	U-237	4.81E-01	1.36E-01	3.51E-01	4.70E-01	1.44E-01	0.953	3.75E+01	8.95E+02	3.16E+03	1.23E+03	9.16E+02	3.00E+03	1.10E-08
Uranium (92)	U-238	7.94E-05	6.29E-05	7.83E-05	7.94E-05	4.94E-04	1	1.55E-10	1.38E+05	1.74E+05	1.40E+05	1.38E+05	2.22E+04	4.10E+05
Uranium (92)	U-238+D	1.56E-01					0.979	1.55E-10	7.18E+01					2.14E+02

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Uranium (92)	U-238+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.979	1.55E-10	7.20E+01	2.44E+02	1.12E+02	7.96E+01	7.92E+01	2.14E+02
Uranium (92)	U-239	1.58E-01	5.17E-02	1.19E-01	1.51E-01	9.63E-02	0.958	1.55E+04	1.12E+06	3.42E+06	1.49E+06	1.17E+06	1.84E+06	3.36E-08
Uranium (92)	U-240	1.11E-03	8.06E-04	1.08E-03	1.11E-03	3.72E-03	0.998	4.31E+02	4.26E+06	5.86E+06	4.37E+06	4.26E+06	1.27E+06	4.61E-06
Vanadium (23)	V-47	5.50E+00	1.14E+00	3.25E+00	4.98E+00	1.23E+00	0.882	1.12E+04	2.52E+04	1.21E+05	4.27E+04	2.79E+04	1.13E+05	2.06E-10
Vanadium (23)	V-48	1.74E+01	3.23E+00	9.31E+00	1.49E+01	3.17E+00	0.844	1.56E+01	1.16E+01	6.26E+01	2.17E+01	1.36E+01	6.37E+01	6.94E-11
Vanadium (23)	V-49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.67E-01						
Tungsten (74)	W-176	4.18E-01	1.59E-01	3.52E-01	4.18E-01	1.80E-01	0.942	2.64E+03	7.34E+04	1.93E+05	8.70E+04	7.34E+04	1.71E+05	9.50E-09
Tungsten (74)	W-177	4.55E+00	9.72E-01	2.69E+00	4.07E+00	9.78E-01	0.927	2.70E+03	7.00E+03	3.28E+04	1.19E+04	7.84E+03	3.26E+04	8.92E-10
Tungsten (74)	W-178	2.13E-02	1.05E-02	1.98E-02	2.13E-02	1.33E-02	0.971	1.17E+01	6.18E+03	1.26E+04	6.65E+03	6.18E+03	9.88E+03	1.83E-07
Tungsten (74)	W-178+D	4.37E-01					0.915	1.17E+01	3.19E+02					9.46E-09
Tungsten (74)	W-178+E	4.37E-01					0.915	1.17E+01	3.19E+02					9.46E-09
Tungsten (74)	W-179	8.09E-02	4.14E-02	7.57E-02	8.09E-02	5.81E-02	0.967	9.71E+03	1.36E+06	2.66E+06	1.45E+06	1.36E+06	1.89E+06	4.86E-08
Tungsten (74)	W-181	6.49E-02	3.17E-02	6.04E-02	6.49E-02	4.01E-02	0.956	2.09E+00	4.20E+02	8.61E+02	4.52E+02	4.20E+02	6.80E+02	7.08E-08
Tungsten (74)	W-185	3.82E-04	1.40E-04	3.10E-04	3.79E-04	2.00E-04	0.945	3.37E+00	1.06E+05	2.89E+05	1.31E+05	1.07E+05	2.03E+05	1.13E-05
Tungsten (74)	W-187	2.57E+00	5.33E-01	1.50E+00	2.31E+00	5.46E-01	0.94	2.54E+02	1.15E+03	5.55E+03	1.97E+03	1.28E+03	5.42E+03	1.64E-09
Tungsten (74)	W-188	8.90E-03	2.11E-03	5.84E-03	8.47E-03	2.12E-03	0.911	3.64E+00	5.06E+03	2.13E+04	7.71E+03	5.31E+03	2.12E+04	5.06E-07
Xenon (54)	Xe-120	2.13E+00	4.49E-01	1.25E+00	1.92E+00	4.68E-01	0.951	9.11E+03	4.93E+04	2.33E+05	8.37E+04	5.46E+04	2.24E+05	1.26E-09
Xenon (54)	Xe-121	1.09E+01	1.98E+00	5.67E+00	9.10E+00	1.97E+00	0.902	9.08E+03	1.01E+04	5.58E+04	1.94E+04	1.21E+04	5.59E+04	2.62E-10
Xenon (54)	Xe-122	2.33E-01	5.71E-02	1.50E-01	2.20E-01	7.04E-02	0.906	3.02E+02	1.57E+04	6.40E+04	2.43E+04	1.66E+04	5.19E+04	1.23E-08
Xenon (54)	Xe-123	3.41E+00	6.84E-01	1.94E+00	3.00E+00	7.04E-01	0.903	2.92E+03	1.04E+04	5.17E+04	1.82E+04	1.18E+04	5.03E+04	8.48E-10
Xenon (54)	Xe-125	1.19E+00	2.74E-01	7.59E-01	1.12E+00	2.88E-01	0.906	3.57E+02	3.64E+03	1.57E+04	5.69E+03	3.87E+03	1.50E+04	2.47E-09
Xenon (54)	Xe-127	1.21E+00	2.89E-01	7.98E-01	1.16E+00	2.99E-01	0.933	6.95E+00	6.75E+01	2.82E+02	1.02E+02	7.06E+01	2.73E+02	2.40E-09
Xenon (54)	Xe-129m	5.69E-02	2.35E-02	4.35E-02	5.56E-02	4.85E-02	0.979	3.16E+01	6.22E+03	1.50E+04	8.14E+03	6.36E+03	7.28E+03	4.92E-08
Xenon (54)	Xe-131m	1.92E-02	8.58E-03	1.52E-02	1.88E-02	1.87E-02	0.981	2.13E+01	1.24E+04	2.77E+04	1.56E+04	1.26E+04	1.27E+04	1.48E-07
Xenon (54)	Xe-133	8.71E-02	3.49E-02	7.46E-02	8.73E-02	4.61E-02	0.964	4.82E+01	6.29E+03	1.57E+04	7.34E+03	6.28E+03	1.19E+04	3.37E-08
Xenon (54)	Xe-133m	1.18E-01	3.13E-02	7.94E-02	1.14E-01	4.12E-02	0.973	1.16E+02	1.10E+04	4.15E+04	1.64E+04	1.15E+04	3.16E+04	2.46E-08
Xenon (54)	Xe-135	1.23E+00	2.78E-01	7.89E-01	1.16E+00	2.92E-01	0.907	6.68E+02	6.57E+03	2.90E+04	1.02E+04	6.93E+03	2.76E+04	2.58E-09
Xenon (54)	Xe-135m	2.35E+00	4.83E-01	1.37E+00	2.13E+00	4.89E-01	0.884	2.38E+04	1.26E+05	6.11E+05	2.15E+05	1.39E+05	6.03E+05	1.38E-09
Xenon (54)	Xe-138	6.99E+00	1.23E+00	3.54E+00	5.76E+00	1.25E+00	0.893	2.57E+04	4.51E+04	2.57E+05	8.90E+04	5.47E+04	2.52E+05	4.69E-10
Yttrium (39)	Y-86	2.14E+01	3.95E+00	1.14E+01	1.83E+01	3.89E+00	0.898	4.12E+02	2.34E+02	1.27E+03	4.40E+02	2.74E+02	1.29E+03	9.49E-11
Yttrium (39)	Y-86m	1.06E+00	2.44E-01	6.88E-01	1.00E+00	2.38E-01	0.919	7.59E+03	8.57E+04	3.70E+05	1.31E+05	9.01E+04	3.80E+05	1.88E-09
Yttrium (39)	Y-87	2.44E+00	5.09E-01	1.45E+00	2.22E+00	5.03E-01	0.969	7.56E+01	3.50E+02	1.68E+03	5.90E+02	3.85E+02	1.70E+03	7.81E-10
Yttrium (39)	Y-88	1.69E+01	2.91E+00	8.45E+00	1.38E+01	2.81E+00	0.881	2.37E+00	1.93E+00	1.12E+01	3.85E+00	2.35E+00	1.16E+01	1.39E-10
Yttrium (39)	Y-90	4.01E-02	2.35E-02	3.25E-02	3.88E-02	1.28E-01	1	9.49E+01	2.59E+04	4.42E+04	3.20E+04	2.68E+04	8.09E+03	4.77E-08
Yttrium (39)	Y-90m	3.26E+00	7.05E-01	2.00E+00	3.02E+00	6.97E-01	0.912	1.90E+03	7.00E+03	3.24E+04	1.14E+04	7.56E+03	3.28E+04	6.42E-10
Yttrium (39)	Y-91	3.79E-02	1.36E-02	2.46E-02	3.39E-02	8.71E-02	0.837	4.32E+00	1.51E+03	4.22E+03	2.33E+03	1.69E+03	6.58E+02	6.18E-08
Yttrium (39)	Y-91m	2.95E+00	6.01E-01	1.71E+00	2.65E+00	5.95E-01	0.892	7.33E+03	3.05E+04	1.50E+05	5.25E+04	3.40E+04	1.51E+05	7.36E-10
Yttrium (39)	Y-92	1.60E+00	3.30E-01	8.78E-01	1.38E+00	4.47E-01	0.843	1.71E+03	1.39E+04	6.75E+04	2.54E+04	1.62E+04	4.98E+04	1.45E-09
Yttrium (39)	Y-93	5.97E-01	1.33E-01	3.32E-01	5.11E-01	2.45E-01	0.814	6.01E+02	1.35E+04	6.10E+04	2.44E+04	1.58E+04	3.30E+04	4.07E-09
Yttrium (39)	Y-94	6.81E+00	1.29E+00	3.64E+00	5.80E+00	1.39E+00	0.83	1.91E+04	3.70E+04	1.95E+05	6.92E+04	4.34E+04	1.81E+05	3.53E-10
Yttrium (39)	Y-95	5.97E+00	9.94E-01	2.83E+00	4.70E+00	1.06E+00	0.829	3.40E+04	7.53E+04	4.52E+05	1.59E+05	9.57E+04	4.23E+05	4.08E-10
Ytterbium (70)	Yb-162	4.20E-01	1.29E-01	3.15E-01	4.12E-01	1.42E-01	0.937	1.93E+04	5.37E+05	1.74E+06	7.15E+05	5.46E+05	1.58E+06	8.75E-09
Ytterbium (70)	Yb-166	1.27E-01	6.47E-02	1.18E-01	1.27E-01	8.68E-02	0.952	1.07E+02	9.68E+03	1.90E+04	1.04E+04	9.67E+03	1.42E+04	2.91E-08
Ytterbium (70)	Yb-167	7.98E-01	2.48E-01	5.93E-01	7.74E-01	2.77E-01	0.928	2.08E+04	3.08E+05	9.90E+05	4.14E+05	3.17E+05	8.88E+05	4.79E-09
Ytterbium (70)	Yb-169	9.96E-01	2.95E-01	7.25E-01	9.70E-01	3.24E-01	0.921	7.90E+00	9.44E+01	3.19E+02	1.30E+02	9.69E+01	2.90E+02	3.92E-09
Ytterbium (70)	Yb-175	1.94E-01	4.38E-02	1.23E-01	1.82E-01	4.36E-02	0.901	6.04E+01	3.78E+03	1.67E+04	5.99E+03	4.04E+03	1.68E+04	2.13E-08
Ytterbium (70)	Yb-177	1.04E+00	2.09E-01	5.86E-01	9.10E-01	2.53E-01	0.882	3.20E+03	3.80E+04	1.90E+05	6.77E+04	4.36E+04	1.57E+05	4.08E-09
Ytterbium (70)	Yb-178	1.82E-01	3.95E-02	1.12E-01	1.69E-01	4.20E-02	0.898	4.92E+03	3.30E+05	1.52E+06	5.36E+05	3.56E+05	1.43E+06	2.32E-08
Zinc (30)	Zn-62	2.35E+00	4.87E-01	1.38E+00	2.13E+00	4.84E-01	0.879	6.56E+02	3.48E+03	1.68E+04	5.91E+03	3.84E+03	1.69E+04	6.38E-10
Zinc (30)	Zn-63	6.14E+00	1.27E+00	3.58E+00	5.52E+00	1.35E+00	0.862	9.56E+03	1.98E+04	9.59E+04	3.39E+04	2.20E+04	8.97E+04	2.53E-10
Zinc (30)	Zn-65	3.51E+00	6.43E-01	1.86E+00	2.97E+00	6.31E-01	0.843	1.04E+00	5.95E+00	3.24E+01	1.12E+01	7.04E+00	3.31E+01	7.24E-10
Zinc (30)	Zn-69	2.93E-03	1.51E-03	2.39E-03	2.87E-03	2.43E-02	0.892	6.39E+03	2.68E+07	5.21E+07	3.29E+07	2.73E+07	3.23E+06	5.61E-07
Zinc (30)	Zn-69m	2.24E+00	4.72E-01	1.34E+00	2.05E+00	4.64E-01	0.889	4.41E+02	2.43E+03	1.15E+04	4.04E+03	2.65E+03	1.17E+04	7.37E-10
Zinc (30)	Zn-71m	8.60E+00	1.76E+00	5.02E+00	7.74E+00	1.80E+00	0.868	1.55E+03	2.27E+03	1.11E+04	3.89E+03	2.52E+03	1.09E+04	2.02E-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)**	**Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Area Correction Factor**	**Lambda**	**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	0.986	1.66E+05	9.30E+07	3.82E+08	1.41E+08	9.86E+07	3.56E+08	2.43E-07
Zinc (30)	Zn-72	5.97E-01	1.58E-01	4.27E-01	5.86E-01	1.56E-01	0.943	1.31E+02	2.54E+03	9.61E+03	3.55E+03	2.59E+03	9.69E+03	2.72E-09
Zirconium (40)	Zr-86	1.32E+00	2.98E-01	8.43E-01	1.25E+00	2.99E-01	0.982	3.68E+02	3.12E+03	1.37E+04	4.87E+03	3.29E+03	1.37E+04	1.41E-09
Zirconium (40)	Zr-88	2.09E+00	4.46E-01	1.27E+00	1.92E+00	4.40E-01	0.97	3.03E+00	1.72E+01	8.07E+01	2.84E+01	1.87E+01	8.18E+01	9.70E-10
Zirconium (40)	Zr-89	6.73E+00	1.30E+00	3.73E+00	5.87E+00	1.28E+00	0.932	7.74E+01	1.35E+02	7.01E+02	2.44E+02	1.55E+02	7.08E+02	3.01E-10
Zirconium (40)	Zr-93	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	4.53E-07						
Zirconium (40)	Zr-95	4.23E+00	8.32E-01	2.39E+00	3.75E+00	8.22E-01	0.865	3.95E+00	1.21E+01	6.13E+01	2.14E+01	1.36E+01	6.21E+01	5.62E-10
Zirconium (40)	Zr-97	1.08E+00	2.13E-01	5.91E-01	9.33E-01	2.92E-01	0.863	3.59E+02	4.21E+03	2.14E+04	7.71E+03	4.89E+03	1.56E+04	2.20E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
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	2.24E+04	8.42E+04	3.14E+04	2.29E+04	8.36E+04	4.65E-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	3.41E+03	1.20E+04	4.62E+03	3.48E+03	1.15E+04	5.89E-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	1.97E+02	9.17E+02	3.27E+02	2.17E+02	7.78E+02	3.39E-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	3.11E+03	1.26E+04	4.57E+03	3.22E+03	1.12E+04	6.52E-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	1.74E+04	5.90E+04	2.31E+04	1.76E+04	4.71E+04	2.41E-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	1.61E+03	8.45E+03	2.95E+03	1.86E+03	8.29E+03	7.18E-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	1.32E+04	7.11E+04	2.47E+04	1.55E+04	7.09E+04	9.27E-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	1.20E+04	5.95E+04	2.09E+04	1.35E+04	5.79E+04	4.34E-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	1.45E+04	7.14E+04	2.52E+04	1.62E+04	6.89E+04	5.23E-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	3.12E+03	1.64E+04	5.70E+03	3.60E+03	1.66E+04	1.20E-10
Silver (47)	Ag-104m	6.88E+00	1.31E+00	3.75E+00	5.93E+00	1.33E+00	1.09E+04	1.18	1.47E+04	7.72E+04	2.69E+04	1.70E+04	7.59E+04	2.72E-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	2.03E+01	9.58E+01	3.37E+01	2.21E+01	9.59E+01	6.70E-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	3.53E+04	1.70E+05	6.00E+04	3.91E+04	1.59E+05	4.78E-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	1.70E+01	8.89E+01	3.09E+01	1.96E+01	9.04E+01	1.16E-10
Silver (47)	Ag-108	1.14E-01	2.98E-02	7.03E-02	1.04E-01	1.05E-01	1.54E+05	1.21	1.21E+07	4.65E+07	1.97E+07	1.34E+07	1.33E+07	1.66E-08
Silver (47)	Ag-108m	9.01E+00	1.82E+00	5.20E+00	8.08E+00	1.81E+00	5.46E-03	1.2	1.01E+00	5.01E+00	1.76E+00	1.13E+00	5.05E+00	3.89E-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	1.22E+00	6.01E+00	2.11E+00	1.36E+00	6.03E+00	4.67E-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	4.44E+08	1.09E+09	5.28E+08	4.43E+08	5.17E+08	1.70E-07
Silver (47)	Ag-110	2.37E-01	6.99E-02	1.48E-01	2.14E-01	1.90E-01	8.88E+05	1.19	3.45E+07	1.17E+08	5.51E+07	3.81E+07	4.30E+07	8.29E-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	9.18E-01	4.85E+00	1.68E+00	1.06E+00	4.93E+00	1.94E-10
Silver (47)	Ag-110m+D	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	1.01E+00	1	1.08E+00	5.69E+00	1.97E+00	1.24E+00	5.78E+00	2.27E-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	2.19E+03	9.57E+03	3.47E+03	2.33E+03	4.95E+03	1.39E-08
Silver (47)	Ag-112	4.05E+00	7.70E-01	2.16E+00	3.43E+00	8.71E-01	1.95E+03	1.16	4.52E+03	2.38E+04	8.46E+03	5.33E+03	2.10E+04	5.05E-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	3.99E+04	2.16E+05	7.62E+04	4.76E+04	1.97E+05	4.89E-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	5.75E-01	3.24E+00	1.12E+00	6.92E-01	3.29E+00	3.00E-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	1.36E+05	8.10E+05	2.80E+05	1.69E+05	7.88E+05	4.54E-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	2.50E+04	1.08E+05	3.90E+04	2.67E+04	1.08E+05	2.31E-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	6.72E+03	3.46E+04	1.21E+04	7.76E+03	3.49E+04	8.35E-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	4.74E+03	1.77E+04	6.62E+03	4.86E+03	1.72E+04	4.31E-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	1.86E+02	9.62E+02	3.38E+02	2.14E+02	9.70E+02	7.23E-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	2.12E+02	4.29E+02	2.28E+02	2.12E+02	2.89E+02	6.18E-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	6.72E+04	2.16E+05	8.58E+04	6.72E+04	1.60E+05	8.33E-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	5.46E+03	1.21E+04	6.61E+03	5.50E+03	2.98E+03	5.22E-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	1.36E+02	4.81E+02	1.89E+02	1.41E+02	3.44E+02	1.30E-05
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	6.61E+01	1.67E+02	7.61E+01	6.61E+01	1.47E+02	3.32E-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	1.10E+01	3.96E+01	1.52E+01	1.13E+01	3.79E+01	5.52E-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	1.20E+03	6.07E+03	2.13E+03	1.36E+03	6.05E+03	9.45E-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	1.03E+07	1.69E+07	1.23E+07	1.05E+07	1.70E+06	3.48E-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	1.86E+05	7.22E+05	2.69E+05	1.93E+05	5.16E+05	2.99E-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	2.23E+04	1.08E+05	3.82E+04	2.48E+04	1.03E+05	1.14E-09
Americium (95)	Am-246m	6.01E+00	1.13E+00	3.25E+00	5.17E+00	1.16E+00	1.46E+04	1.18	2.25E+04	1.20E+05	4.16E+04	2.61E+04	1.16E+05	7.37E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Argon (18)	Ar-39	8.02E-04	2.95E-04	6.29E-04	7.89E-04	2.95E-03	2.58E-03	1.25	1.09E+04	2.97E+04	1.39E+04	1.11E+04	2.96E+03	3.20E-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	3.98E+03	2.24E+04	7.73E+03	4.77E+03	2.22E+04	9.53E-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	3.90E+04	1.84E+05	6.58E+04	4.29E+04	1.69E+05	2.18E-10
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	2.30E+04	1.13E+05	3.99E+04	2.57E+04	1.07E+05	1.29E-10
Arsenic (33)	As-70	2.44E+01	4.55E+00	1.31E+01	2.09E+01	4.55E+00	6.92E+03	1.17	2.66E+03	1.43E+04	4.96E+03	3.11E+03	1.43E+04	5.22E-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	2.84E+02	1.33E+03	4.69E+02	3.09E+02	1.34E+03	4.18E-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	3.44E+02	1.61E+03	5.67E+02	3.74E+02	1.62E+03	5.06E-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	2.09E+02	1.06E+03	3.72E+02	2.38E+02	1.02E+03	1.25E-10
Arsenic (33)	As-73	7.83E-03	4.31E-03	7.52E-03	7.83E-03	6.05E-03	3.15E+00	1.51	3.05E+03	5.54E+03	3.18E+03	3.05E+03	3.95E+03	1.37E-07
Arsenic (33)	As-74	4.21E+00	8.60E-01	2.44E+00	3.79E+00	8.72E-01	1.42E+01	1.2	3.09E+01	1.52E+02	5.33E+01	3.44E+01	1.49E+02	3.12E-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	8.42E+02	4.17E+03	1.50E+03	9.63E+02	3.49E+03	5.39E-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	3.09E+04	1.36E+05	4.87E+04	3.29E+04	8.51E+04	2.95E-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	4.95E+03	2.65E+04	9.33E+03	5.82E+03	2.51E+04	1.87E-10
Astatine (85)	At-207	7.61E+00	1.45E+00	4.14E+00	6.55E+00	1.42E+00	3.37E+03	1.19	4.08E+03	2.14E+04	7.49E+03	4.74E+03	2.18E+04	4.85E-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	6.39E+04	1.83E+05	7.82E+04	6.46E+04	1.70E+05	3.11E-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	7.03E+04	2.21E+05	9.18E+04	7.27E+04	2.07E+05	3.42E-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	1.93E+15	9.05E+15	3.18E+15	2.09E+15	9.20E+15	3.69E-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	1.43E+14	4.06E+14	1.72E+14	1.43E+14	3.80E+14	8.24E-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	3.70E+12	1.76E+13	6.23E+12	4.07E+12	1.79E+13	2.30E-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	1.64E+10	2.96E+10	1.72E+10	1.64E+10	1.88E+10	6.37E-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	5.23E+03	1.83E+04	7.28E+03	5.43E+03	1.73E+04	5.69E-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	2.32E+02	1.23E+03	4.32E+02	2.72E+02	1.26E+03	5.68E-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	7.96E+01	1.99E+02	9.15E+01	7.96E+01	1.75E+02	2.18E-08
Gold (79)	Au-195m	9.33E-01	2.18E-01	6.10E-01	8.90E-01	2.15E-01	7.17E+05	1.29	6.55E+06	2.80E+07	1.00E+07	6.86E+06	2.84E+07	3.46E-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	3.93E+02	1.85E+03	6.50E+02	4.30E+02	1.79E+03	1.61E-09
Gold (79)	Au-198m	2.41E+00	6.12E-01	1.66E+00	2.33E+00	6.10E-01	1.10E+02	1.27	3.94E+02	1.55E+03	5.71E+02	4.07E+02	1.55E+03	1.38E-09
Gold (79)	Au-199	3.54E-01	9.34E-02	2.52E-01	3.47E-01	9.30E-02	8.06E+01	1.29	1.93E+03	7.32E+03	2.72E+03	1.97E+03	7.35E+03	9.25E-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	4.32E+04	2.22E+05	7.91E+04	5.01E+04	1.79E+05	2.23E-09
Gold (79)	Au-200m	1.13E+01	2.33E+00	6.68E+00	1.03E+01	2.31E+00	3.25E+02	1.2	2.61E+02	1.27E+03	4.43E+02	2.88E+02	1.28E+03	3.12E-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	4.26E+05	1.95E+06	7.09E+05	4.68E+05	1.17E+06	1.20E-08
Barium (56)	Ba-126	7.37E-01	1.64E-01	4.55E-01	6.83E-01	1.76E-01	3.77E+03	1.24	4.52E+04	2.02E+05	7.32E+04	4.88E+04	1.89E+05	2.93E-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	3.37E+03	1.36E+04	5.15E+03	3.54E+03	1.14E+04	8.04E-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	8.57E+01	3.91E+02	1.40E+02	9.35E+01	3.83E+02	1.02E-09
Barium (56)	Ba-131m	2.16E-01	6.88E-02	1.68E-01	2.14E-01	7.82E-02	2.49E+04	1.27	9.94E+05	3.13E+06	1.28E+06	1.00E+06	2.75E+06	1.01E-08
Barium (56)	Ba-133	1.82E+00	4.18E-01	1.15E+00	1.70E+00	4.35E-01	6.45E-02	1.24	5.02E+00	2.19E+01	7.92E+00	5.36E+00	2.10E+01	2.01E-08
Barium (56)	Ba-133m	2.50E-01	6.06E-02	1.62E-01	2.37E-01	6.97E-02	1.56E+02	1.27	5.40E+03	2.23E+04	8.31E+03	5.69E+03	1.94E+04	8.92E-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	8.48E+03	3.43E+04	1.29E+04	8.86E+03	2.92E+04	1.05E-08
Barium (56)	Ba-137m	3.38E+00	6.71E-01	1.92E+00	3.00E+00	6.76E-01	1.43E+05	1.19	3.89E+05	1.96E+06	6.84E+05	4.37E+05	1.94E+06	7.25E-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	1.75E+05	5.86E+05	2.53E+05	1.84E+05	2.30E+05	1.07E-08
Barium (56)	Ba-140	9.60E-01	2.03E-01	5.73E-01	8.77E-01	2.22E-01	1.99E+01	1.21	1.86E+02	8.81E+02	3.13E+02	2.04E+02	8.08E+02	2.55E-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	3.87E+04	1.92E+05	6.81E+04	4.39E+04	1.78E+05	5.31E-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	5.29E+04	2.76E+05	9.64E+04	6.11E+04	2.71E+05	4.25E-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	8.70E+03	2.39E+04	1.11E+04	8.83E+03	2.19E+03	3.90E-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	1.62E+02	7.79E+02	2.73E+02	1.78E+02	7.91E+02	4.64E-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	6.89E+03	3.42E+04	1.20E+04	7.76E+03	3.46E+04	2.67E-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	4.08E+03	2.09E+04	7.34E+03	4.68E+03	2.06E+04	4.72E-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	2.16E+03	1.12E+04	3.90E+03	2.48E+03	1.13E+04	2.33E-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	3.33E+02	1.85E+03	6.41E+02	3.98E+02	1.88E+03	2.54E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Bismuth (83)	Bi-205	1.02E+01	1.84E+00	5.28E+00	8.50E+00	1.80E+00	1.65E+01	1.17	1.52E+01	8.41E+01	2.92E+01	1.82E+01	8.59E+01	3.65E-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	1.97E+01	1.04E+02	3.61E+01	2.29E+01	1.05E+02	1.94E-10
Bismuth (83)	Bi-207	8.82E+00	1.70E+00	4.87E+00	7.67E+00	1.69E+00	1.82E-02	1.19	1.05E+00	5.45E+00	1.91E+00	1.21E+00	5.49E+00	2.32E-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	8.09E+04	1.40E+05	9.72E+04	8.23E+04	1.08E+04	6.53E-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	6.97E+00	3.11E+01	1.10E+01	7.39E+00	3.17E+01	1.23E-02
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	8.44E+00	3.70E+01	1.32E+01	8.94E+00	3.09E+01	1.49E-02
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	6.40E+06	2.90E+07	1.03E+07	6.83E+06	2.95E+07	1.54E-08
Bismuth (83)	Bi-212	1.11E+00	2.14E-01	6.02E-01	9.55E-01	2.63E-01	6.02E+03	1.2	4.95E+04	2.56E+05	9.13E+04	5.76E+04	2.09E+05	3.38E-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	6.64E+03	3.98E+04	1.37E+04	8.28E+03	3.95E+04	4.54E-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	1.01E+05	4.67E+05	1.66E+05	1.10E+05	3.67E+05	5.21E-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	8.62E+04	4.16E+05	1.48E+05	9.65E+04	3.40E+05	4.47E-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	1.86E+04	1.05E+05	3.62E+04	2.24E+04	1.03E+05	4.22E-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	2.15E+04	1.21E+05	4.18E+04	2.58E+04	1.19E+05	4.87E-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	4.73E+02	1.80E+03	6.69E+02	4.86E+02	1.77E+03	4.39E-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	2.35E+02	1.20E+03	4.21E+02	2.69E+02	1.21E+03	8.11E-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	2.15E+01	7.86E+01	3.00E+01	2.21E+01	7.72E+01	2.05E-05
Berkelium (97)	Bk-249	3.75E-06	2.31E-06	3.47E-06	3.73E-06	6.23E-06	7.90E-01	1.26	3.36E+06	5.45E+06	3.64E+06	3.38E+06	2.02E+06	2.06E-03
Berkelium (97)	Bk-250	5.24E+00	9.83E-01	2.83E+00	4.51E+00	9.84E-01	1.88E+03	1.18	3.34E+03	1.78E+04	6.18E+03	3.88E+03	1.78E+04	8.60E-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	4.79E+03	2.87E+04	9.86E+03	5.98E+03	2.93E+04	4.78E-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	3.32E+03	1.85E+04	6.43E+03	3.97E+03	1.86E+04	5.43E-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	5.12E+03	2.44E+04	8.58E+03	5.61E+03	2.36E+04	2.00E-10
Bromine (35)	Br-76	1.61E+01	2.87E+00	8.32E+00	1.34E+01	2.85E+00	3.75E+02	1.17	2.19E+02	1.23E+03	4.23E+02	2.63E+02	1.24E+03	8.60E-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	5.45E+02	2.59E+03	9.08E+02	5.96E+02	2.63E+03	7.50E-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	4.20E+05	2.05E+06	7.25E+05	4.69E+05	1.55E+06	3.12E-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	1.14E+06	1.48E+06	1.15E+06	1.14E+06	6.35E+05	1.29E-07
Bromine (35)	Br-82	1.54E+01	2.95E+00	8.49E+00	1.34E+01	2.89E+00	1.72E+02	1.18	1.04E+02	5.44E+02	1.89E+02	1.19E+02	5.54E+02	9.60E-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	5.23E+05	2.30E+06	8.70E+05	5.76E+05	6.95E+05	3.31E-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	9.54E+03	5.72E+04	1.99E+04	1.20E+04	5.69E+04	1.36E-10
Carbon (6)	C-11	5.60E+00	1.16E+00	3.30E+00	5.07E+00	1.18E+00	1.79E+04	1.2	2.91E+04	1.41E+05	4.94E+04	3.21E+04	1.38E+05	3.48E-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	7.96E+05	1.36E+06	8.51E+05	7.96E+05	5.89E+05	1.79E-01
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	2.69E+05	5.77E+05	3.07E+05	2.69E+05	3.25E+05	1.52E-05
Calcium (20)	Ca-47	6.51E+00	1.17E+00	3.38E+00	5.46E+00	1.17E+00	5.58E+01	1.16	8.13E+01	4.52E+02	1.57E+02	9.68E+01	4.53E+02	1.33E-10
Calcium (20)	Ca-49	2.16E+01	3.21E+00	9.47E+00	1.62E+01	3.12E+00	4.18E+04	1.1	1.93E+04	1.30E+05	4.41E+04	2.57E+04	1.34E+05	4.39E-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	4.52E+04	2.10E+05	7.59E+04	5.03E+04	2.00E+05	1.44E-09
Cadmium (48)	Cd-107	4.49E-02	1.32E-02	3.02E-02	4.20E-02	2.72E-02	9.35E+02	1.33	1.71E+05	5.84E+05	2.55E+05	1.84E+05	2.83E+05	3.81E-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	8.74E+02	1.75E+03	1.01E+03	8.72E+02	5.50E+02	3.39E-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	6.00E+04	1.40E+05	7.06E+04	6.02E+04	8.66E+04	1.76E+11
Cadmium (48)	Cd-113m	6.01E-04	2.24E-04	4.74E-04	5.93E-04	2.07E-03	5.10E-02	1.25	1.49E+04	4.00E+04	1.89E+04	1.51E+04	4.34E+03	6.42E-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	8.11E+02	3.90E+03	1.38E+03	8.94E+02	3.64E+03	1.59E-09
Cadmium (48)	Cd-115m	1.47E-01	3.41E-02	8.36E-02	1.28E-01	1.08E-01	5.67E+00	1.17	3.63E+02	1.57E+03	6.40E+02	4.18E+02	4.96E+02	1.43E-08
Cadmium (48)	Cd-117	6.51E+00	1.20E+00	3.47E+00	5.54E+00	1.21E+00	2.44E+03	1.17	3.52E+03	1.91E+04	6.61E+03	4.14E+03	1.89E+04	3.28E-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	1.35E+03	7.77E+03	2.68E+03	1.64E+03	7.99E+03	1.69E-10
Cerium (58)	Ce-134	1.26E-02	1.03E-02	1.26E-02	1.26E-02	2.51E-02	8.43E+01	1.29	5.69E+04	6.94E+04	5.71E+04	5.69E+04	2.85E+04	1.75E-07
Cerium (58)	Ce-135	9.74E+00	2.00E+00	5.73E+00	8.80E+00	1.98E+00	3.45E+02	1.2	3.24E+02	1.58E+03	5.50E+02	3.58E+02	1.59E+03	2.46E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Cerium (58)	Ce-137	5.84E-02	2.00E-02	3.99E-02	5.43E-02	3.48E-02	6.75E+02	1.29	9.85E+04	2.88E+05	1.44E+05	1.06E+05	1.65E+05	3.88E-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	8.70E+03	3.40E+04	1.33E+04	9.22E+03	2.78E+04	1.31E-08
Cerium (58)	Ce-139	5.78E-01	1.54E-01	4.08E-01	5.67E-01	1.67E-01	1.84E+00	1.26	3.29E+01	1.23E+02	4.65E+01	3.35E+01	1.14E+02	4.83E-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	2.36E+02	8.71E+02	3.27E+02	2.39E+02	8.43E+02	8.29E-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	1.20E+03	5.44E+03	1.97E+03	1.31E+03	4.70E+03	1.81E-09
Cerium (58)	Ce-144	6.45E-02	1.94E-02	4.87E-02	6.40E-02	2.15E-02	8.90E-01	1.26	2.03E+02	6.76E+02	2.69E+02	2.05E+02	6.11E+02	6.38E-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	4.51E+01	1.65E+02	7.44E+01	5.15E+01	7.09E+01	1.42E-08
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	1.17E+09	1.19E+09	1.17E+09	1.17E+09	1.55E+08	2.94E-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	9.21E+06	1.31E+07	1.02E+07	9.23E+06	2.00E+06	2.59E-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	1.28E+05	1.32E+05	1.28E+05	1.28E+05	1.72E+04	8.15E-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	5.14E+00	2.37E+01	8.34E+00	5.54E+00	2.40E+01	1.26E-06
Californium (98)	Cf-250	8.30E-05	8.09E-05	8.30E-05	8.30E-05	6.21E-04	5.30E-02	1.39	9.74E+04	9.99E+04	9.74E+04	9.74E+04	1.30E+04	8.92E-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	1.71E+01	6.42E+01	2.39E+01	1.74E+01	6.22E+01	1.08E-05
Californium (98)	Cf-252	2.95E+00	5.13E-01	1.49E+00	2.42E+00	4.97E-01	2.63E-01	1.39	3.04E+00	1.75E+01	6.01E+00	3.69E+00	1.80E+01	5.65E-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	1.71E+06	3.73E+06	1.97E+06	1.72E+06	1.85E+06	5.92E-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	3.10E-01	1.77E+00	6.14E-01	3.77E-01	1.85E+00	3.66E-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	3.68E+03	1.00E+04	5.03E+03	3.82E+03	6.98E+02	1.12E-01
Chlorine (17)	Cl-38	9.85E+00	1.64E+00	4.72E+00	7.83E+00	1.67E+00	9.79E+03	1.13	9.66E+03	5.81E+04	2.02E+04	1.21E+04	5.70E+04	7.28E-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	7.03E+03	3.90E+04	1.35E+04	8.40E+03	3.77E+04	8.13E-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	8.42E+04	2.79E+05	1.09E+05	8.49E+04	2.69E+05	1.54E-08
Curium (96)	Cm-240	1.12E-04	1.06E-04	1.12E-04	1.12E-04	8.97E-04	9.37E+00	1.41	6.50E+05	6.87E+05	6.51E+05	6.50E+05	8.14E+04	3.23E-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	2.72E+01	1.23E+02	4.39E+01	2.95E+01	1.23E+02	1.65E-09
Curium (96)	Cm-242	1.28E-04	1.02E-04	1.19E-04	1.27E-04	8.19E-04	1.55E+00	1.41	1.20E+05	1.50E+05	1.29E+05	1.21E+05	1.87E+04	3.62E-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	1.56E+01	6.16E+01	2.26E+01	1.62E+01	6.06E+01	3.03E-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	8.89E+04	9.22E+04	8.89E+04	8.89E+04	1.06E+04	1.10E-03
Curium (96)	Cm-245	3.06E-01	8.99E-02	2.33E-01	3.04E-01	9.39E-02	8.15E-05	1.36	2.64E+01	8.98E+01	3.46E+01	2.65E+01	8.59E+01	1.54E-04
Curium (96)	Cm-246	8.28E-05	7.89E-05	8.26E-05	8.28E-05	6.72E-04	1.47E-04	1.41	9.41E+04	9.88E+04	9.43E+04	9.41E+04	1.16E+04	3.07E-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	5.41E+00	2.52E+01	8.86E+00	5.85E+00	2.56E+01	5.84E-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	6.24E+00	2.84E+01	1.01E+01	6.72E+00	2.86E+01	6.73E-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	9.20E-01	5.29E+00	1.82E+00	1.12E+00	5.47E+00	2.22E-04
Curium (96)	Cm-249	1.07E-01	2.26E-02	6.32E-02	9.70E-02	3.87E-02	5.68E+03	1.2	4.82E+05	2.29E+06	8.18E+05	5.33E+05	1.34E+06	4.10E-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	5.61E+00					3.81E-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	2.79E+02	1.44E+03	5.01E+02	3.18E+02	1.43E+03	8.59E-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	1.43E+00	8.23E+00	2.84E+00	1.74E+00	8.47E+00	4.83E-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	2.89E+01	1.03E+02	3.89E+01	2.92E+01	1.04E+02	3.42E-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	6.09E+00	3.11E+01	1.09E+01	6.92E+00	3.16E+01	1.92E-10
Cobalt (27)	Co-58m	1.78E-06	1.74E-06	1.78E-06	1.78E-06	7.76E-06	6.63E+02	1.32	3.10E+09	3.17E+09	3.09E+09	3.10E+09	7.09E+08	5.26E-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	6.58E-01	3.69E+00	1.27E+00	7.85E-01	3.77E+00	5.82E-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	1.40E+07	6.80E+07	2.54E+07	1.65E+07	6.33E+07	4.68E-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	1.04E+05	3.56E+05	1.51E+05	1.13E+05	2.19E+05	3.35E-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	1.48E+04	8.40E+04	2.90E+04	1.79E+04	8.27E+04	6.82E-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	1.15E+03	4.92E+03	1.76E+03	1.22E+03	5.02E+03	4.06E-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	1.41E+04	6.61E+04	2.35E+04	1.55E+04	6.31E+04	1.55E-10
Chromium (24)	Cr-51	1.62E-01	3.54E-02	1.01E-01	1.52E-01	3.47E-02	9.13E+00	1.22	5.08E+02	2.32E+03	8.11E+02	5.41E+02	2.37E+03	5.51E-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	2.00E+04	9.70E+04	3.43E+04	2.22E+04	9.21E+04	6.00E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Cesium (55)	Cs-126	6.01E+00	1.28E+00	3.58E+00	5.46E+00	1.38E+00	2.22E+05	1.2	3.37E+05	1.58E+06	5.65E+05	3.70E+05	1.47E+06	3.71E-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	4.10E+03	1.92E+04	6.82E+03	4.49E+03	1.89E+04	1.04E-09
Cesium (55)	Cs-128	4.96E+00	1.04E+00	2.93E+00	4.49E+00	1.11E+00	9.34E+04	1.2	1.72E+05	8.21E+05	2.91E+05	1.89E+05	7.64E+05	4.56E-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	1.26E+03	5.76E+03	2.06E+03	1.37E+03	5.48E+03	1.67E-09
Cesium (55)	Cs-130	2.80E+00	5.82E-01	1.64E+00	2.54E+00	6.31E-01	1.22E+04	1.21	3.95E+04	1.90E+05	6.73E+04	4.36E+04	1.75E+05	8.19E-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	2.81E+04	3.13E+04	2.81E+04	2.81E+04	1.05E+04	2.74E-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	9.20E+01	4.59E+02	1.61E+02	1.03E+02	4.57E+02	6.03E-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	1.22E+00	6.21E+00	2.17E+00	1.39E+00	6.30E+00	9.46E-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	2.73E+05	8.64E+05	3.60E+05	2.76E+05	6.75E+05	3.39E-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	2.72E+05	5.38E+05	3.02E+05	2.72E+05	2.78E+05	2.37E+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	6.94E+03	3.59E+04	1.25E+04	7.94E+03	3.62E+04	2.65E-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	1.44E+01	7.47E+01	2.61E+01	1.65E+01	7.59E+01	1.96E-10
Cesium (55)	Cs-137	8.34E-04	3.86E-04	6.75E-04	8.21E-04	3.49E-03	2.31E-02	1.25	1.06E+04	2.29E+04	1.31E+04	1.08E+04	2.53E+03	1.22E-04
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	2.92E+00	1.46E+01	5.12E+00	3.28E+00	1.45E+01	3.36E-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	7.30E+03	4.16E+04	1.44E+04	8.85E+03	4.09E+04	1.73E-10
Copper (29)	Cu-60	2.39E+01	4.27E+00	1.23E+01	2.00E+01	4.25E+00	1.57E+04	1.16	6.23E+03	3.48E+04	1.20E+04	7.45E+03	3.50E+04	4.62E-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	3.57E+03	1.74E+04	6.11E+03	3.95E+03	1.70E+04	2.37E-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	6.10E+04	2.89E+05	1.03E+05	6.73E+04	2.63E+05	1.96E-10
Copper (29)	Cu-64	1.04E+00	2.14E-01	6.12E-01	9.44E-01	2.14E-01	4.78E+02	1.2	4.18E+03	2.04E+04	7.14E+03	4.63E+03	2.05E+04	1.09E-09
Copper (29)	Cu-66	5.58E-01	1.24E-01	3.11E-01	4.81E-01	2.37E-01	7.14E+04	1.17	1.20E+06	5.43E+06	2.16E+06	1.40E+06	2.83E+06	2.16E-09
Copper (29)	Cu-67	4.87E-01	1.24E-01	3.39E-01	4.74E-01	1.23E-01	9.81E+01	1.24	1.78E+03	6.99E+03	2.56E+03	1.83E+03	7.09E+03	2.36E-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	1.82E+03	8.95E+03	3.18E+03	2.06E+03	8.87E+03	9.03E-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	4.01E+03	1.75E+04	6.32E+03	4.27E+03	1.72E+04	1.63E-09
Dysprosium (66)	Dy-159	4.46E-02	2.82E-02	4.38E-02	4.46E-02	4.52E-02	1.75E+00	1.27	4.10E+02	6.48E+02	4.17E+02	4.10E+02	4.04E+02	7.21E-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	1.91E+05	7.48E+05	3.02E+05	2.08E+05	2.91E+05	2.35E-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	8.15E+03	2.03E+04	9.93E+03	8.33E+03	1.58E+04	3.53E-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	3.40E+03	1.74E+04	6.13E+03	3.91E+03	1.74E+04	5.67E-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	1.20E+05	2.00E+05	1.23E+05	1.20E+05	1.34E+05	6.56E-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	1.97E+06	4.77E+06	2.35E+06	1.98E+06	3.01E+06	2.38E-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	4.00E+03	1.73E+04	6.25E+03	4.25E+03	1.61E+04	1.65E-09
Erbium (68)	Er-172	2.76E+00	5.82E-01	1.64E+00	2.50E+00	5.79E-01	1.23E+02	1.2	4.06E+02	1.93E+03	6.84E+02	4.49E+02	1.94E+03	1.10E-09
Einsteinium (99)	Es-250	2.11E+00	4.27E-01	1.20E+00	1.86E+00	4.26E-01	2.89E+03	1.22	1.23E+04	6.06E+04	2.15E+04	1.39E+04	6.08E+04	2.06E-09
Einsteinium (99)	Es-251	3.26E-01	9.38E-02	2.46E-01	3.25E-01	9.79E-02	1.84E+02	1.33	4.63E+03	1.61E+04	6.14E+03	4.66E+03	1.54E+04	1.23E-08
Einsteinium (99)	Es-253	1.61E-03	4.14E-04	1.04E-03	1.50E-03	7.74E-04	1.24E+01	1.38	6.10E+04	2.37E+05	9.46E+04	6.52E+04	1.27E+05	2.42E-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	1.07E+03	2.90E+03	1.42E+03	1.11E+03	1.06E+03	5.72E-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	2.71E+00	1.44E+01	5.02E+00	3.14E+00	1.43E+01	1.45E-09
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	5.33E+02	2.68E+03	9.35E+02	6.02E+02	2.62E+03	1.70E-09
Europium (63)	Eu-145	8.65E+00	1.59E+00	4.55E+00	7.31E+00	1.56E+00	4.26E+01	1.17	4.62E+01	2.52E+02	8.79E+01	5.47E+01	2.56E+02	3.05E-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	3.52E+01	1.84E+02	6.41E+01	4.05E+01	1.86E+02	1.82E-10
Europium (63)	Eu-147	2.56E+00	5.30E-01	1.47E+00	2.28E+00	5.39E-01	1.05E+01	1.2	3.78E+01	1.82E+02	6.55E+01	4.24E+01	1.79E+02	1.02E-09
Europium (63)	Eu-148	1.23E+01	2.42E+00	6.92E+00	1.09E+01	2.40E+00	4.64E+00	1.19	3.51E+00	1.78E+01	6.25E+00	3.99E+00	1.80E+01	2.17E-10
Europium (63)	Eu-149	1.83E-01	5.20E-02	1.23E-01	1.73E-01	6.61E-02	2.72E+00	1.26	1.38E+02	4.87E+02	2.06E+02	1.47E+02	3.84E+02	1.47E-08
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	1.45E+00	7.59E+00	2.66E+00	1.68E+00	7.59E+00	8.22E-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	3.64E+03	1.83E+04	6.54E+03	4.17E+03	1.54E+04	1.65E-09
Europium (63)	Eu-154	7.25E+00	1.37E+00	3.92E+00	6.23E+00	1.37E+00	7.88E-02	1.17	1.34E+00	7.11E+00	2.48E+00	1.56E+00	7.13E+00	5.09E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Europium (63)	Eu-155	1.62E-01	5.63E-02	1.32E-01	1.62E-01	6.24E-02	1.40E-01	1.26	5.77E+01	1.66E+02	7.08E+01	5.77E+01	1.49E+02	1.24E-07
Europium (63)	Eu-156	8.21E+00	1.45E+00	4.20E+00	6.81E+00	1.45E+00	1.67E+01	1.15	1.93E+01	1.09E+02	3.78E+01	2.33E+01	1.09E+02	3.51E-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	2.96E+03	1.30E+04	4.80E+03	3.22E+03	1.12E+04	2.25E-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	1.18E+04	6.29E+04	2.21E+04	1.39E+04	5.92E+04	4.57E-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	5.39E+03	2.61E+04	9.17E+03	5.95E+03	2.64E+04	5.68E-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	1.72E+03	8.00E+03	2.83E+03	1.87E+03	8.02E+03	2.37E-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	7.45E+00	4.12E+01	1.42E+01	8.84E+00	4.20E+01	1.50E-10
Iron (26)	Fe-60	9.03E-06	5.58E-06	8.58E-06	9.03E-06	1.37E-05	6.93E-06	1.25	9.67E+05	1.57E+06	1.02E+06	9.67E+05	6.40E+05	1.63E+01
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	4.02E+02	1.95E+03	7.31E+02	4.75E+02	1.81E+03	6.75E-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	2.25E+07	2.29E+07	2.25E+07	2.25E+07	3.36E+06	4.12E-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	2.43E+03	8.68E+03	3.28E+03	2.46E+03	8.37E+03	1.41E-08
Fermium (100)	Fm-254	1.88E-04	1.26E-04	1.70E-04	1.88E-04	6.99E-04	1.87E+03	1.38	7.89E+07	1.18E+08	8.74E+07	7.89E+07	2.13E+07	2.08E-05
Fermium (100)	Fm-255	5.22E-03	2.31E-03	4.40E-03	5.18E-03	7.34E-03	3.02E+02	1.4	4.54E+05	1.03E+06	5.39E+05	4.58E+05	3.23E+05	7.43E-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	5.78E+01	2.12E+02	7.95E+01	5.87E+01	2.03E+02	1.15E-08
Francium (87)	Fr-219	1.81E-02	3.92E-03	1.11E-02	1.67E-02	3.85E-03	1.04E+09	1.22	5.16E+11	2.38E+12	8.41E+11	5.58E+11	2.42E+12	2.11E-07
Francium (87)	Fr-220	4.14E-02	1.12E-02	3.00E-02	4.07E-02	1.15E-02	7.98E+05	1.43	1.48E+08	5.45E+08	2.04E+08	1.51E+08	5.31E+08	7.91E-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	8.53E+05	5.09E+06	1.75E+06	1.06E+06	5.05E+06	4.57E-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	4.64E+06	1.94E+07	6.94E+06	4.82E+06	1.98E+07	2.62E-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	6.33E+05	3.01E+06	1.07E+06	7.02E+05	2.53E+06	3.58E-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	9.04E+06	1.50E+07	1.10E+07	9.33E+06	2.17E+06	1.54E-07
Francium (87)	Fr-223	1.81E-01	5.39E-02	1.29E-01	1.72E-01	9.06E-02	1.67E+04	1.37	7.39E+05	2.48E+06	1.04E+06	7.76E+05	1.48E+06	1.91E-08
Gallium (31)	Ga-65	6.38E+00	1.34E+00	3.77E+00	5.76E+00	1.41E+00	2.40E+04	1.2	3.43E+04	1.64E+05	5.81E+04	3.80E+04	1.55E+05	1.81E-10
Gallium (31)	Ga-66	1.57E+01	2.67E+00	7.70E+00	1.26E+01	2.63E+00	6.46E+02	1.14	3.95E+02	2.33E+03	8.05E+02	4.91E+02	2.36E+03	7.82E-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	1.02E+03	4.15E+03	1.51E+03	1.06E+03	4.20E+03	1.70E-09
Gallium (31)	Ga-68	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	5.36E+03	1.2	9.31E+03	4.49E+04	1.58E+04	1.03E+04	4.20E+04	2.29E-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	2.60E+06	8.40E+06	4.16E+06	2.90E+06	1.63E+06	2.05E-08
Gallium (31)	Ga-72	1.69E+01	2.95E+00	8.54E+00	1.39E+01	2.89E+00	4.31E+02	1.15	2.43E+02	1.39E+03	4.80E+02	2.95E+02	1.42E+03	7.87E-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	6.93E+03	3.13E+04	1.11E+04	7.41E+03	2.81E+04	7.94E-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	1.08E+04	6.15E+04	2.14E+04	1.31E+04	6.20E+04	1.91E-10
Gadolinium (64)	Gd-146	7.18E-01	2.26E-01	5.46E-01	7.11E-01	2.59E-01	5.24E+00	1.26	6.38E+01	2.03E+02	8.38E+01	6.44E+01	1.77E+02	3.45E-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	1.99E+02	9.96E+02	3.50E+02	2.25E+02	1.01E+03	3.57E-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	1.21E+02	5.44E+02	1.97E+02	1.32E+02	5.30E+02	1.30E-09
Gadolinium (64)	Gd-151	1.55E-01	5.02E-02	1.13E-01	1.51E-01	6.50E-02	2.11E+00	1.27	1.34E+02	4.14E+02	1.83E+02	1.38E+02	3.19E+02	1.86E-08
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	6.55E+01	1.66E+02	7.83E+01	6.55E+01	1.29E+02	1.86E-08
Gadolinium (64)	Gd-159	2.20E-01	5.28E-02	1.40E-01	2.07E-01	7.56E-02	3.27E+02	1.23	1.33E+04	5.53E+04	2.08E+04	1.41E+04	3.86E+04	1.25E-08
Germanium (32)	Ge-66	3.60E+00	7.59E-01	2.14E+00	3.28E+00	7.59E-01	2.67E+03	1.21	6.72E+03	3.19E+04	1.13E+04	7.37E+03	3.19E+04	3.22E-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	2.28E+04	1.11E+05	3.93E+04	2.55E+04	1.05E+05	1.52E-10
Germanium (32)	Ge-68	1.29E-06	1.29E-06	1.29E-06	1.29E-06	4.78E-05	8.78E-01	1.59	7.98E+06	7.98E+06	7.98E+06	7.98E+06	2.16E+05	1.20E-03
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	2.61E+00	1.26E+01	4.44E+00	2.89E+00	1.18E+01	3.92E-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	2.87E+02	1.47E+03	5.14E+02	3.27E+02	1.47E+03	2.47E-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	1.12E+08	1.12E+08	1.12E+08	1.12E+08	3.04E+06	7.23E-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	2.23E+05	9.41E+05	3.45E+05	2.35E+05	4.68E+05	7.39E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Germanium (32)	Ge-77	6.06E+00	1.22E+00	3.49E+00	5.39E+00	1.27E+00	5.37E+02	1.19	8.16E+02	4.05E+03	1.42E+03	9.17E+02	3.89E+03	2.27E-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	2.69E+04	1.20E+05	4.21E+04	2.84E+04	1.20E+05	9.71E-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	1.33E+03	5.83E+03	2.13E+03	1.44E+03	5.72E+03	1.15E-09
Hafnium (72)	Hf-172	2.14E-01	9.19E-02	1.87E-01	2.14E-01	1.16E-01	3.71E-01	1.3	4.71E+01	1.10E+02	5.41E+01	4.71E+01	8.72E+01	4.24E-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	1.32E+03	5.26E+03	1.97E+03	1.39E+03	5.16E+03	1.75E-09
Hafnium (72)	Hf-175	1.72E+00	3.97E-01	1.09E+00	1.61E+00	4.03E-01	3.61E+00	1.23	1.93E+01	8.35E+01	3.04E+01	2.06E+01	8.24E+01	1.81E-09
Hafnium (72)	Hf-177m	1.09E+01	2.48E+00	6.92E+00	1.02E+01	2.45E+00	7.09E+03	1.22	5.85E+03	2.56E+04	9.17E+03	6.22E+03	2.59E+04	2.83E-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	7.57E-01	3.48E+00	1.23E+00	8.20E-01	3.53E+00	1.17E-08
Hafnium (72)	Hf-179m	4.33E+00	9.85E-01	2.74E+00	4.05E+00	9.83E-01	1.01E+01	1.22	2.09E+01	9.17E+01	3.29E+01	2.23E+01	9.19E+01	7.19E-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	1.99E+03	8.93E+03	3.19E+03	2.15E+03	8.99E+03	6.31E-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	1.92E+01	8.76E+01	3.12E+01	2.07E+01	8.83E+01	1.13E-09
Hafnium (72)	Hf-182	1.15E+00	2.65E-01	7.46E-01	1.09E+00	2.60E-01	7.70E-08	1.23	7.76E+00	3.37E+01	1.20E+01	8.15E+00	3.43E+01	3.56E-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	1.12E+04	5.24E+04	1.86E+04	1.23E+04	5.26E+04	6.68E-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	1.27E+04	6.27E+04	2.22E+04	1.43E+04	5.98E+04	7.91E-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	1.18E+04	4.88E+04	1.78E+04	1.24E+04	4.50E+04	2.85E-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	2.01E+04	7.15E+04	2.81E+04	2.08E+04	6.79E+04	4.34E-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	8.74E+02	4.34E+03	1.54E+03	9.92E+02	4.40E+03	5.99E-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	6.73E+05	6.73E+05	6.73E+05	6.73E+05	2.74E+04	9.51E-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	1.51E+00	8.04E+00	2.82E+00	1.77E+00	8.20E+00	2.13E-07
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	5.69E+03	2.52E+04	9.39E+03	6.36E+03	2.43E+04	3.51E-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	1.26E+03	5.46E+03	1.99E+03	1.36E+03	5.42E+03	3.27E-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	4.94E+03	1.23E+04	5.66E+03	4.94E+03	1.09E+04	1.99E-08
Mercury (80)	Hg-197m	3.19E-01	9.23E-02	2.37E-01	3.13E-01	9.48E-02	2.55E+02	1.35	6.47E+03	2.24E+04	8.72E+03	6.59E+03	2.18E+04	9.70E-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	9.83E+04	3.76E+05	1.41E+05	1.02E+05	3.71E+05	4.44E-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	4.13E+01	1.82E+02	6.44E+01	4.36E+01	1.86E+02	3.00E-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	3.57E+04	1.63E+05	5.89E+04	3.91E+04	1.51E+05	1.42E-09
Holmium (67)	Ho-157	2.33E+00	5.17E-01	1.41E+00	2.11E+00	5.38E-01	2.89E+04	1.21	1.12E+05	5.06E+05	1.85E+05	1.24E+05	4.85E+05	1.18E-09
Holmium (67)	Ho-159	1.47E+00	3.69E-01	9.68E-01	1.38E+00	3.90E-01	1.10E+04	1.23	6.69E+04	2.66E+05	1.02E+05	7.13E+04	2.52E+05	1.87E-09
Holmium (67)	Ho-161	7.50E-02	3.92E-02	6.84E-02	7.48E-02	6.00E-02	2.43E+03	1.29	2.76E+05	5.28E+05	3.02E+05	2.76E+05	3.45E+05	3.55E-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	2.92E+05	1.34E+06	5.06E+05	3.34E+05	1.22E+06	3.78E-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	1.61E+04	8.11E+04	2.89E+04	1.86E+04	8.02E+04	9.46E-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	2.85E+06	5.19E+06	3.03E+06	2.85E+06	2.75E+06	7.22E-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	1.67E+06	2.79E+06	1.72E+06	1.67E+06	1.84E+06	5.47E-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	1.34E+04	5.10E+04	2.26E+04	1.55E+04	1.71E+04	1.91E-08
Holmium (67)	Ho-166m	9.64E+00	1.94E+00	5.56E+00	8.60E+00	1.93E+00	5.78E-04	1.19	9.55E-01	4.75E+00	1.66E+00	1.07E+00	4.78E+00	5.32E-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	9.60E+03	4.33E+04	1.54E+04	1.03E+04	4.30E+04	1.59E-09
Iodine (53)	I-120	1.66E+01	3.02E+00	8.67E+00	1.39E+01	3.06E+00	4.50E+03	1.16	2.55E+03	1.40E+04	4.88E+03	3.04E+03	1.38E+04	1.32E-10
Iodine (53)	I-120m	3.17E+01	5.87E+00	1.69E+01	2.70E+01	5.85E+00	6.87E+03	1.17	2.03E+03	1.10E+04	3.82E+03	2.38E+03	1.10E+04	6.89E-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	1.23E+04	5.66E+04	2.00E+04	1.33E+04	5.53E+04	1.01E-09
Iodine (53)	I-122	5.28E+00	1.10E+00	3.10E+00	4.76E+00	1.19E+00	1.01E+05	1.2	1.74E+05	8.37E+05	2.97E+05	1.93E+05	7.72E+05	4.10E-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	6.10E+03	2.38E+04	8.84E+03	6.30E+03	2.22E+04	3.17E-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	8.79E+01	4.64E+02	1.62E+02	1.02E+02	4.62E+02	3.49E-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	3.02E+03	3.26E+03	3.02E+03	3.02E+03	9.77E+02	1.74E-07
Iodine (53)	I-126	2.46E+00	5.05E-01	1.44E+00	2.22E+00	5.16E-01	1.94E+01	1.21	7.17E+01	3.49E+02	1.23E+02	7.95E+01	3.42E+02	9.02E-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	2.74E+05	1.19E+06	4.50E+05	3.00E+05	6.61E+05	4.67E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Iodine (53)	I-129	9.53E-03	8.21E-03	9.53E-03	9.53E-03	2.28E-02	4.41E-08	1.3	8.86E+02	1.03E+03	8.86E+02	8.86E+02	3.71E+02	5.02E+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	3.73E+02	1.88E+03	6.56E+02	4.20E+02	1.89E+03	1.92E-10
Iodine (53)	I-131	2.01E+00	4.31E-01	1.22E+00	1.85E+00	4.25E-01	3.15E+01	1.21	1.41E+02	6.60E+02	2.33E+02	1.53E+02	6.70E+02	1.14E-09
Iodine (53)	I-132	1.32E+01	2.56E+00	7.35E+00	1.16E+01	2.57E+00	2.64E+03	1.18	1.85E+03	9.59E+03	3.34E+03	2.12E+03	9.55E+03	1.80E-10
Iodine (53)	I-132m	1.75E+00	3.54E-01	1.01E+00	1.56E+00	3.63E-01	4.36E+03	1.2	2.26E+04	1.12E+05	3.93E+04	2.54E+04	1.09E+05	1.33E-09
Iodine (53)	I-133	3.41E+00	6.88E-01	1.96E+00	3.04E+00	7.20E-01	2.92E+02	1.19	7.86E+02	3.90E+03	1.37E+03	8.82E+02	3.72E+03	6.95E-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	4.18E+03	2.21E+04	7.68E+03	4.84E+03	2.19E+04	1.57E-10
Iodine (53)	I-135	9.72E+00	1.73E+00	5.00E+00	8.11E+00	1.72E+00	9.18E+02	1.15	8.98E+02	5.05E+03	1.75E+03	1.08E+03	5.08E+03	2.56E-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	3.62E+03	1.80E+04	6.27E+03	4.06E+03	1.80E+04	5.29E-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	4.30E+02	1.81E+03	6.47E+02	4.48E+02	1.81E+03	1.04E-09
Indium (49)	In-112	1.45E+00	3.00E-01	8.50E-01	1.31E+00	3.20E-01	2.53E+04	1.22	1.57E+05	7.59E+05	2.68E+05	1.74E+05	7.13E+05	1.35E-09
Indium (49)	In-113m	1.33E+00	2.85E-01	8.13E-01	1.23E+00	2.84E-01	3.66E+03	1.23	2.46E+04	1.15E+05	4.02E+04	2.66E+04	1.15E+05	1.47E-09
Indium (49)	In-114	1.68E-02	3.04E-03	8.73E-03	1.41E-02	3.22E-03	3.04E+05	1.19	1.67E+08	9.24E+08	3.22E+08	1.99E+08	8.72E+08	1.22E-07
Indium (49)	In-114m	4.51E-01	9.70E-02	2.72E-01	4.12E-01	1.01E-01	5.11E+00	1.25	9.98E+01	4.64E+02	1.65E+02	1.09E+02	4.47E+02	4.32E-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	1.20E+02	5.61E+02	2.00E+02	1.32E+02	5.40E+02	5.19E-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	3.02E+04	8.22E+04	3.77E+04	3.05E+04	2.57E+04	4.95E+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	1.51E+04	6.86E+04	2.41E+04	1.61E+04	6.77E+04	2.48E-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	4.20E+03	2.36E+04	8.12E+03	5.02E+03	2.40E+04	1.41E-10
Indium (49)	In-117	3.64E+00	7.76E-01	2.20E+00	3.34E+00	7.75E-01	8.32E+03	1.21	2.08E+04	9.73E+04	3.43E+04	2.26E+04	9.74E+04	5.67E-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	6.38E+04	2.67E+05	9.78E+04	6.73E+04	1.88E+05	4.63E-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	3.17E+05	1.61E+06	5.65E+05	3.59E+05	1.50E+06	4.82E-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	1.90E+06	4.59E+06	2.71E+06	2.04E+06	1.13E+06	2.16E-08
Iridium (77)	Ir-182	7.35E+00	1.52E+00	4.27E+00	6.56E+00	1.56E+00	2.43E+04	1.2	3.02E+04	1.46E+05	5.19E+04	3.38E+04	1.42E+05	4.39E-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	1.71E+03	8.88E+03	3.11E+03	1.98E+03	8.93E+03	3.04E-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	1.18E+03	6.30E+03	2.23E+03	1.41E+03	6.32E+03	9.76E-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	2.85E+03	1.31E+04	4.80E+03	3.19E+03	1.30E+04	1.79E-09
Iridium (77)	Ir-188	9.55E+00	1.70E+00	4.89E+00	7.89E+00	1.66E+00	1.46E+02	1.16	1.44E+02	8.12E+02	2.82E+02	1.75E+02	8.32E+02	3.60E-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	6.91E+02	2.06E+03	8.89E+02	7.03E+02	1.85E+03	1.33E-08
Iridium (77)	Ir-190	7.53E+00	1.60E+00	4.51E+00	6.86E+00	1.59E+00	2.09E+01	1.22	2.50E+01	1.18E+02	4.17E+01	2.75E+01	1.19E+02	4.41E-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	1.73E+10	1.73E+10	1.73E+10	1.73E+10	5.71E+08	1.26E-03
Iridium (77)	Ir-190n	8.15E+00	1.73E+00	4.90E+00	7.46E+00	1.72E+00	1.96E+03	1.22	2.16E+03	1.02E+04	3.59E+03	2.36E+03	1.03E+04	4.07E-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	1.69E+08	5.06E+08	2.13E+08	1.71E+08	4.70E+08	1.42E-08
Iridium (77)	Ir-192	4.27E+00	9.19E-01	2.63E+00	3.95E+00	9.07E-01	3.42E+00	1.21	7.47E+00	3.47E+01	1.21E+01	8.07E+00	3.52E+01	8.14E-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	1.29E+01	5.06E+01	1.84E+01	1.32E+01	5.16E+01	1.67E-06
Iridium (77)	Ir-194	5.24E-01	1.19E-01	3.13E-01	4.74E-01	2.11E-01	3.17E+02	1.2	5.53E+03	2.43E+04	9.26E+03	6.12E+03	1.37E+04	6.57E-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	1.37E+00	6.64E+00	2.32E+00	1.51E+00	6.71E+00	3.49E-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	1.31E+05	3.56E+05	1.58E+05	1.32E+05	2.22E+05	2.04E-08
Iridium (77)	Ir-195m	2.00E+00	4.51E-01	1.24E+00	1.84E+00	4.64E-01	1.60E+03	1.33	6.60E+03	2.92E+04	1.06E+04	7.17E+03	2.84E+04	1.56E-09
Potassium (19)	K-38	2.00E+01	3.47E+00	1.00E+01	1.64E+01	3.47E+00	4.77E+04	1.15	2.28E+04	1.31E+05	4.53E+04	2.78E+04	1.31E+05	3.52E-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	9.61E+00	5.39E+01	1.90E+01	1.16E+01	4.01E+01	1.38E+00
Potassium (19)	K-42	1.84E+00	3.49E-01	9.42E-01	1.52E+00	4.64E-01	4.91E+02	1.14	2.56E+03	1.35E+04	5.00E+03	3.10E+03	1.01E+04	4.25E-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	4.62E+02	2.23E+03	7.83E+02	5.08E+02	2.23E+03	1.43E-10
Potassium (19)	K-44	1.47E+01	2.46E+00	7.11E+00	1.17E+01	2.47E+00	1.65E+04	1.13	1.08E+04	6.47E+04	2.24E+04	1.36E+04	6.44E+04	5.61E-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	1.48E+04	8.69E+04	2.99E+04	1.83E+04	8.52E+04	7.10E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Krypton (36)	Kr-74	6.19E+00	1.33E+00	3.73E+00	5.67E+00	1.40E+00	3.17E+04	1.21	4.62E+04	2.15E+05	7.67E+04	5.05E+04	2.04E+05	2.10E-10
Krypton (36)	Kr-76	2.18E+00	4.76E-01	1.35E+00	2.03E+00	4.70E-01	4.10E+02	1.29	1.59E+03	7.31E+03	2.58E+03	1.71E+03	7.39E+03	5.73E-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	8.25E+03	3.81E+04	1.35E+04	8.97E+03	3.61E+04	2.53E-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	1.08E+03	5.16E+03	1.81E+03	1.18E+03	5.24E+03	9.52E-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	2.64E+02	1.17E+03	4.12E+02	2.77E+02	1.04E+03	1.26E-02
Krypton (36)	Kr-81m	5.84E-01	1.41E-01	3.95E-01	5.65E-01	1.38E-01	1.68E+06	1.3	2.42E+07	9.99E+07	3.57E+07	2.50E+07	1.03E+08	2.26E-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	9.66E+08	9.96E+08	9.66E+08	9.66E+08	5.84E+07	4.69E-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	6.99E+02	3.06E+03	1.15E+03	7.64E+02	7.69E+02	1.78E-06
Krypton (36)	Kr-85m	6.96E-01	1.73E-01	4.77E-01	6.73E-01	1.83E-01	1.36E+03	1.26	1.70E+04	6.83E+04	2.47E+04	1.75E+04	6.44E+04	2.07E-09
Krypton (36)	Kr-87	5.02E+00	8.95E-01	2.54E+00	4.12E+00	9.80E-01	4.77E+03	1.15	9.08E+03	5.09E+04	1.80E+04	1.10E+04	4.65E+04	3.21E-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	1.64E+03	9.96E+03	3.40E+03	2.05E+03	1.02E+04	1.31E-10
Lanthanum (57)	La-131	3.47E+00	7.39E-01	2.07E+00	3.17E+00	7.64E-01	6.17E+03	1.21	1.61E+04	7.55E+04	2.69E+04	1.76E+04	7.30E+04	6.62E-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	9.93E+02	5.32E+03	1.86E+03	1.17E+03	5.33E+03	2.01E-10
Lanthanum (57)	La-134	3.84E+00	8.02E-01	2.26E+00	3.47E+00	8.75E-01	5.46E+04	1.2	1.30E+05	6.21E+05	2.21E+05	1.44E+05	5.69E+05	6.17E-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	3.93E+04	1.27E+05	6.03E+04	4.29E+04	7.51E+04	3.31E-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	8.13E+02	9.61E+02	8.13E+02	8.13E+02	3.71E+02	1.87E-02
Lanthanum (57)	La-138	7.53E+00	1.34E+00	3.90E+00	6.30E+00	1.32E+00	5.13E-12	1.16	1.26E+00	7.03E+00	2.43E+00	1.50E+00	7.17E+00	6.55E+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	1.00E+02	5.64E+02	1.95E+02	1.20E+02	5.67E+02	1.81E-10
Lanthanum (57)	La-141	3.10E-01	7.11E-02	1.70E-01	2.61E-01	1.77E-01	1.54E+03	1.15	4.76E+04	2.07E+05	8.69E+04	5.64E+04	8.31E+04	8.43E-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	2.14E+03	1.30E+04	4.45E+03	2.68E+03	1.31E+04	1.49E-10
Lanthanum (57)	La-143	6.64E-01	1.45E-01	3.58E-01	5.58E-01	2.65E-01	2.56E+04	1.15	3.67E+05	1.68E+06	6.81E+05	4.37E+05	9.20E+05	3.98E-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	2.83E+02	1.49E+03	5.26E+02	3.32E+02	1.50E+03	5.21E-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	7.60E+01	4.51E+02	1.55E+02	9.43E+01	4.64E+02	1.98E-10
Lutetium (71)	Lu-171	3.62E+00	7.50E-01	2.09E+00	3.21E+00	7.63E-01	3.08E+01	1.2	7.77E+01	3.75E+02	1.35E+02	8.76E+01	3.68E+02	8.38E-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	3.25E+01	1.70E+02	5.98E+01	3.78E+01	1.72E+02	2.88E-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	2.98E+01	9.53E+01	4.10E+01	3.10E+01	8.25E+01	1.98E-08
Lutetium (71)	Lu-174	5.35E-01	1.20E-01	3.08E-01	4.61E-01	1.31E-01	2.09E-01	1.2	1.89E+01	8.39E+01	3.29E+01	2.20E+01	7.74E+01	3.05E-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	1.41E+02	3.67E+02	1.79E+02	1.48E+02	2.92E+02	2.67E-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	3.82E+00	1.65E+01	5.90E+00	4.02E+00	1.67E+01	6.79E+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	3.58E+05	8.37E+05	4.20E+05	3.58E+05	2.13E+05	7.40E-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	2.29E+03	8.95E+03	3.30E+03	2.36E+03	8.86E+03	2.09E-08
Lutetium (71)	Lu-177m	4.61E+00	1.09E+00	3.00E+00	4.36E+00	1.09E+00	1.57E+00	1.23	3.84E+00	1.63E+01	5.89E+00	4.05E+00	1.63E+01	8.39E-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	1.42E+05	7.28E+05	2.68E+05	1.69E+05	4.83E+05	3.83E-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	2.67E+04	1.17E+05	4.19E+04	2.85E+04	1.14E+05	5.75E-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	7.67E+04	3.03E+05	1.15E+05	8.04E+04	1.32E+05	2.01E-08
Mendelevium (101)	Md-257	4.61E-01	1.16E-01	3.15E-01	4.42E-01	1.18E-01	1.17E+03	1.29	2.15E+04	8.51E+04	3.14E+04	2.24E+04	8.39E+04	9.17E-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	2.00E+04	3.57E+04	2.21E+04	2.00E+04	9.58E+03	2.17E-06
Magnesium (12)	Mg-28	8.15E+00	1.50E+00	4.31E+00	6.92E+00	1.47E+00	2.90E+02	1.17	3.34E+02	1.82E+03	6.32E+02	3.93E+02	1.85E+03	6.25E-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	1.30E+04	6.24E+04	2.22E+04	1.44E+04	5.76E+04	1.64E-10
Manganese (25)	Mn-52	2.07E+01	3.82E+00	1.10E+01	1.77E+01	3.76E+00	4.52E+01	1.17	2.05E+01	1.11E+02	3.85E+01	2.41E+01	1.13E+02	4.58E-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	1.12E+04	5.98E+04	2.09E+04	1.31E+04	5.87E+04	6.57E-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	2.80E+00	1.45E+01	5.05E+00	3.21E+00	1.47E+01	3.62E-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	2.13E+03	1.20E+04	4.16E+03	2.56E+03	1.18E+04	9.83E-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	2.85E+04	1.55E+05	5.40E+04	3.36E+04	1.53E+05	2.24E-10
Molybdenum (42)	Mo-90	4.29E+00	9.06E-01	2.57E+00	3.90E+00	9.08E-01	1.07E+03	1.24	2.21E+03	1.05E+04	3.68E+03	2.43E+03	1.04E+04	3.60E-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	1.89E+04	1.88E+04	1.89E+04	1.89E+04	1.73E+03	1.72E-02
Molybdenum (42)	Mo-93m	1.36E+01	2.48E+00	7.14E+00	1.15E+01	2.42E+00	8.86E+02	1.17	6.14E+02	3.36E+03	1.17E+03	7.26E+02	3.45E+03	1.25E-10
Molybdenum (42)	Mo-99	8.34E-01	1.71E-01	4.81E-01	7.44E-01	2.08E-01	9.20E+01	1.2	1.01E+03	4.93E+03	1.75E+03	1.13E+03	4.05E+03	2.11E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Nitrogen (7)	N-13	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.20E+00	3.66E+04	1.2	5.94E+04	2.88E+05	1.01E+05	6.55E+04	2.77E+05	4.10E-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	8.25E-01	4.35E+00	1.52E+00	9.55E-01	4.44E+00	1.32E-10
Sodium (11)	Na-24	2.72E+01	4.33E+00	1.27E+01	2.13E+01	4.19E+00	4.05E+02	1.12	1.45E+02	9.14E+02	3.12E+02	1.86E+02	9.44E+02	1.67E-11
Niobium (41)	Nb-88	2.37E+01	4.64E+00	1.33E+01	2.09E+01	4.69E+00	2.55E+04	1.19	9.93E+03	5.06E+04	1.77E+04	1.13E+04	5.01E+04	6.66E-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	1.49E+02	8.73E+02	3.00E+02	1.84E+02	8.94E+02	6.27E-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	1.10E+05	1.10E+05	1.10E+05	1.10E+05	1.01E+04	3.88E-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	1.02E+00	5.25E+00	1.83E+00	1.16E+00	5.34E+00	5.45E-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	1.51E+01	7.75E+01	2.71E+01	1.72E+01	7.86E+01	3.87E-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	1.96E+03	8.47E+03	2.99E+03	2.04E+03	8.34E+03	5.16E-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	1.68E+02	8.70E+02	3.04E+02	1.93E+02	8.86E+02	1.21E-10
Niobium (41)	Nb-97	3.73E+00	7.46E-01	2.13E+00	3.32E+00	7.88E-01	5.05E+03	1.19	1.25E+04	6.24E+04	2.19E+04	1.40E+04	5.91E+04	4.65E-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	8.06E+05	4.11E+06	1.43E+06	9.12E+05	4.15E+06	4.17E-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	4.59E+03	2.43E+04	8.49E+03	5.34E+03	2.39E+04	1.23E-10
Neodymium (60)	Nd-136	1.28E+00	2.95E-01	7.93E-01	1.17E+00	3.19E-01	7.19E+03	1.23	5.01E+04	2.18E+05	8.09E+04	5.47E+04	2.01E+05	1.84E-09
Neodymium (60)	Nd-138	8.77E-02	2.89E-02	6.17E-02	8.36E-02	4.38E-02	1.20E+03	1.27	1.18E+05	3.58E+05	1.68E+05	1.24E+05	2.37E+05	2.63E-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	5.16E+04	2.50E+05	8.91E+04	5.76E+04	2.35E+05	1.13E-09
Neodymium (60)	Nd-139m	8.90E+00	1.73E+00	4.92E+00	7.74E+00	1.73E+00	1.10E+03	1.18	1.15E+03	5.93E+03	2.08E+03	1.32E+03	5.93E+03	2.81E-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	7.50E+04	3.29E+05	1.29E+05	8.49E+04	2.70E+05	8.42E-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	7.43E+05	3.80E+06	1.33E+06	8.44E+05	3.79E+06	5.80E-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	3.34E+02	1.43E+03	5.31E+02	3.62E+02	1.26E+03	4.13E-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	1.66E+04	7.43E+04	2.67E+04	1.80E+04	6.66E+04	1.37E-09
Neodymium (60)	Nd-151	5.13E+00	1.02E+00	2.89E+00	4.49E+00	1.08E+00	2.93E+04	1.18	5.29E+04	2.67E+05	9.39E+04	6.04E+04	2.52E+05	5.30E-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	2.05E+06	9.79E+06	3.47E+06	2.26E+06	9.02E+06	5.95E-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	3.96E+01	2.00E+02	6.99E+01	4.49E+01	2.03E+02	1.04E-10
Nickel (28)	Ni-57	1.17E+01	2.11E+00	6.08E+00	9.83E+00	2.05E+00	1.68E+02	1.16	1.36E+02	7.56E+02	2.62E+02	1.62E+02	7.75E+02	8.92E-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	6.71E+03	3.74E+04	1.30E+04	8.02E+03	3.45E+04	3.51E-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	2.67E+07	5.49E+07	3.01E+07	2.68E+07	2.94E+07	3.07E-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	3.39E+04	1.68E+05	5.92E+04	3.82E+04	1.69E+05	6.16E-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	2.77E+05	9.30E+05	3.64E+05	2.80E+05	8.96E+05	1.24E-08
Neptunium (93)	Np-234	8.77E+00	1.56E+00	4.49E+00	7.27E+00	1.53E+00	5.75E+01	1.18	6.11E+01	3.44E+02	1.19E+02	7.36E+01	3.50E+02	4.82E-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	3.71E+03	9.73E+03	4.55E+03	3.71E+03	3.13E+03	2.65E-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	1.13E+02	3.39E+02	1.42E+02	1.13E+02	2.66E+02	1.60E-01
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	3.37E+02	1.80E+03	6.24E+02	3.91E+02	1.76E+03	1.30E-09
Neptunium (93)	Np-239	6.88E-01	1.77E-01	4.79E-01	6.66E-01	1.80E-01	1.07E+02	1.32	1.30E+03	5.05E+03	1.86E+03	1.34E+03	4.97E+03	5.60E-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	6.93E+03	3.48E+04	1.22E+04	7.83E+03	3.47E+04	5.76E-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	2.30E+05	1.15E+06	4.07E+05	2.61E+05	9.67E+05	2.17E-09
Oxygen (8)	O-15	5.61E+00	1.17E+00	3.32E+00	5.09E+00	1.25E+00	1.79E+05	1.2	2.91E+05	1.40E+06	4.91E+05	3.20E+05	1.31E+06	4.73E-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	9.26E+05	2.50E+06	1.16E+06	9.58E+05	2.08E+06	1.95E-08
Osmium (76)	Os-181	6.75E+00	1.33E+00	3.77E+00	5.87E+00	1.32E+00	3.47E+03	1.19	4.72E+03	2.39E+04	8.45E+03	5.42E+03	2.41E+04	4.77E-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	1.17E+03	5.16E+03	1.88E+03	1.26E+03	5.12E+03	1.50E-09
Osmium (76)	Os-185	3.90E+00	7.96E-01	2.24E+00	3.47E+00	7.95E-01	2.69E+00	1.2	6.74E+00	3.30E+01	1.17E+01	7.57E+00	3.31E+01	8.99E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Osmium (76)	Os-189m	1.76E-06	1.76E-06	1.76E-06	1.76E-06	5.64E-05	1.01E+03	1.58	3.99E+09	3.99E+09	3.99E+09	3.99E+09	1.25E+08	1.45E-03
Osmium (76)	Os-190m	8.50E+00	1.78E+00	5.09E+00	7.76E+00	1.76E+00	3.68E+04	1.21	3.92E+04	1.87E+05	6.54E+04	4.29E+04	1.89E+05	3.92E-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	6.03E+02	1.78E+03	7.53E+02	6.08E+02	1.64E+03	1.36E-08
Osmium (76)	Os-191m	1.38E-02	6.21E-03	1.26E-02	1.38E-02	7.47E-03	4.66E+02	1.49	2.47E+05	5.50E+05	2.72E+05	2.47E+05	4.58E+05	1.97E-07
Osmium (76)	Os-193	3.41E-01	8.11E-02	2.18E-01	3.17E-01	1.12E-01	2.02E+02	1.25	5.18E+03	2.18E+04	8.10E+03	5.58E+03	1.58E+04	9.59E-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	8.21E+03	1.24E+04	8.32E+03	8.21E+03	6.85E+03	2.67E-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	1.85E+01	8.10E+01	3.10E+01	2.05E+01	4.57E+01	6.03E-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	2.34E+05	1.10E+06	3.94E+05	2.57E+05	1.01E+06	9.34E-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	7.60E+03	1.25E+04	9.16E+03	7.82E+03	1.55E+03	2.67E-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	1.73E+06	3.67E+06	1.98E+06	1.74E+06	2.05E+06	1.11E-05
Protactinium (91)	Pa-227	5.65E-02	1.92E-02	4.61E-02	5.65E-02	2.11E-02	9.51E+03	1.39	1.32E+06	3.89E+06	1.62E+06	1.32E+06	3.54E+06	6.12E-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	3.87E+02	1.98E+03	6.96E+02	4.45E+02	2.01E+03	6.20E-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	3.64E+01	1.82E+02	6.39E+01	4.14E+01	1.83E+02	1.12E-09
Protactinium (91)	Pa-231	1.76E-01	4.03E-02	1.12E-01	1.66E-01	4.41E-02	2.12E-05	1.4	4.44E+01	1.94E+02	6.97E+01	4.72E+01	1.77E+02	9.41E-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	3.28E+02	1.69E+03	5.89E+02	3.75E+02	1.71E+03	7.66E-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	8.45E+01	3.64E+02	1.30E+02	8.93E+01	3.66E+02	4.08E-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	7.55E+02	3.89E+03	1.36E+03	8.66E+02	3.91E+03	3.78E-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	2.90E+07	9.11E+07	4.60E+07	3.24E+07	2.27E+07	4.23E-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	2.38E+04	1.16E+05	4.11E+04	2.66E+04	1.17E+05	3.91E-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	1.06E+04	4.60E+04	1.67E+04	1.13E+04	4.60E+04	1.61E-09
Lead (82)	Pb-199	8.56E+00	1.61E+00	4.61E+00	7.31E+00	1.59E+00	4.05E+03	1.19	4.36E+03	2.32E+04	8.11E+03	5.11E+03	2.35E+04	4.16E-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	3.00E+03	1.08E+04	4.18E+03	3.09E+03	1.05E+04	4.12E-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	1.45E+03	6.92E+03	2.46E+03	1.61E+03	6.99E+03	8.74E-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	9.49E+05	9.49E+05	9.49E+05	9.49E+05	3.12E+04	1.61E+02
Lead (82)	Pb-202+D	1.40E+01					2.31E-06	1.23	6.35E-01					1.08E-04
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	1.33E+03	6.74E+03	2.35E+03	1.50E+03	6.86E+03	3.10E-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	7.17E+02	2.96E+03	1.08E+03	7.54E+02	2.96E+03	2.42E-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	8.51E+05	8.51E+05	8.51E+05	8.51E+05	2.87E+04	6.98E+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	2.17E+07	5.53E+07	2.74E+07	2.20E+07	4.38E+06	4.71E-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	3.75E+03	5.88E+03	3.79E+03	3.75E+03	2.98E+03	4.92E-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	3.18E+05	1.50E+06	5.47E+05	3.57E+05	8.35E+05	1.29E-08
Lead (82)	Pb-212	6.45E-01	1.59E-01	4.36E-01	6.21E-01	1.58E-01	5.71E+02	1.29	7.52E+03	3.06E+04	1.11E+04	7.82E+03	3.08E+04	5.42E-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	9.62E+04	4.29E+05	1.53E+05	1.03E+05	4.26E+05	2.94E-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	2.00E+03	5.53E+03	2.40E+03	2.00E+03	4.66E+03	5.56E-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	3.69E+03	1.82E+04	6.37E+03	4.12E+03	1.77E+04	9.84E-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	6.43E+04	8.46E+04	7.29E+04	6.59E+04	1.35E+04	8.62E-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	2.07E+05	5.16E+05	2.63E+05	2.12E+05	8.55E+04	9.69E-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	3.84E+04	1.90E+05	6.72E+04	4.32E+04	1.78E+05	6.03E-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	1.01E+06	4.81E+06	1.73E+06	1.12E+06	4.40E+06	5.16E-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	8.54E+00	4.22E+01	1.51E+01	9.67E+00	4.09E+01	2.48E-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	1.47E+00	7.29E+00	2.56E+00	1.65E+00	7.32E+00	5.90E-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	3.77E+02	5.53E+02	3.87E+02	3.77E+02	2.86E+02	2.71E-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	2.36E+00	1.16E+01	4.08E+00	2.64E+00	1.16E+01	5.35E-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	2.31E+05	5.26E+05	2.71E+05	2.32E+05	3.03E+05	2.50E-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	1.27E+02	6.83E+02	2.39E+02	1.50E+02	6.22E+02	7.75E-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	5.02E+00	2.50E+01	8.78E+00	5.63E+00	2.53E+01	2.35E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Promethium (61)	Pm-149	5.95E-02	1.45E-02	3.77E-02	5.56E-02	4.71E-02	1.14E+02	1.21	1.74E+04	7.14E+04	2.74E+04	1.86E+04	2.19E+04	4.39E-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	2.49E+03	1.34E+04	4.66E+03	2.92E+03	1.29E+04	3.19E-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	1.19E+03	5.44E+03	1.94E+03	1.29E+03	5.17E+03	1.63E-09
Polonium (84)	Po-203	9.53E+00	1.80E+00	5.17E+00	8.17E+00	1.79E+00	9.92E+03	1.19	9.62E+03	5.08E+04	1.77E+04	1.12E+04	5.13E+04	3.82E-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	3.40E+03	1.79E+04	6.28E+03	3.96E+03	1.82E+04	4.01E-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	1.26E+03	6.51E+03	2.28E+03	1.45E+03	6.61E+03	4.86E-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	4.11E+05	2.12E+06	7.38E+05	4.70E+05	2.14E+06	9.16E-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	8.76E+09	4.47E+10	1.56E+10	9.96E+09	4.53E+10	8.47E-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	2.56E+15	1.32E+16	4.60E+15	2.92E+15	1.33E+16	7.98E-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	1.18E+14	5.58E+14	1.96E+14	1.28E+14	5.68E+14	4.01E-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	1.38E+13	7.11E+13	2.48E+13	1.57E+13	7.20E+13	3.97E-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	2.09E+10	1.09E+11	3.79E+10	2.39E+10	1.10E+11	7.40E-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	2.12E+04	1.10E+05	3.85E+04	2.44E+04	1.08E+05	2.01E-10
Praseodymium (59)	Pr-137	2.69E+00	5.54E-01	1.56E+00	2.41E+00	5.80E-01	4.76E+03	1.2	1.61E+04	7.82E+04	2.78E+04	1.80E+04	7.47E+04	9.02E-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	5.06E+05	2.40E+06	8.59E+05	5.61E+05	2.19E+06	5.39E-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	1.89E+03	9.71E+03	3.40E+03	2.16E+03	9.77E+03	1.75E-10
Praseodymium (59)	Pr-139	5.56E-01	1.20E-01	3.25E-01	4.98E-01	1.37E-01	1.35E+03	1.23	2.16E+04	1.00E+05	3.70E+04	2.41E+04	8.79E+04	4.33E-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	7.56E+03	3.73E+04	1.46E+04	9.17E+03	1.78E+04	6.56E-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	5.93E+04	1.13E+05	7.23E+04	6.05E+04	7.18E+03	8.83E-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	7.55E+05	2.82E+06	1.32E+06	8.84E+05	1.06E+06	1.00E-08
Praseodymium (59)	Pr-144m	1.20E-02	6.23E-03	9.66E-03	1.14E-02	1.23E-02	5.06E+04	1.28	3.61E+07	6.95E+07	4.48E+07	3.81E+07	3.53E+07	1.99E-07
Praseodymium (59)	Pr-145	9.51E-02	2.69E-02	5.82E-02	8.49E-02	1.09E-01	1.02E+03	1.18	9.90E+04	3.51E+05	1.62E+05	1.11E+05	8.61E+04	2.75E-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	5.20E+04	2.58E+05	9.18E+04	5.90E+04	2.36E+05	5.54E-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	6.89E+03	3.37E+04	1.19E+04	7.72E+03	3.38E+04	8.19E-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	2.71E+02	1.01E+03	3.91E+02	2.82E+02	9.80E+02	3.98E-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	3.32E+03	1.44E+04	5.37E+03	3.66E+03	1.40E+04	2.18E-09
Platinum (78)	Pt-191	1.24E+00	3.11E-01	8.17E-01	1.16E+00	3.24E-01	9.03E+01	1.28	6.23E+02	2.49E+03	9.48E+02	6.68E+02	2.39E+03	2.55E-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	1.12E+06	1.12E+06	1.12E+06	1.12E+06	3.94E+04	3.04E-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	1.97E+04	4.68E+04	2.21E+04	1.97E+04	4.03E+04	1.26E-07
Platinum (78)	Pt-195m	1.65E-01	6.40E-02	1.42E-01	1.65E-01	7.22E-02	6.29E+01	1.42	2.93E+03	7.58E+03	3.43E+03	2.93E+03	6.71E+03	1.76E-08
Platinum (78)	Pt-197	7.25E-02	2.29E-02	5.61E-02	7.14E-02	2.79E-02	3.32E+02	1.42	3.54E+04	1.12E+05	4.57E+04	3.59E+04	9.20E+04	4.07E-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	1.02E+05	3.82E+05	1.49E+05	1.07E+05	3.64E+05	1.01E-08
Platinum (78)	Pt-199	1.10E+00	2.33E-01	6.53E-01	9.96E-01	2.88E-01	1.18E+04	1.21	9.78E+04	4.60E+05	1.64E+05	1.08E+05	3.72E+05	3.19E-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	1.93E+04	6.67E+04	2.64E+04	1.99E+04	6.11E+04	1.55E-08
Plutonium (94)	Pu-234	2.07E-01	6.43E-02	1.63E-01	2.07E-01	6.75E-02	6.90E+02	1.36	2.68E+04	8.63E+04	3.41E+04	2.68E+04	8.23E+04	1.77E-08
Plutonium (94)	Pu-235	3.04E-01	8.88E-02	2.28E-01	2.97E-01	9.34E-02	1.44E+04	1.36	3.82E+05	1.31E+06	5.11E+05	3.92E+05	1.25E+06	1.21E-08
Plutonium (94)	Pu-236	1.81E-04	1.18E-04	1.61E-04	1.79E-04	8.58E-04	2.43E-01	1.42	4.81E+04	7.37E+04	5.40E+04	4.86E+04	1.01E+04	9.06E-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	3.08E+02	9.76E+02	3.91E+02	3.08E+02	8.99E+02	2.53E-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	6.66E+04	8.84E+04	7.19E+04	6.70E+04	1.06E+04	3.90E-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	2.94E+04	8.70E+04	4.10E+04	3.07E+04	2.33E+04	4.73E-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	6.88E+04	9.00E+04	7.32E+04	6.88E+04	1.10E+04	3.02E-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	1.50E+06	4.88E+06	1.94E+06	1.51E+06	3.97E+06	1.46E-02
Plutonium (94)	Pu-242	9.90E-05	7.25E-05	9.21E-05	9.90E-05	5.81E-04	1.84E-06	1.42	7.80E+04	1.06E+05	8.38E+04	7.80E+04	1.33E+04	1.99E+01
Plutonium (94)	Pu-243	7.11E-02	2.33E-02	5.61E-02	7.01E-02	2.65E-02	1.22E+03	1.34	1.41E+05	4.29E+05	1.78E+05	1.43E+05	3.77E+05	5.41E-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	5.61E+01	3.21E+02	1.11E+02	6.83E+01	3.27E+02	3.06E+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	4.36E+00	2.19E+01	7.76E+00	4.95E+00	1.85E+01	2.38E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
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	2.33E+03	1.12E+04	3.95E+03	2.59E+03	1.09E+04	1.92E-09
Plutonium (94)	Pu-246	5.17E-01	1.38E-01	3.66E-01	5.04E-01	1.44E-01	2.33E+01	1.32	3.75E+02	1.41E+03	5.31E+02	3.85E+02	1.35E+03	7.69E-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	1.09E+08	4.98E+08	1.75E+08	1.17E+08	5.09E+08	8.20E-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	3.35E+02	1.32E+03	4.89E+02	3.50E+02	1.31E+03	6.56E-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	1.57E+02	6.70E+02	2.46E+02	1.68E+02	5.09E+02	3.08E-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	1.28E+04	5.54E+04	1.96E+04	1.34E+04	5.67E+04	8.08E-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	6.79E+01	3.94E+02	1.36E+02	8.38E+01	3.91E+02	4.27E-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	1.58E+04	2.19E+04	1.59E+04	1.58E+04	1.09E+04	4.03E-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	1.30E+02	5.96E+02	2.15E+02	1.43E+02	4.96E+02	3.32E-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	2.91E+02	1.17E+03	4.25E+02	3.01E+02	1.19E+03	2.95E-04
Radium (88)	Ra-226+D	1.06E+01					4.33E-04	1.17	8.84E-01					8.95E-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	9.10E+04	4.07E+05	1.47E+05	9.79E+04	3.37E+05	4.64E-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	1.76E+00	9.24E+00	3.23E+00	2.03E+00	9.06E+00	6.45E-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	1.94E+04	9.28E+04	3.27E+04	2.14E+04	8.89E+04	1.87E-10
Rubidium (37)	Rb-80	7.03E+00	1.49E+00	4.16E+00	6.38E+00	1.61E+00	6.43E+05	1.2	8.35E+05	3.93E+06	1.41E+06	9.20E+05	3.65E+06	2.02E-10
Rubidium (37)	Rb-81	3.26E+00	6.94E-01	1.98E+00	3.00E+00	6.98E-01	1.33E+03	1.25	3.55E+03	1.67E+04	5.85E+03	3.85E+03	1.66E+04	4.21E-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	7.21E+06	2.02E+07	8.66E+06	7.21E+06	1.49E+07	9.96E-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	4.18E+05	1.99E+06	7.11E+05	4.62E+05	1.83E+06	2.38E-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	5.34E+02	2.79E+03	9.69E+02	6.14E+02	2.83E+03	8.68E-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	9.86E+00	4.80E+01	1.68E+01	1.09E+01	4.86E+01	5.41E-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	1.33E+01	6.83E+01	2.38E+01	1.51E+01	6.87E+01	2.81E-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	2.17E+02	1.09E+03	4.00E+02	2.53E+02	6.55E+02	2.67E-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	7.20E+04	1.67E+05	8.44E+04	7.23E+04	1.02E+05	8.25E+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	4.68E+04	2.59E+05	9.35E+04	5.74E+04	2.28E+05	3.90E-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	1.76E+04	1.01E+05	3.48E+04	2.14E+04	9.95E+04	1.27E-10
Rhenium (75)	Re-177	3.28E+00	6.66E-01	1.85E+00	2.85E+00	6.94E-01	2.60E+04	1.19	7.29E+04	3.59E+05	1.30E+05	8.38E+04	3.44E+05	9.62E-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	3.67E+04	1.96E+05	6.90E+04	4.34E+04	1.93E+05	4.59E-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	2.10E+05	1.06E+06	3.76E+05	2.41E+05	1.06E+06	4.90E-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	6.94E+02	3.30E+03	1.18E+03	7.73E+02	3.30E+03	8.03E-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	1.25E+01	6.30E+01	2.24E+01	1.43E+01	6.32E+01	6.72E-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	9.20E+00	4.21E+01	1.53E+01	1.02E+01	4.18E+01	2.14E-09
Rhenium (75)	Re-186	7.18E-02	2.24E-02	5.45E-02	7.07E-02	5.16E-02	6.70E+01	1.3	7.83E+03	2.51E+04	1.03E+04	7.96E+03	1.09E+04	4.22E-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	3.06E+02	6.37E+02	3.35E+02	3.06E+02	4.81E+02	3.18E-02
Rhenium (75)	Re-186m+D	9.55E-02					3.47E-06	1.17	9.85E+01					1.03E-02
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	1.03E+04	4.06E+04	1.63E+04	1.12E+04	1.89E+04	1.05E-08
Rhenium (75)	Re-188m	1.69E-01	6.83E-02	1.46E-01	1.68E-01	7.90E-02	1.96E+04	1.39	9.13E+05	2.26E+06	1.06E+06	9.16E+05	1.95E+06	1.70E-08
Rhenium (75)	Re-189	3.08E-01	7.57E-02	2.05E-01	2.95E-01	9.81E-02	2.50E+02	1.28	6.95E+03	2.82E+04	1.04E+04	7.25E+03	2.18E+04	1.02E-08

		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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Rhodium (45)	Rh-100	1.72E+01	2.98E+00	8.65E+00	1.41E+01	2.91E+00	2.92E+02	1.16	1.61E+02	9.25E+02	3.19E+02	1.95E+02	9.50E+02	1.07E-10
Rhodium (45)	Rh-101	1.12E+00	2.78E-01	7.68E-01	1.09E+00	2.80E-01	2.17E-01	1.29	8.43E+00	3.41E+01	1.23E+01	8.71E+00	3.38E+01	7.63E-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	3.36E+02	1.53E+03	5.37E+02	3.59E+02	1.53E+03	1.13E-09
Rhodium (45)	Rh-102	1.22E+01	2.39E+00	6.84E+00	1.07E+01	2.36E+00	2.39E-01	1.19	8.49E-01	4.32E+00	1.51E+00	9.62E-01	4.38E+00	7.03E-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	5.88E+00	2.87E+01	1.01E+01	6.52E+00	2.80E+01	9.52E-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	3.11E+08	3.23E+08	3.11E+08	3.11E+08	5.10E+07	9.58E-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	3.88E+03	1.76E+04	6.17E+03	4.13E+03	1.78E+04	4.61E-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	5.40E+06	2.42E+07	9.22E+06	6.04E+06	1.67E+07	1.52E-09
Rhodium (45)	Rh-106m	1.71E+01	3.25E+00	9.34E+00	1.48E+01	3.21E+00	2.76E+03	1.18	1.51E+03	7.92E+03	2.75E+03	1.74E+03	8.01E+03	1.12E-10
Rhodium (45)	Rh-107	1.62E+00	3.56E-01	1.01E+00	1.51E+00	3.94E-01	1.68E+04	1.22	9.33E+04	4.24E+05	1.50E+05	9.99E+04	3.83E+05	1.15E-09
Rhodium (45)	Rh-99	3.15E+00	6.60E-01	1.86E+00	2.83E+00	6.61E-01	1.58E+01	1.23	4.46E+01	2.13E+02	7.54E+01	4.96E+01	2.13E+02	5.42E-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	3.08E+03	1.55E+04	5.39E+03	3.47E+03	1.56E+04	4.58E-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	1.35E+12	6.70E+12	2.35E+12	1.51E+12	6.77E+12	9.13E-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	1.72E+08	7.83E+08	2.76E+08	1.85E+08	7.99E+08	1.33E-08
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	6.39E+07	2.89E+08	1.04E+08	6.95E+07	1.85E+08	4.92E-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	1.68E+09	8.23E+09	2.88E+09	1.87E+09	8.34E+09	1.82E-06
Radon (86)	Rn-222	2.18E-03	4.51E-04	1.29E-03	1.98E-03	4.46E-04	6.62E+01	1.2	2.76E+05	1.34E+06	4.68E+05	3.05E+05	1.35E+06	1.80E-06
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	5.86E+01	3.19E+02	1.11E+02	6.95E+01	3.16E+02	3.82E-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	2.28E+01	1.11E+02	3.88E+01	2.52E+01	1.12E+02	7.09E-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	2.86E+03	1.42E+04	4.96E+03	3.20E+03	1.38E+04	4.26E-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	3.07E+03	1.51E+04	5.30E+03	3.42E+03	1.47E+04	4.58E-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	1.02E+01	4.57E+01	1.74E+01	1.14E+01	3.16E+01	3.06E-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	2.17E+04	1.07E+05	3.73E+04	2.42E+04	1.07E+05	5.63E-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	6.80E+02	2.93E+03	1.04E+03	7.13E+02	2.95E+03	1.47E-09
Sulfur (16)	S-35	1.22E-05	6.96E-06	1.13E-05	1.22E-05	1.55E-05	2.89E+00	1.25	2.19E+06	3.84E+06	2.36E+06	2.19E+06	1.72E+06	5.14E-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	2.10E+04	1.02E+05	3.57E+04	2.32E+04	9.97E+04	4.10E-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	1.66E+04	9.16E+04	3.17E+04	1.97E+04	9.15E+04	1.62E-10
Antimony (51)	Sb-116m	1.83E+01	3.47E+00	9.94E+00	1.58E+01	3.42E+00	6.04E+03	1.18	3.07E+03	1.62E+04	5.66E+03	3.56E+03	1.64E+04	1.14E-10
Antimony (51)	Sb-117	7.35E-01	1.83E-01	4.98E-01	7.05E-01	1.93E-01	2.17E+03	1.27	2.55E+04	1.03E+05	3.76E+04	2.66E+04	9.72E+04	2.67E-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	7.47E+02	4.01E+03	1.39E+03	8.73E+02	4.05E+03	1.41E-10
Antimony (51)	Sb-119	4.48E-03	4.35E-03	4.49E-03	4.48E-03	1.82E-02	1.59E+02	1.32	2.96E+05	3.05E+05	2.95E+05	2.96E+05	7.27E+04	4.29E-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	3.46E+02	1.69E+03	5.98E+02	3.87E+02	1.52E+03	8.75E-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	3.64E+00	2.02E+01	6.96E+00	4.32E+00	2.03E+01	2.08E-10
Antimony (51)	Sb-124m	1.98E+00	3.99E-01	1.14E+00	1.77E+00	4.01E-01	2.35E+05	1.19	1.09E+06	5.40E+06	1.89E+06	1.22E+06	5.37E+06	1.12E-09
Antimony (51)	Sb-124n	1.37E-05	1.34E-05	1.38E-05	1.37E-05	5.92E-05	1.80E+04	1.32	1.09E+10	1.12E+10	1.09E+10	1.09E+10	2.53E+09	1.46E-04
Antimony (51)	Sb-125	2.28E+00	4.74E-01	1.34E+00	2.07E+00	4.77E-01	2.50E-01	1.21	4.48E+00	2.15E+01	7.59E+00	4.93E+00	2.14E+01	4.35E-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	1.17E+01	5.86E+01	2.06E+01	1.32E+01	5.92E+01	1.41E-10
Antimony (51)	Sb-126m	8.71E+00	1.76E+00	5.02E+00	7.80E+00	1.81E+00	1.92E+04	1.19	2.02E+04	1.00E+05	3.51E+04	2.26E+04	9.74E+04	2.58E-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	1.56E+02	7.78E+02	2.72E+02	1.75E+02	7.65E+02	5.86E-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	1.54E+03	8.23E+03	2.86E+03	1.80E+03	8.23E+03	2.74E-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	4.49E+03	2.31E+04	8.08E+03	5.14E+03	2.31E+04	1.24E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Antimony (51)	Sb-131	1.13E+01	2.05E+00	5.93E+00	9.55E+00	2.07E+00	1.58E+04	1.16	1.32E+04	7.29E+04	2.52E+04	1.57E+04	7.24E+04	2.12E-10
Scandium (21)	Sc-43	5.95E+00	1.24E+00	3.54E+00	5.43E+00	1.25E+00	1.56E+03	1.2	2.39E+03	1.14E+04	4.01E+03	2.62E+03	1.14E+04	1.28E-10
Scandium (21)	Sc-44	1.24E+01	2.39E+00	6.86E+00	1.08E+01	2.43E+00	1.55E+03	1.18	1.16E+03	6.02E+03	2.09E+03	1.33E+03	5.92E+03	6.39E-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	6.48E+02	2.98E+03	1.05E+03	6.97E+02	3.06E+03	5.34E-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	2.49E+00	1.33E+01	4.63E+00	2.90E+00	1.36E+01	7.35E-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	1.45E+03	5.66E+03	2.06E+03	1.48E+03	5.73E+03	1.75E-09
Scandium (21)	Sc-48	2.03E+01	3.69E+00	1.07E+01	1.72E+01	3.63E+00	1.39E+02	1.16	6.45E+01	3.55E+02	1.23E+02	7.63E+01	3.61E+02	4.32E-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	1.70E+06	3.25E+06	2.23E+06	1.80E+06	5.14E+05	2.55E-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	1.47E+04	6.97E+04	2.46E+04	1.62E+04	6.70E+04	2.24E-10
Selenium (34)	Se-73	5.69E+00	1.22E+00	3.43E+00	5.22E+00	1.25E+00	8.49E+02	1.23	1.33E+03	6.22E+03	2.21E+03	1.45E+03	6.08E+03	2.23E-10
Selenium (34)	Se-73m	1.33E+00	2.78E-01	7.87E-01	1.21E+00	2.94E-01	9.34E+03	1.23	6.23E+04	2.99E+05	1.06E+05	6.86E+04	2.82E+05	9.45E-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	1.10E+01	4.67E+01	1.66E+01	1.15E+01	4.76E+01	7.56E-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	2.76E+07	1.09E+08	3.96E+07	2.83E+07	1.11E+08	3.29E-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	5.72E+05	1.00E+06	6.15E+05	5.72E+05	4.56E+05	8.22E+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	2.75E+06	8.99E+06	4.20E+06	2.96E+06	1.89E+06	2.19E-08
Selenium (34)	Se-81m	4.57E-02	1.40E-02	3.56E-02	4.57E-02	1.47E-02	6.36E+03	1.52	1.01E+06	3.28E+06	1.29E+06	1.01E+06	3.13E+06	2.48E-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	1.05E+04	5.65E+04	1.96E+04	1.23E+04	5.67E+04	1.05E-10
Silicon (14)	Si-31	1.98E-02	9.62E-03	1.47E-02	1.85E-02	8.33E-02	2.32E+03	1.15	1.11E+06	2.28E+06	1.50E+06	1.19E+06	2.64E+05	2.89E-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	2.95E+05	5.81E+05	3.28E+05	2.95E+05	3.00E+05	1.19E-02
Silicon (14)	Si-32+D	2.04E-02					1.54E-03	1.25	4.30E+02					1.73E-05
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	4.12E+04	2.09E+05	7.34E+04	4.69E+04	2.03E+05	3.16E-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	1.32E+04	6.79E+04	2.38E+04	1.51E+04	6.78E+04	2.24E-10
Samarium (62)	Sm-142	3.79E-01	8.84E-02	2.29E-01	3.43E-01	1.04E-01	5.02E+03	1.23	1.18E+05	5.05E+05	1.95E+05	1.30E+05	4.27E+05	6.46E-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	2.24E+02	3.37E+02	2.29E+02	2.24E+02	1.87E+02	8.46E-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	1.21E+07	1.23E+07	1.21E+07	1.21E+07	1.98E+06	4.62E-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	8.08E+03	2.18E+04	9.93E+03	8.13E+03	1.58E+04	1.85E-08
Samarium (62)	Sm-155	3.66E-01	1.12E-01	2.76E-01	3.60E-01	1.82E-01	1.65E+04	1.25	3.96E+05	1.29E+06	5.24E+05	4.02E+05	7.95E+05	7.22E-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	1.17E+04	4.53E+04	1.69E+04	1.21E+04	4.33E+04	5.49E-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	9.31E+03	4.14E+04	1.46E+04	9.85E+03	4.11E+04	1.31E-09
Tin (50)	Sn-111	2.87E+00	5.61E-01	1.60E+00	2.50E+00	5.85E-01	1.03E+04	1.2	3.28E+04	1.68E+05	5.88E+04	3.77E+04	1.61E+05	6.84E-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	7.76E+02	2.45E+03	1.13E+03	8.10E+02	1.08E+03	7.74E-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	2.68E+02	1.02E+03	3.79E+02	2.73E+02	9.78E+02	3.27E-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	5.93E+03	6.09E+03	5.88E+03	5.93E+03	1.42E+03	1.59E-06
Tin (50)	Sn-121	1.71E-04	6.79E-05	1.41E-04	1.70E-04	1.03E-04	2.24E+02	1.25	1.15E+07	2.89E+07	1.39E+07	1.15E+07	1.90E+07	1.20E-05
Tin (50)	Sn-121m	1.43E-03	1.27E-03	1.42E-03	1.43E-03	4.20E-03	1.26E-02	1.31	5.88E+03	6.64E+03	5.91E+03	5.88E+03	2.00E+03	1.10E-04
Tin (50)	Sn-121m+D	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	1.26E-02	1	7.02E+03	8.31E+03	7.15E+03	7.02E+03	2.56E+03	1.31E-04
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	4.05E+02	1.47E+03	6.81E+02	4.62E+02	2.83E+02	4.94E-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	1.35E+05	5.19E+05	1.92E+05	1.38E+05	3.95E+05	3.54E-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	1.29E+02	6.76E+02	2.41E+02	1.52E+02	5.55E+02	1.19E-09
Tin (50)	Sn-126	1.30E-01	4.74E-02	1.09E-01	1.30E-01	5.62E-02	6.93E-06	1.29	6.53E+01	1.79E+02	7.81E+01	6.52E+01	1.51E+02	2.31E-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	1.05E+00	5.12E+00	1.80E+00	1.17E+00	4.95E+00	3.69E-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	2.36E+03	1.29E+04	4.48E+03	2.80E+03	1.30E+04	2.01E-10
Tin (50)	Sn-128	3.30E+00	7.03E-01	1.98E+00	3.00E+00	7.29E-01	6.16E+03	1.23	1.66E+04	7.80E+04	2.78E+04	1.83E+04	7.52E+04	6.70E-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	2.73E+08	2.73E+08	2.73E+08	2.73E+08	1.46E+07	1.16E-05

		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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Strontium (38)	Sr-81	7.53E+00	1.59E+00	4.48E+00	6.83E+00	1.67E+00	1.43E+04	1.2	1.72E+04	8.19E+04	2.90E+04	1.90E+04	7.78E+04	1.90E-10
Strontium (38)	Sr-82	9.77E-05	9.77E-05	9.77E-05	9.77E-05	1.83E-03	1.01E+01	1.47	7.72E+05	7.72E+05	7.72E+05	7.72E+05	4.12E+04	1.21E-05
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	1.51E+01	7.19E+01	2.57E+01	1.67E+01	6.60E+01	2.38E-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	3.69E+02	1.87E+03	6.54E+02	4.18E+02	1.87E+03	3.17E-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	1.26E+01	6.09E+01	2.14E+01	1.39E+01	6.16E+01	5.33E-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	4.42E+04	1.89E+05	6.68E+04	4.60E+04	1.95E+05	1.39E-09
Strontium (38)	Sr-87m	1.68E+00	3.60E-01	1.03E+00	1.56E+00	3.55E-01	2.16E+03	1.23	1.15E+04	5.36E+04	1.88E+04	1.24E+04	5.44E+04	8.94E-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	3.12E+03	5.25E+03	3.79E+03	3.21E+03	5.88E+02	1.08E-07
Strontium (38)	Sr-90	6.45E-04	2.35E-04	5.07E-04	6.36E-04	1.91E-03	2.38E-02	1.25	1.37E+04	3.76E+04	1.74E+04	1.39E+04	4.62E+03	1.00E-04
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	1.95E+02	3.34E+02	2.40E+02	2.01E+02	6.06E+01	1.43E-06
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	1.45E+03	7.54E+03	2.64E+03	1.67E+03	7.03E+03	4.00E-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	2.57E+03	1.46E+04	5.01E+03	3.09E+03	1.48E+04	2.05E-10
Tantalum (73)	Ta-172	8.78E+00	1.71E+00	4.85E+00	7.61E+00	1.74E+00	9.90E+03	1.18	1.05E+04	5.39E+04	1.90E+04	1.21E+04	5.30E+04	3.53E-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	5.08E+03	2.39E+04	8.67E+03	5.69E+03	2.26E+04	1.03E-09
Tantalum (73)	Ta-174	3.21E+00	6.86E-01	1.90E+00	2.89E+00	7.18E-01	5.06E+03	1.2	1.44E+04	6.71E+04	2.42E+04	1.59E+04	6.42E+04	9.58E-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	1.04E+03	5.41E+03	1.91E+03	1.22E+03	5.44E+03	6.11E-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	5.14E+02	2.95E+03	1.02E+03	6.26E+02	3.01E+03	2.34E-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	5.90E+03	1.62E+04	7.53E+03	6.14E+03	1.35E+04	1.89E-08
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	2.09E+02	4.09E+02	2.22E+02	2.09E+02	3.16E+02	1.90E-07
Tantalum (73)	Ta-180	2.57E+00	6.04E-01	1.67E+00	2.44E+00	6.05E-01	6.93E-14	1.23	3.46E+00	1.47E+01	5.32E+00	3.64E+00	1.47E+01	1.74E+04
Tantalum (73)	Ta-180m	8.17E-02	3.86E-02	7.46E-02	8.17E-02	4.94E-02	7.49E+02	1.28	7.82E+04	1.66E+05	8.57E+04	7.82E+04	1.29E+05	3.65E-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	3.10E+00	1.64E+01	5.76E+00	3.63E+00	1.66E+01	4.97E-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	2.13E+05	7.86E+05	3.00E+05	2.19E+05	7.65E+05	3.27E-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	3.65E+02	1.44E+03	5.38E+02	3.81E+02	1.40E+03	2.61E-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	7.27E+02	3.56E+03	1.25E+03	8.11E+02	3.54E+03	3.72E-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	8.24E+04	3.15E+05	1.22E+05	8.68E+04	2.25E+05	3.98E-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	3.76E+04	1.80E+05	6.37E+04	4.17E+04	1.72E+05	3.91E-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	3.75E+03	1.92E+04	6.76E+03	4.29E+03	1.89E+04	2.90E-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	1.45E+03	7.76E+03	2.70E+03	1.70E+03	7.83E+03	2.86E-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	1.77E+03	9.16E+03	3.22E+03	2.04E+03	9.13E+03	2.77E-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	6.84E+02	3.23E+03	1.15E+03	7.54E+02	3.21E+03	5.81E-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	1.05E+03	4.23E+03	1.61E+03	1.12E+03	3.94E+03	2.88E-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	1.85E+02	1.09E+03	3.76E+02	2.29E+02	1.12E+03	1.95E-10
Terbium (65)	Tb-155	4.20E-01	1.27E-01	3.08E-01	4.08E-01	1.46E-01	4.75E+01	1.25	9.89E+02	3.26E+03	1.35E+03	1.02E+03	2.85E+03	6.26E-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	4.23E+01	2.21E+02	7.76E+01	4.91E+01	2.24E+02	2.70E-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	7.25E+04	1.22E+05	7.44E+04	7.25E+04	8.34E+04	8.82E-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	1.92E+06	3.99E+06	2.14E+06	1.92E+06	2.85E+06	4.78E-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	3.73E+03	5.64E+03	3.79E+03	3.73E+03	3.36E+03	2.46E-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	2.09E+00	1.07E+01	3.78E+00	2.41E+00	1.07E+01	1.39E-07
Terbium (65)	Tb-160	6.53E+00	1.24E+00	3.56E+00	5.63E+00	1.24E+00	3.50E+00	1.17	5.16E+00	2.71E+01	9.45E+00	5.98E+00	2.72E+01	4.58E-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	6.69E+03	1.35E+04	7.40E+03	6.75E+03	9.03E+03	5.71E-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	1.33E+05	6.07E+05	2.14E+05	1.43E+05	5.42E+05	1.02E-09
Technetium (43)	Tc-104	1.22E+01	2.22E+00	6.34E+00	1.02E+01	2.28E+00	2.00E+04	1.16	1.56E+04	8.53E+04	2.98E+04	1.86E+04	8.32E+04	1.57E-10
Technetium (43)	Tc-93	9.06E+00	1.58E+00	4.59E+00	7.48E+00	1.54E+00	2.21E+03	1.17	2.29E+03	1.31E+04	4.51E+03	2.77E+03	1.34E+04	1.87E-10
Technetium (43)	Tc-93m	4.49E+00	7.65E-01	2.24E+00	3.66E+00	7.35E-01	8.37E+03	1.16	1.76E+04	1.03E+05	3.53E+04	2.16E+04	1.07E+05	3.79E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Technetium (43)	Tc-94	1.54E+01	2.98E+00	8.56E+00	1.35E+01	2.95E+00	1.24E+03	1.19	7.44E+02	3.84E+03	1.34E+03	8.50E+02	3.88E+03	1.09E-10
Technetium (43)	Tc-94m	1.09E+01	2.09E+00	5.95E+00	9.42E+00	2.12E+00	7.00E+03	1.18	5.98E+03	3.11E+04	1.09E+04	6.90E+03	3.06E+04	1.56E-10
Technetium (43)	Tc-95	4.53E+00	8.82E-01	2.54E+00	3.97E+00	8.75E-01	3.04E+02	1.21	6.07E+02	3.12E+03	1.08E+03	6.92E+02	3.14E+03	3.68E-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	1.03E+01	5.07E+01	1.77E+01	1.15E+01	5.11E+01	4.56E-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	3.76E+01	1.95E+02	6.80E+01	4.31E+01	1.97E+02	1.18E-10
Technetium (43)	Tc-96m	2.65E-01	5.04E-02	1.44E-01	2.28E-01	5.25E-02	7.07E+03	1.29	2.27E+05	1.19E+06	4.17E+05	2.64E+05	1.14E+06	5.97E-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	1.41E+04	1.40E+04	1.41E+04	1.41E+04	1.46E+03	9.94E+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	1.61E+04	2.79E+04	1.84E+04	1.61E+04	4.74E+03	1.04E-06
Technetium (43)	Tc-98	8.06E+00	1.59E+00	4.57E+00	7.14E+00	1.58E+00	1.65E-07	1.19	1.15E+00	5.80E+00	2.02E+00	1.29E+00	5.86E+00	1.32E-03
Technetium (43)	Tc-99	1.08E-04	4.64E-05	9.21E-05	1.08E-04	7.55E-05	3.25E-06	1.25	8.07E+04	1.88E+05	9.48E+04	8.10E+04	1.16E+05	4.77E+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	1.75E+04	6.51E+04	2.41E+04	1.77E+04	6.59E+04	3.33E-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	1.19E+05	3.99E+05	1.66E+05	1.25E+05	2.92E+05	1.10E-08
Tellurium (52)	Te-121	3.10E+00	6.36E-01	1.81E+00	2.80E+00	6.38E-01	1.49E+01	1.21	4.34E+01	2.11E+02	7.44E+01	4.80E+01	2.10E+02	6.85E-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	1.81E+01	7.89E+01	2.82E+01	1.92E+01	7.76E+01	2.59E-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	1.81E+03	1.89E+03	1.80E+03	1.81E+03	5.04E+02	6.22E+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	3.65E+01	1.40E+02	5.17E+01	3.72E+01	1.35E+02	4.12E-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	3.34E+03	3.87E+03	3.42E+03	3.34E+03	1.19E+03	1.86E-07
Tellurium (52)	Te-127	2.67E-02	5.91E-03	1.64E-02	2.46E-02	1.20E-02	6.49E+02	1.21	2.20E+05	9.92E+05	3.57E+05	2.38E+05	4.88E+05	8.35E-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	5.19E+03	6.89E+03	5.62E+03	5.26E+03	2.16E+03	5.51E-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	1.49E+05	6.70E+05	2.51E+05	1.65E+05	3.51E+05	7.14E-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	3.76E+02	1.72E+03	6.50E+02	4.23E+02	9.92E+02	1.25E-08
Tellurium (52)	Te-131	2.24E+00	4.77E-01	1.33E+00	2.01E+00	5.53E-01	1.46E+04	1.2	5.95E+04	2.79E+05	1.00E+05	6.61E+04	2.41E+05	1.04E-09
Tellurium (52)	Te-131m	8.24E+00	1.58E+00	4.53E+00	7.16E+00	1.56E+00	2.02E+02	1.18	2.28E+02	1.19E+03	4.15E+02	2.62E+02	1.20E+03	2.86E-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	6.83E+02	2.84E+03	1.03E+03	7.11E+02	2.74E+03	2.25E-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	5.05E+04	2.59E+05	9.04E+04	5.78E+04	2.43E+05	4.46E-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	4.52E+03	2.38E+04	8.31E+03	5.24E+03	2.35E+04	1.77E-10
Tellurium (52)	Te-134	4.76E+00	9.87E-01	2.80E+00	4.29E+00	9.90E-01	8.71E+03	1.2	1.67E+04	8.05E+04	2.84E+04	1.85E+04	8.03E+04	4.98E-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	3.07E+06	1.13E+07	4.25E+06	3.14E+06	1.10E+07	1.14E-07
Thorium (90)	Th-227	4.79E-01	1.13E-01	3.15E-01	4.57E-01	1.14E-01	1.35E+01	1.34	2.30E+02	9.74E+02	3.50E+02	2.42E+02	9.65E+02	7.51E-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	1.27E+03	4.35E+03	1.71E+03	1.29E+03	3.66E+03	1.55E-06
Thorium (90)	Th-229	2.89E-01	8.69E-02	2.20E-01	2.85E-01	9.21E-02	9.44E-05	1.4	2.71E+01	9.01E+01	3.56E+01	2.75E+01	8.51E+01	1.28E-04
Thorium (90)	Th-229+D	1.48E+00					9.44E-05	1.16	6.39E+00					3.01E-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	7.08E+03	1.97E+04	8.78E+03	7.17E+03	1.02E+04	3.51E-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	5.75E+04	1.59E+05	7.02E+04	5.79E+04	1.02E+05	1.08E-07
Thorium (90)	Th-232	4.55E-04	1.87E-04	3.82E-04	4.51E-04	5.31E-04	4.93E-11	1.45	1.66E+04	4.05E+04	1.98E+04	1.67E+04	1.42E+04	1.51E+05
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	3.89E+03	1.08E+04	4.67E+03	3.89E+03	9.45E+03	1.68E-07
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	6.43E+02	2.18E+03	1.00E+03	7.12E+02	7.08E+02	2.78E-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	2.80E+01	7.06E+01	3.20E+01	2.80E+01	6.38E+01	1.63E-07
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	7.43E-01	3.76E+00	1.32E+00	8.48E-01	3.68E+00	4.33E-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	3.77E+03	1.82E+04	6.39E+03	4.14E+03	1.78E+04	1.67E-10
Thallium (81)	Tl-194	4.08E+00	8.63E-01	2.42E+00	3.71E+00	8.58E-01	1.10E+04	1.21	2.44E+04	1.15E+05	4.11E+04	2.68E+04	1.16E+05	8.32E-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	8.00E+03	3.87E+04	1.37E+04	8.89E+03	3.89E+04	2.71E-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	6.39E+03	3.50E+04	1.22E+04	7.62E+03	3.54E+04	4.62E-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	9.24E+03	4.37E+04	1.58E+04	1.04E+04	4.35E+04	1.65E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Thallium (81)	Tl-198	1.20E+01	2.18E+00	6.27E+00	1.01E+01	2.12E+00	1.15E+03	1.17	8.95E+02	4.93E+03	1.72E+03	1.07E+03	5.07E+03	3.00E-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	4.60E+03	2.19E+04	7.74E+03	5.06E+03	2.21E+04	5.44E-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	6.54E+03	2.71E+04	1.01E+04	7.02E+03	2.68E+04	3.09E-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	2.89E+02	1.49E+03	5.21E+02	3.33E+02	1.51E+03	4.83E-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	2.74E+03	7.83E+03	3.35E+03	2.76E+03	7.20E+03	1.29E-08
Thallium (81)	Tl-202	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	2.07E+01	1.23	7.89E+01	3.57E+02	1.29E+02	8.58E+01	3.58E+02	1.50E-09
Thallium (81)	Tl-204	3.88E-03	1.65E-03	3.30E-03	3.86E-03	1.26E-02	1.83E-01	1.39	2.23E+03	5.24E+03	2.62E+03	2.24E+03	6.87E+02	4.82E-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	5.64E+07	9.51E+07	6.82E+07	5.80E+07	1.00E+07	2.60E-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	3.10E+07	8.41E+07	4.61E+07	3.38E+07	1.10E+07	1.63E-07
Thallium (81)	Tl-208	2.18E+01	3.56E+00	1.04E+01	1.73E+01	3.47E+00	1.19E+05	1.13	5.27E+04	3.23E+05	1.10E+05	6.64E+04	3.32E+05	1.79E-10
Thallium (81)	Tl-209	1.22E+01	2.22E+00	6.40E+00	1.03E+01	2.24E+00	1.66E+05	1.16	1.28E+05	7.04E+05	2.44E+05	1.52E+05	6.97E+05	3.13E-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	1.46E+04	8.21E+04	2.86E+04	1.77E+04	8.29E+04	2.74E-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	6.67E+02	3.70E+03	1.28E+03	7.99E+02	3.75E+03	2.72E-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	4.75E+02	1.72E+03	6.84E+02	4.93E+02	1.58E+03	5.62E-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	1.41E+03	3.21E+03	1.64E+03	1.41E+03	6.44E+02	2.37E-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	1.10E+04	2.11E+04	1.16E+04	1.10E+04	1.59E+04	1.01E-05
Thulium (69)	Tm-172	2.91E+00	5.26E-01	1.51E+00	2.42E+00	5.68E-01	9.55E+01	1.15	3.12E+02	1.72E+03	6.02E+02	3.74E+02	1.60E+03	1.09E-09
Thulium (69)	Tm-173	2.03E+00	4.38E-01	1.24E+00	1.88E+00	4.53E-01	7.37E+02	1.21	3.28E+03	1.52E+04	5.36E+03	3.54E+03	1.47E+04	1.49E-09
Thulium (69)	Tm-175	5.99E+00	1.18E+00	3.38E+00	5.26E+00	1.21E+00	2.40E+04	1.18	3.70E+04	1.88E+05	6.57E+04	4.21E+04	1.83E+05	5.25E-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	2.36E+04	7.96E+04	3.21E+04	2.42E+04	5.16E+04	8.67E-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	2.29E+03	7.13E+03	2.89E+03	2.29E+03	6.34E+03	1.70E-08
Uranium (92)	U-232	7.91E-04	3.02E-04	6.30E-04	7.81E-04	9.42E-04	9.63E-03	1.43	9.72E+03	2.54E+04	1.22E+04	9.83E+03	8.16E+03	4.54E-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	6.06E+03	2.11E+04	8.54E+03	6.27E+03	1.10E+04	6.27E-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	2.23E+04	4.90E+04	2.64E+04	2.23E+04	1.12E+04	3.57E+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	1.28E+01	5.09E+01	1.84E+01	1.31E+01	5.15E+01	5.92E+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	1.54E+01	6.02E+01	2.20E+01	1.58E+01	5.85E+01	7.14E+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	4.31E+04	7.86E+04	4.90E+04	4.31E+04	1.30E+04	6.67E+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	6.36E+02	2.24E+03	8.73E+02	6.51E+02	2.13E+03	7.80E-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	9.61E+04	1.21E+05	9.75E+04	9.61E+04	1.55E+04	2.86E+05
Uranium (92)	U-238+D	1.56E-01					1.55E-10	1.23	5.71E+01					1.70E+02
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	8.16E+05	2.49E+06	1.08E+06	8.55E+05	1.34E+06	2.44E-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	3.02E+06	4.15E+06	3.10E+06	3.02E+06	8.98E+05	3.26E-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	1.85E+04	8.92E+04	3.14E+04	2.05E+04	8.32E+04	1.51E-10
Vanadium (23)	V-48	1.74E+01	3.23E+00	9.31E+00	1.49E+01	3.17E+00	1.56E+01	1.17	8.41E+00	4.53E+01	1.57E+01	9.84E+00	4.61E+01	5.03E-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	5.43E+04	1.43E+05	6.44E+04	5.43E+04	1.26E+05	7.03E-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	5.42E+03	2.54E+04	9.18E+03	6.07E+03	2.52E+04	6.90E-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	4.46E+03	9.06E+03	4.79E+03	4.46E+03	7.12E+03	1.32E-07
Tungsten (74)	W-178+D	4.37E-01					1.17E+01	1.19	2.45E+02					7.27E-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	1.01E+06	1.98E+06	1.08E+06	1.01E+06	1.41E+06	3.62E-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	3.12E+02	6.38E+02	3.35E+02	3.12E+02	5.04E+02	5.25E-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	7.51E+04	2.05E+05	9.28E+04	7.59E+04	1.44E+05	8.01E-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	8.82E+02	4.26E+03	1.51E+03	9.82E+02	4.16E+03	1.26E-09
Tungsten (74)	W-188	8.90E-03	2.11E-03	5.84E-03	8.47E-03	2.12E-03	3.64E+00	1.26	3.67E+03	1.55E+04	5.59E+03	3.86E+03	1.54E+04	3.67E-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	3.82E+04	1.81E+05	6.47E+04	4.22E+04	1.73E+05	9.76E-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	7.75E+03	4.27E+04	1.49E+04	9.27E+03	4.28E+04	2.00E-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	6.27E+07	2.58E+08	9.48E+07	6.64E+07	2.40E+08	1.64E-07
Xenon (54)	Xe-122	2.33E-01	5.71E-02	1.50E-01	2.20E-01	7.04E-02	3.02E+02	1.28	1.11E+04	4.55E+04	1.73E+04	1.18E+04	3.69E+04	8.72E-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	7.81E+03	3.89E+04	1.37E+04	8.88E+03	3.79E+04	6.39E-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	2.64E+03	1.14E+04	4.13E+03	2.81E+03	1.09E+04	1.80E-09
Xenon (54)	Xe-127	1.21E+00	2.89E-01	7.98E-01	1.16E+00	2.99E-01	6.95E+00	1.25	5.04E+01	2.11E+02	7.63E+01	5.26E+01	2.04E+02	1.79E-09
Xenon (54)	Xe-129m	5.69E-02	2.35E-02	4.35E-02	5.56E-02	4.85E-02	3.16E+01	1.29	4.70E+03	1.14E+04	6.16E+03	4.81E+03	5.51E+03	3.72E-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	9.35E+03	2.09E+04	1.18E+04	9.53E+03	9.62E+03	1.12E-07
Xenon (54)	Xe-133	8.71E-02	3.49E-02	7.46E-02	8.73E-02	4.61E-02	4.82E+01	1.28	4.73E+03	1.18E+04	5.52E+03	4.72E+03	8.94E+03	2.53E-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	8.36E+03	3.15E+04	1.24E+04	8.70E+03	2.40E+04	1.87E-08
Xenon (54)	Xe-135	1.23E+00	2.78E-01	7.89E-01	1.16E+00	2.92E-01	6.68E+02	1.23	4.86E+03	2.15E+04	7.57E+03	5.13E+03	2.05E+04	1.91E-09
Xenon (54)	Xe-135m	2.35E+00	4.83E-01	1.37E+00	2.13E+00	4.89E-01	2.38E+04	1.2	9.24E+04	4.49E+05	1.58E+05	1.02E+05	4.44E+05	1.02E-09
Xenon (54)	Xe-138	6.99E+00	1.23E+00	3.54E+00	5.76E+00	1.25E+00	2.57E+04	1.15	3.50E+04	2.00E+05	6.91E+04	4.25E+04	1.96E+05	3.65E-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	1.80E+02	9.74E+02	3.37E+02	2.10E+02	9.91E+02	7.28E-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	6.38E+04	2.76E+05	9.79E+04	6.72E+04	2.83E+05	1.40E-09
Yttrium (39)	Y-87	2.44E+00	5.09E-01	1.45E+00	2.22E+00	5.03E-01	7.56E+01	1.26	2.69E+02	1.29E+03	4.54E+02	2.97E+02	1.31E+03	6.01E-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	1.46E+00	8.49E+00	2.92E+00	1.78E+00	8.78E+00	1.05E-10
Yttrium (39)	Y-90	4.01E-02	2.35E-02	3.25E-02	3.88E-02	1.28E-01	9.49E+01	1.41	1.84E+04	3.13E+04	2.27E+04	1.90E+04	5.74E+03	3.38E-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	5.25E+03	2.43E+04	8.59E+03	5.67E+03	2.46E+04	4.82E-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	1.10E+03	3.05E+03	1.68E+03	1.22E+03	4.76E+02	4.47E-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	2.27E+04	1.11E+05	3.90E+04	2.53E+04	1.12E+05	5.47E-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	1.01E+04	4.87E+04	1.83E+04	1.17E+04	3.60E+04	1.05E-09
Yttrium (39)	Y-93	5.97E-01	1.33E-01	3.32E-01	5.11E-01	2.45E-01	6.01E+02	1.16	9.49E+03	4.27E+04	1.71E+04	1.11E+04	2.31E+04	2.85E-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	2.64E+04	1.39E+05	4.94E+04	3.10E+04	1.29E+05	2.52E-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	5.56E+04	3.34E+05	1.17E+05	7.06E+04	3.12E+05	3.01E-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	4.02E+05	1.30E+06	5.35E+05	4.09E+05	1.18E+06	6.55E-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	7.29E+03	1.43E+04	7.83E+03	7.28E+03	1.07E+04	2.19E-08
Ytterbium (70)	Yb-167	7.98E-01	2.48E-01	5.93E-01	7.74E-01	2.77E-01	2.08E+04	1.25	2.29E+05	7.37E+05	3.08E+05	2.36E+05	6.61E+05	3.56E-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	6.97E+01	2.36E+02	9.57E+01	7.16E+01	2.14E+02	2.89E-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	2.80E+03	1.24E+04	4.43E+03	2.99E+03	1.24E+04	1.57E-08
Ytterbium (70)	Yb-177	1.04E+00	2.09E-01	5.86E-01	9.10E-01	2.53E-01	3.20E+03	1.18	2.85E+04	1.42E+05	5.08E+04	3.27E+04	1.17E+05	3.06E-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	2.44E+05	1.12E+06	3.96E+05	2.63E+05	1.06E+06	1.71E-08
Zinc (30)	Zn-62	2.35E+00	4.87E-01	1.38E+00	2.13E+00	4.84E-01	6.56E+02	1.2	2.54E+03	1.23E+04	4.33E+03	2.81E+03	1.23E+04	4.67E-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	1.43E+04	6.91E+04	2.44E+04	1.59E+04	6.47E+04	1.82E-10
Zinc (30)	Zn-65	3.51E+00	6.43E-01	1.86E+00	2.97E+00	6.31E-01	1.04E+00	1.16	4.32E+00	2.35E+01	8.15E+00	5.11E+00	2.40E+01	5.25E-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	1.99E+07	3.87E+07	2.44E+07	2.03E+07	2.40E+06	4.17E-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	1.79E+03	8.49E+03	2.98E+03	1.95E+03	8.62E+03	5.43E-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	1.65E+03	8.06E+03	2.83E+03	1.83E+03	7.89E+03	1.47E-10
Zinc (30)	Zn-72	5.97E-01	1.58E-01	4.27E-01	5.86E-01	1.56E-01	1.31E+02	1.29	1.86E+03	7.05E+03	2.60E+03	1.90E+03	7.11E+03	1.99E-09
Zirconium (40)	Zr-86	1.32E+00	2.98E-01	8.43E-01	1.25E+00	2.99E-01	3.68E+02	1.33	2.31E+03	1.02E+04	3.60E+03	2.44E+03	1.02E+04	1.05E-09
Zirconium (40)	Zr-88	2.09E+00	4.46E-01	1.27E+00	1.92E+00	4.40E-01	3.03E+00	1.27	1.32E+01	6.17E+01	2.17E+01	1.43E+01	6.25E+01	7.41E-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	1.05E+02	5.45E+02	1.90E+02	1.20E+02	5.51E+02	2.34E-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	8.81E+00	4.49E+01	1.56E+01	9.95E+00	4.54E+01	4.11E-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	3.10E+03	1.58E+04	5.69E+03	3.61E+03	1.15E+04	1.63E-09

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-223+D			1.25E-01	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-223+E			1.25E-01	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-224	2.59E-06	4.07E-04	2.07E-01	2.09E+03	1.36E+09	2.11E+07	2.20E+03	3.61E+01
Actinium (89)	Ac-225	8.88E-05	2.74E-02	1.72E-02	2.53E+01	1.36E+09	2.11E+07	4.06E-01	6.49E-03
Actinium (89)	Ac-225+D	8.88E-05	2.74E-02	2.99E-01	2.53E+01	1.36E+09	2.11E+07	4.06E-01	6.49E-03
Actinium (89)	Ac-225+E	8.88E-05	2.74E-02	2.99E-01	2.53E+01	1.36E+09	2.11E+07	4.06E-01	6.49E-03
Actinium (89)	Ac-226	3.70E-05	4.44E-03	1.58E-01	2.09E+02	1.36E+09	2.11E+07	1.98E+01	3.31E-01
Actinium (89)	Ac-227	4.07E-03	8.14E-01	1.65E-04	3.18E-02	1.36E+09	2.11E+07	5.41E-04	8.77E-06
Actinium (89)	Ac-228	1.59E-06	6.29E-05	1.10E+00	9.90E+02	1.36E+09	2.11E+07	5.79E+03	1.10E+02
Silver (47)	Ag-102	1.48E-07	6.29E-08	3.72E+00	2.82E+04	1.36E+09	2.11E+07	9.00E+06	2.36E+06
Silver (47)	Ag-103	1.59E-07	9.62E-08	8.69E-01	5.54E+03	1.36E+09	2.11E+07	1.61E+06	3.28E+05
Silver (47)	Ag-103+D	8.88E-07	1.52E-06	8.80E-01	5.54E+03	1.36E+09	2.11E+07	2.60E+05	2.37E+04
Silver (47)	Ag-104	2.22E-07	1.33E-07	2.94E+00	5.26E+03	1.36E+09	2.11E+07	1.10E+06	2.25E+05
Silver (47)	Ag-104m	2.00E-07	9.25E-08	1.33E+00	1.09E+04	1.36E+09	2.11E+07	2.56E+06	6.32E+05
Silver (47)	Ag-105	1.74E-06	2.70E-06	5.72E-01	6.17E+00	1.36E+09	2.11E+07	1.50E+02	1.47E+01
Silver (47)	Ag-106	1.18E-07	5.55E-08	8.65E-01	1.52E+04	1.36E+09	2.11E+07	6.03E+06	1.48E+06
Silver (47)	Ag-106m	5.55E-06	4.07E-06	3.08E+00	3.01E+01	1.36E+09	2.11E+07	2.48E+02	4.35E+01
Silver (47)	Ag-108			1.05E-01	1.54E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-108m	8.51E-06	2.74E-05	1.81E+00	5.46E-03	1.36E+09	2.11E+07	4.31E+00	2.47E-01
Silver (47)	Ag-108m+D			1.82E+00	5.46E-03	1.36E+09	2.11E+07		
Silver (47)	Ag-108m+E			1.82E+00		1.36E+09	2.11E+07		
Silver (47)	Ag-109m			8.78E-03	5.52E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-110			1.90E-01	8.88E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-110m	1.04E-05	2.81E-05	3.01E+00	1.01E+00	1.36E+09	2.11E+07	5.85E+00	3.78E-01
Silver (47)	Ag-110m+D			3.01E+00	1.01E+00	1.36E+09	2.11E+07		
Silver (47)	Ag-110m+E			3.01E+00		1.36E+09	2.11E+07		
Silver (47)	Ag-111	4.81E-06	5.55E-06	6.16E-02	3.40E+01	1.36E+09	2.11E+07	3.10E+02	3.83E+01
Silver (47)	Ag-112	1.59E-06	5.92E-07	8.71E-01	1.95E+03	1.36E+09	2.11E+07	5.80E+04	1.67E+04
Silver (47)	Ag-115	2.22E-07	9.99E-08	8.75E-01	1.82E+04	1.36E+09	2.11E+07	3.86E+06	9.74E+05
Aluminum (13)	Al-26	1.30E-05	7.40E-05	2.88E+00	9.68E-07	1.36E+09	2.11E+07	2.35E+00	9.27E-02
Aluminum (13)	Al-28			2.00E+00	1.63E+05	1.36E+09	2.11E+07		
Americium (95)	Am-237	6.66E-08	9.25E-08	3.94E-01	4.99E+03	1.36E+09	2.11E+07	3.21E+06	3.44E+05
Americium (95)	Am-238	1.18E-07	3.33E-07	9.65E-01	3.72E+03	1.36E+09	2.11E+07	1.19E+06	7.47E+04
Americium (95)	Am-239	8.88E-07	8.14E-07	2.43E-01	5.10E+02	1.36E+09	2.11E+07	2.58E+04	3.81E+03
Americium (95)	Am-240	2.15E-06	1.59E-06	1.12E+00	1.20E+02	1.36E+09	2.11E+07	2.54E+03	4.43E+02
Americium (95)	Am-241	7.40E-04	1.55E-01	2.72E-02	1.60E-03	1.36E+09	2.11E+07	2.80E-03	4.52E-05
Americium (95)	Am-242	1.11E-06	6.29E-05	1.88E-02	3.79E+02	1.36E+09	2.11E+07	2.35E+03	4.22E+01
Americium (95)	Am-242m	7.03E-04	1.37E-01	2.64E-03	4.56E-03	1.36E+09	2.11E+07	3.17E-03	5.14E-05
Americium (95)	Am-242m+D	7.03E-04	1.37E-01	2.44E-02	4.56E-03	1.36E+09	2.11E+07	3.17E-03	5.14E-05
Americium (95)	Am-242m+E	7.03E-04	1.52E-01	2.50E-02	4.56E-03	1.36E+09	2.11E+07	2.87E-03	4.64E-05
Americium (95)	Am-243	7.40E-04	1.52E-01	5.59E-02	9.39E-05	1.36E+09	2.11E+07	2.86E-03	4.63E-05
Americium (95)	Am-243+D	7.40E-04	1.52E-01	2.36E-01	9.39E-05	1.36E+09	2.11E+07	2.86E-03	4.63E-05
Americium (95)	Am-243+E	7.40E-04	1.52E-01	2.36E-01	9.39E-05	1.36E+09	2.11E+07	2.86E-03	4.63E-05
Americium (95)	Am-244	1.70E-06	7.40E-06	8.87E-01	6.01E+02	1.36E+09	2.11E+07	1.18E+04	5.53E+02
Americium (95)	Am-244m	1.07E-07	3.11E-07	6.48E-02	1.40E+04	1.36E+09	2.11E+07	4.90E+06	3.02E+05
Americium (95)	Am-245	2.29E-07	1.96E-07	4.81E-02	2.96E+03	1.36E+09	2.11E+07	5.83E+05	9.10E+04
Americium (95)	Am-246	2.15E-07	2.44E-07	7.94E-01	9.34E+03	1.36E+09	2.11E+07	1.91E+06	2.39E+05
Americium (95)	Am-246m	1.26E-07	8.14E-08	1.16E+00	1.46E+04	1.36E+09	2.11E+07	5.34E+06	1.03E+06
Argon (18)	Ar-37			0.00E+00	7.22E+00	1.36E+09	2.11E+07		
Argon (18)	Ar-39			2.95E-03	2.58E-03	1.36E+09	2.11E+07		
Argon (18)	Ar-41			1.42E+00	3.32E+03	1.36E+09	2.11E+07		
Arsenic (33)	As-69	2.11E-07	7.77E-08	1.30E+00	2.40E+04	1.36E+09	2.11E+07	5.39E+06	1.56E+06
Arsenic (33)	As-69+D	1.11E-06	1.15E-06	2.28E+00	2.40E+04	1.36E+09	2.11E+07	9.58E+05	1.29E+05
Arsenic (33)	As-70	4.81E-07	2.48E-07	4.55E+00	6.92E+03	1.36E+09	2.11E+07	6.73E+05	1.54E+05
Arsenic (33)	As-71	1.70E-06	1.48E-06	6.33E-01	9.37E+01	1.36E+09	2.11E+07	2.48E+03	3.82E+02
Arsenic (33)	As-71+D			6.33E-01	9.37E+01	1.36E+09	2.11E+07		
Arsenic (33)	As-72	6.66E-06	3.33E-06	2.11E+00	2.33E+02	1.36E+09	2.11E+07	1.64E+03	3.84E+02
Arsenic (33)	As-73	9.62E-07	3.70E-06	6.05E-03	3.15E+00	1.36E+09	2.11E+07	1.19E+02	6.03E+00
Arsenic (33)	As-74	4.81E-06	7.77E-06	8.72E-01	1.42E+01	1.36E+09	2.11E+07	1.24E+02	1.18E+01
Arsenic (33)	As-76	5.92E-06	2.74E-06	6.12E-01	2.31E+02	1.36E+09	2.11E+07	1.83E+03	4.53E+02
Arsenic (33)	As-77	1.48E-06	1.44E-06	1.65E-02	1.56E+02	1.36E+09	2.11E+07	4.72E+03	6.65E+02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Arsenic (33)	As-78	7.77E-07	3.29E-07	1.51E+00	4.02E+03	1.36E+09	2.11E+07	2.44E+05	6.42E+04
Astatine (85)	At-207	8.88E-07	8.51E-06	1.42E+00	3.37E+03	1.36E+09	2.11E+07	9.17E+04	2.75E+03
Astatine (85)	At-211	4.07E-05	4.07E-04	3.87E-02	8.42E+02	1.36E+09	2.11E+07	4.89E+02	1.43E+01
Astatine (85)	At-211+D	4.07E-05	4.07E-04	4.38E-02	8.42E+02	1.36E+09	2.11E+07	4.89E+02	1.43E+01
Astatine (85)	At-211+E	4.07E-05	4.07E-04	7.49E-01	8.42E+02	1.36E+09	2.11E+07	4.89E+02	1.43E+01
Astatine (85)	At-215			2.15E-04	2.19E+11	1.36E+09	2.11E+07		
Astatine (85)	At-216			1.51E-03	7.28E+10	1.36E+09	2.11E+07		
Astatine (85)	At-217			3.42E-04	6.77E+08	1.36E+09	2.11E+07		
Astatine (85)	At-218			4.25E-03	1.09E+07	1.36E+09	2.11E+07		
Gold (79)	Au-193	4.81E-07	4.07E-07	1.66E-01	3.44E+02	1.36E+09	2.11E+07	3.23E+04	5.09E+03
Gold (79)	Au-194	1.55E-06	8.51E-07	1.13E+00	1.54E+02	1.36E+09	2.11E+07	4.61E+03	1.01E+03
Gold (79)	Au-195	9.25E-07	4.07E-06	8.23E-02	1.38E+00	1.36E+09	2.11E+07	6.66E+01	3.09E+00
Gold (79)	Au-195m			2.15E-01	7.17E+05	1.36E+09	2.11E+07		
Gold (79)	Au-198	3.70E-06	2.89E-06	4.75E-01	9.38E+01	1.36E+09	2.11E+07	1.15E+03	1.93E+02
Gold (79)	Au-198m	4.81E-06	6.66E-06	6.10E-01	1.10E+02	1.36E+09	2.11E+07	9.81E+02	1.05E+02
Gold (79)	Au-199	1.63E-06	2.63E-06	9.30E-02	8.06E+01	1.36E+09	2.11E+07	2.08E+03	1.98E+02
Gold (79)	Au-200	2.52E-07	1.22E-07	3.93E-01	7.53E+03	1.36E+09	2.11E+07	1.40E+06	3.35E+05
Gold (79)	Au-200m	4.07E-06	2.52E-06	2.31E+00	3.25E+02	1.36E+09	2.11E+07	3.69E+03	7.37E+02
Gold (79)	Au-201	8.88E-08	6.29E-08	1.05E-01	1.38E+04	1.36E+09	2.11E+07	7.12E+06	1.28E+06
Barium (56)	Ba-126	9.62E-07	3.70E-07	1.76E-01	3.77E+03	1.36E+09	2.11E+07	1.86E+05	5.23E+04
Barium (56)	Ba-128	9.99E-06	4.81E-06	7.91E-02	1.04E+02	1.36E+09	2.11E+07	4.89E+02	1.17E+02
Barium (56)	Ba-131	1.67E-06	2.81E-06	5.01E-01	2.14E+01	1.36E+09	2.11E+07	5.37E+02	4.94E+01
Barium (56)	Ba-131m	1.81E-08	2.74E-08	7.82E-02	2.49E+04	1.36E+09	2.11E+07	5.83E+07	5.85E+06
Barium (56)	Ba-133	5.55E-06	1.15E-05	4.35E-01	6.45E-02	1.36E+09	2.11E+07	7.50E+00	5.92E-01
Barium (56)	Ba-133m	2.00E-06	1.55E-06	6.97E-02	1.56E+02	1.36E+09	2.11E+07	3.56E+03	5.97E+02
Barium (56)	Ba-135m	1.59E-06	1.22E-06	6.28E-02	2.12E+02	1.36E+09	2.11E+07	6.06E+03	1.03E+03
Barium (56)	Ba-137m			6.76E-01	1.43E+05	1.36E+09	2.11E+07		
Barium (56)	Ba-139	4.44E-07	2.07E-07	1.70E-01	4.40E+03	1.36E+09	2.11E+07	4.66E+05	1.15E+05
Barium (56)	Ba-140	9.62E-06	1.89E-05	2.22E-01	1.99E+01	1.36E+09	2.11E+07	8.40E+01	6.90E+00
Barium (56)	Ba-141	2.59E-07	1.18E-07	1.03E+00	1.99E+04	1.36E+09	2.11E+07	3.62E+06	9.03E+05
Barium (56)	Ba-142	1.30E-07	7.77E-08	1.18E+00	3.44E+04	1.36E+09	2.11E+07	1.23E+07	2.51E+06
Beryllium (4)	Be-10	4.07E-06	3.55E-05	3.98E-03	4.33E-07	1.36E+09	2.11E+07	6.22E+00	1.95E-01
Beryllium (4)	Be-7	1.04E-07	1.85E-07	5.51E-02	4.75E+00	1.36E+09	2.11E+07	1.91E+03	1.68E+02
Bismuth (83)	Bi-200	1.89E-07	1.22E-07	2.64E+00	1.00E+04	1.36E+09	2.11E+07	2.45E+06	4.72E+05
Bismuth (83)	Bi-201	4.44E-07	2.44E-07	1.49E+00	3.37E+03	1.36E+09	2.11E+07	3.54E+05	7.71E+04
Bismuth (83)	Bi-202	3.29E-07	2.04E-07	2.96E+00	3.64E+03	1.36E+09	2.11E+07	5.11E+05	1.02E+05
Bismuth (83)	Bi-203	1.78E-06	9.62E-07	2.54E+00	5.16E+02	1.36E+09	2.11E+07	1.36E+04	2.99E+03
Bismuth (83)	Bi-205	3.33E-06	3.44E-06	1.80E+00	1.65E+01	1.36E+09	2.11E+07	2.20E+02	2.97E+01
Bismuth (83)	Bi-206	7.03E-06	6.29E-06	3.57E+00	4.05E+01	1.36E+09	2.11E+07	2.59E+02	3.91E+01
Bismuth (83)	Bi-207	4.81E-06	2.07E-05	1.69E+00	1.82E-02	1.36E+09	2.11E+07	7.05E+00	3.31E-01
Bismuth (83)	Bi-210	4.81E-06	3.44E-04	4.10E-02	5.05E+01	1.36E+09	2.11E+07	5.89E+01	1.03E+00
Bismuth (83)	Bi-210m	5.55E-05	1.26E-02	2.80E-01	2.31E-07	1.36E+09	2.11E+07	3.46E-02	5.58E-04
Bismuth (83)	Bi-210m+D			3.51E-01	2.31E-07	1.36E+09	2.11E+07		
Bismuth (83)	Bi-210m+E			3.51E-01		1.36E+09	2.11E+07		
Bismuth (83)	Bi-211			5.13E-02	1.70E+05	1.36E+09	2.11E+07		
Bismuth (83)	Bi-212	9.62E-07	1.15E-04	2.63E-01	6.02E+03	1.36E+09	2.11E+07	2.21E+04	3.68E+02
Bismuth (83)	Bi-212+D	9.62E-07	1.15E-04	1.51E+00	6.02E+03	1.36E+09	2.11E+07	2.21E+04	3.68E+02
Bismuth (83)	Bi-212+E	9.62E-07	1.15E-04	1.51E+00	6.02E+03	1.36E+09	2.11E+07	2.21E+04	3.68E+02
Bismuth (83)	Bi-213	7.40E-07	1.11E-04	1.96E-01	7.98E+03	1.36E+09	2.11E+07	3.07E+04	5.05E+02
Bismuth (83)	Bi-213+D	9.62E-07	1.11E-04	2.49E-01	7.98E+03	1.36E+09	2.11E+07	3.02E+04	5.05E+02
Bismuth (83)	Bi-213+E	9.62E-07	1.11E-04	2.49E-01	7.98E+03	1.36E+09	2.11E+07	3.02E+04	5.05E+02
Bismuth (83)	Bi-214	4.07E-07	5.18E-05	1.68E+00	1.83E+04	1.36E+09	2.11E+07	1.49E+05	2.48E+03
Bismuth (83)	Bi-214+D	4.07E-07	5.18E-05	1.68E+00	1.83E+04	1.36E+09	2.11E+07	1.49E+05	2.48E+03
Bismuth (83)	Bi-214+E	7.03E-03	1.67E-02	1.73E+00	1.83E+04	1.36E+09	2.11E+07	1.02E+02	7.29E+00
Berkelium (97)	Bk-245	2.11E-06	7.77E-06	2.40E-01	5.12E+01	1.36E+09	2.11E+07	8.55E+02	4.46E+01
Berkelium (97)	Bk-246	1.78E-06	1.22E-06	1.04E+00	1.38E+02	1.36E+09	2.11E+07	3.58E+03	6.59E+02
Berkelium (97)	Bk-247	1.30E-03	2.55E-01	1.10E-01	5.02E-04	1.36E+09	2.11E+07	1.70E-03	2.75E-05
Berkelium (97)	Bk-249	3.59E-06	5.92E-04	6.23E-06	7.90E-01	1.36E+09	2.11E+07	1.05E+00	1.72E-02
Berkelium (97)	Bk-250	5.18E-07	3.70E-06	9.84E-01	1.88E+03	1.36E+09	2.11E+07	1.01E+05	3.51E+03
Bromine (35)	Br-74	3.11E-07	1.41E-07	4.73E+00	1.44E+04	1.36E+09	2.11E+07	2.18E+06	5.48E+05
Bromine (35)	Br-74m	5.18E-07	2.29E-07	4.46E+00	8.78E+03	1.36E+09	2.11E+07	7.98E+05	2.04E+05

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Bromine (35)	Br-75	2.92E-07	1.96E-07	1.42E+00	3.72E+03	1.36E+09	2.11E+07	5.85E+05	1.10E+05
Bromine (35)	Br-76	1.70E-06	1.52E-06	2.85E+00	3.75E+02	1.36E+09	2.11E+07	9.91E+03	1.50E+03
Bromine (35)	Br-77	3.55E-07	3.11E-07	3.49E-01	1.08E+02	1.36E+09	2.11E+07	1.38E+04	2.11E+03
Bromine (35)	Br-80	1.15E-07	3.48E-08	1.21E-01	2.09E+04	1.36E+09	2.11E+07	8.72E+06	2.88E+06
Bromine (35)	Br-80m	4.07E-07	2.81E-07	1.60E-02	1.37E+03	1.36E+09	2.11E+07	1.55E+05	2.85E+04
Bromine (35)	Br-82	2.00E-06	2.33E-06	2.89E+00	1.72E+02	1.36E+09	2.11E+07	3.77E+03	4.62E+02
Bromine (35)	Br-83	1.59E-07	1.78E-07	3.34E-02	2.54E+03	1.36E+09	2.11E+07	7.03E+05	8.92E+04
Bromine (35)	Br-84	3.26E-07	1.37E-07	1.95E+00	1.15E+04	1.36E+09	2.11E+07	1.66E+06	4.39E+05
Carbon (6)	C-11	8.88E-08	8.14E-09	1.18E+00	1.79E+04	1.36E+09	2.11E+07	9.84E+06	6.05E+06
Carbon (6)	C-14	2.15E-06	2.29E-08	1.48E-05	1.21E-04	1.36E+09	2.11E+07	2.30E+01	2.14E+01
Calcium (20)	Ca-41	7.03E-07	3.52E-07	0.00E+00	4.95E-06	1.36E+09	2.11E+07	6.66E+01	1.56E+01
Calcium (20)	Ca-45	2.63E-06	9.99E-06	4.40E-05	1.55E+00	1.36E+09	2.11E+07	2.62E+01	1.34E+00
Calcium (20)	Ca-47	5.92E-06	7.03E-06	1.17E+00	5.58E+01	1.36E+09	2.11E+07	4.12E+02	4.99E+01
Calcium (20)	Ca-49			3.12E+00	4.18E+04	1.36E+09	2.11E+07		
Cadmium (48)	Cd-104	2.00E-07	1.26E-07	2.75E-01	6.31E+03	1.36E+09	2.11E+07	1.46E+06	2.88E+05
Cadmium (48)	Cd-107	2.29E-07	3.07E-07	2.72E-02	9.35E+02	1.36E+09	2.11E+07	1.76E+05	1.94E+04
Cadmium (48)	Cd-109	7.40E-06	2.44E-05	1.94E-02	5.45E-01	1.36E+09	2.11E+07	6.37E+00	3.58E-01
Cadmium (48)	Cd-113	9.25E-05	2.04E-04	6.77E-05	7.45E-17	1.36E+09	2.11E+07	2.89E-01	2.18E-02
Cadmium (48)	Cd-113m	8.51E-05	1.92E-04	2.07E-03	5.10E-02	1.36E+09	2.11E+07	4.78E-01	3.53E-02
Cadmium (48)	Cd-115	5.18E-06	3.63E-06	2.84E-01	1.14E+02	1.36E+09	2.11E+07	1.01E+03	1.83E+02
Cadmium (48)	Cd-115m	1.22E-05	2.29E-05	1.08E-01	5.67E+00	1.36E+09	2.11E+07	1.91E+01	1.62E+00
Cadmium (48)	Cd-117	1.04E-06	5.92E-07	1.21E+00	2.44E+03	1.36E+09	2.11E+07	1.09E+05	2.32E+04
Cadmium (48)	Cd-117m	1.04E-06	7.40E-07	2.16E+00	1.81E+03	1.36E+09	2.11E+07	7.99E+04	1.43E+04
Cerium (58)	Ce-134	9.25E-06	4.81E-06	2.51E-02	8.43E+01	1.36E+09	2.11E+07	4.26E+02	9.67E+01
Cerium (58)	Ce-135	2.92E-06	1.78E-06	1.98E+00	3.45E+02	1.36E+09	2.11E+07	5.47E+03	1.11E+03
Cerium (58)	Ce-137	9.25E-08	3.63E-08	3.48E-02	6.75E+02	1.36E+09	2.11E+07	3.45E+05	9.59E+04
Cerium (58)	Ce-137m	2.00E-06	1.52E-06	5.51E-02	1.76E+02	1.36E+09	2.11E+07	4.03E+03	6.89E+02
Cerium (58)	Ce-139	9.62E-07	6.29E-06	1.67E-01	1.84E+00	1.36E+09	2.11E+07	6.55E+01	2.39E+00
Cerium (58)	Ce-141	2.63E-06	1.18E-05	8.09E-02	7.78E+00	1.36E+09	2.11E+07	9.81E+01	4.48E+00
Cerium (58)	Ce-143	4.07E-06	2.78E-06	3.51E-01	1.84E+02	1.36E+09	2.11E+07	2.08E+03	3.86E+02
Cerium (58)	Ce-144	1.92E-05	1.33E-04	2.15E-02	8.90E-01	1.36E+09	2.11E+07	2.21E+00	7.81E-02
Cerium (58)	Ce-144+D	1.92E-05	1.33E-04	2.11E-01	8.90E-01	1.36E+09	2.11E+07	2.21E+00	7.81E-02
Cerium (58)	Ce-144+E	1.92E-05	1.33E-04	2.11E-01	8.90E-01	1.36E+09	2.11E+07	2.21E+00	7.81E-02
Californium (98)	Cf-244	2.59E-07	5.18E-05	9.56E-04	1.88E+04	1.36E+09	2.11E+07	1.57E+05	2.55E+03
Californium (98)	Cf-246	1.22E-05	1.67E-03	6.69E-04	1.70E+02	1.36E+09	2.11E+07	4.34E+01	7.17E-01
Californium (98)	Cf-248	1.04E-04	3.26E-02	6.51E-04	7.58E-01	1.36E+09	2.11E+07	1.93E-02	3.08E-04
Californium (98)	Cf-249	1.30E-03	2.59E-01	3.68E-01	1.98E-03	1.36E+09	2.11E+07	1.67E-03	2.71E-05
Californium (98)	Cf-250	5.92E-04	1.26E-01	6.21E-04	5.30E-02	1.36E+09	2.11E+07	3.54E-03	5.73E-05
Californium (98)	Cf-251	1.33E-03	2.63E-01	1.32E-01	7.72E-04	1.36E+09	2.11E+07	1.65E-03	2.68E-05
Californium (98)	Cf-252	3.33E-04	7.40E-02	4.97E-01	2.63E-01	1.36E+09	2.11E+07	6.69E-03	1.08E-04
Californium (98)	Cf-253	5.18E-06	4.81E-03	6.03E-05	1.42E+01	1.36E+09	2.11E+07	1.32E+00	2.08E-02
Californium (98)	Cf-254	1.48E-03	1.52E-01	1.81E+01	4.18E+00	1.36E+09	2.11E+07	1.16E-02	1.96E-04
Chlorine (17)	Cl-36	3.44E-06	2.70E-05	1.31E-02	2.30E-06	1.36E+09	2.11E+07	7.73E+00	2.56E-01
Chlorine (17)	Cl-38	4.44E-07	1.67E-07	1.67E+00	9.79E+03	1.36E+09	2.11E+07	1.05E+06	3.00E+05
Chlorine (17)	Cl-39	3.15E-07	1.70E-07	1.65E+00	6.55E+03	1.36E+09	2.11E+07	9.71E+05	2.14E+05
Curium (96)	Cm-238	2.96E-07	1.67E-05	7.66E-02	2.53E+03	1.36E+09	2.11E+07	5.92E+04	1.07E+03
Curium (96)	Cm-240	2.81E-05	1.18E-02	8.97E-04	9.37E+00	1.36E+09	2.11E+07	3.51E-01	5.56E-03
Curium (96)	Cm-241	3.37E-06	1.37E-04	5.43E-01	7.71E+00	1.36E+09	2.11E+07	2.08E+01	3.95E-01
Curium (96)	Cm-242	4.44E-05	1.92E-02	8.19E-04	1.55E+00	1.36E+09	2.11E+07	4.54E-02	7.20E-04
Curium (96)	Cm-243	5.55E-04	1.15E-01	1.38E-01	2.43E-02	1.36E+09	2.11E+07	3.83E-03	6.20E-05
Curium (96)	Cm-244	4.44E-04	9.99E-02	7.52E-04	3.83E-02	1.36E+09	2.11E+07	4.44E-03	7.17E-05
Curium (96)	Cm-245	7.77E-04	1.55E-01	9.39E-02	8.15E-05	1.36E+09	2.11E+07	2.79E-03	4.52E-05
Curium (96)	Cm-246	7.77E-04	1.55E-01	6.72E-04	1.47E-04	1.36E+09	2.11E+07	2.79E-03	4.52E-05
Curium (96)	Cm-247	7.03E-04	1.44E-01	3.49E-01	4.44E-08	1.36E+09	2.11E+07	3.01E-03	4.87E-05
Curium (96)	Cm-247+D			3.76E-01	4.44E-08	1.36E+09	2.11E+07		
Curium (96)	Cm-247+E			3.76E-01		1.36E+09	2.11E+07		
Curium (96)	Cm-248	2.85E-03	5.55E-01	1.42E+00	1.99E-06	1.36E+09	2.11E+07	7.80E-04	1.27E-05
Curium (96)	Cm-249	1.15E-07	1.22E-07	3.87E-02	5.68E+03	1.36E+09	2.11E+07	2.19E+06	2.88E+05
Curium (96)	Cm-250	1.63E-02	3.11E+00	1.05E+01	7.14E-05	1.36E+09	2.11E+07	1.39E-04	2.26E-06
Curium (96)	Cm-250+D	1.63E-02	3.11E+00		7.14E-05	1.36E+09	2.11E+07	1.39E-04	2.26E-06
Curium (96)	Cm-250+E	1.63E-02	3.11E+00	1.08E+01	7.14E-05	1.36E+09	2.11E+07	1.39E-04	2.26E-06

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Cobalt (27)	Co-55	3.70E-06	1.85E-06	2.25E+00	3.46E+02	1.36E+09	2.11E+07	4.38E+03	1.02E+03
Cobalt (27)	Co-56	9.25E-06	1.78E-05	3.77E+00	3.21E+00	1.36E+09	2.11E+07	1.48E+01	1.23E+00
Cobalt (27)	Co-57	7.77E-07	2.04E-06	1.26E-01	9.34E-01	1.36E+09	2.11E+07	7.61E+01	5.04E+00
Cobalt (27)	Co-58	2.74E-06	5.92E-06	1.08E+00	3.57E+00	1.36E+09	2.11E+07	5.37E+01	4.10E+00
Cobalt (27)	Co-58m	8.88E-08	4.81E-08	7.76E-06	6.63E+02	1.36E+09	2.11E+07	3.48E+05	7.68E+04
Cobalt (27)	Co-60	1.26E-05	3.70E-05	2.68E+00	1.31E-01	1.36E+09	2.11E+07	3.17E+00	1.93E-01
Cobalt (27)	Co-60m	6.29E-09	4.44E-09	5.11E-03	3.48E+04	1.36E+09	2.11E+07	2.54E+08	4.58E+07
Cobalt (27)	Co-61	2.74E-07	1.74E-07	1.51E-01	3.68E+03	1.36E+09	2.11E+07	6.21E+05	1.21E+05
Cobalt (27)	Co-62m	1.74E-07	7.40E-08	3.01E+00	2.62E+04	1.36E+09	2.11E+07	7.11E+06	1.86E+06
Chromium (24)	Cr-48	7.40E-07	7.40E-07	4.71E-01	2.64E+02	1.36E+09	2.11E+07	1.59E+04	2.20E+03
Chromium (24)	Cr-49	2.26E-07	1.22E-07	1.25E+00	8.65E+03	1.36E+09	2.11E+07	1.79E+06	3.94E+05
Chromium (24)	Cr-51	1.41E-07	1.18E-07	3.47E-02	9.13E+00	1.36E+09	2.11E+07	2.94E+03	4.64E+02
Cesium (55)	Cs-125	1.30E-07	4.44E-08	7.99E-01	8.09E+03	1.36E+09	2.11E+07	2.98E+06	9.06E+05
Cesium (55)	Cs-126			1.38E+00	2.22E+05	1.36E+09	2.11E+07		
Cesium (55)	Cs-127	8.88E-08	7.40E-08	4.61E-01	9.71E+02	1.36E+09	2.11E+07	4.95E+05	7.88E+04
Cesium (55)	Cs-128			1.11E+00	9.34E+04	1.36E+09	2.11E+07		
Cesium (55)	Cs-129	2.22E-07	1.55E-07	3.06E-01	1.89E+02	1.36E+09	2.11E+07	3.91E+04	7.12E+03
Cesium (55)	Cs-130	1.04E-07	2.89E-08	6.31E-01	1.22E+04	1.36E+09	2.11E+07	5.64E+06	1.96E+06
Cesium (55)	Cs-131	2.15E-07	9.99E-08	2.09E-02	2.61E+01	1.36E+09	2.11E+07	5.72E+03	1.41E+03
Cesium (55)	Cs-132	1.85E-06	8.51E-07	7.81E-01	3.91E+01	1.36E+09	2.11E+07	9.93E+02	2.46E+02
Cesium (55)	Cs-134	7.03E-05	2.44E-05	1.73E+00	3.36E-01	1.36E+09	2.11E+07	7.97E-01	2.40E-01
Cesium (55)	Cs-134m	7.40E-08	5.18E-08	2.63E-02	2.09E+03	1.36E+09	2.11E+07	1.30E+06	2.36E+05
Cesium (55)	Cs-135	7.40E-06	2.55E-06	3.14E-05	3.01E-07	1.36E+09	2.11E+07	6.43E+00	1.95E+00
Cesium (55)	Cs-135m	7.03E-08	4.44E-08	1.76E+00	6.87E+03	1.36E+09	2.11E+07	4.52E+06	8.88E+05
Cesium (55)	Cs-136	1.11E-05	4.44E-06	2.37E+00	1.93E+01	1.36E+09	2.11E+07	8.23E+01	2.25E+01
Cesium (55)	Cs-137	4.81E-05	1.70E-05	3.49E-03	2.31E-02	1.36E+09	2.11E+07	1.00E+00	2.98E-01
Cesium (55)	Cs-137+D	4.81E-05	1.70E-05	6.43E-01	2.31E-02	1.36E+09	2.11E+07	1.00E+00	2.98E-01
Cesium (55)	Cs-137+E	4.81E-05	1.70E-05	6.43E-01	2.31E-02	1.36E+09	2.11E+07	1.00E+00	2.98E-01
Cesium (55)	Cs-138	3.40E-07	8.88E-08	2.64E+00	1.13E+04	1.36E+09	2.11E+07	1.60E+06	5.79E+05
Copper (29)	Cu-60	2.59E-07	1.22E-07	4.25E+00	1.57E+04	1.36E+09	2.11E+07	2.85E+06	6.94E+05
Copper (29)	Cu-61	4.44E-07	2.74E-07	9.58E-01	1.78E+03	1.36E+09	2.11E+07	1.86E+05	3.72E+04
Copper (29)	Cu-62			1.30E+00	3.74E+04	1.36E+09	2.11E+07		
Copper (29)	Cu-64	4.44E-07	4.07E-07	2.14E-01	4.78E+02	1.36E+09	2.11E+07	4.83E+04	7.15E+03
Copper (29)	Cu-66			2.37E-01	7.14E+04	1.36E+09	2.11E+07		
Copper (29)	Cu-67	1.26E-06	2.04E-06	1.23E-01	9.81E+01	1.36E+09	2.11E+07	3.27E+03	3.12E+02
Dysprosium (66)	Dy-155	4.81E-07	2.85E-07	6.28E-01	6.07E+02	1.36E+09	2.11E+07	5.85E+04	1.21E+04
Dysprosium (66)	Dy-157	2.26E-07	1.11E-07	3.89E-01	7.49E+02	1.36E+09	2.11E+07	1.56E+05	3.68E+04
Dysprosium (66)	Dy-159	3.70E-07	1.37E-06	4.52E-02	1.75E+00	1.36E+09	2.11E+07	2.02E+02	1.05E+01
Dysprosium (66)	Dy-165	4.07E-07	2.22E-07	8.06E-02	2.60E+03	1.36E+09	2.11E+07	2.98E+05	6.53E+04
Dysprosium (66)	Dy-166	5.92E-06	7.03E-06	4.10E-02	7.44E+01	1.36E+09	2.11E+07	5.49E+02	6.64E+01
Erbium (68)	Er-161	2.96E-07	1.78E-07	9.98E-01	1.87E+03	1.36E+09	2.11E+07	2.93E+05	5.99E+04
Erbium (68)	Er-165	7.03E-08	2.92E-08	3.78E-02	5.86E+02	1.36E+09	2.11E+07	3.94E+05	1.05E+05
Erbium (68)	Er-169	1.37E-06	3.70E-06	7.88E-05	2.72E+01	1.36E+09	2.11E+07	7.58E+02	4.91E+01
Erbium (68)	Er-171	1.33E-06	8.14E-07	4.49E-01	8.07E+02	1.36E+09	2.11E+07	2.81E+04	5.65E+03
Erbium (68)	Er-172	3.70E-06	4.07E-06	5.79E-01	1.23E+02	1.36E+09	2.11E+07	1.47E+03	1.88E+02
Einsteinium (99)	Es-250	7.77E-08	2.33E-06	4.26E-01	2.89E+03	1.36E+09	2.11E+07	4.30E+05	8.68E+03
Einsteinium (99)	Es-251	6.29E-07	7.77E-06	9.79E-02	1.84E+02	1.36E+09	2.11E+07	6.16E+03	1.65E+02
Einsteinium (99)	Es-253	2.26E-05	9.99E-03	7.74E-04	1.24E+01	1.36E+09	2.11E+07	5.49E-01	8.69E-03
Einsteinium (99)	Es-254	1.04E-04	3.18E-02	1.14E-02	9.17E-01	1.36E+09	2.11E+07	2.11E-02	3.37E-04
Einsteinium (99)	Es-254+D	1.04E-04	3.18E-02	9.95E-01	9.17E-01	1.36E+09	2.11E+07	2.11E-02	3.37E-04
Einsteinium (99)	Es-254+E	7.03E-04	1.59E-01	9.97E-01	9.17E-01	1.36E+09	2.11E+07	4.18E-03	6.75E-05
Einsteinium (99)	Es-254m	1.55E-05	1.74E-03	5.34E-01	1.54E+02	1.36E+09	2.11E+07	3.72E+01	6.24E-01
Europium (63)	Eu-145	2.78E-06	2.04E-06	1.56E+00	4.26E+01	1.36E+09	2.11E+07	7.02E+02	1.23E+02
Europium (63)	Eu-146	4.81E-06	2.96E-06	2.74E+00	5.49E+01	1.36E+09	2.11E+07	5.28E+02	1.06E+02
Europium (63)	Eu-147	1.63E-06	4.07E-06	5.39E-01	1.05E+01	1.36E+09	2.11E+07	2.51E+02	1.72E+01
Europium (63)	Eu-148	4.81E-06	9.62E-06	2.40E+00	4.64E+00	1.36E+09	2.11E+07	3.95E+01	3.20E+00
Europium (63)	Eu-149	3.70E-07	1.07E-06	6.61E-02	2.72E+00	1.36E+09	2.11E+07	2.95E+02	1.82E+01
Europium (63)	Eu-150	4.81E-06	1.96E-04	1.66E+00	2.03E-02	1.36E+09	2.11E+07	1.91E+00	3.61E-02
Europium (63)	Eu-150m	1.41E-06	7.03E-07	7.91E-02	4.81E+02	1.36E+09	2.11E+07	1.60E+04	3.74E+03
Europium (63)	Eu-152	5.18E-06	1.55E-04	1.26E+00	5.20E-02	1.36E+09	2.11E+07	2.29E+00	4.62E-02
Europium (63)	Eu-152m	1.85E-06	8.14E-07	3.91E-01	6.51E+02	1.36E+09	2.11E+07	1.66E+04	4.25E+03

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Europium (63)	Eu-154	7.40E-06	1.96E-04	1.37E+00	7.88E-02	1.36E+09	2.11E+07	1.78E+00	3.71E-02
Europium (63)	Eu-155	1.18E-06	2.55E-05	6.24E-02	1.40E-01	1.36E+09	2.11E+07	1.33E+01	2.93E-01
Europium (63)	Eu-156	8.14E-06	1.26E-05	1.45E+00	1.67E+01	1.36E+09	2.11E+07	8.65E+01	8.52E+00
Europium (63)	Eu-157	2.22E-06	1.04E-06	3.22E-01	4.01E+02	1.36E+09	2.11E+07	8.48E+03	2.08E+03
Europium (63)	Eu-158	3.48E-07	1.74E-07	1.26E+00	7.94E+03	1.36E+09	2.11E+07	1.07E+06	2.50E+05
Fluorine (9)	F-18	1.81E-07	2.07E-07	1.15E+00	3.32E+03	1.36E+09	2.11E+07	8.04E+05	1.00E+05
Iron (26)	Fe-52	5.18E-06	2.22E-06	8.30E-01	7.34E+02	1.36E+09	2.11E+07	6.68E+03	1.74E+03
Iron (26)	Fe-55	1.22E-06	1.41E-06	0.00E+00	2.57E-01	1.36E+09	2.11E+07	4.07E+01	5.05E+00
Iron (26)	Fe-59	6.66E-06	1.37E-05	1.28E+00	5.68E+00	1.36E+09	2.11E+07	3.45E+01	2.74E+00
Iron (26)	Fe-60	4.07E-04	5.18E-04	1.37E-05	6.93E-06	1.36E+09	2.11E+07	1.07E-01	1.22E-02
Iron (26)	Fe-60+D	4.07E-04	5.18E-04	5.12E-03	6.93E-06	1.36E+09	2.11E+07	1.07E-01	1.22E-02
Iron (26)	Fe-60+E	4.07E-04	5.18E-04	5.12E-03	6.93E-06	1.36E+09	2.11E+07	1.07E-01	1.22E-02
Fermium (100)	Fm-252	9.99E-06	1.18E-03	6.31E-04	2.67E+02	1.36E+09	2.11E+07	9.50E+01	1.59E+00
Fermium (100)	Fm-253	3.37E-06	1.48E-03	8.33E-02	8.43E+01	1.36E+09	2.11E+07	2.53E+01	4.00E-01
Fermium (100)	Fm-254	1.63E-06	2.26E-04	6.99E-04	1.87E+03	1.36E+09	2.11E+07	3.53E+03	5.83E+01
Fermium (100)	Fm-255	9.25E-06	9.99E-04	7.34E-03	3.02E+02	1.36E+09	2.11E+07	1.26E+02	2.13E+00
Fermium (100)	Fm-257	5.55E-05	2.63E-02	1.11E-01	2.52E+00	1.36E+09	2.11E+07	4.63E-02	7.32E-04
Francium (87)	Fr-219			3.85E-03	1.04E+09	1.36E+09	2.11E+07		
Francium (87)	Fr-220			1.15E-02	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-220+D			1.52E+00	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-220+E			1.52E+00	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-221			3.31E-02	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-221+D			2.81E-01	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-221+E			2.81E-01	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-222	2.66E-06	5.18E-05	1.02E-01	2.53E+04	1.36E+09	2.11E+07	1.50E+05	3.41E+03
Francium (87)	Fr-223	8.88E-06	3.29E-06	9.06E-02	1.67E+04	1.36E+09	2.11E+07	8.93E+04	2.58E+04
Gallium (31)	Ga-65	1.37E-07	6.29E-08	1.41E+00	2.40E+04	1.36E+09	2.11E+07	8.23E+06	2.04E+06
Gallium (31)	Ga-66	4.44E-06	1.63E-06	2.63E+00	6.46E+02	1.36E+09	2.11E+07	6.91E+03	2.01E+03
Gallium (31)	Ga-67	7.03E-07	8.88E-07	1.65E-01	7.76E+01	1.36E+09	2.11E+07	4.79E+03	5.52E+02
Gallium (31)	Ga-68	3.70E-07	1.81E-07	1.17E+00	5.36E+03	1.36E+09	2.11E+07	6.79E+05	1.61E+05
Gallium (31)	Ga-70	1.15E-07	5.92E-08	9.90E-02	1.72E+04	1.36E+09	2.11E+07	7.02E+06	1.60E+06
Gallium (31)	Ga-72	4.07E-06	1.96E-06	2.89E+00	4.31E+02	1.36E+09	2.11E+07	4.96E+03	1.19E+03
Gallium (31)	Ga-73	9.62E-07	5.18E-07	3.91E-01	1.24E+03	1.36E+09	2.11E+07	5.99E+04	1.33E+04
Gadolinium (64)	Gd-145	1.63E-07	7.40E-08	2.44E+00	1.59E+04	1.36E+09	2.11E+07	4.60E+06	1.15E+06
Gadolinium (64)	Gd-146	3.55E-06	2.37E-05	2.59E-01	5.24E+00	1.36E+09	2.11E+07	4.24E+01	1.53E+00
Gadolinium (64)	Gd-147	2.26E-06	1.48E-06	1.46E+00	1.59E+02	1.36E+09	2.11E+07	3.25E+03	6.22E+02
Gadolinium (64)	Gd-148	2.07E-04	4.07E-02	0.00E+00	7.45E-03	1.36E+09	2.11E+07	1.07E-02	1.73E-04
Gadolinium (64)	Gd-149	1.67E-06	2.70E-06	4.57E-01	2.69E+01	1.36E+09	2.11E+07	6.78E+02	6.44E+01
Gadolinium (64)	Gd-151	7.40E-07	3.18E-06	6.50E-02	2.11E+00	1.36E+09	2.11E+07	1.09E+02	5.13E+00
Gadolinium (64)	Gd-152	1.52E-04	2.96E-02	0.00E+00	6.42E-15	1.36E+09	2.11E+07	1.46E-02	2.36E-04
Gadolinium (64)	Gd-153	9.99E-07	7.77E-06	1.08E-01	1.05E+00	1.36E+09	2.11E+07	4.31E+01	1.43E+00
Gadolinium (64)	Gd-159	1.81E-06	9.99E-07	7.56E-02	3.27E+02	1.36E+09	2.11E+07	8.40E+03	1.83E+03
Germanium (32)	Ge-66	3.70E-07	3.37E-07	7.59E-01	2.67E+03	1.36E+09	2.11E+07	3.25E+05	4.83E+04
Germanium (32)	Ge-67	2.41E-07	9.25E-08	1.70E+00	1.95E+04	1.36E+09	2.11E+07	3.84E+06	1.08E+06
Germanium (32)	Ge-68	4.81E-06	5.18E-05	4.78E-05	8.78E-01	1.36E+09	2.11E+07	7.10E+00	2.01E-01
Germanium (32)	Ge-68+D	4.81E-06	5.18E-05	1.17E+00	8.78E-01	1.36E+09	2.11E+07	7.10E+00	2.01E-01
Germanium (32)	Ge-68+E	4.81E-06	5.18E-05	1.17E+00	8.78E-01	1.36E+09	2.11E+07	7.10E+00	2.01E-01
Germanium (32)	Ge-69	8.88E-07	1.07E-06	9.79E-01	1.55E+02	1.36E+09	2.11E+07	7.64E+03	9.11E+02
Germanium (32)	Ge-71	4.44E-08	4.07E-08	4.84E-05	2.14E+01	1.36E+09	2.11E+07	2.17E+04	3.20E+03
Germanium (32)	Ge-75	1.70E-07	1.33E-07	8.40E-02	4.40E+03	1.36E+09	2.11E+07	1.18E+06	1.96E+05
Germanium (32)	Ge-77	1.22E-06	1.37E-06	1.27E+00	5.37E+02	1.36E+09	2.11E+07	1.94E+04	2.45E+03
Germanium (32)	Ge-78	4.44E-07	3.52E-07	3.12E-01	4.19E+03	1.36E+09	2.11E+07	4.29E+05	7.10E+04
Hydrogen (1)	H-3	1.55E-07	1.52E-07	0.00E+00	5.61E-02	1.36E+09	2.11E+07	2.95E+02	4.16E+01
Hafnium (72)	Hf-170	1.78E-06	1.18E-06	5.96E-01	3.79E+02	1.36E+09	2.11E+07	9.83E+03	1.86E+03
Hafnium (72)	Hf-172	3.70E-06	7.40E-05	1.16E-01	3.71E-01	1.36E+09	2.11E+07	5.02E+00	1.13E-01
Hafnium (72)	Hf-173	8.51E-07	5.92E-07	4.35E-01	2.53E+02	1.36E+09	2.11E+07	1.36E+04	2.49E+03
Hafnium (72)	Hf-175	1.52E-06	4.44E-06	4.03E-01	3.61E+00	1.36E+09	2.11E+07	9.17E+01	5.61E+00
Hafnium (72)	Hf-177m	3.00E-07	3.33E-07	2.45E+00	7.09E+03	1.36E+09	2.11E+07	1.04E+06	1.33E+05
Hafnium (72)	Hf-178m	1.74E-05	4.44E-04	2.59E+00	2.24E-02	1.36E+09	2.11E+07	7.59E-01	1.59E-02
Hafnium (72)	Hf-179m	4.44E-06	1.41E-05	9.83E-01	1.01E+01	1.36E+09	2.11E+07	8.33E+01	4.82E+00
Hafnium (72)	Hf-180m	6.29E-07	4.81E-07	1.10E+00	1.10E+03	1.36E+09	2.11E+07	8.00E+04	1.36E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Hafnium (72)	Hf-181	4.07E-06	1.85E-05	6.13E-01	5.97E+00	1.36E+09	2.11E+07	4.85E+01	2.20E+00
Hafnium (72)	Hf-182	1.11E-05	4.81E-04	2.60E-01	7.70E-08	1.36E+09	2.11E+07	7.77E-01	1.46E-02
Hafnium (72)	Hf-182+D				7.70E-08	1.36E+09	2.11E+07		
Hafnium (72)	Hf-182+E	1.67E-05	4.81E-04	1.66E+00	7.70E-08	1.36E+09	2.11E+07	7.15E-01	1.45E-02
Hafnium (72)	Hf-182m	1.55E-07	1.70E-07	1.02E+00	5.92E+03	1.36E+09	2.11E+07	1.68E+06	2.16E+05
Hafnium (72)	Hf-183	2.70E-07	2.11E-07	8.78E-01	5.69E+03	1.36E+09	2.11E+07	9.59E+05	1.60E+05
Hafnium (72)	Hf-184	1.92E-06	1.22E-06	2.87E-01	1.47E+03	1.36E+09	2.11E+07	3.54E+04	6.93E+03
Mercury (80)	Hg-193	3.03E-07	2.78E-07	2.10E-01	1.73E+03	1.36E+09	2.11E+07	2.57E+05	3.80E+04
Mercury (80)	Hg-193m	1.48E-06	9.62E-07	1.13E+00	5.47E+02	1.36E+09	2.11E+07	1.70E+04	3.28E+03
Mercury (80)	Hg-194	5.18E-06	3.07E-05	2.61E-04	2.67E-03	1.36E+09	2.11E+07	5.80E+00	2.24E-01
Mercury (80)	Hg-194+D	6.66E-06	3.07E-05	1.13E+00	2.67E-03	1.36E+09	2.11E+07	4.94E+00	2.22E-01
Mercury (80)	Hg-194+E	6.66E-06	3.07E-05	1.13E+00	2.67E-03	1.36E+09	2.11E+07	4.94E+00	2.22E-01
Mercury (80)	Hg-195	3.59E-07	2.70E-07	2.16E-01	6.13E+02	1.36E+09	2.11E+07	7.80E+04	1.34E+04
Mercury (80)	Hg-195m	2.07E-06	1.96E-06	2.25E-01	1.46E+02	1.36E+09	2.11E+07	3.15E+03	4.55E+02
Mercury (80)	Hg-197	8.51E-07	1.11E-06	6.76E-02	9.47E+01	1.36E+09	2.11E+07	4.81E+03	5.41E+02
Mercury (80)	Hg-197m	1.74E-06	1.96E-06	9.48E-02	2.55E+02	1.36E+09	2.11E+07	6.45E+03	8.12E+02
Mercury (80)	Hg-199m	1.15E-07	1.18E-07	1.95E-01	8.55E+03	1.36E+09	2.11E+07	3.31E+06	4.46E+05
Mercury (80)	Hg-203	2.00E-06	8.88E-06	2.59E-01	5.43E+00	1.36E+09	2.11E+07	9.08E+01	4.18E+00
Holmium (67)	Ho-155	1.37E-07	7.40E-08	4.54E-01	7.59E+03	1.36E+09	2.11E+07	2.58E+06	5.71E+05
Holmium (67)	Ho-157	2.41E-08	1.55E-08	5.38E-01	2.89E+04	1.36E+09	2.11E+07	5.55E+07	1.07E+07
Holmium (67)	Ho-159	2.92E-08	2.26E-08	3.90E-01	1.10E+04	1.36E+09	2.11E+07	1.72E+07	2.90E+06
Holmium (67)	Ho-161	4.81E-08	2.22E-08	6.00E-02	2.43E+03	1.36E+09	2.11E+07	2.37E+06	5.88E+05
Holmium (67)	Ho-162	1.22E-08	1.04E-08	1.81E-01	2.43E+04	1.36E+09	2.11E+07	8.99E+07	1.41E+07
Holmium (67)	Ho-162m	9.62E-08	7.77E-08	6.19E-01	5.36E+03	1.36E+09	2.11E+07	2.53E+06	4.12E+05
Holmium (67)	Ho-164	3.52E-08	3.11E-08	3.94E-02	1.26E+04	1.36E+09	2.11E+07	1.61E+07	2.45E+06
Holmium (67)	Ho-164m	5.92E-08	4.44E-08	4.55E-02	9.71E+03	1.36E+09	2.11E+07	7.49E+06	1.29E+06
Holmium (67)	Ho-166	5.18E-06	2.41E-06	1.23E-01	2.27E+02	1.36E+09	2.11E+07	2.06E+03	5.07E+02
Holmium (67)	Ho-166m	7.40E-06	4.44E-04	1.93E+00	5.78E-04	1.36E+09	2.11E+07	8.85E-01	1.58E-02
Holmium (67)	Ho-167	3.07E-07	2.63E-07	4.10E-01	1.96E+03	1.36E+09	2.11E+07	2.88E+05	4.49E+04
Iodine (53)	I-120	1.26E-06	7.40E-07	3.06E+00	4.50E+03	1.36E+09	2.11E+07	1.66E+05	3.44E+04
Iodine (53)	I-120m	7.77E-07	3.70E-07	5.85E+00	6.87E+03	1.36E+09	2.11E+07	4.15E+05	1.01E+05
Iodine (53)	I-121	3.03E-07	2.07E-07	4.62E-01	2.86E+03	1.36E+09	2.11E+07	4.34E+05	8.04E+04
Iodine (53)	I-122			1.19E+00	1.01E+05	1.36E+09	2.11E+07		
Iodine (53)	I-123	7.77E-07	5.55E-07	1.79E-01	4.60E+02	1.36E+09	2.11E+07	2.71E+04	4.86E+03
Iodine (53)	I-124	4.81E-05	3.40E-05	1.21E+00	6.05E+01	1.36E+09	2.11E+07	5.77E+01	1.04E+01
Iodine (53)	I-125	5.55E-05	4.07E-05	3.66E-02	4.21E+00	1.36E+09	2.11E+07	3.52E+00	6.18E-01
Iodine (53)	I-126	1.07E-04	7.40E-05	5.16E-01	1.94E+01	1.36E+09	2.11E+07	8.32E+00	1.53E+00
Iodine (53)	I-128	1.70E-07	4.81E-08	2.00E-01	1.46E+04	1.36E+09	2.11E+07	4.10E+06	1.42E+06
Iodine (53)	I-129	4.07E-04	2.74E-04	2.28E-02	4.41E-08	1.36E+09	2.11E+07	1.13E-01	2.12E-02
Iodine (53)	I-130	7.40E-06	5.18E-06	2.39E+00	4.91E+02	1.36E+09	2.11E+07	3.05E+03	5.54E+02
Iodine (53)	I-131	8.14E-05	5.55E-05	4.25E-01	3.15E+01	1.36E+09	2.11E+07	1.78E+01	3.30E+00
Iodine (53)	I-132	1.07E-06	7.03E-07	2.57E+00	2.64E+03	1.36E+09	2.11E+07	1.13E+05	2.17E+04
Iodine (53)	I-132m	8.14E-07	5.92E-07	3.63E-01	4.36E+03	1.36E+09	2.11E+07	2.45E+05	4.33E+04
Iodine (53)	I-133	1.59E-05	1.15E-05	7.20E-01	2.92E+02	1.36E+09	2.11E+07	8.40E+02	1.49E+02
Iodine (53)	I-134	4.07E-07	1.85E-07	2.95E+00	6.92E+03	1.36E+09	2.11E+07	8.01E+05	2.00E+05
Iodine (53)	I-135	3.44E-06	2.52E-06	1.72E+00	9.18E+02	1.36E+09	2.11E+07	1.22E+04	2.15E+03
Indium (49)	In-109	2.44E-07	1.55E-07	7.28E-01	1.45E+03	1.36E+09	2.11E+07	2.73E+05	5.34E+04
Indium (49)	In-110	8.88E-07	4.81E-07	3.36E+00	1.24E+03	1.36E+09	2.11E+07	6.51E+04	1.43E+04
Indium (49)	In-110m	3.70E-07	1.74E-07	1.79E+00	5.27E+03	1.36E+09	2.11E+07	6.69E+05	1.64E+05
Indium (49)	In-111	1.07E-06	8.51E-07	4.29E-01	8.94E+01	1.36E+09	2.11E+07	3.79E+03	6.26E+02
Indium (49)	In-112	3.70E-08	2.74E-08	3.20E-01	2.53E+04	1.36E+09	2.11E+07	3.12E+07	5.45E+06
Indium (49)	In-113m	1.04E-07	7.40E-08	2.84E-01	3.66E+03	1.36E+09	2.11E+07	1.62E+06	2.90E+05
Indium (49)	In-114			3.22E-03	3.04E+05	1.36E+09	2.11E+07		
Indium (49)	In-114m	1.52E-05	2.26E-05	1.01E-01	5.11E+00	1.36E+09	2.11E+07	1.44E+01	1.46E+00
Indium (49)	In-114m+D	1.52E-05	4.44E-05	1.04E-01	5.11E+00	1.36E+09	2.11E+07	1.27E+01	7.76E-01
Indium (49)	In-114m+E	1.52E-05	4.44E-05	1.04E-01	5.11E+00	1.36E+09	2.11E+07	1.27E+01	7.76E-01
Indium (49)	In-115	1.18E-04	5.92E-04	4.17E-04	1.36E-16	1.36E+09	2.11E+07	3.30E-01	1.41E-02
Indium (49)	In-115m	3.18E-07	2.18E-07	1.76E-01	1.35E+03	1.36E+09	2.11E+07	1.95E+05	3.61E+04
Indium (49)	In-116m	2.37E-07	1.67E-07	2.66E+00	6.73E+03	1.36E+09	2.11E+07	1.30E+06	2.36E+05
Indium (49)	In-117	1.15E-07	1.07E-07	7.75E-01	8.32E+03	1.36E+09	2.11E+07	3.25E+06	4.73E+05
Indium (49)	In-117m	4.44E-07	2.66E-07	1.46E-01	3.13E+03	1.36E+09	2.11E+07	3.26E+05	6.67E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Indium (49)	In-119			9.36E-01	1.52E+05	1.36E+09	2.11E+07		
Indium (49)	In-119m	1.74E-07	6.29E-08	1.52E-01	2.02E+04	1.36E+09	2.11E+07	5.53E+06	1.62E+06
Iridium (77)	Ir-182	1.78E-07	8.51E-08	1.56E+00	2.43E+04	1.36E+09	2.11E+07	6.42E+06	1.55E+06
Iridium (77)	Ir-184	6.29E-07	4.07E-07	2.08E+00	2.01E+03	1.36E+09	2.11E+07	1.47E+05	2.85E+04
Iridium (77)	Ir-185	9.62E-07	6.66E-07	6.22E-01	4.34E+02	1.36E+09	2.11E+07	2.07E+04	3.80E+03
Iridium (77)	Ir-186	1.81E-06	1.15E-06	1.76E+00	3.84E+02	1.36E+09	2.11E+07	9.79E+03	1.92E+03
Iridium (77)	Ir-186m	2.26E-07	1.55E-07	1.07E+00	3.47E+03	1.36E+09	2.11E+07	7.06E+05	1.30E+05
Iridium (77)	Ir-187	4.44E-07	2.74E-07	3.93E-01	5.78E+02	1.36E+09	2.11E+07	6.03E+04	1.21E+04
Iridium (77)	Ir-188	2.33E-06	1.48E-06	1.66E+00	1.46E+02	1.36E+09	2.11E+07	2.90E+03	5.68E+02
Iridium (77)	Ir-189	8.88E-07	1.92E-06	8.16E-02	1.90E+01	1.36E+09	2.11E+07	8.56E+02	6.52E+01
Iridium (77)	Ir-190	4.44E-06	7.77E-06	1.59E+00	2.09E+01	1.36E+09	2.11E+07	1.95E+02	1.75E+01
Iridium (77)	Ir-190m			6.21E-05	5.06E+03	1.36E+09	2.11E+07		
Iridium (77)	Ir-190n			1.72E+00	1.96E+03	1.36E+09	2.11E+07		
Iridium (77)	Ir-191m			7.39E-02	4.42E+06	1.36E+09	2.11E+07		
Iridium (77)	Ir-192	5.18E-06	1.92E-05	9.07E-01	3.42E+00	1.36E+09	2.11E+07	2.40E+01	1.24E+00
Iridium (77)	Ir-192m	1.15E-06	2.15E-05	1.72E-01	2.88E-03	1.36E+09	2.11E+07	1.42E+01	3.26E-01
Iridium (77)	Ir-194	4.81E-06	1.92E-06	2.11E-01	3.17E+02	1.36E+09	2.11E+07	3.12E+03	8.54E+02
Iridium (77)	Ir-194m	7.77E-06	3.33E-05	2.60E+00	1.48E+00	1.36E+09	2.11E+07	8.30E+00	3.91E-01
Iridium (77)	Ir-195	3.70E-07	2.48E-07	8.60E-02	2.43E+03	1.36E+09	2.11E+07	3.02E+05	5.68E+04
Iridium (77)	Ir-195m	7.77E-07	5.92E-07	4.64E-01	1.60E+03	1.36E+09	2.11E+07	9.37E+04	1.60E+04
Potassium (19)	K-38			3.47E+00	4.77E+04	1.36E+09	2.11E+07		
Potassium (19)	K-40	2.29E-05	7.77E-06	2.38E-01	5.41E-10	1.36E+09	2.11E+07	2.08E+00	6.37E-01
Potassium (19)	K-42	1.59E-06	4.44E-07	4.64E-01	4.91E+02	1.36E+09	2.11E+07	1.48E+04	5.15E+03
Potassium (19)	K-43	9.25E-07	5.18E-07	1.10E+00	2.69E+02	1.36E+09	2.11E+07	1.35E+04	2.91E+03
Potassium (19)	K-44	3.11E-07	7.40E-08	2.47E+00	1.65E+04	1.36E+09	2.11E+07	2.55E+06	9.79E+05
Potassium (19)	K-45	2.00E-07	5.55E-08	2.05E+00	1.82E+04	1.36E+09	2.11E+07	4.37E+06	1.53E+06
Krypton (36)	Kr-74			1.40E+00	3.17E+04	1.36E+09	2.11E+07		
Krypton (36)	Kr-76			4.70E-01	4.10E+02	1.36E+09	2.11E+07		
Krypton (36)	Kr-77			1.21E+00	4.88E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-79			2.79E-01	1.73E+02	1.36E+09	2.11E+07		
Krypton (36)	Kr-81			6.99E-03	3.30E-06	1.36E+09	2.11E+07		
Krypton (36)	Kr-81m			1.38E-01	1.68E+06	1.36E+09	2.11E+07		
Krypton (36)	Kr-83m			4.17E-04	3.32E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-85			1.23E-02	6.46E-02	1.36E+09	2.11E+07		
Krypton (36)	Kr-85m			1.83E-01	1.36E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-87			9.80E-01	4.77E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-88			2.02E+00	2.14E+03	1.36E+09	2.11E+07		
Lanthanum (57)	La-131	1.30E-07	8.51E-08	7.64E-01	6.17E+03	1.36E+09	2.11E+07	2.20E+06	4.19E+05
Lanthanum (57)	La-132	1.44E-06	5.92E-07	2.22E+00	1.26E+03	1.36E+09	2.11E+07	4.14E+04	1.11E+04
Lanthanum (57)	La-134			8.75E-01	5.46E+04	1.36E+09	2.11E+07		
Lanthanum (57)	La-135	1.11E-07	5.18E-08	3.55E-02	3.11E+02	1.36E+09	2.11E+07	1.32E+05	3.24E+04
Lanthanum (57)	La-137	3.00E-07	1.33E-05	2.29E-02	1.16E-05	1.36E+09	2.11E+07	2.82E+01	5.26E-01
Lanthanum (57)	La-138	4.07E-06	2.37E-04	1.32E+00	5.13E-12	1.36E+09	2.11E+07	1.65E+00	2.96E-02
Lanthanum (57)	La-140	7.40E-06	4.07E-06	2.52E+00	1.51E+02	1.36E+09	2.11E+07	9.49E+02	2.07E+02
Lanthanum (57)	La-141	1.33E-06	5.55E-07	1.77E-01	1.54E+03	1.36E+09	2.11E+07	5.48E+04	1.46E+04
Lanthanum (57)	La-142	6.66E-07	3.29E-07	2.91E+00	3.94E+03	1.36E+09	2.11E+07	2.77E+05	6.53E+04
Lanthanum (57)	La-143	2.07E-07	7.77E-08	2.65E-01	2.56E+04	1.36E+09	2.11E+07	5.86E+06	1.68E+06
Lutetium (71)	Lu-169	1.70E-06	1.30E-06	1.12E+00	1.78E+02	1.36E+09	2.11E+07	4.78E+03	8.15E+02
Lutetium (71)	Lu-170	3.66E-06	2.33E-06	2.56E+00	1.26E+02	1.36E+09	2.11E+07	1.59E+03	3.12E+02
Lutetium (71)	Lu-171	2.48E-06	2.96E-06	7.63E-01	3.08E+01	1.36E+09	2.11E+07	5.42E+02	6.53E+01
Lutetium (71)	Lu-172	4.81E-06	5.18E-06	2.05E+00	3.78E+01	1.36E+09	2.11E+07	3.47E+02	4.53E+01
Lutetium (71)	Lu-173	9.62E-07	8.14E-06	1.35E-01	5.06E-01	1.36E+09	2.11E+07	3.40E+01	1.08E+00
Lutetium (71)	Lu-174	9.99E-07	1.55E-05	1.31E-01	2.09E-01	1.36E+09	2.11E+07	2.03E+01	4.97E-01
Lutetium (71)	Lu-174m	1.96E-06	1.37E-05	6.22E-02	1.78E+00	1.36E+09	2.11E+07	3.06E+01	1.08E+00
Lutetium (71)	Lu-176	6.66E-06	2.59E-04	5.33E-01	1.93E-11	1.36E+09	2.11E+07	1.42E+00	2.70E-02
Lutetium (71)	Lu-176m	6.29E-07	4.07E-07	6.54E-02	1.65E+03	1.36E+09	2.11E+07	1.21E+05	2.34E+04
Lutetium (71)	Lu-177	1.96E-06	4.07E-06	3.75E-02	3.77E+01	1.36E+09	2.11E+07	7.74E+02	6.09E+01
Lutetium (71)	Lu-177m	6.29E-06	4.81E-05	1.09E+00	1.57E+00	1.36E+09	2.11E+07	8.50E+00	2.85E-01
Lutetium (71)	Lu-178	1.74E-07	8.88E-08	2.51E-01	1.28E+04	1.36E+09	2.11E+07	3.45E+06	7.94E+05
Lutetium (71)	Lu-178m	1.41E-07	1.18E-07	1.26E+00	1.60E+04	1.36E+09	2.11E+07	5.16E+06	8.15E+05
Lutetium (71)	Lu-179	7.77E-07	4.07E-07	8.95E-02	1.32E+03	1.36E+09	2.11E+07	7.95E+04	1.80E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Mendelevium (101)	Md-257	4.44E-07	9.25E-05	1.18E-01	1.17E+03	1.36E+09	2.11E+07	5.48E+03	8.87E+01
Mendelevium (101)	Md-258	4.81E-05	2.18E-02	3.87E-03	4.60E+00	1.36E+09	2.11E+07	9.45E-02	1.50E-03
Magnesium (12)	Mg-28	8.14E-06	4.44E-06	1.47E+00	2.90E+02	1.36E+09	2.11E+07	1.66E+03	3.65E+02
Manganese (25)	Mn-51	3.44E-07	1.52E-07	1.25E+00	7.88E+03	1.36E+09	2.11E+07	1.08E+06	2.76E+05
Manganese (25)	Mn-52	6.66E-06	5.18E-06	3.76E+00	4.52E+01	1.36E+09	2.11E+07	3.09E+02	5.19E+01
Manganese (25)	Mn-52m	2.55E-07	1.07E-07	2.75E+00	1.73E+04	1.36E+09	2.11E+07	3.19E+06	8.45E+05
Manganese (25)	Mn-53	1.11E-07	2.00E-07	0.00E+00	1.87E-07	1.36E+09	2.11E+07	3.72E+02	3.26E+01
Manganese (25)	Mn-54	2.63E-06	5.55E-06	9.23E-01	8.09E-01	1.36E+09	2.11E+07	2.23E+01	1.73E+00
Manganese (25)	Mn-56	9.25E-07	4.44E-07	1.89E+00	2.35E+03	1.36E+09	2.11E+07	1.19E+05	2.87E+04
Molybdenum (42)	Mo-101	1.52E-07	9.25E-08	1.53E+00	2.49E+04	1.36E+09	2.11E+07	7.60E+06	1.54E+06
Molybdenum (42)	Mo-90	8.14E-07	1.26E-06	9.08E-01	1.07E+03	1.36E+09	2.11E+07	5.56E+04	5.48E+03
Molybdenum (42)	Mo-93	1.15E-05	2.18E-06	4.53E-03	1.98E-04	1.36E+09	2.11E+07	4.22E+00	1.84E+00
Molybdenum (42)	Mo-93m	4.07E-07	5.92E-07	2.42E+00	8.86E+02	1.36E+09	2.11E+07	9.28E+04	9.59E+03
Molybdenum (42)	Mo-99	2.22E-06	3.29E-06	2.08E-01	9.20E+01	1.36E+09	2.11E+07	1.76E+03	1.79E+02
Nitrogen (7)	N-13			1.20E+00	3.66E+04	1.36E+09	2.11E+07		
Sodium (11)	Na-22	1.18E-05	4.81E-06	2.39E+00	2.66E-01	1.36E+09	2.11E+07	4.55E+00	1.23E+00
Sodium (11)	Na-24	1.59E-06	9.99E-07	4.19E+00	4.05E+02	1.36E+09	2.11E+07	1.18E+04	2.32E+03
Niobium (41)	Nb-88	2.33E-07	9.99E-08	4.69E+00	2.55E+04	1.36E+09	2.11E+07	5.16E+06	1.35E+06
Niobium (41)	Nb-89	9.99E-07	4.07E-07	1.62E+00	2.99E+03	1.36E+09	2.11E+07	1.41E+05	3.82E+04
Niobium (41)	Nb-89m	5.18E-07	2.52E-07	2.26E+00	5.52E+03	1.36E+09	2.11E+07	5.00E+05	1.19E+05
Niobium (41)	Nb-90	4.44E-06	2.33E-06	4.42E+00	4.16E+02	1.36E+09	2.11E+07	4.37E+03	9.86E+02
Niobium (41)	Nb-93m	4.44E-07	1.89E-06	7.96E-04	5.10E-02	1.36E+09	2.11E+07	7.80E+01	3.70E+00
Niobium (41)	Nb-94	6.29E-06	4.07E-05	1.74E+00	3.41E-05	1.36E+09	2.11E+07	4.60E+00	1.69E-01
Niobium (41)	Nb-95	2.15E-06	5.55E-06	8.50E-01	7.20E+00	1.36E+09	2.11E+07	1.29E+02	8.65E+00
Niobium (41)	Nb-95m	2.07E-06	2.92E-06	6.90E-02	7.01E+01	1.36E+09	2.11E+07	1.45E+03	1.53E+02
Niobium (41)	Nb-96	4.07E-06	2.33E-06	2.73E+00	2.60E+02	1.36E+09	2.11E+07	2.97E+03	6.28E+02
Niobium (41)	Nb-97	2.52E-07	1.59E-07	7.88E-01	5.05E+03	1.36E+09	2.11E+07	9.28E+05	1.82E+05
Niobium (41)	Nb-97m			8.11E-01	3.64E+05	1.36E+09	2.11E+07		
Niobium (41)	Nb-98	4.07E-07	2.07E-07	2.77E+00	7.07E+03	1.36E+09	2.11E+07	8.13E+05	1.88E+05
Neodymium (60)	Nd-136	3.66E-07	1.89E-07	3.19E-01	7.19E+03	1.36E+09	2.11E+07	9.18E+05	2.10E+05
Neodymium (60)	Nd-138	2.37E-06	8.51E-07	4.38E-02	1.20E+03	1.36E+09	2.11E+07	2.42E+04	7.13E+03
Neodymium (60)	Nd-139	7.40E-08	3.66E-08	4.75E-01	1.23E+04	1.36E+09	2.11E+07	7.77E+06	1.83E+06
Neodymium (60)	Nd-139m	9.25E-07	5.55E-07	1.73E+00	1.10E+03	1.36E+09	2.11E+07	5.53E+04	1.13E+04
Neodymium (60)	Nd-141	3.07E-08	1.78E-08	7.98E-02	2.44E+03	1.36E+09	2.11E+07	3.69E+06	7.74E+05
Neodymium (60)	Nd-141m			8.54E-01	3.50E+05	1.36E+09	2.11E+07		
Neodymium (60)	Nd-147	4.07E-06	7.77E-06	1.63E-01	2.30E+01	1.36E+09	2.11E+07	2.31E+02	1.94E+01
Neodymium (60)	Nd-149	4.44E-07	3.11E-07	4.74E-01	3.51E+03	1.36E+09	2.11E+07	3.63E+05	6.60E+04
Neodymium (60)	Nd-151	1.11E-07	6.29E-08	1.08E+00	2.93E+04	1.36E+09	2.11E+07	1.23E+07	2.62E+06
Neon (10)	Ne-19			1.28E+00	1.27E+06	1.36E+09	2.11E+07		
Nickel (28)	Ni-56	3.18E-06	3.22E-06	1.89E+00	4.15E+01	1.36E+09	2.11E+07	5.80E+02	7.94E+01
Nickel (28)	Ni-57	3.22E-06	1.85E-06	2.05E+00	1.68E+02	1.36E+09	2.11E+07	2.43E+03	5.12E+02
Nickel (28)	Ni-59	2.33E-07	4.81E-07	0.00E+00	9.24E-06	1.36E+09	2.11E+07	1.73E+02	1.37E+01
Nickel (28)	Ni-63	5.55E-07	1.78E-06	0.00E+00	7.22E-03	1.36E+09	2.11E+07	6.62E+01	3.80E+00
Nickel (28)	Ni-65	6.66E-07	3.15E-07	6.64E-01	2.41E+03	1.36E+09	2.11E+07	1.70E+05	4.14E+04
Nickel (28)	Ni-66	1.11E-05	5.92E-06	3.30E-05	1.11E+02	1.36E+09	2.11E+07	4.67E+02	1.04E+02
Neptunium (93)	Np-232	3.59E-08	1.85E-07	1.32E+00	2.48E+04	1.36E+09	2.11E+07	2.18E+07	9.16E+05
Neptunium (93)	Np-233	8.14E-09	5.92E-09	9.09E-02	1.01E+04	1.36E+09	2.11E+07	5.66E+07	9.99E+06
Neptunium (93)	Np-234	3.00E-06	1.96E-06	1.53E+00	5.75E+01	1.36E+09	2.11E+07	8.84E+02	1.69E+02
Neptunium (93)	Np-235	1.96E-07	1.55E-06	3.34E-03	6.39E-01	1.36E+09	2.11E+07	1.83E+02	6.01E+00
Neptunium (93)	Np-236	6.29E-05	1.18E-02	1.30E-01	6.03E-06	1.36E+09	2.11E+07	3.65E-02	5.93E-04
Neptunium (93)	Np-236m			5.11E-02	2.70E+02	1.36E+09	2.11E+07		
Neptunium (93)	Np-237	4.07E-04	8.51E-02	2.94E-02	3.24E-07	1.36E+09	2.11E+07	5.10E-03	8.26E-05
Neptunium (93)	Np-237+D				3.24E-07	1.36E+09	2.11E+07		
Neptunium (93)	Np-237+E	4.07E-04	8.51E-02	2.46E-01	3.24E-07	1.36E+09	2.11E+07	5.10E-03	8.26E-05
Neptunium (93)	Np-238	3.37E-06	7.77E-06	6.23E-01	1.19E+02	1.36E+09	2.11E+07	1.40E+03	1.02E+02
Neptunium (93)	Np-239	2.96E-06	3.44E-06	1.80E-01	1.07E+02	1.36E+09	2.11E+07	1.59E+03	1.95E+02
Neptunium (93)	Np-240	3.03E-07	3.15E-07	1.45E+00	5.60E+03	1.36E+09	2.11E+07	8.20E+05	1.10E+05
Neptunium (93)	Np-240m			4.52E-01	4.92E+04	1.36E+09	2.11E+07		
Oxygen (8)	O-15			1.25E+00	1.79E+05	1.36E+09	2.11E+07		
Osmium (76)	Os-180	6.29E-08	5.18E-08	6.29E-02	1.66E+04	1.36E+09	2.11E+07	1.19E+07	1.92E+06
Osmium (76)	Os-181	3.29E-07	2.29E-07	1.32E+00	3.47E+03	1.36E+09	2.11E+07	4.84E+05	8.83E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Osmium (76)	Os-182	2.07E-06	1.33E-06	4.74E-01	2.76E+02	1.36E+09	2.11E+07	6.15E+03	1.19E+03
Osmium (76)	Os-185	1.89E-06	4.81E-06	7.95E-01	2.69E+00	1.36E+09	2.11E+07	5.91E+01	4.00E+00
Osmium (76)	Os-189m	6.66E-08	1.85E-08	5.64E-05	1.01E+03	1.36E+09	2.11E+07	7.28E+05	2.54E+05
Osmium (76)	Os-190m			1.76E+00	3.68E+04	1.36E+09	2.11E+07		
Osmium (76)	Os-191	2.11E-06	6.29E-06	7.88E-02	1.64E+01	1.36E+09	2.11E+07	2.90E+02	1.75E+01
Osmium (76)	Os-191m	3.55E-07	5.18E-07	7.47E-03	4.66E+02	1.36E+09	2.11E+07	5.59E+04	5.76E+03
Osmium (76)	Os-193	3.00E-06	1.78E-06	1.12E-01	2.02E+02	1.36E+09	2.11E+07	3.13E+03	6.46E+02
Osmium (76)	Os-194	8.88E-06	7.77E-05	1.11E-03	1.16E-01	1.36E+09	2.11E+07	3.01E+00	9.43E-02
Osmium (76)	Os-194+D	1.37E-05	7.77E-05	2.12E-01	1.16E-01	1.36E+09	2.11E+07	2.36E+00	9.35E-02
Osmium (76)	Os-194+E	1.37E-05	7.77E-05	2.12E-01	1.16E-01	1.36E+09	2.11E+07	2.36E+00	9.35E-02
Phosphorus (15)	P-30			1.32E+00	1.46E+05	1.36E+09	2.11E+07		
Phosphorus (15)	P-32	8.88E-06	1.26E-05	9.94E-02	1.77E+01	1.36E+09	2.11E+07	8.53E+01	8.99E+00
Phosphorus (15)	P-33	8.88E-07	5.55E-06	4.25E-05	9.96E+00	1.36E+09	2.11E+07	3.29E+02	1.23E+01
Protactinium (91)	Pa-227	1.67E-06	2.74E-04	2.11E-02	9.51E+03	1.36E+09	2.11E+07	1.49E+04	2.44E+02
Protactinium (91)	Pa-228	2.89E-06	2.37E-04	1.23E+00	2.76E+02	1.36E+09	2.11E+07	4.75E+02	8.18E+00
Protactinium (91)	Pa-230	3.40E-06	2.26E-03	7.08E-01	1.45E+01	1.36E+09	2.11E+07	2.88E+00	4.53E-02
Protactinium (91)	Pa-231	2.63E-03	5.18E-01	4.41E-02	2.12E-05	1.36E+09	2.11E+07	8.36E-04	1.36E-05
Protactinium (91)	Pa-232	2.66E-06	3.70E-05	1.03E+00	1.93E+02	1.36E+09	2.11E+07	1.42E+03	3.63E+01
Protactinium (91)	Pa-233	3.22E-06	1.22E-05	2.17E-01	9.37E+00	1.36E+09	2.11E+07	1.02E+02	5.20E+00
Protactinium (91)	Pa-234	1.89E-06	1.41E-06	2.10E+00	9.06E+02	1.36E+09	2.11E+07	2.19E+04	3.80E+03
Protactinium (91)	Pa-234m			1.26E-01	3.11E+05	1.36E+09	2.11E+07		
Lead (82)	Pb-195m	1.07E-07	9.25E-08	1.77E+00	2.31E+04	1.36E+09	2.11E+07	9.70E+06	1.50E+06
Lead (82)	Pb-198	3.70E-07	2.44E-07	4.74E-01	2.53E+03	1.36E+09	2.11E+07	3.15E+05	5.99E+04
Lead (82)	Pb-199	2.00E-07	1.33E-07	1.59E+00	4.05E+03	1.36E+09	2.11E+07	9.33E+05	1.76E+05
Lead (82)	Pb-200	1.48E-06	1.22E-06	2.17E-01	2.82E+02	1.36E+09	2.11E+07	8.64E+03	1.39E+03
Lead (82)	Pb-201	5.92E-07	4.07E-07	8.26E-01	6.46E+02	1.36E+09	2.11E+07	5.01E+04	9.24E+03
Lead (82)	Pb-202	3.26E-05	2.33E-05	2.23E-04	2.31E-06	1.36E+09	2.11E+07	1.41E+00	2.52E-01
Lead (82)	Pb-202+D	3.26E-05	2.33E-05		2.31E-06	1.36E+09	2.11E+07	1.41E+00	2.52E-01
Lead (82)	Pb-202+E	3.26E-05	2.33E-05	5.13E-01	2.31E-06	1.36E+09	2.11E+07	1.41E+00	2.52E-01
Lead (82)	Pb-202m	4.81E-07	3.52E-07	2.25E+00	1.68E+03	1.36E+09	2.11E+07	1.59E+05	2.81E+04
Lead (82)	Pb-203	8.88E-07	7.40E-07	3.34E-01	1.17E+02	1.36E+09	2.11E+07	5.95E+03	9.46E+02
Lead (82)	Pb-205	1.04E-06	9.25E-07	2.43E-04	4.85E-08	1.36E+09	2.11E+07	4.34E+01	6.55E+00
Lead (82)	Pb-209	2.11E-07	2.07E-07	3.72E-03	1.87E+03	1.36E+09	2.11E+07	3.95E+05	5.53E+04
Lead (82)	Pb-210	2.55E-03	4.07E-03	2.49E-03	3.11E-02	1.36E+09	2.11E+07	1.67E-02	1.61E-03
Lead (82)	Pb-211	6.66E-07	4.07E-05	1.11E-01	1.01E+04	1.36E+09	2.11E+07	9.77E+04	1.74E+03
Lead (82)	Pb-212	2.22E-05	6.29E-04	1.58E-01	5.71E+02	1.36E+09	2.11E+07	3.10E+02	6.34E+00
Lead (82)	Pb-214	5.18E-07	5.18E-05	2.80E-01	1.36E+04	1.36E+09	2.11E+07	1.09E+05	1.84E+03
Palladium (46)	Pd-100	3.48E-06	2.96E-06	1.24E-01	6.97E+01	1.36E+09	2.11E+07	9.05E+02	1.42E+02
Palladium (46)	Pd-101	3.48E-07	2.18E-07	3.61E-01	7.34E+02	1.36E+09	2.11E+07	9.76E+04	1.93E+04
Palladium (46)	Pd-103	7.03E-07	1.41E-06	8.95E-03	1.49E+01	1.36E+09	2.11E+07	8.60E+02	6.96E+01
Palladium (46)	Pd-107	1.37E-07	3.15E-07	0.00E+00	1.07E-07	1.36E+09	2.11E+07	2.88E+02	2.10E+01
Palladium (46)	Pd-109	2.04E-06	1.26E-06	4.35E-02	4.52E+02	1.36E+09	2.11E+07	1.03E+04	2.05E+03
Promethium (61)	Pm-141	1.33E-07	5.18E-08	9.02E-01	1.74E+04	1.36E+09	2.11E+07	6.20E+06	1.73E+06
Promethium (61)	Pm-142			1.12E+00	5.40E+05	1.36E+09	2.11E+07		
Promethium (61)	Pm-143	8.51E-07	5.55E-06	3.47E-01	9.55E-01	1.36E+09	2.11E+07	5.26E+01	1.92E+00
Promethium (61)	Pm-144	3.59E-06	3.03E-05	1.74E+00	6.97E-01	1.36E+09	2.11E+07	9.94E+00	3.16E-01
Promethium (61)	Pm-145	4.07E-07	1.33E-05	3.05E-02	3.92E-02	1.36E+09	2.11E+07	2.71E+01	5.36E-01
Promethium (61)	Pm-146	3.33E-06	7.77E-05	8.39E-01	1.25E-01	1.36E+09	2.11E+07	4.45E+00	9.57E-02
Promethium (61)	Pm-147	9.62E-07	1.85E-05	3.27E-05	2.64E-01	1.36E+09	2.11E+07	1.89E+01	4.29E-01
Promethium (61)	Pm-148	9.99E-06	7.40E-06	7.13E-01	4.71E+01	1.36E+09	2.11E+07	2.15E+02	3.75E+01
Promethium (61)	Pm-148m	6.29E-06	1.89E-05	2.23E+00	6.12E+00	1.36E+09	2.11E+07	3.63E+01	2.18E+00
Promethium (61)	Pm-149	3.66E-06	2.48E-06	4.71E-02	1.14E+02	1.36E+09	2.11E+07	1.44E+03	2.68E+02
Promethium (61)	Pm-150	9.62E-07	4.44E-07	1.65E+00	2.27E+03	1.36E+09	2.11E+07	1.11E+05	2.74E+04
Promethium (61)	Pm-151	2.70E-06	1.59E-06	3.71E-01	2.14E+02	1.36E+09	2.11E+07	3.67E+03	7.61E+02
Polonium (84)	Po-203	1.70E-07	1.30E-07	1.79E+00	9.92E+03	1.36E+09	2.11E+07	2.66E+06	4.54E+05
Polonium (84)	Po-205	2.15E-07	2.41E-07	1.72E+00	3.37E+03	1.36E+09	2.11E+07	6.92E+05	8.75E+04
Polonium (84)	Po-207	4.07E-07	2.89E-07	1.45E+00	1.04E+03	1.36E+09	2.11E+07	1.17E+05	2.11E+04
Polonium (84)	Po-210	4.44E-03	1.22E-02	9.44E-06	1.83E+00	1.36E+09	2.11E+07	1.86E-02	1.19E-03
Polonium (84)	Po-211			8.66E-03	4.24E+07	1.36E+09	2.11E+07		
Polonium (84)	Po-212			0.00E+00	7.17E+13	1.36E+09	2.11E+07		
Polonium (84)	Po-213			0.00E+00	5.20E+12	1.36E+09	2.11E+07		

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Polonium (84)	Po-214			9.25E-05	1.33E+11	1.36E+09	2.11E+07		
Polonium (84)	Po-215			1.96E-04	1.23E+10	1.36E+09	2.11E+07		
Polonium (84)	Po-216			1.88E-05	1.46E+08	1.36E+09	2.11E+07		
Polonium (84)	Po-218			1.01E-05	1.19E+05	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-136	1.22E-07	4.81E-08	2.38E+00	2.78E+04	1.36E+09	2.11E+07	1.08E+07	2.98E+06
Praseodymium (59)	Pr-137	1.48E-07	7.40E-08	5.80E-01	4.76E+03	1.36E+09	2.11E+07	1.50E+06	3.52E+05
Praseodymium (59)	Pr-138			1.05E+00	2.51E+05	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-138m	4.81E-07	2.66E-07	2.74E+00	2.89E+03	1.36E+09	2.11E+07	2.80E+05	6.07E+04
Praseodymium (59)	Pr-139	1.15E-07	6.66E-08	1.37E-01	1.35E+03	1.36E+09	2.11E+07	5.45E+05	1.14E+05
Praseodymium (59)	Pr-142	4.81E-06	1.92E-06	1.72E-01	3.17E+02	1.36E+09	2.11E+07	3.12E+03	8.55E+02
Praseodymium (59)	Pr-142m	6.29E-08	2.44E-08	0.00E+00	2.49E+04	1.36E+09	2.11E+07	1.88E+07	5.25E+06
Praseodymium (59)	Pr-143	4.44E-06	8.14E-06	2.40E-02	1.87E+01	1.36E+09	2.11E+07	1.73E+02	1.49E+01
Praseodymium (59)	Pr-144	1.85E-07	6.66E-08	1.90E-01	2.11E+04	1.36E+09	2.11E+07	5.41E+06	1.59E+06
Praseodymium (59)	Pr-144m			1.23E-02	5.06E+04	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-145	1.44E-06	5.92E-07	1.09E-01	1.02E+03	1.36E+09	2.11E+07	3.33E+04	8.95E+03
Praseodymium (59)	Pr-147	1.22E-07	6.66E-08	1.04E+00	2.68E+04	1.36E+09	2.11E+07	1.02E+07	2.24E+06
Platinum (78)	Pt-186	3.44E-07	1.22E-07	8.17E-01	3.04E+03	1.36E+09	2.11E+07	4.19E+05	1.25E+05
Platinum (78)	Pt-188	2.81E-06	1.55E-06	2.12E-01	2.48E+01	1.36E+09	2.11E+07	4.11E+02	8.92E+01
Platinum (78)	Pt-189	4.44E-07	1.41E-07	3.49E-01	5.58E+02	1.36E+09	2.11E+07	6.00E+04	1.93E+04
Platinum (78)	Pt-191	1.26E-06	4.07E-07	3.24E-01	9.03E+01	1.36E+09	2.11E+07	3.43E+03	1.08E+03
Platinum (78)	Pt-193	1.15E-07	7.77E-08	1.80E-04	1.39E-02	1.36E+09	2.11E+07	4.04E+02	7.53E+01
Platinum (78)	Pt-193m	1.67E-06	4.44E-07	1.09E-02	5.84E+01	1.36E+09	2.11E+07	1.68E+03	6.03E+02
Platinum (78)	Pt-195m	2.33E-06	6.66E-07	7.22E-02	6.29E+01	1.36E+09	2.11E+07	1.29E+03	4.43E+02
Platinum (78)	Pt-197	1.48E-06	3.15E-07	2.79E-02	3.32E+02	1.36E+09	2.11E+07	1.08E+04	4.44E+03
Platinum (78)	Pt-197m	3.11E-07	8.88E-08	8.50E-02	3.86E+03	1.36E+09	2.11E+07	5.95E+05	2.04E+05
Platinum (78)	Pt-199	1.44E-07	4.44E-08	2.88E-01	1.18E+04	1.36E+09	2.11E+07	3.92E+06	1.28E+06
Platinum (78)	Pt-200	4.44E-06	8.14E-07	6.37E-02	4.86E+02	1.36E+09	2.11E+07	5.30E+03	2.36E+03
Plutonium (94)	Pu-234	5.92E-07	7.77E-05	6.75E-02	6.90E+02	1.36E+09	2.11E+07	3.76E+03	6.23E+01
Plutonium (94)	Pu-235	7.77E-09	5.18E-09	9.34E-02	1.44E+04	1.36E+09	2.11E+07	8.53E+07	1.61E+07
Plutonium (94)	Pu-236	3.22E-04	7.40E-02	8.58E-04	2.43E-01	1.36E+09	2.11E+07	6.63E-03	1.07E-04
Plutonium (94)	Pu-237	3.70E-07	1.30E-06	4.96E-02	5.58E+00	1.36E+09	2.11E+07	5.42E+02	2.92E+01
Plutonium (94)	Pu-238	8.51E-04	1.70E-01	7.31E-04	7.90E-03	1.36E+09	2.11E+07	2.56E-03	4.14E-05
Plutonium (94)	Pu-239	9.25E-04	1.85E-01	3.31E-04	2.88E-05	1.36E+09	2.11E+07	2.34E-03	3.80E-05
Plutonium (94)	Pu-240	9.25E-04	1.85E-01	7.01E-04	1.06E-04	1.36E+09	2.11E+07	2.34E-03	3.80E-05
Plutonium (94)	Pu-241	1.78E-05	3.33E-03	2.01E-06	4.81E-02	1.36E+09	2.11E+07	1.33E-01	2.16E-03
Plutonium (94)	Pu-242	8.88E-04	1.78E-01	5.81E-04	1.84E-06	1.36E+09	2.11E+07	2.44E-03	3.96E-05
Plutonium (94)	Pu-243	3.15E-07	3.07E-07	2.65E-02	1.22E+03	1.36E+09	2.11E+07	1.74E+05	2.45E+04
Plutonium (94)	Pu-244	8.88E-04	1.74E-01	2.36E-02	8.66E-09	1.36E+09	2.11E+07	2.49E-03	4.04E-05
Plutonium (94)	Pu-244+D	8.88E-04	1.74E-01	4.78E-01	8.66E-09	1.36E+09	2.11E+07	2.49E-03	4.04E-05
Plutonium (94)	Pu-244+E	8.88E-04	1.74E-01	4.78E-01	8.66E-09	1.36E+09	2.11E+07	2.49E-03	4.04E-05
Plutonium (94)	Pu-245	2.66E-06	1.48E-06	4.74E-01	5.78E+02	1.36E+09	2.11E+07	1.01E+04	2.19E+03
Plutonium (94)	Pu-246	1.22E-05	2.74E-05	1.44E-01	2.33E+01	1.36E+09	2.11E+07	7.58E+01	5.63E+00
Radium (88)	Ra-222			1.01E-02	5.75E+05	1.36E+09	2.11E+07		
Radium (88)	Ra-223	3.70E-04	2.74E-02	1.41E-01	2.21E+01	1.36E+09	2.11E+07	3.26E-01	5.67E-03
Radium (88)	Ra-223+D	3.70E-04	2.74E-02	4.29E-01	2.21E+01	1.36E+09	2.11E+07	3.26E-01	5.67E-03
Radium (88)	Ra-223+E	3.70E-04	2.74E-02	4.29E-01	2.21E+01	1.36E+09	2.11E+07	3.26E-01	5.67E-03
Radium (88)	Ra-224	2.41E-04	1.11E-02	1.07E-02	6.91E+01	1.36E+09	2.11E+07	2.35E+00	4.36E-02
Radium (88)	Ra-224+D	2.41E-04	1.11E-02	1.68E+00	6.91E+01	1.36E+09	2.11E+07	2.35E+00	4.36E-02
Radium (88)	Ra-224+E	2.41E-04	1.11E-02	1.68E+00	6.91E+01	1.36E+09	2.11E+07	2.35E+00	4.36E-02
Radium (88)	Ra-225	3.66E-04	2.33E-02	1.25E-02	1.71E+01	1.36E+09	2.11E+07	2.90E-01	5.14E-03
Radium (88)	Ra-225+D	4.44E-04	5.18E-02	3.12E-01	1.71E+01	1.36E+09	2.11E+07	1.39E-01	2.32E-03
Radium (88)	Ra-225+E	4.44E-04	5.18E-02	3.12E-01	1.71E+01	1.36E+09	2.11E+07	1.39E-01	2.32E-03
Radium (88)	Ra-226	1.04E-03	1.30E-02	7.13E-03	4.33E-04	1.36E+09	2.11E+07	2.02E-02	5.37E-04
Radium (88)	Ra-226+D	1.04E-03	1.30E-02		4.33E-04	1.36E+09	2.11E+07	2.02E-02	5.37E-04
Radium (88)	Ra-226+E	1.04E-03	1.30E-02	1.97E+00	4.33E-04	1.36E+09	2.11E+07	2.02E-02	5.37E-04
Radium (88)	Ra-227	3.00E-07	1.04E-06	2.12E-01	8.63E+03	1.36E+09	2.11E+07	1.03E+06	5.63E+04
Radium (88)	Ra-227+D				8.63E+03	1.36E+09	2.11E+07		
Radium (88)	Ra-228	2.55E-03	9.62E-03	0.00E+00	1.21E-01	1.36E+09	2.11E+07	1.46E-02	7.47E-04
Radium (88)	Ra-228+D	3.07E-03	1.70E-01	1.10E+00	1.21E-01	1.36E+09	2.11E+07	2.42E-03	4.37E-05
Radium (88)	Ra-228+E	3.07E-03	1.70E-01	2.78E+00	1.21E-01	1.36E+09	2.11E+07	2.42E-03	4.37E-05
Rubidium (37)	Rb-79	1.85E-07	5.92E-08	1.61E+00	1.59E+04	1.36E+09	2.11E+07	4.10E+06	1.31E+06

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-80			1.61E+00	6.43E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-81	2.00E-07	1.26E-07	6.98E-01	1.33E+03	1.36E+09	2.11E+07	3.07E+05	6.04E+04
Rubidium (37)	Rb-81m	3.59E-08	2.59E-08	5.73E-03	1.14E+04	1.36E+09	2.11E+07	1.45E+07	2.58E+06
Rubidium (37)	Rb-82			1.40E+00	2.80E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-82m	4.81E-07	4.07E-07	3.20E+00	9.79E+02	1.36E+09	2.11E+07	9.20E+04	1.45E+04
Rubidium (37)	Rb-83	7.03E-06	2.55E-06	5.55E-01	2.93E+00	1.36E+09	2.11E+07	2.09E+01	6.13E+00
Rubidium (37)	Rb-84	1.04E-05	3.70E-06	1.02E+00	7.72E+00	1.36E+09	2.11E+07	3.54E+01	1.05E+01
Rubidium (37)	Rb-86	1.04E-05	3.44E-06	1.95E-01	1.36E+01	1.36E+09	2.11E+07	6.24E+01	1.94E+01
Rubidium (37)	Rb-87	5.55E-06	1.85E-06	8.52E-05	1.47E-11	1.36E+09	2.11E+07	8.59E+00	2.66E+00
Rubidium (37)	Rb-88	3.33E-07	5.92E-08	8.65E-01	2.05E+04	1.36E+09	2.11E+07	2.98E+06	1.35E+06
Rubidium (37)	Rb-89	1.74E-07	5.18E-08	2.30E+00	2.40E+04	1.36E+09	2.11E+07	6.59E+06	2.20E+06
Rhenium (75)	Re-177	8.14E-08	5.18E-08	6.94E-01	2.60E+04	1.36E+09	2.11E+07	1.48E+07	2.89E+06
Rhenium (75)	Re-178	9.25E-08	5.18E-08	1.34E+00	2.76E+04	1.36E+09	2.11E+07	1.39E+07	2.99E+06
Rhenium (75)	Re-180			1.31E+00	1.50E+05	1.36E+09	2.11E+07		
Rhenium (75)	Re-181	1.55E-06	9.25E-07	8.40E-01	3.04E+02	1.36E+09	2.11E+07	9.06E+03	1.86E+03
Rhenium (75)	Re-182	5.18E-06	4.44E-06	2.02E+00	9.49E+01	1.36E+09	2.11E+07	8.27E+02	1.29E+02
Rhenium (75)	Re-182m	9.99E-07	7.40E-07	1.26E+00	4.78E+02	1.36E+09	2.11E+07	2.19E+04	3.81E+03
Rhenium (75)	Re-184	3.70E-06	7.03E-06	9.77E-01	6.66E+00	1.36E+09	2.11E+07	7.37E+01	6.20E+00
Rhenium (75)	Re-184m	5.55E-06	2.41E-05	4.19E-01	1.53E+00	1.36E+09	2.11E+07	1.18E+01	5.53E-01
Rhenium (75)	Re-186	5.55E-06	4.07E-06	5.16E-02	6.70E+01	1.36E+09	2.11E+07	5.52E+02	9.69E+01
Rhenium (75)	Re-186m	8.14E-06	4.44E-05	1.49E-02	3.47E-06	1.36E+09	2.11E+07	3.80E+00	1.54E-01
Rhenium (75)	Re-186m+D	1.37E-05	4.44E-05		3.47E-06	1.36E+09	2.11E+07	2.67E+00	1.52E-01
Rhenium (75)	Re-186m+E	1.37E-05	4.44E-05	6.65E-02	3.47E-06	1.36E+09	2.11E+07	2.67E+00	1.52E-01
Rhenium (75)	Re-187	1.89E-08	2.33E-08	0.00E+00	1.39E-11	1.36E+09	2.11E+07	2.31E+03	2.70E+02
Rhenium (75)	Re-188	5.18E-06	2.00E-06	1.69E-01	3.58E+02	1.36E+09	2.11E+07	3.27E+03	9.19E+02
Rhenium (75)	Re-188m	1.11E-07	4.81E-08	7.90E-02	1.96E+04	1.36E+09	2.11E+07	8.32E+06	2.15E+06
Rhenium (75)	Re-189	2.89E-06	1.59E-06	9.81E-02	2.50E+02	1.36E+09	2.11E+07	4.03E+03	8.77E+02
Rhodium (45)	Rh-100	2.63E-06	1.26E-06	2.91E+00	2.92E+02	1.36E+09	2.11E+07	5.21E+03	1.26E+03
Rhodium (45)	Rh-101	2.04E-06	8.51E-06	2.80E-01	2.17E-01	1.36E+09	2.11E+07	1.85E+01	8.88E-01
Rhodium (45)	Rh-101m	8.14E-07	7.03E-07	3.30E-01	5.83E+01	1.36E+09	2.11E+07	3.23E+03	5.00E+02
Rhodium (45)	Rh-102	9.62E-06	2.55E-05	2.36E+00	2.39E-01	1.36E+09	2.11E+07	4.48E+00	2.94E-01
Rhodium (45)	Rh-102m	4.44E-06	1.48E-05	5.57E-01	1.22E+00	1.36E+09	2.11E+07	1.41E+01	7.89E-01
Rhodium (45)	Rh-103m	1.41E-08	9.25E-09	1.03E-03	6.49E+03	1.36E+09	2.11E+07	2.13E+07	4.06E+06
Rhodium (45)	Rh-105	1.37E-06	1.18E-06	8.66E-02	1.72E+02	1.36E+09	2.11E+07	5.66E+03	8.75E+02
Rhodium (45)	Rh-106			4.03E-01	7.31E+05	1.36E+09	2.11E+07		
Rhodium (45)	Rh-106m	5.92E-07	4.07E-07	3.21E+00	2.76E+03	1.36E+09	2.11E+07	2.14E+05	3.95E+04
Rhodium (45)	Rh-107	8.88E-08	5.92E-08	3.94E-01	1.68E+04	1.36E+09	2.11E+07	8.70E+06	1.64E+06
Rhodium (45)	Rh-99	1.89E-06	2.85E-06	6.61E-01	1.58E+01	1.36E+09	2.11E+07	3.55E+02	3.56E+01
Rhodium (45)	Rh-99m	2.44E-07	1.44E-07	7.46E-01	1.29E+03	1.36E+09	2.11E+07	2.45E+05	5.07E+04
Radon (86)	Rn-218			8.46E-04	6.24E+08	1.36E+09	2.11E+07		
Radon (86)	Rn-219			6.16E-02	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-219+D			2.89E-01	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-219+E			2.89E-01	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-220			4.31E-04	3.93E+05	1.36E+09	2.11E+07		
Radon (86)	Rn-222			4.46E-04	6.62E+01	1.36E+09	2.11E+07		
Radon (86)	Rn-222+D			1.96E+00	6.62E+01	1.36E+09	2.11E+07		
Radon (86)	Rn-222+E			2.01E+00	6.62E+01	1.36E+09	2.11E+07		
Ruthenium (44)	Ru-103	2.70E-06	8.88E-06	5.24E-01	6.44E+00	1.36E+09	2.11E+07	8.68E+01	4.89E+00
Ruthenium (44)	Ru-105	9.62E-07	6.29E-07	9.13E-01	1.37E+03	1.36E+09	2.11E+07	6.55E+04	1.25E+04
Ruthenium (44)	Ru-105+D	2.33E-06	1.81E-06	9.99E-01	1.37E+03	1.36E+09	2.11E+07	2.67E+04	4.48E+03
Ruthenium (44)	Ru-106	2.59E-05	1.04E-04	0.00E+00	6.87E-01	1.36E+09	2.11E+07	1.84E+00	9.06E-02
Ruthenium (44)	Ru-106+D	2.59E-05	1.04E-04	4.03E-01	6.87E-01	1.36E+09	2.11E+07	1.84E+00	9.06E-02
Ruthenium (44)	Ru-106+E	2.59E-05	1.04E-04	4.03E-01	6.87E-01	1.36E+09	2.11E+07	1.84E+00	9.06E-02
Ruthenium (44)	Ru-94	3.48E-07	1.55E-07	5.84E-01	7.03E+03	1.36E+09	2.11E+07	9.52E+05	2.41E+05
Ruthenium (44)	Ru-97	5.55E-07	3.70E-07	2.52E-01	8.72E+01	1.36E+09	2.11E+07	7.24E+03	1.37E+03
Sulfur (16)	S-35	2.85E-06	5.18E-06	1.55E-05	2.89E+00	1.36E+09	2.11E+07	4.43E+01	3.85E+00
Antimony (51)	Sb-115	8.88E-08	4.81E-08	1.04E+00	1.15E+04	1.36E+09	2.11E+07	6.01E+06	1.33E+06
Antimony (51)	Sb-116	9.62E-08	4.81E-08	2.37E+00	2.31E+04	1.36E+09	2.11E+07	1.12E+07	2.62E+06
Antimony (51)	Sb-116m	2.48E-07	1.74E-07	3.42E+00	6.04E+03	1.36E+09	2.11E+07	1.12E+06	2.03E+05
Antimony (51)	Sb-117	6.66E-08	5.92E-08	1.93E-01	2.17E+03	1.36E+09	2.11E+07	1.47E+06	2.22E+05
Antimony (51)	Sb-118m	7.77E-07	4.44E-07	2.79E+00	1.21E+03	1.36E+09	2.11E+07	7.26E+04	1.54E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Antimony (51)	Sb-119	2.96E-07	1.30E-07	1.82E-02	1.59E+02	1.36E+09	2.11E+07	2.54E+04	6.53E+03
Antimony (51)	Sb-120	5.18E-08	2.59E-08	5.45E-01	2.29E+04	1.36E+09	2.11E+07	2.07E+07	4.84E+06
Antimony (51)	Sb-120m	4.44E-06	3.70E-06	2.66E+00	4.39E+01	1.36E+09	2.11E+07	4.48E+02	7.13E+01
Antimony (51)	Sb-122	6.29E-06	3.70E-06	5.66E-01	9.37E+01	1.36E+09	2.11E+07	6.91E+02	1.43E+02
Antimony (51)	Sb-124	9.25E-06	2.37E-05	1.98E+00	4.20E+00	1.36E+09	2.11E+07	1.78E+01	1.20E+00
Antimony (51)	Sb-124m			4.01E-01	2.35E+05	1.36E+09	2.11E+07		
Antimony (51)	Sb-124n	2.96E-08	2.00E-08	5.92E-05	1.80E+04	1.36E+09	2.11E+07	2.80E+07	5.24E+06
Antimony (51)	Sb-125	4.07E-06	1.78E-05	4.77E-01	2.50E-01	1.36E+09	2.11E+07	9.29E+00	4.33E-01
Antimony (51)	Sb-126	8.88E-06	1.04E-05	3.17E+00	2.04E+01	1.36E+09	2.11E+07	1.01E+02	1.23E+01
Antimony (51)	Sb-126m	1.33E-07	7.03E-08	1.81E+00	1.92E+04	1.36E+09	2.11E+07	6.72E+06	1.51E+06
Antimony (51)	Sb-127	6.29E-06	6.29E-06	7.89E-01	6.57E+01	1.36E+09	2.11E+07	4.65E+02	6.43E+01
Antimony (51)	Sb-128	2.81E-06	1.48E-06	3.48E+00	6.74E+02	1.36E+09	2.11E+07	1.12E+04	2.52E+03
Antimony (51)	Sb-128m	1.22E-07	5.18E-08	2.32E+00	3.50E+04	1.36E+09	2.11E+07	1.35E+07	3.56E+06
Antimony (51)	Sb-129	1.55E-06	8.51E-07	1.60E+00	1.41E+03	1.36E+09	2.11E+07	4.21E+04	9.21E+03
Antimony (51)	Sb-130	3.37E-07	1.89E-07	3.66E+00	9.11E+03	1.36E+09	2.11E+07	1.26E+06	2.71E+05
Antimony (51)	Sb-131	3.70E-07	1.63E-07	2.07E+00	1.58E+04	1.36E+09	2.11E+07	2.02E+06	5.17E+05
Scandium (21)	Sc-43	7.03E-07	4.07E-07	1.25E+00	1.56E+03	1.36E+09	2.11E+07	1.03E+05	2.16E+04
Scandium (21)	Sc-44	1.30E-06	6.66E-07	2.43E+00	1.55E+03	1.36E+09	2.11E+07	5.58E+04	1.28E+04
Scandium (21)	Sc-44m	8.88E-06	5.18E-06	3.06E-01	1.04E+02	1.36E+09	2.11E+07	5.42E+02	1.13E+02
Scandium (21)	Sc-46	5.55E-06	2.52E-05	2.19E+00	3.02E+00	1.36E+09	2.11E+07	1.89E+01	8.59E-01
Scandium (21)	Sc-47	2.00E-06	2.70E-06	1.16E-01	7.55E+01	1.36E+09	2.11E+07	1.63E+03	1.78E+02
Scandium (21)	Sc-48	6.29E-06	4.07E-06	3.63E+00	1.39E+02	1.36E+09	2.11E+07	1.02E+03	1.97E+02
Scandium (21)	Sc-49	3.03E-07	1.48E-07	1.19E-01	6.35E+03	1.36E+09	2.11E+07	9.81E+05	2.33E+05
Selenium (34)	Se-70	4.44E-07	1.55E-07	1.16E+00	8.88E+03	1.36E+09	2.11E+07	9.52E+05	2.86E+05
Selenium (34)	Se-73	7.77E-07	2.96E-07	1.25E+00	8.49E+02	1.36E+09	2.11E+07	5.18E+04	1.47E+04
Selenium (34)	Se-73m	1.04E-07	3.40E-08	2.94E-01	9.34E+03	1.36E+09	2.11E+07	4.30E+06	1.35E+06
Selenium (34)	Se-75	9.62E-06	3.70E-06	4.21E-01	2.11E+00	1.36E+09	2.11E+07	1.18E+01	3.33E+00
Selenium (34)	Se-77m			9.07E-02	1.25E+06	1.36E+09	2.11E+07		
Selenium (34)	Se-79	1.07E-05	4.07E-06	1.91E-05	1.07E-05	1.36E+09	2.11E+07	4.42E+00	1.26E+00
Selenium (34)	Se-81	9.99E-08	2.96E-08	9.50E-02	1.97E+04	1.36E+09	2.11E+07	9.43E+06	3.16E+06
Selenium (34)	Se-81m	1.96E-07	5.92E-08	1.47E-02	6.36E+03	1.36E+09	2.11E+07	1.55E+06	5.13E+05
Selenium (34)	Se-83	1.74E-07	6.66E-08	2.67E+00	1.62E+04	1.36E+09	2.11E+07	4.41E+06	1.25E+06
Silicon (14)	Si-31	5.92E-07	2.74E-07	8.33E-02	2.32E+03	1.36E+09	2.11E+07	1.84E+05	4.55E+04
Silicon (14)	Si-32	2.07E-06	6.29E-05	2.92E-05	1.54E-03	1.36E+09	2.11E+07	5.54E+00	1.11E-01
Silicon (14)	Si-32+D	1.11E-05	7.40E-05		1.54E-03	1.36E+09	2.11E+07	2.58E+00	9.31E-02
Silicon (14)	Si-32+E	1.11E-05	7.40E-05	9.94E-02	1.54E-03	1.36E+09	2.11E+07	2.58E+00	9.31E-02
Samarium (62)	Sm-141	1.44E-07	5.55E-08	1.62E+00	3.57E+04	1.36E+09	2.11E+07	1.17E+07	3.30E+06
Samarium (62)	Sm-141m	2.41E-07	1.18E-07	2.21E+00	1.61E+04	1.36E+09	2.11E+07	3.14E+06	7.42E+05
Samarium (62)	Sm-142	7.03E-07	2.63E-07	1.04E-01	5.02E+03	1.36E+09	2.11E+07	3.39E+05	9.74E+04
Samarium (62)	Sm-145	7.77E-07	5.92E-06	6.49E-02	7.44E-01	1.36E+09	2.11E+07	4.92E+01	1.65E+00
Samarium (62)	Sm-146	2.00E-04	4.07E-02	0.00E+00	6.73E-09	1.36E+09	2.11E+07	1.07E-02	1.73E-04
Samarium (62)	Sm-147	1.81E-04	3.55E-02	0.00E+00	6.54E-12	1.36E+09	2.11E+07	1.22E-02	1.98E-04
Samarium (62)	Sm-151	3.63E-07	1.48E-05	4.13E-06	7.70E-03	1.36E+09	2.11E+07	2.51E+01	4.75E-01
Samarium (62)	Sm-153	2.74E-06	2.33E-06	7.12E-02	1.30E+02	1.36E+09	2.11E+07	2.15E+03	3.36E+02
Samarium (62)	Sm-155	1.07E-07	6.29E-08	1.82E-01	1.65E+04	1.36E+09	2.11E+07	7.13E+06	1.48E+06
Samarium (62)	Sm-156	9.25E-07	8.14E-07	1.31E-01	6.46E+02	1.36E+09	2.11E+07	3.15E+04	4.80E+03
Tin (50)	Sn-110	1.30E-06	5.92E-07	3.23E-01	1.52E+03	1.36E+09	2.11E+07	5.51E+04	1.37E+04
Tin (50)	Sn-111	8.51E-08	4.81E-08	5.85E-01	1.03E+04	1.36E+09	2.11E+07	5.64E+06	1.20E+06
Tin (50)	Sn-113	2.70E-06	9.99E-06	1.90E-02	2.20E+00	1.36E+09	2.11E+07	3.22E+01	1.68E+00
Tin (50)	Sn-117m	2.63E-06	8.88E-06	1.63E-01	1.86E+01	1.36E+09	2.11E+07	2.55E+02	1.41E+01
Tin (50)	Sn-119m	1.26E-06	8.14E-06	8.72E-03	8.63E-01	1.36E+09	2.11E+07	3.44E+01	1.26E+00
Tin (50)	Sn-121	8.51E-07	8.51E-07	1.03E-04	2.24E+02	1.36E+09	2.11E+07	1.17E+04	1.62E+03
Tin (50)	Sn-121m	1.41E-06	1.67E-05	4.20E-03	1.26E-02	1.36E+09	2.11E+07	1.54E+01	4.20E-01
Tin (50)	Sn-121m+D	2.07E-06	1.67E-05	4.28E-03	1.26E-02	1.36E+09	2.11E+07	1.28E+01	4.17E-01
Tin (50)	Sn-121m+E	2.07E-06	1.67E-05	4.28E-03	1.26E-02	1.36E+09	2.11E+07	1.28E+01	4.17E-01
Tin (50)	Sn-123	7.77E-06	3.00E-05	7.59E-02	1.96E+00	1.36E+09	2.11E+07	1.02E+01	5.16E-01
Tin (50)	Sn-123m	1.41E-07	9.99E-08	2.02E-01	9.09E+03	1.36E+09	2.11E+07	2.96E+06	5.33E+05
Tin (50)	Sn-125	1.15E-05	1.15E-05	4.46E-01	2.62E+01	1.36E+09	2.11E+07	1.02E+02	1.41E+01
Tin (50)	Sn-126	1.74E-05	1.04E-04	5.62E-02	6.93E-06	1.36E+09	2.11E+07	1.72E+00	6.63E-02
Tin (50)	Sn-126+D	1.74E-05	1.04E-04	1.87E+00	6.93E-06	1.36E+09	2.11E+07	1.72E+00	6.63E-02
Tin (50)	Sn-126+E	1.74E-05	1.04E-04	2.31E+00	6.93E-06	1.36E+09	2.11E+07	1.72E+00	6.63E-02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Tin (50)	Sn-127	7.40E-07	4.81E-07	2.10E+00	2.89E+03	1.36E+09	2.11E+07	1.80E+05	3.47E+04
Tin (50)	Sn-128	5.55E-07	3.40E-07	7.29E-01	6.16E+03	1.36E+09	2.11E+07	5.14E+05	1.03E+05
Strontium (38)	Sr-80	1.26E-06	4.81E-07	1.87E-03	3.64E+03	1.36E+09	2.11E+07	1.37E+05	3.88E+04
Strontium (38)	Sr-81	2.85E-07	1.30E-07	1.67E+00	1.43E+04	1.36E+09	2.11E+07	2.36E+06	5.90E+05
Strontium (38)	Sr-82	2.26E-05	3.29E-05	1.83E-03	1.01E+01	1.36E+09	2.11E+07	1.91E+01	1.97E+00
Strontium (38)	Sr-82+D	2.26E-05	3.29E-05	1.40E+00	1.01E+01	1.36E+09	2.11E+07	1.91E+01	1.97E+00
Strontium (38)	Sr-82+E	2.26E-05	3.29E-05	1.40E+00	1.01E+01	1.36E+09	2.11E+07	1.91E+01	1.97E+00
Strontium (38)	Sr-83	1.81E-06	1.15E-06	8.88E-01	1.87E+02	1.36E+09	2.11E+07	4.77E+03	9.37E+02
Strontium (38)	Sr-85	2.07E-06	2.37E-06	5.65E-01	3.90E+00	1.36E+09	2.11E+07	8.44E+01	1.05E+01
Strontium (38)	Sr-85m	2.26E-08	1.52E-08	2.36E-01	5.24E+03	1.36E+09	2.11E+07	1.07E+07	2.00E+06
Strontium (38)	Sr-87m	1.11E-07	7.40E-08	3.55E-01	2.16E+03	1.36E+09	2.11E+07	8.98E+05	1.69E+05
Strontium (38)	Sr-89	9.62E-06	2.26E-05	8.01E-02	5.01E+00	1.36E+09	2.11E+07	2.06E+01	1.48E+00
Strontium (38)	Sr-90	1.04E-04	1.33E-04	1.91E-03	2.38E-02	1.36E+09	2.11E+07	4.23E-01	4.81E-02
Strontium (38)	Sr-90+D	1.04E-04	1.33E-04	1.31E-01	2.38E-02	1.36E+09	2.11E+07	4.23E-01	4.81E-02
Strontium (38)	Sr-90+E	1.04E-04	1.33E-04	1.31E-01	2.38E-02	1.36E+09	2.11E+07	4.23E-01	4.81E-02
Strontium (38)	Sr-91	2.41E-06	1.37E-06	8.48E-01	6.39E+02	1.36E+09	2.11E+07	1.24E+04	2.62E+03
Strontium (38)	Sr-92	1.59E-06	7.77E-07	1.44E+00	2.24E+03	1.36E+09	2.11E+07	6.60E+04	1.57E+04
Tantalum (73)	Ta-172	1.96E-07	1.22E-07	1.74E+00	9.90E+03	1.36E+09	2.11E+07	2.33E+06	4.64E+05
Tantalum (73)	Ta-173	7.03E-07	4.07E-07	6.71E-01	1.66E+03	1.36E+09	2.11E+07	1.10E+05	2.31E+04
Tantalum (73)	Ta-174	2.11E-07	1.52E-07	7.18E-01	5.06E+03	1.36E+09	2.11E+07	1.10E+06	1.96E+05
Tantalum (73)	Ta-175	7.77E-07	4.44E-07	9.91E-01	5.78E+02	1.36E+09	2.11E+07	3.46E+04	7.33E+03
Tantalum (73)	Ta-176	1.15E-06	7.03E-07	2.25E+00	7.51E+02	1.36E+09	2.11E+07	3.03E+04	6.10E+03
Tantalum (73)	Ta-177	4.07E-07	3.55E-07	6.85E-02	1.07E+02	1.36E+09	2.11E+07	1.19E+04	1.83E+03
Tantalum (73)	Ta-178			1.12E-01	3.91E+04	1.36E+09	2.11E+07		
Tantalum (73)	Ta-178m	2.66E-07	2.41E-07	1.11E+00	2.76E+03	1.36E+09	2.11E+07	4.66E+05	6.97E+04
Tantalum (73)	Ta-179	2.41E-07	8.14E-07	3.21E-02	3.80E-01	1.36E+09	2.11E+07	1.80E+02	9.96E+00
Tantalum (73)	Ta-180	3.11E-06	2.37E-05	6.05E-01	6.93E-14	1.36E+09	2.11E+07	8.68E+00	2.92E-01
Tantalum (73)	Ta-180m	2.00E-07	1.63E-07	4.94E-02	7.49E+02	1.36E+09	2.11E+07	1.70E+05	2.75E+04
Tantalum (73)	Ta-182	5.55E-06	2.81E-05	1.40E+00	2.20E+00	1.36E+09	2.11E+07	1.42E+01	6.02E-01
Tantalum (73)	Ta-182m	4.44E-08	7.40E-08	2.63E-01	2.30E+04	1.36E+09	2.11E+07	2.16E+07	2.01E+06
Tantalum (73)	Ta-183	4.81E-06	7.03E-06	3.13E-01	4.96E+01	1.36E+09	2.11E+07	4.39E+02	4.52E+01
Tantalum (73)	Ta-184	2.52E-06	1.52E-06	1.81E+00	6.98E+02	1.36E+09	2.11E+07	1.29E+04	2.62E+03
Tantalum (73)	Ta-185	2.52E-07	1.67E-07	2.92E-01	7.43E+03	1.36E+09	2.11E+07	1.36E+06	2.58E+05
Tantalum (73)	Ta-186	1.22E-07	6.29E-08	1.84E+00	3.47E+04	1.36E+09	2.11E+07	1.33E+07	3.04E+06
Terbium (65)	Tb-147	5.92E-07	2.81E-07	1.81E+00	3.68E+03	1.36E+09	2.11E+07	2.92E+05	7.08E+04
Terbium (65)	Tb-149	9.25E-07	1.81E-05	1.75E+00	1.46E+03	1.36E+09	2.11E+07	2.49E+04	5.63E+02
Terbium (65)	Tb-150	9.25E-07	4.07E-07	1.89E+00	1.86E+03	1.36E+09	2.11E+07	9.46E+04	2.42E+04
Terbium (65)	Tb-151	1.26E-06	8.51E-07	9.78E-01	3.45E+02	1.36E+09	2.11E+07	1.26E+04	2.35E+03
Terbium (65)	Tb-153	9.25E-07	7.03E-07	2.44E-01	1.08E+02	1.36E+09	2.11E+07	5.33E+03	9.10E+02
Terbium (65)	Tb-154	2.41E-06	1.33E-06	2.43E+00	2.84E+02	1.36E+09	2.11E+07	5.49E+03	1.19E+03
Terbium (65)	Tb-155	7.77E-07	8.14E-07	1.46E-01	4.75E+01	1.36E+09	2.11E+07	2.71E+03	3.61E+02
Terbium (65)	Tb-156	4.44E-06	4.44E-06	1.97E+00	4.74E+01	1.36E+09	2.11E+07	4.75E+02	6.57E+01
Terbium (65)	Tb-156m	6.29E-07	7.77E-07	2.58E-02	2.49E+02	1.36E+09	2.11E+07	1.72E+04	2.02E+03
Terbium (65)	Tb-156n	3.00E-07	3.55E-07	3.68E-03	1.21E+03	1.36E+09	2.11E+07	1.77E+05	2.15E+04
Terbium (65)	Tb-157	1.26E-07	4.44E-06	2.57E-03	4.62E-03	1.36E+09	2.11E+07	8.12E+01	1.58E+00
Terbium (65)	Tb-158	4.07E-06	1.70E-04	8.74E-01	4.62E-03	1.36E+09	2.11E+07	2.19E+00	4.13E-02
Terbium (65)	Tb-160	5.92E-06	2.59E-05	1.24E+00	3.50E+00	1.36E+09	2.11E+07	2.04E+01	9.48E-01
Terbium (65)	Tb-161	2.66E-06	4.81E-06	3.44E-02	3.66E+01	1.36E+09	2.11E+07	5.67E+02	4.96E+01
Technetium (43)	Tc-101	7.03E-08	4.44E-08	4.26E-01	2.57E+04	1.36E+09	2.11E+07	1.69E+07	3.31E+06
Technetium (43)	Tc-104	2.96E-07	1.04E-07	2.28E+00	2.00E+04	1.36E+09	2.11E+07	3.22E+06	9.65E+05
Technetium (43)	Tc-93	2.04E-07	1.30E-07	1.54E+00	2.21E+03	1.36E+09	2.11E+07	5.01E+05	9.79E+04
Technetium (43)	Tc-93m	9.25E-08	6.29E-08	7.35E-01	8.37E+03	1.36E+09	2.11E+07	4.16E+06	7.74E+05
Technetium (43)	Tc-94	7.40E-07	4.44E-07	2.95E+00	1.24E+03	1.36E+09	2.11E+07	7.79E+04	1.59E+04
Technetium (43)	Tc-94m	3.70E-07	1.67E-07	2.12E+00	7.00E+03	1.36E+09	2.11E+07	8.91E+05	2.25E+05
Technetium (43)	Tc-95	6.66E-07	3.70E-07	8.75E-01	3.04E+02	1.36E+09	2.11E+07	2.12E+04	4.59E+03
Technetium (43)	Tc-95m	2.07E-06	3.26E-06	7.38E-01	4.15E+00	1.36E+09	2.11E+07	8.57E+01	8.34E+00
Technetium (43)	Tc-96	4.07E-06	2.52E-06	2.77E+00	5.91E+01	1.36E+09	2.11E+07	6.72E+02	1.34E+02
Technetium (43)	Tc-96m	4.44E-08	2.74E-08	5.25E-02	7.07E+03	1.36E+09	2.11E+07	7.37E+06	1.48E+06
Technetium (43)	Tc-97	2.52E-07	8.14E-07	5.43E-03	2.67E-07	1.36E+09	2.11E+07	1.45E+02	8.27E+00
Technetium (43)	Tc-97m	2.04E-06	1.18E-05	5.19E-03	2.91E+00	1.36E+09	2.11E+07	4.57E+01	1.78E+00
Technetium (43)	Tc-98	7.40E-06	3.07E-05	1.58E+00	1.65E-07	1.36E+09	2.11E+07	4.60E+00	2.21E-01

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Technetium (43)	Tc-99	2.37E-06	1.48E-05	7.55E-05	3.25E-06	1.36E+09	2.11E+07	1.24E+01	4.64E-01
Technetium (43)	Tc-99m	8.14E-08	7.03E-08	1.33E-01	1.01E+03	1.36E+09	2.11E+07	5.59E+05	8.66E+04
Tellurium (52)	Te-116	6.29E-07	3.70E-07	7.07E-02	2.44E+03	1.36E+09	2.11E+07	1.80E+05	3.73E+04
Tellurium (52)	Te-121	1.59E-06	1.41E-06	6.38E-01	1.49E+01	1.36E+09	2.11E+07	4.21E+02	6.41E+01
Tellurium (52)	Te-121m	8.51E-06	1.55E-05	2.31E-01	1.64E+00	1.36E+09	2.11E+07	9.86E+00	8.55E-01
Tellurium (52)	Te-123	1.63E-05	7.03E-06	1.66E-02	6.93E-14	1.36E+09	2.11E+07	2.90E+00	7.52E-01
Tellurium (52)	Te-123m	5.18E-06	1.48E-05	1.54E-01	2.11E+00	1.36E+09	2.11E+07	1.75E+01	1.09E+00
Tellurium (52)	Te-125m	3.22E-06	1.26E-05	3.10E-02	4.36E+00	1.36E+09	2.11E+07	4.75E+01	2.38E+00
Tellurium (52)	Te-127	6.29E-07	4.81E-07	1.20E-02	6.49E+02	1.36E+09	2.11E+07	4.71E+04	8.00E+03
Tellurium (52)	Te-127m	8.51E-06	2.74E-05	9.99E-03	2.32E+00	1.36E+09	2.11E+07	1.11E+01	6.33E-01
Tellurium (52)	Te-129	2.33E-07	1.37E-07	1.33E-01	5.23E+03	1.36E+09	2.11E+07	1.04E+06	2.16E+05
Tellurium (52)	Te-129m	1.11E-05	2.44E-05	6.65E-02	7.53E+00	1.36E+09	2.11E+07	2.70E+01	2.04E+00
Tellurium (52)	Te-131	3.22E-07	1.04E-07	5.53E-01	1.46E+04	1.36E+09	2.11E+07	2.16E+06	6.85E+05
Tellurium (52)	Te-131m	7.03E-06	3.48E-06	1.56E+00	2.02E+02	1.36E+09	2.11E+07	1.35E+03	3.18E+02
Tellurium (52)	Te-132	1.41E-05	7.40E-06	2.47E-01	7.76E+01	1.36E+09	2.11E+07	2.58E+02	5.80E+01
Tellurium (52)	Te-133	2.66E-07	7.40E-08	1.12E+00	2.93E+04	1.36E+09	2.11E+07	5.26E+06	1.84E+06
Tellurium (52)	Te-133m	1.04E-06	3.22E-07	2.61E+00	6.57E+03	1.36E+09	2.11E+07	3.03E+05	9.85E+04
Tellurium (52)	Te-134	4.07E-07	2.44E-07	9.90E-01	8.71E+03	1.36E+09	2.11E+07	9.92E+05	2.03E+05
()	Test Isotope					1.36E+09	2.11E+07		
Thorium (90)	Th-226	1.30E-06	2.26E-04	8.46E-03	1.18E+04	1.36E+09	2.11E+07	2.25E+04	3.67E+02
Thorium (90)	Th-227	3.26E-05	3.70E-02	1.14E-01	1.35E+01	1.36E+09	2.11E+07	1.64E-01	2.57E-03
Thorium (90)	Th-228	2.66E-04	1.48E-01	2.49E-03	3.62E-01	1.36E+09	2.11E+07	3.59E-03	5.66E-05
Thorium (90)	Th-229	1.81E-03	2.63E-01	9.21E-02	9.44E-05	1.36E+09	2.11E+07	1.62E-03	2.67E-05
Thorium (90)	Th-229+D	2.26E-03	3.15E-01		9.44E-05	1.36E+09	2.11E+07	1.35E-03	2.23E-05
Thorium (90)	Th-229+E	2.26E-03	3.15E-01	4.04E-01	9.44E-05	1.36E+09	2.11E+07	1.35E-03	2.23E-05
Thorium (90)	Th-230	7.77E-04	5.18E-02	7.43E-04	9.00E-06	1.36E+09	2.11E+07	7.69E-03	1.35E-04
Thorium (90)	Th-231	1.26E-06	1.22E-06	1.81E-02	2.38E+02	1.36E+09	2.11E+07	8.44E+03	1.19E+03
Thorium (90)	Th-232	8.51E-04	9.25E-02	5.31E-04	4.93E-11	1.36E+09	2.11E+07	4.52E-03	7.59E-05
Thorium (90)	Th-232+D				4.93E-11	1.36E+09	2.11E+07		
Thorium (90)	Th-234	1.26E-05	2.85E-05	8.74E-03	1.05E+01	1.36E+09	2.11E+07	3.30E+01	2.44E+00
Thorium (90)	Th-234+D	1.26E-05	2.85E-05	1.41E-01	1.05E+01	1.36E+09	2.11E+07	3.30E+01	2.44E+00
Thorium (90)	Th-234+E	1.26E-05	2.85E-05	1.41E-01	1.05E+01	1.36E+09	2.11E+07	3.30E+01	2.44E+00
Titanium (22)	Ti-44	2.15E-05	1.55E-04	1.38E-01	1.47E-02	1.36E+09	2.11E+07	1.30E+00	4.47E-02
Titanium (22)	Ti-44+D	2.15E-05	1.55E-04	2.57E+00	1.47E-02	1.36E+09	2.11E+07	1.30E+00	4.47E-02
Titanium (22)	Ti-44+E	2.15E-05	1.55E-04	2.57E+00	1.47E-02	1.36E+09	2.11E+07	1.30E+00	4.47E-02
Titanium (22)	Ti-45	5.55E-07	3.26E-07	1.01E+00	1.97E+03	1.36E+09	2.11E+07	1.65E+05	3.42E+04
Thallium (81)	Tl-194	3.00E-08	1.63E-08	8.58E-01	1.10E+04	1.36E+09	2.11E+07	1.72E+07	3.78E+06
Thallium (81)	Tl-194m	1.48E-07	7.03E-08	2.60E+00	1.11E+04	1.36E+09	2.11E+07	3.52E+06	8.54E+05
Thallium (81)	Tl-195	9.99E-08	5.55E-08	1.35E+00	5.23E+03	1.36E+09	2.11E+07	2.44E+06	5.28E+05
Thallium (81)	Tl-197	8.51E-08	5.18E-08	4.40E-01	2.14E+03	1.36E+09	2.11E+07	1.16E+06	2.35E+05
Thallium (81)	Tl-198	2.70E-07	2.22E-07	2.12E+00	1.15E+03	1.36E+09	2.11E+07	1.92E+05	3.09E+04
Thallium (81)	Tl-198m	2.00E-07	1.37E-07	1.32E+00	3.25E+03	1.36E+09	2.11E+07	7.47E+05	1.38E+05
Thallium (81)	Tl-199	9.62E-08	7.03E-08	2.65E-01	8.18E+02	1.36E+09	2.11E+07	3.89E+05	6.85E+04
Thallium (81)	Tl-200	7.40E-07	4.81E-07	1.42E+00	2.33E+02	1.36E+09	2.11E+07	1.45E+04	2.79E+03
Thallium (81)	Tl-201	3.52E-07	1.63E-07	9.29E-02	8.31E+01	1.36E+09	2.11E+07	1.11E+04	2.74E+03
Thallium (81)	Tl-202	1.67E-06	7.03E-07	5.13E-01	2.07E+01	1.36E+09	2.11E+07	5.86E+02	1.55E+02
Thallium (81)	Tl-204	4.44E-06	1.44E-06	1.26E-02	1.83E-01	1.36E+09	2.11E+07	1.18E+01	3.71E+00
Thallium (81)	Tl-206			7.08E-02	8.67E+04	1.36E+09	2.11E+07		
Thallium (81)	Tl-207			6.49E-02	7.64E+04	1.36E+09	2.11E+07		
Thallium (81)	Tl-208			3.47E+00	1.19E+05	1.36E+09	2.11E+07		
Thallium (81)	Tl-209			2.24E+00	1.66E+05	1.36E+09	2.11E+07		
Thulium (69)	Tm-162	1.07E-07	5.92E-08	1.90E+00	1.68E+04	1.36E+09	2.11E+07	7.29E+06	1.58E+06
Thulium (69)	Tm-166	1.04E-06	6.29E-07	1.98E+00	7.88E+02	1.36E+09	2.11E+07	3.52E+04	7.14E+03
Thulium (69)	Tm-167	2.07E-06	4.07E-06	1.53E-01	2.74E+01	1.36E+09	2.11E+07	5.37E+02	4.41E+01
Thulium (69)	Tm-170	4.81E-06	2.59E-05	3.08E-02	1.97E+00	1.36E+09	2.11E+07	1.48E+01	6.05E-01
Thulium (69)	Tm-171	4.07E-07	5.18E-06	6.48E-04	3.61E-01	1.36E+09	2.11E+07	6.06E+01	1.60E+00
Thulium (69)	Tm-172	6.29E-06	4.07E-06	5.68E-01	9.55E+01	1.36E+09	2.11E+07	7.00E+02	1.35E+02
Thulium (69)	Tm-173	1.15E-06	6.66E-07	4.53E-01	7.37E+02	1.36E+09	2.11E+07	2.98E+04	6.25E+03
Thulium (69)	Tm-175	9.99E-08	6.66E-08	1.21E+00	2.40E+04	1.36E+09	2.11E+07	1.10E+07	2.08E+06
Uranium (92)	U-230	2.07E-04	4.81E-02	1.81E-03	1.22E+01	1.36E+09	2.11E+07	1.10E-01	1.78E-03
Uranium (92)	U-231	1.04E-06	1.74E-06	7.47E-02	6.02E+01	1.36E+09	2.11E+07	2.43E+03	2.24E+02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Uranium (92)	U-232	1.22E-03	2.89E-02	9.42E-04	9.63E-03	1.36E+09	2.11E+07	1.14E-02	2.43E-04
Uranium (92)	U-233	1.89E-04	1.33E-02	6.99E-04	4.37E-06	1.36E+09	2.11E+07	3.01E-02	5.27E-04
Uranium (92)	U-234	1.81E-04	1.30E-02	6.84E-04	2.83E-06	1.36E+09	2.11E+07	3.10E-02	5.42E-04
Uranium (92)	U-235	1.74E-04	1.15E-02	1.63E-01	9.85E-10	1.36E+09	2.11E+07	3.47E-02	6.12E-04
Uranium (92)	U-235+D			1.82E-01	9.85E-10	1.36E+09	2.11E+07		
Uranium (92)	U-235+E			1.82E-01	9.85E-10	1.36E+09	2.11E+07		
Uranium (92)	U-236	1.74E-04	1.18E-02	5.87E-04	2.96E-08	1.36E+09	2.11E+07	3.37E-02	5.92E-04
Uranium (92)	U-237	2.81E-06	6.29E-06	1.44E-01	3.75E+01	1.36E+09	2.11E+07	5.29E+02	3.94E+01
Uranium (92)	U-238	1.67E-04	1.07E-02	4.94E-04	1.55E-10	1.36E+09	2.11E+07	3.70E-02	6.54E-04
Uranium (92)	U-238+D	1.67E-04	1.07E-02		1.55E-10	1.36E+09	2.11E+07	3.70E-02	6.54E-04
Uranium (92)	U-238+E	1.67E-04	1.07E-02	1.41E-01	1.55E-10	1.36E+09	2.11E+07	3.70E-02	6.54E-04
Uranium (92)	U-239	9.99E-08	8.14E-08	9.63E-02	1.55E+04	1.36E+09	2.11E+07	7.02E+06	1.14E+06
Uranium (92)	U-240	4.07E-06	1.96E-06	3.72E-03	4.31E+02	1.36E+09	2.11E+07	4.96E+03	1.19E+03
Vanadium (23)	V-47	2.33E-07	1.07E-07	1.23E+00	1.12E+04	1.36E+09	2.11E+07	2.25E+06	5.59E+05
Vanadium (23)	V-48	7.40E-06	8.88E-06	3.17E+00	1.56E+01	1.36E+09	2.11E+07	9.19E+01	1.10E+01
Vanadium (23)	V-49	6.66E-08	1.26E-07	0.00E+00	7.67E-01	1.36E+09	2.11E+07	8.80E+02	7.44E+01
Tungsten (74)	W-176	3.70E-07	1.52E-07	1.80E-01	2.64E+03	1.36E+09	2.11E+07	3.37E+05	9.08E+04
Tungsten (74)	W-177	2.15E-07	8.88E-08	9.78E-01	2.70E+03	1.36E+09	2.11E+07	5.94E+05	1.59E+05
Tungsten (74)	W-178	8.14E-07	2.66E-07	1.33E-02	1.17E+01	1.36E+09	2.11E+07	6.83E+02	2.14E+02
Tungsten (74)	W-178+D	8.14E-07	2.66E-07		1.17E+01	1.36E+09	2.11E+07	6.83E+02	2.14E+02
Tungsten (74)	W-178+E	8.14E-07	2.66E-07		1.17E+01	1.36E+09	2.11E+07	6.83E+02	2.14E+02
Tungsten (74)	W-179	1.22E-08	3.40E-09	5.81E-02	9.71E+03	1.36E+09	2.11E+07	3.81E+07	1.33E+07
Tungsten (74)	W-181	2.81E-07	9.99E-08	4.01E-02	2.09E+00	1.36E+09	2.11E+07	4.03E+02	1.20E+02
Tungsten (74)	W-185	1.63E-06	4.44E-07	2.00E-04	3.37E+00	1.36E+09	2.11E+07	1.03E+02	3.63E+01
Tungsten (74)	W-187	2.33E-06	7.03E-07	5.46E-01	2.54E+02	1.36E+09	2.11E+07	5.21E+03	1.73E+03
Tungsten (74)	W-188	7.77E-06	2.11E-06	2.12E-03	3.64E+00	1.36E+09	2.11E+07	2.31E+01	8.18E+00
Xenon (54)	Xe-120			4.68E-01	9.11E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-121			1.97E+00	9.08E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-122			7.04E-02	3.02E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-123			7.04E-01	2.92E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-125			2.88E-01	3.57E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-127			2.99E-01	6.95E+00	1.36E+09	2.11E+07		
Xenon (54)	Xe-129m			4.85E-02	3.16E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-131m			1.87E-02	2.13E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-133			4.61E-02	4.82E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-133m			4.12E-02	1.16E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-135			2.92E-01	6.68E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-135m			4.89E-01	2.38E+04	1.36E+09	2.11E+07		
Xenon (54)	Xe-138			1.25E+00	2.57E+04	1.36E+09	2.11E+07		
Yttrium (39)	Y-86	3.55E-06	1.67E-06	3.89E+00	4.12E+02	1.36E+09	2.11E+07	5.45E+03	1.33E+03
Yttrium (39)	Y-86m	2.07E-07	9.99E-08	2.38E-01	7.59E+03	1.36E+09	2.11E+07	1.72E+06	4.12E+05
Yttrium (39)	Y-87	2.04E-06	1.37E-06	5.03E-01	7.56E+01	1.36E+09	2.11E+07	1.71E+03	3.20E+02
Yttrium (39)	Y-88	4.81E-06	1.52E-05	2.81E+00	2.37E+00	1.36E+09	2.11E+07	2.00E+01	1.16E+00
Yttrium (39)	Y-90	9.99E-06	5.18E-06	1.28E-01	9.49E+01	1.36E+09	2.11E+07	4.44E+02	1.01E+02
Yttrium (39)	Y-90m	6.29E-07	3.52E-07	6.97E-01	1.90E+03	1.36E+09	2.11E+07	1.41E+05	3.03E+04
Yttrium (39)	Y-91	8.88E-06	2.63E-05	8.71E-02	4.32E+00	1.36E+09	2.11E+07	1.84E+01	1.12E+00
Yttrium (39)	Y-91m	4.07E-08	3.70E-08	5.95E-01	7.33E+03	1.36E+09	2.11E+07	8.09E+06	1.20E+06
Yttrium (39)	Y-92	1.81E-06	6.29E-07	4.47E-01	1.71E+03	1.36E+09	2.11E+07	4.50E+04	1.36E+04
Yttrium (39)	Y-93	4.44E-06	1.48E-06	2.45E-01	6.01E+02	1.36E+09	2.11E+07	6.45E+03	2.00E+03
Yttrium (39)	Y-94	3.00E-07	9.99E-08	1.39E+00	1.91E+04	1.36E+09	2.11E+07	3.03E+06	9.40E+05
Yttrium (39)	Y-95	1.70E-07	5.55E-08	1.06E+00	3.40E+04	1.36E+09	2.11E+07	9.54E+06	3.00E+06
Ytterbium (70)	Yb-162	8.51E-08	4.81E-08	1.42E-01	1.93E+04	1.36E+09	2.11E+07	1.05E+07	2.25E+06
Ytterbium (70)	Yb-166	3.52E-06	2.66E-06	8.68E-02	1.07E+02	1.36E+09	2.11E+07	1.39E+03	2.38E+02
Ytterbium (70)	Yb-167	2.48E-08	2.41E-08	2.77E-01	2.08E+04	1.36E+09	2.11E+07	3.75E+07	5.31E+06
Ytterbium (70)	Yb-169	2.63E-06	9.25E-06	3.24E-01	7.90E+00	1.36E+09	2.11E+07	1.07E+02	5.77E+00
Ytterbium (70)	Yb-175	1.63E-06	2.41E-06	4.36E-02	6.04E+01	1.36E+09	2.11E+07	1.58E+03	1.61E+02
Ytterbium (70)	Yb-177	3.26E-07	2.37E-07	2.53E-01	3.20E+03	1.36E+09	2.11E+07	4.49E+05	7.93E+04
Ytterbium (70)	Yb-178	4.44E-07	2.59E-07	4.20E-02	4.92E+03	1.36E+09	2.11E+07	5.15E+05	1.07E+05
Zinc (30)	Zn-62	3.48E-06	1.85E-06	4.84E-01	6.56E+02	1.36E+09	2.11E+07	8.80E+03	1.97E+03
Zinc (30)	Zn-63	2.92E-07	1.30E-07	1.35E+00	9.56E+03	1.36E+09	2.11E+07	1.54E+06	3.93E+05
Zinc (30)	Zn-65	1.44E-05	5.92E-06	6.31E-01	1.04E+00	1.36E+09	2.11E+07	5.26E+00	1.42E+00

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Zinc (30)	Zn-69	1.15E-07	9.62E-08	2.43E-02	6.39E+03	1.36E+09	2.11E+07	2.52E+06	3.99E+05
Zinc (30)	Zn-69m	1.22E-06	8.88E-07	4.64E-01	4.41E+02	1.36E+09	2.11E+07	1.65E+04	2.92E+03
Zinc (30)	Zn-71m	8.88E-07	5.55E-07	1.80E+00	1.55E+03	1.36E+09	2.11E+07	8.06E+04	1.60E+04
Zinc (30)	Zn-72	5.18E-06	4.44E-06	1.56E-01	1.31E+02	1.36E+09	2.11E+07	1.14E+03	1.77E+02
Zirconium (40)	Zr-86	3.18E-06	1.55E-06	2.99E-01	3.68E+02	1.36E+09	2.11E+07	5.42E+03	1.29E+03
Zirconium (40)	Zr-88	1.67E-06	9.62E-06	4.40E-01	3.03E+00	1.36E+09	2.11E+07	5.80E+01	2.27E+00
Zirconium (40)	Zr-89	2.92E-06	1.92E-06	1.28E+00	7.74E+01	1.36E+09	2.11E+07	1.22E+03	2.33E+02
Zirconium (40)	Zr-93	4.07E-06	3.70E-05	0.00E+00	4.53E-07	1.36E+09	2.11E+07	6.09E+00	1.87E-01
Zirconium (40)	Zr-95	3.52E-06	1.78E-05	8.22E-01	3.95E+00	1.36E+09	2.11E+07	3.65E+01	1.55E+00
Zirconium (40)	Zr-97	7.77E-06	3.40E-06	2.92E-01	3.59E+02	1.36E+09	2.11E+07	2.18E+03	5.60E+02

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Actinium (89)	Ac-223+D	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	0.907	1.66E+05	2.96E+06	1.27E+07	4.72E+06	3.18E+06	7.11E+06	7.73E-09
Actinium (89)	Ac-223+E	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	0.907	1.66E+05	2.96E+06	1.27E+07	4.72E+06	3.18E+06	7.11E+06	7.73E-09
Actinium (89)	Ac-224	7.72E-01	2.05E-01	5.50E-01	7.53E-01	2.07E-01	1	2.09E+03	1.32E+04	4.97E+04	1.85E+04	1.35E+04	4.93E+04	2.74E-09
Actinium (89)	Ac-225	5.76E-02	1.64E-02	4.25E-02	5.65E-02	1.72E-02	0.978	2.53E+01	2.18E+03	7.66E+03	2.96E+03	2.23E+03	7.34E+03	3.77E-08
Actinium (89)	Ac-225+D	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	0.963	2.53E+01	1.08E+02	5.04E+02	1.80E+02	1.19E+02	4.28E+02	1.87E-09
Actinium (89)	Ac-225+E	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	0.963	2.53E+01	1.08E+02	5.04E+02	1.80E+02	1.19E+02	4.28E+02	1.87E-09
Actinium (89)	Ac-226	5.67E-01	1.40E-01	3.86E-01	5.48E-01	1.58E-01	1	2.09E+02	1.80E+03	7.28E+03	2.64E+03	1.86E+03	6.47E+03	3.76E-09
Actinium (89)	Ac-227	4.46E-04	1.31E-04	3.36E-04	4.40E-04	1.65E-04	1	3.18E-02	1.11E+04	3.76E+04	1.47E+04	1.12E+04	3.00E+04	1.54E-04
Actinium (89)	Ac-228	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	0.969	9.90E+02	8.80E+02	4.63E+03	1.62E+03	1.02E+03	4.54E+03	3.93E-10
Silver (47)	Ag-102	2.00E+01	3.71E+00	1.07E+01	1.71E+01	3.72E+00	0.833	2.82E+04	8.27E+03	4.44E+04	1.54E+04	9.67E+03	4.43E+04	5.79E-11
Silver (47)	Ag-103	4.18E+00	8.47E-01	2.41E+00	3.73E+00	8.69E-01	0.938	5.54E+03	6.89E+03	3.40E+04	1.20E+04	7.71E+03	3.31E+04	2.48E-10
Silver (47)	Ag-103+D	4.18E+00	8.49E-01	2.41E+00	3.73E+00	8.80E-01	0.938	5.54E+03	6.89E+03	3.39E+04	1.20E+04	7.71E+03	3.27E+04	2.48E-10
Silver (47)	Ag-104	1.56E+01	2.98E+00	8.56E+00	1.36E+01	2.94E+00	0.867	5.26E+03	1.89E+03	9.90E+03	3.45E+03	2.18E+03	1.00E+04	7.24E-11
Silver (47)	Ag-104m	6.88E+00	1.31E+00	3.75E+00	5.93E+00	1.33E+00	0.856	1.09E+04	8.98E+03	4.73E+04	1.65E+04	1.04E+04	4.65E+04	1.67E-10
Silver (47)	Ag-105	2.70E+00	5.73E-01	1.63E+00	2.48E+00	5.72E-01	0.905	6.17E+00	1.23E+01	5.81E+01	2.04E+01	1.34E+01	5.81E+01	4.06E-10
Silver (47)	Ag-106	3.90E+00	8.09E-01	2.29E+00	3.52E+00	8.65E-01	0.916	1.52E+04	2.07E+04	9.98E+04	3.52E+04	2.29E+04	9.34E+04	2.80E-10
Silver (47)	Ag-106m	1.64E+01	3.13E+00	9.01E+00	1.42E+01	3.08E+00	0.881	3.01E+01	1.02E+01	5.30E+01	1.84E+01	1.17E+01	5.39E+01	6.95E-11
Silver (47)	Ag-108	1.14E-01	2.98E-02	7.03E-02	1.04E-01	1.05E-01	0.878	1.54E+05	7.45E+06	2.85E+07	1.21E+07	8.20E+06	8.15E+06	1.02E-08
Silver (47)	Ag-108m	9.01E+00	1.82E+00	5.20E+00	8.08E+00	1.81E+00	0.88	5.46E-03	6.16E-01	3.04E+00	1.07E+00	6.87E-01	3.07E+00	2.36E-08
Silver (47)	Ag-108m+D	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	0.88	5.46E-03	6.14E-01	3.04E+00	1.07E+00	6.87E-01	3.05E+00	2.36E-08
Silver (47)	Ag-108m+E	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	0.88							
Silver (47)	Ag-109m	1.02E-02	4.16E-03	8.60E-03	1.02E-02	8.78E-03	0.995	5.52E+05	2.64E+08	6.49E+08	3.14E+08	2.64E+08	3.08E+08	1.01E-07
Silver (47)	Ag-110	2.37E-01	6.99E-02	1.48E-01	2.14E-01	1.90E-01	0.87	8.88E+05	2.10E+07	7.11E+07	3.35E+07	2.32E+07	2.61E+07	5.04E-09
Silver (47)	Ag-110m	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918	1.01E+00	5.21E-01	2.76E+00	9.56E-01	6.02E-01	2.80E+00	1.10E-10
Silver (47)	Ag-110m+D	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918	1.01E+00	5.21E-01	2.76E+00	9.56E-01	6.02E-01	2.80E+00	1.10E-10
Silver (47)	Ag-110m+E	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918							
Silver (47)	Ag-111	1.40E-01	3.19E-02	8.78E-02	1.31E-01	6.16E-02	0.902	3.40E+01	1.31E+03	5.74E+03	2.09E+03	1.40E+03	2.97E+03	8.33E-09
Silver (47)	Ag-112	4.05E+00	7.70E-01	2.16E+00	3.43E+00	8.71E-01	0.871	1.95E+03	2.69E+03	1.41E+04	5.03E+03	3.17E+03	1.25E+04	3.00E-10
Silver (47)	Ag-115	4.31E+00	7.96E-01	2.26E+00	3.62E+00	8.75E-01	0.878	1.82E+04	2.34E+04	1.27E+05	4.47E+04	2.79E+04	1.15E+05	2.87E-10
Aluminum (13)	Al-26	1.65E+01	2.93E+00	8.47E+00	1.37E+01	2.88E+00	0.845	9.68E-07	3.49E-01	1.97E+00	6.80E-01	4.20E-01	2.00E+00	1.82E-05
Aluminum (13)	Al-28	1.16E+01	1.94E+00	5.61E+00	9.29E+00	2.00E+00	0.814	1.63E+05	8.41E+04	5.01E+05	1.73E+05	1.05E+05	4.87E+05	2.81E-11
Americium (95)	Am-237	1.71E+00	3.95E-01	1.10E+00	1.60E+00	3.94E-01	0.945	4.99E+03	1.50E+04	6.50E+04	2.34E+04	1.60E+04	6.51E+04	1.38E-09
Americium (95)	Am-238	5.02E+00	9.74E-01	2.78E+00	4.35E+00	9.65E-01	0.95	3.72E+03	3.80E+03	1.96E+04	6.85E+03	4.38E+03	1.97E+04	4.72E-10
Americium (95)	Am-239	8.82E-01	2.37E-01	6.32E-01	8.62E-01	2.43E-01	0.999	5.10E+02	2.82E+03	1.05E+04	3.93E+03	2.88E+03	1.02E+04	2.56E-09
Americium (95)	Am-240	5.84E+00	1.13E+00	3.21E+00	5.07E+00	1.12E+00	0.966	1.20E+02	1.03E+02	5.34E+02	1.88E+02	1.19E+02	5.39E+02	4.02E-10
Americium (95)	Am-241	3.71E-02	1.84E-02	3.45E-02	3.71E-02	2.72E-02	0.965	1.60E-03	1.36E+02	2.75E+02	1.46E+02	1.36E+02	1.86E+02	3.97E-05
Americium (95)	Am-242	4.48E-02	1.40E-02	3.51E-02	4.48E-02	1.88E-02	0.998	3.79E+02	4.13E+04	1.32E+05	5.27E+04	4.13E+04	9.84E+04	5.12E-08
Americium (95)	Am-242m	1.44E-03	6.47E-04	1.19E-03	1.43E-03	2.64E-03	0.999	4.56E-03	3.40E+03	7.54E+03	4.11E+03	3.42E+03	1.85E+03	3.24E-04
Americium (95)	Am-242m+D	6.15E-02	1.74E-02	4.44E-02	5.93E-02	2.44E-02	0.998	4.56E-03	7.94E+01	2.80E+02	1.10E+02	8.24E+01	2.00E+02	7.59E-06
Americium (95)	Am-242m+E	6.15E-02	1.75E-02	4.44E-02	5.95E-02	2.50E-02	0.998	4.56E-03	7.94E+01	2.79E+02	1.10E+02	8.22E+01	1.96E+02	7.59E-06
Americium (95)	Am-243	1.24E-01	4.90E-02	1.08E-01	1.24E-01	5.59E-02	0.954	9.39E-05	4.11E+01	1.04E+02	4.73E+01	4.11E+01	9.13E+01	2.07E-04
Americium (95)	Am-243+D	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	0.958	9.39E-05	6.25E+00	2.25E+01	8.65E+00	6.42E+00	2.16E+01	3.14E-05
Americium (95)	Am-243+E	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	0.958	9.39E-05	6.25E+00	2.25E+01	8.65E+00	6.42E+00	2.16E+01	3.14E-05
Americium (95)	Am-244	4.48E+00	8.84E-01	2.52E+00	3.95E+00	8.87E-01	0.877	6.01E+02	7.45E+02	3.77E+03	1.32E+03	8.44E+02	3.76E+03	5.87E-10
Americium (95)	Am-244m	1.07E-02	6.51E-03	8.95E-03	1.05E-02	6.48E-02	0.999	1.40E+04	6.36E+06	1.05E+07	7.62E+06	6.51E+06	1.05E+06	2.15E-07
Americium (95)	Am-245	1.33E-01	3.43E-02	9.21E-02	1.29E-01	4.81E-02	0.926	2.96E+03	1.17E+05	4.54E+05	1.69E+05	1.21E+05	3.24E+05	1.88E-08
Americium (95)	Am-246	3.67E+00	7.61E-01	2.14E+00	3.30E+00	7.94E-01	0.933	9.34E+03	1.33E+04	6.40E+04	2.27E+04	1.48E+04	6.14E+04	6.78E-10
Americium (95)	Am-246m	6.01E+00	1.13E+00	3.25E+00	5.17E+00	1.16E+00	0.979	1.46E+04	1.21E+04	6.41E+04	2.23E+04	1.40E+04	6.24E+04	3.95E-10
Argon (18)	Ar-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.22E+00						
Argon (18)	Ar-39	8.02E-04	2.95E-04	6.29E-04	7.89E-04	2.95E-03	0.927	2.58E-03	6.55E+03	1.78E+04	8.36E+03	6.66E+03	1.78E+03	1.93E-04
Argon (18)	Ar-41	7.93E+00	1.41E+00	4.08E+00	6.62E+00	1.42E+00	0.833	3.32E+03	2.45E+03	1.38E+04	4.75E+03	2.93E+03	1.36E+04	5.86E-11
Arsenic (33)	As-69	5.60E+00	1.19E+00	3.32E+00	5.09E+00	1.30E+00	0.883	2.40E+04	2.36E+04	1.11E+05	3.98E+04	2.59E+04	1.02E+05	1.32E-10
Arsenic (33)	As-69+D	1.06E+01	2.16E+00	6.12E+00	9.49E+00	2.28E+00	0.925	2.40E+04	1.19E+04	5.83E+04	2.06E+04	1.33E+04	5.54E+04	6.64E-11
Arsenic (33)	As-70	2.44E+01	4.55E+00	1.31E+01	2.09E+01	4.55E+00	0.87	6.92E+03	1.59E+03	8.51E+03	2.96E+03	1.85E+03	8.51E+03	3.11E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Arsenic (33)	As-71	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	0.884	9.37E+01	1.73E+02	8.09E+02	2.85E+02	1.88E+02	8.15E+02	2.54E-10
Arsenic (33)	As-71+D	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	0.884	9.37E+01	1.73E+02	8.09E+02	2.85E+02	1.88E+02	8.15E+02	2.54E-10
Arsenic (33)	As-72	1.03E+01	2.03E+00	5.80E+00	9.08E+00	2.11E+00	0.863	2.33E+02	1.28E+02	6.48E+02	2.27E+02	1.45E+02	6.23E+02	7.64E-11
Arsenic (33)	As-73	7.83E-03	4.31E-03	7.52E-03	7.83E-03	6.05E-03	0.994	3.15E+00	2.06E+03	3.74E+03	2.14E+03	2.06E+03	2.67E+03	9.25E-08
Arsenic (33)	As-74	4.21E+00	8.60E-01	2.44E+00	3.79E+00	8.72E-01	0.877	1.42E+01	1.88E+01	9.19E+01	3.23E+01	2.09E+01	9.07E+01	1.89E-10
Arsenic (33)	As-76	2.54E+00	5.13E-01	1.42E+00	2.22E+00	6.12E-01	0.875	2.31E+02	5.06E+02	2.50E+03	9.00E+02	5.78E+02	2.10E+03	3.23E-10
Arsenic (33)	As-77	4.53E-02	1.03E-02	2.87E-02	4.25E-02	1.65E-02	0.9	1.56E+02	1.87E+04	8.25E+04	2.95E+04	1.99E+04	5.14E+04	1.78E-08
Arsenic (33)	As-78	7.63E+00	1.43E+00	4.05E+00	6.49E+00	1.51E+00	0.858	4.02E+03	2.99E+03	1.60E+04	5.63E+03	3.51E+03	1.51E+04	1.13E-10
Astatine (85)	At-207	7.61E+00	1.45E+00	4.14E+00	6.55E+00	1.42E+00	0.934	3.37E+03	2.31E+03	1.21E+04	4.24E+03	2.68E+03	1.23E+04	2.75E-10
Astatine (85)	At-211	1.03E-01	3.60E-02	8.41E-02	1.02E-01	3.87E-02	1	8.42E+02	3.98E+04	1.14E+05	4.87E+04	4.02E+04	1.06E+05	1.94E-08
Astatine (85)	At-211+D	1.29E-01	4.10E-02	9.88E-02	1.25E-01	4.38E-02	0.985	8.42E+02	3.22E+04	1.01E+05	4.21E+04	3.33E+04	9.50E+04	1.57E-08
Astatine (85)	At-211+E	3.82E+00	7.52E-01	2.14E+00	3.32E+00	7.49E-01	0.985	8.42E+02	1.09E+03	5.53E+03	1.94E+03	1.25E+03	5.55E+03	5.29E-10
Astatine (85)	At-215	1.02E-03	2.18E-04	6.21E-04	9.44E-04	2.15E-04	0.894	2.19E+11	1.16E+15	5.45E+15	1.92E+15	1.26E+15	5.54E+15	2.22E-06
Astatine (85)	At-216	3.99E-03	1.41E-03	3.32E-03	3.99E-03	1.51E-03	0.954	7.28E+10	9.31E+13	2.64E+14	1.12E+14	9.31E+13	2.47E+14	5.36E-07
Astatine (85)	At-217	1.65E-03	3.47E-04	9.81E-04	1.50E-03	3.42E-04	0.889	6.77E+08	2.24E+12	1.07E+13	3.78E+12	2.47E+12	1.08E+13	1.39E-06
Astatine (85)	At-218	4.87E-03	2.70E-03	4.66E-03	4.87E-03	4.25E-03	0.995	1.09E+07	1.10E+10	1.98E+10	1.15E+10	1.10E+10	1.26E+10	4.25E-07
Gold (79)	Au-193	5.48E-01	1.57E-01	3.94E-01	5.28E-01	1.66E-01	0.95	3.44E+02	3.21E+03	1.12E+04	4.48E+03	3.34E+03	1.06E+04	3.50E-09
Gold (79)	Au-194	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	1.54E+02	1.27E+02	6.77E+02	2.37E+02	1.49E+02	6.90E+02	3.12E-10
Gold (79)	Au-195	1.81E-01	7.24E-02	1.58E-01	1.81E-01	8.23E-02	0.96	1.38E+00	5.17E+01	1.29E+02	5.94E+01	5.17E+01	1.14E+02	1.41E-08
Gold (79)	Au-195m	9.33E-01	2.18E-01	6.10E-01	8.90E-01	2.15E-01	0.917	7.17E+05	4.08E+06	1.74E+07	6.24E+06	4.27E+06	1.77E+07	2.15E-09
Gold (79)	Au-198	2.16E+00	4.59E-01	1.31E+00	1.98E+00	4.75E-01	0.892	9.38E+01	2.37E+02	1.12E+03	3.92E+02	2.59E+02	1.08E+03	9.69E-10
Gold (79)	Au-198m	2.41E+00	6.12E-01	1.66E+00	2.33E+00	6.10E-01	0.922	1.10E+02	2.41E+02	9.49E+02	3.49E+02	2.49E+02	9.51E+02	8.43E-10
Gold (79)	Au-199	3.54E-01	9.34E-02	2.52E-01	3.47E-01	9.30E-02	0.93	8.06E+01	1.19E+03	4.51E+03	1.67E+03	1.22E+03	4.53E+03	5.70E-09
Gold (79)	Au-200	1.63E+00	3.17E-01	8.90E-01	1.40E+00	3.93E-01	0.897	7.53E+03	2.50E+04	1.29E+05	4.59E+04	2.91E+04	1.04E+05	1.29E-09
Gold (79)	Au-200m	1.13E+01	2.33E+00	6.68E+00	1.03E+01	2.31E+00	0.978	3.25E+02	1.42E+02	6.93E+02	2.42E+02	1.57E+02	6.99E+02	1.70E-10
Gold (79)	Au-201	2.89E-01	6.32E-02	1.73E-01	2.63E-01	1.05E-01	0.902	1.38E+04	2.58E+05	1.18E+06	4.29E+05	2.83E+05	7.06E+05	7.28E-09
Barium (56)	Ba-126	7.37E-01	1.64E-01	4.55E-01	6.83E-01	1.76E-01	0.94	3.77E+03	2.65E+04	1.19E+05	4.29E+04	2.86E+04	1.11E+05	1.72E-09
Barium (56)	Ba-128	2.67E-01	6.60E-02	1.75E-01	2.54E-01	7.91E-02	0.966	1.04E+02	1.97E+03	7.94E+03	3.00E+03	2.07E+03	6.63E+03	4.69E-09
Barium (56)	Ba-131	2.24E+00	4.90E-01	1.37E+00	2.05E+00	5.01E-01	0.905	2.14E+01	5.15E+01	2.35E+02	8.41E+01	5.62E+01	2.30E+02	6.11E-10
Barium (56)	Ba-131m	2.16E-01	6.88E-02	1.68E-01	2.14E-01	7.82E-02	0.954	2.49E+04	5.88E+05	1.85E+06	7.56E+05	5.93E+05	1.63E+06	5.99E-09
Barium (56)	Ba-133	1.82E+00	4.18E-01	1.15E+00	1.70E+00	4.35E-01	0.912	6.45E-02	3.03E+00	1.32E+01	4.78E+00	3.23E+00	1.27E+01	1.21E-08
Barium (56)	Ba-133m	2.50E-01	6.06E-02	1.62E-01	2.37E-01	6.97E-02	0.962	1.56E+02	3.16E+03	1.30E+04	4.87E+03	3.33E+03	1.13E+04	5.22E-09
Barium (56)	Ba-135m	2.16E-01	5.35E-02	1.42E-01	2.07E-01	6.28E-02	0.961	2.12E+02	4.95E+03	2.00E+04	7.56E+03	5.17E+03	1.71E+04	6.13E-09
Barium (56)	Ba-137m	3.38E+00	6.71E-01	1.92E+00	3.00E+00	6.76E-01	0.877	1.43E+05	2.35E+05	1.18E+06	4.12E+05	2.64E+05	1.17E+06	4.37E-10
Barium (56)	Ba-139	2.24E-01	6.68E-02	1.55E-01	2.13E-01	1.70E-01	0.909	4.40E+03	1.05E+05	3.53E+05	1.53E+05	1.11E+05	1.38E+05	6.45E-09
Barium (56)	Ba-140	9.60E-01	2.03E-01	5.73E-01	8.77E-01	2.22E-01	0.888	1.99E+01	1.13E+02	5.35E+02	1.90E+02	1.24E+02	4.91E+02	1.55E-09
Barium (56)	Ba-141	4.76E+00	9.57E-01	2.70E+00	4.20E+00	1.03E+00	0.894	1.99E+04	2.28E+04	1.13E+05	4.01E+04	2.59E+04	1.05E+05	3.13E-10
Barium (56)	Ba-142	6.04E+00	1.16E+00	3.32E+00	5.24E+00	1.18E+00	0.905	3.44E+04	3.06E+04	1.59E+05	5.57E+04	3.53E+04	1.57E+05	2.45E-10
Beryllium (4)	Be-10	1.00E-03	3.66E-04	7.85E-04	9.88E-04	3.98E-03	0.927	4.33E-07	5.23E+03	1.44E+04	6.69E+03	5.31E+03	1.32E+03	2.34E-01
Beryllium (4)	Be-7	2.69E-01	5.60E-02	1.59E-01	2.44E-01	5.51E-02	0.886	4.75E+00	9.79E+01	4.70E+02	1.65E+02	1.08E+02	4.77E+02	2.80E-10
Bismuth (83)	Bi-200	1.33E+01	2.67E+00	7.59E+00	1.18E+01	2.64E+00	0.924	1.00E+04	3.97E+03	1.98E+04	6.94E+03	4.48E+03	2.00E+04	1.54E-10
Bismuth (83)	Bi-201	7.55E+00	1.48E+00	4.20E+00	6.58E+00	1.49E+00	0.867	3.37E+03	2.51E+03	1.28E+04	4.51E+03	2.88E+03	1.27E+04	2.90E-10
Bismuth (83)	Bi-202	1.55E+01	3.00E+00	8.60E+00	1.35E+01	2.96E+00	0.951	3.64E+03	1.20E+03	6.20E+03	2.16E+03	1.38E+03	6.28E+03	1.29E-10
Bismuth (83)	Bi-203	1.44E+01	2.59E+00	7.48E+00	1.20E+01	2.54E+00	0.951	5.16E+02	1.83E+02	1.02E+03	3.53E+02	2.20E+02	1.04E+03	1.40E-10
Bismuth (83)	Bi-205	1.02E+01	1.84E+00	5.28E+00	8.50E+00	1.80E+00	0.962	1.65E+01	8.21E+00	4.55E+01	1.58E+01	9.83E+00	4.65E+01	1.98E-10
Bismuth (83)	Bi-206	1.90E+01	3.62E+00	1.04E+01	1.64E+01	3.57E+00	0.94	4.05E+01	1.10E+01	5.80E+01	2.02E+01	1.28E+01	5.87E+01	1.09E-10
Bismuth (83)	Bi-207	8.82E+00	1.70E+00	4.87E+00	7.67E+00	1.69E+00	0.865	1.82E-02	6.44E-01	3.33E+00	1.17E+00	7.41E-01	3.36E+00	1.42E-08
Bismuth (83)	Bi-210	5.45E-03	3.15E-03	4.53E-03	5.35E-03	4.10E-02	0.927	5.05E+01	4.87E+04	8.41E+04	5.85E+04	4.95E+04	6.47E+03	3.93E-07
Bismuth (83)	Bi-210m	1.27E+00	2.85E-01	8.09E-01	1.20E+00	2.80E-01	0.906	2.31E-07	4.22E+00	1.88E+01	6.64E+00	4.48E+00	1.92E+01	7.45E-03
Bismuth (83)	Bi-210m+D	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	0.906	2.31E-07	4.18E+00	1.83E+01	6.55E+00	4.43E+00	1.53E+01	7.37E-03
Bismuth (83)	Bi-210m+E	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	0.906							
Bismuth (83)	Bi-211	2.37E-01	5.22E-02	1.48E-01	2.22E-01	5.13E-02	0.903	1.70E+05	3.87E+06	1.76E+07	6.20E+06	4.13E+06	1.79E+07	9.32E-09
Bismuth (83)	Bi-212	1.11E+00	2.14E-01	6.02E-01	9.55E-01	2.63E-01	0.991	6.02E+03	2.66E+04	1.38E+05	4.90E+04	3.09E+04	1.13E+05	1.82E-09
Bismuth (83)	Bi-212+D	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	0.896	6.02E+03	3.65E+03	2.19E+04	7.55E+03	4.55E+03	2.17E+04	2.50E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Bismuth (83)	Bi-212+E	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	0.896	6.02E+03	3.65E+03	2.19E+04	7.55E+03	4.55E+03	2.17E+04	2.50E-10
Bismuth (83)	Bi-213	7.16E-01	1.54E-01	4.33E-01	6.55E-01	1.96E-01	1	7.98E+03	5.42E+04	2.52E+05	8.97E+04	5.93E+04	1.98E+05	2.81E-09
Bismuth (83)	Bi-213+D	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	0.968	7.98E+03	4.09E+04	1.97E+05	7.03E+04	4.58E+04	1.61E+05	2.12E-09
Bismuth (83)	Bi-213+E	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	0.968	7.98E+03	4.09E+04	1.97E+05	7.03E+04	4.58E+04	1.61E+05	2.12E-09
Bismuth (83)	Bi-214	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	0.925	1.83E+04	1.03E+04	5.80E+04	2.01E+04	1.24E+04	5.73E+04	2.34E-10
Bismuth (83)	Bi-214+D	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	0.925	1.83E+04	1.03E+04	5.80E+04	2.01E+04	1.24E+04	5.73E+04	2.34E-10
Bismuth (83)	Bi-214+E	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.73E+00	0.925	1.83E+04	1.03E+04	5.79E+04	2.01E+04	1.24E+04	5.58E+04	2.34E-10
Berkelium (97)	Bk-245	9.03E-01	2.37E-01	6.38E-01	8.78E-01	2.40E-01	0.998	5.12E+01	2.77E+02	1.05E+03	3.91E+02	2.84E+02	1.04E+03	2.57E-09
Berkelium (97)	Bk-246	5.32E+00	1.04E+00	2.97E+00	4.64E+00	1.04E+00	0.88	1.38E+02	1.44E+02	7.33E+02	2.58E+02	1.65E+02	7.38E+02	4.97E-10
Berkelium (97)	Bk-247	3.95E-01	1.08E-01	2.83E-01	3.84E-01	1.10E-01	0.928	5.02E-04	1.33E+01	4.86E+01	1.85E+01	1.37E+01	4.77E+01	1.27E-05
Berkelium (97)	Bk-249	3.75E-06	2.31E-06	3.47E-06	3.73E-06	6.23E-06	0.911	7.90E-01	2.06E+06	3.34E+06	2.23E+06	2.07E+06	1.24E+06	1.26E-03
Berkelium (97)	Bk-250	5.24E+00	9.83E-01	2.83E+00	4.51E+00	9.84E-01	0.851	1.88E+03	2.06E+03	1.10E+04	3.80E+03	2.39E+03	1.10E+04	5.29E-10
Bromine (35)	Br-74	2.89E+01	4.83E+00	1.40E+01	2.31E+01	4.73E+00	0.848	1.44E+04	2.86E+03	1.71E+04	5.88E+03	3.57E+03	1.75E+04	2.85E-11
Bromine (35)	Br-74m	2.50E+01	4.48E+00	1.29E+01	2.09E+01	4.46E+00	0.867	8.78E+03	1.97E+03	1.10E+04	3.82E+03	2.36E+03	1.11E+04	3.23E-11
Bromine (35)	Br-75	6.56E+00	1.38E+00	3.92E+00	5.99E+00	1.42E+00	0.884	3.72E+03	3.12E+03	1.48E+04	5.22E+03	3.42E+03	1.44E+04	1.22E-10
Bromine (35)	Br-76	1.61E+01	2.87E+00	8.32E+00	1.34E+01	2.85E+00	0.884	3.75E+02	1.28E+02	7.18E+02	2.48E+02	1.54E+02	7.25E+02	5.04E-11
Bromine (35)	Br-77	1.69E+00	3.54E-01	1.01E+00	1.54E+00	3.49E-01	0.922	1.08E+02	3.39E+02	1.61E+03	5.66E+02	3.71E+02	1.64E+03	4.68E-10
Bromine (35)	Br-80	4.48E-01	9.19E-02	2.59E-01	4.01E-01	1.21E-01	0.888	2.09E+04	2.56E+05	1.25E+06	4.43E+05	2.86E+05	9.45E+05	1.90E-09
Bromine (35)	Br-80m	8.88E-03	6.86E-03	8.86E-03	8.88E-03	1.60E-02	0.995	1.37E+03	7.57E+05	9.79E+05	7.58E+05	7.57E+05	4.20E+05	8.55E-08
Bromine (35)	Br-82	1.54E+01	2.95E+00	8.49E+00	1.34E+01	2.89E+00	0.865	1.72E+02	6.27E+01	3.28E+02	1.14E+02	7.21E+01	3.34E+02	5.80E-11
Bromine (35)	Br-83	4.44E-02	1.01E-02	2.67E-02	4.03E-02	3.34E-02	0.881	2.54E+03	3.16E+05	1.39E+06	5.26E+05	3.48E+05	4.20E+05	2.00E-08
Bromine (35)	Br-84	1.16E+01	1.94E+00	5.58E+00	9.25E+00	1.95E+00	0.849	1.15E+04	5.65E+03	3.39E+04	1.18E+04	7.10E+03	3.37E+04	8.04E-11
Carbon (6)	C-11	5.60E+00	1.16E+00	3.30E+00	5.07E+00	1.18E+00	0.883	1.79E+04	1.76E+04	8.51E+04	2.98E+04	1.94E+04	8.36E+04	2.10E-11
Carbon (6)	C-14	1.10E-05	6.43E-06	1.03E-05	1.10E-05	1.48E-05	0.927	1.21E-04	4.79E+05	8.16E+05	5.12E+05	4.79E+05	3.54E+05	1.08E-01
Calcium (20)	Ca-41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	4.95E-06						
Calcium (20)	Ca-45	5.32E-05	2.48E-05	4.66E-05	5.32E-05	4.40E-05	1	1.55E+00	1.80E+05	3.86E+05	2.06E+05	1.80E+05	2.18E+05	1.01E-05
Calcium (20)	Ca-47	6.51E+00	1.17E+00	3.38E+00	5.46E+00	1.17E+00	0.836	5.58E+01	4.99E+01	2.78E+02	9.63E+01	5.95E+01	2.79E+02	8.16E-11
Calcium (20)	Ca-49	2.16E+01	3.21E+00	9.47E+00	1.62E+01	3.12E+00	0.778	4.18E+04	1.21E+04	8.15E+04	2.76E+04	1.61E+04	8.39E+04	2.75E-11
Cadmium (48)	Cd-104	1.22E+00	2.63E-01	7.27E-01	1.10E+00	2.75E-01	0.932	6.31E+03	2.70E+04	1.25E+05	4.53E+04	3.00E+04	1.20E+05	8.63E-10
Cadmium (48)	Cd-107	4.49E-02	1.32E-02	3.02E-02	4.20E-02	2.72E-02	0.975	9.35E+02	1.04E+05	3.54E+05	1.55E+05	1.11E+05	1.72E+05	2.31E-08
Cadmium (48)	Cd-109	1.22E-02	6.10E-03	1.06E-02	1.22E-02	1.94E-02	0.996	5.45E-01	5.20E+02	1.04E+03	5.99E+02	5.19E+02	3.27E+02	2.02E-07
Cadmium (48)	Cd-113	9.77E-05	4.18E-05	8.30E-05	9.74E-05	6.77E-05	0.927	7.45E-17	3.61E+04	8.43E+04	4.25E+04	3.62E+04	5.21E+04	1.06E+11
Cadmium (48)	Cd-113m	6.01E-04	2.24E-04	4.74E-04	5.93E-04	2.07E-03	0.927	5.10E-02	8.97E+03	2.41E+04	1.14E+04	9.08E+03	2.61E+03	3.86E-05
Cadmium (48)	Cd-115	1.27E+00	2.65E-01	7.52E-01	1.16E+00	2.84E-01	0.886	1.14E+02	4.90E+02	2.36E+03	8.30E+02	5.39E+02	2.20E+03	9.62E-10
Cadmium (48)	Cd-115m	1.47E-01	3.41E-02	8.36E-02	1.28E-01	1.08E-01	0.843	5.67E+00	2.23E+02	9.63E+02	3.93E+02	2.57E+02	3.05E+02	8.78E-09
Cadmium (48)	Cd-117	6.51E+00	1.20E+00	3.47E+00	5.54E+00	1.21E+00	0.902	2.44E+03	2.02E+03	1.10E+04	3.79E+03	2.37E+03	1.08E+04	1.88E-10
Cadmium (48)	Cd-117m	1.28E+01	2.22E+00	6.43E+00	1.05E+01	2.16E+00	0.879	1.81E+03	7.82E+02	4.51E+03	1.55E+03	9.51E+02	4.63E+03	9.82E-11
Cerium (58)	Ce-134	1.26E-02	1.03E-02	1.26E-02	1.26E-02	2.51E-02	0.976	8.43E+01	3.34E+04	4.08E+04	3.35E+04	3.34E+04	1.68E+04	1.03E-07
Cerium (58)	Ce-135	9.74E+00	2.00E+00	5.73E+00	8.80E+00	1.98E+00	0.91	3.45E+02	1.89E+02	9.24E+02	3.22E+02	2.10E+02	9.30E+02	1.44E-10
Cerium (58)	Ce-137	5.84E-02	2.00E-02	3.99E-02	5.43E-02	3.48E-02	0.97	6.75E+02	5.80E+04	1.70E+05	8.48E+04	6.24E+04	9.73E+04	2.28E-08
Cerium (58)	Ce-137m	1.76E-01	4.51E-02	1.15E-01	1.66E-01	5.51E-02	0.944	1.76E+02	5.16E+03	2.02E+04	7.89E+03	5.47E+03	1.65E+04	7.78E-09
Cerium (58)	Ce-139	5.78E-01	1.54E-01	4.08E-01	5.67E-01	1.67E-01	0.949	1.84E+00	1.94E+01	7.28E+01	2.74E+01	1.98E+01	6.72E+01	2.85E-09
Cerium (58)	Ce-141	2.89E-01	7.83E-02	2.09E-01	2.85E-01	8.09E-02	0.938	7.78E+00	1.40E+02	5.16E+02	1.93E+02	1.42E+02	4.99E+02	4.91E-09
Cerium (58)	Ce-143	1.38E+00	3.04E-01	8.39E-01	1.26E+00	3.51E-01	0.904	1.84E+02	7.19E+02	3.26E+03	1.18E+03	7.83E+02	2.82E+03	1.08E-09
Cerium (58)	Ce-144	6.45E-02	1.94E-02	4.87E-02	6.40E-02	2.15E-02	0.935	8.90E-01	1.22E+02	4.05E+02	1.61E+02	1.23E+02	3.66E+02	3.83E-08
Cerium (58)	Ce-144+D	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	0.881	8.90E-01	2.51E+01	9.16E+01	4.14E+01	2.87E+01	3.95E+01	7.89E-09
Cerium (58)	Ce-144+E	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	0.881	8.90E-01	2.51E+01	9.16E+01	4.14E+01	2.87E+01	3.95E+01	7.89E-09
Californium (98)	Cf-244	1.27E-04	1.24E-04	1.27E-04	1.27E-04	9.56E-04	0.999	1.88E+04	7.21E+08	7.37E+08	7.21E+08	7.21E+08	9.57E+07	1.82E-05
Californium (98)	Cf-246	1.45E-04	1.02E-04	1.32E-04	1.45E-04	6.69E-04	0.998	1.70E+02	5.71E+06	8.10E+06	6.30E+06	5.71E+06	1.24E+06	1.60E-05
Californium (98)	Cf-248	8.75E-05	8.52E-05	8.75E-05	8.75E-05	6.51E-04	0.999	7.58E-01	7.95E+04	8.15E+04	7.95E+04	7.95E+04	1.07E+04	5.04E-05
Californium (98)	Cf-249	1.72E+00	3.73E-01	1.06E+00	1.59E+00	3.68E-01	0.962	1.98E-03	2.94E+00	1.36E+01	4.78E+00	3.18E+00	1.38E+01	7.20E-07
Californium (98)	Cf-250	8.30E-05	8.09E-05	8.30E-05	8.30E-05	6.21E-04	0.999	5.30E-02	6.03E+04	6.18E+04	6.03E+04	6.03E+04	8.06E+03	5.52E-04
Californium (98)	Cf-251	4.79E-01	1.28E-01	3.43E-01	4.70E-01	1.32E-01	0.955	7.72E-04	1.06E+01	3.99E+01	1.49E+01	1.08E+01	3.87E+01	6.71E-06
Californium (98)	Cf-252	2.95E+00	5.13E-01	1.49E+00	2.42E+00	4.97E-01	1.69	2.63E-01	1.11E+00	6.38E+00	2.20E+00	1.35E+00	6.59E+00	2.07E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Californium (98)	Cf-253	6.53E-05	3.00E-05	5.67E-05	6.51E-05	6.03E-05	0.998	1.42E+01	1.06E+06	2.31E+06	1.22E+06	1.06E+06	1.15E+06	3.67E-05
Californium (98)	Cf-254	1.08E+02	1.88E+01	5.45E+01	8.86E+01	1.81E+01	1.68	4.18E+00	1.14E-01	6.53E-01	2.26E-01	1.39E-01	6.80E-01	1.35E-11
Chlorine (17)	Cl-36	2.48E-03	9.08E-04	1.81E-03	2.39E-03	1.31E-02	0.883	2.30E-06	2.22E+03	6.07E+03	3.04E+03	2.31E+03	4.22E+02	6.74E-02
Chlorine (17)	Cl-38	9.85E+00	1.64E+00	4.72E+00	7.83E+00	1.67E+00	0.807	9.79E+03	5.99E+03	3.61E+04	1.25E+04	7.54E+03	3.54E+04	4.52E-11
Chlorine (17)	Cl-39	8.82E+00	1.59E+00	4.59E+00	7.39E+00	1.65E+00	0.834	6.55E+03	4.33E+03	2.40E+04	8.33E+03	5.18E+03	2.32E+04	5.01E-11
Curium (96)	Cm-238	2.44E-01	7.37E-02	1.88E-01	2.42E-01	7.66E-02	0.958	2.53E+03	5.26E+04	1.74E+05	6.82E+04	5.30E+04	1.68E+05	9.60E-09
Curium (96)	Cm-240	1.12E-04	1.06E-04	1.12E-04	1.12E-04	8.97E-04	0.999	9.37E+00	4.07E+05	4.29E+05	4.07E+05	4.07E+05	5.09E+04	2.02E-05
Curium (96)	Cm-241	2.44E+00	5.41E-01	1.51E+00	2.26E+00	5.43E-01	0.999	7.71E+00	1.54E+01	6.95E+01	2.48E+01	1.67E+01	6.93E+01	9.33E-10
Curium (96)	Cm-242	1.28E-04	1.02E-04	1.19E-04	1.27E-04	8.19E-04	0.999	1.55E+00	7.48E+04	9.39E+04	8.07E+04	7.56E+04	1.17E+04	2.26E-05
Curium (96)	Cm-243	5.33E-01	1.35E-01	3.69E-01	5.17E-01	1.38E-01	0.949	2.43E-02	9.73E+00	3.83E+01	1.41E+01	1.00E+01	3.77E+01	1.89E-07
Curium (96)	Cm-244	8.93E-05	8.62E-05	8.93E-05	8.93E-05	7.52E-04	0.999	3.83E-02	5.56E+04	5.76E+04	5.56E+04	5.56E+04	6.61E+03	6.88E-04
Curium (96)	Cm-245	3.06E-01	8.99E-02	2.33E-01	3.04E-01	9.39E-02	0.952	8.15E-05	1.67E+01	5.69E+01	2.19E+01	1.68E+01	5.44E+01	9.75E-05
Curium (96)	Cm-246	8.28E-05	7.89E-05	8.26E-05	8.28E-05	6.72E-04	0.999	1.47E-04	5.88E+04	6.18E+04	5.90E+04	5.88E+04	7.25E+03	1.92E-01
Curium (96)	Cm-247	1.65E+00	3.54E-01	1.01E+00	1.53E+00	3.49E-01	0.925	4.44E-08	3.18E+00	1.48E+01	5.21E+00	3.44E+00	1.51E+01	3.44E-02
Curium (96)	Cm-247+D	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	0.925	4.44E-08	3.05E+00	1.39E+01	4.94E+00	3.29E+00	1.40E+01	3.29E-02
Curium (96)	Cm-247+E	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	0.925							
Curium (96)	Cm-248	8.47E+00	1.47E+00	4.27E+00	6.96E+00	1.42E+00	1.68	1.99E-06	3.42E-01	1.97E+00	6.78E-01	4.16E-01	2.03E+00	8.27E-05
Curium (96)	Cm-249	1.07E-01	2.26E-02	6.32E-02	9.70E-02	3.87E-02	0.909	5.68E+03	2.83E+05	1.35E+06	4.81E+05	3.13E+05	7.85E+05	2.41E-08
Curium (96)	Cm-250	6.25E+01	1.09E+01	3.15E+01	5.13E+01	1.05E+01	1.68	7.14E-05	4.64E-02	2.66E-01	9.19E-02	5.65E-02	2.76E-01	3.15E-07
Curium (96)	Cm-250+D	1.63E+00					1.68	7.14E-05	1.77E+00					1.20E-05
Curium (96)	Cm-250+E	6.42E+01	1.12E+01	3.25E+01	5.28E+01	1.08E+01	1.68	7.14E-05	4.52E-02	2.59E-01	8.93E-02	5.49E-02	2.67E-01	3.07E-07
Cobalt (27)	Co-55	1.15E+01	2.24E+00	6.42E+00	1.01E+01	2.25E+00	0.848	3.46E+02	1.72E+02	8.88E+02	3.10E+02	1.97E+02	8.82E+02	5.31E-11
Cobalt (27)	Co-56	2.24E+01	3.88E+00	1.12E+01	1.83E+01	3.77E+00	0.823	3.21E+00	8.84E-01	5.10E+00	1.76E+00	1.08E+00	5.25E+00	2.99E-11
Cobalt (27)	Co-57	4.55E-01	1.28E-01	3.38E-01	4.49E-01	1.26E-01	0.971	9.34E-01	1.69E+01	6.04E+01	2.28E+01	1.72E+01	6.12E+01	2.01E-09
Cobalt (27)	Co-58	5.60E+00	1.09E+00	3.13E+00	4.92E+00	1.08E+00	0.863	3.57E+00	3.70E+00	1.89E+01	6.62E+00	4.21E+00	1.92E+01	1.17E-10
Cobalt (27)	Co-58m	1.78E-06	1.74E-06	1.78E-06	1.78E-06	7.76E-06	0.994	6.63E+02	1.83E+09	1.87E+09	1.82E+09	1.83E+09	4.19E+08	3.10E-04
Cobalt (27)	Co-60	1.54E+01	2.74E+00	7.96E+00	1.29E+01	2.68E+00	0.834	1.31E-01	4.05E-01	2.27E+00	7.82E-01	4.83E-01	2.32E+00	3.58E-10
Cobalt (27)	Co-60m	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.11E-03	0.925	3.48E+04	7.91E+06	3.85E+07	1.44E+07	9.35E+06	3.58E+07	2.65E-08
Cobalt (27)	Co-61	3.17E-01	9.25E-02	2.18E-01	2.93E-01	1.51E-01	0.938	3.68E+03	6.02E+04	2.06E+05	8.75E+04	6.52E+04	1.27E+05	1.94E-09
Cobalt (27)	Co-62m	1.68E+01	2.97E+00	8.58E+00	1.39E+01	3.01E+00	0.828	2.62E+04	9.17E+03	5.19E+04	1.79E+04	1.10E+04	5.11E+04	4.21E-11
Chromium (24)	Cr-48	2.05E+00	4.81E-01	1.34E+00	1.94E+00	4.71E-01	0.913	2.64E+02	6.87E+02	2.93E+03	1.05E+03	7.27E+02	2.99E+03	2.42E-10
Chromium (24)	Cr-49	5.58E+00	1.19E+00	3.36E+00	5.09E+00	1.25E+00	0.892	8.65E+03	8.47E+03	3.96E+04	1.41E+04	9.27E+03	3.78E+04	9.30E-11
Chromium (24)	Cr-51	1.62E-01	3.54E-02	1.01E-01	1.52E-01	3.47E-02	0.903	9.13E+00	3.05E+02	1.39E+03	4.86E+02	3.25E+02	1.42E+03	3.30E-09
Cesium (55)	Cs-125	3.67E+00	7.59E-01	2.14E+00	3.32E+00	7.99E-01	0.878	8.09E+03	1.22E+04	5.91E+04	2.09E+04	1.35E+04	5.61E+04	3.66E-10
Cesium (55)	Cs-126	6.01E+00	1.28E+00	3.58E+00	5.46E+00	1.38E+00	0.887	2.22E+05	2.03E+05	9.51E+05	3.40E+05	2.23E+05	8.85E+05	2.23E-10
Cesium (55)	Cs-127	2.13E+00	4.53E-01	1.28E+00	1.94E+00	4.61E-01	0.898	9.71E+02	2.48E+03	1.16E+04	4.12E+03	2.71E+03	1.14E+04	6.28E-10
Cesium (55)	Cs-128	4.96E+00	1.04E+00	2.93E+00	4.49E+00	1.11E+00	0.885	9.34E+04	1.04E+05	4.95E+05	1.75E+05	1.14E+05	4.61E+05	2.75E-10
Cesium (55)	Cs-129	1.33E+00	2.91E-01	8.11E-01	1.23E+00	3.06E-01	0.898	1.89E+02	7.74E+02	3.53E+03	1.26E+03	8.38E+02	3.36E+03	1.02E-09
Cesium (55)	Cs-130	2.80E+00	5.82E-01	1.64E+00	2.54E+00	6.31E-01	0.89	1.22E+04	2.38E+04	1.14E+05	4.05E+04	2.63E+04	1.06E+05	4.93E-10
Cesium (55)	Cs-131	7.83E-03	7.03E-03	7.83E-03	7.83E-03	2.09E-02	0.983	2.61E+01	1.65E+04	1.84E+04	1.65E+04	1.65E+04	6.19E+03	1.61E-07
Cesium (55)	Cs-132	3.88E+00	7.78E-01	2.22E+00	3.45E+00	7.81E-01	0.871	3.91E+01	5.63E+01	2.81E+02	9.83E+01	6.33E+01	2.80E+02	3.69E-10
Cesium (55)	Cs-134	8.90E+00	1.75E+00	5.02E+00	7.85E+00	1.73E+00	0.865	3.36E-01	7.45E-01	3.78E+00	1.32E+00	8.44E-01	3.84E+00	5.76E-10
Cesium (55)	Cs-134m	6.49E-02	2.05E-02	4.92E-02	6.43E-02	2.63E-02	0.971	2.09E+03	1.62E+05	5.11E+05	2.13E+05	1.63E+05	4.00E+05	2.01E-08
Cesium (55)	Cs-135	3.21E-05	1.62E-05	2.89E-05	3.21E-05	3.14E-05	0.927	3.01E-07	1.64E+05	3.23E+05	1.82E+05	1.64E+05	1.67E+05	1.42E+02
Cesium (55)	Cs-135m	9.19E+00	1.78E+00	5.11E+00	8.04E+00	1.76E+00	0.861	6.87E+03	4.22E+03	2.18E+04	7.60E+03	4.83E+03	2.20E+04	1.61E-10
Cesium (55)	Cs-136	1.25E+01	2.41E+00	6.90E+00	1.09E+01	2.37E+00	0.856	1.93E+01	8.77E+00	4.56E+01	1.59E+01	1.01E+01	4.63E+01	1.20E-10
Cesium (55)	Cs-137	8.34E-04	3.86E-04	6.75E-04	8.21E-04	3.49E-03	0.927	2.31E-02	6.37E+03	1.38E+04	7.87E+03	6.47E+03	1.52E+03	7.33E-05
Cesium (55)	Cs-137+D	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	0.877	2.31E-02	1.76E+00	8.83E+00	3.09E+00	1.98E+00	8.73E+00	2.03E-08
Cesium (55)	Cs-137+E	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	0.877	2.31E-02	1.76E+00	8.83E+00	3.09E+00	1.98E+00	8.73E+00	2.03E-08
Cesium (55)	Cs-138	1.48E+01	2.59E+00	7.50E+00	1.22E+01	2.64E+00	0.885	1.13E+04	4.21E+03	2.40E+04	8.30E+03	5.11E+03	2.36E+04	9.97E-11
Copper (29)	Cu-60	2.39E+01	4.27E+00	1.23E+01	2.00E+01	4.25E+00	0.832	1.57E+04	3.85E+03	2.15E+04	7.44E+03	4.60E+03	2.16E+04	2.85E-11
Copper (29)	Cu-61	4.57E+00	9.38E-01	2.67E+00	4.12E+00	9.58E-01	0.851	1.78E+03	2.23E+03	1.09E+04	3.82E+03	2.47E+03	1.06E+04	1.48E-10
Copper (29)	Cu-62	5.60E+00	1.18E+00	3.30E+00	5.07E+00	1.30E+00	0.882	3.74E+04	3.69E+04	1.75E+05	6.25E+04	4.07E+04	1.59E+05	1.19E-10
Copper (29)	Cu-64	1.04E+00	2.14E-01	6.12E-01	9.44E-01	2.14E-01	0.882	4.78E+02	2.53E+03	1.23E+04	4.31E+03	2.79E+03	1.23E+04	6.56E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Copper (29)	Cu-66	5.58E-01	1.24E-01	3.11E-01	4.81E-01	2.37E-01	0.846	7.14E+04	7.37E+05	3.32E+06	1.32E+06	8.54E+05	1.73E+06	1.32E-09
Copper (29)	Cu-67	4.87E-01	1.24E-01	3.39E-01	4.74E-01	1.23E-01	0.924	9.81E+01	1.06E+03	4.16E+03	1.52E+03	1.09E+03	4.22E+03	1.41E-09
Dysprosium (66)	Dy-155	3.06E+00	6.23E-01	1.75E+00	2.70E+00	6.28E-01	0.916	6.07E+02	1.05E+03	5.18E+03	1.84E+03	1.19E+03	5.14E+03	5.22E-10
Dysprosium (66)	Dy-157	1.67E+00	3.82E-01	1.06E+00	1.57E+00	3.89E-01	0.904	7.49E+02	2.41E+03	1.06E+04	3.81E+03	2.57E+03	1.04E+04	9.81E-10
Dysprosium (66)	Dy-159	4.46E-02	2.82E-02	4.38E-02	4.46E-02	4.52E-02	0.96	1.75E+00	2.41E+02	3.82E+02	2.45E+02	2.41E+02	2.38E+02	4.25E-08
Dysprosium (66)	Dy-165	1.23E-01	3.13E-02	7.76E-02	1.12E-01	8.06E-02	0.94	2.60E+03	1.10E+05	4.30E+05	1.74E+05	1.20E+05	1.67E+05	1.35E-08
Dysprosium (66)	Dy-166	7.93E-02	3.19E-02	6.51E-02	7.76E-02	4.10E-02	0.944	7.44E+01	4.84E+03	1.20E+04	5.89E+03	4.94E+03	9.36E+03	2.10E-08
Erbium (68)	Er-161	5.11E+00	1.00E+00	2.83E+00	4.44E+00	9.98E-01	0.942	1.87E+03	1.89E+03	9.68E+03	3.41E+03	2.18E+03	9.70E+03	3.16E-10
Erbium (68)	Er-165	4.21E-02	2.54E-02	4.10E-02	4.21E-02	3.78E-02	0.957	5.86E+02	7.07E+04	1.17E+05	7.26E+04	7.07E+04	7.88E+04	3.86E-08
Erbium (68)	Er-169	1.20E-04	4.98E-05	1.01E-04	1.20E-04	7.88E-05	0.927	2.72E+01	1.19E+06	2.87E+06	1.41E+06	1.19E+06	1.81E+06	1.43E-05
Erbium (68)	Er-171	1.81E+00	4.18E-01	1.16E+00	1.70E+00	4.49E-01	0.905	8.07E+02	2.40E+03	1.04E+04	3.75E+03	2.55E+03	9.66E+03	9.87E-10
Erbium (68)	Er-172	2.76E+00	5.82E-01	1.64E+00	2.50E+00	5.79E-01	0.928	1.23E+02	2.34E+02	1.11E+03	3.94E+02	2.58E+02	1.12E+03	6.34E-10
Einsteinium (99)	Es-250	2.11E+00	4.27E-01	1.20E+00	1.86E+00	4.26E-01	0.888	2.89E+03	7.52E+03	3.71E+04	1.31E+04	8.54E+03	3.72E+04	1.26E-09
Einsteinium (99)	Es-251	3.26E-01	9.38E-02	2.46E-01	3.25E-01	9.79E-02	0.948	1.84E+02	2.89E+03	1.01E+04	3.84E+03	2.91E+03	9.65E+03	7.66E-09
Einsteinium (99)	Es-253	1.61E-03	4.14E-04	1.04E-03	1.50E-03	7.74E-04	0.995	1.24E+01	3.76E+04	1.46E+05	5.83E+04	4.02E+04	7.81E+04	1.49E-06
Einsteinium (99)	Es-254	1.13E-02	4.16E-03	8.47E-03	1.09E-02	1.14E-02	0.995	9.17E-01	6.60E+02	1.80E+03	8.83E+02	6.85E+02	6.56E+02	3.55E-07
Einsteinium (99)	Es-254+D	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.95E-01	0.853	9.17E-01	1.66E+00	8.84E+00	3.08E+00	1.92E+00	8.76E+00	8.90E-10
Einsteinium (99)	Es-254+E	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.97E-01	0.853	9.17E-01	1.66E+00	8.84E+00	3.08E+00	1.92E+00	8.75E+00	8.90E-10
Einsteinium (99)	Es-254m	2.63E+00	5.24E-01	1.50E+00	2.33E+00	5.34E-01	0.995	1.54E+02	2.87E+02	1.44E+03	5.04E+02	3.24E+02	1.41E+03	9.17E-10
Europium (63)	Eu-145	8.65E+00	1.59E+00	4.55E+00	7.31E+00	1.56E+00	0.875	4.26E+01	2.74E+01	1.49E+02	5.20E+01	3.24E+01	1.51E+02	1.81E-10
Europium (63)	Eu-146	1.45E+01	2.78E+00	7.96E+00	1.26E+01	2.74E+00	0.871	5.49E+01	2.11E+01	1.10E+02	3.85E+01	2.44E+01	1.12E+02	1.09E-10
Europium (63)	Eu-147	2.56E+00	5.30E-01	1.47E+00	2.28E+00	5.39E-01	0.866	1.05E+01	2.32E+01	1.12E+02	4.02E+01	2.60E+01	1.10E+02	6.27E-10
Europium (63)	Eu-148	1.23E+01	2.42E+00	6.92E+00	1.09E+01	2.40E+00	0.914	4.64E+00	2.02E+00	1.03E+01	3.61E+00	2.30E+00	1.04E+01	1.25E-10
Europium (63)	Eu-149	1.83E-01	5.20E-02	1.23E-01	1.73E-01	6.61E-02	0.924	2.72E+00	8.37E+01	2.94E+02	1.25E+02	8.88E+01	2.32E+02	8.90E-09
Europium (63)	Eu-150	8.15E+00	1.66E+00	4.74E+00	7.31E+00	1.66E+00	0.901	2.03E-02	6.69E-01	3.28E+00	1.15E+00	7.46E-01	3.29E+00	9.62E-09
Europium (63)	Eu-150m	2.46E-01	5.24E-02	1.45E-01	2.20E-01	7.91E-02	0.856	4.81E+02	1.11E+04	5.22E+04	1.89E+04	1.24E+04	3.46E+04	6.72E-09
Europium (63)	Eu-152	6.60E+00	1.26E+00	3.60E+00	5.69E+00	1.26E+00	0.919	5.20E-02	8.23E-01	4.31E+00	1.51E+00	9.55E-01	4.31E+00	4.67E-09
Europium (63)	Eu-152m	1.66E+00	3.30E-01	9.23E-01	1.45E+00	3.91E-01	0.91	6.51E+02	2.10E+03	1.06E+04	3.77E+03	2.41E+03	8.91E+03	9.50E-10
Europium (63)	Eu-154	7.25E+00	1.37E+00	3.92E+00	6.23E+00	1.37E+00	0.935	7.88E-02	7.46E-01	3.95E+00	1.38E+00	8.69E-01	3.96E+00	2.83E-09
Europium (63)	Eu-155	1.62E-01	5.63E-02	1.32E-01	1.62E-01	6.24E-02	0.941	1.40E-01	3.43E+01	9.84E+01	4.21E+01	3.43E+01	8.88E+01	7.39E-08
Europium (63)	Eu-156	8.21E+00	1.45E+00	4.20E+00	6.81E+00	1.45E+00	0.897	1.67E+01	1.10E+01	6.23E+01	2.15E+01	1.33E+01	6.24E+01	2.00E-10
Europium (63)	Eu-157	1.22E+00	2.78E-01	7.50E-01	1.12E+00	3.22E-01	0.895	4.01E+02	1.79E+03	7.84E+03	2.91E+03	1.95E+03	6.76E+03	1.36E-09
Europium (63)	Eu-158	6.30E+00	1.19E+00	3.38E+00	5.37E+00	1.26E+00	0.856	7.94E+03	7.16E+03	3.80E+04	1.34E+04	8.40E+03	3.58E+04	2.77E-10
Fluorine (9)	F-18	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.15E+00	0.883	3.32E+03	3.26E+03	1.58E+04	5.54E+03	3.59E+03	1.60E+04	3.43E-11
Iron (26)	Fe-52	3.86E+00	8.32E-01	2.35E+00	3.56E+00	8.30E-01	0.896	7.34E+02	1.03E+03	4.79E+03	1.70E+03	1.12E+03	4.80E+03	1.42E-10
Iron (26)	Fe-55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	2.57E-01						
Iron (26)	Fe-59	7.24E+00	1.31E+00	3.79E+00	6.10E+00	1.28E+00	0.839	5.68E+00	4.57E+00	2.53E+01	8.73E+00	5.42E+00	2.58E+01	9.21E-11
Iron (26)	Fe-60	9.03E-06	5.58E-06	8.58E-06	9.03E-06	1.37E-05	0.927	6.93E-06	5.82E+05	9.41E+05	6.12E+05	5.82E+05	3.85E+05	9.77E+00
Iron (26)	Fe-60+D	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	0.925	6.93E-06	2.28E+02	1.11E+03	4.14E+02	2.69E+02	1.03E+03	3.82E-03
Iron (26)	Fe-60+E	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	0.925	6.93E-06	2.28E+02	1.11E+03	4.14E+02	2.69E+02	1.03E+03	3.82E-03
Fermium (100)	Fm-252	9.42E-05	9.25E-05	9.42E-05	9.42E-05	6.31E-04	0.998	2.67E+02	1.38E+07	1.41E+07	1.38E+07	1.38E+07	2.07E+06	2.53E-05
Fermium (100)	Fm-253	2.87E-01	8.04E-02	2.13E-01	2.83E-01	8.33E-02	0.996	8.43E+01	1.43E+03	5.13E+03	1.94E+03	1.45E+03	4.94E+03	8.35E-09
Fermium (100)	Fm-254	1.88E-04	1.26E-04	1.70E-04	1.88E-04	6.99E-04	0.997	1.87E+03	4.86E+07	7.24E+07	5.38E+07	4.86E+07	1.31E+07	1.28E-05
Fermium (100)	Fm-255	5.22E-03	2.31E-03	4.40E-03	5.18E-03	7.34E-03	0.991	3.02E+02	2.84E+05	6.42E+05	3.37E+05	2.86E+05	2.02E+05	4.65E-07
Fermium (100)	Fm-257	3.90E-01	1.06E-01	2.83E-01	3.84E-01	1.11E-01	0.939	2.52E+00	3.64E+01	1.33E+02	5.01E+01	3.69E+01	1.28E+02	7.21E-09
Francium (87)	Fr-219	1.81E-02	3.92E-03	1.11E-02	1.67E-02	3.85E-03	0.897	1.04E+09	3.12E+11	1.44E+12	5.10E+11	3.38E+11	1.47E+12	1.28E-07
Francium (87)	Fr-220	4.14E-02	1.12E-02	3.00E-02	4.07E-02	1.15E-02	0.968	7.98E+05	9.69E+07	3.57E+08	1.34E+08	9.86E+07	3.48E+08	5.18E-08
Francium (87)	Fr-220+D	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	0.896	7.98E+05	4.82E+05	2.87E+06	9.88E+05	6.00E+05	2.86E+06	2.58E-10
Francium (87)	Fr-220+E	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	0.896	7.98E+05	4.82E+05	2.87E+06	9.88E+05	6.00E+05	2.86E+06	2.58E-10
Francium (87)	Fr-221	1.41E-01	3.38E-02	9.44E-02	1.36E-01	3.31E-02	0.919	7.59E+04	2.85E+06	1.19E+07	4.26E+06	2.96E+06	1.21E+07	1.61E-08
Francium (87)	Fr-221+D	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	0.972	7.59E+04	3.38E+05	1.60E+06	5.69E+05	3.74E+05	1.35E+06	1.91E-09
Francium (87)	Fr-221+E	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	0.972	7.59E+04	3.38E+05	1.60E+06	5.69E+05	3.74E+05	1.35E+06	1.91E-09
Francium (87)	Fr-222	2.44E-02	1.47E-02	2.01E-02	2.37E-02	1.02E-01	0.927	2.53E+04	5.44E+06	9.02E+06	6.59E+06	5.61E+06	1.30E+06	9.26E-08
Francium (87)	Fr-223	1.81E-01	5.39E-02	1.29E-01	1.72E-01	9.06E-02	0.961	1.67E+04	4.68E+05	1.57E+06	6.58E+05	4.92E+05	9.34E+05	1.21E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Gallium (31)	Ga-65	6.38E+00	1.34E+00	3.77E+00	5.76E+00	1.41E+00	0.865	2.40E+04	2.11E+04	1.01E+05	3.58E+04	2.34E+04	9.55E+04	1.11E-10
Gallium (31)	Ga-66	1.57E+01	2.67E+00	7.70E+00	1.26E+01	2.63E+00	0.843	6.46E+02	2.37E+02	1.40E+03	4.84E+02	2.95E+02	1.42E+03	4.70E-11
Gallium (31)	Ga-67	6.81E-01	1.67E-01	4.57E-01	6.51E-01	1.65E-01	0.915	7.76E+01	6.06E+02	2.48E+03	9.03E+02	6.34E+02	2.51E+03	1.02E-09
Gallium (31)	Ga-68	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	5.36E+03	5.63E+03	2.72E+04	9.57E+03	6.23E+03	2.54E+04	1.39E-10
Gallium (31)	Ga-70	6.21E-02	1.92E-02	3.88E-02	5.56E-02	9.90E-02	0.864	1.72E+04	1.56E+06	5.05E+06	2.50E+06	1.75E+06	9.80E+05	1.23E-08
Gallium (31)	Ga-72	1.69E+01	2.95E+00	8.54E+00	1.39E+01	2.89E+00	0.871	4.31E+02	1.42E+02	8.16E+02	2.82E+02	1.73E+02	8.31E+02	4.61E-11
Gallium (31)	Ga-73	1.58E+00	3.51E-01	9.90E-01	1.48E+00	3.91E-01	0.929	1.24E+03	4.09E+03	1.85E+04	6.54E+03	4.37E+03	1.66E+04	4.69E-10
Gadolinium (64)	Gd-145	1.40E+01	2.46E+00	7.09E+00	1.15E+01	2.44E+00	0.814	1.59E+04	6.79E+03	3.86E+04	1.34E+04	8.25E+03	3.90E+04	1.20E-10
Gadolinium (64)	Gd-146	7.18E-01	2.26E-01	5.46E-01	7.11E-01	2.59E-01	0.943	5.24E+00	3.78E+01	1.20E+02	4.97E+01	3.82E+01	1.05E+02	2.05E-09
Gadolinium (64)	Gd-147	7.37E+00	1.47E+00	4.20E+00	6.51E+00	1.46E+00	0.911	1.59E+02	1.16E+02	5.78E+02	2.03E+02	1.31E+02	5.84E+02	2.07E-10
Gadolinium (64)	Gd-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.45E-03						
Gadolinium (64)	Gd-149	2.00E+00	4.46E-01	1.23E+00	1.84E+00	4.57E-01	0.892	2.69E+01	7.36E+01	3.29E+02	1.19E+02	7.99E+01	3.21E+02	7.90E-10
Gadolinium (64)	Gd-151	1.55E-01	5.02E-02	1.13E-01	1.51E-01	6.50E-02	0.93	2.11E+00	8.09E+01	2.50E+02	1.11E+02	8.34E+01	1.93E+02	1.12E-08
Gadolinium (64)	Gd-152	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.42E-15						
Gadolinium (64)	Gd-153	2.13E-01	8.37E-02	1.78E-01	2.13E-01	1.08E-01	0.945	1.05E+00	3.90E+01	9.91E+01	4.67E+01	3.90E+01	7.72E+01	1.11E-08
Gadolinium (64)	Gd-159	2.20E-01	5.28E-02	1.40E-01	2.07E-01	7.56E-02	0.9	3.27E+02	8.04E+03	3.35E+04	1.26E+04	8.54E+03	2.34E+04	7.58E-09
Germanium (32)	Ge-66	3.60E+00	7.59E-01	2.14E+00	3.28E+00	7.59E-01	0.915	2.67E+03	3.95E+03	1.87E+04	6.63E+03	4.33E+03	1.88E+04	1.89E-10
Germanium (32)	Ge-67	7.85E+00	1.62E+00	4.55E+00	7.01E+00	1.70E+00	0.843	1.95E+04	1.43E+04	6.95E+04	2.47E+04	1.60E+04	6.60E+04	9.56E-11
Germanium (32)	Ge-68	1.29E-06	1.29E-06	1.29E-06	1.29E-06	4.78E-05	1	8.78E-01	5.65E+06	5.65E+06	5.65E+06	5.65E+06	1.53E+05	8.49E-04
Germanium (32)	Ge-68+D	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	8.78E-01	1.58E+00	7.62E+00	2.68E+00	1.75E+00	7.13E+00	2.37E-10
Germanium (32)	Ge-68+E	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	8.78E-01	1.58E+00	7.62E+00	2.68E+00	1.75E+00	7.13E+00	2.37E-10
Germanium (32)	Ge-69	5.02E+00	9.77E-01	2.80E+00	4.40E+00	9.79E-01	0.846	1.55E+02	1.78E+02	9.15E+02	3.20E+02	2.03E+02	9.13E+02	1.54E-10
Germanium (32)	Ge-71	1.31E-06	1.31E-06	1.31E-06	1.31E-06	4.84E-05	1	2.14E+01	7.97E+07	7.97E+07	7.97E+07	7.97E+07	2.15E+06	5.12E-04
Germanium (32)	Ge-75	1.76E-01	4.18E-02	1.14E-01	1.67E-01	8.40E-02	0.909	4.40E+03	1.34E+05	5.64E+05	2.07E+05	1.41E+05	2.80E+05	4.43E-09
Germanium (32)	Ge-77	6.06E+00	1.22E+00	3.49E+00	5.39E+00	1.27E+00	0.898	5.37E+02	4.80E+02	2.38E+03	8.35E+02	5.40E+02	2.29E+03	1.34E-10
Germanium (32)	Ge-78	1.40E+00	3.11E-01	8.90E-01	1.32E+00	3.12E-01	0.909	4.19E+03	1.61E+04	7.20E+04	2.52E+04	1.70E+04	7.19E+04	5.81E-10
Hydrogen (1)	H-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	5.61E-02						
Hafnium (72)	Hf-170	2.57E+00	5.86E-01	1.60E+00	2.37E+00	5.96E-01	0.949	3.79E+02	7.56E+02	3.32E+03	1.22E+03	8.21E+02	3.26E+03	6.57E-10
Hafnium (72)	Hf-172	2.14E-01	9.19E-02	1.87E-01	2.14E-01	1.16E-01	0.947	3.71E-01	2.87E+01	6.69E+01	3.30E+01	2.87E+01	5.31E+01	2.58E-08
Hafnium (72)	Hf-173	1.71E+00	4.27E-01	1.14E+00	1.62E+00	4.35E-01	0.913	2.53E+02	7.90E+02	3.16E+03	1.18E+03	8.33E+02	3.10E+03	1.05E-09
Hafnium (72)	Hf-175	1.72E+00	3.97E-01	1.09E+00	1.61E+00	4.03E-01	0.903	3.61E+00	1.17E+01	5.04E+01	1.83E+01	1.24E+01	4.97E+01	1.09E-09
Hafnium (72)	Hf-177m	1.09E+01	2.48E+00	6.92E+00	1.02E+01	2.45E+00	0.92	7.09E+03	3.45E+03	1.51E+04	5.42E+03	3.67E+03	1.53E+04	1.67E-10
Hafnium (72)	Hf-178m	1.21E+01	2.63E+00	7.40E+00	1.12E+01	2.59E+00	0.888	2.24E-02	4.59E-01	2.11E+00	7.49E-01	4.97E-01	2.14E+00	7.09E-09
Hafnium (72)	Hf-179m	4.33E+00	9.85E-01	2.74E+00	4.05E+00	9.83E-01	0.896	1.01E+01	1.27E+01	5.56E+01	2.00E+01	1.35E+01	5.57E+01	4.36E-10
Hafnium (72)	Hf-180m	4.98E+00	1.11E+00	3.11E+00	4.63E+00	1.10E+00	0.902	1.10E+03	1.20E+03	5.36E+03	1.91E+03	1.29E+03	5.39E+03	3.78E-10
Hafnium (72)	Hf-181	2.82E+00	6.17E-01	1.73E+00	2.61E+00	6.13E-01	0.893	5.97E+00	1.16E+01	5.28E+01	1.88E+01	1.25E+01	5.32E+01	6.81E-10
Hafnium (72)	Hf-182	1.15E+00	2.65E-01	7.46E-01	1.09E+00	2.60E-01	0.911	7.70E-08	4.64E+00	2.02E+01	7.16E+00	4.88E+00	2.05E+01	2.13E-02
Hafnium (72)	Hf-182+D						0.911	7.70E-08						
Hafnium (72)	Hf-182+E	8.65E+00	1.68E+00	4.77E+00	7.50E+00	1.66E+00	0.911	7.70E-08	6.17E-01	3.19E+00	1.12E+00	7.13E-01	3.22E+00	2.83E-03
Hafnium (72)	Hf-182m	4.81E+00	1.03E+00	2.89E+00	4.36E+00	1.02E+00	0.942	5.92E+03	6.36E+03	2.98E+04	1.06E+04	7.01E+03	2.99E+04	3.79E-10
Hafnium (72)	Hf-183	4.14E+00	8.37E-01	2.37E+00	3.67E+00	8.78E-01	0.866	5.69E+03	7.72E+03	3.82E+04	1.35E+04	8.71E+03	3.64E+04	4.82E-10
Hafnium (72)	Hf-184	1.10E+00	2.65E-01	7.27E-01	1.05E+00	2.87E-01	0.917	1.47E+03	7.12E+03	2.95E+04	1.08E+04	7.47E+03	2.72E+04	1.72E-09
Mercury (80)	Hg-193	7.09E-01	2.00E-01	5.07E-01	6.84E-01	2.10E-01	0.938	1.73E+03	1.27E+04	4.51E+04	1.77E+04	1.31E+04	4.28E+04	2.74E-09
Mercury (80)	Hg-193m	5.67E+00	1.14E+00	3.23E+00	5.00E+00	1.13E+00	0.965	5.47E+02	4.86E+02	2.42E+03	8.55E+02	5.52E+02	2.45E+03	3.33E-10
Mercury (80)	Hg-194	1.06E-05	1.06E-05	1.06E-05	1.06E-05	2.61E-04	1	2.67E-03	4.58E+05	4.58E+05	4.58E+05	4.58E+05	1.86E+04	6.46E-02
Mercury (80)	Hg-194+D	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	2.67E-03	8.29E-01	4.41E+00	1.55E+00	9.74E-01	4.50E+00	1.17E-07
Mercury (80)	Hg-194+E	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	2.67E-03	8.29E-01	4.41E+00	1.55E+00	9.74E-01	4.50E+00	1.17E-07
Mercury (80)	Hg-195	9.23E-01	2.09E-01	5.60E-01	8.26E-01	2.16E-01	0.951	6.13E+02	3.40E+03	1.50E+04	5.61E+03	3.80E+03	1.45E+04	2.10E-09
Mercury (80)	Hg-195m	9.70E-01	2.24E-01	6.14E-01	9.01E-01	2.25E-01	0.998	1.46E+02	7.34E+02	3.18E+03	1.16E+03	7.90E+02	3.16E+03	1.90E-09
Mercury (80)	Hg-197	1.50E-01	5.99E-02	1.31E-01	1.50E-01	6.76E-02	0.965	9.47E+01	3.19E+03	7.98E+03	3.66E+03	3.19E+03	7.07E+03	1.29E-08
Mercury (80)	Hg-197m	3.19E-01	9.23E-02	2.37E-01	3.13E-01	9.48E-02	0.969	2.55E+02	4.02E+03	1.39E+04	5.41E+03	4.09E+03	1.35E+04	6.02E-09
Mercury (80)	Hg-199m	7.35E-01	1.92E-01	5.11E-01	7.09E-01	1.95E-01	0.932	8.55E+03	6.08E+04	2.32E+05	8.74E+04	6.30E+04	2.29E+05	2.74E-09
Mercury (80)	Hg-203	1.17E+00	2.65E-01	7.48E-01	1.10E+00	2.59E-01	0.911	5.43E+00	2.50E+01	1.10E+02	3.89E+01	2.64E+01	1.12E+02	1.81E-09
Holmium (67)	Ho-155	1.92E+00	4.21E-01	1.17E+00	1.76E+00	4.54E-01	0.926	7.59E+03	2.08E+04	9.46E+04	3.42E+04	2.27E+04	8.79E+04	8.23E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Holmium (67)	Ho-157	2.33E+00	5.17E-01	1.41E+00	2.11E+00	5.38E-01	0.923	2.89E+04	6.54E+04	2.95E+05	1.08E+05	7.23E+04	2.83E+05	6.89E-10
Holmium (67)	Ho-159	1.47E+00	3.69E-01	9.68E-01	1.38E+00	3.90E-01	0.927	1.10E+04	3.95E+04	1.57E+05	5.99E+04	4.20E+04	1.49E+05	1.10E-09
Holmium (67)	Ho-161	7.50E-02	3.92E-02	6.84E-02	7.48E-02	6.00E-02	0.957	2.43E+03	1.65E+05	3.15E+05	1.80E+05	1.65E+05	2.06E+05	2.12E-08
Holmium (67)	Ho-162	7.57E-01	1.65E-01	4.36E-01	6.62E-01	1.81E-01	0.879	2.43E+04	1.78E+05	8.14E+05	3.08E+05	2.03E+05	7.43E+05	2.30E-09
Holmium (67)	Ho-162m	3.08E+00	6.12E-01	1.71E+00	2.67E+00	6.19E-01	0.924	5.36E+03	9.17E+03	4.61E+04	1.65E+04	1.06E+04	4.56E+04	5.38E-10
Holmium (67)	Ho-164	3.80E-02	2.09E-02	3.58E-02	3.80E-02	3.94E-02	0.95	1.26E+04	1.69E+06	3.08E+06	1.80E+06	1.69E+06	1.63E+06	4.28E-08
Holmium (67)	Ho-164m	5.02E-02	3.00E-02	4.87E-02	5.02E-02	4.55E-02	0.957	9.71E+03	9.85E+05	1.65E+06	1.01E+06	9.85E+05	1.09E+06	3.23E-08
Holmium (67)	Ho-166	1.56E-01	4.10E-02	9.27E-02	1.35E-01	1.23E-01	0.897	2.27E+02	7.88E+03	3.00E+04	1.33E+04	9.10E+03	1.00E+04	1.12E-08
Holmium (67)	Ho-166m	9.64E+00	1.94E+00	5.56E+00	8.60E+00	1.93E+00	0.903	5.78E-04	5.59E-01	2.78E+00	9.70E-01	6.27E-01	2.80E+00	3.12E-07
Holmium (67)	Ho-167	1.83E+00	4.07E-01	1.15E+00	1.71E+00	4.10E-01	0.9	1.96E+03	5.78E+03	2.60E+04	9.25E+03	6.18E+03	2.59E+04	9.56E-10
Iodine (53)	I-120	1.66E+01	3.02E+00	8.67E+00	1.39E+01	3.06E+00	0.878	4.50E+03	1.50E+03	8.25E+03	2.87E+03	1.79E+03	8.15E+03	7.78E-11
Iodine (53)	I-120m	3.17E+01	5.87E+00	1.69E+01	2.70E+01	5.85E+00	0.857	6.87E+03	1.23E+03	6.64E+03	2.31E+03	1.44E+03	6.68E+03	4.17E-11
Iodine (53)	I-121	2.07E+00	4.51E-01	1.28E+00	1.92E+00	4.62E-01	0.892	2.86E+03	7.55E+03	3.46E+04	1.22E+04	8.13E+03	3.38E+04	6.19E-10
Iodine (53)	I-122	5.28E+00	1.10E+00	3.10E+00	4.76E+00	1.19E+00	0.875	1.01E+05	1.06E+05	5.09E+05	1.81E+05	1.18E+05	4.70E+05	2.49E-10
Iodine (53)	I-123	6.51E-01	1.67E-01	4.49E-01	6.30E-01	1.79E-01	0.956	4.60E+02	3.60E+03	1.40E+04	5.21E+03	3.71E+03	1.31E+04	1.87E-09
Iodine (53)	I-124	6.38E+00	1.21E+00	3.47E+00	5.50E+00	1.21E+00	0.875	6.05E+01	5.28E+01	2.78E+02	9.70E+01	6.12E+01	2.77E+02	2.10E-10
Iodine (53)	I-125	1.19E-02	1.10E-02	1.19E-02	1.19E-02	3.66E-02	0.986	4.21E+00	1.78E+03	1.92E+03	1.78E+03	1.78E+03	5.75E+02	1.02E-07
Iodine (53)	I-126	2.46E+00	5.05E-01	1.44E+00	2.22E+00	5.16E-01	0.881	1.94E+01	4.36E+01	2.12E+02	7.47E+01	4.84E+01	2.08E+02	5.49E-10
Iodine (53)	I-128	4.81E-01	1.11E-01	2.93E-01	4.40E-01	2.00E-01	0.89	1.46E+04	1.66E+05	7.17E+05	2.72E+05	1.81E+05	3.99E+05	2.82E-09
Iodine (53)	I-129	9.53E-03	8.21E-03	9.53E-03	9.53E-03	2.28E-02	0.98	4.41E-08	5.21E+02	6.05E+02	5.21E+02	5.21E+02	2.18E+02	2.95E+00
Iodine (53)	I-130	1.21E+01	2.41E+00	6.90E+00	1.08E+01	2.39E+00	0.872	4.91E+02	2.26E+02	1.14E+03	3.97E+02	2.54E+02	1.15E+03	1.16E-10
Iodine (53)	I-131	2.01E+00	4.31E-01	1.22E+00	1.85E+00	4.25E-01	0.891	3.15E+01	8.53E+01	3.99E+02	1.40E+02	9.27E+01	4.05E+02	6.89E-10
Iodine (53)	I-132	1.32E+01	2.56E+00	7.35E+00	1.16E+01	2.57E+00	0.892	2.64E+03	1.09E+03	5.64E+03	1.96E+03	1.24E+03	5.61E+03	1.06E-10
Iodine (53)	I-132m	1.75E+00	3.54E-01	1.01E+00	1.56E+00	3.63E-01	0.874	4.36E+03	1.39E+04	6.85E+04	2.41E+04	1.55E+04	6.68E+04	8.14E-10
Iodine (53)	I-133	3.41E+00	6.88E-01	1.96E+00	3.04E+00	7.20E-01	0.881	2.92E+02	4.72E+02	2.34E+03	8.23E+02	5.30E+02	2.24E+03	4.18E-10
Iodine (53)	I-134	1.55E+01	2.93E+00	8.43E+00	1.34E+01	2.95E+00	0.879	6.92E+03	2.47E+03	1.31E+04	4.55E+03	2.87E+03	1.30E+04	9.29E-11
Iodine (53)	I-135	9.72E+00	1.73E+00	5.00E+00	8.11E+00	1.72E+00	0.9	9.18E+02	5.11E+02	2.88E+03	9.94E+02	6.12E+02	2.89E+03	1.46E-10
Indium (49)	In-109	3.62E+00	7.29E-01	2.09E+00	3.23E+00	7.28E-01	0.899	1.45E+03	2.16E+03	1.07E+04	3.75E+03	2.43E+03	1.07E+04	3.16E-10
Indium (49)	In-110	1.76E+01	3.39E+00	9.75E+00	1.54E+01	3.36E+00	0.871	1.24E+03	3.93E+02	2.04E+03	7.10E+02	4.50E+02	2.06E+03	6.77E-11
Indium (49)	In-110m	8.95E+00	1.75E+00	4.98E+00	7.83E+00	1.79E+00	0.874	5.27E+03	3.28E+03	1.68E+04	5.89E+03	3.75E+03	1.64E+04	1.33E-10
Indium (49)	In-111	1.81E+00	4.29E-01	1.20E+00	1.74E+00	4.29E-01	0.952	8.94E+01	2.53E+02	1.07E+03	3.80E+02	2.63E+02	1.06E+03	6.09E-10
Indium (49)	In-112	1.45E+00	3.00E-01	8.50E-01	1.31E+00	3.20E-01	0.931	2.53E+04	9.12E+04	4.40E+05	1.55E+05	1.01E+05	4.14E+05	7.84E-10
Indium (49)	In-113m	1.33E+00	2.85E-01	8.13E-01	1.23E+00	2.84E-01	0.932	3.66E+03	1.44E+04	6.70E+04	2.35E+04	1.55E+04	6.74E+04	8.60E-10
Indium (49)	In-114	1.68E-02	3.04E-03	8.73E-03	1.41E-02	3.22E-03	0.869	3.04E+05	1.01E+08	5.60E+08	1.95E+08	1.21E+08	5.28E+08	7.37E-08
Indium (49)	In-114m	4.51E-01	9.70E-02	2.72E-01	4.12E-01	1.01E-01	0.946	5.11E+00	5.86E+01	2.73E+02	9.71E+01	6.42E+01	2.63E+02	2.54E-09
Indium (49)	In-114m+D	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	0.946	5.11E+00	5.65E+01	2.65E+02	9.45E+01	6.22E+01	2.55E+02	2.45E-09
Indium (49)	In-114m+E	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	0.946	5.11E+00	5.65E+01	2.65E+02	9.45E+01	6.22E+01	2.55E+02	2.45E-09
Indium (49)	In-115	3.54E-04	1.30E-04	2.83E-04	3.51E-04	4.17E-04	0.927	1.36E-16	1.81E+04	4.94E+04	2.27E+04	1.83E+04	1.54E+04	2.98E+10
Indium (49)	In-115m	7.93E-01	1.74E-01	4.94E-01	7.40E-01	1.76E-01	0.917	1.35E+03	9.06E+03	4.13E+04	1.45E+04	9.70E+03	4.08E+04	1.49E-09
Indium (49)	In-116m	1.52E+01	2.70E+00	7.85E+00	1.27E+01	2.66E+00	0.892	6.73E+03	2.42E+03	1.36E+04	4.67E+03	2.89E+03	1.38E+04	8.09E-11
Indium (49)	In-117	3.64E+00	7.76E-01	2.20E+00	3.34E+00	7.75E-01	0.897	8.32E+03	1.24E+04	5.82E+04	2.05E+04	1.35E+04	5.82E+04	3.39E-10
Indium (49)	In-117m	4.29E-01	1.02E-01	2.80E-01	4.07E-01	1.46E-01	0.923	3.13E+03	3.84E+04	1.61E+05	5.89E+04	4.05E+04	1.13E+05	2.79E-09
Indium (49)	In-119	4.42E+00	8.71E-01	2.48E+00	3.90E+00	9.36E-01	0.871	1.52E+05	1.92E+05	9.74E+05	3.42E+05	2.18E+05	9.06E+05	2.92E-10
Indium (49)	In-119m	9.03E-02	3.73E-02	6.30E-02	8.37E-02	1.52E-01	0.93	2.02E+04	1.17E+06	2.84E+06	1.68E+06	1.26E+06	6.98E+05	1.34E-08
Iridium (77)	Ir-182	7.35E+00	1.52E+00	4.27E+00	6.56E+00	1.56E+00	0.928	2.43E+04	1.73E+04	8.40E+04	2.98E+04	1.94E+04	8.14E+04	2.52E-10
Iridium (77)	Ir-184	1.08E+01	2.09E+00	5.97E+00	9.36E+00	2.08E+00	0.944	2.01E+03	9.58E+02	4.96E+03	1.74E+03	1.11E+03	4.99E+03	1.70E-10
Iridium (77)	Ir-185	3.34E+00	6.25E-01	1.76E+00	2.80E+00	6.22E-01	0.953	4.34E+02	6.63E+02	3.54E+03	1.26E+03	7.92E+02	3.56E+03	5.49E-10
Iridium (77)	Ir-186	9.25E+00	1.79E+00	5.11E+00	8.00E+00	1.76E+00	0.942	3.84E+02	2.15E+02	1.11E+03	3.88E+02	2.48E+02	1.13E+03	2.02E-10
Iridium (77)	Ir-186m	5.28E+00	1.06E+00	3.00E+00	4.64E+00	1.07E+00	0.878	3.47E+03	3.64E+03	1.81E+04	6.40E+03	4.14E+03	1.80E+04	3.79E-10
Iridium (77)	Ir-187	1.79E+00	3.88E-01	1.06E+00	1.60E+00	3.93E-01	0.958	5.78E+02	1.64E+03	7.57E+03	2.77E+03	1.84E+03	7.47E+03	1.03E-09
Iridium (77)	Ir-188	9.55E+00	1.70E+00	4.89E+00	7.89E+00	1.66E+00	0.908	1.46E+02	8.21E+01	4.62E+02	1.60E+02	9.94E+01	4.73E+02	2.05E-10
Iridium (77)	Ir-189	2.18E-01	7.31E-02	1.70E-01	2.14E-01	8.16E-02	0.954	1.90E+01	4.45E+02	1.33E+03	5.72E+02	4.52E+02	1.19E+03	8.57E-09
Iridium (77)	Ir-190	7.53E+00	1.60E+00	4.51E+00	6.86E+00	1.59E+00	0.928	2.09E+01	1.46E+01	6.84E+01	2.43E+01	1.60E+01	6.91E+01	2.57E-10
Iridium (77)	Ir-190m	2.05E-06	2.05E-06	2.05E-06	2.05E-06	6.21E-05	1	5.06E+03	1.20E+10	1.20E+10	1.20E+10	1.20E+10	3.97E+08	8.75E-04

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Iridium (77)	Ir-190n	8.15E+00	1.73E+00	4.90E+00	7.46E+00	1.72E+00	0.955	1.96E+03	1.22E+03	5.76E+03	2.03E+03	1.34E+03	5.82E+03	2.31E-10
Iridium (77)	Ir-191m	2.05E-01	6.86E-02	1.63E-01	2.03E-01	7.39E-02	0.945	4.42E+06	1.11E+08	3.32E+08	1.40E+08	1.12E+08	3.08E+08	9.30E-09
Iridium (77)	Ir-192	4.27E+00	9.19E-01	2.63E+00	3.95E+00	9.07E-01	0.957	3.42E+00	4.21E+00	1.95E+01	6.83E+00	4.54E+00	1.98E+01	4.59E-10
Iridium (77)	Ir-192m	6.86E-01	1.75E-01	4.81E-01	6.71E-01	1.72E-01	0.925	2.88E-03	7.68E+00	3.01E+01	1.10E+01	7.85E+00	3.07E+01	9.95E-07
Iridium (77)	Ir-194	5.24E-01	1.19E-01	3.13E-01	4.74E-01	2.11E-01	0.902	3.17E+02	3.26E+03	1.44E+04	5.46E+03	3.61E+03	8.10E+03	3.88E-09
Iridium (77)	Ir-194m	1.27E+01	2.63E+00	7.52E+00	1.15E+01	2.60E+00	0.881	1.48E+00	8.32E-01	4.02E+00	1.41E+00	9.17E-01	4.07E+00	2.12E-10
Iridium (77)	Ir-195	1.46E-01	5.37E-02	1.21E-01	1.45E-01	8.60E-02	0.954	2.43E+03	8.47E+04	2.31E+05	1.03E+05	8.54E+04	1.44E+05	1.32E-08
Iridium (77)	Ir-195m	2.00E+00	4.51E-01	1.24E+00	1.84E+00	4.64E-01	0.998	1.60E+03	3.90E+03	1.73E+04	6.26E+03	4.24E+03	1.68E+04	9.25E-10
Potassium (19)	K-38	2.00E+01	3.47E+00	1.00E+01	1.64E+01	3.47E+00	0.844	4.77E+04	1.38E+04	7.93E+04	2.74E+04	1.68E+04	7.94E+04	2.13E-11
Potassium (19)	K-40	9.94E-01	1.77E-01	5.04E-01	8.21E-01	2.38E-01	0.826	5.41E-10	5.93E+00	3.33E+01	1.17E+01	7.18E+00	2.47E+01	8.50E-01
Potassium (19)	K-42	1.84E+00	3.49E-01	9.42E-01	1.52E+00	4.64E-01	0.823	4.91E+02	1.58E+03	8.33E+03	3.08E+03	1.92E+03	6.25E+03	2.63E-10
Potassium (19)	K-43	5.32E+00	1.10E+00	3.13E+00	4.83E+00	1.10E+00	0.878	2.69E+02	2.80E+02	1.36E+03	4.75E+02	3.08E+02	1.36E+03	8.70E-11
Potassium (19)	K-44	1.47E+01	2.46E+00	7.11E+00	1.17E+01	2.47E+00	0.799	1.65E+04	6.81E+03	4.07E+04	1.41E+04	8.53E+03	4.05E+04	3.53E-11
Potassium (19)	K-45	1.18E+01	2.01E+00	5.86E+00	9.59E+00	2.05E+00	0.833	1.82E+04	9.00E+03	5.28E+04	1.82E+04	1.11E+04	5.18E+04	4.31E-11
Krypton (36)	Kr-74	6.19E+00	1.33E+00	3.73E+00	5.67E+00	1.40E+00	0.923	3.17E+04	2.70E+04	1.26E+05	4.48E+04	2.95E+04	1.19E+05	1.22E-10
Krypton (36)	Kr-76	2.18E+00	4.76E-01	1.35E+00	2.03E+00	4.70E-01	0.971	4.10E+02	9.42E+02	4.32E+03	1.52E+03	1.01E+03	4.37E+03	3.39E-10
Krypton (36)	Kr-77	5.32E+00	1.15E+00	3.25E+00	4.89E+00	1.21E+00	0.894	4.88E+03	4.99E+03	2.31E+04	8.18E+03	5.43E+03	2.19E+04	1.53E-10
Krypton (36)	Kr-79	1.36E+00	2.83E-01	8.08E-01	1.24E+00	2.79E-01	0.893	1.73E+02	6.95E+02	3.33E+03	1.17E+03	7.64E+02	3.39E+03	6.15E-10
Krypton (36)	Kr-81	2.76E-02	6.23E-03	1.77E-02	2.63E-02	6.99E-03	0.999	3.30E-06	1.76E+02	7.82E+02	2.76E+02	1.85E+02	6.97E+02	8.41E-03
Krypton (36)	Kr-81m	5.84E-01	1.41E-01	3.95E-01	5.65E-01	1.38E-01	0.968	1.68E+06	1.45E+07	5.98E+07	2.14E+07	1.50E+07	6.14E+07	1.35E-09
Krypton (36)	Kr-83m	2.52E-05	2.44E-05	2.52E-05	2.52E-05	4.17E-04	1	3.32E+03	6.41E+08	6.61E+08	6.41E+08	6.41E+08	3.88E+07	3.11E-05
Krypton (36)	Kr-85	1.35E-02	3.08E-03	8.21E-03	1.23E-02	1.23E-02	0.884	6.46E-02	4.22E+02	1.85E+03	6.93E+02	4.61E+02	4.64E+02	1.08E-06
Krypton (36)	Kr-85m	6.96E-01	1.73E-01	4.77E-01	6.73E-01	1.83E-01	0.928	1.36E+03	1.02E+04	4.11E+04	1.49E+04	1.06E+04	3.88E+04	1.24E-09
Krypton (36)	Kr-87	5.02E+00	8.95E-01	2.54E+00	4.12E+00	9.80E-01	0.849	4.77E+03	5.45E+03	3.06E+04	1.08E+04	6.64E+03	2.79E+04	1.93E-10
Krypton (36)	Kr-88	1.26E+01	2.07E+00	6.06E+00	1.01E+01	2.02E+00	0.916	2.14E+03	9.01E+02	5.49E+03	1.87E+03	1.13E+03	5.63E+03	7.20E-11
Lanthanum (57)	La-131	3.47E+00	7.39E-01	2.07E+00	3.17E+00	7.64E-01	0.896	6.17E+03	9.67E+03	4.54E+04	1.62E+04	1.06E+04	4.39E+04	3.98E-10
Lanthanum (57)	La-132	1.19E+01	2.22E+00	6.36E+00	1.01E+01	2.22E+00	0.879	1.26E+03	5.88E+02	3.16E+03	1.10E+03	6.91E+02	3.16E+03	1.19E-10
Lanthanum (57)	La-134	3.84E+00	8.02E-01	2.26E+00	3.47E+00	8.75E-01	0.89	5.46E+04	7.77E+04	3.72E+05	1.32E+05	8.61E+04	3.41E+05	3.70E-10
Lanthanum (57)	La-135	6.77E-02	2.09E-02	4.42E-02	6.21E-02	3.55E-02	0.943	3.11E+02	2.37E+04	7.69E+04	3.63E+04	2.59E+04	4.53E+04	2.00E-08
Lanthanum (57)	La-137	1.04E-02	8.82E-03	1.04E-02	1.04E-02	2.29E-02	0.978	1.16E-05	4.77E+02	5.64E+02	4.77E+02	4.77E+02	2.18E+02	1.10E-02
Lanthanum (57)	La-138	7.53E+00	1.34E+00	3.90E+00	6.30E+00	1.32E+00	0.842	5.13E-12	7.67E-01	4.30E+00	1.48E+00	9.17E-01	4.38E+00	4.00E+01
Lanthanum (57)	La-140	1.43E+01	2.54E+00	7.33E+00	1.19E+01	2.52E+00	0.868	1.51E+02	5.92E+01	3.33E+02	1.15E+02	7.11E+01	3.35E+02	1.07E-10
Lanthanum (57)	La-141	3.10E-01	7.11E-02	1.70E-01	2.61E-01	1.77E-01	0.829	1.54E+03	2.93E+04	1.28E+05	5.35E+04	3.47E+04	5.11E+04	5.19E-09
Lanthanum (57)	La-142	1.78E+01	2.93E+00	8.56E+00	1.42E+01	2.91E+00	0.88	3.94E+03	1.22E+03	7.44E+03	2.54E+03	1.53E+03	7.49E+03	8.55E-11
Lanthanum (57)	La-143	6.64E-01	1.45E-01	3.58E-01	5.58E-01	2.65E-01	0.853	2.56E+04	2.20E+05	1.01E+06	4.08E+05	2.62E+05	5.51E+05	2.38E-09
Lutetium (71)	Lu-169	5.89E+00	1.12E+00	3.17E+00	5.02E+00	1.12E+00	0.922	1.78E+02	1.60E+02	8.41E+02	2.97E+02	1.88E+02	8.43E+02	2.94E-10
Lutetium (71)	Lu-170	1.56E+01	2.63E+00	7.65E+00	1.26E+01	2.56E+00	0.941	1.26E+02	4.19E+01	2.49E+02	8.55E+01	5.20E+01	2.56E+02	1.09E-10
Lutetium (71)	Lu-171	3.62E+00	7.50E-01	2.09E+00	3.21E+00	7.63E-01	0.941	3.08E+01	4.40E+01	2.12E+02	7.62E+01	4.96E+01	2.09E+02	4.74E-10
Lutetium (71)	Lu-172	1.08E+01	2.07E+00	5.89E+00	9.33E+00	2.05E+00	0.92	3.78E+01	1.84E+01	9.65E+01	3.39E+01	2.14E+01	9.72E+01	1.63E-10
Lutetium (71)	Lu-173	3.75E-01	1.17E-01	2.72E-01	3.60E-01	1.35E-01	0.907	5.06E-01	1.82E+01	5.84E+01	2.51E+01	1.90E+01	5.05E+01	1.21E-08
Lutetium (71)	Lu-174	5.35E-01	1.20E-01	3.08E-01	4.61E-01	1.31E-01	0.917	2.09E-01	1.10E+01	4.88E+01	1.91E+01	1.28E+01	4.50E+01	1.77E-08
Lutetium (71)	Lu-174m	1.29E-01	4.94E-02	1.01E-01	1.23E-01	6.22E-02	0.948	1.78E+00	8.55E+01	2.23E+02	1.09E+02	8.97E+01	1.77E+02	1.62E-08
Lutetium (71)	Lu-176	2.33E+00	5.39E-01	1.51E+00	2.22E+00	5.33E-01	0.912	1.93E-11	2.29E+00	9.90E+00	3.53E+00	2.40E+00	1.00E+01	4.06E+01
Lutetium (71)	Lu-176m	3.90E-02	1.67E-02	3.32E-02	3.90E-02	6.54E-02	0.947	1.65E+03	2.17E+05	5.09E+05	2.55E+05	2.17E+05	1.30E+05	4.50E-08
Lutetium (71)	Lu-177	1.45E-01	3.71E-02	1.01E-01	1.41E-01	3.75E-02	0.923	3.77E+01	1.37E+03	5.36E+03	1.98E+03	1.41E+03	5.31E+03	1.25E-08
Lutetium (71)	Lu-177m	4.61E+00	1.09E+00	3.00E+00	4.36E+00	1.09E+00	0.941	1.57E+00	2.23E+00	9.44E+00	3.42E+00	2.35E+00	9.44E+00	4.87E-10
Lutetium (71)	Lu-178	8.50E-01	1.66E-01	4.51E-01	7.16E-01	2.51E-01	0.836	1.28E+04	8.78E+04	4.49E+05	1.65E+05	1.04E+05	2.98E+05	2.36E-09
Lutetium (71)	Lu-178m	5.39E+00	1.23E+00	3.43E+00	5.05E+00	1.26E+00	0.904	1.60E+04	1.60E+04	7.04E+04	2.52E+04	1.71E+04	6.85E+04	3.45E-10
Lutetium (71)	Lu-179	1.54E-01	3.90E-02	1.02E-01	1.47E-01	8.95E-02	0.905	1.32E+03	4.62E+04	1.82E+05	6.96E+04	4.85E+04	7.95E+04	1.21E-08
Mendelevium (101)	Md-257	4.61E-01	1.16E-01	3.15E-01	4.42E-01	1.18E-01	0.995	1.17E+03	1.24E+04	4.91E+04	1.81E+04	1.29E+04	4.84E+04	5.29E-09
Mendelevium (101)	Md-258	1.86E-03	1.04E-03	1.68E-03	1.86E-03	3.87E-03	0.996	4.60E+00	1.22E+04	2.19E+04	1.35E+04	1.22E+04	5.86E+03	1.33E-06
Magnesium (12)	Mg-28	8.15E+00	1.50E+00	4.31E+00	6.92E+00	1.47E+00	0.872	2.90E+02	1.99E+02	1.08E+03	3.76E+02	2.34E+02	1.10E+03	3.72E-11
Manganese (25)	Mn-51	5.52E+00	1.15E+00	3.25E+00	5.00E+00	1.25E+00	0.882	7.88E+03	7.88E+03	3.77E+04	1.34E+04	8.70E+03	3.48E+04	9.89E-11
Manganese (25)	Mn-52	2.07E+01	3.82E+00	1.10E+01	1.77E+01	3.76E+00	0.836	4.52E+01	1.27E+01	6.89E+01	2.39E+01	1.49E+01	7.01E+01	2.84E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Manganese (25)	Mn-52m	1.44E+01	2.70E+00	7.74E+00	1.23E+01	2.75E+00	0.848	1.73E+04	6.89E+03	3.66E+04	1.28E+04	8.05E+03	3.60E+04	4.03E-11
Manganese (25)	Mn-53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.87E-07						
Manganese (25)	Mn-54	4.85E+00	9.36E-01	2.69E+00	4.23E+00	9.23E-01	0.858	8.09E-01	1.71E+00	8.84E+00	3.08E+00	1.95E+00	8.96E+00	2.21E-10
Manganese (25)	Mn-56	1.05E+01	1.87E+00	5.37E+00	8.73E+00	1.89E+00	0.827	2.35E+03	1.32E+03	7.43E+03	2.58E+03	1.59E+03	7.33E+03	6.09E-11
Molybdenum (42)	Mo-101	8.24E+00	1.51E+00	4.35E+00	6.98E+00	1.53E+00	0.917	2.49E+04	1.60E+04	8.75E+04	3.04E+04	1.90E+04	8.65E+04	1.26E-10
Molybdenum (42)	Mo-90	4.29E+00	9.06E-01	2.57E+00	3.90E+00	9.08E-01	0.884	1.07E+03	1.37E+03	6.50E+03	2.29E+03	1.51E+03	6.49E+03	2.24E-10
Molybdenum (42)	Mo-93	4.16E-04	4.18E-04	4.16E-04	4.16E-04	4.53E-03	1	1.98E-04	1.17E+04	1.17E+04	1.17E+04	1.17E+04	1.07E+03	1.07E-02
Molybdenum (42)	Mo-93m	1.36E+01	2.48E+00	7.14E+00	1.15E+01	2.42E+00	0.861	8.86E+02	3.69E+02	2.02E+03	7.01E+02	4.37E+02	2.07E+03	7.52E-11
Molybdenum (42)	Mo-99	8.34E-01	1.71E-01	4.81E-01	7.44E-01	2.08E-01	0.929	9.20E+01	5.78E+02	2.82E+03	1.00E+03	6.48E+02	2.32E+03	1.21E-09
Nitrogen (7)	N-13	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.20E+00	0.883	3.66E+04	3.59E+04	1.74E+05	6.10E+04	3.96E+04	1.68E+05	2.48E-11
Sodium (11)	Na-22	1.29E+01	2.44E+00	7.01E+00	1.11E+01	2.39E+00	0.861	2.66E-01	5.00E-01	2.64E+00	9.18E-01	5.78E-01	2.69E+00	8.01E-11
Sodium (11)	Na-24	2.72E+01	4.33E+00	1.27E+01	2.13E+01	4.19E+00	0.806	4.05E+02	8.97E+01	5.65E+02	1.93E+02	1.15E+02	5.83E+02	1.03E-11
Niobium (41)	Nb-88	2.37E+01	4.64E+00	1.33E+01	2.09E+01	4.69E+00	0.871	2.55E+04	6.01E+03	3.06E+04	1.07E+04	6.81E+03	3.03E+04	4.03E-11
Niobium (41)	Nb-89	8.32E+00	1.56E+00	4.46E+00	7.09E+00	1.62E+00	0.885	2.99E+03	1.97E+03	1.05E+04	3.68E+03	2.32E+03	1.01E+04	1.14E-10
Niobium (41)	Nb-89m	1.07E+01	2.20E+00	6.25E+00	9.64E+00	2.26E+00	0.89	5.52E+03	2.83E+03	1.37E+04	4.83E+03	3.13E+03	1.33E+04	8.85E-11
Niobium (41)	Nb-90	2.65E+01	4.53E+00	1.32E+01	2.14E+01	4.42E+00	0.851	4.16E+02	8.98E+01	5.25E+02	1.81E+02	1.11E+02	5.38E+02	3.77E-11
Niobium (41)	Nb-93m	7.35E-05	7.35E-05	7.35E-05	7.35E-05	7.96E-04	1	5.10E-02	6.79E+04	6.79E+04	6.79E+04	6.79E+04	6.27E+03	2.41E-04
Niobium (41)	Nb-94	9.10E+00	1.77E+00	5.07E+00	7.98E+00	1.74E+00	0.861	3.41E-05	6.21E-01	3.20E+00	1.11E+00	7.08E-01	3.25E+00	3.32E-06
Niobium (41)	Nb-95	4.42E+00	8.62E-01	2.46E+00	3.88E+00	8.50E-01	0.863	7.20E+00	9.19E+00	4.71E+01	1.65E+01	1.05E+01	4.78E+01	2.35E-10
Niobium (41)	Nb-95m	2.93E-01	6.79E-02	1.92E-01	2.82E-01	6.90E-02	0.988	7.01E+01	1.18E+03	5.09E+03	1.80E+03	1.23E+03	5.01E+03	3.10E-09
Niobium (41)	Nb-96	1.44E+01	2.78E+00	7.94E+00	1.25E+01	2.73E+00	0.866	2.60E+02	1.02E+02	5.26E+02	1.84E+02	1.17E+02	5.35E+02	7.29E-11
Niobium (41)	Nb-97	3.73E+00	7.46E-01	2.13E+00	3.32E+00	7.88E-01	0.87	5.05E+03	7.58E+03	3.79E+04	1.33E+04	8.51E+03	3.59E+04	2.82E-10
Niobium (41)	Nb-97m	4.18E+00	8.21E-01	2.35E+00	3.69E+00	8.11E-01	0.87	3.64E+05	4.88E+05	2.48E+06	8.67E+05	5.52E+05	2.51E+06	2.52E-10
Niobium (41)	Nb-98	1.44E+01	2.72E+00	7.80E+00	1.24E+01	2.77E+00	0.84	7.07E+03	2.84E+03	1.50E+04	5.26E+03	3.30E+03	1.48E+04	7.63E-11
Neodymium (60)	Nd-136	1.28E+00	2.95E-01	7.93E-01	1.17E+00	3.19E-01	0.884	7.19E+03	3.09E+04	1.34E+05	4.99E+04	3.37E+04	1.24E+05	1.14E-09
Neodymium (60)	Nd-138	8.77E-02	2.89E-02	6.17E-02	8.36E-02	4.38E-02	0.945	1.20E+03	7.08E+04	2.15E+05	1.00E+05	7.42E+04	1.42E+05	1.57E-08
Neodymium (60)	Nd-139	2.16E+00	4.46E-01	1.25E+00	1.94E+00	4.75E-01	0.87	1.23E+04	3.17E+04	1.54E+05	5.47E+04	3.54E+04	1.44E+05	6.97E-10
Neodymium (60)	Nd-139m	8.90E+00	1.73E+00	4.92E+00	7.74E+00	1.73E+00	0.898	1.10E+03	6.72E+02	3.47E+03	1.21E+03	7.73E+02	3.46E+03	1.64E-10
Neodymium (60)	Nd-141	2.87E-01	6.55E-02	1.67E-01	2.54E-01	7.98E-02	0.942	2.44E+03	4.39E+04	1.92E+05	7.52E+04	4.97E+04	1.58E+05	4.92E-09
Neodymium (60)	Nd-141m	4.36E+00	8.54E-01	2.44E+00	3.84E+00	8.54E-01	0.865	3.50E+05	4.52E+05	2.31E+06	8.07E+05	5.13E+05	2.31E+06	3.53E-10
Neodymium (60)	Nd-147	6.17E-01	1.45E-01	3.88E-01	5.69E-01	1.63E-01	0.89	2.30E+01	2.04E+02	8.72E+02	3.25E+02	2.21E+02	7.71E+02	2.53E-09
Neodymium (60)	Nd-149	1.90E+00	4.25E-01	1.18E+00	1.76E+00	4.74E-01	0.927	3.51E+03	9.68E+03	4.33E+04	1.56E+04	1.05E+04	3.89E+04	7.98E-10
Neodymium (60)	Nd-151	5.13E+00	1.02E+00	2.89E+00	4.49E+00	1.08E+00	0.928	2.93E+04	2.99E+04	1.51E+05	5.31E+04	3.42E+04	1.43E+05	3.00E-10
Neon (10)	Ne-19	5.65E+00	1.18E+00	3.34E+00	5.13E+00	1.28E+00	0.883	1.27E+06	1.24E+06	5.92E+06	2.10E+06	1.36E+06	5.45E+06	3.60E-11
Nickel (28)	Ni-56	9.68E+00	1.92E+00	5.48E+00	8.54E+00	1.89E+00	0.869	4.15E+01	2.40E+01	1.21E+02	4.24E+01	2.72E+01	1.23E+02	6.29E-11
Nickel (28)	Ni-57	1.17E+01	2.11E+00	6.08E+00	9.83E+00	2.05E+00	0.829	1.68E+02	8.42E+01	4.69E+02	1.62E+02	1.00E+02	4.81E+02	5.53E-11
Nickel (28)	Ni-59	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	9.24E-06						
Nickel (28)	Ni-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.22E-03						
Nickel (28)	Ni-65	3.41E+00	6.12E-01	1.76E+00	2.85E+00	6.64E-01	0.831	2.41E+03	4.13E+03	2.31E+04	8.03E+03	4.94E+03	2.12E+04	2.16E-10
Nickel (28)	Ni-66	3.64E-05	1.77E-05	3.23E-05	3.62E-05	3.30E-05	0.927	1.11E+02	1.61E+07	3.30E+07	1.81E+07	1.61E+07	1.77E+07	1.85E-05
Neptunium (93)	Np-232	6.58E+00	1.33E+00	3.77E+00	5.84E+00	1.32E+00	0.916	2.48E+04	2.00E+04	9.93E+04	3.49E+04	2.26E+04	9.98E+04	3.63E-10
Neptunium (93)	Np-233	2.95E-01	8.77E-02	2.24E-01	2.91E-01	9.09E-02	0.951	1.01E+04	1.75E+05	5.87E+05	2.30E+05	1.77E+05	5.66E+05	7.85E-09
Neptunium (93)	Np-234	8.77E+00	1.56E+00	4.49E+00	7.27E+00	1.53E+00	0.966	5.75E+01	3.30E+01	1.86E+02	6.44E+01	3.98E+01	1.89E+02	2.61E-10
Neptunium (93)	Np-235	2.82E-03	1.07E-03	2.29E-03	2.82E-03	3.34E-03	1	6.39E-01	2.34E+03	6.13E+03	2.87E+03	2.34E+03	1.97E+03	1.67E-06
Neptunium (93)	Np-236	4.16E-01	1.22E-01	3.15E-01	4.12E-01	1.30E-01	0.999	6.03E-06	1.17E+01	4.01E+01	1.55E+01	1.18E+01	3.76E+01	8.90E-04
Neptunium (93)	Np-236m	1.72E-01	4.87E-02	1.25E-01	1.66E-01	5.11E-02	0.999	2.70E+02	7.66E+03	2.70E+04	1.05E+04	7.90E+03	2.57E+04	1.30E-08
Neptunium (93)	Np-237	6.94E-02	2.31E-02	5.52E-02	6.92E-02	2.94E-02	0.973	3.24E-07	7.21E+01	2.16E+02	9.06E+01	7.23E+01	1.70E+02	1.02E-01
Neptunium (93)	Np-237+D						0.973	3.24E-07						
Neptunium (93)	Np-237+E	1.01E+00	2.41E-01	6.66E-01	9.59E-01	2.46E-01	0.973	3.24E-07	4.96E+00	2.08E+01	7.51E+00	5.22E+00	2.03E+01	7.04E-03
Neptunium (93)	Np-238	3.25E+00	6.10E-01	1.75E+00	2.80E+00	6.23E-01	0.995	1.19E+02	1.80E+02	9.58E+02	3.33E+02	2.09E+02	9.38E+02	6.96E-10
Neptunium (93)	Np-239	6.88E-01	1.77E-01	4.79E-01	6.66E-01	1.80E-01	0.945	1.07E+02	8.04E+02	3.13E+03	1.15E+03	8.31E+02	3.08E+03	3.47E-09
Neptunium (93)	Np-240	7.25E+00	1.45E+00	4.12E+00	6.42E+00	1.45E+00	0.954	5.60E+03	3.94E+03	1.98E+04	6.94E+03	4.46E+03	1.98E+04	3.27E-10
Neptunium (93)	Np-240m	1.90E+00	3.80E-01	1.07E+00	1.68E+00	4.52E-01	0.97	4.92E+04	1.30E+05	6.49E+05	2.30E+05	1.47E+05	5.47E+05	1.23E-09
Oxygen (8)	O-15	5.61E+00	1.17E+00	3.32E+00	5.09E+00	1.25E+00	0.883	1.79E+05	1.76E+05	8.43E+05	2.97E+05	1.94E+05	7.89E+05	2.86E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Osmium (76)	Os-180	1.41E-01	5.22E-02	1.13E-01	1.36E-01	6.29E-02	0.97	1.66E+04	5.89E+05	1.59E+06	7.37E+05	6.09E+05	1.32E+06	1.24E-08
Osmium (76)	Os-181	6.75E+00	1.33E+00	3.77E+00	5.87E+00	1.32E+00	0.918	3.47E+03	2.72E+03	1.38E+04	4.88E+03	3.13E+03	1.39E+04	2.76E-10
Osmium (76)	Os-182	2.07E+00	4.70E-01	1.29E+00	1.92E+00	4.74E-01	0.95	2.76E+02	6.83E+02	3.01E+03	1.09E+03	7.36E+02	2.98E+03	8.74E-10
Osmium (76)	Os-185	3.90E+00	7.96E-01	2.24E+00	3.47E+00	7.95E-01	0.871	2.69E+00	4.14E+00	2.03E+01	7.21E+00	4.65E+00	2.03E+01	5.52E-10
Osmium (76)	Os-189m	1.76E-06	1.76E-06	1.76E-06	1.76E-06	5.64E-05	1	1.01E+03	2.79E+09	2.80E+09	2.79E+09	2.79E+09	8.74E+07	1.01E-03
Osmium (76)	Os-190m	8.50E+00	1.78E+00	5.09E+00	7.76E+00	1.76E+00	0.887	3.68E+04	2.37E+04	1.13E+05	3.96E+04	2.60E+04	1.15E+05	2.38E-10
Osmium (76)	Os-191	2.14E-01	7.27E-02	1.72E-01	2.13E-01	7.88E-02	0.945	1.64E+01	3.94E+02	1.16E+03	4.92E+02	3.98E+02	1.07E+03	8.90E-09
Osmium (76)	Os-191m	1.38E-02	6.21E-03	1.26E-02	1.38E-02	7.47E-03	0.98	4.66E+02	1.67E+05	3.73E+05	1.84E+05	1.67E+05	3.10E+05	1.33E-07
Osmium (76)	Os-193	3.41E-01	8.11E-02	2.18E-01	3.17E-01	1.12E-01	0.939	2.02E+02	3.07E+03	1.29E+04	4.81E+03	3.31E+03	9.37E+03	5.69E-09
Osmium (76)	Os-194	9.31E-04	6.17E-04	9.18E-04	9.31E-04	1.11E-03	0.994	1.16E-01	5.57E+03	8.40E+03	5.65E+03	5.57E+03	4.65E+03	1.82E-05
Osmium (76)	Os-194+D	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	0.903	1.16E-01	1.09E+01	4.77E+01	1.82E+01	1.20E+01	2.69E+01	3.55E-08
Osmium (76)	Os-194+E	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	0.903	1.16E-01	1.09E+01	4.77E+01	1.82E+01	1.20E+01	2.69E+01	3.55E-08
Phosphorus (15)	P-30	5.69E+00	1.21E+00	3.38E+00	5.17E+00	1.32E+00	0.883	1.46E+05	1.41E+05	6.66E+05	2.38E+05	1.56E+05	6.09E+05	5.64E-11
Phosphorus (15)	P-32	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	0.927	1.77E+01	4.57E+03	7.50E+03	5.51E+03	4.70E+03	9.35E+02	1.60E-08
Phosphorus (15)	P-33	5.02E-05	2.37E-05	4.40E-05	5.00E-05	4.25E-05	0.927	9.96E+00	1.04E+06	2.21E+06	1.19E+06	1.05E+06	1.23E+06	6.70E-06
Protactinium (91)	Pa-227	5.65E-02	1.92E-02	4.61E-02	5.65E-02	2.11E-02	1	9.51E+03	8.19E+05	2.41E+06	1.00E+06	8.19E+05	2.19E+06	3.79E-08
Protactinium (91)	Pa-228	6.38E+00	1.24E+00	3.54E+00	5.54E+00	1.23E+00	1	2.76E+02	2.11E+02	1.08E+03	3.79E+02	2.42E+02	1.10E+03	3.38E-10
Protactinium (91)	Pa-230	3.56E+00	7.14E-01	2.03E+00	3.13E+00	7.08E-01	1	1.45E+01	1.99E+01	9.90E+01	3.48E+01	2.26E+01	9.99E+01	6.10E-10
Protactinium (91)	Pa-231	1.76E-01	4.03E-02	1.12E-01	1.66E-01	4.41E-02	0.994	2.12E-05	2.78E+01	1.22E+02	4.36E+01	2.95E+01	1.11E+02	5.89E-04
Protactinium (91)	Pa-232	5.35E+00	1.04E+00	2.98E+00	4.68E+00	1.03E+00	0.952	1.93E+02	1.84E+02	9.48E+02	3.31E+02	2.11E+02	9.59E+02	4.30E-10
Protactinium (91)	Pa-233	9.40E-01	2.18E-01	6.10E-01	8.90E-01	2.17E-01	0.951	9.37E+00	5.10E+01	2.20E+02	7.86E+01	5.39E+01	2.21E+02	2.46E-09
Protactinium (91)	Pa-234	1.09E+01	2.11E+00	6.04E+00	9.47E+00	2.10E+00	0.957	9.06E+02	4.24E+02	2.19E+03	7.63E+02	4.86E+02	2.19E+03	2.12E-10
Protactinium (91)	Pa-234m	9.85E-02	3.13E-02	6.21E-02	8.80E-02	1.26E-01	0.999	3.11E+05	1.54E+07	4.84E+07	2.44E+07	1.72E+07	1.20E+07	2.25E-08
Lead (82)	Pb-195m	8.67E+00	1.78E+00	5.04E+00	7.78E+00	1.77E+00	0.902	2.31E+04	1.43E+04	7.00E+04	2.47E+04	1.60E+04	7.01E+04	2.35E-10
Lead (82)	Pb-198	2.05E+00	4.74E-01	1.31E+00	1.92E+00	4.74E-01	0.936	2.53E+03	6.41E+03	2.78E+04	1.01E+04	6.85E+03	2.78E+04	9.74E-10
Lead (82)	Pb-199	8.56E+00	1.61E+00	4.61E+00	7.31E+00	1.59E+00	0.958	4.05E+03	2.40E+03	1.28E+04	4.46E+03	2.81E+03	1.30E+04	2.29E-10
Lead (82)	Pb-200	7.63E-01	2.11E-01	5.46E-01	7.39E-01	2.17E-01	0.939	2.82E+02	1.92E+03	6.94E+03	2.68E+03	1.98E+03	6.74E+03	2.64E-09
Lead (82)	Pb-201	3.99E+00	8.34E-01	2.35E+00	3.58E+00	8.26E-01	0.96	6.46E+02	8.20E+02	3.93E+03	1.39E+03	9.14E+02	3.96E+03	4.95E-10
Lead (82)	Pb-202	7.33E-06	7.33E-06	7.33E-06	7.33E-06	2.23E-04	1	2.31E-06	6.64E+05	6.64E+05	6.64E+05	6.64E+05	2.18E+04	1.13E+02
Lead (82)	Pb-202+D	1.40E+01					0.906	2.31E-06	3.83E-01					6.51E-05
Lead (82)	Pb-202+E	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	0.906	2.31E-06	2.30E+00	1.04E+01	3.76E+00	2.50E+00	1.05E+01	3.91E-04
Lead (82)	Pb-202m	1.17E+01	2.29E+00	6.56E+00	1.03E+01	2.25E+00	0.994	1.68E+03	7.04E+02	3.58E+03	1.25E+03	7.99E+02	3.65E+03	1.65E-10
Lead (82)	Pb-203	1.38E+00	3.34E-01	9.12E-01	1.31E+00	3.34E-01	0.921	1.17E+02	4.47E+02	1.85E+03	6.76E+02	4.70E+02	1.85E+03	1.51E-09
Lead (82)	Pb-205	8.19E-06	8.19E-06	8.19E-06	8.19E-06	2.43E-04	1	4.85E-08	5.94E+05	5.94E+05	5.94E+05	5.94E+05	2.00E+04	4.88E+03
Lead (82)	Pb-209	7.52E-04	2.95E-04	5.95E-04	7.40E-04	3.72E-03	0.927	1.87E+03	1.30E+07	3.32E+07	1.65E+07	1.32E+07	2.63E+06	2.83E-06
Lead (82)	Pb-210	1.98E-03	1.26E-03	1.96E-03	1.98E-03	2.49E-03	0.996	3.11E-02	2.51E+03	3.93E+03	2.53E+03	2.51E+03	2.00E+03	3.29E-05
Lead (82)	Pb-211	2.91E-01	6.17E-02	1.69E-01	2.59E-01	1.11E-01	0.894	1.01E+04	1.89E+05	8.90E+05	3.25E+05	2.12E+05	4.95E+05	7.66E-09
Lead (82)	Pb-212	6.45E-01	1.59E-01	4.36E-01	6.21E-01	1.58E-01	0.919	5.71E+02	4.68E+03	1.90E+04	6.92E+03	4.87E+03	1.92E+04	3.38E-09
Lead (82)	Pb-214	1.24E+00	2.78E-01	7.80E-01	1.16E+00	2.80E-01	0.929	1.36E+04	5.74E+04	2.56E+05	9.13E+04	6.14E+04	2.54E+05	1.75E-09
Palladium (46)	Pd-100	2.89E-01	1.04E-01	2.41E-01	2.89E-01	1.24E-01	0.973	6.97E+01	1.21E+03	3.34E+03	1.45E+03	1.21E+03	2.82E+03	3.36E-09
Palladium (46)	Pd-101	1.74E+00	3.52E-01	1.01E+00	1.55E+00	3.61E-01	0.893	7.34E+02	2.30E+03	1.13E+04	3.98E+03	2.58E+03	1.11E+04	6.15E-10
Palladium (46)	Pd-103	1.88E-03	1.43E-03	1.66E-03	1.84E-03	8.95E-03	0.998	1.49E+01	3.86E+04	5.08E+04	4.38E+04	3.95E+04	8.13E+03	5.17E-07
Palladium (46)	Pd-107	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.07E-07						
Palladium (46)	Pd-109	1.80E-02	7.22E-03	1.41E-02	1.75E-02	4.35E-02	0.992	4.52E+02	1.23E+05	3.07E+05	1.57E+05	1.26E+05	5.10E+04	5.77E-08
Promethium (61)	Pm-141	4.18E+00	8.43E-01	2.39E+00	3.71E+00	9.02E-01	0.877	1.74E+04	2.31E+04	1.15E+05	4.05E+04	2.61E+04	1.07E+05	3.63E-10
Promethium (61)	Pm-142	4.89E+00	1.03E+00	2.85E+00	4.40E+00	1.12E+00	0.88	5.40E+05	6.11E+05	2.91E+06	1.05E+06	6.78E+05	2.66E+06	3.12E-10
Promethium (61)	Pm-143	1.66E+00	3.36E-01	9.40E-01	1.47E+00	3.47E-01	0.918	9.55E-01	4.96E+00	2.45E+01	8.75E+00	5.61E+00	2.37E+01	1.44E-09
Promethium (61)	Pm-144	8.65E+00	1.75E+00	4.98E+00	7.72E+00	1.74E+00	0.875	6.97E-01	8.92E-01	4.42E+00	1.55E+00	1.00E+00	4.44E+00	3.58E-10
Promethium (61)	Pm-145	2.31E-02	1.58E-02	2.26E-02	2.31E-02	3.05E-02	0.968	3.92E-02	2.22E+02	3.25E+02	2.27E+02	2.22E+02	1.68E+02	1.59E-06
Promethium (61)	Pm-146	4.12E+00	8.37E-01	2.39E+00	3.69E+00	8.39E-01	0.873	1.25E-01	1.44E+00	7.08E+00	2.48E+00	1.61E+00	7.07E+00	3.26E-09
Promethium (61)	Pm-147	4.29E-05	1.88E-05	3.66E-05	4.27E-05	3.27E-05	0.942	2.64E-01	1.37E+05	3.12E+05	1.61E+05	1.38E+05	1.80E+05	1.48E-04
Promethium (61)	Pm-148	3.49E+00	6.49E-01	1.85E+00	2.97E+00	7.13E-01	0.845	4.71E+01	7.78E+01	4.18E+02	1.46E+02	9.15E+01	3.80E+02	4.74E-10
Promethium (61)	Pm-148m	1.12E+01	2.26E+00	6.43E+00	1.00E+01	2.23E+00	0.875	6.12E+00	3.04E+00	1.51E+01	5.31E+00	3.40E+00	1.53E+01	1.42E-10
Promethium (61)	Pm-149	5.95E-02	1.45E-02	3.77E-02	5.56E-02	4.71E-02	0.898	1.14E+02	1.04E+04	4.29E+04	1.65E+04	1.12E+04	1.31E+04	2.63E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Promethium (61)	Pm-150	8.56E+00	1.59E+00	4.57E+00	7.29E+00	1.65E+00	0.899	2.27E+03	1.43E+03	7.71E+03	2.68E+03	1.68E+03	7.45E+03	1.84E-10
Promethium (61)	Pm-151	1.61E+00	3.52E-01	9.88E-01	1.48E+00	3.71E-01	0.939	2.14E+02	6.88E+02	3.14E+03	1.12E+03	7.47E+02	2.99E+03	9.44E-10
Polonium (84)	Po-203	9.53E+00	1.80E+00	5.17E+00	8.17E+00	1.79E+00	0.935	9.92E+03	5.42E+03	2.86E+04	1.00E+04	6.32E+03	2.89E+04	2.15E-10
Polonium (84)	Po-205	9.16E+00	1.74E+00	4.96E+00	7.87E+00	1.72E+00	0.955	3.37E+03	1.88E+03	9.90E+03	3.46E+03	2.18E+03	1.00E+04	2.21E-10
Polonium (84)	Po-207	7.59E+00	1.47E+00	4.20E+00	6.58E+00	1.45E+00	0.955	1.04E+03	6.99E+02	3.61E+03	1.26E+03	8.06E+02	3.66E+03	2.70E-10
Polonium (84)	Po-210	4.92E-05	9.55E-06	2.74E-05	4.31E-05	9.44E-06	0.86	1.83E+00	2.50E+05	1.29E+06	4.50E+05	2.86E+05	1.31E+06	5.58E-05
Polonium (84)	Po-211	4.48E-02	8.77E-03	2.52E-02	3.94E-02	8.66E-03	0.865	4.24E+07	5.32E+09	2.72E+10	9.46E+09	6.06E+09	2.75E+10	5.15E-08
Polonium (84)	Po-212	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.17E+13						
Polonium (84)	Po-213	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	5.20E+12						
Polonium (84)	Po-214	4.83E-04	9.36E-05	2.69E-04	4.23E-04	9.25E-05	0.861	1.33E+11	1.56E+15	8.03E+15	2.80E+15	1.78E+15	8.12E+15	4.86E-06
Polonium (84)	Po-215	9.44E-04	2.00E-04	5.69E-04	8.67E-04	1.96E-04	0.89	1.23E+10	7.11E+13	3.36E+14	1.18E+14	7.74E+13	3.42E+14	2.42E-06
Polonium (84)	Po-216	9.81E-05	1.90E-05	5.45E-05	8.60E-05	1.88E-05	0.86	1.46E+08	8.40E+12	4.33E+13	1.51E+13	9.59E+12	4.39E+13	2.42E-05
Polonium (84)	Po-218	5.32E-05	1.02E-05	2.93E-05	4.64E-05	1.01E-05	0.858	1.19E+05	1.27E+10	6.62E+10	2.31E+10	1.46E+10	6.70E+10	4.51E-05
Praseodymium (59)	Pr-136	1.22E+01	2.35E+00	6.71E+00	1.06E+01	2.38E+00	0.855	2.78E+04	1.30E+04	6.73E+04	2.36E+04	1.49E+04	6.65E+04	1.23E-10
Praseodymium (59)	Pr-137	2.69E+00	5.54E-01	1.56E+00	2.41E+00	5.80E-01	0.885	4.76E+03	9.74E+03	4.72E+04	1.68E+04	1.09E+04	4.51E+04	5.44E-10
Praseodymium (59)	Pr-138	4.53E+00	9.57E-01	2.67E+00	4.08E+00	1.05E+00	0.879	2.51E+05	3.07E+05	1.45E+06	5.21E+05	3.41E+05	1.33E+06	3.27E-10
Praseodymium (59)	Pr-138m	1.42E+01	2.76E+00	7.89E+00	1.24E+01	2.74E+00	0.868	2.89E+03	1.14E+03	5.87E+03	2.05E+03	1.31E+03	5.91E+03	1.06E-10
Praseodymium (59)	Pr-139	5.56E-01	1.20E-01	3.25E-01	4.98E-01	1.37E-01	0.937	1.35E+03	1.26E+04	5.83E+04	2.15E+04	1.40E+04	5.12E+04	2.52E-09
Praseodymium (59)	Pr-142	4.03E-01	8.17E-02	2.09E-01	3.32E-01	1.72E-01	0.821	3.17E+02	4.67E+03	2.30E+04	9.01E+03	5.67E+03	1.10E+04	4.05E-09
Praseodymium (59)	Pr-142m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	2.49E+04						
Praseodymium (59)	Pr-143	2.91E-03	1.52E-03	2.39E-03	2.85E-03	2.40E-02	0.864	1.87E+01	3.61E+04	6.90E+04	4.40E+04	3.68E+04	4.37E+03	5.37E-07
Praseodymium (59)	Pr-144	2.67E-01	7.14E-02	1.52E-01	2.28E-01	1.90E-01	0.821	2.11E+04	4.69E+05	1.75E+06	8.20E+05	5.49E+05	6.57E+05	6.21E-09
Praseodymium (59)	Pr-144m	1.20E-02	6.23E-03	9.66E-03	1.14E-02	1.23E-02	0.964	5.06E+04	2.13E+07	4.10E+07	2.64E+07	2.25E+07	2.08E+07	1.18E-07
Praseodymium (59)	Pr-145	9.51E-02	2.69E-02	5.82E-02	8.49E-02	1.09E-01	0.86	1.02E+03	6.04E+04	2.14E+05	9.87E+04	6.77E+04	5.25E+04	1.67E-08
Praseodymium (59)	Pr-147	4.74E+00	9.57E-01	2.69E+00	4.18E+00	1.04E+00	0.896	2.68E+04	3.07E+04	1.52E+05	5.42E+04	3.48E+04	1.39E+05	3.27E-10
Platinum (78)	Pt-186	4.01E+00	8.21E-01	2.31E+00	3.58E+00	8.17E-01	0.887	3.04E+03	4.15E+03	2.03E+04	7.20E+03	4.65E+03	2.04E+04	4.94E-10
Platinum (78)	Pt-188	7.68E-01	2.05E-01	5.32E-01	7.37E-01	2.12E-01	0.928	2.48E+01	1.69E+02	6.34E+02	2.45E+02	1.77E+02	6.12E+02	2.49E-09
Platinum (78)	Pt-189	1.47E+00	3.39E-01	9.08E-01	1.33E+00	3.49E-01	0.947	5.58E+02	1.95E+03	8.46E+03	3.16E+03	2.15E+03	8.23E+03	1.28E-09
Platinum (78)	Pt-191	1.24E+00	3.11E-01	8.17E-01	1.16E+00	3.24E-01	0.945	9.03E+01	3.74E+02	1.49E+03	5.70E+02	4.01E+02	1.43E+03	1.53E-09
Platinum (78)	Pt-193	6.30E-06	6.30E-06	6.30E-06	6.30E-06	1.80E-04	1	1.39E-02	7.77E+05	7.77E+05	7.77E+05	7.77E+05	2.73E+04	2.10E-02
Platinum (78)	Pt-193m	2.22E-02	9.34E-03	1.98E-02	2.22E-02	1.09E-02	0.976	5.84E+01	1.31E+04	3.12E+04	1.47E+04	1.31E+04	2.68E+04	8.41E-08
Platinum (78)	Pt-195m	1.65E-01	6.40E-02	1.42E-01	1.65E-01	7.22E-02	0.955	6.29E+01	1.94E+03	5.01E+03	2.27E+03	1.94E+03	4.44E+03	1.17E-08
Platinum (78)	Pt-197	7.25E-02	2.29E-02	5.61E-02	7.14E-02	2.79E-02	0.961	3.32E+02	2.32E+04	7.32E+04	2.99E+04	2.35E+04	6.02E+04	2.67E-08
Platinum (78)	Pt-197m	3.04E-01	8.08E-02	2.07E-01	2.89E-01	8.50E-02	0.959	3.86E+03	6.44E+04	2.42E+05	9.46E+04	6.77E+04	2.30E+05	6.38E-09
Platinum (78)	Pt-199	1.10E+00	2.33E-01	6.53E-01	9.96E-01	2.88E-01	0.927	1.18E+04	5.66E+04	2.66E+05	9.51E+04	6.23E+04	2.15E+05	1.85E-09
Platinum (78)	Pt-200	2.01E-01	5.84E-02	1.47E-01	1.96E-01	6.37E-02	0.95	4.86E+02	1.24E+04	4.26E+04	1.69E+04	1.27E+04	3.90E+04	9.87E-09
Plutonium (94)	Pu-234	2.07E-01	6.43E-02	1.63E-01	2.07E-01	6.75E-02	0.999	6.90E+02	1.62E+04	5.22E+04	2.06E+04	1.62E+04	4.98E+04	1.07E-08
Plutonium (94)	Pu-235	3.04E-01	8.88E-02	2.28E-01	2.97E-01	9.34E-02	0.955	1.44E+04	2.41E+05	8.26E+05	3.22E+05	2.47E+05	7.86E+05	7.64E-09
Plutonium (94)	Pu-236	1.81E-04	1.18E-04	1.61E-04	1.79E-04	8.58E-04	0.999	2.43E-01	3.03E+04	4.65E+04	3.41E+04	3.06E+04	6.40E+03	5.71E-05
Plutonium (94)	Pu-237	1.45E-01	4.57E-02	1.14E-01	1.45E-01	4.96E-02	0.999	5.58E+00	1.88E+02	5.98E+02	2.39E+02	1.89E+02	5.51E+02	1.55E-08
Plutonium (94)	Pu-238	1.16E-04	8.77E-05	1.08E-04	1.16E-04	7.31E-04	0.999	7.90E-03	4.20E+04	5.58E+04	4.54E+04	4.23E+04	6.69E+03	2.46E-03
Plutonium (94)	Pu-239	2.63E-04	8.88E-05	1.88E-04	2.52E-04	3.31E-04	0.999	2.88E-05	1.85E+04	5.49E+04	2.59E+04	1.93E+04	1.47E+04	2.98E-01
Plutonium (94)	Pu-240	1.12E-04	8.58E-05	1.06E-04	1.12E-04	7.01E-04	0.999	1.06E-04	4.34E+04	5.68E+04	4.62E+04	4.34E+04	6.95E+03	1.91E-01
Plutonium (94)	Pu-241	5.30E-06	1.63E-06	4.10E-06	5.28E-06	2.01E-06	0.974	4.81E-02	9.66E+05	3.14E+06	1.25E+06	9.70E+05	2.55E+06	9.39E-03
Plutonium (94)	Pu-242	9.90E-05	7.25E-05	9.21E-05	9.90E-05	5.81E-04	0.999	1.84E-06	4.92E+04	6.71E+04	5.29E+04	4.92E+04	8.38E+03	1.25E+01
Plutonium (94)	Pu-243	7.11E-02	2.33E-02	5.61E-02	7.01E-02	2.65E-02	0.952	1.22E+03	8.81E+04	2.69E+05	1.12E+05	8.93E+04	2.36E+05	3.39E-08
Plutonium (94)	Pu-244	1.38E-01	2.41E-02	6.96E-02	1.13E-01	2.36E-02	1.78	8.66E-09	1.99E+01	1.14E+02	3.93E+01	2.42E+01	1.16E+02	1.09E+00
Plutonium (94)	Pu-244+D	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	0.973	8.66E-09	2.46E+00	1.24E+01	4.38E+00	2.79E+00	1.05E+01	1.34E-01
Plutonium (94)	Pu-244+E	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	0.973	8.66E-09	2.46E+00	1.24E+01	4.38E+00	2.79E+00	1.05E+01	1.34E-01
Plutonium (94)	Pu-245	2.22E+00	4.61E-01	1.31E+00	2.00E+00	4.74E-01	0.95	5.78E+02	1.33E+03	6.43E+03	2.26E+03	1.48E+03	6.25E+03	1.10E-09
Plutonium (94)	Pu-246	5.17E-01	1.38E-01	3.66E-01	5.04E-01	1.44E-01	0.955	2.33E+01	2.30E+02	8.63E+02	3.25E+02	2.36E+02	8.28E+02	4.71E-09
Radium (88)	Ra-222	4.70E-02	1.03E-02	2.95E-02	4.40E-02	1.01E-02	0.903	5.75E+05	6.60E+07	3.00E+08	1.05E+08	7.04E+07	3.07E+08	4.94E-08
Radium (88)	Ra-223	5.52E-01	1.41E-01	3.79E-01	5.30E-01	1.41E-01	0.958	2.21E+01	2.04E+02	7.99E+02	2.97E+02	2.12E+02	7.96E+02	3.98E-09
Radium (88)	Ra-223+D	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	0.945	2.21E+01	8.20E+01	3.49E+02	1.28E+02	8.76E+01	2.65E+02	1.60E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Radium (88)	Ra-223+E	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	0.945	2.21E+01	8.20E+01	3.49E+02	1.28E+02	8.76E+01	2.65E+02	1.60E-09
Radium (88)	Ra-224	4.72E-02	1.09E-02	3.10E-02	4.51E-02	1.07E-02	0.916	6.91E+01	7.78E+03	3.36E+04	1.19E+04	8.14E+03	3.44E+04	4.89E-08
Radium (88)	Ra-224+D	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	0.898	6.91E+01	3.88E+01	2.25E+02	7.78E+01	4.78E+01	2.23E+02	2.44E-10
Radium (88)	Ra-224+E	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	0.898	6.91E+01	3.88E+01	2.25E+02	7.78E+01	4.78E+01	2.23E+02	2.44E-10
Radium (88)	Ra-225	8.60E-03	6.21E-03	8.54E-03	8.58E-03	1.25E-02	0.977	1.71E+01	9.90E+03	1.37E+04	9.97E+03	9.92E+03	6.82E+03	2.53E-07
Radium (88)	Ra-225+D	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	0.964	1.71E+01	7.25E+01	3.33E+02	1.20E+02	7.99E+01	2.77E+02	1.85E-09
Radium (88)	Ra-225+E	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	0.964	1.71E+01	7.25E+01	3.33E+02	1.20E+02	7.99E+01	2.77E+02	1.85E-09
Radium (88)	Ra-226	2.91E-02	7.24E-03	2.00E-02	2.82E-02	7.13E-03	0.928	4.33E-04	1.80E+02	7.25E+02	2.63E+02	1.86E+02	7.36E+02	1.83E-04
Radium (88)	Ra-226+D	1.06E+01					0.926	4.33E-04	4.95E-01					5.02E-07
Radium (88)	Ra-226+E	1.06E+01	1.94E+00	5.60E+00	8.95E+00	1.97E+00	0.926	4.33E-04	4.95E-01	2.71E+00	9.40E-01	5.87E-01	2.67E+00	5.02E-07
Radium (88)	Ra-227	7.87E-01	1.76E-01	4.89E-01	7.31E-01	2.12E-01	0.979	8.63E+03	5.45E+04	2.44E+05	8.78E+04	5.87E+04	2.02E+05	2.78E-09
Radium (88)	Ra-227+D						0.979	8.63E+03						
Radium (88)	Ra-228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.21E-01						
Radium (88)	Ra-228+D	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	0.926	1.21E-01	9.87E-01	5.19E+00	1.81E+00	1.14E+00	5.09E+00	3.62E-09
Radium (88)	Ra-228+E	1.53E+01	2.74E+00	7.89E+00	1.27E+01	2.78E+00	0.926	1.21E-01	3.64E-01	2.03E+00	7.07E-01	4.38E-01	2.01E+00	1.34E-09
Rubidium (37)	Rb-79	7.39E+00	1.54E+00	4.38E+00	6.70E+00	1.61E+00	0.914	1.59E+04	1.15E+04	5.48E+04	1.93E+04	1.26E+04	5.26E+04	1.11E-10
Rubidium (37)	Rb-80	7.03E+00	1.49E+00	4.16E+00	6.38E+00	1.61E+00	0.883	6.43E+05	5.04E+05	2.37E+06	8.52E+05	5.55E+05	2.20E+06	1.22E-10
Rubidium (37)	Rb-81	3.26E+00	6.94E-01	1.98E+00	3.00E+00	6.98E-01	0.902	1.33E+03	2.19E+03	1.03E+04	3.62E+03	2.38E+03	1.02E+04	2.60E-10
Rubidium (37)	Rb-81m	1.18E-02	4.21E-03	9.85E-03	1.18E-02	5.73E-03	0.999	1.14E+04	4.69E+06	1.32E+07	5.63E+06	4.69E+06	9.68E+06	6.48E-08
Rubidium (37)	Rb-82	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	2.80E+05	2.52E+05	1.20E+06	4.29E+05	2.79E+05	1.10E+06	1.43E-10
Rubidium (37)	Rb-82m	1.69E+01	3.25E+00	9.33E+00	1.47E+01	3.20E+00	0.862	9.79E+02	3.26E+02	1.70E+03	5.93E+02	3.75E+02	1.73E+03	5.30E-11
Rubidium (37)	Rb-83	2.74E+00	5.63E-01	1.61E+00	2.48E+00	5.55E-01	0.944	2.93E+00	5.83E+00	2.84E+01	9.95E+00	6.44E+00	2.88E+01	3.20E-10
Rubidium (37)	Rb-84	5.26E+00	1.03E+00	2.95E+00	4.63E+00	1.02E+00	0.94	7.72E+00	7.60E+00	3.90E+01	1.36E+01	8.64E+00	3.92E+01	1.61E-10
Rubidium (37)	Rb-86	5.87E-01	1.17E-01	3.19E-01	5.04E-01	1.95E-01	0.844	1.36E+01	1.33E+02	6.66E+02	2.45E+02	1.55E+02	4.01E+02	1.64E-09
Rubidium (37)	Rb-87	1.21E-04	5.24E-05	1.04E-04	1.21E-04	8.52E-05	0.927	1.47E-11	4.33E+04	1.00E+05	5.07E+04	4.34E+04	6.16E+04	4.96E+05
Rubidium (37)	Rb-88	4.21E+00	7.61E-01	2.11E+00	3.43E+00	8.65E-01	0.809	2.05E+04	2.92E+04	1.62E+05	5.84E+04	3.59E+04	1.42E+05	2.44E-10
Rubidium (37)	Rb-89	1.30E+01	2.28E+00	6.56E+00	1.07E+01	2.30E+00	0.847	2.40E+04	1.06E+04	6.05E+04	2.10E+04	1.29E+04	5.99E+04	7.62E-11
Rhenium (75)	Re-177	3.28E+00	6.66E-01	1.85E+00	2.85E+00	6.94E-01	0.89	2.60E+04	4.33E+04	2.14E+05	7.71E+04	4.99E+04	2.05E+05	5.72E-10
Rhenium (75)	Re-178	7.05E+00	1.32E+00	3.75E+00	5.95E+00	1.34E+00	0.873	2.76E+04	2.18E+04	1.16E+05	4.10E+04	2.59E+04	1.15E+05	2.73E-10
Rhenium (75)	Re-180	6.60E+00	1.31E+00	3.69E+00	5.76E+00	1.31E+00	0.859	1.50E+05	1.29E+05	6.50E+05	2.30E+05	1.47E+05	6.50E+05	3.00E-10
Rhenium (75)	Re-181	3.99E+00	8.39E-01	2.35E+00	3.58E+00	8.40E-01	0.945	3.04E+02	3.92E+02	1.86E+03	6.65E+02	4.37E+02	1.86E+03	4.53E-10
Rhenium (75)	Re-182	1.03E+01	2.03E+00	5.76E+00	8.93E+00	2.02E+00	0.94	9.49E+01	4.79E+01	2.42E+02	8.52E+01	5.50E+01	2.43E+02	1.78E-10
Rhenium (75)	Re-182m	6.70E+00	1.27E+00	3.60E+00	5.69E+00	1.26E+00	0.926	4.78E+02	3.75E+02	1.98E+03	6.98E+02	4.42E+02	1.99E+03	2.77E-10
Rhenium (75)	Re-184	4.92E+00	9.79E-01	2.76E+00	4.31E+00	9.77E-01	0.897	6.66E+00	7.34E+00	3.69E+01	1.31E+01	8.39E+00	3.70E+01	3.94E-10
Rhenium (75)	Re-184m	1.90E+00	4.16E-01	1.14E+00	1.72E+00	4.19E-01	0.952	1.53E+00	5.25E+00	2.40E+01	8.74E+00	5.82E+00	2.39E+01	1.22E-09
Rhenium (75)	Re-186	7.18E-02	2.24E-02	5.45E-02	7.07E-02	5.16E-02	0.954	6.70E+01	4.76E+03	1.53E+04	6.27E+03	4.83E+03	6.62E+03	2.56E-08
Rhenium (75)	Re-186m	2.35E-02	1.13E-02	2.14E-02	2.35E-02	1.49E-02	0.985	3.47E-06	2.10E+02	4.38E+02	2.30E+02	2.10E+02	3.31E+02	2.19E-02
Rhenium (75)	Re-186m+D	9.55E-02					0.973	3.47E-06	5.24E+01					5.46E-03
Rhenium (75)	Re-186m+E	9.53E-02	3.36E-02	7.59E-02	9.42E-02	6.65E-02	0.973	3.47E-06	5.25E+01	1.49E+02	6.59E+01	5.31E+01	7.52E+01	5.47E-03
Rhenium (75)	Re-187	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.39E-11						
Rhenium (75)	Re-188	3.11E-01	7.87E-02	1.96E-01	2.85E-01	1.69E-01	0.903	3.58E+02	6.19E+03	2.45E+04	9.84E+03	6.75E+03	1.14E+04	6.31E-09
Rhenium (75)	Re-188m	1.69E-01	6.83E-02	1.46E-01	1.68E-01	7.90E-02	0.953	1.96E+04	5.92E+05	1.47E+06	6.85E+05	5.94E+05	1.27E+06	1.10E-08
Rhenium (75)	Re-189	3.08E-01	7.57E-02	2.05E-01	2.95E-01	9.81E-02	0.921	2.50E+02	4.29E+03	1.74E+04	6.43E+03	4.48E+03	1.35E+04	6.30E-09
Rhodium (45)	Rh-100	1.72E+01	2.98E+00	8.65E+00	1.41E+01	2.91E+00	0.886	2.92E+02	9.34E+01	5.37E+02	1.85E+02	1.14E+02	5.52E+02	6.21E-11
Rhodium (45)	Rh-101	1.12E+00	2.78E-01	7.68E-01	1.09E+00	2.80E-01	0.931	2.17E-01	5.18E+00	2.09E+01	7.57E+00	5.35E+00	2.08E+01	4.69E-09
Rhodium (45)	Rh-101m	1.51E+00	3.30E-01	9.42E-01	1.41E+00	3.30E-01	0.907	5.83E+01	2.08E+02	9.47E+02	3.32E+02	2.22E+02	9.47E+02	6.99E-10
Rhodium (45)	Rh-102	1.22E+01	2.39E+00	6.84E+00	1.07E+01	2.36E+00	0.861	2.39E-01	5.23E-01	2.66E+00	9.28E-01	5.93E-01	2.70E+00	4.33E-10
Rhodium (45)	Rh-102m	2.65E+00	5.43E-01	1.54E+00	2.39E+00	5.57E-01	0.987	1.22E+00	3.23E+00	1.57E+01	5.53E+00	3.58E+00	1.53E+01	5.22E-10
Rhodium (45)	Rh-103m	1.70E-04	1.63E-04	1.70E-04	1.70E-04	1.03E-03	0.998	6.49E+03	1.87E+08	1.94E+08	1.87E+08	1.87E+08	3.06E+07	5.75E-06
Rhodium (45)	Rh-105	3.97E-01	8.75E-02	2.50E-01	3.73E-01	8.66E-02	0.905	1.72E+02	2.32E+03	1.06E+04	3.69E+03	2.48E+03	1.07E+04	2.76E-09
Rhodium (45)	Rh-106	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	7.31E+05	3.24E+06	1.45E+07	5.52E+06	3.62E+06	1.00E+07	9.11E-10
Rhodium (45)	Rh-106m	1.71E+01	3.25E+00	9.34E+00	1.48E+01	3.21E+00	0.87	2.76E+03	9.05E+02	4.76E+03	1.65E+03	1.04E+03	4.81E+03	6.74E-11
Rhodium (45)	Rh-107	1.62E+00	3.56E-01	1.01E+00	1.51E+00	3.94E-01	0.9	1.68E+04	5.61E+04	2.55E+05	9.01E+04	6.00E+04	2.30E+05	6.94E-10
Rhodium (45)	Rh-99	3.15E+00	6.60E-01	1.86E+00	2.83E+00	6.61E-01	0.891	1.58E+01	2.74E+01	1.31E+02	4.63E+01	3.05E+01	1.31E+02	3.33E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Rhodium (45)	Rh-99m	3.79E+00	7.53E-01	2.16E+00	3.36E+00	7.46E-01	0.859	1.29E+03	1.93E+03	9.71E+03	3.38E+03	2.18E+03	9.81E+03	2.87E-10
Radon (86)	Rn-218	4.25E-03	8.56E-04	2.44E-03	3.80E-03	8.46E-04	0.875	6.24E+08	8.17E+11	4.06E+12	1.42E+12	9.13E+11	4.10E+12	5.53E-07
Radon (86)	Rn-219	2.85E-01	6.29E-02	1.78E-01	2.67E-01	6.16E-02	0.911	5.52E+06	1.03E+08	4.69E+08	1.65E+08	1.11E+08	4.78E+08	7.96E-09
Radon (86)	Rn-219+D	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	0.931	5.52E+06	3.45E+07	1.56E+08	5.62E+07	3.75E+07	9.97E+07	2.65E-09
Radon (86)	Rn-219+E	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	0.931	5.52E+06	3.45E+07	1.56E+08	5.62E+07	3.75E+07	9.97E+07	2.65E-09
Radon (86)	Rn-220	2.14E-03	4.36E-04	1.25E-03	1.92E-03	4.31E-04	0.88	3.93E+05	1.01E+09	4.98E+09	1.74E+09	1.13E+09	5.05E+09	1.10E-06
Radon (86)	Rn-222	2.18E-03	4.51E-04	1.29E-03	1.98E-03	4.46E-04	0.883	6.62E+01	1.67E+05	8.08E+05	2.83E+05	1.84E+05	8.18E+05	1.09E-06
Radon (86)	Rn-222+D	1.06E+01	1.94E+00	5.58E+00	8.91E+00	1.96E+00	0.926	6.62E+01	3.29E+01	1.79E+02	6.23E+01	3.90E+01	1.77E+02	2.14E-10
Radon (86)	Rn-222+E	1.06E+01	1.94E+00	5.58E+00	8.93E+00	2.01E+00	0.926	6.62E+01	3.29E+01	1.79E+02	6.23E+01	3.89E+01	1.73E+02	2.14E-10
Ruthenium (44)	Ru-103	2.57E+00	5.32E-01	1.51E+00	2.33E+00	5.24E-01	0.882	6.44E+00	1.38E+01	6.70E+01	2.35E+01	1.53E+01	6.79E+01	4.29E-10
Ruthenium (44)	Ru-105	4.40E+00	8.88E-01	2.54E+00	3.94E+00	9.13E-01	0.898	1.37E+03	1.68E+03	8.35E+03	2.92E+03	1.88E+03	8.12E+03	2.51E-10
Ruthenium (44)	Ru-105+D	4.79E+00	9.75E-01	2.78E+00	4.31E+00	9.99E-01	0.991	1.37E+03	1.40E+03	6.88E+03	2.42E+03	1.56E+03	6.72E+03	2.09E-10
Ruthenium (44)	Ru-106	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.87E-01						
Ruthenium (44)	Ru-106+D	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	6.87E-01	6.13E+00	2.74E+01	1.04E+01	6.84E+00	1.89E+01	1.83E-09
Ruthenium (44)	Ru-106+E	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	6.87E-01	6.13E+00	2.74E+01	1.04E+01	6.84E+00	1.89E+01	1.83E-09
Ruthenium (44)	Ru-94	2.89E+00	5.87E-01	1.68E+00	2.59E+00	5.84E-01	0.951	7.03E+03	1.24E+04	6.13E+04	2.14E+04	1.39E+04	6.17E+04	3.23E-10
Ruthenium (44)	Ru-97	1.09E+00	2.54E-01	7.14E-01	1.04E+00	2.52E-01	0.949	8.72E+01	4.09E+02	1.76E+03	6.26E+02	4.29E+02	1.77E+03	8.83E-10
Sulfur (16)	S-35	1.22E-05	6.96E-06	1.13E-05	1.22E-05	1.55E-05	0.927	2.89E+00	1.32E+06	2.31E+06	1.42E+06	1.32E+06	1.04E+06	3.09E-05
Antimony (51)	Sb-115	4.94E+00	1.02E+00	2.91E+00	4.48E+00	1.04E+00	0.891	1.15E+04	1.27E+04	6.13E+04	2.15E+04	1.40E+04	6.00E+04	2.47E-10
Antimony (51)	Sb-116	1.30E+01	2.37E+00	6.84E+00	1.10E+01	2.37E+00	0.867	2.31E+04	9.93E+03	5.46E+04	1.89E+04	1.18E+04	5.46E+04	9.69E-11
Antimony (51)	Sb-116m	1.83E+01	3.47E+00	9.94E+00	1.58E+01	3.42E+00	0.856	6.04E+03	1.87E+03	9.90E+03	3.45E+03	2.18E+03	1.00E+04	6.98E-11
Antimony (51)	Sb-117	7.35E-01	1.83E-01	4.98E-01	7.05E-01	1.93E-01	0.962	2.17E+03	1.49E+04	6.01E+04	2.20E+04	1.56E+04	5.70E+04	1.56E-09
Antimony (51)	Sb-118m	1.51E+01	2.82E+00	8.11E+00	1.29E+01	2.79E+00	0.87	1.21E+03	4.49E+02	2.41E+03	8.37E+02	5.25E+02	2.44E+03	8.47E-11
Antimony (51)	Sb-119	4.48E-03	4.35E-03	4.49E-03	4.48E-03	1.82E-02	0.992	1.59E+02	1.75E+05	1.80E+05	1.74E+05	1.75E+05	4.29E+04	2.53E-07
Antimony (51)	Sb-120	2.44E+00	5.07E-01	1.43E+00	2.20E+00	5.45E-01	0.927	2.29E+04	4.93E+04	2.37E+05	8.39E+04	5.47E+04	2.21E+05	5.00E-10
Antimony (51)	Sb-120m	1.43E+01	2.70E+00	7.74E+00	1.23E+01	2.66E+00	0.88	4.39E+01	1.70E+01	8.98E+01	3.14E+01	1.98E+01	9.13E+01	9.03E-11
Antimony (51)	Sb-122	2.48E+00	5.07E-01	1.44E+00	2.22E+00	5.66E-01	0.875	9.37E+01	2.10E+02	1.03E+03	3.63E+02	2.35E+02	9.21E+02	5.31E-10
Antimony (51)	Sb-124	1.11E+01	2.00E+00	5.78E+00	9.33E+00	1.98E+00	0.871	4.20E+00	2.16E+00	1.19E+01	4.12E+00	2.56E+00	1.20E+01	1.23E-10
Antimony (51)	Sb-124m	1.98E+00	3.99E-01	1.14E+00	1.77E+00	4.01E-01	0.875	2.35E+05	6.61E+05	3.27E+06	1.15E+06	7.40E+05	3.26E+06	6.77E-10
Antimony (51)	Sb-124n	1.37E-05	1.34E-05	1.38E-05	1.37E-05	5.92E-05	0.993	1.80E+04	6.45E+09	6.59E+09	6.42E+09	6.45E+09	1.49E+09	8.60E-05
Antimony (51)	Sb-125	2.28E+00	4.74E-01	1.34E+00	2.07E+00	4.77E-01	0.881	2.50E-01	2.74E+00	1.32E+01	4.64E+00	3.02E+00	1.31E+01	2.66E-09
Antimony (51)	Sb-126	1.60E+01	3.21E+00	9.14E+00	1.43E+01	3.17E+00	0.866	2.04E+01	7.15E+00	3.57E+01	1.25E+01	8.03E+00	3.61E+01	8.57E-11
Antimony (51)	Sb-126m	8.71E+00	1.76E+00	5.02E+00	7.80E+00	1.81E+00	0.872	1.92E+04	1.23E+04	6.08E+04	2.13E+04	1.37E+04	5.91E+04	1.57E-10
Antimony (51)	Sb-127	3.86E+00	7.76E-01	2.22E+00	3.45E+00	7.89E-01	0.883	6.57E+01	9.38E+01	4.67E+02	1.63E+02	1.05E+02	4.59E+02	3.52E-10
Antimony (51)	Sb-128	1.76E+01	3.49E+00	9.98E+00	1.56E+01	3.48E+00	0.885	6.74E+02	2.10E+02	1.06E+03	3.71E+02	2.38E+02	1.07E+03	7.75E-11
Antimony (51)	Sb-128m	1.13E+01	2.26E+00	6.43E+00	1.00E+01	2.32E+00	0.863	3.50E+04	1.75E+04	8.75E+04	3.07E+04	1.97E+04	8.50E+04	1.24E-10
Antimony (51)	Sb-129	8.54E+00	1.60E+00	4.61E+00	7.33E+00	1.60E+00	0.875	1.41E+03	9.15E+02	4.88E+03	1.70E+03	1.07E+03	4.89E+03	1.63E-10
Antimony (51)	Sb-130	1.88E+01	3.66E+00	1.05E+01	1.64E+01	3.66E+00	0.863	9.11E+03	2.73E+03	1.40E+04	4.91E+03	3.12E+03	1.40E+04	7.55E-11
Antimony (51)	Sb-131	1.13E+01	2.05E+00	5.93E+00	9.55E+00	2.07E+00	0.858	1.58E+04	7.95E+03	4.38E+04	1.51E+04	9.41E+03	4.35E+04	1.28E-10
Scandium (21)	Sc-43	5.95E+00	1.24E+00	3.54E+00	5.43E+00	1.25E+00	0.886	1.56E+03	1.44E+03	6.89E+03	2.42E+03	1.58E+03	6.86E+03	7.70E-11
Scandium (21)	Sc-44	1.24E+01	2.39E+00	6.86E+00	1.08E+01	2.43E+00	0.863	1.55E+03	7.02E+02	3.65E+03	1.27E+03	8.05E+02	3.59E+03	3.88E-11
Scandium (21)	Sc-44m	1.44E+00	3.13E-01	8.93E-01	1.34E+00	3.06E-01	0.902	1.04E+02	3.87E+02	1.78E+03	6.26E+02	4.17E+02	1.83E+03	3.19E-10
Scandium (21)	Sc-46	1.20E+01	2.24E+00	6.43E+00	1.03E+01	2.19E+00	0.847	3.02E+00	1.52E+00	8.15E+00	2.83E+00	1.78E+00	8.31E+00	4.50E-11
Scandium (21)	Sc-47	4.61E-01	1.18E-01	3.25E-01	4.51E-01	1.16E-01	0.926	7.55E+01	8.61E+02	3.37E+03	1.22E+03	8.79E+02	3.41E+03	1.04E-09
Scandium (21)	Sc-48	2.03E+01	3.69E+00	1.07E+01	1.72E+01	3.63E+00	0.84	1.39E+02	3.96E+01	2.18E+02	7.53E+01	4.69E+01	2.22E+02	2.65E-11
Scandium (21)	Sc-49	3.60E-02	1.88E-02	2.74E-02	3.39E-02	1.19E-01	0.815	6.35E+03	1.05E+06	2.01E+06	1.38E+06	1.12E+06	3.18E+05	1.58E-08
Selenium (34)	Se-70	5.32E+00	1.12E+00	3.17E+00	4.83E+00	1.16E+00	0.936	8.88E+03	8.69E+03	4.13E+04	1.46E+04	9.56E+03	3.97E+04	1.33E-10
Selenium (34)	Se-73	5.69E+00	1.22E+00	3.43E+00	5.22E+00	1.25E+00	0.905	8.49E+02	8.03E+02	3.74E+03	1.33E+03	8.74E+02	3.66E+03	1.34E-10
Selenium (34)	Se-73m	1.33E+00	2.78E-01	7.87E-01	1.21E+00	2.94E-01	0.941	9.34E+03	3.62E+04	1.74E+05	6.14E+04	3.99E+04	1.64E+05	5.49E-10
Selenium (34)	Se-75	1.83E+00	4.29E-01	1.20E+00	1.75E+00	4.21E-01	0.918	2.11E+00	6.97E+00	2.97E+01	1.06E+01	7.30E+00	3.02E+01	4.80E-10
Selenium (34)	Se-77m	3.64E-01	9.23E-02	2.54E-01	3.54E-01	9.07E-02	0.98	1.25E+06	1.71E+07	6.74E+07	2.45E+07	1.76E+07	6.86E+07	2.04E-09
Selenium (34)	Se-79	1.53E-05	8.69E-06	1.42E-05	1.53E-05	1.91E-05	0.927	1.07E-05	3.44E+05	6.04E+05	3.70E+05	3.44E+05	2.74E+05	4.94E+00
Selenium (34)	Se-81	6.53E-02	2.00E-02	4.27E-02	6.06E-02	9.50E-02	0.878	1.97E+04	1.67E+06	5.47E+06	2.56E+06	1.80E+06	1.15E+06	1.33E-08
Selenium (34)	Se-81m	4.57E-02	1.40E-02	3.56E-02	4.57E-02	1.47E-02	0.987	6.36E+03	6.87E+05	2.24E+06	8.81E+05	6.87E+05	2.13E+06	1.70E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Selenium (34)	Se-83	1.44E+01	2.69E+00	7.74E+00	1.23E+01	2.67E+00	0.881	1.62E+04	6.21E+03	3.33E+04	1.16E+04	7.25E+03	3.35E+04	6.18E-11
Silicon (14)	Si-31	1.98E-02	9.62E-03	1.47E-02	1.85E-02	8.33E-02	0.834	2.32E+03	6.84E+05	1.40E+06	9.19E+05	7.31E+05	1.62E+05	1.78E-08
Silicon (14)	Si-32	2.97E-05	1.51E-05	2.67E-05	2.97E-05	2.92E-05	0.927	1.54E-03	1.77E+05	3.49E+05	1.97E+05	1.77E+05	1.80E+05	7.14E-03
Silicon (14)	Si-32+D	2.04E-02					0.928	1.54E-03	2.58E+02					1.04E-05
Silicon (14)	Si-32+E	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	0.928	1.54E-03	2.58E+02	4.23E+02	3.11E+02	2.65E+02	5.28E+01	1.04E-05
Samarium (62)	Sm-141	8.00E+00	1.58E+00	4.49E+00	7.03E+00	1.62E+00	0.851	3.57E+04	2.55E+04	1.29E+05	4.54E+04	2.90E+04	1.26E+05	1.96E-10
Samarium (62)	Sm-141m	1.13E+01	2.20E+00	6.29E+00	9.87E+00	2.21E+00	0.89	1.61E+04	7.80E+03	4.00E+04	1.40E+04	8.93E+03	4.00E+04	1.32E-10
Samarium (62)	Sm-142	3.79E-01	8.84E-02	2.29E-01	3.43E-01	1.04E-01	0.944	5.02E+03	6.84E+04	2.93E+05	1.13E+05	7.55E+04	2.48E+05	3.75E-09
Samarium (62)	Sm-145	5.43E-02	3.60E-02	5.32E-02	5.43E-02	6.49E-02	0.965	7.44E-01	1.32E+02	1.99E+02	1.35E+02	1.32E+02	1.10E+02	4.98E-08
Samarium (62)	Sm-146	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.73E-09						
Samarium (62)	Sm-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.54E-12						
Samarium (62)	Sm-151	6.75E-07	6.68E-07	6.75E-07	6.75E-07	4.13E-06	0.998	7.70E-03	7.25E+06	7.33E+06	7.25E+06	7.25E+06	1.18E+06	2.76E-01
Samarium (62)	Sm-153	1.39E-01	5.17E-02	1.13E-01	1.39E-01	7.12E-02	0.94	1.30E+02	4.83E+03	1.30E+04	5.94E+03	4.86E+03	9.45E+03	1.10E-08
Samarium (62)	Sm-155	3.66E-01	1.12E-01	2.76E-01	3.60E-01	1.82E-01	0.925	1.65E+04	2.37E+05	7.75E+05	3.14E+05	2.41E+05	4.76E+05	4.33E-09
Samarium (62)	Sm-156	4.83E-01	1.25E-01	3.36E-01	4.68E-01	1.31E-01	0.924	6.46E+02	7.04E+03	2.72E+04	1.01E+04	7.27E+03	2.60E+04	3.30E-09
Tin (50)	Sn-110	1.43E+00	3.21E-01	9.08E-01	1.35E+00	3.23E-01	0.956	1.52E+03	5.42E+03	2.41E+04	8.51E+03	5.73E+03	2.39E+04	7.62E-10
Tin (50)	Sn-111	2.87E+00	5.61E-01	1.60E+00	2.50E+00	5.85E-01	0.871	1.03E+04	2.01E+04	1.03E+05	3.60E+04	2.31E+04	9.86E+04	4.19E-10
Tin (50)	Sn-113	2.65E-02	8.39E-03	1.82E-02	2.54E-02	1.90E-02	0.992	2.20E+00	4.58E+02	1.45E+03	6.66E+02	4.78E+02	6.38E+02	4.57E-08
Tin (50)	Sn-117m	5.97E-01	1.56E-01	4.21E-01	5.86E-01	1.63E-01	0.961	1.86E+01	1.58E+02	6.04E+02	2.23E+02	1.61E+02	5.76E+02	1.93E-09
Tin (50)	Sn-119m	2.09E-03	2.03E-03	2.11E-03	2.09E-03	8.72E-03	0.992	8.63E-01	3.51E+03	3.60E+03	3.48E+03	3.51E+03	8.40E+02	9.38E-07
Tin (50)	Sn-121	1.71E-04	6.79E-05	1.41E-04	1.70E-04	1.03E-04	0.927	2.24E+02	6.89E+06	1.73E+07	8.33E+06	6.94E+06	1.14E+07	7.21E-06
Tin (50)	Sn-121m	1.43E-03	1.27E-03	1.42E-03	1.43E-03	4.20E-03	0.986	1.26E-02	3.47E+03	3.92E+03	3.49E+03	3.47E+03	1.18E+03	6.47E-05
Tin (50)	Sn-121m+D	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	0.986	1.26E-02	3.18E+03	3.76E+03	3.24E+03	3.18E+03	1.16E+03	5.92E-05
Tin (50)	Sn-121m+E	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	0.986	1.26E-02	3.18E+03	3.76E+03	3.24E+03	3.18E+03	1.16E+03	5.92E-05
Tin (50)	Sn-123	5.30E-02	1.46E-02	3.15E-02	4.64E-02	7.59E-02	0.843	1.96E+00	2.48E+02	9.02E+02	4.18E+02	2.83E+02	1.73E+02	3.03E-08
Tin (50)	Sn-123m	5.91E-01	1.54E-01	4.16E-01	5.78E-01	2.02E-01	0.936	9.09E+03	7.99E+04	3.07E+05	1.14E+05	8.17E+04	2.34E+05	2.10E-09
Tin (50)	Sn-125	1.92E+00	3.66E-01	1.02E+00	1.63E+00	4.46E-01	0.857	2.62E+01	7.76E+01	4.08E+02	1.46E+02	9.13E+01	3.34E+02	7.17E-10
Tin (50)	Sn-126	1.30E-01	4.74E-02	1.09E-01	1.30E-01	5.62E-02	0.957	6.93E-06	3.92E+01	1.07E+02	4.69E+01	3.91E+01	9.04E+01	1.38E-03
Tin (50)	Sn-126+D	8.84E+00	1.81E+00	5.13E+00	7.93E+00	1.87E+00	0.874	6.93E-06	6.30E-01	3.08E+00	1.09E+00	7.03E-01	2.98E+00	2.22E-05
Tin (50)	Sn-126+E	1.11E+01	2.26E+00	6.42E+00	9.92E+00	2.31E+00	0.874	6.93E-06	5.03E-01	2.47E+00	8.68E-01	5.61E-01	2.41E+00	1.77E-05
Tin (50)	Sn-127	1.15E+01	2.11E+00	6.08E+00	9.74E+00	2.10E+00	0.928	2.89E+03	1.32E+03	7.19E+03	2.49E+03	1.56E+03	7.22E+03	1.12E-10
Tin (50)	Sn-128	3.30E+00	7.03E-01	1.98E+00	3.00E+00	7.29E-01	0.904	6.16E+03	1.01E+04	4.72E+04	1.68E+04	1.10E+04	4.55E+04	4.05E-10
Strontium (38)	Sr-80	9.94E-05	9.94E-05	9.94E-05	9.94E-05	1.87E-03	1	3.64E+03	1.78E+08	1.78E+08	1.78E+08	1.78E+08	9.49E+06	7.60E-06
Strontium (38)	Sr-81	7.53E+00	1.59E+00	4.48E+00	6.83E+00	1.67E+00	0.895	1.43E+04	1.03E+04	4.89E+04	1.74E+04	1.14E+04	4.65E+04	1.13E-10
Strontium (38)	Sr-82	9.77E-05	9.77E-05	9.77E-05	9.77E-05	1.83E-03	1	1.01E+01	5.04E+05	5.04E+05	5.04E+05	5.04E+05	2.69E+04	7.92E-06
Strontium (38)	Sr-82+D	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	1.01E+01	9.12E+00	4.34E+01	1.55E+01	1.01E+01	3.98E+01	1.43E-10
Strontium (38)	Sr-82+E	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	1.01E+01	9.12E+00	4.34E+01	1.55E+01	1.01E+01	3.98E+01	1.43E-10
Strontium (38)	Sr-83	4.49E+00	8.88E-01	2.54E+00	3.97E+00	8.88E-01	0.906	1.87E+02	2.24E+02	1.13E+03	3.97E+02	2.53E+02	1.13E+03	1.92E-10
Strontium (38)	Sr-85	2.76E+00	5.71E-01	1.63E+00	2.50E+00	5.65E-01	0.968	3.90E+00	7.25E+00	3.51E+01	1.23E+01	8.01E+00	3.54E+01	3.07E-10
Strontium (38)	Sr-85m	1.04E+00	2.42E-01	6.86E-01	9.98E-01	2.36E-01	0.921	5.24E+03	2.67E+04	1.14E+05	4.04E+04	2.78E+04	1.17E+05	8.39E-10
Strontium (38)	Sr-87m	1.68E+00	3.60E-01	1.03E+00	1.56E+00	3.55E-01	0.917	2.16E+03	6.82E+03	3.19E+04	1.12E+04	7.37E+03	3.24E+04	5.32E-10
Strontium (38)	Sr-89	1.51E-02	8.97E-03	1.24E-02	1.47E-02	8.01E-02	0.856	5.01E+00	1.90E+03	3.20E+03	2.30E+03	1.95E+03	3.58E+02	6.55E-08
Strontium (38)	Sr-90	6.45E-04	2.35E-04	5.07E-04	6.36E-04	1.91E-03	0.927	2.38E-02	8.23E+03	2.26E+04	1.05E+04	8.35E+03	2.78E+03	6.04E-05
Strontium (38)	Sr-90+D	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	1	2.38E-02	1.21E+02	2.08E+02	1.49E+02	1.25E+02	3.77E+01	8.89E-07
Strontium (38)	Sr-90+E	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	1	2.38E-02	1.21E+02	2.08E+02	1.49E+02	1.25E+02	3.77E+01	8.89E-07
Strontium (38)	Sr-91	4.12E+00	7.91E-01	2.26E+00	3.58E+00	8.48E-01	0.862	6.39E+02	8.75E+02	4.56E+03	1.60E+03	1.01E+03	4.25E+03	2.42E-10
Strontium (38)	Sr-92	8.30E+00	1.46E+00	4.25E+00	6.90E+00	1.44E+00	0.831	2.24E+03	1.58E+03	8.96E+03	3.09E+03	1.90E+03	9.14E+03	1.26E-10
Tantalum (73)	Ta-172	8.78E+00	1.71E+00	4.85E+00	7.61E+00	1.74E+00	0.913	9.90E+03	6.01E+03	3.09E+04	1.09E+04	6.93E+03	3.03E+04	2.03E-10
Tantalum (73)	Ta-173	2.98E+00	6.34E-01	1.75E+00	2.67E+00	6.71E-01	0.93	1.66E+03	2.92E+03	1.37E+04	4.98E+03	3.26E+03	1.30E+04	5.89E-10
Tantalum (73)	Ta-174	3.21E+00	6.86E-01	1.90E+00	2.89E+00	7.18E-01	0.865	5.06E+03	8.87E+03	4.15E+04	1.50E+04	9.85E+03	3.97E+04	5.92E-10
Tantalum (73)	Ta-175	5.18E+00	9.96E-01	2.82E+00	4.42E+00	9.91E-01	0.934	5.78E+02	5.81E+02	3.02E+03	1.07E+03	6.82E+02	3.04E+03	3.41E-10
Tantalum (73)	Ta-176	1.32E+01	2.29E+00	6.64E+00	1.08E+01	2.25E+00	0.941	7.51E+02	2.95E+02	1.69E+03	5.85E+02	3.59E+02	1.73E+03	1.34E-10
Tantalum (73)	Ta-177	1.57E-01	5.73E-02	1.23E-01	1.51E-01	6.85E-02	0.941	1.07E+02	3.53E+03	9.69E+03	4.51E+03	3.68E+03	8.10E+03	1.13E-08
Tantalum (73)	Ta-178	4.16E-01	1.02E-01	2.52E-01	3.62E-01	1.12E-01	0.905	3.91E+04	5.06E+05	2.07E+06	8.36E+05	5.81E+05	1.88E+06	4.47E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Tantalum (73)	Ta-178m	4.79E+00	1.11E+00	3.06E+00	4.49E+00	1.11E+00	0.906	2.76E+03	3.09E+03	1.33E+04	4.85E+03	3.30E+03	1.33E+04	3.87E-10
Tantalum (73)	Ta-179	4.87E-02	2.48E-02	4.57E-02	4.87E-02	3.21E-02	0.959	3.80E-01	1.25E+02	2.46E+02	1.34E+02	1.25E+02	1.90E+02	1.14E-07
Tantalum (73)	Ta-180	2.57E+00	6.04E-01	1.67E+00	2.44E+00	6.05E-01	0.912	6.93E-14	2.07E+00	8.83E+00	3.19E+00	2.18E+00	8.83E+00	1.05E+04
Tantalum (73)	Ta-180m	8.17E-02	3.86E-02	7.46E-02	8.17E-02	4.94E-02	0.946	7.49E+02	4.72E+04	9.99E+04	5.17E+04	4.72E+04	7.81E+04	2.20E-08
Tantalum (73)	Ta-182	7.50E+00	1.41E+00	4.03E+00	6.40E+00	1.40E+00	0.925	2.20E+00	1.74E+00	9.22E+00	3.23E+00	2.03E+00	9.29E+00	2.79E-10
Tantalum (73)	Ta-182m	9.42E-01	2.56E-01	6.70E-01	9.18E-01	2.63E-01	0.928	2.30E+04	1.28E+05	4.72E+05	1.80E+05	1.31E+05	4.59E+05	1.97E-09
Tantalum (73)	Ta-183	1.20E+00	3.04E-01	8.11E-01	1.15E+00	3.13E-01	0.932	4.96E+01	2.17E+02	8.52E+02	3.19E+02	2.26E+02	8.28E+02	1.55E-09
Tantalum (73)	Ta-184	8.80E+00	1.80E+00	5.13E+00	7.89E+00	1.81E+00	0.914	6.98E+02	4.22E+02	2.06E+03	7.24E+02	4.71E+02	2.05E+03	2.16E-10
Tantalum (73)	Ta-185	7.98E-01	2.09E-01	5.39E-01	7.57E-01	2.92E-01	0.923	7.43E+03	4.91E+04	1.88E+05	7.27E+04	5.18E+04	1.34E+05	2.37E-09
Tantalum (73)	Ta-186	8.43E+00	1.76E+00	4.98E+00	7.61E+00	1.84E+00	0.913	3.47E+04	2.19E+04	1.05E+05	3.71E+04	2.43E+04	1.00E+05	2.28E-10
Terbium (65)	Tb-147	9.12E+00	1.78E+00	5.05E+00	7.96E+00	1.81E+00	0.859	3.68E+03	2.29E+03	1.17E+04	4.12E+03	2.62E+03	1.15E+04	1.77E-10
Terbium (65)	Tb-149	9.47E+00	1.77E+00	5.07E+00	8.08E+00	1.75E+00	0.863	1.46E+03	8.71E+02	4.67E+03	1.63E+03	1.02E+03	4.71E+03	1.72E-10
Terbium (65)	Tb-150	9.75E+00	1.88E+00	5.35E+00	8.45E+00	1.89E+00	0.868	1.86E+03	1.07E+03	5.53E+03	1.94E+03	1.23E+03	5.51E+03	1.67E-10
Terbium (65)	Tb-151	4.59E+00	9.72E-01	2.72E+00	4.16E+00	9.78E-01	0.892	3.45E+02	4.10E+02	1.94E+03	6.91E+02	4.52E+02	1.92E+03	3.48E-10
Terbium (65)	Tb-153	9.18E-01	2.28E-01	5.97E-01	8.56E-01	2.44E-01	0.931	1.08E+02	6.16E+02	2.48E+03	9.47E+02	6.60E+02	2.32E+03	1.69E-09
Terbium (65)	Tb-154	1.47E+01	2.50E+00	7.24E+00	1.19E+01	2.43E+00	0.889	2.84E+02	1.06E+02	6.21E+02	2.15E+02	1.31E+02	6.40E+02	1.11E-10
Terbium (65)	Tb-155	4.20E-01	1.27E-01	3.08E-01	4.08E-01	1.46E-01	0.937	4.75E+01	5.88E+02	1.94E+03	8.02E+02	6.05E+02	1.69E+03	3.72E-09
Terbium (65)	Tb-156	1.04E+01	2.00E+00	5.69E+00	8.99E+00	1.97E+00	0.883	4.74E+01	2.50E+01	1.31E+02	4.59E+01	2.90E+01	1.32E+02	1.60E-10
Terbium (65)	Tb-156m	2.97E-02	1.76E-02	2.89E-02	2.97E-02	2.58E-02	0.957	2.49E+02	4.27E+04	7.19E+04	4.38E+04	4.27E+04	4.91E+04	5.19E-08
Terbium (65)	Tb-156n	5.46E-03	2.63E-03	4.90E-03	5.46E-03	3.68E-03	0.955	1.21E+03	1.13E+06	2.35E+06	1.26E+06	1.13E+06	1.68E+06	2.82E-07
Terbium (65)	Tb-157	2.31E-03	1.53E-03	2.28E-03	2.31E-03	2.57E-03	0.962	4.62E-03	2.19E+03	3.32E+03	2.23E+03	2.19E+03	1.97E+03	1.45E-04
Terbium (65)	Tb-158	4.46E+00	8.67E-01	2.46E+00	3.86E+00	8.74E-01	0.854	4.62E-03	1.28E+00	6.59E+00	2.32E+00	1.48E+00	6.53E+00	8.50E-08
Terbium (65)	Tb-160	6.53E+00	1.24E+00	3.56E+00	5.63E+00	1.24E+00	0.861	3.50E+00	3.12E+00	1.64E+01	5.72E+00	3.62E+00	1.65E+01	2.77E-10
Terbium (65)	Tb-161	4.64E-02	2.29E-02	4.20E-02	4.61E-02	3.44E-02	0.954	3.66E+01	4.02E+03	8.14E+03	4.45E+03	4.05E+03	5.42E+03	3.43E-08
Technetium (43)	Tc-101	1.73E+00	3.80E-01	1.08E+00	1.62E+00	4.26E-01	0.894	2.57E+04	8.07E+04	3.67E+05	1.30E+05	8.64E+04	3.28E+05	6.16E-10
Technetium (43)	Tc-104	1.22E+01	2.22E+00	6.34E+00	1.02E+01	2.28E+00	0.898	2.00E+04	8.92E+03	4.89E+04	1.71E+04	1.07E+04	4.77E+04	8.99E-11
Technetium (43)	Tc-93	9.06E+00	1.58E+00	4.59E+00	7.48E+00	1.54E+00	0.891	2.21E+03	1.33E+03	7.65E+03	2.63E+03	1.61E+03	7.83E+03	1.09E-10
Technetium (43)	Tc-93m	4.49E+00	7.65E-01	2.24E+00	3.66E+00	7.35E-01	0.898	8.37E+03	1.01E+04	5.93E+04	2.03E+04	1.24E+04	6.17E+04	2.18E-10
Technetium (43)	Tc-94	1.54E+01	2.98E+00	8.56E+00	1.35E+01	2.95E+00	0.87	1.24E+03	4.51E+02	2.33E+03	8.12E+02	5.16E+02	2.36E+03	6.62E-11
Technetium (43)	Tc-94m	1.09E+01	2.09E+00	5.95E+00	9.42E+00	2.12E+00	0.859	7.00E+03	3.65E+03	1.90E+04	6.67E+03	4.21E+03	1.87E+04	9.50E-11
Technetium (43)	Tc-95	4.53E+00	8.82E-01	2.54E+00	3.97E+00	8.75E-01	0.877	3.04E+02	3.72E+02	1.91E+03	6.64E+02	4.24E+02	1.92E+03	2.26E-10
Technetium (43)	Tc-95m	3.67E+00	7.44E-01	2.13E+00	3.28E+00	7.38E-01	0.873	4.15E+00	6.39E+00	3.16E+01	1.10E+01	7.16E+00	3.18E+01	2.84E-10
Technetium (43)	Tc-96	1.45E+01	2.80E+00	8.02E+00	1.27E+01	2.77E+00	0.86	5.91E+01	2.30E+01	1.20E+02	4.17E+01	2.64E+01	1.21E+02	7.27E-11
Technetium (43)	Tc-96m	2.65E-01	5.04E-02	1.44E-01	2.28E-01	5.25E-02	0.938	7.07E+03	1.39E+05	7.29E+05	2.55E+05	1.61E+05	6.99E+05	3.65E-09
Technetium (43)	Tc-97	5.63E-04	5.67E-04	5.63E-04	5.63E-04	5.43E-03	1	2.67E-07	8.64E+03	8.58E+03	8.64E+03	8.64E+03	8.97E+02	6.10E+00
Technetium (43)	Tc-97m	1.53E-03	8.82E-04	1.34E-03	1.53E-03	5.19E-03	0.999	2.91E+00	9.78E+03	1.70E+04	1.12E+04	9.77E+03	2.88E+03	6.33E-07
Technetium (43)	Tc-98	8.06E+00	1.59E+00	4.57E+00	7.14E+00	1.58E+00	0.867	1.65E-07	6.97E-01	3.52E+00	1.23E+00	7.86E-01	3.56E+00	8.03E-04
Technetium (43)	Tc-99	1.08E-04	4.64E-05	9.21E-05	1.08E-04	7.55E-05	0.927	3.25E-06	4.85E+04	1.13E+05	5.70E+04	4.87E+04	6.95E+04	2.87E+00
Technetium (43)	Tc-99m	5.02E-01	1.35E-01	3.64E-01	4.96E-01	1.33E-01	0.946	1.01E+03	1.03E+04	3.85E+04	1.43E+04	1.05E+04	3.90E+04	1.97E-09
Tellurium (52)	Te-116	1.73E-01	5.17E-02	1.24E-01	1.65E-01	7.07E-02	0.98	2.44E+03	7.01E+04	2.34E+05	9.78E+04	7.33E+04	1.71E+05	6.47E-09
Tellurium (52)	Te-121	3.10E+00	6.36E-01	1.81E+00	2.80E+00	6.38E-01	0.902	1.49E+01	2.59E+01	1.26E+02	4.45E+01	2.87E+01	1.26E+02	4.09E-10
Tellurium (52)	Te-121m	9.90E-01	2.28E-01	6.36E-01	9.34E-01	2.31E-01	0.917	1.64E+00	1.09E+01	4.75E+01	1.70E+01	1.16E+01	4.68E+01	1.56E-09
Tellurium (52)	Te-123	4.63E-03	4.42E-03	4.64E-03	4.63E-03	1.66E-02	0.989	6.93E-14	1.06E+03	1.11E+03	1.06E+03	1.06E+03	2.97E+02	3.67E+06
Tellurium (52)	Te-123m	5.71E-01	1.49E-01	4.03E-01	5.60E-01	1.54E-01	0.951	2.11E+00	2.16E+01	8.25E+01	3.05E+01	2.20E+01	7.99E+01	2.43E-09
Tellurium (52)	Te-125m	1.11E-02	9.59E-03	1.08E-02	1.11E-02	3.10E-02	0.986	4.36E+00	1.96E+03	2.27E+03	2.01E+03	1.96E+03	7.02E+02	1.09E-07
Tellurium (52)	Te-127	2.67E-02	5.91E-03	1.64E-02	2.46E-02	1.20E-02	0.894	6.49E+02	1.33E+05	5.98E+05	2.15E+05	1.44E+05	2.94E+05	5.03E-08
Tellurium (52)	Te-127m	4.16E-03	3.13E-03	3.84E-03	4.10E-03	9.99E-03	0.983	2.32E+00	3.06E+03	4.07E+03	3.32E+03	3.11E+03	1.28E+03	3.25E-07
Tellurium (52)	Te-129	3.13E-01	6.98E-02	1.87E-01	2.83E-01	1.33E-01	0.889	5.23E+03	9.14E+04	4.11E+05	1.54E+05	1.01E+05	2.15E+05	4.37E-09
Tellurium (52)	Te-129m	1.75E-01	3.84E-02	1.01E-01	1.56E-01	6.65E-02	0.985	7.53E+00	2.12E+02	9.69E+02	3.67E+02	2.38E+02	5.59E+02	7.06E-09
Tellurium (52)	Te-131	2.24E+00	4.77E-01	1.33E+00	2.01E+00	5.53E-01	0.917	1.46E+04	3.46E+04	1.62E+05	5.81E+04	3.84E+04	1.40E+05	6.03E-10
Tellurium (52)	Te-131m	8.24E+00	1.58E+00	4.53E+00	7.16E+00	1.56E+00	0.949	2.02E+02	1.26E+02	6.56E+02	2.29E+02	1.45E+02	6.64E+02	1.58E-10
Tellurium (52)	Te-132	9.94E-01	2.39E-01	6.60E-01	9.55E-01	2.47E-01	0.936	7.76E+01	4.06E+02	1.69E+03	6.11E+02	4.23E+02	1.63E+03	1.34E-09
Tellurium (52)	Te-133	5.37E+00	1.05E+00	3.00E+00	4.70E+00	1.12E+00	0.842	2.93E+04	3.15E+04	1.61E+05	5.63E+04	3.60E+04	1.51E+05	2.78E-10
Tellurium (52)	Te-133m	1.36E+01	2.57E+00	7.39E+00	1.17E+01	2.61E+00	0.927	6.57E+03	2.54E+03	1.34E+04	4.67E+03	2.95E+03	1.32E+04	9.98E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Tellurium (52)	Te-134	4.76E+00	9.87E-01	2.80E+00	4.29E+00	9.90E-01	0.872	8.71E+03	1.02E+04	4.93E+04	1.74E+04	1.13E+04	4.91E+04	3.05E-10
()	Test Isotope													
Thorium (90)	Th-226	3.02E-02	8.21E-03	2.18E-02	2.95E-02	8.46E-03	0.947	1.18E+04	2.01E+06	7.38E+06	2.78E+06	2.06E+06	7.16E+06	7.46E-08
Thorium (90)	Th-227	4.79E-01	1.13E-01	3.15E-01	4.57E-01	1.14E-01	0.971	1.35E+01	1.41E+02	5.97E+02	2.15E+02	1.48E+02	5.92E+02	4.61E-09
Thorium (90)	Th-228	7.16E-03	2.09E-03	5.32E-03	7.03E-03	2.49E-03	0.98	3.62E-01	8.27E+02	2.83E+03	1.11E+03	8.42E+02	2.38E+03	1.01E-06
Thorium (90)	Th-229	2.89E-01	8.69E-02	2.20E-01	2.85E-01	9.21E-02	0.959	9.44E-05	1.76E+01	5.84E+01	2.31E+01	1.78E+01	5.51E+01	8.26E-05
Thorium (90)	Th-229+D	1.48E+00					0.972	9.44E-05	3.38E+00					1.59E-05
Thorium (90)	Th-229+E	1.48E+00	3.47E-01	9.38E-01	1.37E+00	4.04E-01	0.972	9.44E-05	3.39E+00	1.44E+01	5.34E+00	3.67E+00	1.24E+01	1.59E-05
Thorium (90)	Th-230	1.07E-03	3.84E-04	8.62E-04	1.06E-03	7.43E-04	0.997	9.00E-06	4.57E+03	1.27E+04	5.67E+03	4.62E+03	6.57E+03	2.27E-01
Thorium (90)	Th-231	3.21E-02	1.16E-02	2.63E-02	3.19E-02	1.81E-02	0.985	2.38E+02	3.66E+04	1.01E+05	4.47E+04	3.69E+04	6.50E+04	6.90E-08
Thorium (90)	Th-232	4.55E-04	1.87E-04	3.82E-04	4.51E-04	5.31E-04	0.998	4.93E-11	1.07E+04	2.61E+04	1.28E+04	1.08E+04	9.18E+03	9.78E+04
Thorium (90)	Th-232+D						0.998	4.93E-11						
Thorium (90)	Th-234	2.13E-02	7.63E-03	1.77E-02	2.13E-02	8.74E-03	0.957	1.05E+01	2.51E+03	7.00E+03	3.02E+03	2.51E+03	6.11E+03	1.09E-07
Thorium (90)	Th-234+D	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.991	1.05E+01	3.32E+02	1.12E+03	5.18E+02	3.67E+02	3.65E+02	1.44E-08
Thorium (90)	Th-234+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.991	1.05E+01	3.32E+02	1.12E+03	5.18E+02	3.67E+02	3.65E+02	1.44E-08
Titanium (22)	Ti-44	3.13E-01	1.24E-01	2.74E-01	3.13E-01	1.38E-01	0.945	1.47E-02	1.66E+01	4.17E+01	1.89E+01	1.66E+01	3.77E+01	9.65E-08
Titanium (22)	Ti-44+D	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	0.871	1.47E-02	4.42E-01	2.24E+00	7.88E-01	5.05E-01	2.19E+00	2.57E-09
Titanium (22)	Ti-44+E	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	0.871	1.47E-02	4.42E-01	2.24E+00	7.88E-01	5.05E-01	2.19E+00	2.57E-09
Titanium (22)	Ti-45	4.77E+00	9.88E-01	2.82E+00	4.35E+00	1.01E+00	0.882	1.97E+03	2.28E+03	1.10E+04	3.86E+03	2.50E+03	1.08E+04	1.01E-10
Thallium (81)	Tl-194	4.08E+00	8.63E-01	2.42E+00	3.71E+00	8.58E-01	0.886	1.10E+04	1.48E+04	7.02E+04	2.50E+04	1.63E+04	7.07E+04	5.06E-10
Thallium (81)	Tl-194m	1.26E+01	2.61E+00	7.39E+00	1.14E+01	2.60E+00	0.927	1.11E+04	4.61E+03	2.23E+04	7.89E+03	5.12E+03	2.24E+04	1.56E-10
Thallium (81)	Tl-195	7.50E+00	1.37E+00	3.94E+00	6.29E+00	1.35E+00	0.944	5.23E+03	3.60E+03	1.97E+04	6.86E+03	4.29E+03	1.99E+04	2.60E-10
Thallium (81)	Tl-197	2.07E+00	4.38E-01	1.21E+00	1.83E+00	4.40E-01	0.934	2.14E+03	5.38E+03	2.54E+04	9.20E+03	6.08E+03	2.53E+04	9.62E-10
Thallium (81)	Tl-198	1.20E+01	2.18E+00	6.27E+00	1.01E+01	2.12E+00	0.948	1.15E+03	4.89E+02	2.69E+03	9.38E+02	5.84E+02	2.77E+03	1.64E-10
Thallium (81)	Tl-198m	6.34E+00	1.33E+00	3.77E+00	5.76E+00	1.32E+00	0.981	3.25E+03	2.54E+03	1.21E+04	4.27E+03	2.79E+03	1.22E+04	3.01E-10
Thallium (81)	Tl-199	1.08E+00	2.61E-01	7.01E-01	1.01E+00	2.65E-01	0.931	8.18E+02	3.95E+03	1.64E+04	6.10E+03	4.24E+03	1.61E+04	1.86E-09
Thallium (81)	Tl-200	7.42E+00	1.44E+00	4.12E+00	6.45E+00	1.42E+00	0.952	2.33E+02	1.60E+02	8.25E+02	2.88E+02	1.84E+02	8.35E+02	2.67E-10
Thallium (81)	Tl-201	2.44E-01	8.54E-02	2.00E-01	2.42E-01	9.29E-02	0.944	8.31E+01	1.75E+03	5.02E+03	2.15E+03	1.77E+03	4.61E+03	8.23E-09
Thallium (81)	Tl-202	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	0.906	2.07E+01	4.77E+01	2.16E+02	7.77E+01	5.18E+01	2.16E+02	9.03E-10
Thallium (81)	Tl-204	3.88E-03	1.65E-03	3.30E-03	3.86E-03	1.26E-02	0.963	1.83E-01	1.43E+03	3.35E+03	1.68E+03	1.43E+03	4.39E+02	3.08E-06
Thallium (81)	Tl-206	1.26E-02	7.48E-03	1.04E-02	1.23E-02	7.08E-02	0.934	8.67E+04	3.58E+07	6.04E+07	4.33E+07	3.68E+07	6.38E+06	1.65E-07
Thallium (81)	Tl-207	2.29E-02	8.47E-03	1.54E-02	2.11E-02	6.49E-02	0.855	7.64E+04	1.89E+07	5.13E+07	2.81E+07	2.06E+07	6.70E+06	9.97E-08
Thallium (81)	Tl-208	2.18E+01	3.56E+00	1.04E+01	1.73E+01	3.47E+00	0.879	1.19E+05	3.01E+04	1.84E+05	6.31E+04	3.79E+04	1.90E+05	1.02E-10
Thallium (81)	Tl-209	1.22E+01	2.22E+00	6.40E+00	1.03E+01	2.24E+00	0.865	1.66E+05	7.61E+04	4.20E+05	1.46E+05	9.08E+04	4.16E+05	1.86E-10
Thulium (69)	Tm-162	1.08E+01	1.92E+00	5.52E+00	8.93E+00	1.90E+00	0.883	1.68E+04	8.57E+03	4.82E+04	1.68E+04	1.04E+04	4.86E+04	1.60E-10
Thulium (69)	Tm-166	1.12E+01	2.01E+00	5.80E+00	9.33E+00	1.98E+00	0.912	7.88E+02	3.77E+02	2.09E+03	7.25E+02	4.51E+02	2.12E+03	1.54E-10
Thulium (69)	Tm-167	5.07E-01	1.40E-01	3.52E-01	4.89E-01	1.53E-01	0.928	2.74E+01	2.83E+02	1.03E+03	4.07E+02	2.94E+02	9.39E+02	3.35E-09
Thulium (69)	Tm-170	1.41E-02	6.17E-03	1.21E-02	1.40E-02	3.08E-02	0.944	1.97E+00	8.38E+02	1.91E+03	9.73E+02	8.41E+02	3.83E+02	1.41E-07
Thulium (69)	Tm-171	9.38E-04	4.89E-04	8.86E-04	9.38E-04	6.48E-04	0.953	3.61E-01	6.49E+03	1.25E+04	6.87E+03	6.49E+03	9.39E+03	5.96E-06
Thulium (69)	Tm-172	2.91E+00	5.26E-01	1.51E+00	2.42E+00	5.68E-01	0.898	9.55E+01	1.78E+02	9.84E+02	3.44E+02	2.13E+02	9.10E+02	6.22E-10
Thulium (69)	Tm-173	2.03E+00	4.38E-01	1.24E+00	1.88E+00	4.53E-01	0.895	7.37E+02	1.97E+03	9.14E+03	3.22E+03	2.13E+03	8.85E+03	8.98E-10
Thulium (69)	Tm-175	5.99E+00	1.18E+00	3.38E+00	5.26E+00	1.21E+00	0.892	2.40E+04	2.18E+04	1.11E+05	3.87E+04	2.49E+04	1.08E+05	3.09E-10
Uranium (92)	U-230	3.95E-03	1.17E-03	2.91E-03	3.86E-03	1.81E-03	0.987	1.22E+01	1.52E+04	5.11E+04	2.06E+04	1.55E+04	3.31E+04	5.57E-07
Uranium (92)	U-231	2.07E-01	6.64E-02	1.64E-01	2.07E-01	7.47E-02	0.961	6.02E+01	1.47E+03	4.59E+03	1.86E+03	1.47E+03	4.08E+03	1.10E-08
Uranium (92)	U-232	7.91E-04	3.02E-04	6.30E-04	7.81E-04	9.42E-04	0.997	9.63E-03	6.20E+03	1.62E+04	7.78E+03	6.28E+03	5.21E+03	2.90E-04
Uranium (92)	U-233	1.26E-03	3.64E-04	8.97E-04	1.22E-03	6.99E-04	0.998	4.37E-06	3.86E+03	1.34E+04	5.44E+03	3.99E+03	6.98E+03	3.99E-01
Uranium (92)	U-234	3.43E-04	1.56E-04	2.89E-04	3.43E-04	6.84E-04	0.998	2.83E-06	1.42E+04	3.13E+04	1.69E+04	1.42E+04	7.13E+03	2.28E+00
Uranium (92)	U-235	6.58E-01	1.65E-01	4.57E-01	6.42E-01	1.63E-01	0.96	9.85E-10	7.70E+00	3.07E+01	1.11E+01	7.90E+00	3.10E+01	3.57E+00
Uranium (92)	U-235+D	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	0.96	9.85E-10	7.35E+00	2.87E+01	1.05E+01	7.53E+00	2.78E+01	3.40E+00
Uranium (92)	U-235+E	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	0.96	9.85E-10	7.35E+00	2.87E+01	1.05E+01	7.53E+00	2.78E+01	
Uranium (92)	U-236	1.77E-04	9.72E-05	1.56E-04	1.77E-04	5.87E-04	0.999	2.96E-08	2.75E+04	5.01E+04	3.12E+04	2.75E+04	8.30E+03	4.25E+02
Uranium (92)	U-237	4.81E-01	1.36E-01	3.51E-01	4.70E-01	1.44E-01	0.953	3.75E+01	3.98E+02	1.40E+03	5.46E+02	4.07E+02	1.33E+03	4.88E-09
Uranium (92)	U-238	7.94E-05	6.29E-05	7.83E-05	7.94E-05	4.94E-04	1	1.55E-10	6.13E+04	7.74E+04	6.21E+04	6.13E+04	9.86E+03	1.82E+05
Uranium (92)	U-238+D	1.56E-01					0.979	1.55E-10	3.19E+01					9.50E+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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Uranium (92)	U-238+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.979	1.55E-10	3.20E+01	1.08E+02	4.99E+01	3.54E+01	3.52E+01	9.53E+01
Uranium (92)	U-239	1.58E-01	5.17E-02	1.19E-01	1.51E-01	9.63E-02	0.958	1.55E+04	4.98E+05	1.52E+06	6.62E+05	5.22E+05	8.16E+05	1.49E-08
Uranium (92)	U-240	1.11E-03	8.06E-04	1.08E-03	1.11E-03	3.72E-03	0.998	4.31E+02	1.90E+06	2.61E+06	1.94E+06	1.90E+06	5.64E+05	2.05E-06
Vanadium (23)	V-47	5.50E+00	1.14E+00	3.25E+00	4.98E+00	1.23E+00	0.882	1.12E+04	1.12E+04	5.39E+04	1.90E+04	1.24E+04	5.03E+04	9.15E-11
Vanadium (23)	V-48	1.74E+01	3.23E+00	9.31E+00	1.49E+01	3.17E+00	0.844	1.56E+01	5.16E+00	2.78E+01	9.65E+00	6.04E+00	2.83E+01	3.09E-11
Vanadium (23)	V-49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.67E-01						
Tungsten (74)	W-176	4.18E-01	1.59E-01	3.52E-01	4.18E-01	1.80E-01	0.942	2.64E+03	3.26E+04	8.58E+04	3.87E+04	3.26E+04	7.59E+04	4.22E-09
Tungsten (74)	W-177	4.55E+00	9.72E-01	2.69E+00	4.07E+00	9.78E-01	0.927	2.70E+03	3.11E+03	1.46E+04	5.27E+03	3.48E+03	1.45E+04	3.96E-10
Tungsten (74)	W-178	2.13E-02	1.05E-02	1.98E-02	2.13E-02	1.33E-02	0.971	1.17E+01	2.75E+03	5.58E+03	2.96E+03	2.75E+03	4.39E+03	8.14E-08
Tungsten (74)	W-178+D	4.37E-01					0.915	1.17E+01	1.42E+02					4.20E-09
Tungsten (74)	W-178+E	4.37E-01					0.915	1.17E+01	1.42E+02					4.20E-09
Tungsten (74)	W-179	8.09E-02	4.14E-02	7.57E-02	8.09E-02	5.81E-02	0.967	9.71E+03	6.04E+05	1.18E+06	6.46E+05	6.04E+05	8.41E+05	2.16E-08
Tungsten (74)	W-181	6.49E-02	3.17E-02	6.04E-02	6.49E-02	4.01E-02	0.956	2.09E+00	1.87E+02	3.83E+02	2.01E+02	1.87E+02	3.02E+02	3.14E-08
Tungsten (74)	W-185	3.82E-04	1.40E-04	3.10E-04	3.79E-04	2.00E-04	0.945	3.37E+00	4.70E+04	1.28E+05	5.80E+04	4.75E+04	9.00E+04	5.01E-06
Tungsten (74)	W-187	2.57E+00	5.33E-01	1.50E+00	2.31E+00	5.46E-01	0.94	2.54E+02	5.11E+02	2.47E+03	8.76E+02	5.69E+02	2.41E+03	7.30E-10
Tungsten (74)	W-188	8.90E-03	2.11E-03	5.84E-03	8.47E-03	2.12E-03	0.911	3.64E+00	2.25E+03	9.49E+03	3.42E+03	2.36E+03	9.41E+03	2.25E-07
Xenon (54)	Xe-120	2.13E+00	4.49E-01	1.25E+00	1.92E+00	4.68E-01	0.951	9.11E+03	2.19E+04	1.04E+05	3.72E+04	2.43E+04	9.96E+04	5.60E-10
Xenon (54)	Xe-121	1.09E+01	1.98E+00	5.67E+00	9.10E+00	1.97E+00	0.902	9.08E+03	4.50E+03	2.48E+04	8.64E+03	5.38E+03	2.48E+04	1.16E-10
Xenon (54)	Xe-122	2.33E-01	5.71E-02	1.50E-01	2.20E-01	7.04E-02	0.906	3.02E+02	6.96E+03	2.84E+04	1.08E+04	7.37E+03	2.31E+04	5.45E-09
Xenon (54)	Xe-123	3.41E+00	6.84E-01	1.94E+00	3.00E+00	7.04E-01	0.903	2.92E+03	4.61E+03	2.30E+04	8.11E+03	5.24E+03	2.24E+04	3.77E-10
Xenon (54)	Xe-125	1.19E+00	2.74E-01	7.59E-01	1.12E+00	2.88E-01	0.906	3.57E+02	1.62E+03	7.00E+03	2.53E+03	1.72E+03	6.65E+03	1.10E-09
Xenon (54)	Xe-127	1.21E+00	2.89E-01	7.98E-01	1.16E+00	2.99E-01	0.933	6.95E+00	3.00E+01	1.25E+02	4.54E+01	3.14E+01	1.21E+02	1.06E-09
Xenon (54)	Xe-129m	5.69E-02	2.35E-02	4.35E-02	5.56E-02	4.85E-02	0.979	3.16E+01	2.76E+03	6.69E+03	3.62E+03	2.83E+03	3.24E+03	2.19E-08
Xenon (54)	Xe-131m	1.92E-02	8.58E-03	1.52E-02	1.88E-02	1.87E-02	0.981	2.13E+01	5.49E+03	1.23E+04	6.95E+03	5.60E+03	5.65E+03	6.56E-08
Xenon (54)	Xe-133	8.71E-02	3.49E-02	7.46E-02	8.73E-02	4.61E-02	0.964	4.82E+01	2.80E+03	6.98E+03	3.26E+03	2.79E+03	5.28E+03	1.50E-08
Xenon (54)	Xe-133m	1.18E-01	3.13E-02	7.94E-02	1.14E-01	4.12E-02	0.973	1.16E+02	4.89E+03	1.85E+04	7.28E+03	5.09E+03	1.40E+04	1.09E-08
Xenon (54)	Xe-135	1.23E+00	2.78E-01	7.89E-01	1.16E+00	2.92E-01	0.907	6.68E+02	2.92E+03	1.29E+04	4.54E+03	3.08E+03	1.23E+04	1.15E-09
Xenon (54)	Xe-135m	2.35E+00	4.83E-01	1.37E+00	2.13E+00	4.89E-01	0.884	2.38E+04	5.58E+04	2.72E+05	9.54E+04	6.17E+04	2.68E+05	6.14E-10
Xenon (54)	Xe-138	6.99E+00	1.23E+00	3.54E+00	5.76E+00	1.25E+00	0.893	2.57E+04	2.00E+04	1.14E+05	3.95E+04	2.43E+04	1.12E+05	2.09E-10
Yttrium (39)	Y-86	2.14E+01	3.95E+00	1.14E+01	1.83E+01	3.89E+00	0.898	4.12E+02	1.04E+02	5.65E+02	1.96E+02	1.22E+02	5.74E+02	4.22E-11
Yttrium (39)	Y-86m	1.06E+00	2.44E-01	6.88E-01	1.00E+00	2.38E-01	0.919	7.59E+03	3.81E+04	1.64E+05	5.84E+04	4.00E+04	1.69E+05	8.37E-10
Yttrium (39)	Y-87	2.44E+00	5.09E-01	1.45E+00	2.22E+00	5.03E-01	0.969	7.56E+01	1.55E+02	7.46E+02	2.62E+02	1.71E+02	7.55E+02	3.47E-10
Yttrium (39)	Y-88	1.69E+01	2.91E+00	8.45E+00	1.38E+01	2.81E+00	0.881	2.37E+00	8.56E-01	4.97E+00	1.71E+00	1.04E+00	5.14E+00	6.16E-11
Yttrium (39)	Y-90	4.01E-02	2.35E-02	3.25E-02	3.88E-02	1.28E-01	1	9.49E+01	1.15E+04	1.96E+04	1.42E+04	1.19E+04	3.60E+03	2.12E-08
Yttrium (39)	Y-90m	3.26E+00	7.05E-01	2.00E+00	3.02E+00	6.97E-01	0.912	1.90E+03	3.11E+03	1.44E+04	5.09E+03	3.36E+03	1.46E+04	2.86E-10
Yttrium (39)	Y-91	3.79E-02	1.36E-02	2.46E-02	3.39E-02	8.71E-02	0.837	4.32E+00	6.73E+02	1.88E+03	1.03E+03	7.50E+02	2.93E+02	2.75E-08
Yttrium (39)	Y-91m	2.95E+00	6.01E-01	1.71E+00	2.65E+00	5.95E-01	0.892	7.33E+03	1.36E+04	6.66E+04	2.33E+04	1.51E+04	6.72E+04	3.27E-10
Yttrium (39)	Y-92	1.60E+00	3.30E-01	8.78E-01	1.38E+00	4.47E-01	0.843	1.71E+03	6.19E+03	3.00E+04	1.13E+04	7.19E+03	2.21E+04	6.45E-10
Yttrium (39)	Y-93	5.97E-01	1.33E-01	3.32E-01	5.11E-01	2.45E-01	0.814	6.01E+02	6.02E+03	2.71E+04	1.08E+04	7.03E+03	1.47E+04	1.81E-09
Yttrium (39)	Y-94	6.81E+00	1.29E+00	3.64E+00	5.80E+00	1.39E+00	0.83	1.91E+04	1.64E+04	8.68E+04	3.07E+04	1.93E+04	8.05E+04	1.57E-10
Yttrium (39)	Y-95	5.97E+00	9.94E-01	2.83E+00	4.70E+00	1.06E+00	0.829	3.40E+04	3.35E+04	2.01E+05	7.05E+04	4.25E+04	1.88E+05	1.81E-10
Ytterbium (70)	Yb-162	4.20E-01	1.29E-01	3.15E-01	4.12E-01	1.42E-01	0.937	1.93E+04	2.39E+05	7.74E+05	3.18E+05	2.43E+05	7.03E+05	3.89E-09
Ytterbium (70)	Yb-166	1.27E-01	6.47E-02	1.18E-01	1.27E-01	8.68E-02	0.952	1.07E+02	4.30E+03	8.46E+03	4.62E+03	4.30E+03	6.30E+03	1.29E-08
Ytterbium (70)	Yb-167	7.98E-01	2.48E-01	5.93E-01	7.74E-01	2.77E-01	0.928	2.08E+04	1.37E+05	4.40E+05	1.84E+05	1.41E+05	3.95E+05	2.13E-09
Ytterbium (70)	Yb-169	9.96E-01	2.95E-01	7.25E-01	9.70E-01	3.24E-01	0.921	7.90E+00	4.19E+01	1.42E+02	5.76E+01	4.31E+01	1.29E+02	1.74E-09
Ytterbium (70)	Yb-175	1.94E-01	4.38E-02	1.23E-01	1.82E-01	4.36E-02	0.901	6.04E+01	1.68E+03	7.44E+03	2.66E+03	1.80E+03	7.47E+03	9.46E-09
Ytterbium (70)	Yb-177	1.04E+00	2.09E-01	5.86E-01	9.10E-01	2.53E-01	0.882	3.20E+03	1.69E+04	8.44E+04	3.01E+04	1.94E+04	6.96E+04	1.81E-09
Ytterbium (70)	Yb-178	1.82E-01	3.95E-02	1.12E-01	1.69E-01	4.20E-02	0.898	4.92E+03	1.47E+05	6.75E+05	2.38E+05	1.58E+05	6.35E+05	1.03E-08
Zinc (30)	Zn-62	2.35E+00	4.87E-01	1.38E+00	2.13E+00	4.84E-01	0.879	6.56E+02	1.54E+03	7.46E+03	2.63E+03	1.71E+03	7.49E+03	2.83E-10
Zinc (30)	Zn-63	6.14E+00	1.27E+00	3.58E+00	5.52E+00	1.35E+00	0.862	9.56E+03	8.80E+03	4.26E+04	1.51E+04	9.78E+03	3.99E+04	1.12E-10
Zinc (30)	Zn-65	3.51E+00	6.43E-01	1.86E+00	2.97E+00	6.31E-01	0.843	1.04E+00	2.65E+00	1.44E+01	4.99E+00	3.13E+00	1.47E+01	3.22E-10
Zinc (30)	Zn-69	2.93E-03	1.51E-03	2.39E-03	2.87E-03	2.43E-02	0.892	6.39E+03	1.19E+07	2.31E+07	1.46E+07	1.21E+07	1.44E+06	2.49E-07
Zinc (30)	Zn-69m	2.24E+00	4.72E-01	1.34E+00	2.05E+00	4.64E-01	0.889	4.41E+02	1.08E+03	5.12E+03	1.80E+03	1.18E+03	5.20E+03	3.27E-10
Zinc (30)	Zn-71m	8.60E+00	1.76E+00	5.02E+00	7.74E+00	1.80E+00	0.868	1.55E+03	1.01E+03	4.94E+03	1.73E+03	1.12E+03	4.83E+03	8.98E-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)**	**Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Area Correction Factor**	**Lambda**	**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	0.986	1.66E+05	4.13E+07	1.70E+08	6.25E+07	4.38E+07	1.58E+08	1.08E-07
Zinc (30)	Zn-72	5.97E-01	1.58E-01	4.27E-01	5.86E-01	1.56E-01	0.943	1.31E+02	1.13E+03	4.27E+03	1.58E+03	1.15E+03	4.31E+03	1.21E-09
Zirconium (40)	Zr-86	1.32E+00	2.98E-01	8.43E-01	1.25E+00	2.99E-01	0.982	3.68E+02	1.38E+03	6.11E+03	2.16E+03	1.46E+03	6.10E+03	6.28E-10
Zirconium (40)	Zr-88	2.09E+00	4.46E-01	1.27E+00	1.92E+00	4.40E-01	0.97	3.03E+00	7.65E+00	3.59E+01	1.26E+01	8.32E+00	3.63E+01	4.31E-10
Zirconium (40)	Zr-89	6.73E+00	1.30E+00	3.73E+00	5.87E+00	1.28E+00	0.932	7.74E+01	6.00E+01	3.11E+02	1.08E+02	6.88E+01	3.15E+02	1.34E-10
Zirconium (40)	Zr-93	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	4.53E-07						
Zirconium (40)	Zr-95	4.23E+00	8.32E-01	2.39E+00	3.75E+00	8.22E-01	0.865	3.95E+00	5.36E+00	2.73E+01	9.50E+00	6.05E+00	2.76E+01	2.50E-10
Zirconium (40)	Zr-97	1.08E+00	2.13E-01	5.91E-01	9.33E-01	2.92E-01	0.863	3.59E+02	1.87E+03	9.53E+03	3.43E+03	2.17E+03	6.94E+03	9.80E-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
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

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-223+D			1.25E-01	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-223+E			1.25E-01	1.66E+05	1.36E+09	2.11E+07		
Actinium (89)	Ac-224	2.59E-06	4.07E-04	2.07E-01	2.09E+03	1.36E+09	2.11E+07	1.98E+03	3.25E+01
Actinium (89)	Ac-225	8.88E-05	2.74E-02	1.72E-02	2.53E+01	1.36E+09	2.11E+07	3.66E-01	5.84E-03
Actinium (89)	Ac-225+D	8.88E-05	2.74E-02	2.99E-01	2.53E+01	1.36E+09	2.11E+07	3.66E-01	5.84E-03
Actinium (89)	Ac-225+E	8.88E-05	2.74E-02	2.99E-01	2.53E+01	1.36E+09	2.11E+07	3.66E-01	5.84E-03
Actinium (89)	Ac-226	3.70E-05	4.44E-03	1.58E-01	2.09E+02	1.36E+09	2.11E+07	1.79E+01	2.98E-01
Actinium (89)	Ac-227	4.07E-03	8.14E-01	1.65E-04	3.18E-02	1.36E+09	2.11E+07	4.87E-04	7.89E-06
Actinium (89)	Ac-228	1.59E-06	6.29E-05	1.10E+00	9.90E+02	1.36E+09	2.11E+07	5.21E+03	9.93E+01
Silver (47)	Ag-102	1.48E-07	6.29E-08	3.72E+00	2.82E+04	1.36E+09	2.11E+07	8.10E+06	2.13E+06
Silver (47)	Ag-103	1.59E-07	9.62E-08	8.69E-01	5.54E+03	1.36E+09	2.11E+07	1.45E+06	2.95E+05
Silver (47)	Ag-103+D	8.88E-07	1.52E-06	8.80E-01	5.54E+03	1.36E+09	2.11E+07	2.34E+05	2.13E+04
Silver (47)	Ag-104	2.22E-07	1.33E-07	2.94E+00	5.26E+03	1.36E+09	2.11E+07	9.89E+05	2.02E+05
Silver (47)	Ag-104m	2.00E-07	9.25E-08	1.33E+00	1.09E+04	1.36E+09	2.11E+07	2.30E+06	5.69E+05
Silver (47)	Ag-105	1.74E-06	2.70E-06	5.72E-01	6.17E+00	1.36E+09	2.11E+07	1.35E+02	1.33E+01
Silver (47)	Ag-106	1.18E-07	5.55E-08	8.65E-01	1.52E+04	1.36E+09	2.11E+07	5.43E+06	1.33E+06
Silver (47)	Ag-106m	5.55E-06	4.07E-06	3.08E+00	3.01E+01	1.36E+09	2.11E+07	2.23E+02	3.92E+01
Silver (47)	Ag-108			1.05E-01	1.54E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-108m	8.51E-06	2.74E-05	1.81E+00	5.46E-03	1.36E+09	2.11E+07	3.88E+00	2.22E-01
Silver (47)	Ag-108m+D			1.82E+00	5.46E-03	1.36E+09	2.11E+07		
Silver (47)	Ag-108m+E			1.82E+00		1.36E+09	2.11E+07		
Silver (47)	Ag-109m			8.78E-03	5.52E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-110			1.90E-01	8.88E+05	1.36E+09	2.11E+07		
Silver (47)	Ag-110m	1.04E-05	2.81E-05	3.01E+00	1.01E+00	1.36E+09	2.11E+07	5.26E+00	3.40E-01
Silver (47)	Ag-110m+D			3.01E+00	1.01E+00	1.36E+09	2.11E+07		
Silver (47)	Ag-110m+E			3.01E+00		1.36E+09	2.11E+07		
Silver (47)	Ag-111	4.81E-06	5.55E-06	6.16E-02	3.40E+01	1.36E+09	2.11E+07	2.79E+02	3.45E+01
Silver (47)	Ag-112	1.59E-06	5.92E-07	8.71E-01	1.95E+03	1.36E+09	2.11E+07	5.22E+04	1.50E+04
Silver (47)	Ag-115	2.22E-07	9.99E-08	8.75E-01	1.82E+04	1.36E+09	2.11E+07	3.48E+06	8.76E+05
Aluminum (13)	Al-26	1.30E-05	7.40E-05	2.88E+00	9.68E-07	1.36E+09	2.11E+07	2.11E+00	8.34E-02
Aluminum (13)	Al-28			2.00E+00	1.63E+05	1.36E+09	2.11E+07		
Americium (95)	Am-237	6.66E-08	9.25E-08	3.94E-01	4.99E+03	1.36E+09	2.11E+07	2.89E+06	3.10E+05
Americium (95)	Am-238	1.18E-07	3.33E-07	9.65E-01	3.72E+03	1.36E+09	2.11E+07	1.07E+06	6.72E+04
Americium (95)	Am-239	8.88E-07	8.14E-07	2.43E-01	5.10E+02	1.36E+09	2.11E+07	2.32E+04	3.43E+03
Americium (95)	Am-240	2.15E-06	1.59E-06	1.12E+00	1.20E+02	1.36E+09	2.11E+07	2.29E+03	3.99E+02
Americium (95)	Am-241	7.40E-04	1.55E-01	2.72E-02	1.60E-03	1.36E+09	2.11E+07	2.52E-03	4.07E-05
Americium (95)	Am-242	1.11E-06	6.29E-05	1.88E-02	3.79E+02	1.36E+09	2.11E+07	2.11E+03	3.80E+01
Americium (95)	Am-242m	7.03E-04	1.37E-01	2.64E-03	4.56E-03	1.36E+09	2.11E+07	2.85E-03	4.63E-05
Americium (95)	Am-242m+D	7.03E-04	1.37E-01	2.44E-02	4.56E-03	1.36E+09	2.11E+07	2.85E-03	4.63E-05
Americium (95)	Am-242m+E	7.03E-04	1.52E-01	2.50E-02	4.56E-03	1.36E+09	2.11E+07	2.58E-03	4.18E-05
Americium (95)	Am-243	7.40E-04	1.52E-01	5.59E-02	9.39E-05	1.36E+09	2.11E+07	2.57E-03	4.17E-05
Americium (95)	Am-243+D	7.40E-04	1.52E-01	2.36E-01	9.39E-05	1.36E+09	2.11E+07	2.57E-03	4.17E-05
Americium (95)	Am-243+E	7.40E-04	1.52E-01	2.36E-01	9.39E-05	1.36E+09	2.11E+07	2.57E-03	4.17E-05
Americium (95)	Am-244	1.70E-06	7.40E-06	8.87E-01	6.01E+02	1.36E+09	2.11E+07	1.06E+04	4.98E+02
Americium (95)	Am-244m	1.07E-07	3.11E-07	6.48E-02	1.40E+04	1.36E+09	2.11E+07	4.41E+06	2.72E+05
Americium (95)	Am-245	2.29E-07	1.96E-07	4.81E-02	2.96E+03	1.36E+09	2.11E+07	5.25E+05	8.19E+04
Americium (95)	Am-246	2.15E-07	2.44E-07	7.94E-01	9.34E+03	1.36E+09	2.11E+07	1.72E+06	2.15E+05
Americium (95)	Am-246m	1.26E-07	8.14E-08	1.16E+00	1.46E+04	1.36E+09	2.11E+07	4.81E+06	9.28E+05
Argon (18)	Ar-37			0.00E+00	7.22E+00	1.36E+09	2.11E+07		
Argon (18)	Ar-39			2.95E-03	2.58E-03	1.36E+09	2.11E+07		
Argon (18)	Ar-41			1.42E+00	3.32E+03	1.36E+09	2.11E+07		
Arsenic (33)	As-69	2.11E-07	7.77E-08	1.30E+00	2.40E+04	1.36E+09	2.11E+07	4.85E+06	1.41E+06
Arsenic (33)	As-69+D	1.11E-06	1.15E-06	2.28E+00	2.40E+04	1.36E+09	2.11E+07	8.62E+05	1.16E+05
Arsenic (33)	As-70	4.81E-07	2.48E-07	4.55E+00	6.92E+03	1.36E+09	2.11E+07	6.06E+05	1.38E+05
Arsenic (33)	As-71	1.70E-06	1.48E-06	6.33E-01	9.37E+01	1.36E+09	2.11E+07	2.23E+03	3.44E+02
Arsenic (33)	As-71+D			6.33E-01	9.37E+01	1.36E+09	2.11E+07		
Arsenic (33)	As-72	6.66E-06	3.33E-06	2.11E+00	2.33E+02	1.36E+09	2.11E+07	1.48E+03	3.45E+02
Arsenic (33)	As-73	9.62E-07	3.70E-06	6.05E-03	3.15E+00	1.36E+09	2.11E+07	1.07E+02	5.43E+00
Arsenic (33)	As-74	4.81E-06	7.77E-06	8.72E-01	1.42E+01	1.36E+09	2.11E+07	1.12E+02	1.07E+01
Arsenic (33)	As-76	5.92E-06	2.74E-06	6.12E-01	2.31E+02	1.36E+09	2.11E+07	1.65E+03	4.08E+02
Arsenic (33)	As-77	1.48E-06	1.44E-06	1.65E-02	1.56E+02	1.36E+09	2.11E+07	4.25E+03	5.99E+02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Arsenic (33)	As-78	7.77E-07	3.29E-07	1.51E+00	4.02E+03	1.36E+09	2.11E+07	2.20E+05	5.78E+04
Astatine (85)	At-207	8.88E-07	8.51E-06	1.42E+00	3.37E+03	1.36E+09	2.11E+07	8.26E+04	2.47E+03
Astatine (85)	At-211	4.07E-05	4.07E-04	3.87E-02	8.42E+02	1.36E+09	2.11E+07	4.40E+02	1.29E+01
Astatine (85)	At-211+D	4.07E-05	4.07E-04	4.38E-02	8.42E+02	1.36E+09	2.11E+07	4.40E+02	1.29E+01
Astatine (85)	At-211+E	4.07E-05	4.07E-04	7.49E-01	8.42E+02	1.36E+09	2.11E+07	4.40E+02	1.29E+01
Astatine (85)	At-215			2.15E-04	2.19E+11	1.36E+09	2.11E+07		
Astatine (85)	At-216			1.51E-03	7.28E+10	1.36E+09	2.11E+07		
Astatine (85)	At-217			3.42E-04	6.77E+08	1.36E+09	2.11E+07		
Astatine (85)	At-218			4.25E-03	1.09E+07	1.36E+09	2.11E+07		
Gold (79)	Au-193	4.81E-07	4.07E-07	1.66E-01	3.44E+02	1.36E+09	2.11E+07	2.91E+04	4.58E+03
Gold (79)	Au-194	1.55E-06	8.51E-07	1.13E+00	1.54E+02	1.36E+09	2.11E+07	4.15E+03	9.07E+02
Gold (79)	Au-195	9.25E-07	4.07E-06	8.23E-02	1.38E+00	1.36E+09	2.11E+07	5.99E+01	2.78E+00
Gold (79)	Au-195m			2.15E-01	7.17E+05	1.36E+09	2.11E+07		
Gold (79)	Au-198	3.70E-06	2.89E-06	4.75E-01	9.38E+01	1.36E+09	2.11E+07	1.04E+03	1.74E+02
Gold (79)	Au-198m	4.81E-06	6.66E-06	6.10E-01	1.10E+02	1.36E+09	2.11E+07	8.83E+02	9.47E+01
Gold (79)	Au-199	1.63E-06	2.63E-06	9.30E-02	8.06E+01	1.36E+09	2.11E+07	1.87E+03	1.78E+02
Gold (79)	Au-200	2.52E-07	1.22E-07	3.93E-01	7.53E+03	1.36E+09	2.11E+07	1.26E+06	3.02E+05
Gold (79)	Au-200m	4.07E-06	2.52E-06	2.31E+00	3.25E+02	1.36E+09	2.11E+07	3.32E+03	6.64E+02
Gold (79)	Au-201	8.88E-08	6.29E-08	1.05E-01	1.38E+04	1.36E+09	2.11E+07	6.41E+06	1.16E+06
Barium (56)	Ba-126	9.62E-07	3.70E-07	1.76E-01	3.77E+03	1.36E+09	2.11E+07	1.67E+05	4.71E+04
Barium (56)	Ba-128	9.99E-06	4.81E-06	7.91E-02	1.04E+02	1.36E+09	2.11E+07	4.40E+02	1.06E+02
Barium (56)	Ba-131	1.67E-06	2.81E-06	5.01E-01	2.14E+01	1.36E+09	2.11E+07	4.83E+02	4.45E+01
Barium (56)	Ba-131m	1.81E-08	2.74E-08	7.82E-02	2.49E+04	1.36E+09	2.11E+07	5.25E+07	5.27E+06
Barium (56)	Ba-133	5.55E-06	1.15E-05	4.35E-01	6.45E-02	1.36E+09	2.11E+07	6.75E+00	5.33E-01
Barium (56)	Ba-133m	2.00E-06	1.55E-06	6.97E-02	1.56E+02	1.36E+09	2.11E+07	3.20E+03	5.37E+02
Barium (56)	Ba-135m	1.59E-06	1.22E-06	6.28E-02	2.12E+02	1.36E+09	2.11E+07	5.45E+03	9.25E+02
Barium (56)	Ba-137m			6.76E-01	1.43E+05	1.36E+09	2.11E+07		
Barium (56)	Ba-139	4.44E-07	2.07E-07	1.70E-01	4.40E+03	1.36E+09	2.11E+07	4.20E+05	1.03E+05
Barium (56)	Ba-140	9.62E-06	1.89E-05	2.22E-01	1.99E+01	1.36E+09	2.11E+07	7.56E+01	6.21E+00
Barium (56)	Ba-141	2.59E-07	1.18E-07	1.03E+00	1.99E+04	1.36E+09	2.11E+07	3.26E+06	8.12E+05
Barium (56)	Ba-142	1.30E-07	7.77E-08	1.18E+00	3.44E+04	1.36E+09	2.11E+07	1.11E+07	2.26E+06
Beryllium (4)	Be-10	4.07E-06	3.55E-05	3.98E-03	4.33E-07	1.36E+09	2.11E+07	5.60E+00	1.75E-01
Beryllium (4)	Be-7	1.04E-07	1.85E-07	5.51E-02	4.75E+00	1.36E+09	2.11E+07	1.72E+03	1.52E+02
Bismuth (83)	Bi-200	1.89E-07	1.22E-07	2.64E+00	1.00E+04	1.36E+09	2.11E+07	2.20E+06	4.25E+05
Bismuth (83)	Bi-201	4.44E-07	2.44E-07	1.49E+00	3.37E+03	1.36E+09	2.11E+07	3.19E+05	6.94E+04
Bismuth (83)	Bi-202	3.29E-07	2.04E-07	2.96E+00	3.64E+03	1.36E+09	2.11E+07	4.60E+05	9.19E+04
Bismuth (83)	Bi-203	1.78E-06	9.62E-07	2.54E+00	5.16E+02	1.36E+09	2.11E+07	1.22E+04	2.69E+03
Bismuth (83)	Bi-205	3.33E-06	3.44E-06	1.80E+00	1.65E+01	1.36E+09	2.11E+07	1.98E+02	2.67E+01
Bismuth (83)	Bi-206	7.03E-06	6.29E-06	3.57E+00	4.05E+01	1.36E+09	2.11E+07	2.33E+02	3.52E+01
Bismuth (83)	Bi-207	4.81E-06	2.07E-05	1.69E+00	1.82E-02	1.36E+09	2.11E+07	6.35E+00	2.98E-01
Bismuth (83)	Bi-210	4.81E-06	3.44E-04	4.10E-02	5.05E+01	1.36E+09	2.11E+07	5.30E+01	9.26E-01
Bismuth (83)	Bi-210m	5.55E-05	1.26E-02	2.80E-01	2.31E-07	1.36E+09	2.11E+07	3.12E-02	5.03E-04
Bismuth (83)	Bi-210m+D			3.51E-01	2.31E-07	1.36E+09	2.11E+07		
Bismuth (83)	Bi-210m+E			3.51E-01		1.36E+09	2.11E+07		
Bismuth (83)	Bi-211			5.13E-02	1.70E+05	1.36E+09	2.11E+07		
Bismuth (83)	Bi-212	9.62E-07	1.15E-04	2.63E-01	6.02E+03	1.36E+09	2.11E+07	1.99E+04	3.31E+02
Bismuth (83)	Bi-212+D	9.62E-07	1.15E-04	1.51E+00	6.02E+03	1.36E+09	2.11E+07	1.99E+04	3.31E+02
Bismuth (83)	Bi-212+E	9.62E-07	1.15E-04	1.51E+00	6.02E+03	1.36E+09	2.11E+07	1.99E+04	3.31E+02
Bismuth (83)	Bi-213	7.40E-07	1.11E-04	1.96E-01	7.98E+03	1.36E+09	2.11E+07	2.76E+04	4.54E+02
Bismuth (83)	Bi-213+D	9.62E-07	1.11E-04	2.49E-01	7.98E+03	1.36E+09	2.11E+07	2.72E+04	4.54E+02
Bismuth (83)	Bi-213+E	9.62E-07	1.11E-04	2.49E-01	7.98E+03	1.36E+09	2.11E+07	2.72E+04	4.54E+02
Bismuth (83)	Bi-214	4.07E-07	5.18E-05	1.68E+00	1.83E+04	1.36E+09	2.11E+07	1.34E+05	2.23E+03
Bismuth (83)	Bi-214+D	4.07E-07	5.18E-05	1.68E+00	1.83E+04	1.36E+09	2.11E+07	1.34E+05	2.23E+03
Bismuth (83)	Bi-214+E	7.03E-03	1.67E-02	1.73E+00	1.83E+04	1.36E+09	2.11E+07	9.20E+01	6.56E+00
Berkelium (97)	Bk-245	2.11E-06	7.77E-06	2.40E-01	5.12E+01	1.36E+09	2.11E+07	7.70E+02	4.01E+01
Berkelium (97)	Bk-246	1.78E-06	1.22E-06	1.04E+00	1.38E+02	1.36E+09	2.11E+07	3.22E+03	5.93E+02
Berkelium (97)	Bk-247	1.30E-03	2.55E-01	1.10E-01	5.02E-04	1.36E+09	2.11E+07	1.53E-03	2.48E-05
Berkelium (97)	Bk-249	3.59E-06	5.92E-04	6.23E-06	7.90E-01	1.36E+09	2.11E+07	9.44E-01	1.54E-02
Berkelium (97)	Bk-250	5.18E-07	3.70E-06	9.84E-01	1.88E+03	1.36E+09	2.11E+07	9.09E+04	3.16E+03
Bromine (35)	Br-74	3.11E-07	1.41E-07	4.73E+00	1.44E+04	1.36E+09	2.11E+07	1.96E+06	4.93E+05
Bromine (35)	Br-74m	5.18E-07	2.29E-07	4.46E+00	8.78E+03	1.36E+09	2.11E+07	7.18E+05	1.83E+05

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Bromine (35)	Br-75	2.92E-07	1.96E-07	1.42E+00	3.72E+03	1.36E+09	2.11E+07	5.27E+05	9.89E+04
Bromine (35)	Br-76	1.70E-06	1.52E-06	2.85E+00	3.75E+02	1.36E+09	2.11E+07	8.92E+03	1.35E+03
Bromine (35)	Br-77	3.55E-07	3.11E-07	3.49E-01	1.08E+02	1.36E+09	2.11E+07	1.24E+04	1.90E+03
Bromine (35)	Br-80	1.15E-07	3.48E-08	1.21E-01	2.09E+04	1.36E+09	2.11E+07	7.85E+06	2.59E+06
Bromine (35)	Br-80m	4.07E-07	2.81E-07	1.60E-02	1.37E+03	1.36E+09	2.11E+07	1.39E+05	2.56E+04
Bromine (35)	Br-82	2.00E-06	2.33E-06	2.89E+00	1.72E+02	1.36E+09	2.11E+07	3.39E+03	4.16E+02
Bromine (35)	Br-83	1.59E-07	1.78E-07	3.34E-02	2.54E+03	1.36E+09	2.11E+07	6.33E+05	8.03E+04
Bromine (35)	Br-84	3.26E-07	1.37E-07	1.95E+00	1.15E+04	1.36E+09	2.11E+07	1.49E+06	3.95E+05
Carbon (6)	C-11	8.88E-08	8.14E-09	1.18E+00	1.79E+04	1.36E+09	2.11E+07	8.86E+06	5.44E+06
Carbon (6)	C-14	2.15E-06	2.29E-08	1.48E-05	1.21E-04	1.36E+09	2.11E+07	2.07E+01	1.93E+01
Calcium (20)	Ca-41	7.03E-07	3.52E-07	0.00E+00	4.95E-06	1.36E+09	2.11E+07	6.00E+01	1.40E+01
Calcium (20)	Ca-45	2.63E-06	9.99E-06	4.40E-05	1.55E+00	1.36E+09	2.11E+07	2.36E+01	1.20E+00
Calcium (20)	Ca-47	5.92E-06	7.03E-06	1.17E+00	5.58E+01	1.36E+09	2.11E+07	3.71E+02	4.49E+01
Calcium (20)	Ca-49			3.12E+00	4.18E+04	1.36E+09	2.11E+07		
Cadmium (48)	Cd-104	2.00E-07	1.26E-07	2.75E-01	6.31E+03	1.36E+09	2.11E+07	1.31E+06	2.59E+05
Cadmium (48)	Cd-107	2.29E-07	3.07E-07	2.72E-02	9.35E+02	1.36E+09	2.11E+07	1.58E+05	1.74E+04
Cadmium (48)	Cd-109	7.40E-06	2.44E-05	1.94E-02	5.45E-01	1.36E+09	2.11E+07	5.73E+00	3.22E-01
Cadmium (48)	Cd-113	9.25E-05	2.04E-04	6.77E-05	7.45E-17	1.36E+09	2.11E+07	2.60E-01	1.96E-02
Cadmium (48)	Cd-113m	8.51E-05	1.92E-04	2.07E-03	5.10E-02	1.36E+09	2.11E+07	4.30E-01	3.17E-02
Cadmium (48)	Cd-115	5.18E-06	3.63E-06	2.84E-01	1.14E+02	1.36E+09	2.11E+07	9.05E+02	1.65E+02
Cadmium (48)	Cd-115m	1.22E-05	2.29E-05	1.08E-01	5.67E+00	1.36E+09	2.11E+07	1.72E+01	1.46E+00
Cadmium (48)	Cd-117	1.04E-06	5.92E-07	1.21E+00	2.44E+03	1.36E+09	2.11E+07	9.85E+04	2.09E+04
Cadmium (48)	Cd-117m	1.04E-06	7.40E-07	2.16E+00	1.81E+03	1.36E+09	2.11E+07	7.19E+04	1.29E+04
Cerium (58)	Ce-134	9.25E-06	4.81E-06	2.51E-02	8.43E+01	1.36E+09	2.11E+07	3.83E+02	8.71E+01
Cerium (58)	Ce-135	2.92E-06	1.78E-06	1.98E+00	3.45E+02	1.36E+09	2.11E+07	4.92E+03	9.96E+02
Cerium (58)	Ce-137	9.25E-08	3.63E-08	3.48E-02	6.75E+02	1.36E+09	2.11E+07	3.11E+05	8.63E+04
Cerium (58)	Ce-137m	2.00E-06	1.52E-06	5.51E-02	1.76E+02	1.36E+09	2.11E+07	3.63E+03	6.20E+02
Cerium (58)	Ce-139	9.62E-07	6.29E-06	1.67E-01	1.84E+00	1.36E+09	2.11E+07	5.90E+01	2.15E+00
Cerium (58)	Ce-141	2.63E-06	1.18E-05	8.09E-02	7.78E+00	1.36E+09	2.11E+07	8.83E+01	4.03E+00
Cerium (58)	Ce-143	4.07E-06	2.78E-06	3.51E-01	1.84E+02	1.36E+09	2.11E+07	1.87E+03	3.47E+02
Cerium (58)	Ce-144	1.92E-05	1.33E-04	2.15E-02	8.90E-01	1.36E+09	2.11E+07	1.99E+00	7.03E-02
Cerium (58)	Ce-144+D	1.92E-05	1.33E-04	2.11E-01	8.90E-01	1.36E+09	2.11E+07	1.99E+00	7.03E-02
Cerium (58)	Ce-144+E	1.92E-05	1.33E-04	2.11E-01	8.90E-01	1.36E+09	2.11E+07	1.99E+00	7.03E-02
Californium (98)	Cf-244	2.59E-07	5.18E-05	9.56E-04	1.88E+04	1.36E+09	2.11E+07	1.41E+05	2.29E+03
Californium (98)	Cf-246	1.22E-05	1.67E-03	6.69E-04	1.70E+02	1.36E+09	2.11E+07	3.90E+01	6.45E-01
Californium (98)	Cf-248	1.04E-04	3.26E-02	6.51E-04	7.58E-01	1.36E+09	2.11E+07	1.74E-02	2.77E-04
Californium (98)	Cf-249	1.30E-03	2.59E-01	3.68E-01	1.98E-03	1.36E+09	2.11E+07	1.51E-03	2.44E-05
Californium (98)	Cf-250	5.92E-04	1.26E-01	6.21E-04	5.30E-02	1.36E+09	2.11E+07	3.19E-03	5.16E-05
Californium (98)	Cf-251	1.33E-03	2.63E-01	1.32E-01	7.72E-04	1.36E+09	2.11E+07	1.48E-03	2.41E-05
Californium (98)	Cf-252	3.33E-04	7.40E-02	4.97E-01	2.63E-01	1.36E+09	2.11E+07	6.02E-03	9.72E-05
Californium (98)	Cf-253	5.18E-06	4.81E-03	6.03E-05	1.42E+01	1.36E+09	2.11E+07	1.19E+00	1.87E-02
Californium (98)	Cf-254	1.48E-03	1.52E-01	1.81E+01	4.18E+00	1.36E+09	2.11E+07	1.05E-02	1.77E-04
Chlorine (17)	Cl-36	3.44E-06	2.70E-05	1.31E-02	2.30E-06	1.36E+09	2.11E+07	6.96E+00	2.30E-01
Chlorine (17)	Cl-38	4.44E-07	1.67E-07	1.67E+00	9.79E+03	1.36E+09	2.11E+07	9.41E+05	2.70E+05
Chlorine (17)	Cl-39	3.15E-07	1.70E-07	1.65E+00	6.55E+03	1.36E+09	2.11E+07	8.74E+05	1.93E+05
Curium (96)	Cm-238	2.96E-07	1.67E-05	7.66E-02	2.53E+03	1.36E+09	2.11E+07	5.33E+04	9.59E+02
Curium (96)	Cm-240	2.81E-05	1.18E-02	8.97E-04	9.37E+00	1.36E+09	2.11E+07	3.16E-01	5.00E-03
Curium (96)	Cm-241	3.37E-06	1.37E-04	5.43E-01	7.71E+00	1.36E+09	2.11E+07	1.88E+01	3.55E-01
Curium (96)	Cm-242	4.44E-05	1.92E-02	8.19E-04	1.55E+00	1.36E+09	2.11E+07	4.09E-02	6.48E-04
Curium (96)	Cm-243	5.55E-04	1.15E-01	1.38E-01	2.43E-02	1.36E+09	2.11E+07	3.45E-03	5.58E-05
Curium (96)	Cm-244	4.44E-04	9.99E-02	7.52E-04	3.83E-02	1.36E+09	2.11E+07	4.00E-03	6.45E-05
Curium (96)	Cm-245	7.77E-04	1.55E-01	9.39E-02	8.15E-05	1.36E+09	2.11E+07	2.51E-03	4.07E-05
Curium (96)	Cm-246	7.77E-04	1.55E-01	6.72E-04	1.47E-04	1.36E+09	2.11E+07	2.51E-03	4.07E-05
Curium (96)	Cm-247	7.03E-04	1.44E-01	3.49E-01	4.44E-08	1.36E+09	2.11E+07	2.71E-03	4.38E-05
Curium (96)	Cm-247+D			3.76E-01	4.44E-08	1.36E+09	2.11E+07		
Curium (96)	Cm-247+E			3.76E-01		1.36E+09	2.11E+07		
Curium (96)	Cm-248	2.85E-03	5.55E-01	1.42E+00	1.99E-06	1.36E+09	2.11E+07	7.02E-04	1.14E-05
Curium (96)	Cm-249	1.15E-07	1.22E-07	3.87E-02	5.68E+03	1.36E+09	2.11E+07	1.97E+06	2.60E+05
Curium (96)	Cm-250	1.63E-02	3.11E+00	1.05E+01	7.14E-05	1.36E+09	2.11E+07	1.25E-04	2.03E-06
Curium (96)	Cm-250+D	1.63E-02	3.11E+00		7.14E-05	1.36E+09	2.11E+07	1.25E-04	2.03E-06
Curium (96)	Cm-250+E	1.63E-02	3.11E+00	1.08E+01	7.14E-05	1.36E+09	2.11E+07	1.25E-04	2.03E-06

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Cobalt (27)	Co-55	3.70E-06	1.85E-06	2.25E+00	3.46E+02	1.36E+09	2.11E+07	3.94E+03	9.21E+02
Cobalt (27)	Co-56	9.25E-06	1.78E-05	3.77E+00	3.21E+00	1.36E+09	2.11E+07	1.33E+01	1.11E+00
Cobalt (27)	Co-57	7.77E-07	2.04E-06	1.26E-01	9.34E-01	1.36E+09	2.11E+07	6.85E+01	4.54E+00
Cobalt (27)	Co-58	2.74E-06	5.92E-06	1.08E+00	3.57E+00	1.36E+09	2.11E+07	4.83E+01	3.69E+00
Cobalt (27)	Co-58m	8.88E-08	4.81E-08	7.76E-06	6.63E+02	1.36E+09	2.11E+07	3.14E+05	6.91E+04
Cobalt (27)	Co-60	1.26E-05	3.70E-05	2.68E+00	1.31E-01	1.36E+09	2.11E+07	2.86E+00	1.74E-01
Cobalt (27)	Co-60m	6.29E-09	4.44E-09	5.11E-03	3.48E+04	1.36E+09	2.11E+07	2.28E+08	4.13E+07
Cobalt (27)	Co-61	2.74E-07	1.74E-07	1.51E-01	3.68E+03	1.36E+09	2.11E+07	5.59E+05	1.09E+05
Cobalt (27)	Co-62m	1.74E-07	7.40E-08	3.01E+00	2.62E+04	1.36E+09	2.11E+07	6.40E+06	1.68E+06
Chromium (24)	Cr-48	7.40E-07	7.40E-07	4.71E-01	2.64E+02	1.36E+09	2.11E+07	1.43E+04	1.98E+03
Chromium (24)	Cr-49	2.26E-07	1.22E-07	1.25E+00	8.65E+03	1.36E+09	2.11E+07	1.61E+06	3.55E+05
Chromium (24)	Cr-51	1.41E-07	1.18E-07	3.47E-02	9.13E+00	1.36E+09	2.11E+07	2.64E+03	4.17E+02
Cesium (55)	Cs-125	1.30E-07	4.44E-08	7.99E-01	8.09E+03	1.36E+09	2.11E+07	2.68E+06	8.15E+05
Cesium (55)	Cs-126			1.38E+00	2.22E+05	1.36E+09	2.11E+07		
Cesium (55)	Cs-127	8.88E-08	7.40E-08	4.61E-01	9.71E+02	1.36E+09	2.11E+07	4.46E+05	7.09E+04
Cesium (55)	Cs-128			1.11E+00	9.34E+04	1.36E+09	2.11E+07		
Cesium (55)	Cs-129	2.22E-07	1.55E-07	3.06E-01	1.89E+02	1.36E+09	2.11E+07	3.52E+04	6.41E+03
Cesium (55)	Cs-130	1.04E-07	2.89E-08	6.31E-01	1.22E+04	1.36E+09	2.11E+07	5.07E+06	1.77E+06
Cesium (55)	Cs-131	2.15E-07	9.99E-08	2.09E-02	2.61E+01	1.36E+09	2.11E+07	5.15E+03	1.27E+03
Cesium (55)	Cs-132	1.85E-06	8.51E-07	7.81E-01	3.91E+01	1.36E+09	2.11E+07	8.94E+02	2.22E+02
Cesium (55)	Cs-134	7.03E-05	2.44E-05	1.73E+00	3.36E-01	1.36E+09	2.11E+07	7.17E-01	2.16E-01
Cesium (55)	Cs-134m	7.40E-08	5.18E-08	2.63E-02	2.09E+03	1.36E+09	2.11E+07	1.17E+06	2.12E+05
Cesium (55)	Cs-135	7.40E-06	2.55E-06	3.14E-05	3.01E-07	1.36E+09	2.11E+07	5.79E+00	1.75E+00
Cesium (55)	Cs-135m	7.03E-08	4.44E-08	1.76E+00	6.87E+03	1.36E+09	2.11E+07	4.07E+06	7.99E+05
Cesium (55)	Cs-136	1.11E-05	4.44E-06	2.37E+00	1.93E+01	1.36E+09	2.11E+07	7.41E+01	2.03E+01
Cesium (55)	Cs-137	4.81E-05	1.70E-05	3.49E-03	2.31E-02	1.36E+09	2.11E+07	9.00E-01	2.68E-01
Cesium (55)	Cs-137+D	4.81E-05	1.70E-05	6.43E-01	2.31E-02	1.36E+09	2.11E+07	9.00E-01	2.68E-01
Cesium (55)	Cs-137+E	4.81E-05	1.70E-05	6.43E-01	2.31E-02	1.36E+09	2.11E+07	9.00E-01	2.68E-01
Cesium (55)	Cs-138	3.40E-07	8.88E-08	2.64E+00	1.13E+04	1.36E+09	2.11E+07	1.44E+06	5.21E+05
Copper (29)	Cu-60	2.59E-07	1.22E-07	4.25E+00	1.57E+04	1.36E+09	2.11E+07	2.56E+06	6.25E+05
Copper (29)	Cu-61	4.44E-07	2.74E-07	9.58E-01	1.78E+03	1.36E+09	2.11E+07	1.67E+05	3.34E+04
Copper (29)	Cu-62			1.30E+00	3.74E+04	1.36E+09	2.11E+07		
Copper (29)	Cu-64	4.44E-07	4.07E-07	2.14E-01	4.78E+02	1.36E+09	2.11E+07	4.35E+04	6.43E+03
Copper (29)	Cu-66			2.37E-01	7.14E+04	1.36E+09	2.11E+07		
Copper (29)	Cu-67	1.26E-06	2.04E-06	1.23E-01	9.81E+01	1.36E+09	2.11E+07	2.95E+03	2.80E+02
Dysprosium (66)	Dy-155	4.81E-07	2.85E-07	6.28E-01	6.07E+02	1.36E+09	2.11E+07	5.27E+04	1.09E+04
Dysprosium (66)	Dy-157	2.26E-07	1.11E-07	3.89E-01	7.49E+02	1.36E+09	2.11E+07	1.40E+05	3.31E+04
Dysprosium (66)	Dy-159	3.70E-07	1.37E-06	4.52E-02	1.75E+00	1.36E+09	2.11E+07	1.81E+02	9.43E+00
Dysprosium (66)	Dy-165	4.07E-07	2.22E-07	8.06E-02	2.60E+03	1.36E+09	2.11E+07	2.68E+05	5.88E+04
Dysprosium (66)	Dy-166	5.92E-06	7.03E-06	4.10E-02	7.44E+01	1.36E+09	2.11E+07	4.95E+02	5.98E+01
Erbium (68)	Er-161	2.96E-07	1.78E-07	9.98E-01	1.87E+03	1.36E+09	2.11E+07	2.64E+05	5.39E+04
Erbium (68)	Er-165	7.03E-08	2.92E-08	3.78E-02	5.86E+02	1.36E+09	2.11E+07	3.54E+05	9.45E+04
Erbium (68)	Er-169	1.37E-06	3.70E-06	7.88E-05	2.72E+01	1.36E+09	2.11E+07	6.82E+02	4.42E+01
Erbium (68)	Er-171	1.33E-06	8.14E-07	4.49E-01	8.07E+02	1.36E+09	2.11E+07	2.53E+04	5.09E+03
Erbium (68)	Er-172	3.70E-06	4.07E-06	5.79E-01	1.23E+02	1.36E+09	2.11E+07	1.32E+03	1.69E+02
Einsteinium (99)	Es-250	7.77E-08	2.33E-06	4.26E-01	2.89E+03	1.36E+09	2.11E+07	3.87E+05	7.81E+03
Einsteinium (99)	Es-251	6.29E-07	7.77E-06	9.79E-02	1.84E+02	1.36E+09	2.11E+07	5.54E+03	1.48E+02
Einsteinium (99)	Es-253	2.26E-05	9.99E-03	7.74E-04	1.24E+01	1.36E+09	2.11E+07	4.94E-01	7.82E-03
Einsteinium (99)	Es-254	1.04E-04	3.18E-02	1.14E-02	9.17E-01	1.36E+09	2.11E+07	1.90E-02	3.04E-04
Einsteinium (99)	Es-254+D	1.04E-04	3.18E-02	9.95E-01	9.17E-01	1.36E+09	2.11E+07	1.90E-02	3.04E-04
Einsteinium (99)	Es-254+E	7.03E-04	1.59E-01	9.97E-01	9.17E-01	1.36E+09	2.11E+07	3.76E-03	6.07E-05
Einsteinium (99)	Es-254m	1.55E-05	1.74E-03	5.34E-01	1.54E+02	1.36E+09	2.11E+07	3.35E+01	5.61E-01
Europium (63)	Eu-145	2.78E-06	2.04E-06	1.56E+00	4.26E+01	1.36E+09	2.11E+07	6.32E+02	1.11E+02
Europium (63)	Eu-146	4.81E-06	2.96E-06	2.74E+00	5.49E+01	1.36E+09	2.11E+07	4.75E+02	9.52E+01
Europium (63)	Eu-147	1.63E-06	4.07E-06	5.39E-01	1.05E+01	1.36E+09	2.11E+07	2.26E+02	1.55E+01
Europium (63)	Eu-148	4.81E-06	9.62E-06	2.40E+00	4.64E+00	1.36E+09	2.11E+07	3.56E+01	2.88E+00
Europium (63)	Eu-149	3.70E-07	1.07E-06	6.61E-02	2.72E+00	1.36E+09	2.11E+07	2.66E+02	1.64E+01
Europium (63)	Eu-150	4.81E-06	1.96E-04	1.66E+00	2.03E-02	1.36E+09	2.11E+07	1.71E+00	3.25E-02
Europium (63)	Eu-150m	1.41E-06	7.03E-07	7.91E-02	4.81E+02	1.36E+09	2.11E+07	1.44E+04	3.37E+03
Europium (63)	Eu-152	5.18E-06	1.55E-04	1.26E+00	5.20E-02	1.36E+09	2.11E+07	2.06E+00	4.16E-02
Europium (63)	Eu-152m	1.85E-06	8.14E-07	3.91E-01	6.51E+02	1.36E+09	2.11E+07	1.49E+04	3.83E+03

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Europium (63)	Eu-154	7.40E-06	1.96E-04	1.37E+00	7.88E-02	1.36E+09	2.11E+07	1.61E+00	3.34E-02
Europium (63)	Eu-155	1.18E-06	2.55E-05	6.24E-02	1.40E-01	1.36E+09	2.11E+07	1.20E+01	2.64E-01
Europium (63)	Eu-156	8.14E-06	1.26E-05	1.45E+00	1.67E+01	1.36E+09	2.11E+07	7.78E+01	7.67E+00
Europium (63)	Eu-157	2.22E-06	1.04E-06	3.22E-01	4.01E+02	1.36E+09	2.11E+07	7.63E+03	1.88E+03
Europium (63)	Eu-158	3.48E-07	1.74E-07	1.26E+00	7.94E+03	1.36E+09	2.11E+07	9.62E+05	2.25E+05
Fluorine (9)	F-18	1.81E-07	2.07E-07	1.15E+00	3.32E+03	1.36E+09	2.11E+07	7.23E+05	9.01E+04
Iron (26)	Fe-52	5.18E-06	2.22E-06	8.30E-01	7.34E+02	1.36E+09	2.11E+07	6.01E+03	1.57E+03
Iron (26)	Fe-55	1.22E-06	1.41E-06	0.00E+00	2.57E-01	1.36E+09	2.11E+07	3.67E+01	4.54E+00
Iron (26)	Fe-59	6.66E-06	1.37E-05	1.28E+00	5.68E+00	1.36E+09	2.11E+07	3.11E+01	2.46E+00
Iron (26)	Fe-60	4.07E-04	5.18E-04	1.37E-05	6.93E-06	1.36E+09	2.11E+07	9.59E-02	1.10E-02
Iron (26)	Fe-60+D	4.07E-04	5.18E-04	5.12E-03	6.93E-06	1.36E+09	2.11E+07	9.59E-02	1.10E-02
Iron (26)	Fe-60+E	4.07E-04	5.18E-04	5.12E-03	6.93E-06	1.36E+09	2.11E+07	9.59E-02	1.10E-02
Fermium (100)	Fm-252	9.99E-06	1.18E-03	6.31E-04	2.67E+02	1.36E+09	2.11E+07	8.55E+01	1.43E+00
Fermium (100)	Fm-253	3.37E-06	1.48E-03	8.33E-02	8.43E+01	1.36E+09	2.11E+07	2.28E+01	3.60E-01
Fermium (100)	Fm-254	1.63E-06	2.26E-04	6.99E-04	1.87E+03	1.36E+09	2.11E+07	3.18E+03	5.25E+01
Fermium (100)	Fm-255	9.25E-06	9.99E-04	7.34E-03	3.02E+02	1.36E+09	2.11E+07	1.14E+02	1.91E+00
Fermium (100)	Fm-257	5.55E-05	2.63E-02	1.11E-01	2.52E+00	1.36E+09	2.11E+07	4.17E-02	6.59E-04
Francium (87)	Fr-219			3.85E-03	1.04E+09	1.36E+09	2.11E+07		
Francium (87)	Fr-220			1.15E-02	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-220+D			1.52E+00	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-220+E			1.52E+00	7.98E+05	1.36E+09	2.11E+07		
Francium (87)	Fr-221			3.31E-02	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-221+D			2.81E-01	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-221+E			2.81E-01	7.59E+04	1.36E+09	2.11E+07		
Francium (87)	Fr-222	2.66E-06	5.18E-05	1.02E-01	2.53E+04	1.36E+09	2.11E+07	1.35E+05	3.07E+03
Francium (87)	Fr-223	8.88E-06	3.29E-06	9.06E-02	1.67E+04	1.36E+09	2.11E+07	8.04E+04	2.32E+04
Gallium (31)	Ga-65	1.37E-07	6.29E-08	1.41E+00	2.40E+04	1.36E+09	2.11E+07	7.41E+06	1.84E+06
Gallium (31)	Ga-66	4.44E-06	1.63E-06	2.63E+00	6.46E+02	1.36E+09	2.11E+07	6.22E+03	1.81E+03
Gallium (31)	Ga-67	7.03E-07	8.88E-07	1.65E-01	7.76E+01	1.36E+09	2.11E+07	4.31E+03	4.97E+02
Gallium (31)	Ga-68	3.70E-07	1.81E-07	1.17E+00	5.36E+03	1.36E+09	2.11E+07	6.11E+05	1.45E+05
Gallium (31)	Ga-70	1.15E-07	5.92E-08	9.90E-02	1.72E+04	1.36E+09	2.11E+07	6.32E+06	1.44E+06
Gallium (31)	Ga-72	4.07E-06	1.96E-06	2.89E+00	4.31E+02	1.36E+09	2.11E+07	4.47E+03	1.07E+03
Gallium (31)	Ga-73	9.62E-07	5.18E-07	3.91E-01	1.24E+03	1.36E+09	2.11E+07	5.40E+04	1.19E+04
Gadolinium (64)	Gd-145	1.63E-07	7.40E-08	2.44E+00	1.59E+04	1.36E+09	2.11E+07	4.14E+06	1.04E+06
Gadolinium (64)	Gd-146	3.55E-06	2.37E-05	2.59E-01	5.24E+00	1.36E+09	2.11E+07	3.82E+01	1.38E+00
Gadolinium (64)	Gd-147	2.26E-06	1.48E-06	1.46E+00	1.59E+02	1.36E+09	2.11E+07	2.93E+03	5.60E+02
Gadolinium (64)	Gd-148	2.07E-04	4.07E-02	0.00E+00	7.45E-03	1.36E+09	2.11E+07	9.61E-03	1.56E-04
Gadolinium (64)	Gd-149	1.67E-06	2.70E-06	4.57E-01	2.69E+01	1.36E+09	2.11E+07	6.10E+02	5.79E+01
Gadolinium (64)	Gd-151	7.40E-07	3.18E-06	6.50E-02	2.11E+00	1.36E+09	2.11E+07	9.81E+01	4.62E+00
Gadolinium (64)	Gd-152	1.52E-04	2.96E-02	0.00E+00	6.42E-15	1.36E+09	2.11E+07	1.31E-02	2.13E-04
Gadolinium (64)	Gd-153	9.99E-07	7.77E-06	1.08E-01	1.05E+00	1.36E+09	2.11E+07	3.88E+01	1.29E+00
Gadolinium (64)	Gd-159	1.81E-06	9.99E-07	7.56E-02	3.27E+02	1.36E+09	2.11E+07	7.56E+03	1.65E+03
Germanium (32)	Ge-66	3.70E-07	3.37E-07	7.59E-01	2.67E+03	1.36E+09	2.11E+07	2.92E+05	4.35E+04
Germanium (32)	Ge-67	2.41E-07	9.25E-08	1.70E+00	1.95E+04	1.36E+09	2.11E+07	3.45E+06	9.72E+05
Germanium (32)	Ge-68	4.81E-06	5.18E-05	4.78E-05	8.78E-01	1.36E+09	2.11E+07	6.39E+00	1.81E-01
Germanium (32)	Ge-68+D	4.81E-06	5.18E-05	1.17E+00	8.78E-01	1.36E+09	2.11E+07	6.39E+00	1.81E-01
Germanium (32)	Ge-68+E	4.81E-06	5.18E-05	1.17E+00	8.78E-01	1.36E+09	2.11E+07	6.39E+00	1.81E-01
Germanium (32)	Ge-69	8.88E-07	1.07E-06	9.79E-01	1.55E+02	1.36E+09	2.11E+07	6.88E+03	8.20E+02
Germanium (32)	Ge-71	4.44E-08	4.07E-08	4.84E-05	2.14E+01	1.36E+09	2.11E+07	1.95E+04	2.88E+03
Germanium (32)	Ge-75	1.70E-07	1.33E-07	8.40E-02	4.40E+03	1.36E+09	2.11E+07	1.06E+06	1.77E+05
Germanium (32)	Ge-77	1.22E-06	1.37E-06	1.27E+00	5.37E+02	1.36E+09	2.11E+07	1.74E+04	2.20E+03
Germanium (32)	Ge-78	4.44E-07	3.52E-07	3.12E-01	4.19E+03	1.36E+09	2.11E+07	3.86E+05	6.39E+04
Hydrogen (1)	H-3	1.55E-07	1.52E-07	0.00E+00	5.61E-02	1.36E+09	2.11E+07	2.66E+02	3.74E+01
Hafnium (72)	Hf-170	1.78E-06	1.18E-06	5.96E-01	3.79E+02	1.36E+09	2.11E+07	8.85E+03	1.67E+03
Hafnium (72)	Hf-172	3.70E-06	7.40E-05	1.16E-01	3.71E-01	1.36E+09	2.11E+07	4.52E+00	1.02E-01
Hafnium (72)	Hf-173	8.51E-07	5.92E-07	4.35E-01	2.53E+02	1.36E+09	2.11E+07	1.23E+04	2.24E+03
Hafnium (72)	Hf-175	1.52E-06	4.44E-06	4.03E-01	3.61E+00	1.36E+09	2.11E+07	8.25E+01	5.05E+00
Hafnium (72)	Hf-177m	3.00E-07	3.33E-07	2.45E+00	7.09E+03	1.36E+09	2.11E+07	9.37E+05	1.19E+05
Hafnium (72)	Hf-178m	1.74E-05	4.44E-04	2.59E+00	2.24E-02	1.36E+09	2.11E+07	6.83E-01	1.43E-02
Hafnium (72)	Hf-179m	4.44E-06	1.41E-05	9.83E-01	1.01E+01	1.36E+09	2.11E+07	7.50E+01	4.34E+00
Hafnium (72)	Hf-180m	6.29E-07	4.81E-07	1.10E+00	1.10E+03	1.36E+09	2.11E+07	7.20E+04	1.22E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Hafnium (72)	Hf-181	4.07E-06	1.85E-05	6.13E-01	5.97E+00	1.36E+09	2.11E+07	4.37E+01	1.98E+00
Hafnium (72)	Hf-182	1.11E-05	4.81E-04	2.60E-01	7.70E-08	1.36E+09	2.11E+07	7.00E-01	1.31E-02
Hafnium (72)	Hf-182+D				7.70E-08	1.36E+09	2.11E+07		
Hafnium (72)	Hf-182+E	1.67E-05	4.81E-04	1.66E+00	7.70E-08	1.36E+09	2.11E+07	6.43E-01	1.31E-02
Hafnium (72)	Hf-182m	1.55E-07	1.70E-07	1.02E+00	5.92E+03	1.36E+09	2.11E+07	1.51E+06	1.95E+05
Hafnium (72)	Hf-183	2.70E-07	2.11E-07	8.78E-01	5.69E+03	1.36E+09	2.11E+07	8.63E+05	1.44E+05
Hafnium (72)	Hf-184	1.92E-06	1.22E-06	2.87E-01	1.47E+03	1.36E+09	2.11E+07	3.18E+04	6.24E+03
Mercury (80)	Hg-193	3.03E-07	2.78E-07	2.10E-01	1.73E+03	1.36E+09	2.11E+07	2.31E+05	3.42E+04
Mercury (80)	Hg-193m	1.48E-06	9.62E-07	1.13E+00	5.47E+02	1.36E+09	2.11E+07	1.53E+04	2.95E+03
Mercury (80)	Hg-194	5.18E-06	3.07E-05	2.61E-04	2.67E-03	1.36E+09	2.11E+07	5.22E+00	2.01E-01
Mercury (80)	Hg-194+D	6.66E-06	3.07E-05	1.13E+00	2.67E-03	1.36E+09	2.11E+07	4.45E+00	2.00E-01
Mercury (80)	Hg-194+E	6.66E-06	3.07E-05	1.13E+00	2.67E-03	1.36E+09	2.11E+07	4.45E+00	2.00E-01
Mercury (80)	Hg-195	3.59E-07	2.70E-07	2.16E-01	6.13E+02	1.36E+09	2.11E+07	7.02E+04	1.21E+04
Mercury (80)	Hg-195m	2.07E-06	1.96E-06	2.25E-01	1.46E+02	1.36E+09	2.11E+07	2.84E+03	4.09E+02
Mercury (80)	Hg-197	8.51E-07	1.11E-06	6.76E-02	9.47E+01	1.36E+09	2.11E+07	4.33E+03	4.87E+02
Mercury (80)	Hg-197m	1.74E-06	1.96E-06	9.48E-02	2.55E+02	1.36E+09	2.11E+07	5.81E+03	7.31E+02
Mercury (80)	Hg-199m	1.15E-07	1.18E-07	1.95E-01	8.55E+03	1.36E+09	2.11E+07	2.98E+06	4.02E+05
Mercury (80)	Hg-203	2.00E-06	8.88E-06	2.59E-01	5.43E+00	1.36E+09	2.11E+07	8.17E+01	3.76E+00
Holmium (67)	Ho-155	1.37E-07	7.40E-08	4.54E-01	7.59E+03	1.36E+09	2.11E+07	2.33E+06	5.14E+05
Holmium (67)	Ho-157	2.41E-08	1.55E-08	5.38E-01	2.89E+04	1.36E+09	2.11E+07	4.99E+07	9.64E+06
Holmium (67)	Ho-159	2.92E-08	2.26E-08	3.90E-01	1.10E+04	1.36E+09	2.11E+07	1.55E+07	2.61E+06
Holmium (67)	Ho-161	4.81E-08	2.22E-08	6.00E-02	2.43E+03	1.36E+09	2.11E+07	2.14E+06	5.29E+05
Holmium (67)	Ho-162	1.22E-08	1.04E-08	1.81E-01	2.43E+04	1.36E+09	2.11E+07	8.09E+07	1.27E+07
Holmium (67)	Ho-162m	9.62E-08	7.77E-08	6.19E-01	5.36E+03	1.36E+09	2.11E+07	2.27E+06	3.71E+05
Holmium (67)	Ho-164	3.52E-08	3.11E-08	3.94E-02	1.26E+04	1.36E+09	2.11E+07	1.45E+07	2.20E+06
Holmium (67)	Ho-164m	5.92E-08	4.44E-08	4.55E-02	9.71E+03	1.36E+09	2.11E+07	6.74E+06	1.16E+06
Holmium (67)	Ho-166	5.18E-06	2.41E-06	1.23E-01	2.27E+02	1.36E+09	2.11E+07	1.85E+03	4.56E+02
Holmium (67)	Ho-166m	7.40E-06	4.44E-04	1.93E+00	5.78E-04	1.36E+09	2.11E+07	7.97E-01	1.42E-02
Holmium (67)	Ho-167	3.07E-07	2.63E-07	4.10E-01	1.96E+03	1.36E+09	2.11E+07	2.59E+05	4.04E+04
Iodine (53)	I-120	1.26E-06	7.40E-07	3.06E+00	4.50E+03	1.36E+09	2.11E+07	1.49E+05	3.10E+04
Iodine (53)	I-120m	7.77E-07	3.70E-07	5.85E+00	6.87E+03	1.36E+09	2.11E+07	3.74E+05	9.05E+04
Iodine (53)	I-121	3.03E-07	2.07E-07	4.62E-01	2.86E+03	1.36E+09	2.11E+07	3.90E+05	7.24E+04
Iodine (53)	I-122			1.19E+00	1.01E+05	1.36E+09	2.11E+07		
Iodine (53)	I-123	7.77E-07	5.55E-07	1.79E-01	4.60E+02	1.36E+09	2.11E+07	2.44E+04	4.37E+03
Iodine (53)	I-124	4.81E-05	3.40E-05	1.21E+00	6.05E+01	1.36E+09	2.11E+07	5.19E+01	9.36E+00
Iodine (53)	I-125	5.55E-05	4.07E-05	3.66E-02	4.21E+00	1.36E+09	2.11E+07	3.17E+00	5.56E-01
Iodine (53)	I-126	1.07E-04	7.40E-05	5.16E-01	1.94E+01	1.36E+09	2.11E+07	7.48E+00	1.38E+00
Iodine (53)	I-128	1.70E-07	4.81E-08	2.00E-01	1.46E+04	1.36E+09	2.11E+07	3.69E+06	1.27E+06
Iodine (53)	I-129	4.07E-04	2.74E-04	2.28E-02	4.41E-08	1.36E+09	2.11E+07	1.02E-01	1.91E-02
Iodine (53)	I-130	7.40E-06	5.18E-06	2.39E+00	4.91E+02	1.36E+09	2.11E+07	2.74E+03	4.99E+02
Iodine (53)	I-131	8.14E-05	5.55E-05	4.25E-01	3.15E+01	1.36E+09	2.11E+07	1.60E+01	2.97E+00
Iodine (53)	I-132	1.07E-06	7.03E-07	2.57E+00	2.64E+03	1.36E+09	2.11E+07	1.02E+05	1.95E+04
Iodine (53)	I-132m	8.14E-07	5.92E-07	3.63E-01	4.36E+03	1.36E+09	2.11E+07	2.20E+05	3.89E+04
Iodine (53)	I-133	1.59E-05	1.15E-05	7.20E-01	2.92E+02	1.36E+09	2.11E+07	7.56E+02	1.34E+02
Iodine (53)	I-134	4.07E-07	1.85E-07	2.95E+00	6.92E+03	1.36E+09	2.11E+07	7.20E+05	1.80E+05
Iodine (53)	I-135	3.44E-06	2.52E-06	1.72E+00	9.18E+02	1.36E+09	2.11E+07	1.10E+04	1.93E+03
Indium (49)	In-109	2.44E-07	1.55E-07	7.28E-01	1.45E+03	1.36E+09	2.11E+07	2.46E+05	4.81E+04
Indium (49)	In-110	8.88E-07	4.81E-07	3.36E+00	1.24E+03	1.36E+09	2.11E+07	5.86E+04	1.29E+04
Indium (49)	In-110m	3.70E-07	1.74E-07	1.79E+00	5.27E+03	1.36E+09	2.11E+07	6.02E+05	1.47E+05
Indium (49)	In-111	1.07E-06	8.51E-07	4.29E-01	8.94E+01	1.36E+09	2.11E+07	3.41E+03	5.63E+02
Indium (49)	In-112	3.70E-08	2.74E-08	3.20E-01	2.53E+04	1.36E+09	2.11E+07	2.81E+07	4.90E+06
Indium (49)	In-113m	1.04E-07	7.40E-08	2.84E-01	3.66E+03	1.36E+09	2.11E+07	1.46E+06	2.61E+05
Indium (49)	In-114			3.22E-03	3.04E+05	1.36E+09	2.11E+07		
Indium (49)	In-114m	1.52E-05	2.26E-05	1.01E-01	5.11E+00	1.36E+09	2.11E+07	1.30E+01	1.32E+00
Indium (49)	In-114m+D	1.52E-05	4.44E-05	1.04E-01	5.11E+00	1.36E+09	2.11E+07	1.14E+01	6.98E-01
Indium (49)	In-114m+E	1.52E-05	4.44E-05	1.04E-01	5.11E+00	1.36E+09	2.11E+07	1.14E+01	6.98E-01
Indium (49)	In-115	1.18E-04	5.92E-04	4.17E-04	1.36E-16	1.36E+09	2.11E+07	2.97E-01	1.27E-02
Indium (49)	In-115m	3.18E-07	2.18E-07	1.76E-01	1.35E+03	1.36E+09	2.11E+07	1.76E+05	3.25E+04
Indium (49)	In-116m	2.37E-07	1.67E-07	2.66E+00	6.73E+03	1.36E+09	2.11E+07	1.17E+06	2.13E+05
Indium (49)	In-117	1.15E-07	1.07E-07	7.75E-01	8.32E+03	1.36E+09	2.11E+07	2.92E+06	4.26E+05
Indium (49)	In-117m	4.44E-07	2.66E-07	1.46E-01	3.13E+03	1.36E+09	2.11E+07	2.94E+05	6.00E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Indium (49)	In-119			9.36E-01	1.52E+05	1.36E+09	2.11E+07		
Indium (49)	In-119m	1.74E-07	6.29E-08	1.52E-01	2.02E+04	1.36E+09	2.11E+07	4.98E+06	1.46E+06
Iridium (77)	Ir-182	1.78E-07	8.51E-08	1.56E+00	2.43E+04	1.36E+09	2.11E+07	5.78E+06	1.39E+06
Iridium (77)	Ir-184	6.29E-07	4.07E-07	2.08E+00	2.01E+03	1.36E+09	2.11E+07	1.33E+05	2.56E+04
Iridium (77)	Ir-185	9.62E-07	6.66E-07	6.22E-01	4.34E+02	1.36E+09	2.11E+07	1.86E+04	3.42E+03
Iridium (77)	Ir-186	1.81E-06	1.15E-06	1.76E+00	3.84E+02	1.36E+09	2.11E+07	8.81E+03	1.73E+03
Iridium (77)	Ir-186m	2.26E-07	1.55E-07	1.07E+00	3.47E+03	1.36E+09	2.11E+07	6.35E+05	1.17E+05
Iridium (77)	Ir-187	4.44E-07	2.74E-07	3.93E-01	5.78E+02	1.36E+09	2.11E+07	5.42E+04	1.09E+04
Iridium (77)	Ir-188	2.33E-06	1.48E-06	1.66E+00	1.46E+02	1.36E+09	2.11E+07	2.61E+03	5.11E+02
Iridium (77)	Ir-189	8.88E-07	1.92E-06	8.16E-02	1.90E+01	1.36E+09	2.11E+07	7.70E+02	5.87E+01
Iridium (77)	Ir-190	4.44E-06	7.77E-06	1.59E+00	2.09E+01	1.36E+09	2.11E+07	1.76E+02	1.57E+01
Iridium (77)	Ir-190m			6.21E-05	5.06E+03	1.36E+09	2.11E+07		
Iridium (77)	Ir-190n			1.72E+00	1.96E+03	1.36E+09	2.11E+07		
Iridium (77)	Ir-191m			7.39E-02	4.42E+06	1.36E+09	2.11E+07		
Iridium (77)	Ir-192	5.18E-06	1.92E-05	9.07E-01	3.42E+00	1.36E+09	2.11E+07	2.16E+01	1.12E+00
Iridium (77)	Ir-192m	1.15E-06	2.15E-05	1.72E-01	2.88E-03	1.36E+09	2.11E+07	1.28E+01	2.93E-01
Iridium (77)	Ir-194	4.81E-06	1.92E-06	2.11E-01	3.17E+02	1.36E+09	2.11E+07	2.81E+03	7.69E+02
Iridium (77)	Ir-194m	7.77E-06	3.33E-05	2.60E+00	1.48E+00	1.36E+09	2.11E+07	7.47E+00	3.52E-01
Iridium (77)	Ir-195	3.70E-07	2.48E-07	8.60E-02	2.43E+03	1.36E+09	2.11E+07	2.72E+05	5.11E+04
Iridium (77)	Ir-195m	7.77E-07	5.92E-07	4.64E-01	1.60E+03	1.36E+09	2.11E+07	8.44E+04	1.44E+04
Potassium (19)	K-38			3.47E+00	4.77E+04	1.36E+09	2.11E+07		
Potassium (19)	K-40	2.29E-05	7.77E-06	2.38E-01	5.41E-10	1.36E+09	2.11E+07	1.87E+00	5.73E-01
Potassium (19)	K-42	1.59E-06	4.44E-07	4.64E-01	4.91E+02	1.36E+09	2.11E+07	1.33E+04	4.63E+03
Potassium (19)	K-43	9.25E-07	5.18E-07	1.10E+00	2.69E+02	1.36E+09	2.11E+07	1.22E+04	2.62E+03
Potassium (19)	K-44	3.11E-07	7.40E-08	2.47E+00	1.65E+04	1.36E+09	2.11E+07	2.29E+06	8.81E+05
Potassium (19)	K-45	2.00E-07	5.55E-08	2.05E+00	1.82E+04	1.36E+09	2.11E+07	3.93E+06	1.37E+06
Krypton (36)	Kr-74			1.40E+00	3.17E+04	1.36E+09	2.11E+07		
Krypton (36)	Kr-76			4.70E-01	4.10E+02	1.36E+09	2.11E+07		
Krypton (36)	Kr-77			1.21E+00	4.88E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-79			2.79E-01	1.73E+02	1.36E+09	2.11E+07		
Krypton (36)	Kr-81			6.99E-03	3.30E-06	1.36E+09	2.11E+07		
Krypton (36)	Kr-81m			1.38E-01	1.68E+06	1.36E+09	2.11E+07		
Krypton (36)	Kr-83m			4.17E-04	3.32E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-85			1.23E-02	6.46E-02	1.36E+09	2.11E+07		
Krypton (36)	Kr-85m			1.83E-01	1.36E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-87			9.80E-01	4.77E+03	1.36E+09	2.11E+07		
Krypton (36)	Kr-88			2.02E+00	2.14E+03	1.36E+09	2.11E+07		
Lanthanum (57)	La-131	1.30E-07	8.51E-08	7.64E-01	6.17E+03	1.36E+09	2.11E+07	1.98E+06	3.77E+05
Lanthanum (57)	La-132	1.44E-06	5.92E-07	2.22E+00	1.26E+03	1.36E+09	2.11E+07	3.73E+04	1.00E+04
Lanthanum (57)	La-134			8.75E-01	5.46E+04	1.36E+09	2.11E+07		
Lanthanum (57)	La-135	1.11E-07	5.18E-08	3.55E-02	3.11E+02	1.36E+09	2.11E+07	1.19E+05	2.91E+04
Lanthanum (57)	La-137	3.00E-07	1.33E-05	2.29E-02	1.16E-05	1.36E+09	2.11E+07	2.54E+01	4.73E-01
Lanthanum (57)	La-138	4.07E-06	2.37E-04	1.32E+00	5.13E-12	1.36E+09	2.11E+07	1.49E+00	2.67E-02
Lanthanum (57)	La-140	7.40E-06	4.07E-06	2.52E+00	1.51E+02	1.36E+09	2.11E+07	8.54E+02	1.86E+02
Lanthanum (57)	La-141	1.33E-06	5.55E-07	1.77E-01	1.54E+03	1.36E+09	2.11E+07	4.93E+04	1.31E+04
Lanthanum (57)	La-142	6.66E-07	3.29E-07	2.91E+00	3.94E+03	1.36E+09	2.11E+07	2.49E+05	5.87E+04
Lanthanum (57)	La-143	2.07E-07	7.77E-08	2.65E-01	2.56E+04	1.36E+09	2.11E+07	5.27E+06	1.51E+06
Lutetium (71)	Lu-169	1.70E-06	1.30E-06	1.12E+00	1.78E+02	1.36E+09	2.11E+07	4.30E+03	7.34E+02
Lutetium (71)	Lu-170	3.66E-06	2.33E-06	2.56E+00	1.26E+02	1.36E+09	2.11E+07	1.44E+03	2.81E+02
Lutetium (71)	Lu-171	2.48E-06	2.96E-06	7.63E-01	3.08E+01	1.36E+09	2.11E+07	4.88E+02	5.88E+01
Lutetium (71)	Lu-172	4.81E-06	5.18E-06	2.05E+00	3.78E+01	1.36E+09	2.11E+07	3.12E+02	4.07E+01
Lutetium (71)	Lu-173	9.62E-07	8.14E-06	1.35E-01	5.06E-01	1.36E+09	2.11E+07	3.06E+01	9.74E-01
Lutetium (71)	Lu-174	9.99E-07	1.55E-05	1.31E-01	2.09E-01	1.36E+09	2.11E+07	1.83E+01	4.47E-01
Lutetium (71)	Lu-174m	1.96E-06	1.37E-05	6.22E-02	1.78E+00	1.36E+09	2.11E+07	2.76E+01	9.70E-01
Lutetium (71)	Lu-176	6.66E-06	2.59E-04	5.33E-01	1.93E-11	1.36E+09	2.11E+07	1.27E+00	2.43E-02
Lutetium (71)	Lu-176m	6.29E-07	4.07E-07	6.54E-02	1.65E+03	1.36E+09	2.11E+07	1.09E+05	2.10E+04
Lutetium (71)	Lu-177	1.96E-06	4.07E-06	3.75E-02	3.77E+01	1.36E+09	2.11E+07	6.97E+02	5.48E+01
Lutetium (71)	Lu-177m	6.29E-06	4.81E-05	1.09E+00	1.57E+00	1.36E+09	2.11E+07	7.65E+00	2.56E-01
Lutetium (71)	Lu-178	1.74E-07	8.88E-08	2.51E-01	1.28E+04	1.36E+09	2.11E+07	3.11E+06	7.15E+05
Lutetium (71)	Lu-178m	1.41E-07	1.18E-07	1.26E+00	1.60E+04	1.36E+09	2.11E+07	4.65E+06	7.33E+05
Lutetium (71)	Lu-179	7.77E-07	4.07E-07	8.95E-02	1.32E+03	1.36E+09	2.11E+07	7.16E+04	1.62E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Mendelevium (101)	Md-257	4.44E-07	9.25E-05	1.18E-01	1.17E+03	1.36E+09	2.11E+07	4.93E+03	7.98E+01
Mendelevium (101)	Md-258	4.81E-05	2.18E-02	3.87E-03	4.60E+00	1.36E+09	2.11E+07	8.51E-02	1.35E-03
Magnesium (12)	Mg-28	8.14E-06	4.44E-06	1.47E+00	2.90E+02	1.36E+09	2.11E+07	1.50E+03	3.28E+02
Manganese (25)	Mn-51	3.44E-07	1.52E-07	1.25E+00	7.88E+03	1.36E+09	2.11E+07	9.72E+05	2.49E+05
Manganese (25)	Mn-52	6.66E-06	5.18E-06	3.76E+00	4.52E+01	1.36E+09	2.11E+07	2.78E+02	4.67E+01
Manganese (25)	Mn-52m	2.55E-07	1.07E-07	2.75E+00	1.73E+04	1.36E+09	2.11E+07	2.87E+06	7.60E+05
Manganese (25)	Mn-53	1.11E-07	2.00E-07	0.00E+00	1.87E-07	1.36E+09	2.11E+07	3.35E+02	2.93E+01
Manganese (25)	Mn-54	2.63E-06	5.55E-06	9.23E-01	8.09E-01	1.36E+09	2.11E+07	2.01E+01	1.56E+00
Manganese (25)	Mn-56	9.25E-07	4.44E-07	1.89E+00	2.35E+03	1.36E+09	2.11E+07	1.07E+05	2.59E+04
Molybdenum (42)	Mo-101	1.52E-07	9.25E-08	1.53E+00	2.49E+04	1.36E+09	2.11E+07	6.84E+06	1.38E+06
Molybdenum (42)	Mo-90	8.14E-07	1.26E-06	9.08E-01	1.07E+03	1.36E+09	2.11E+07	5.00E+04	4.93E+03
Molybdenum (42)	Mo-93	1.15E-05	2.18E-06	4.53E-03	1.98E-04	1.36E+09	2.11E+07	3.80E+00	1.66E+00
Molybdenum (42)	Mo-93m	4.07E-07	5.92E-07	2.42E+00	8.86E+02	1.36E+09	2.11E+07	8.35E+04	8.63E+03
Molybdenum (42)	Mo-99	2.22E-06	3.29E-06	2.08E-01	9.20E+01	1.36E+09	2.11E+07	1.59E+03	1.61E+02
Nitrogen (7)	N-13			1.20E+00	3.66E+04	1.36E+09	2.11E+07		
Sodium (11)	Na-22	1.18E-05	4.81E-06	2.39E+00	2.66E-01	1.36E+09	2.11E+07	4.09E+00	1.11E+00
Sodium (11)	Na-24	1.59E-06	9.99E-07	4.19E+00	4.05E+02	1.36E+09	2.11E+07	1.06E+04	2.09E+03
Niobium (41)	Nb-88	2.33E-07	9.99E-08	4.69E+00	2.55E+04	1.36E+09	2.11E+07	4.64E+06	1.21E+06
Niobium (41)	Nb-89	9.99E-07	4.07E-07	1.62E+00	2.99E+03	1.36E+09	2.11E+07	1.27E+05	3.44E+04
Niobium (41)	Nb-89m	5.18E-07	2.52E-07	2.26E+00	5.52E+03	1.36E+09	2.11E+07	4.50E+05	1.07E+05
Niobium (41)	Nb-90	4.44E-06	2.33E-06	4.42E+00	4.16E+02	1.36E+09	2.11E+07	3.94E+03	8.88E+02
Niobium (41)	Nb-93m	4.44E-07	1.89E-06	7.96E-04	5.10E-02	1.36E+09	2.11E+07	7.02E+01	3.33E+00
Niobium (41)	Nb-94	6.29E-06	4.07E-05	1.74E+00	3.41E-05	1.36E+09	2.11E+07	4.14E+00	1.52E-01
Niobium (41)	Nb-95	2.15E-06	5.55E-06	8.50E-01	7.20E+00	1.36E+09	2.11E+07	1.16E+02	7.78E+00
Niobium (41)	Nb-95m	2.07E-06	2.92E-06	6.90E-02	7.01E+01	1.36E+09	2.11E+07	1.30E+03	1.38E+02
Niobium (41)	Nb-96	4.07E-06	2.33E-06	2.73E+00	2.60E+02	1.36E+09	2.11E+07	2.67E+03	5.65E+02
Niobium (41)	Nb-97	2.52E-07	1.59E-07	7.88E-01	5.05E+03	1.36E+09	2.11E+07	8.35E+05	1.64E+05
Niobium (41)	Nb-97m			8.11E-01	3.64E+05	1.36E+09	2.11E+07		
Niobium (41)	Nb-98	4.07E-07	2.07E-07	2.77E+00	7.07E+03	1.36E+09	2.11E+07	7.32E+05	1.69E+05
Neodymium (60)	Nd-136	3.66E-07	1.89E-07	3.19E-01	7.19E+03	1.36E+09	2.11E+07	8.26E+05	1.89E+05
Neodymium (60)	Nd-138	2.37E-06	8.51E-07	4.38E-02	1.20E+03	1.36E+09	2.11E+07	2.18E+04	6.41E+03
Neodymium (60)	Nd-139	7.40E-08	3.66E-08	4.75E-01	1.23E+04	1.36E+09	2.11E+07	6.99E+06	1.65E+06
Neodymium (60)	Nd-139m	9.25E-07	5.55E-07	1.73E+00	1.10E+03	1.36E+09	2.11E+07	4.98E+04	1.02E+04
Neodymium (60)	Nd-141	3.07E-08	1.78E-08	7.98E-02	2.44E+03	1.36E+09	2.11E+07	3.32E+06	6.97E+05
Neodymium (60)	Nd-141m			8.54E-01	3.50E+05	1.36E+09	2.11E+07		
Neodymium (60)	Nd-147	4.07E-06	7.77E-06	1.63E-01	2.30E+01	1.36E+09	2.11E+07	2.08E+02	1.75E+01
Neodymium (60)	Nd-149	4.44E-07	3.11E-07	4.74E-01	3.51E+03	1.36E+09	2.11E+07	3.26E+05	5.94E+04
Neodymium (60)	Nd-151	1.11E-07	6.29E-08	1.08E+00	2.93E+04	1.36E+09	2.11E+07	1.10E+07	2.35E+06
Neon (10)	Ne-19			1.28E+00	1.27E+06	1.36E+09	2.11E+07		
Nickel (28)	Ni-56	3.18E-06	3.22E-06	1.89E+00	4.15E+01	1.36E+09	2.11E+07	5.22E+02	7.14E+01
Nickel (28)	Ni-57	3.22E-06	1.85E-06	2.05E+00	1.68E+02	1.36E+09	2.11E+07	2.19E+03	4.61E+02
Nickel (28)	Ni-59	2.33E-07	4.81E-07	0.00E+00	9.24E-06	1.36E+09	2.11E+07	1.56E+02	1.23E+01
Nickel (28)	Ni-63	5.55E-07	1.78E-06	0.00E+00	7.22E-03	1.36E+09	2.11E+07	5.96E+01	3.42E+00
Nickel (28)	Ni-65	6.66E-07	3.15E-07	6.64E-01	2.41E+03	1.36E+09	2.11E+07	1.53E+05	3.72E+04
Nickel (28)	Ni-66	1.11E-05	5.92E-06	3.30E-05	1.11E+02	1.36E+09	2.11E+07	4.21E+02	9.38E+01
Neptunium (93)	Np-232	3.59E-08	1.85E-07	1.32E+00	2.48E+04	1.36E+09	2.11E+07	1.96E+07	8.25E+05
Neptunium (93)	Np-233	8.14E-09	5.92E-09	9.09E-02	1.01E+04	1.36E+09	2.11E+07	5.09E+07	8.99E+06
Neptunium (93)	Np-234	3.00E-06	1.96E-06	1.53E+00	5.75E+01	1.36E+09	2.11E+07	7.96E+02	1.52E+02
Neptunium (93)	Np-235	1.96E-07	1.55E-06	3.34E-03	6.39E-01	1.36E+09	2.11E+07	1.65E+02	5.41E+00
Neptunium (93)	Np-236	6.29E-05	1.18E-02	1.30E-01	6.03E-06	1.36E+09	2.11E+07	3.28E-02	5.34E-04
Neptunium (93)	Np-236m			5.11E-02	2.70E+02	1.36E+09	2.11E+07		
Neptunium (93)	Np-237	4.07E-04	8.51E-02	2.94E-02	3.24E-07	1.36E+09	2.11E+07	4.59E-03	7.43E-05
Neptunium (93)	Np-237+D				3.24E-07	1.36E+09	2.11E+07		
Neptunium (93)	Np-237+E	4.07E-04	8.51E-02	2.46E-01	3.24E-07	1.36E+09	2.11E+07	4.59E-03	7.43E-05
Neptunium (93)	Np-238	3.37E-06	7.77E-06	6.23E-01	1.19E+02	1.36E+09	2.11E+07	1.26E+03	9.16E+01
Neptunium (93)	Np-239	2.96E-06	3.44E-06	1.80E-01	1.07E+02	1.36E+09	2.11E+07	1.43E+03	1.76E+02
Neptunium (93)	Np-240	3.03E-07	3.15E-07	1.45E+00	5.60E+03	1.36E+09	2.11E+07	7.38E+05	9.91E+04
Neptunium (93)	Np-240m			4.52E-01	4.92E+04	1.36E+09	2.11E+07		
Oxygen (8)	O-15			1.25E+00	1.79E+05	1.36E+09	2.11E+07		
Osmium (76)	Os-180	6.29E-08	5.18E-08	6.29E-02	1.66E+04	1.36E+09	2.11E+07	1.07E+07	1.72E+06
Osmium (76)	Os-181	3.29E-07	2.29E-07	1.32E+00	3.47E+03	1.36E+09	2.11E+07	4.35E+05	7.94E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Osmium (76)	Os-182	2.07E-06	1.33E-06	4.74E-01	2.76E+02	1.36E+09	2.11E+07	5.53E+03	1.07E+03
Osmium (76)	Os-185	1.89E-06	4.81E-06	7.95E-01	2.69E+00	1.36E+09	2.11E+07	5.32E+01	3.60E+00
Osmium (76)	Os-189m	6.66E-08	1.85E-08	5.64E-05	1.01E+03	1.36E+09	2.11E+07	6.55E+05	2.29E+05
Osmium (76)	Os-190m			1.76E+00	3.68E+04	1.36E+09	2.11E+07		
Osmium (76)	Os-191	2.11E-06	6.29E-06	7.88E-02	1.64E+01	1.36E+09	2.11E+07	2.61E+02	1.58E+01
Osmium (76)	Os-191m	3.55E-07	5.18E-07	7.47E-03	4.66E+02	1.36E+09	2.11E+07	5.03E+04	5.18E+03
Osmium (76)	Os-193	3.00E-06	1.78E-06	1.12E-01	2.02E+02	1.36E+09	2.11E+07	2.82E+03	5.81E+02
Osmium (76)	Os-194	8.88E-06	7.77E-05	1.11E-03	1.16E-01	1.36E+09	2.11E+07	2.71E+00	8.48E-02
Osmium (76)	Os-194+D	1.37E-05	7.77E-05	2.12E-01	1.16E-01	1.36E+09	2.11E+07	2.12E+00	8.41E-02
Osmium (76)	Os-194+E	1.37E-05	7.77E-05	2.12E-01	1.16E-01	1.36E+09	2.11E+07	2.12E+00	8.41E-02
Phosphorus (15)	P-30			1.32E+00	1.46E+05	1.36E+09	2.11E+07		
Phosphorus (15)	P-32	8.88E-06	1.26E-05	9.94E-02	1.77E+01	1.36E+09	2.11E+07	7.67E+01	8.09E+00
Phosphorus (15)	P-33	8.88E-07	5.55E-06	4.25E-05	9.96E+00	1.36E+09	2.11E+07	2.96E+02	1.11E+01
Protactinium (91)	Pa-227	1.67E-06	2.74E-04	2.11E-02	9.51E+03	1.36E+09	2.11E+07	1.34E+04	2.20E+02
Protactinium (91)	Pa-228	2.89E-06	2.37E-04	1.23E+00	2.76E+02	1.36E+09	2.11E+07	4.27E+02	7.36E+00
Protactinium (91)	Pa-230	3.40E-06	2.26E-03	7.08E-01	1.45E+01	1.36E+09	2.11E+07	2.59E+00	4.07E-02
Protactinium (91)	Pa-231	2.63E-03	5.18E-01	4.41E-02	2.12E-05	1.36E+09	2.11E+07	7.52E-04	1.22E-05
Protactinium (91)	Pa-232	2.66E-06	3.70E-05	1.03E+00	1.93E+02	1.36E+09	2.11E+07	1.28E+03	3.27E+01
Protactinium (91)	Pa-233	3.22E-06	1.22E-05	2.17E-01	9.37E+00	1.36E+09	2.11E+07	9.15E+01	4.68E+00
Protactinium (91)	Pa-234	1.89E-06	1.41E-06	2.10E+00	9.06E+02	1.36E+09	2.11E+07	1.97E+04	3.42E+03
Protactinium (91)	Pa-234m			1.26E-01	3.11E+05	1.36E+09	2.11E+07		
Lead (82)	Pb-195m	1.07E-07	9.25E-08	1.77E+00	2.31E+04	1.36E+09	2.11E+07	8.73E+06	1.35E+06
Lead (82)	Pb-198	3.70E-07	2.44E-07	4.74E-01	2.53E+03	1.36E+09	2.11E+07	2.83E+05	5.39E+04
Lead (82)	Pb-199	2.00E-07	1.33E-07	1.59E+00	4.05E+03	1.36E+09	2.11E+07	8.39E+05	1.58E+05
Lead (82)	Pb-200	1.48E-06	1.22E-06	2.17E-01	2.82E+02	1.36E+09	2.11E+07	7.78E+03	1.25E+03
Lead (82)	Pb-201	5.92E-07	4.07E-07	8.26E-01	6.46E+02	1.36E+09	2.11E+07	4.51E+04	8.32E+03
Lead (82)	Pb-202	3.26E-05	2.33E-05	2.23E-04	2.31E-06	1.36E+09	2.11E+07	1.27E+00	2.26E-01
Lead (82)	Pb-202+D	3.26E-05	2.33E-05		2.31E-06	1.36E+09	2.11E+07	1.27E+00	2.26E-01
Lead (82)	Pb-202+E	3.26E-05	2.33E-05	5.13E-01	2.31E-06	1.36E+09	2.11E+07	1.27E+00	2.26E-01
Lead (82)	Pb-202m	4.81E-07	3.52E-07	2.25E+00	1.68E+03	1.36E+09	2.11E+07	1.44E+05	2.53E+04
Lead (82)	Pb-203	8.88E-07	7.40E-07	3.34E-01	1.17E+02	1.36E+09	2.11E+07	5.35E+03	8.52E+02
Lead (82)	Pb-205	1.04E-06	9.25E-07	2.43E-04	4.85E-08	1.36E+09	2.11E+07	3.91E+01	5.90E+00
Lead (82)	Pb-209	2.11E-07	2.07E-07	3.72E-03	1.87E+03	1.36E+09	2.11E+07	3.55E+05	4.98E+04
Lead (82)	Pb-210	2.55E-03	4.07E-03	2.49E-03	3.11E-02	1.36E+09	2.11E+07	1.51E-02	1.45E-03
Lead (82)	Pb-211	6.66E-07	4.07E-05	1.11E-01	1.01E+04	1.36E+09	2.11E+07	8.79E+04	1.56E+03
Lead (82)	Pb-212	2.22E-05	6.29E-04	1.58E-01	5.71E+02	1.36E+09	2.11E+07	2.79E+02	5.71E+00
Lead (82)	Pb-214	5.18E-07	5.18E-05	2.80E-01	1.36E+04	1.36E+09	2.11E+07	9.80E+04	1.66E+03
Palladium (46)	Pd-100	3.48E-06	2.96E-06	1.24E-01	6.97E+01	1.36E+09	2.11E+07	8.15E+02	1.28E+02
Palladium (46)	Pd-101	3.48E-07	2.18E-07	3.61E-01	7.34E+02	1.36E+09	2.11E+07	8.78E+04	1.73E+04
Palladium (46)	Pd-103	7.03E-07	1.41E-06	8.95E-03	1.49E+01	1.36E+09	2.11E+07	7.74E+02	6.27E+01
Palladium (46)	Pd-107	1.37E-07	3.15E-07	0.00E+00	1.07E-07	1.36E+09	2.11E+07	2.60E+02	1.89E+01
Palladium (46)	Pd-109	2.04E-06	1.26E-06	4.35E-02	4.52E+02	1.36E+09	2.11E+07	9.25E+03	1.85E+03
Promethium (61)	Pm-141	1.33E-07	5.18E-08	9.02E-01	1.74E+04	1.36E+09	2.11E+07	5.58E+06	1.56E+06
Promethium (61)	Pm-142			1.12E+00	5.40E+05	1.36E+09	2.11E+07		
Promethium (61)	Pm-143	8.51E-07	5.55E-06	3.47E-01	9.55E-01	1.36E+09	2.11E+07	4.74E+01	1.73E+00
Promethium (61)	Pm-144	3.59E-06	3.03E-05	1.74E+00	6.97E-01	1.36E+09	2.11E+07	8.95E+00	2.85E-01
Promethium (61)	Pm-145	4.07E-07	1.33E-05	3.05E-02	3.92E-02	1.36E+09	2.11E+07	2.44E+01	4.82E-01
Promethium (61)	Pm-146	3.33E-06	7.77E-05	8.39E-01	1.25E-01	1.36E+09	2.11E+07	4.01E+00	8.61E-02
Promethium (61)	Pm-147	9.62E-07	1.85E-05	3.27E-05	2.64E-01	1.36E+09	2.11E+07	1.70E+01	3.86E-01
Promethium (61)	Pm-148	9.99E-06	7.40E-06	7.13E-01	4.71E+01	1.36E+09	2.11E+07	1.94E+02	3.38E+01
Promethium (61)	Pm-148m	6.29E-06	1.89E-05	2.23E+00	6.12E+00	1.36E+09	2.11E+07	3.27E+01	1.96E+00
Promethium (61)	Pm-149	3.66E-06	2.48E-06	4.71E-02	1.14E+02	1.36E+09	2.11E+07	1.29E+03	2.41E+02
Promethium (61)	Pm-150	9.62E-07	4.44E-07	1.65E+00	2.27E+03	1.36E+09	2.11E+07	9.96E+04	2.47E+04
Promethium (61)	Pm-151	2.70E-06	1.59E-06	3.71E-01	2.14E+02	1.36E+09	2.11E+07	3.31E+03	6.85E+02
Polonium (84)	Po-203	1.70E-07	1.30E-07	1.79E+00	9.92E+03	1.36E+09	2.11E+07	2.39E+06	4.08E+05
Polonium (84)	Po-205	2.15E-07	2.41E-07	1.72E+00	3.37E+03	1.36E+09	2.11E+07	6.22E+05	7.87E+04
Polonium (84)	Po-207	4.07E-07	2.89E-07	1.45E+00	1.04E+03	1.36E+09	2.11E+07	1.05E+05	1.90E+04
Polonium (84)	Po-210	4.44E-03	1.22E-02	9.44E-06	1.83E+00	1.36E+09	2.11E+07	1.68E-02	1.07E-03
Polonium (84)	Po-211			8.66E-03	4.24E+07	1.36E+09	2.11E+07		
Polonium (84)	Po-212			0.00E+00	7.17E+13	1.36E+09	2.11E+07		
Polonium (84)	Po-213			0.00E+00	5.20E+12	1.36E+09	2.11E+07		

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Polonium (84)	Po-214			9.25E-05	1.33E+11	1.36E+09	2.11E+07		
Polonium (84)	Po-215			1.96E-04	1.23E+10	1.36E+09	2.11E+07		
Polonium (84)	Po-216			1.88E-05	1.46E+08	1.36E+09	2.11E+07		
Polonium (84)	Po-218			1.01E-05	1.19E+05	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-136	1.22E-07	4.81E-08	2.38E+00	2.78E+04	1.36E+09	2.11E+07	9.70E+06	2.69E+06
Praseodymium (59)	Pr-137	1.48E-07	7.40E-08	5.80E-01	4.76E+03	1.36E+09	2.11E+07	1.35E+06	3.16E+05
Praseodymium (59)	Pr-138			1.05E+00	2.51E+05	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-138m	4.81E-07	2.66E-07	2.74E+00	2.89E+03	1.36E+09	2.11E+07	2.52E+05	5.46E+04
Praseodymium (59)	Pr-139	1.15E-07	6.66E-08	1.37E-01	1.35E+03	1.36E+09	2.11E+07	4.91E+05	1.03E+05
Praseodymium (59)	Pr-142	4.81E-06	1.92E-06	1.72E-01	3.17E+02	1.36E+09	2.11E+07	2.81E+03	7.70E+02
Praseodymium (59)	Pr-142m	6.29E-08	2.44E-08	0.00E+00	2.49E+04	1.36E+09	2.11E+07	1.69E+07	4.73E+06
Praseodymium (59)	Pr-143	4.44E-06	8.14E-06	2.40E-02	1.87E+01	1.36E+09	2.11E+07	1.56E+02	1.35E+01
Praseodymium (59)	Pr-144	1.85E-07	6.66E-08	1.90E-01	2.11E+04	1.36E+09	2.11E+07	4.87E+06	1.43E+06
Praseodymium (59)	Pr-144m			1.23E-02	5.06E+04	1.36E+09	2.11E+07		
Praseodymium (59)	Pr-145	1.44E-06	5.92E-07	1.09E-01	1.02E+03	1.36E+09	2.11E+07	2.99E+04	8.05E+03
Praseodymium (59)	Pr-147	1.22E-07	6.66E-08	1.04E+00	2.68E+04	1.36E+09	2.11E+07	9.20E+06	2.02E+06
Platinum (78)	Pt-186	3.44E-07	1.22E-07	8.17E-01	3.04E+03	1.36E+09	2.11E+07	3.77E+05	1.12E+05
Platinum (78)	Pt-188	2.81E-06	1.55E-06	2.12E-01	2.48E+01	1.36E+09	2.11E+07	3.70E+02	8.03E+01
Platinum (78)	Pt-189	4.44E-07	1.41E-07	3.49E-01	5.58E+02	1.36E+09	2.11E+07	5.40E+04	1.73E+04
Platinum (78)	Pt-191	1.26E-06	4.07E-07	3.24E-01	9.03E+01	1.36E+09	2.11E+07	3.08E+03	9.75E+02
Platinum (78)	Pt-193	1.15E-07	7.77E-08	1.80E-04	1.39E-02	1.36E+09	2.11E+07	3.63E+02	6.78E+01
Platinum (78)	Pt-193m	1.67E-06	4.44E-07	1.09E-02	5.84E+01	1.36E+09	2.11E+07	1.52E+03	5.43E+02
Platinum (78)	Pt-195m	2.33E-06	6.66E-07	7.22E-02	6.29E+01	1.36E+09	2.11E+07	1.16E+03	3.99E+02
Platinum (78)	Pt-197	1.48E-06	3.15E-07	2.79E-02	3.32E+02	1.36E+09	2.11E+07	9.74E+03	4.00E+03
Platinum (78)	Pt-197m	3.11E-07	8.88E-08	8.50E-02	3.86E+03	1.36E+09	2.11E+07	5.35E+05	1.83E+05
Platinum (78)	Pt-199	1.44E-07	4.44E-08	2.88E-01	1.18E+04	1.36E+09	2.11E+07	3.52E+06	1.15E+06
Platinum (78)	Pt-200	4.44E-06	8.14E-07	6.37E-02	4.86E+02	1.36E+09	2.11E+07	4.77E+03	2.12E+03
Plutonium (94)	Pu-234	5.92E-07	7.77E-05	6.75E-02	6.90E+02	1.36E+09	2.11E+07	3.38E+03	5.61E+01
Plutonium (94)	Pu-235	7.77E-09	5.18E-09	9.34E-02	1.44E+04	1.36E+09	2.11E+07	7.68E+07	1.45E+07
Plutonium (94)	Pu-236	3.22E-04	7.40E-02	8.58E-04	2.43E-01	1.36E+09	2.11E+07	5.97E-03	9.62E-05
Plutonium (94)	Pu-237	3.70E-07	1.30E-06	4.96E-02	5.58E+00	1.36E+09	2.11E+07	4.87E+02	2.63E+01
Plutonium (94)	Pu-238	8.51E-04	1.70E-01	7.31E-04	7.90E-03	1.36E+09	2.11E+07	2.30E-03	3.73E-05
Plutonium (94)	Pu-239	9.25E-04	1.85E-01	3.31E-04	2.88E-05	1.36E+09	2.11E+07	2.11E-03	3.42E-05
Plutonium (94)	Pu-240	9.25E-04	1.85E-01	7.01E-04	1.06E-04	1.36E+09	2.11E+07	2.11E-03	3.42E-05
Plutonium (94)	Pu-241	1.78E-05	3.33E-03	2.01E-06	4.81E-02	1.36E+09	2.11E+07	1.20E-01	1.94E-03
Plutonium (94)	Pu-242	8.88E-04	1.78E-01	5.81E-04	1.84E-06	1.36E+09	2.11E+07	2.20E-03	3.56E-05
Plutonium (94)	Pu-243	3.15E-07	3.07E-07	2.65E-02	1.22E+03	1.36E+09	2.11E+07	1.56E+05	2.20E+04
Plutonium (94)	Pu-244	8.88E-04	1.74E-01	2.36E-02	8.66E-09	1.36E+09	2.11E+07	2.24E-03	3.64E-05
Plutonium (94)	Pu-244+D	8.88E-04	1.74E-01	4.78E-01	8.66E-09	1.36E+09	2.11E+07	2.24E-03	3.64E-05
Plutonium (94)	Pu-244+E	8.88E-04	1.74E-01	4.78E-01	8.66E-09	1.36E+09	2.11E+07	2.24E-03	3.64E-05
Plutonium (94)	Pu-245	2.66E-06	1.48E-06	4.74E-01	5.78E+02	1.36E+09	2.11E+07	9.09E+03	1.97E+03
Plutonium (94)	Pu-246	1.22E-05	2.74E-05	1.44E-01	2.33E+01	1.36E+09	2.11E+07	6.82E+01	5.07E+00
Radium (88)	Ra-222			1.01E-02	5.75E+05	1.36E+09	2.11E+07		
Radium (88)	Ra-223	3.70E-04	2.74E-02	1.41E-01	2.21E+01	1.36E+09	2.11E+07	2.93E-01	5.10E-03
Radium (88)	Ra-223+D	3.70E-04	2.74E-02	4.29E-01	2.21E+01	1.36E+09	2.11E+07	2.93E-01	5.10E-03
Radium (88)	Ra-223+E	3.70E-04	2.74E-02	4.29E-01	2.21E+01	1.36E+09	2.11E+07	2.93E-01	5.10E-03
Radium (88)	Ra-224	2.41E-04	1.11E-02	1.07E-02	6.91E+01	1.36E+09	2.11E+07	2.12E+00	3.93E-02
Radium (88)	Ra-224+D	2.41E-04	1.11E-02	1.68E+00	6.91E+01	1.36E+09	2.11E+07	2.12E+00	3.93E-02
Radium (88)	Ra-224+E	2.41E-04	1.11E-02	1.68E+00	6.91E+01	1.36E+09	2.11E+07	2.12E+00	3.93E-02
Radium (88)	Ra-225	3.66E-04	2.33E-02	1.25E-02	1.71E+01	1.36E+09	2.11E+07	2.61E-01	4.63E-03
Radium (88)	Ra-225+D	4.44E-04	5.18E-02	3.12E-01	1.71E+01	1.36E+09	2.11E+07	1.25E-01	2.08E-03
Radium (88)	Ra-225+E	4.44E-04	5.18E-02	3.12E-01	1.71E+01	1.36E+09	2.11E+07	1.25E-01	2.08E-03
Radium (88)	Ra-226	1.04E-03	1.30E-02	7.13E-03	4.33E-04	1.36E+09	2.11E+07	1.82E-02	4.83E-04
Radium (88)	Ra-226+D	1.04E-03	1.30E-02		4.33E-04	1.36E+09	2.11E+07	1.82E-02	4.83E-04
Radium (88)	Ra-226+E	1.04E-03	1.30E-02	1.97E+00	4.33E-04	1.36E+09	2.11E+07	1.82E-02	4.83E-04
Radium (88)	Ra-227	3.00E-07	1.04E-06	2.12E-01	8.63E+03	1.36E+09	2.11E+07	9.30E+05	5.06E+04
Radium (88)	Ra-227+D				8.63E+03	1.36E+09	2.11E+07		
Radium (88)	Ra-228	2.55E-03	9.62E-03	0.00E+00	1.21E-01	1.36E+09	2.11E+07	1.31E-02	6.73E-04
Radium (88)	Ra-228+D	3.07E-03	1.70E-01	1.10E+00	1.21E-01	1.36E+09	2.11E+07	2.18E-03	3.94E-05
Radium (88)	Ra-228+E	3.07E-03	1.70E-01	2.78E+00	1.21E-01	1.36E+09	2.11E+07	2.18E-03	3.94E-05
Rubidium (37)	Rb-79	1.85E-07	5.92E-08	1.61E+00	1.59E+04	1.36E+09	2.11E+07	3.69E+06	1.18E+06

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-80			1.61E+00	6.43E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-81	2.00E-07	1.26E-07	6.98E-01	1.33E+03	1.36E+09	2.11E+07	2.76E+05	5.44E+04
Rubidium (37)	Rb-81m	3.59E-08	2.59E-08	5.73E-03	1.14E+04	1.36E+09	2.11E+07	1.31E+07	2.32E+06
Rubidium (37)	Rb-82			1.40E+00	2.80E+05	1.36E+09	2.11E+07		
Rubidium (37)	Rb-82m	4.81E-07	4.07E-07	3.20E+00	9.79E+02	1.36E+09	2.11E+07	8.28E+04	1.30E+04
Rubidium (37)	Rb-83	7.03E-06	2.55E-06	5.55E-01	2.93E+00	1.36E+09	2.11E+07	1.88E+01	5.52E+00
Rubidium (37)	Rb-84	1.04E-05	3.70E-06	1.02E+00	7.72E+00	1.36E+09	2.11E+07	3.19E+01	9.44E+00
Rubidium (37)	Rb-86	1.04E-05	3.44E-06	1.95E-01	1.36E+01	1.36E+09	2.11E+07	5.61E+01	1.74E+01
Rubidium (37)	Rb-87	5.55E-06	1.85E-06	8.52E-05	1.47E-11	1.36E+09	2.11E+07	7.73E+00	2.40E+00
Rubidium (37)	Rb-88	3.33E-07	5.92E-08	8.65E-01	2.05E+04	1.36E+09	2.11E+07	2.68E+06	1.21E+06
Rubidium (37)	Rb-89	1.74E-07	5.18E-08	2.30E+00	2.40E+04	1.36E+09	2.11E+07	5.93E+06	1.98E+06
Rhenium (75)	Re-177	8.14E-08	5.18E-08	6.94E-01	2.60E+04	1.36E+09	2.11E+07	1.33E+07	2.60E+06
Rhenium (75)	Re-178	9.25E-08	5.18E-08	1.34E+00	2.76E+04	1.36E+09	2.11E+07	1.25E+07	2.69E+06
Rhenium (75)	Re-180			1.31E+00	1.50E+05	1.36E+09	2.11E+07		
Rhenium (75)	Re-181	1.55E-06	9.25E-07	8.40E-01	3.04E+02	1.36E+09	2.11E+07	8.15E+03	1.68E+03
Rhenium (75)	Re-182	5.18E-06	4.44E-06	2.02E+00	9.49E+01	1.36E+09	2.11E+07	7.44E+02	1.16E+02
Rhenium (75)	Re-182m	9.99E-07	7.40E-07	1.26E+00	4.78E+02	1.36E+09	2.11E+07	1.97E+04	3.43E+03
Rhenium (75)	Re-184	3.70E-06	7.03E-06	9.77E-01	6.66E+00	1.36E+09	2.11E+07	6.63E+01	5.58E+00
Rhenium (75)	Re-184m	5.55E-06	2.41E-05	4.19E-01	1.53E+00	1.36E+09	2.11E+07	1.06E+01	4.98E-01
Rhenium (75)	Re-186	5.55E-06	4.07E-06	5.16E-02	6.70E+01	1.36E+09	2.11E+07	4.97E+02	8.72E+01
Rhenium (75)	Re-186m	8.14E-06	4.44E-05	1.49E-02	3.47E-06	1.36E+09	2.11E+07	3.42E+00	1.39E-01
Rhenium (75)	Re-186m+D	1.37E-05	4.44E-05		3.47E-06	1.36E+09	2.11E+07	2.40E+00	1.37E-01
Rhenium (75)	Re-186m+E	1.37E-05	4.44E-05	6.65E-02	3.47E-06	1.36E+09	2.11E+07	2.40E+00	1.37E-01
Rhenium (75)	Re-187	1.89E-08	2.33E-08	0.00E+00	1.39E-11	1.36E+09	2.11E+07	2.08E+03	2.43E+02
Rhenium (75)	Re-188	5.18E-06	2.00E-06	1.69E-01	3.58E+02	1.36E+09	2.11E+07	2.94E+03	8.27E+02
Rhenium (75)	Re-188m	1.11E-07	4.81E-08	7.90E-02	1.96E+04	1.36E+09	2.11E+07	7.49E+06	1.94E+06
Rhenium (75)	Re-189	2.89E-06	1.59E-06	9.81E-02	2.50E+02	1.36E+09	2.11E+07	3.63E+03	7.90E+02
Rhodium (45)	Rh-100	2.63E-06	1.26E-06	2.91E+00	2.92E+02	1.36E+09	2.11E+07	4.69E+03	1.13E+03
Rhodium (45)	Rh-101	2.04E-06	8.51E-06	2.80E-01	2.17E-01	1.36E+09	2.11E+07	1.67E+01	8.00E-01
Rhodium (45)	Rh-101m	8.14E-07	7.03E-07	3.30E-01	5.83E+01	1.36E+09	2.11E+07	2.91E+03	4.50E+02
Rhodium (45)	Rh-102	9.62E-06	2.55E-05	2.36E+00	2.39E-01	1.36E+09	2.11E+07	4.03E+00	2.64E-01
Rhodium (45)	Rh-102m	4.44E-06	1.48E-05	5.57E-01	1.22E+00	1.36E+09	2.11E+07	1.27E+01	7.10E-01
Rhodium (45)	Rh-103m	1.41E-08	9.25E-09	1.03E-03	6.49E+03	1.36E+09	2.11E+07	1.91E+07	3.65E+06
Rhodium (45)	Rh-105	1.37E-06	1.18E-06	8.66E-02	1.72E+02	1.36E+09	2.11E+07	5.09E+03	7.88E+02
Rhodium (45)	Rh-106			4.03E-01	7.31E+05	1.36E+09	2.11E+07		
Rhodium (45)	Rh-106m	5.92E-07	4.07E-07	3.21E+00	2.76E+03	1.36E+09	2.11E+07	1.93E+05	3.55E+04
Rhodium (45)	Rh-107	8.88E-08	5.92E-08	3.94E-01	1.68E+04	1.36E+09	2.11E+07	7.83E+06	1.48E+06
Rhodium (45)	Rh-99	1.89E-06	2.85E-06	6.61E-01	1.58E+01	1.36E+09	2.11E+07	3.20E+02	3.21E+01
Rhodium (45)	Rh-99m	2.44E-07	1.44E-07	7.46E-01	1.29E+03	1.36E+09	2.11E+07	2.21E+05	4.56E+04
Radon (86)	Rn-218			8.46E-04	6.24E+08	1.36E+09	2.11E+07		
Radon (86)	Rn-219			6.16E-02	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-219+D			2.89E-01	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-219+E			2.89E-01	5.52E+06	1.36E+09	2.11E+07		
Radon (86)	Rn-220			4.31E-04	3.93E+05	1.36E+09	2.11E+07		
Radon (86)	Rn-222			4.46E-04	6.62E+01	1.36E+09	2.11E+07		
Radon (86)	Rn-222+D			1.96E+00	6.62E+01	1.36E+09	2.11E+07		
Radon (86)	Rn-222+E			2.01E+00	6.62E+01	1.36E+09	2.11E+07		
Ruthenium (44)	Ru-103	2.70E-06	8.88E-06	5.24E-01	6.44E+00	1.36E+09	2.11E+07	7.81E+01	4.40E+00
Ruthenium (44)	Ru-105	9.62E-07	6.29E-07	9.13E-01	1.37E+03	1.36E+09	2.11E+07	5.90E+04	1.13E+04
Ruthenium (44)	Ru-105+D	2.33E-06	1.81E-06	9.99E-01	1.37E+03	1.36E+09	2.11E+07	2.40E+04	4.03E+03
Ruthenium (44)	Ru-106	2.59E-05	1.04E-04	0.00E+00	6.87E-01	1.36E+09	2.11E+07	1.65E+00	8.15E-02
Ruthenium (44)	Ru-106+D	2.59E-05	1.04E-04	4.03E-01	6.87E-01	1.36E+09	2.11E+07	1.65E+00	8.15E-02
Ruthenium (44)	Ru-106+E	2.59E-05	1.04E-04	4.03E-01	6.87E-01	1.36E+09	2.11E+07	1.65E+00	8.15E-02
Ruthenium (44)	Ru-94	3.48E-07	1.55E-07	5.84E-01	7.03E+03	1.36E+09	2.11E+07	8.57E+05	2.17E+05
Ruthenium (44)	Ru-97	5.55E-07	3.70E-07	2.52E-01	8.72E+01	1.36E+09	2.11E+07	6.51E+03	1.23E+03
Sulfur (16)	S-35	2.85E-06	5.18E-06	1.55E-05	2.89E+00	1.36E+09	2.11E+07	3.99E+01	3.47E+00
Antimony (51)	Sb-115	8.88E-08	4.81E-08	1.04E+00	1.15E+04	1.36E+09	2.11E+07	5.41E+06	1.19E+06
Antimony (51)	Sb-116	9.62E-08	4.81E-08	2.37E+00	2.31E+04	1.36E+09	2.11E+07	1.01E+07	2.36E+06
Antimony (51)	Sb-116m	2.48E-07	1.74E-07	3.42E+00	6.04E+03	1.36E+09	2.11E+07	1.01E+06	1.83E+05
Antimony (51)	Sb-117	6.66E-08	5.92E-08	1.93E-01	2.17E+03	1.36E+09	2.11E+07	1.32E+06	2.00E+05
Antimony (51)	Sb-118m	7.77E-07	4.44E-07	2.79E+00	1.21E+03	1.36E+09	2.11E+07	6.54E+04	1.39E+04

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Antimony (51)	Sb-119	2.96E-07	1.30E-07	1.82E-02	1.59E+02	1.36E+09	2.11E+07	2.28E+04	5.87E+03
Antimony (51)	Sb-120	5.18E-08	2.59E-08	5.45E-01	2.29E+04	1.36E+09	2.11E+07	1.87E+07	4.36E+06
Antimony (51)	Sb-120m	4.44E-06	3.70E-06	2.66E+00	4.39E+01	1.36E+09	2.11E+07	4.03E+02	6.41E+01
Antimony (51)	Sb-122	6.29E-06	3.70E-06	5.66E-01	9.37E+01	1.36E+09	2.11E+07	6.22E+02	1.29E+02
Antimony (51)	Sb-124	9.25E-06	2.37E-05	1.98E+00	4.20E+00	1.36E+09	2.11E+07	1.60E+01	1.08E+00
Antimony (51)	Sb-124m			4.01E-01	2.35E+05	1.36E+09	2.11E+07		
Antimony (51)	Sb-124n	2.96E-08	2.00E-08	5.92E-05	1.80E+04	1.36E+09	2.11E+07	2.52E+07	4.72E+06
Antimony (51)	Sb-125	4.07E-06	1.78E-05	4.77E-01	2.50E-01	1.36E+09	2.11E+07	8.36E+00	3.90E-01
Antimony (51)	Sb-126	8.88E-06	1.04E-05	3.17E+00	2.04E+01	1.36E+09	2.11E+07	9.06E+01	1.11E+01
Antimony (51)	Sb-126m	1.33E-07	7.03E-08	1.81E+00	1.92E+04	1.36E+09	2.11E+07	6.05E+06	1.36E+06
Antimony (51)	Sb-127	6.29E-06	6.29E-06	7.89E-01	6.57E+01	1.36E+09	2.11E+07	4.19E+02	5.78E+01
Antimony (51)	Sb-128	2.81E-06	1.48E-06	3.48E+00	6.74E+02	1.36E+09	2.11E+07	1.01E+04	2.27E+03
Antimony (51)	Sb-128m	1.22E-07	5.18E-08	2.32E+00	3.50E+04	1.36E+09	2.11E+07	1.22E+07	3.20E+06
Antimony (51)	Sb-129	1.55E-06	8.51E-07	1.60E+00	1.41E+03	1.36E+09	2.11E+07	3.79E+04	8.29E+03
Antimony (51)	Sb-130	3.37E-07	1.89E-07	3.66E+00	9.11E+03	1.36E+09	2.11E+07	1.13E+06	2.43E+05
Antimony (51)	Sb-131	3.70E-07	1.63E-07	2.07E+00	1.58E+04	1.36E+09	2.11E+07	1.82E+06	4.65E+05
Scandium (21)	Sc-43	7.03E-07	4.07E-07	1.25E+00	1.56E+03	1.36E+09	2.11E+07	9.28E+04	1.95E+04
Scandium (21)	Sc-44	1.30E-06	6.66E-07	2.43E+00	1.55E+03	1.36E+09	2.11E+07	5.02E+04	1.15E+04
Scandium (21)	Sc-44m	8.88E-06	5.18E-06	3.06E-01	1.04E+02	1.36E+09	2.11E+07	4.88E+02	1.02E+02
Scandium (21)	Sc-46	5.55E-06	2.52E-05	2.19E+00	3.02E+00	1.36E+09	2.11E+07	1.70E+01	7.74E-01
Scandium (21)	Sc-47	2.00E-06	2.70E-06	1.16E-01	7.55E+01	1.36E+09	2.11E+07	1.46E+03	1.60E+02
Scandium (21)	Sc-48	6.29E-06	4.07E-06	3.63E+00	1.39E+02	1.36E+09	2.11E+07	9.17E+02	1.77E+02
Scandium (21)	Sc-49	3.03E-07	1.48E-07	1.19E-01	6.35E+03	1.36E+09	2.11E+07	8.83E+05	2.10E+05
Selenium (34)	Se-70	4.44E-07	1.55E-07	1.16E+00	8.88E+03	1.36E+09	2.11E+07	8.57E+05	2.57E+05
Selenium (34)	Se-73	7.77E-07	2.96E-07	1.25E+00	8.49E+02	1.36E+09	2.11E+07	4.66E+04	1.32E+04
Selenium (34)	Se-73m	1.04E-07	3.40E-08	2.94E-01	9.34E+03	1.36E+09	2.11E+07	3.87E+06	1.21E+06
Selenium (34)	Se-75	9.62E-06	3.70E-06	4.21E-01	2.11E+00	1.36E+09	2.11E+07	1.07E+01	3.00E+00
Selenium (34)	Se-77m			9.07E-02	1.25E+06	1.36E+09	2.11E+07		
Selenium (34)	Se-79	1.07E-05	4.07E-06	1.91E-05	1.07E-05	1.36E+09	2.11E+07	3.98E+00	1.13E+00
Selenium (34)	Se-81	9.99E-08	2.96E-08	9.50E-02	1.97E+04	1.36E+09	2.11E+07	8.49E+06	2.84E+06
Selenium (34)	Se-81m	1.96E-07	5.92E-08	1.47E-02	6.36E+03	1.36E+09	2.11E+07	1.40E+06	4.62E+05
Selenium (34)	Se-83	1.74E-07	6.66E-08	2.67E+00	1.62E+04	1.36E+09	2.11E+07	3.97E+06	1.12E+06
Silicon (14)	Si-31	5.92E-07	2.74E-07	8.33E-02	2.32E+03	1.36E+09	2.11E+07	1.66E+05	4.09E+04
Silicon (14)	Si-32	2.07E-06	6.29E-05	2.92E-05	1.54E-03	1.36E+09	2.11E+07	4.98E+00	1.00E-01
Silicon (14)	Si-32+D	1.11E-05	7.40E-05		1.54E-03	1.36E+09	2.11E+07	2.32E+00	8.38E-02
Silicon (14)	Si-32+E	1.11E-05	7.40E-05	9.94E-02	1.54E-03	1.36E+09	2.11E+07	2.32E+00	8.38E-02
Samarium (62)	Sm-141	1.44E-07	5.55E-08	1.62E+00	3.57E+04	1.36E+09	2.11E+07	1.06E+07	2.97E+06
Samarium (62)	Sm-141m	2.41E-07	1.18E-07	2.21E+00	1.61E+04	1.36E+09	2.11E+07	2.83E+06	6.68E+05
Samarium (62)	Sm-142	7.03E-07	2.63E-07	1.04E-01	5.02E+03	1.36E+09	2.11E+07	3.05E+05	8.76E+04
Samarium (62)	Sm-145	7.77E-07	5.92E-06	6.49E-02	7.44E-01	1.36E+09	2.11E+07	4.43E+01	1.49E+00
Samarium (62)	Sm-146	2.00E-04	4.07E-02	0.00E+00	6.73E-09	1.36E+09	2.11E+07	9.59E-03	1.55E-04
Samarium (62)	Sm-147	1.81E-04	3.55E-02	0.00E+00	6.54E-12	1.36E+09	2.11E+07	1.10E-02	1.78E-04
Samarium (62)	Sm-151	3.63E-07	1.48E-05	4.13E-06	7.70E-03	1.36E+09	2.11E+07	2.26E+01	4.28E-01
Samarium (62)	Sm-153	2.74E-06	2.33E-06	7.12E-02	1.30E+02	1.36E+09	2.11E+07	1.93E+03	3.02E+02
Samarium (62)	Sm-155	1.07E-07	6.29E-08	1.82E-01	1.65E+04	1.36E+09	2.11E+07	6.42E+06	1.33E+06
Samarium (62)	Sm-156	9.25E-07	8.14E-07	1.31E-01	6.46E+02	1.36E+09	2.11E+07	2.83E+04	4.32E+03
Tin (50)	Sn-110	1.30E-06	5.92E-07	3.23E-01	1.52E+03	1.36E+09	2.11E+07	4.96E+04	1.24E+04
Tin (50)	Sn-111	8.51E-08	4.81E-08	5.85E-01	1.03E+04	1.36E+09	2.11E+07	5.08E+06	1.08E+06
Tin (50)	Sn-113	2.70E-06	9.99E-06	1.90E-02	2.20E+00	1.36E+09	2.11E+07	2.90E+01	1.51E+00
Tin (50)	Sn-117m	2.63E-06	8.88E-06	1.63E-01	1.86E+01	1.36E+09	2.11E+07	2.30E+02	1.27E+01
Tin (50)	Sn-119m	1.26E-06	8.14E-06	8.72E-03	8.63E-01	1.36E+09	2.11E+07	3.09E+01	1.14E+00
Tin (50)	Sn-121	8.51E-07	8.51E-07	1.03E-04	2.24E+02	1.36E+09	2.11E+07	1.06E+04	1.46E+03
Tin (50)	Sn-121m	1.41E-06	1.67E-05	4.20E-03	1.26E-02	1.36E+09	2.11E+07	1.39E+01	3.78E-01
Tin (50)	Sn-121m+D	2.07E-06	1.67E-05	4.28E-03	1.26E-02	1.36E+09	2.11E+07	1.15E+01	3.76E-01
Tin (50)	Sn-121m+E	2.07E-06	1.67E-05	4.28E-03	1.26E-02	1.36E+09	2.11E+07	1.15E+01	3.76E-01
Tin (50)	Sn-123	7.77E-06	3.00E-05	7.59E-02	1.96E+00	1.36E+09	2.11E+07	9.18E+00	4.64E-01
Tin (50)	Sn-123m	1.41E-07	9.99E-08	2.02E-01	9.09E+03	1.36E+09	2.11E+07	2.67E+06	4.79E+05
Tin (50)	Sn-125	1.15E-05	1.15E-05	4.46E-01	2.62E+01	1.36E+09	2.11E+07	9.17E+01	1.27E+01
Tin (50)	Sn-126	1.74E-05	1.04E-04	5.62E-02	6.93E-06	1.36E+09	2.11E+07	1.55E+00	5.96E-02
Tin (50)	Sn-126+D	1.74E-05	1.04E-04	1.87E+00	6.93E-06	1.36E+09	2.11E+07	1.55E+00	5.96E-02
Tin (50)	Sn-126+E	1.74E-05	1.04E-04	2.31E+00	6.93E-06	1.36E+09	2.11E+07	1.55E+00	5.96E-02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Tin (50)	Sn-127	7.40E-07	4.81E-07	2.10E+00	2.89E+03	1.36E+09	2.11E+07	1.62E+05	3.12E+04
Tin (50)	Sn-128	5.55E-07	3.40E-07	7.29E-01	6.16E+03	1.36E+09	2.11E+07	4.63E+05	9.30E+04
Strontium (38)	Sr-80	1.26E-06	4.81E-07	1.87E-03	3.64E+03	1.36E+09	2.11E+07	1.24E+05	3.49E+04
Strontium (38)	Sr-81	2.85E-07	1.30E-07	1.67E+00	1.43E+04	1.36E+09	2.11E+07	2.12E+06	5.31E+05
Strontium (38)	Sr-82	2.26E-05	3.29E-05	1.83E-03	1.01E+01	1.36E+09	2.11E+07	1.72E+01	1.77E+00
Strontium (38)	Sr-82+D	2.26E-05	3.29E-05	1.40E+00	1.01E+01	1.36E+09	2.11E+07	1.72E+01	1.77E+00
Strontium (38)	Sr-82+E	2.26E-05	3.29E-05	1.40E+00	1.01E+01	1.36E+09	2.11E+07	1.72E+01	1.77E+00
Strontium (38)	Sr-83	1.81E-06	1.15E-06	8.88E-01	1.87E+02	1.36E+09	2.11E+07	4.30E+03	8.44E+02
Strontium (38)	Sr-85	2.07E-06	2.37E-06	5.65E-01	3.90E+00	1.36E+09	2.11E+07	7.59E+01	9.46E+00
Strontium (38)	Sr-85m	2.26E-08	1.52E-08	2.36E-01	5.24E+03	1.36E+09	2.11E+07	9.62E+06	1.80E+06
Strontium (38)	Sr-87m	1.11E-07	7.40E-08	3.55E-01	2.16E+03	1.36E+09	2.11E+07	8.08E+05	1.52E+05
Strontium (38)	Sr-89	9.62E-06	2.26E-05	8.01E-02	5.01E+00	1.36E+09	2.11E+07	1.86E+01	1.33E+00
Strontium (38)	Sr-90	1.04E-04	1.33E-04	1.91E-03	2.38E-02	1.36E+09	2.11E+07	3.81E-01	4.33E-02
Strontium (38)	Sr-90+D	1.04E-04	1.33E-04	1.31E-01	2.38E-02	1.36E+09	2.11E+07	3.81E-01	4.33E-02
Strontium (38)	Sr-90+E	1.04E-04	1.33E-04	1.31E-01	2.38E-02	1.36E+09	2.11E+07	3.81E-01	4.33E-02
Strontium (38)	Sr-91	2.41E-06	1.37E-06	8.48E-01	6.39E+02	1.36E+09	2.11E+07	1.11E+04	2.36E+03
Strontium (38)	Sr-92	1.59E-06	7.77E-07	1.44E+00	2.24E+03	1.36E+09	2.11E+07	5.94E+04	1.41E+04
Tantalum (73)	Ta-172	1.96E-07	1.22E-07	1.74E+00	9.90E+03	1.36E+09	2.11E+07	2.10E+06	4.17E+05
Tantalum (73)	Ta-173	7.03E-07	4.07E-07	6.71E-01	1.66E+03	1.36E+09	2.11E+07	9.89E+04	2.08E+04
Tantalum (73)	Ta-174	2.11E-07	1.52E-07	7.18E-01	5.06E+03	1.36E+09	2.11E+07	9.89E+05	1.76E+05
Tantalum (73)	Ta-175	7.77E-07	4.44E-07	9.91E-01	5.78E+02	1.36E+09	2.11E+07	3.11E+04	6.60E+03
Tantalum (73)	Ta-176	1.15E-06	7.03E-07	2.25E+00	7.51E+02	1.36E+09	2.11E+07	2.73E+04	5.49E+03
Tantalum (73)	Ta-177	4.07E-07	3.55E-07	6.85E-02	1.07E+02	1.36E+09	2.11E+07	1.07E+04	1.64E+03
Tantalum (73)	Ta-178			1.12E-01	3.91E+04	1.36E+09	2.11E+07		
Tantalum (73)	Ta-178m	2.66E-07	2.41E-07	1.11E+00	2.76E+03	1.36E+09	2.11E+07	4.19E+05	6.27E+04
Tantalum (73)	Ta-179	2.41E-07	8.14E-07	3.21E-02	3.80E-01	1.36E+09	2.11E+07	1.62E+02	8.97E+00
Tantalum (73)	Ta-180	3.11E-06	2.37E-05	6.05E-01	6.93E-14	1.36E+09	2.11E+07	7.82E+00	2.62E-01
Tantalum (73)	Ta-180m	2.00E-07	1.63E-07	4.94E-02	7.49E+02	1.36E+09	2.11E+07	1.53E+05	2.48E+04
Tantalum (73)	Ta-182	5.55E-06	2.81E-05	1.40E+00	2.20E+00	1.36E+09	2.11E+07	1.28E+01	5.41E-01
Tantalum (73)	Ta-182m	4.44E-08	7.40E-08	2.63E-01	2.30E+04	1.36E+09	2.11E+07	1.95E+07	1.81E+06
Tantalum (73)	Ta-183	4.81E-06	7.03E-06	3.13E-01	4.96E+01	1.36E+09	2.11E+07	3.95E+02	4.07E+01
Tantalum (73)	Ta-184	2.52E-06	1.52E-06	1.81E+00	6.98E+02	1.36E+09	2.11E+07	1.16E+04	2.35E+03
Tantalum (73)	Ta-185	2.52E-07	1.67E-07	2.92E-01	7.43E+03	1.36E+09	2.11E+07	1.22E+06	2.32E+05
Tantalum (73)	Ta-186	1.22E-07	6.29E-08	1.84E+00	3.47E+04	1.36E+09	2.11E+07	1.20E+07	2.73E+06
Terbium (65)	Tb-147	5.92E-07	2.81E-07	1.81E+00	3.68E+03	1.36E+09	2.11E+07	2.63E+05	6.37E+04
Terbium (65)	Tb-149	9.25E-07	1.81E-05	1.75E+00	1.46E+03	1.36E+09	2.11E+07	2.24E+04	5.07E+02
Terbium (65)	Tb-150	9.25E-07	4.07E-07	1.89E+00	1.86E+03	1.36E+09	2.11E+07	8.51E+04	2.18E+04
Terbium (65)	Tb-151	1.26E-06	8.51E-07	9.78E-01	3.45E+02	1.36E+09	2.11E+07	1.13E+04	2.12E+03
Terbium (65)	Tb-153	9.25E-07	7.03E-07	2.44E-01	1.08E+02	1.36E+09	2.11E+07	4.80E+03	8.19E+02
Terbium (65)	Tb-154	2.41E-06	1.33E-06	2.43E+00	2.84E+02	1.36E+09	2.11E+07	4.94E+03	1.07E+03
Terbium (65)	Tb-155	7.77E-07	8.14E-07	1.46E-01	4.75E+01	1.36E+09	2.11E+07	2.44E+03	3.25E+02
Terbium (65)	Tb-156	4.44E-06	4.44E-06	1.97E+00	4.74E+01	1.36E+09	2.11E+07	4.28E+02	5.91E+01
Terbium (65)	Tb-156m	6.29E-07	7.77E-07	2.58E-02	2.49E+02	1.36E+09	2.11E+07	1.55E+04	1.82E+03
Terbium (65)	Tb-156n	3.00E-07	3.55E-07	3.68E-03	1.21E+03	1.36E+09	2.11E+07	1.59E+05	1.93E+04
Terbium (65)	Tb-157	1.26E-07	4.44E-06	2.57E-03	4.62E-03	1.36E+09	2.11E+07	7.31E+01	1.42E+00
Terbium (65)	Tb-158	4.07E-06	1.70E-04	8.74E-01	4.62E-03	1.36E+09	2.11E+07	1.97E+00	3.71E-02
Terbium (65)	Tb-160	5.92E-06	2.59E-05	1.24E+00	3.50E+00	1.36E+09	2.11E+07	1.83E+01	8.54E-01
Terbium (65)	Tb-161	2.66E-06	4.81E-06	3.44E-02	3.66E+01	1.36E+09	2.11E+07	5.10E+02	4.46E+01
Technetium (43)	Tc-101	7.03E-08	4.44E-08	4.26E-01	2.57E+04	1.36E+09	2.11E+07	1.52E+07	2.98E+06
Technetium (43)	Tc-104	2.96E-07	1.04E-07	2.28E+00	2.00E+04	1.36E+09	2.11E+07	2.89E+06	8.69E+05
Technetium (43)	Tc-93	2.04E-07	1.30E-07	1.54E+00	2.21E+03	1.36E+09	2.11E+07	4.51E+05	8.81E+04
Technetium (43)	Tc-93m	9.25E-08	6.29E-08	7.35E-01	8.37E+03	1.36E+09	2.11E+07	3.75E+06	6.96E+05
Technetium (43)	Tc-94	7.40E-07	4.44E-07	2.95E+00	1.24E+03	1.36E+09	2.11E+07	7.01E+04	1.43E+04
Technetium (43)	Tc-94m	3.70E-07	1.67E-07	2.12E+00	7.00E+03	1.36E+09	2.11E+07	8.02E+05	2.02E+05
Technetium (43)	Tc-95	6.66E-07	3.70E-07	8.75E-01	3.04E+02	1.36E+09	2.11E+07	1.91E+04	4.13E+03
Technetium (43)	Tc-95m	2.07E-06	3.26E-06	7.38E-01	4.15E+00	1.36E+09	2.11E+07	7.72E+01	7.51E+00
Technetium (43)	Tc-96	4.07E-06	2.52E-06	2.77E+00	5.91E+01	1.36E+09	2.11E+07	6.05E+02	1.21E+02
Technetium (43)	Tc-96m	4.44E-08	2.74E-08	5.25E-02	7.07E+03	1.36E+09	2.11E+07	6.63E+06	1.33E+06
Technetium (43)	Tc-97	2.52E-07	8.14E-07	5.43E-03	2.67E-07	1.36E+09	2.11E+07	1.31E+02	7.44E+00
Technetium (43)	Tc-97m	2.04E-06	1.18E-05	5.19E-03	2.91E+00	1.36E+09	2.11E+07	4.11E+01	1.60E+00
Technetium (43)	Tc-98	7.40E-06	3.07E-05	1.58E+00	1.65E-07	1.36E+09	2.11E+07	4.14E+00	1.99E-01

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Technetium (43)	Tc-99	2.37E-06	1.48E-05	7.55E-05	3.25E-06	1.36E+09	2.11E+07	1.12E+01	4.18E-01
Technetium (43)	Tc-99m	8.14E-08	7.03E-08	1.33E-01	1.01E+03	1.36E+09	2.11E+07	5.03E+05	7.79E+04
Tellurium (52)	Te-116	6.29E-07	3.70E-07	7.07E-02	2.44E+03	1.36E+09	2.11E+07	1.62E+05	3.36E+04
Tellurium (52)	Te-121	1.59E-06	1.41E-06	6.38E-01	1.49E+01	1.36E+09	2.11E+07	3.79E+02	5.77E+01
Tellurium (52)	Te-121m	8.51E-06	1.55E-05	2.31E-01	1.64E+00	1.36E+09	2.11E+07	8.87E+00	7.69E-01
Tellurium (52)	Te-123	1.63E-05	7.03E-06	1.66E-02	6.93E-14	1.36E+09	2.11E+07	2.61E+00	6.77E-01
Tellurium (52)	Te-123m	5.18E-06	1.48E-05	1.54E-01	2.11E+00	1.36E+09	2.11E+07	1.57E+01	9.79E-01
Tellurium (52)	Te-125m	3.22E-06	1.26E-05	3.10E-02	4.36E+00	1.36E+09	2.11E+07	4.28E+01	2.14E+00
Tellurium (52)	Te-127	6.29E-07	4.81E-07	1.20E-02	6.49E+02	1.36E+09	2.11E+07	4.23E+04	7.20E+03
Tellurium (52)	Te-127m	8.51E-06	2.74E-05	9.99E-03	2.32E+00	1.36E+09	2.11E+07	9.95E+00	5.69E-01
Tellurium (52)	Te-129	2.33E-07	1.37E-07	1.33E-01	5.23E+03	1.36E+09	2.11E+07	9.38E+05	1.95E+05
Tellurium (52)	Te-129m	1.11E-05	2.44E-05	6.65E-02	7.53E+00	1.36E+09	2.11E+07	2.43E+01	1.83E+00
Tellurium (52)	Te-131	3.22E-07	1.04E-07	5.53E-01	1.46E+04	1.36E+09	2.11E+07	1.94E+06	6.17E+05
Tellurium (52)	Te-131m	7.03E-06	3.48E-06	1.56E+00	2.02E+02	1.36E+09	2.11E+07	1.21E+03	2.86E+02
Tellurium (52)	Te-132	1.41E-05	7.40E-06	2.47E-01	7.76E+01	1.36E+09	2.11E+07	2.32E+02	5.22E+01
Tellurium (52)	Te-133	2.66E-07	7.40E-08	1.12E+00	2.93E+04	1.36E+09	2.11E+07	4.74E+06	1.65E+06
Tellurium (52)	Te-133m	1.04E-06	3.22E-07	2.61E+00	6.57E+03	1.36E+09	2.11E+07	2.73E+05	8.86E+04
Tellurium (52)	Te-134	4.07E-07	2.44E-07	9.90E-01	8.71E+03	1.36E+09	2.11E+07	8.93E+05	1.82E+05
()	Test Isotope					1.36E+09	2.11E+07		
Thorium (90)	Th-226	1.30E-06	2.26E-04	8.46E-03	1.18E+04	1.36E+09	2.11E+07	2.02E+04	3.30E+02
Thorium (90)	Th-227	3.26E-05	3.70E-02	1.14E-01	1.35E+01	1.36E+09	2.11E+07	1.48E-01	2.31E-03
Thorium (90)	Th-228	2.66E-04	1.48E-01	2.49E-03	3.62E-01	1.36E+09	2.11E+07	3.23E-03	5.09E-05
Thorium (90)	Th-229	1.81E-03	2.63E-01	9.21E-02	9.44E-05	1.36E+09	2.11E+07	1.46E-03	2.41E-05
Thorium (90)	Th-229+D	2.26E-03	3.15E-01		9.44E-05	1.36E+09	2.11E+07	1.22E-03	2.01E-05
Thorium (90)	Th-229+E	2.26E-03	3.15E-01	4.04E-01	9.44E-05	1.36E+09	2.11E+07	1.22E-03	2.01E-05
Thorium (90)	Th-230	7.77E-04	5.18E-02	7.43E-04	9.00E-06	1.36E+09	2.11E+07	6.92E-03	1.22E-04
Thorium (90)	Th-231	1.26E-06	1.22E-06	1.81E-02	2.38E+02	1.36E+09	2.11E+07	7.60E+03	1.07E+03
Thorium (90)	Th-232	8.51E-04	9.25E-02	5.31E-04	4.93E-11	1.36E+09	2.11E+07	4.07E-03	6.83E-05
Thorium (90)	Th-232+D				4.93E-11	1.36E+09	2.11E+07		
Thorium (90)	Th-234	1.26E-05	2.85E-05	8.74E-03	1.05E+01	1.36E+09	2.11E+07	2.97E+01	2.19E+00
Thorium (90)	Th-234+D	1.26E-05	2.85E-05	1.41E-01	1.05E+01	1.36E+09	2.11E+07	2.97E+01	2.19E+00
Thorium (90)	Th-234+E	1.26E-05	2.85E-05	1.41E-01	1.05E+01	1.36E+09	2.11E+07	2.97E+01	2.19E+00
Titanium (22)	Ti-44	2.15E-05	1.55E-04	1.38E-01	1.47E-02	1.36E+09	2.11E+07	1.17E+00	4.02E-02
Titanium (22)	Ti-44+D	2.15E-05	1.55E-04	2.57E+00	1.47E-02	1.36E+09	2.11E+07	1.17E+00	4.02E-02
Titanium (22)	Ti-44+E	2.15E-05	1.55E-04	2.57E+00	1.47E-02	1.36E+09	2.11E+07	1.17E+00	4.02E-02
Titanium (22)	Ti-45	5.55E-07	3.26E-07	1.01E+00	1.97E+03	1.36E+09	2.11E+07	1.48E+05	3.08E+04
Thallium (81)	Tl-194	3.00E-08	1.63E-08	8.58E-01	1.10E+04	1.36E+09	2.11E+07	1.55E+07	3.40E+06
Thallium (81)	Tl-194m	1.48E-07	7.03E-08	2.60E+00	1.11E+04	1.36E+09	2.11E+07	3.17E+06	7.69E+05
Thallium (81)	Tl-195	9.99E-08	5.55E-08	1.35E+00	5.23E+03	1.36E+09	2.11E+07	2.20E+06	4.75E+05
Thallium (81)	Tl-197	8.51E-08	5.18E-08	4.40E-01	2.14E+03	1.36E+09	2.11E+07	1.05E+06	2.12E+05
Thallium (81)	Tl-198	2.70E-07	2.22E-07	2.12E+00	1.15E+03	1.36E+09	2.11E+07	1.73E+05	2.78E+04
Thallium (81)	Tl-198m	2.00E-07	1.37E-07	1.32E+00	3.25E+03	1.36E+09	2.11E+07	6.72E+05	1.24E+05
Thallium (81)	Tl-199	9.62E-08	7.03E-08	2.65E-01	8.18E+02	1.36E+09	2.11E+07	3.50E+05	6.16E+04
Thallium (81)	Tl-200	7.40E-07	4.81E-07	1.42E+00	2.33E+02	1.36E+09	2.11E+07	1.30E+04	2.51E+03
Thallium (81)	Tl-201	3.52E-07	1.63E-07	9.29E-02	8.31E+01	1.36E+09	2.11E+07	1.00E+04	2.47E+03
Thallium (81)	Tl-202	1.67E-06	7.03E-07	5.13E-01	2.07E+01	1.36E+09	2.11E+07	5.28E+02	1.39E+02
Thallium (81)	Tl-204	4.44E-06	1.44E-06	1.26E-02	1.83E-01	1.36E+09	2.11E+07	1.06E+01	3.34E+00
Thallium (81)	Tl-206			7.08E-02	8.67E+04	1.36E+09	2.11E+07		
Thallium (81)	Tl-207			6.49E-02	7.64E+04	1.36E+09	2.11E+07		
Thallium (81)	Tl-208			3.47E+00	1.19E+05	1.36E+09	2.11E+07		
Thallium (81)	Tl-209			2.24E+00	1.66E+05	1.36E+09	2.11E+07		
Thulium (69)	Tm-162	1.07E-07	5.92E-08	1.90E+00	1.68E+04	1.36E+09	2.11E+07	6.56E+06	1.43E+06
Thulium (69)	Tm-166	1.04E-06	6.29E-07	1.98E+00	7.88E+02	1.36E+09	2.11E+07	3.17E+04	6.42E+03
Thulium (69)	Tm-167	2.07E-06	4.07E-06	1.53E-01	2.74E+01	1.36E+09	2.11E+07	4.84E+02	3.97E+01
Thulium (69)	Tm-170	4.81E-06	2.59E-05	3.08E-02	1.97E+00	1.36E+09	2.11E+07	1.33E+01	5.44E-01
Thulium (69)	Tm-171	4.07E-07	5.18E-06	6.48E-04	3.61E-01	1.36E+09	2.11E+07	5.45E+01	1.44E+00
Thulium (69)	Tm-172	6.29E-06	4.07E-06	5.68E-01	9.55E+01	1.36E+09	2.11E+07	6.30E+02	1.22E+02
Thulium (69)	Tm-173	1.15E-06	6.66E-07	4.53E-01	7.37E+02	1.36E+09	2.11E+07	2.68E+04	5.62E+03
Thulium (69)	Tm-175	9.99E-08	6.66E-08	1.21E+00	2.40E+04	1.36E+09	2.11E+07	9.94E+06	1.88E+06
Uranium (92)	U-230	2.07E-04	4.81E-02	1.81E-03	1.22E+01	1.36E+09	2.11E+07	9.92E-02	1.60E-03
Uranium (92)	U-231	1.04E-06	1.74E-06	7.47E-02	6.02E+01	1.36E+09	2.11E+07	2.18E+03	2.02E+02

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF$_w$**	**PEF$_m$**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Uranium (92)	U-232	1.22E-03	2.89E-02	9.42E-04	9.63E-03	1.36E+09	2.11E+07	1.02E-02	2.19E-04
Uranium (92)	U-233	1.89E-04	1.33E-02	6.99E-04	4.37E-06	1.36E+09	2.11E+07	2.71E-02	4.74E-04
Uranium (92)	U-234	1.81E-04	1.30E-02	6.84E-04	2.83E-06	1.36E+09	2.11E+07	2.79E-02	4.88E-04
Uranium (92)	U-235	1.74E-04	1.15E-02	1.63E-01	9.85E-10	1.36E+09	2.11E+07	3.12E-02	5.50E-04
Uranium (92)	U-235+D			1.82E-01	9.85E-10	1.36E+09	2.11E+07		
Uranium (92)	U-235+E			1.82E-01	9.85E-10	1.36E+09	2.11E+07		
Uranium (92)	U-236	1.74E-04	1.18E-02	5.87E-04	2.96E-08	1.36E+09	2.11E+07	3.04E-02	5.33E-04
Uranium (92)	U-237	2.81E-06	6.29E-06	1.44E-01	3.75E+01	1.36E+09	2.11E+07	4.76E+02	3.54E+01
Uranium (92)	U-238	1.67E-04	1.07E-02	4.94E-04	1.55E-10	1.36E+09	2.11E+07	3.33E-02	5.88E-04
Uranium (92)	U-238+D	1.67E-04	1.07E-02		1.55E-10	1.36E+09	2.11E+07	3.33E-02	5.88E-04
Uranium (92)	U-238+E	1.67E-04	1.07E-02	1.41E-01	1.55E-10	1.36E+09	2.11E+07	3.33E-02	5.88E-04
Uranium (92)	U-239	9.99E-08	8.14E-08	9.63E-02	1.55E+04	1.36E+09	2.11E+07	6.32E+06	1.02E+06
Uranium (92)	U-240	4.07E-06	1.96E-06	3.72E-03	4.31E+02	1.36E+09	2.11E+07	4.47E+03	1.07E+03
Vanadium (23)	V-47	2.33E-07	1.07E-07	1.23E+00	1.12E+04	1.36E+09	2.11E+07	2.03E+06	5.03E+05
Vanadium (23)	V-48	7.40E-06	8.88E-06	3.17E+00	1.56E+01	1.36E+09	2.11E+07	8.27E+01	9.92E+00
Vanadium (23)	V-49	6.66E-08	1.26E-07	0.00E+00	7.67E-01	1.36E+09	2.11E+07	7.92E+02	6.70E+01
Tungsten (74)	W-176	3.70E-07	1.52E-07	1.80E-01	2.64E+03	1.36E+09	2.11E+07	3.03E+05	8.17E+04
Tungsten (74)	W-177	2.15E-07	8.88E-08	9.78E-01	2.70E+03	1.36E+09	2.11E+07	5.35E+05	1.43E+05
Tungsten (74)	W-178	8.14E-07	2.66E-07	1.33E-02	1.17E+01	1.36E+09	2.11E+07	6.15E+02	1.93E+02
Tungsten (74)	W-178+D	8.14E-07	2.66E-07		1.17E+01	1.36E+09	2.11E+07	6.15E+02	1.93E+02
Tungsten (74)	W-178+E	8.14E-07	2.66E-07		1.17E+01	1.36E+09	2.11E+07	6.15E+02	1.93E+02
Tungsten (74)	W-179	1.22E-08	3.40E-09	5.81E-02	9.71E+03	1.36E+09	2.11E+07	3.43E+07	1.20E+07
Tungsten (74)	W-181	2.81E-07	9.99E-08	4.01E-02	2.09E+00	1.36E+09	2.11E+07	3.63E+02	1.08E+02
Tungsten (74)	W-185	1.63E-06	4.44E-07	2.00E-04	3.37E+00	1.36E+09	2.11E+07	9.25E+01	3.27E+01
Tungsten (74)	W-187	2.33E-06	7.03E-07	5.46E-01	2.54E+02	1.36E+09	2.11E+07	4.69E+03	1.55E+03
Tungsten (74)	W-188	7.77E-06	2.11E-06	2.12E-03	3.64E+00	1.36E+09	2.11E+07	2.08E+01	7.36E+00
Xenon (54)	Xe-120			4.68E-01	9.11E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-121			1.97E+00	9.08E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-122			7.04E-02	3.02E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-123			7.04E-01	2.92E+03	1.36E+09	2.11E+07		
Xenon (54)	Xe-125			2.88E-01	3.57E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-127			2.99E-01	6.95E+00	1.36E+09	2.11E+07		
Xenon (54)	Xe-129m			4.85E-02	3.16E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-131m			1.87E-02	2.13E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-133			4.61E-02	4.82E+01	1.36E+09	2.11E+07		
Xenon (54)	Xe-133m			4.12E-02	1.16E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-135			2.92E-01	6.68E+02	1.36E+09	2.11E+07		
Xenon (54)	Xe-135m			4.89E-01	2.38E+04	1.36E+09	2.11E+07		
Xenon (54)	Xe-138			1.25E+00	2.57E+04	1.36E+09	2.11E+07		
Yttrium (39)	Y-86	3.55E-06	1.67E-06	3.89E+00	4.12E+02	1.36E+09	2.11E+07	4.90E+03	1.20E+03
Yttrium (39)	Y-86m	2.07E-07	9.99E-08	2.38E-01	7.59E+03	1.36E+09	2.11E+07	1.55E+06	3.71E+05
Yttrium (39)	Y-87	2.04E-06	1.37E-06	5.03E-01	7.56E+01	1.36E+09	2.11E+07	1.54E+03	2.88E+02
Yttrium (39)	Y-88	4.81E-06	1.52E-05	2.81E+00	2.37E+00	1.36E+09	2.11E+07	1.80E+01	1.04E+00
Yttrium (39)	Y-90	9.99E-06	5.18E-06	1.28E-01	9.49E+01	1.36E+09	2.11E+07	3.99E+02	9.09E+01
Yttrium (39)	Y-90m	6.29E-07	3.52E-07	6.97E-01	1.90E+03	1.36E+09	2.11E+07	1.27E+05	2.73E+04
Yttrium (39)	Y-91	8.88E-06	2.63E-05	8.71E-02	4.32E+00	1.36E+09	2.11E+07	1.66E+01	1.01E+00
Yttrium (39)	Y-91m	4.07E-08	3.70E-08	5.95E-01	7.33E+03	1.36E+09	2.11E+07	7.28E+06	1.08E+06
Yttrium (39)	Y-92	1.81E-06	6.29E-07	4.47E-01	1.71E+03	1.36E+09	2.11E+07	4.05E+04	1.22E+04
Yttrium (39)	Y-93	4.44E-06	1.48E-06	2.45E-01	6.01E+02	1.36E+09	2.11E+07	5.81E+03	1.80E+03
Yttrium (39)	Y-94	3.00E-07	9.99E-08	1.39E+00	1.91E+04	1.36E+09	2.11E+07	2.73E+06	8.46E+05
Yttrium (39)	Y-95	1.70E-07	5.55E-08	1.06E+00	3.40E+04	1.36E+09	2.11E+07	8.58E+06	2.70E+06
Ytterbium (70)	Yb-162	8.51E-08	4.81E-08	1.42E-01	1.93E+04	1.36E+09	2.11E+07	9.48E+06	2.02E+06
Ytterbium (70)	Yb-166	3.52E-06	2.66E-06	8.68E-02	1.07E+02	1.36E+09	2.11E+07	1.25E+03	2.14E+02
Ytterbium (70)	Yb-167	2.48E-08	2.41E-08	2.77E-01	2.08E+04	1.36E+09	2.11E+07	3.37E+07	4.77E+06
Ytterbium (70)	Yb-169	2.63E-06	9.25E-06	3.24E-01	7.90E+00	1.36E+09	2.11E+07	9.66E+01	5.20E+00
Ytterbium (70)	Yb-175	1.63E-06	2.41E-06	4.36E-02	6.04E+01	1.36E+09	2.11E+07	1.42E+03	1.45E+02
Ytterbium (70)	Yb-177	3.26E-07	2.37E-07	2.53E-01	3.20E+03	1.36E+09	2.11E+07	4.04E+05	7.14E+04
Ytterbium (70)	Yb-178	4.44E-07	2.59E-07	4.20E-02	4.92E+03	1.36E+09	2.11E+07	4.63E+05	9.67E+04
Zinc (30)	Zn-62	3.48E-06	1.85E-06	4.84E-01	6.56E+02	1.36E+09	2.11E+07	7.92E+03	1.77E+03
Zinc (30)	Zn-63	2.92E-07	1.30E-07	1.35E+00	9.56E+03	1.36E+09	2.11E+07	1.39E+06	3.53E+05
Zinc (30)	Zn-65	1.44E-05	5.92E-06	6.31E-01	1.04E+00	1.36E+09	2.11E+07	4.74E+00	1.27E+00

		Toxicity and Isotope-specific Information						Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCCs)	
Element (Atomic No.)	**Radionuclide**	**Soil Ingestion DCF (mrem/pCi)**	**Inhalation DCF (mrem/pCi)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Lambda**	**PEF_w**	**PEF_m**	**SDCC (Wind) (pCi/cm^2)**	**SDCC (Mechanical) pCi/cm^2)**
Actinium (89)	Ac-223			5.16E-03	1.66E+05	1.36E+09	2.11E+07		
Zinc (30)	Zn-69	1.15E-07	9.62E-08	2.43E-02	6.39E+03	1.36E+09	2.11E+07	2.27E+06	3.59E+05
Zinc (30)	Zn-69m	1.22E-06	8.88E-07	4.64E-01	4.41E+02	1.36E+09	2.11E+07	1.49E+04	2.63E+03
Zinc (30)	Zn-71m	8.88E-07	5.55E-07	1.80E+00	1.55E+03	1.36E+09	2.11E+07	7.26E+04	1.44E+04
Zinc (30)	Zn-72	5.18E-06	4.44E-06	1.56E-01	1.31E+02	1.36E+09	2.11E+07	1.02E+03	1.60E+02
Zirconium (40)	Zr-86	3.18E-06	1.55E-06	2.99E-01	3.68E+02	1.36E+09	2.11E+07	4.88E+03	1.16E+03
Zirconium (40)	Zr-88	1.67E-06	9.62E-06	4.40E-01	3.03E+00	1.36E+09	2.11E+07	5.22E+01	2.05E+00
Zirconium (40)	Zr-89	2.92E-06	1.92E-06	1.28E+00	7.74E+01	1.36E+09	2.11E+07	1.10E+03	2.09E+02
Zirconium (40)	Zr-93	4.07E-06	3.70E-05	0.00E+00	4.53E-07	1.36E+09	2.11E+07	5.49E+00	1.68E-01
Zirconium (40)	Zr-95	3.52E-06	1.78E-05	8.22E-01	3.95E+00	1.36E+09	2.11E+07	3.29E+01	1.40E+00
Zirconium (40)	Zr-97	7.77E-06	3.40E-06	2.92E-01	3.59E+02	1.36E+09	2.11E+07	1.96E+03	5.04E+02

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Actinium (89)	Ac-223+D	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	0.907	1.66E+05	2.66E+06	1.15E+07	4.24E+06	2.86E+06	6.40E+06	6.96E-09
Actinium (89)	Ac-223+E	3.00E-01	6.98E-02	1.88E-01	2.80E-01	1.25E-01	0.907	1.66E+05	2.66E+06	1.15E+07	4.24E+06	2.86E+06	6.40E+06	6.96E-09
Actinium (89)	Ac-224	7.72E-01	2.05E-01	5.50E-01	7.53E-01	2.07E-01	1	2.09E+03	1.19E+04	4.47E+04	1.67E+04	1.22E+04	4.44E+04	2.47E-09
Actinium (89)	Ac-225	5.76E-02	1.64E-02	4.25E-02	5.65E-02	1.72E-02	0.978	2.53E+01	1.97E+03	6.89E+03	2.66E+03	2.00E+03	6.60E+03	3.39E-08
Actinium (89)	Ac-225+D	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	0.963	2.53E+01	9.73E+01	4.54E+02	1.62E+02	1.07E+02	3.85E+02	1.68E-09
Actinium (89)	Ac-225+E	1.18E+00	2.54E-01	7.11E-01	1.07E+00	2.99E-01	0.963	2.53E+01	9.73E+01	4.54E+02	1.62E+02	1.07E+02	3.85E+02	1.68E-09
Actinium (89)	Ac-226	5.67E-01	1.40E-01	3.86E-01	5.48E-01	1.58E-01	1	2.09E+02	1.62E+03	6.56E+03	2.38E+03	1.67E+03	5.82E+03	3.39E-09
Actinium (89)	Ac-227	4.46E-04	1.31E-04	3.36E-04	4.40E-04	1.65E-04	1	3.18E-02	9.98E+03	3.38E+04	1.33E+04	1.01E+04	2.70E+04	1.38E-04
Actinium (89)	Ac-228	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	0.969	9.90E+02	7.92E+02	4.17E+03	1.45E+03	9.16E+02	4.08E+03	3.54E-10
Silver (47)	Ag-102	2.00E+01	3.71E+00	1.07E+01	1.71E+01	3.72E+00	0.833	2.82E+04	7.44E+03	4.00E+04	1.39E+04	8.70E+03	3.99E+04	5.22E-11
Silver (47)	Ag-103	4.18E+00	8.47E-01	2.41E+00	3.73E+00	8.69E-01	0.938	5.54E+03	6.20E+03	3.06E+04	1.08E+04	6.94E+03	2.98E+04	2.23E-10
Silver (47)	Ag-103+D	4.18E+00	8.49E-01	2.41E+00	3.73E+00	8.80E-01	0.938	5.54E+03	6.20E+03	3.05E+04	1.08E+04	6.94E+03	2.94E+04	2.23E-10
Silver (47)	Ag-104	1.56E+01	2.98E+00	8.56E+00	1.36E+01	2.94E+00	0.867	5.26E+03	1.70E+03	8.91E+03	3.11E+03	1.96E+03	9.04E+03	6.52E-11
Silver (47)	Ag-104m	6.88E+00	1.31E+00	3.75E+00	5.93E+00	1.33E+00	0.856	1.09E+04	8.08E+03	4.26E+04	1.48E+04	9.38E+03	4.18E+04	1.50E-10
Silver (47)	Ag-105	2.70E+00	5.73E-01	1.63E+00	2.48E+00	5.72E-01	0.905	6.17E+00	1.11E+01	5.23E+01	1.84E+01	1.21E+01	5.23E+01	3.65E-10
Silver (47)	Ag-106	3.90E+00	8.09E-01	2.29E+00	3.52E+00	8.65E-01	0.916	1.52E+04	1.86E+04	8.98E+04	3.17E+04	2.06E+04	8.41E+04	2.52E-10
Silver (47)	Ag-106m	1.64E+01	3.13E+00	9.01E+00	1.42E+01	3.08E+00	0.881	3.01E+01	9.14E+00	4.77E+01	1.66E+01	1.05E+01	4.85E+01	6.25E-11
Silver (47)	Ag-108	1.14E-01	2.98E-02	7.03E-02	1.04E-01	1.05E-01	0.878	1.54E+05	6.71E+06	2.57E+07	1.09E+07	7.38E+06	7.33E+06	9.14E-09
Silver (47)	Ag-108m	9.01E+00	1.82E+00	5.20E+00	8.08E+00	1.81E+00	0.88	5.46E-03	5.54E-01	2.74E+00	9.59E-01	6.18E-01	2.76E+00	2.13E-08
Silver (47)	Ag-108m+D	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	0.88	5.46E-03	5.53E-01	2.73E+00	9.59E-01	6.18E-01	2.74E+00	2.12E-08
Silver (47)	Ag-108m+E	9.03E+00	1.83E+00	5.20E+00	8.08E+00	1.82E+00	0.88							
Silver (47)	Ag-109m	1.02E-02	4.16E-03	8.60E-03	1.02E-02	8.78E-03	0.995	5.52E+05	2.38E+08	5.84E+08	2.83E+08	2.37E+08	2.77E+08	9.11E-08
Silver (47)	Ag-110	2.37E-01	6.99E-02	1.48E-01	2.14E-01	1.90E-01	0.87	8.88E+05	1.89E+07	6.40E+07	3.01E+07	2.09E+07	2.35E+07	4.54E-09
Silver (47)	Ag-110m	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918	1.01E+00	4.69E-01	2.48E+00	8.60E-01	5.42E-01	2.52E+00	9.89E-11
Silver (47)	Ag-110m+D	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918	1.01E+00	4.69E-01	2.48E+00	8.60E-01	5.42E-01	2.52E+00	9.89E-11
Silver (47)	Ag-110m+E	1.62E+01	3.06E+00	8.82E+00	1.40E+01	3.01E+00	0.918							
Silver (47)	Ag-111	1.40E-01	3.19E-02	8.78E-02	1.31E-01	6.16E-02	0.902	3.40E+01	1.18E+03	5.17E+03	1.88E+03	1.26E+03	2.68E+03	7.50E-09
Silver (47)	Ag-112	4.05E+00	7.70E-01	2.16E+00	3.43E+00	8.71E-01	0.871	1.95E+03	2.42E+03	1.27E+04	4.52E+03	2.85E+03	1.12E+04	2.70E-10
Silver (47)	Ag-115	4.31E+00	7.96E-01	2.26E+00	3.62E+00	8.75E-01	0.878	1.82E+04	2.11E+04	1.14E+05	4.03E+04	2.51E+04	1.04E+05	2.58E-10
Aluminum (13)	Al-26	1.65E+01	2.93E+00	8.47E+00	1.37E+01	2.88E+00	0.845	9.68E-07	3.14E-01	1.77E+00	6.12E-01	3.78E-01	1.80E+00	1.64E-05
Aluminum (13)	Al-28	1.16E+01	1.94E+00	5.61E+00	9.29E+00	2.00E+00	0.814	1.63E+05	7.57E+04	4.51E+05	1.56E+05	9.42E+04	4.38E+05	2.53E-11
Americium (95)	Am-237	1.71E+00	3.95E-01	1.10E+00	1.60E+00	3.94E-01	0.945	4.99E+03	1.35E+04	5.85E+04	2.11E+04	1.44E+04	5.86E+04	1.25E-09
Americium (95)	Am-238	5.02E+00	9.74E-01	2.78E+00	4.35E+00	9.65E-01	0.95	3.72E+03	3.42E+03	1.76E+04	6.17E+03	3.94E+03	1.78E+04	4.24E-10
Americium (95)	Am-239	8.82E-01	2.37E-01	6.32E-01	8.62E-01	2.43E-01	0.999	5.10E+02	2.54E+03	9.44E+03	3.54E+03	2.60E+03	9.21E+03	2.30E-09
Americium (95)	Am-240	5.84E+00	1.13E+00	3.21E+00	5.07E+00	1.12E+00	0.966	1.20E+02	9.28E+01	4.81E+02	1.69E+02	1.07E+02	4.85E+02	3.62E-10
Americium (95)	Am-241	3.71E-02	1.84E-02	3.45E-02	3.71E-02	2.72E-02	0.965	1.60E-03	1.22E+02	2.48E+02	1.32E+02	1.22E+02	1.67E+02	3.57E-05
Americium (95)	Am-242	4.48E-02	1.40E-02	3.51E-02	4.48E-02	1.88E-02	0.998	3.79E+02	3.72E+04	1.19E+05	4.74E+04	3.72E+04	8.85E+04	4.60E-08
Americium (95)	Am-242m	1.44E-03	6.47E-04	1.19E-03	1.43E-03	2.64E-03	0.999	4.56E-03	3.06E+03	6.79E+03	3.70E+03	3.08E+03	1.67E+03	2.92E-04
Americium (95)	Am-242m+D	6.15E-02	1.74E-02	4.44E-02	5.93E-02	2.44E-02	0.998	4.56E-03	7.15E+01	2.52E+02	9.91E+01	7.42E+01	1.80E+02	6.83E-06
Americium (95)	Am-242m+E	6.15E-02	1.75E-02	4.44E-02	5.95E-02	2.50E-02	0.998	4.56E-03	7.15E+01	2.51E+02	9.91E+01	7.39E+01	1.76E+02	6.83E-06
Americium (95)	Am-243	1.24E-01	4.90E-02	1.08E-01	1.24E-01	5.59E-02	0.954	9.39E-05	3.70E+01	9.36E+01	4.26E+01	3.70E+01	8.21E+01	1.86E-04
Americium (95)	Am-243+D	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	0.958	9.39E-05	5.62E+00	2.03E+01	7.78E+00	5.78E+00	1.94E+01	2.82E-05
Americium (95)	Am-243+E	8.13E-01	2.26E-01	5.87E-01	7.91E-01	2.36E-01	0.958	9.39E-05	5.62E+00	2.03E+01	7.78E+00	5.78E+00	1.94E+01	2.82E-05
Americium (95)	Am-244	4.48E+00	8.84E-01	2.52E+00	3.95E+00	8.87E-01	0.877	6.01E+02	6.71E+02	3.40E+03	1.19E+03	7.59E+02	3.38E+03	5.28E-10
Americium (95)	Am-244m	1.07E-02	6.51E-03	8.95E-03	1.05E-02	6.48E-02	0.999	1.40E+04	5.73E+06	9.44E+06	6.86E+06	5.86E+06	9.48E+05	1.94E-07
Americium (95)	Am-245	1.33E-01	3.43E-02	9.21E-02	1.29E-01	4.81E-02	0.926	2.96E+03	1.05E+05	4.08E+05	1.52E+05	1.09E+05	2.91E+05	1.69E-08
Americium (95)	Am-246	3.67E+00	7.61E-01	2.14E+00	3.30E+00	7.94E-01	0.933	9.34E+03	1.19E+04	5.76E+04	2.04E+04	1.33E+04	5.53E+04	6.10E-10
Americium (95)	Am-246m	6.01E+00	1.13E+00	3.25E+00	5.17E+00	1.16E+00	0.979	1.46E+04	1.09E+04	5.77E+04	2.01E+04	1.26E+04	5.61E+04	3.56E-10
Argon (18)	Ar-37	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.22E+00						
Argon (18)	Ar-39	8.02E-04	2.95E-04	6.29E-04	7.89E-04	2.95E-03	0.927	2.58E-03	5.90E+03	1.61E+04	7.53E+03	6.00E+03	1.60E+03	1.73E-04
Argon (18)	Ar-41	7.93E+00	1.41E+00	4.08E+00	6.62E+00	1.42E+00	0.833	3.32E+03	2.20E+03	1.24E+04	4.28E+03	2.64E+03	1.23E+04	5.28E-11
Arsenic (33)	As-69	5.60E+00	1.19E+00	3.32E+00	5.09E+00	1.30E+00	0.883	2.40E+04	2.12E+04	1.00E+05	3.58E+04	2.33E+04	9.18E+04	1.19E-10
Arsenic (33)	As-69+D	1.06E+01	2.16E+00	6.12E+00	9.49E+00	2.28E+00	0.925	2.40E+04	1.07E+04	5.24E+04	1.85E+04	1.20E+04	4.99E+04	5.97E-11
Arsenic (33)	As-70	2.44E+01	4.55E+00	1.31E+01	2.09E+01	4.55E+00	0.87	6.92E+03	1.43E+03	7.66E+03	2.66E+03	1.67E+03	7.66E+03	2.80E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Arsenic (33)	As-71	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	0.884	9.37E+01	1.56E+02	7.28E+02	2.57E+02	1.69E+02	7.34E+02	2.29E-10
Arsenic (33)	As-71+D	2.98E+00	6.38E-01	1.81E+00	2.74E+00	6.33E-01	0.884	9.37E+01	1.56E+02	7.28E+02	2.57E+02	1.69E+02	7.34E+02	2.29E-10
Arsenic (33)	As-72	1.03E+01	2.03E+00	5.80E+00	9.08E+00	2.11E+00	0.863	2.33E+02	1.15E+02	5.83E+02	2.04E+02	1.30E+02	5.61E+02	6.88E-11
Arsenic (33)	As-73	7.83E-03	4.31E-03	7.52E-03	7.83E-03	6.05E-03	0.994	3.15E+00	1.85E+03	3.37E+03	1.93E+03	1.85E+03	2.40E+03	8.33E-08
Arsenic (33)	As-74	4.21E+00	8.60E-01	2.44E+00	3.79E+00	8.72E-01	0.877	1.42E+01	1.69E+01	8.27E+01	2.91E+01	1.88E+01	8.16E+01	1.70E-10
Arsenic (33)	As-76	2.54E+00	5.13E-01	1.42E+00	2.22E+00	6.12E-01	0.875	2.31E+02	4.55E+02	2.25E+03	8.10E+02	5.20E+02	1.89E+03	2.91E-10
Arsenic (33)	As-77	4.53E-02	1.03E-02	2.87E-02	4.25E-02	1.65E-02	0.9	1.56E+02	1.68E+04	7.42E+04	2.65E+04	1.79E+04	4.63E+04	1.60E-08
Arsenic (33)	As-78	7.63E+00	1.43E+00	4.05E+00	6.49E+00	1.51E+00	0.858	4.02E+03	2.69E+03	1.44E+04	5.07E+03	3.16E+03	1.36E+04	1.01E-10
Astatine (85)	At-207	7.61E+00	1.45E+00	4.14E+00	6.55E+00	1.42E+00	0.934	3.37E+03	2.08E+03	1.09E+04	3.82E+03	2.42E+03	1.11E+04	2.48E-10
Astatine (85)	At-211	1.03E-01	3.60E-02	8.41E-02	1.02E-01	3.87E-02	1	8.42E+02	3.58E+04	1.02E+05	4.38E+04	3.62E+04	9.51E+04	1.74E-08
Astatine (85)	At-211+D	1.29E-01	4.10E-02	9.88E-02	1.25E-01	4.38E-02	0.985	8.42E+02	2.90E+04	9.12E+04	3.79E+04	3.00E+04	8.55E+04	1.41E-08
Astatine (85)	At-211+E	3.82E+00	7.52E-01	2.14E+00	3.32E+00	7.49E-01	0.985	8.42E+02	9.79E+02	4.98E+03	1.74E+03	1.13E+03	4.99E+03	4.76E-10
Astatine (85)	At-215	1.02E-03	2.18E-04	6.21E-04	9.44E-04	2.15E-04	0.894	2.19E+11	1.05E+15	4.91E+15	1.72E+15	1.13E+15	4.99E+15	2.00E-06
Astatine (85)	At-216	3.99E-03	1.41E-03	3.32E-03	3.99E-03	1.51E-03	0.954	7.28E+10	8.38E+13	2.38E+14	1.01E+14	8.38E+13	2.22E+14	4.82E-07
Astatine (85)	At-217	1.65E-03	3.47E-04	9.81E-04	1.50E-03	3.42E-04	0.889	6.77E+08	2.02E+12	9.61E+12	3.40E+12	2.22E+12	9.75E+12	1.26E-06
Astatine (85)	At-218	4.87E-03	2.70E-03	4.66E-03	4.87E-03	4.25E-03	0.995	1.09E+07	9.88E+09	1.78E+10	1.03E+10	9.88E+09	1.13E+10	3.83E-07
Gold (79)	Au-193	5.48E-01	1.57E-01	3.94E-01	5.28E-01	1.66E-01	0.95	3.44E+02	2.89E+03	1.01E+04	4.03E+03	3.00E+03	9.57E+03	3.15E-09
Gold (79)	Au-194	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	1.54E+02	1.15E+02	6.10E+02	2.14E+02	1.35E+02	6.21E+02	2.81E-10
Gold (79)	Au-195	1.81E-01	7.24E-02	1.58E-01	1.81E-01	8.23E-02	0.96	1.38E+00	4.65E+01	1.16E+02	5.34E+01	4.65E+01	1.02E+02	1.27E-08
Gold (79)	Au-195m	9.33E-01	2.18E-01	6.10E-01	8.90E-01	2.15E-01	0.917	7.17E+05	3.67E+06	1.57E+07	5.61E+06	3.85E+06	1.59E+07	1.94E-09
Gold (79)	Au-198	2.16E+00	4.59E-01	1.31E+00	1.98E+00	4.75E-01	0.892	9.38E+01	2.13E+02	1.00E+03	3.52E+02	2.33E+02	9.70E+02	8.72E-10
Gold (79)	Au-198m	2.41E+00	6.12E-01	1.66E+00	2.33E+00	6.10E-01	0.922	1.10E+02	2.17E+02	8.54E+02	3.14E+02	2.24E+02	8.56E+02	7.59E-10
Gold (79)	Au-199	3.54E-01	9.34E-02	2.52E-01	3.47E-01	9.30E-02	0.93	8.06E+01	1.07E+03	4.06E+03	1.51E+03	1.09E+03	4.08E+03	5.13E-09
Gold (79)	Au-200	1.63E+00	3.17E-01	8.90E-01	1.40E+00	3.93E-01	0.897	7.53E+03	2.25E+04	1.16E+05	4.13E+04	2.62E+04	9.34E+04	1.16E-09
Gold (79)	Au-200m	1.13E+01	2.33E+00	6.68E+00	1.03E+01	2.31E+00	0.978	3.25E+02	1.28E+02	6.24E+02	2.18E+02	1.42E+02	6.29E+02	1.53E-10
Gold (79)	Au-201	2.89E-01	6.32E-02	1.73E-01	2.63E-01	1.05E-01	0.902	1.38E+04	2.32E+05	1.06E+06	3.86E+05	2.55E+05	6.36E+05	6.55E-09
Barium (56)	Ba-126	7.37E-01	1.64E-01	4.55E-01	6.83E-01	1.76E-01	0.94	3.77E+03	2.39E+04	1.07E+05	3.86E+04	2.58E+04	9.98E+04	1.55E-09
Barium (56)	Ba-128	2.67E-01	6.60E-02	1.75E-01	2.54E-01	7.91E-02	0.966	1.04E+02	1.77E+03	7.15E+03	2.70E+03	1.86E+03	5.97E+03	4.22E-09
Barium (56)	Ba-131	2.24E+00	4.90E-01	1.37E+00	2.05E+00	5.01E-01	0.905	2.14E+01	4.64E+01	2.12E+02	7.57E+01	5.06E+01	2.07E+02	5.50E-10
Barium (56)	Ba-131m	2.16E-01	6.88E-02	1.68E-01	2.14E-01	7.82E-02	0.954	2.49E+04	5.29E+05	1.66E+06	6.80E+05	5.34E+05	1.46E+06	5.39E-09
Barium (56)	Ba-133	1.82E+00	4.18E-01	1.15E+00	1.70E+00	4.35E-01	0.912	6.45E-02	2.73E+00	1.19E+01	4.30E+00	2.91E+00	1.14E+01	1.09E-08
Barium (56)	Ba-133m	2.50E-01	6.06E-02	1.62E-01	2.37E-01	6.97E-02	0.962	1.56E+02	2.84E+03	1.17E+04	4.38E+03	3.00E+03	1.02E+04	4.70E-09
Barium (56)	Ba-135m	2.16E-01	5.35E-02	1.42E-01	2.07E-01	6.28E-02	0.961	2.12E+02	4.46E+03	1.80E+04	6.80E+03	4.66E+03	1.54E+04	5.52E-09
Barium (56)	Ba-137m	3.38E+00	6.71E-01	1.92E+00	3.00E+00	6.76E-01	0.877	1.43E+05	2.11E+05	1.06E+06	3.71E+05	2.37E+05	1.05E+06	3.93E-10
Barium (56)	Ba-139	2.24E-01	6.68E-02	1.55E-01	2.13E-01	1.70E-01	0.909	4.40E+03	9.48E+04	3.18E+05	1.37E+05	9.98E+04	1.25E+05	5.81E-09
Barium (56)	Ba-140	9.60E-01	2.03E-01	5.73E-01	8.77E-01	2.22E-01	0.888	1.99E+01	1.02E+02	4.82E+02	1.71E+02	1.12E+02	4.42E+02	1.40E-09
Barium (56)	Ba-141	4.76E+00	9.57E-01	2.70E+00	4.20E+00	1.03E+00	0.894	1.99E+04	2.05E+04	1.02E+05	3.61E+04	2.33E+04	9.45E+04	2.82E-10
Barium (56)	Ba-142	6.04E+00	1.16E+00	3.32E+00	5.24E+00	1.18E+00	0.905	3.44E+04	2.75E+04	1.43E+05	5.01E+04	3.17E+04	1.41E+05	2.21E-10
Beryllium (4)	Be-10	1.00E-03	3.66E-04	7.85E-04	9.88E-04	3.98E-03	0.927	4.33E-07	4.71E+03	1.29E+04	6.02E+03	4.78E+03	1.19E+03	2.11E-01
Beryllium (4)	Be-7	2.69E-01	5.60E-02	1.59E-01	2.44E-01	5.51E-02	0.886	4.75E+00	8.81E+01	4.23E+02	1.48E+02	9.69E+01	4.30E+02	2.52E-10
Bismuth (83)	Bi-200	1.33E+01	2.67E+00	7.59E+00	1.18E+01	2.64E+00	0.924	1.00E+04	3.58E+03	1.78E+04	6.25E+03	4.03E+03	1.80E+04	1.39E-10
Bismuth (83)	Bi-201	7.55E+00	1.48E+00	4.20E+00	6.58E+00	1.49E+00	0.867	3.37E+03	2.26E+03	1.15E+04	4.06E+03	2.59E+03	1.14E+04	2.61E-10
Bismuth (83)	Bi-202	1.55E+01	3.00E+00	8.60E+00	1.35E+01	2.96E+00	0.951	3.64E+03	1.08E+03	5.58E+03	1.95E+03	1.24E+03	5.65E+03	1.16E-10
Bismuth (83)	Bi-203	1.44E+01	2.59E+00	7.48E+00	1.20E+01	2.54E+00	0.951	5.16E+02	1.65E+02	9.17E+02	3.18E+02	1.98E+02	9.35E+02	1.26E-10
Bismuth (83)	Bi-205	1.02E+01	1.84E+00	5.28E+00	8.50E+00	1.80E+00	0.962	1.65E+01	7.39E+00	4.10E+01	1.43E+01	8.85E+00	4.19E+01	1.78E-10
Bismuth (83)	Bi-206	1.90E+01	3.62E+00	1.04E+01	1.64E+01	3.57E+00	0.94	4.05E+01	9.92E+00	5.22E+01	1.82E+01	1.15E+01	5.29E+01	9.79E-11
Bismuth (83)	Bi-207	8.82E+00	1.70E+00	4.87E+00	7.67E+00	1.69E+00	0.865	1.82E-02	5.79E-01	3.00E+00	1.05E+00	6.67E-01	3.02E+00	1.28E-08
Bismuth (83)	Bi-210	5.45E-03	3.15E-03	4.53E-03	5.35E-03	4.10E-02	0.927	5.05E+01	4.38E+04	7.57E+04	5.26E+04	4.46E+04	5.82E+03	3.54E-07
Bismuth (83)	Bi-210m	1.27E+00	2.85E-01	8.09E-01	1.20E+00	2.80E-01	0.906	2.31E-07	3.80E+00	1.69E+01	5.97E+00	4.03E+00	1.73E+01	6.70E-03
Bismuth (83)	Bi-210m+D	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	0.906	2.31E-07	3.76E+00	1.65E+01	5.89E+00	3.99E+00	1.38E+01	6.64E-03
Bismuth (83)	Bi-210m+E	1.28E+00	2.93E-01	8.21E-01	1.21E+00	3.51E-01	0.906							
Bismuth (83)	Bi-211	2.37E-01	5.22E-02	1.48E-01	2.22E-01	5.13E-02	0.903	1.70E+05	3.49E+06	1.58E+07	5.58E+06	3.72E+06	1.61E+07	8.38E-09
Bismuth (83)	Bi-212	1.11E+00	2.14E-01	6.02E-01	9.55E-01	2.63E-01	0.991	6.02E+03	2.39E+04	1.24E+05	4.41E+04	2.78E+04	1.01E+05	1.64E-09
Bismuth (83)	Bi-212+D	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	0.896	6.02E+03	3.28E+03	1.97E+04	6.80E+03	4.10E+03	1.95E+04	2.25E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Bismuth (83)	Bi-212+E	8.95E+00	1.49E+00	4.33E+00	7.18E+00	1.51E+00	0.896	6.02E+03	3.28E+03	1.97E+04	6.80E+03	4.10E+03	1.95E+04	2.25E-10
Bismuth (83)	Bi-213	7.16E-01	1.54E-01	4.33E-01	6.55E-01	1.96E-01	1	7.98E+03	4.88E+04	2.27E+05	8.08E+04	5.34E+04	1.78E+05	2.53E-09
Bismuth (83)	Bi-213+D	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	0.968	7.98E+03	3.68E+04	1.78E+05	6.33E+04	4.12E+04	1.45E+05	1.91E-09
Bismuth (83)	Bi-213+E	9.81E-01	2.03E-01	5.71E-01	8.77E-01	2.49E-01	0.968	7.98E+03	3.68E+04	1.78E+05	6.33E+04	4.12E+04	1.45E+05	1.91E-09
Bismuth (83)	Bi-214	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	0.925	1.83E+04	9.29E+03	5.22E+04	1.81E+04	1.12E+04	5.16E+04	2.11E-10
Bismuth (83)	Bi-214+D	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.68E+00	0.925	1.83E+04	9.29E+03	5.22E+04	1.81E+04	1.12E+04	5.16E+04	2.11E-10
Bismuth (83)	Bi-214+E	9.33E+00	1.66E+00	4.79E+00	7.76E+00	1.73E+00	0.925	1.83E+04	9.29E+03	5.21E+04	1.81E+04	1.12E+04	5.02E+04	2.11E-10
Berkelium (97)	Bk-245	9.03E-01	2.37E-01	6.38E-01	8.78E-01	2.40E-01	0.998	5.12E+01	2.49E+02	9.49E+02	3.52E+02	2.56E+02	9.35E+02	2.31E-09
Berkelium (97)	Bk-246	5.32E+00	1.04E+00	2.97E+00	4.64E+00	1.04E+00	0.88	1.38E+02	1.29E+02	6.60E+02	2.32E+02	1.48E+02	6.64E+02	4.47E-10
Berkelium (97)	Bk-247	3.95E-01	1.08E-01	2.83E-01	3.84E-01	1.10E-01	0.928	5.02E-04	1.19E+01	4.37E+01	1.67E+01	1.23E+01	4.29E+01	1.14E-05
Berkelium (97)	Bk-249	3.75E-06	2.31E-06	3.47E-06	3.73E-06	6.23E-06	0.911	7.90E-01	1.86E+06	3.01E+06	2.01E+06	1.86E+06	1.12E+06	1.13E-03
Berkelium (97)	Bk-250	5.24E+00	9.83E-01	2.83E+00	4.51E+00	9.84E-01	0.851	1.88E+03	1.85E+03	9.87E+03	3.42E+03	2.15E+03	9.86E+03	4.76E-10
Bromine (35)	Br-74	2.89E+01	4.83E+00	1.40E+01	2.31E+01	4.73E+00	0.848	1.44E+04	2.57E+03	1.54E+04	5.30E+03	3.22E+03	1.57E+04	2.57E-11
Bromine (35)	Br-74m	2.50E+01	4.48E+00	1.29E+01	2.09E+01	4.46E+00	0.867	8.78E+03	1.77E+03	9.91E+03	3.44E+03	2.12E+03	9.95E+03	2.90E-11
Bromine (35)	Br-75	6.56E+00	1.38E+00	3.92E+00	5.99E+00	1.42E+00	0.884	3.72E+03	2.81E+03	1.34E+04	4.70E+03	3.08E+03	1.29E+04	1.10E-10
Bromine (35)	Br-76	1.61E+01	2.87E+00	8.32E+00	1.34E+01	2.85E+00	0.884	3.75E+02	1.15E+02	6.46E+02	2.23E+02	1.38E+02	6.52E+02	4.53E-11
Bromine (35)	Br-77	1.69E+00	3.54E-01	1.01E+00	1.54E+00	3.49E-01	0.922	1.08E+02	3.05E+02	1.45E+03	5.09E+02	3.34E+02	1.48E+03	4.21E-10
Bromine (35)	Br-80	4.48E-01	9.19E-02	2.59E-01	4.01E-01	1.21E-01	0.888	2.09E+04	2.31E+05	1.12E+06	3.98E+05	2.58E+05	8.51E+05	1.71E-09
Bromine (35)	Br-80m	8.88E-03	6.86E-03	8.86E-03	8.88E-03	1.60E-02	0.995	1.37E+03	6.81E+05	8.81E+05	6.82E+05	6.81E+05	3.78E+05	7.70E-08
Bromine (35)	Br-82	1.54E+01	2.95E+00	8.49E+00	1.34E+01	2.89E+00	0.865	1.72E+02	5.64E+01	2.96E+02	1.03E+02	6.48E+01	3.01E+02	5.22E-11
Bromine (35)	Br-83	4.44E-02	1.01E-02	2.67E-02	4.03E-02	3.34E-02	0.881	2.54E+03	2.84E+05	1.25E+06	4.74E+05	3.13E+05	3.78E+05	1.80E-08
Bromine (35)	Br-84	1.16E+01	1.94E+00	5.58E+00	9.25E+00	1.95E+00	0.849	1.15E+04	5.09E+03	3.05E+04	1.06E+04	6.39E+03	3.03E+04	7.24E-11
Carbon (6)	C-11	5.60E+00	1.16E+00	3.30E+00	5.07E+00	1.18E+00	0.883	1.79E+04	1.58E+04	7.65E+04	2.69E+04	1.75E+04	7.52E+04	1.89E-11
Carbon (6)	C-14	1.10E-05	6.43E-06	1.03E-05	1.10E-05	1.48E-05	0.927	1.21E-04	4.31E+05	7.34E+05	4.61E+05	4.31E+05	3.19E+05	9.68E-02
Calcium (20)	Ca-41	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	4.95E-06						
Calcium (20)	Ca-45	5.32E-05	2.48E-05	4.66E-05	5.32E-05	4.40E-05	1	1.55E+00	1.62E+05	3.48E+05	1.85E+05	1.62E+05	1.96E+05	9.13E-06
Calcium (20)	Ca-47	6.51E+00	1.17E+00	3.38E+00	5.46E+00	1.17E+00	0.836	5.58E+01	4.49E+01	2.50E+02	8.67E+01	5.35E+01	2.51E+02	7.34E-11
Calcium (20)	Ca-49	2.16E+01	3.21E+00	9.47E+00	1.62E+01	3.12E+00	0.778	4.18E+04	1.09E+04	7.33E+04	2.48E+04	1.45E+04	7.55E+04	2.47E-11
Cadmium (48)	Cd-104	1.22E+00	2.63E-01	7.27E-01	1.10E+00	2.75E-01	0.932	6.31E+03	2.43E+04	1.13E+05	4.08E+04	2.70E+04	1.08E+05	7.76E-10
Cadmium (48)	Cd-107	4.49E-02	1.32E-02	3.02E-02	4.20E-02	2.72E-02	0.975	9.35E+02	9.35E+04	3.19E+05	1.39E+05	1.00E+05	1.55E+05	2.08E-08
Cadmium (48)	Cd-109	1.22E-02	6.10E-03	1.06E-02	1.22E-02	1.94E-02	0.996	5.45E-01	4.68E+02	9.35E+02	5.39E+02	4.67E+02	2.94E+02	1.81E-07
Cadmium (48)	Cd-113	9.77E-05	4.18E-05	8.30E-05	9.74E-05	6.77E-05	0.927	7.45E-17	3.25E+04	7.59E+04	3.82E+04	3.26E+04	4.69E+04	9.55E+10
Cadmium (48)	Cd-113m	6.01E-04	2.24E-04	4.74E-04	5.93E-04	2.07E-03	0.927	5.10E-02	8.07E+03	2.17E+04	1.02E+04	8.17E+03	2.35E+03	3.47E-05
Cadmium (48)	Cd-115	1.27E+00	2.65E-01	7.52E-01	1.16E+00	2.84E-01	0.886	1.14E+02	4.41E+02	2.12E+03	7.47E+02	4.85E+02	1.98E+03	8.66E-10
Cadmium (48)	Cd-115m	1.47E-01	3.41E-02	8.36E-02	1.28E-01	1.08E-01	0.843	5.67E+00	2.01E+02	8.66E+02	3.54E+02	2.31E+02	2.74E+02	7.91E-09
Cadmium (48)	Cd-117	6.51E+00	1.20E+00	3.47E+00	5.54E+00	1.21E+00	0.902	2.44E+03	1.82E+03	9.86E+03	3.41E+03	2.14E+03	9.75E+03	1.69E-10
Cadmium (48)	Cd-117m	1.28E+01	2.22E+00	6.43E+00	1.05E+01	2.16E+00	0.879	1.81E+03	7.04E+02	4.06E+03	1.40E+03	8.56E+02	4.17E+03	8.84E-11
Cerium (58)	Ce-134	1.26E-02	1.03E-02	1.26E-02	1.26E-02	2.51E-02	0.976	8.43E+01	3.01E+04	3.67E+04	3.01E+04	3.01E+04	1.51E+04	9.27E-08
Cerium (58)	Ce-135	9.74E+00	2.00E+00	5.73E+00	8.80E+00	1.98E+00	0.91	3.45E+02	1.71E+02	8.32E+02	2.90E+02	1.89E+02	8.37E+02	1.30E-10
Cerium (58)	Ce-137	5.84E-02	2.00E-02	3.99E-02	5.43E-02	3.48E-02	0.97	6.75E+02	5.22E+04	1.53E+05	7.63E+04	5.61E+04	8.76E+04	2.06E-08
Cerium (58)	Ce-137m	1.76E-01	4.51E-02	1.15E-01	1.66E-01	5.51E-02	0.944	1.76E+02	4.65E+03	1.81E+04	7.10E+03	4.92E+03	1.49E+04	7.00E-09
Cerium (58)	Ce-139	5.78E-01	1.54E-01	4.08E-01	5.67E-01	1.67E-01	0.949	1.84E+00	1.74E+01	6.55E+01	2.47E+01	1.78E+01	6.04E+01	2.56E-09
Cerium (58)	Ce-141	2.89E-01	7.83E-02	2.09E-01	2.85E-01	8.09E-02	0.938	7.78E+00	1.26E+02	4.64E+02	1.74E+02	1.27E+02	4.50E+02	4.42E-09
Cerium (58)	Ce-143	1.38E+00	3.04E-01	8.39E-01	1.26E+00	3.51E-01	0.904	1.84E+02	6.47E+02	2.93E+03	1.06E+03	7.05E+02	2.54E+03	9.75E-10
Cerium (58)	Ce-144	6.45E-02	1.94E-02	4.87E-02	6.40E-02	2.15E-02	0.935	8.90E-01	1.10E+02	3.65E+02	1.45E+02	1.11E+02	3.29E+02	3.44E-08
Cerium (58)	Ce-144+D	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	0.881	8.90E-01	2.26E+01	8.25E+01	3.73E+01	2.58E+01	3.55E+01	7.10E-09
Cerium (58)	Ce-144+E	3.32E-01	9.10E-02	2.01E-01	2.91E-01	2.11E-01	0.881	8.90E-01	2.26E+01	8.25E+01	3.73E+01	2.58E+01	3.55E+01	7.10E-09
Californium (98)	Cf-244	1.27E-04	1.24E-04	1.27E-04	1.27E-04	9.56E-04	0.999	1.88E+04	6.49E+08	6.64E+08	6.49E+08	6.49E+08	8.61E+07	1.64E-05
Californium (98)	Cf-246	1.45E-04	1.02E-04	1.32E-04	1.45E-04	6.69E-04	0.998	1.70E+02	5.14E+06	7.29E+06	5.67E+06	5.14E+06	1.12E+06	1.44E-05
Californium (98)	Cf-248	8.75E-05	8.52E-05	8.75E-05	8.75E-05	6.51E-04	0.999	7.58E-01	7.15E+04	7.34E+04	7.15E+04	7.15E+04	9.61E+03	4.54E-05
Californium (98)	Cf-249	1.72E+00	3.73E-01	1.06E+00	1.59E+00	3.68E-01	0.962	1.98E-03	2.65E+00	1.22E+01	4.30E+00	2.86E+00	1.24E+01	6.48E-07
Californium (98)	Cf-250	8.30E-05	8.09E-05	8.30E-05	8.30E-05	6.21E-04	0.999	5.30E-02	5.42E+04	5.56E+04	5.42E+04	5.42E+04	7.25E+03	4.97E-04
Californium (98)	Cf-251	4.79E-01	1.28E-01	3.43E-01	4.70E-01	1.32E-01	0.955	7.72E-04	9.57E+00	3.59E+01	1.34E+01	9.76E+00	3.48E+01	6.04E-06
Californium (98)	Cf-252	2.95E+00	5.13E-01	1.49E+00	2.42E+00	4.97E-01	1.69	2.63E-01	1.00E+00	5.75E+00	1.98E+00	1.22E+00	5.93E+00	1.86E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Californium (98)	Cf-253	6.53E-05	3.00E-05	5.67E-05	6.51E-05	6.03E-05	0.998	1.42E+01	9.55E+05	2.08E+06	1.10E+06	9.58E+05	1.03E+06	3.30E-05
Californium (98)	Cf-254	1.08E+02	1.88E+01	5.45E+01	8.86E+01	1.81E+01	1.68	4.18E+00	1.03E-01	5.88E-01	2.03E-01	1.25E-01	6.12E-01	1.21E-11
Chlorine (17)	Cl-36	2.48E-03	9.08E-04	1.81E-03	2.39E-03	1.31E-02	0.883	2.30E-06	2.00E+03	5.46E+03	2.74E+03	2.08E+03	3.80E+02	6.07E-02
Chlorine (17)	Cl-38	9.85E+00	1.64E+00	4.72E+00	7.83E+00	1.67E+00	0.807	9.79E+03	5.40E+03	3.24E+04	1.13E+04	6.78E+03	3.18E+04	4.06E-11
Chlorine (17)	Cl-39	8.82E+00	1.59E+00	4.59E+00	7.39E+00	1.65E+00	0.834	6.55E+03	3.90E+03	2.16E+04	7.50E+03	4.66E+03	2.09E+04	4.51E-11
Curium (96)	Cm-238	2.44E-01	7.37E-02	1.88E-01	2.42E-01	7.66E-02	0.958	2.53E+03	4.73E+04	1.57E+05	6.14E+04	4.77E+04	1.51E+05	8.64E-09
Curium (96)	Cm-240	1.12E-04	1.06E-04	1.12E-04	1.12E-04	8.97E-04	0.999	9.37E+00	3.66E+05	3.86E+05	3.66E+05	3.66E+05	4.58E+04	1.82E-05
Curium (96)	Cm-241	2.44E+00	5.41E-01	1.51E+00	2.26E+00	5.43E-01	0.999	7.71E+00	1.38E+01	6.25E+01	2.23E+01	1.50E+01	6.23E+01	8.40E-10
Curium (96)	Cm-242	1.28E-04	1.02E-04	1.19E-04	1.27E-04	8.19E-04	0.999	1.55E+00	6.73E+04	8.45E+04	7.26E+04	6.80E+04	1.05E+04	2.03E-05
Curium (96)	Cm-243	5.33E-01	1.35E-01	3.69E-01	5.17E-01	1.38E-01	0.949	2.43E-02	8.76E+00	3.45E+01	1.27E+01	9.04E+00	3.39E+01	1.70E-07
Curium (96)	Cm-244	8.93E-05	8.62E-05	8.93E-05	8.93E-05	7.52E-04	0.999	3.83E-02	5.00E+04	5.19E+04	5.00E+04	5.00E+04	5.95E+03	6.19E-04
Curium (96)	Cm-245	3.06E-01	8.99E-02	2.33E-01	3.04E-01	9.39E-02	0.952	8.15E-05	1.50E+01	5.12E+01	1.97E+01	1.51E+01	4.90E+01	8.77E-05
Curium (96)	Cm-246	8.28E-05	7.89E-05	8.26E-05	8.28E-05	6.72E-04	0.999	1.47E-04	5.30E+04	5.56E+04	5.31E+04	5.30E+04	6.52E+03	1.73E-01
Curium (96)	Cm-247	1.65E+00	3.54E-01	1.01E+00	1.53E+00	3.49E-01	0.925	4.44E-08	2.87E+00	1.34E+01	4.69E+00	3.10E+00	1.36E+01	3.09E-02
Curium (96)	Cm-247+D	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	0.925	4.44E-08	2.75E+00	1.25E+01	4.45E+00	2.96E+00	1.26E+01	2.96E-02
Curium (96)	Cm-247+E	1.72E+00	3.79E-01	1.06E+00	1.60E+00	3.76E-01	0.925							
Curium (96)	Cm-248	8.47E+00	1.47E+00	4.27E+00	6.96E+00	1.42E+00	1.68	1.99E-06	3.08E-01	1.77E+00	6.10E-01	3.75E-01	1.83E+00	7.44E-05
Curium (96)	Cm-249	1.07E-01	2.26E-02	6.32E-02	9.70E-02	3.87E-02	0.909	5.68E+03	2.55E+05	1.21E+06	4.33E+05	2.82E+05	7.06E+05	2.17E-08
Curium (96)	Cm-250	6.25E+01	1.09E+01	3.15E+01	5.13E+01	1.05E+01	1.68	7.14E-05	4.17E-02	2.40E-01	8.27E-02	5.08E-02	2.48E-01	2.83E-07
Curium (96)	Cm-250+D	1.63E+00					1.68	7.14E-05	1.60E+00					1.08E-05
Curium (96)	Cm-250+E	6.42E+01	1.12E+01	3.25E+01	5.28E+01	1.08E+01	1.68	7.14E-05	4.06E-02	2.33E-01	8.03E-02	4.94E-02	2.40E-01	2.76E-07
Cobalt (27)	Co-55	1.15E+01	2.24E+00	6.42E+00	1.01E+01	2.25E+00	0.848	3.46E+02	1.55E+02	7.99E+02	2.79E+02	1.77E+02	7.94E+02	4.78E-11
Cobalt (27)	Co-56	2.24E+01	3.88E+00	1.12E+01	1.83E+01	3.77E+00	0.823	3.21E+00	7.96E-01	4.59E+00	1.58E+00	9.71E-01	4.72E+00	2.69E-11
Cobalt (27)	Co-57	4.55E-01	1.28E-01	3.38E-01	4.49E-01	1.26E-01	0.971	9.34E-01	1.53E+01	5.43E+01	2.06E+01	1.54E+01	5.51E+01	1.81E-09
Cobalt (27)	Co-58	5.60E+00	1.09E+00	3.13E+00	4.92E+00	1.08E+00	0.863	3.57E+00	3.33E+00	1.70E+01	5.95E+00	3.79E+00	1.73E+01	1.05E-10
Cobalt (27)	Co-58m	1.78E-06	1.74E-06	1.78E-06	1.78E-06	7.76E-06	0.994	6.63E+02	1.65E+09	1.68E+09	1.64E+09	1.65E+09	3.77E+08	2.79E-04
Cobalt (27)	Co-60	1.54E+01	2.74E+00	7.96E+00	1.29E+01	2.68E+00	0.834	1.31E-01	3.64E-01	2.04E+00	7.04E-01	4.35E-01	2.09E+00	3.23E-10
Cobalt (27)	Co-60m	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.11E-03	0.925	3.48E+04	7.12E+06	3.46E+07	1.30E+07	8.41E+06	3.22E+07	2.38E-08
Cobalt (27)	Co-61	3.17E-01	9.25E-02	2.18E-01	2.93E-01	1.51E-01	0.938	3.68E+03	5.42E+04	1.86E+05	7.87E+04	5.87E+04	1.14E+05	1.74E-09
Cobalt (27)	Co-62m	1.68E+01	2.97E+00	8.58E+00	1.39E+01	3.01E+00	0.828	2.62E+04	8.25E+03	4.67E+04	1.61E+04	9.94E+03	4.60E+04	3.79E-11
Chromium (24)	Cr-48	2.05E+00	4.81E-01	1.34E+00	1.94E+00	4.71E-01	0.913	2.64E+02	6.18E+02	2.64E+03	9.46E+02	6.54E+02	2.69E+03	2.18E-10
Chromium (24)	Cr-49	5.58E+00	1.19E+00	3.36E+00	5.09E+00	1.25E+00	0.892	8.65E+03	7.62E+03	3.57E+04	1.27E+04	8.35E+03	3.40E+04	8.37E-11
Chromium (24)	Cr-51	1.62E-01	3.54E-02	1.01E-01	1.52E-01	3.47E-02	0.903	9.13E+00	2.74E+02	1.25E+03	4.37E+02	2.92E+02	1.28E+03	2.97E-09
Cesium (55)	Cs-125	3.67E+00	7.59E-01	2.14E+00	3.32E+00	7.99E-01	0.878	8.09E+03	1.10E+04	5.32E+04	1.88E+04	1.22E+04	5.05E+04	3.29E-10
Cesium (55)	Cs-126	6.01E+00	1.28E+00	3.58E+00	5.46E+00	1.38E+00	0.887	2.22E+05	1.83E+05	8.56E+05	3.06E+05	2.01E+05	7.96E+05	2.01E-10
Cesium (55)	Cs-127	2.13E+00	4.53E-01	1.28E+00	1.94E+00	4.61E-01	0.898	9.71E+02	2.23E+03	1.05E+04	3.71E+03	2.44E+03	1.03E+04	5.65E-10
Cesium (55)	Cs-128	4.96E+00	1.04E+00	2.93E+00	4.49E+00	1.11E+00	0.885	9.34E+04	9.32E+04	4.46E+05	1.58E+05	1.03E+05	4.15E+05	2.48E-10
Cesium (55)	Cs-129	1.33E+00	2.91E-01	8.11E-01	1.23E+00	3.06E-01	0.898	1.89E+02	6.97E+02	3.17E+03	1.14E+03	7.54E+02	3.02E+03	9.21E-10
Cesium (55)	Cs-130	2.80E+00	5.82E-01	1.64E+00	2.54E+00	6.31E-01	0.89	1.22E+04	2.14E+04	1.03E+05	3.65E+04	2.36E+04	9.50E+04	4.44E-10
Cesium (55)	Cs-131	7.83E-03	7.03E-03	7.83E-03	7.83E-03	2.09E-02	0.983	2.61E+01	1.48E+04	1.65E+04	1.48E+04	1.48E+04	5.57E+03	1.45E-07
Cesium (55)	Cs-132	3.88E+00	7.78E-01	2.22E+00	3.45E+00	7.81E-01	0.871	3.91E+01	5.06E+01	2.53E+02	8.85E+01	5.69E+01	2.52E+02	3.32E-10
Cesium (55)	Cs-134	8.90E+00	1.75E+00	5.02E+00	7.85E+00	1.73E+00	0.865	3.36E-01	6.70E-01	3.40E+00	1.19E+00	7.59E-01	3.45E+00	5.19E-10
Cesium (55)	Cs-134m	6.49E-02	2.05E-02	4.92E-02	6.43E-02	2.63E-02	0.971	2.09E+03	1.45E+05	4.60E+05	1.92E+05	1.47E+05	3.60E+05	1.81E-08
Cesium (55)	Cs-135	3.21E-05	1.62E-05	2.89E-05	3.21E-05	3.14E-05	0.927	3.01E-07	1.47E+05	2.91E+05	1.63E+05	1.47E+05	1.51E+05	1.28E+02
Cesium (55)	Cs-135m	9.19E+00	1.78E+00	5.11E+00	8.04E+00	1.76E+00	0.861	6.87E+03	3.80E+03	1.96E+04	6.84E+03	4.35E+03	1.98E+04	1.45E-10
Cesium (55)	Cs-136	1.25E+01	2.41E+00	6.90E+00	1.09E+01	2.37E+00	0.856	1.93E+01	7.90E+00	4.11E+01	1.43E+01	9.07E+00	4.17E+01	1.08E-10
Cesium (55)	Cs-137	8.34E-04	3.86E-04	6.75E-04	8.21E-04	3.49E-03	0.927	2.31E-02	5.73E+03	1.24E+04	7.08E+03	5.82E+03	1.37E+03	6.60E-05
Cesium (55)	Cs-137+D	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	0.877	2.31E-02	1.58E+00	7.94E+00	2.78E+00	1.78E+00	7.86E+00	1.82E-08
Cesium (55)	Cs-137+E	3.19E+00	6.36E-01	1.82E+00	2.83E+00	6.43E-01	0.877	2.31E-02	1.58E+00	7.94E+00	2.78E+00	1.78E+00	7.86E+00	1.82E-08
Cesium (55)	Cs-138	1.48E+01	2.59E+00	7.50E+00	1.22E+01	2.64E+00	0.885	1.13E+04	3.79E+03	2.16E+04	7.47E+03	4.60E+03	2.12E+04	8.97E-11
Copper (29)	Cu-60	2.39E+01	4.27E+00	1.23E+01	2.00E+01	4.25E+00	0.832	1.57E+04	3.46E+03	1.94E+04	6.69E+03	4.14E+03	1.95E+04	2.57E-11
Copper (29)	Cu-61	4.57E+00	9.38E-01	2.67E+00	4.12E+00	9.58E-01	0.851	1.78E+03	2.01E+03	9.77E+03	3.44E+03	2.22E+03	9.57E+03	1.33E-10
Copper (29)	Cu-62	5.60E+00	1.18E+00	3.30E+00	5.07E+00	1.30E+00	0.882	3.74E+04	3.32E+04	1.57E+05	5.63E+04	3.66E+04	1.43E+05	1.07E-10
Copper (29)	Cu-64	1.04E+00	2.14E-01	6.12E-01	9.44E-01	2.14E-01	0.882	4.78E+02	2.27E+03	1.11E+04	3.88E+03	2.52E+03	1.11E+04	5.90E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Copper (29)	Cu-66	5.58E-01	1.24E-01	3.11E-01	4.81E-01	2.37E-01	0.846	7.14E+04	6.63E+05	2.99E+06	1.19E+06	7.68E+05	1.56E+06	1.19E-09
Copper (29)	Cu-67	4.87E-01	1.24E-01	3.39E-01	4.74E-01	1.23E-01	0.924	9.81E+01	9.56E+02	3.75E+03	1.37E+03	9.82E+02	3.80E+03	1.27E-09
Dysprosium (66)	Dy-155	3.06E+00	6.23E-01	1.75E+00	2.70E+00	6.28E-01	0.916	6.07E+02	9.49E+02	4.66E+03	1.66E+03	1.07E+03	4.62E+03	4.70E-10
Dysprosium (66)	Dy-157	1.67E+00	3.82E-01	1.06E+00	1.57E+00	3.89E-01	0.904	7.49E+02	2.17E+03	9.50E+03	3.43E+03	2.32E+03	9.34E+03	8.83E-10
Dysprosium (66)	Dy-159	4.46E-02	2.82E-02	4.38E-02	4.46E-02	4.52E-02	0.96	1.75E+00	2.17E+02	3.43E+02	2.21E+02	2.17E+02	2.14E+02	3.82E-08
Dysprosium (66)	Dy-165	1.23E-01	3.13E-02	7.76E-02	1.12E-01	8.06E-02	0.94	2.60E+03	9.86E+04	3.87E+05	1.56E+05	1.08E+05	1.50E+05	1.21E-08
Dysprosium (66)	Dy-166	7.93E-02	3.19E-02	6.51E-02	7.76E-02	4.10E-02	0.944	7.44E+01	4.35E+03	1.08E+04	5.30E+03	4.45E+03	8.43E+03	1.89E-08
Erbium (68)	Er-161	5.11E+00	1.00E+00	2.83E+00	4.44E+00	9.98E-01	0.942	1.87E+03	1.70E+03	8.72E+03	3.07E+03	1.96E+03	8.73E+03	2.84E-10
Erbium (68)	Er-165	4.21E-02	2.54E-02	4.10E-02	4.21E-02	3.78E-02	0.957	5.86E+02	6.36E+04	1.06E+05	6.54E+04	6.36E+04	7.09E+04	3.48E-08
Erbium (68)	Er-169	1.20E-04	4.98E-05	1.01E-04	1.20E-04	7.88E-05	0.927	2.72E+01	1.07E+06	2.58E+06	1.27E+06	1.07E+06	1.63E+06	1.29E-05
Erbium (68)	Er-171	1.81E+00	4.18E-01	1.16E+00	1.70E+00	4.49E-01	0.905	8.07E+02	2.16E+03	9.35E+03	3.37E+03	2.30E+03	8.70E+03	8.89E-10
Erbium (68)	Er-172	2.76E+00	5.82E-01	1.64E+00	2.50E+00	5.79E-01	0.928	1.23E+02	2.11E+02	9.99E+02	3.55E+02	2.33E+02	1.00E+03	5.71E-10
Einsteinium (99)	Es-250	2.11E+00	4.27E-01	1.20E+00	1.86E+00	4.26E-01	0.888	2.89E+03	6.77E+03	3.34E+04	1.18E+04	7.68E+03	3.35E+04	1.14E-09
Einsteinium (99)	Es-251	3.26E-01	9.38E-02	2.46E-01	3.25E-01	9.79E-02	0.948	1.84E+02	2.60E+03	9.06E+03	3.45E+03	2.62E+03	8.68E+03	6.89E-09
Einsteinium (99)	Es-253	1.61E-03	4.14E-04	1.04E-03	1.50E-03	7.74E-04	0.995	1.24E+01	3.38E+04	1.31E+05	5.25E+04	3.62E+04	7.03E+04	1.34E-06
Einsteinium (99)	Es-254	1.13E-02	4.16E-03	8.47E-03	1.09E-02	1.14E-02	0.995	9.17E-01	5.94E+02	1.62E+03	7.94E+02	6.16E+02	5.91E+02	3.19E-07
Einsteinium (99)	Es-254+D	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.95E-01	0.853	9.17E-01	1.49E+00	7.95E+00	2.77E+00	1.73E+00	7.88E+00	8.01E-10
Einsteinium (99)	Es-254+E	5.26E+00	9.87E-01	2.83E+00	4.53E+00	9.97E-01	0.853	9.17E-01	1.49E+00	7.95E+00	2.77E+00	1.73E+00	7.87E+00	8.01E-10
Einsteinium (99)	Es-254m	2.63E+00	5.24E-01	1.50E+00	2.33E+00	5.34E-01	0.995	1.54E+02	2.59E+02	1.30E+03	4.53E+02	2.92E+02	1.27E+03	8.25E-10
Europium (63)	Eu-145	8.65E+00	1.59E+00	4.55E+00	7.31E+00	1.56E+00	0.875	4.26E+01	2.46E+01	1.34E+02	4.68E+01	2.92E+01	1.36E+02	1.63E-10
Europium (63)	Eu-146	1.45E+01	2.78E+00	7.96E+00	1.26E+01	2.74E+00	0.871	5.49E+01	1.90E+01	9.93E+01	3.46E+01	2.19E+01	1.01E+02	9.82E-11
Europium (63)	Eu-147	2.56E+00	5.30E-01	1.47E+00	2.28E+00	5.39E-01	0.866	1.05E+01	2.09E+01	1.01E+02	3.62E+01	2.34E+01	9.89E+01	5.65E-10
Europium (63)	Eu-148	1.23E+01	2.42E+00	6.92E+00	1.09E+01	2.40E+00	0.914	4.64E+00	1.82E+00	9.26E+00	3.25E+00	2.07E+00	9.34E+00	1.13E-10
Europium (63)	Eu-149	1.83E-01	5.20E-02	1.23E-01	1.73E-01	6.61E-02	0.924	2.72E+00	7.53E+01	2.65E+02	1.12E+02	7.99E+01	2.09E+02	8.01E-09
Europium (63)	Eu-150	8.15E+00	1.66E+00	4.74E+00	7.31E+00	1.66E+00	0.901	2.03E-02	6.03E-01	2.95E+00	1.04E+00	6.72E-01	2.96E+00	8.65E-09
Europium (63)	Eu-150m	2.46E-01	5.24E-02	1.45E-01	2.20E-01	7.91E-02	0.856	4.81E+02	1.00E+04	4.70E+04	1.70E+04	1.12E+04	3.11E+04	6.05E-09
Europium (63)	Eu-152	6.60E+00	1.26E+00	3.60E+00	5.69E+00	1.26E+00	0.919	5.20E-02	7.41E-01	3.88E+00	1.36E+00	8.60E-01	3.88E+00	4.20E-09
Europium (63)	Eu-152m	1.66E+00	3.30E-01	9.23E-01	1.45E+00	3.91E-01	0.91	6.51E+02	1.89E+03	9.50E+03	3.40E+03	2.17E+03	8.02E+03	8.55E-10
Europium (63)	Eu-154	7.25E+00	1.37E+00	3.92E+00	6.23E+00	1.37E+00	0.935	7.88E-02	6.71E-01	3.56E+00	1.24E+00	7.82E-01	3.57E+00	2.55E-09
Europium (63)	Eu-155	1.62E-01	5.63E-02	1.32E-01	1.62E-01	6.24E-02	0.941	1.40E-01	3.09E+01	8.85E+01	3.79E+01	3.09E+01	7.99E+01	6.65E-08
Europium (63)	Eu-156	8.21E+00	1.45E+00	4.20E+00	6.81E+00	1.45E+00	0.897	1.67E+01	9.91E+00	5.61E+01	1.94E+01	1.19E+01	5.62E+01	1.80E-10
Europium (63)	Eu-157	1.22E+00	2.78E-01	7.50E-01	1.12E+00	3.22E-01	0.895	4.01E+02	1.61E+03	7.06E+03	2.62E+03	1.75E+03	6.09E+03	1.23E-09
Europium (63)	Eu-158	6.30E+00	1.19E+00	3.38E+00	5.37E+00	1.26E+00	0.856	7.94E+03	6.44E+03	3.42E+04	1.20E+04	7.56E+03	3.22E+04	2.49E-10
Fluorine (9)	F-18	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.15E+00	0.883	3.32E+03	2.93E+03	1.42E+04	4.99E+03	3.23E+03	1.44E+04	3.09E-11
Iron (26)	Fe-52	3.86E+00	8.32E-01	2.35E+00	3.56E+00	8.30E-01	0.896	7.34E+02	9.29E+02	4.31E+03	1.53E+03	1.01E+03	4.32E+03	1.28E-10
Iron (26)	Fe-55	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	2.57E-01						
Iron (26)	Fe-59	7.24E+00	1.31E+00	3.79E+00	6.10E+00	1.28E+00	0.839	5.68E+00	4.11E+00	2.27E+01	7.86E+00	4.88E+00	2.32E+01	8.29E-11
Iron (26)	Fe-60	9.03E-06	5.58E-06	8.58E-06	9.03E-06	1.37E-05	0.927	6.93E-06	5.23E+05	8.47E+05	5.51E+05	5.23E+05	3.46E+05	8.79E+00
Iron (26)	Fe-60+D	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	0.925	6.93E-06	2.05E+02	9.96E+02	3.72E+02	2.42E+02	9.24E+02	3.44E-03
Iron (26)	Fe-60+E	2.31E-02	4.76E-03	1.27E-02	1.96E-02	5.12E-03	0.925	6.93E-06	2.05E+02	9.96E+02	3.72E+02	2.42E+02	9.24E+02	3.44E-03
Fermium (100)	Fm-252	9.42E-05	9.25E-05	9.42E-05	9.42E-05	6.31E-04	0.998	2.67E+02	1.25E+07	1.27E+07	1.25E+07	1.25E+07	1.86E+06	2.28E-05
Fermium (100)	Fm-253	2.87E-01	8.04E-02	2.13E-01	2.83E-01	8.33E-02	0.996	8.43E+01	1.29E+03	4.61E+03	1.74E+03	1.31E+03	4.45E+03	7.52E-09
Fermium (100)	Fm-254	1.88E-04	1.26E-04	1.70E-04	1.88E-04	6.99E-04	0.997	1.87E+03	4.37E+07	6.52E+07	4.84E+07	4.37E+07	1.18E+07	1.15E-05
Fermium (100)	Fm-255	5.22E-03	2.31E-03	4.40E-03	5.18E-03	7.34E-03	0.991	3.02E+02	2.56E+05	5.78E+05	3.04E+05	2.58E+05	1.82E+05	4.19E-07
Fermium (100)	Fm-257	3.90E-01	1.06E-01	2.83E-01	3.84E-01	1.11E-01	0.939	2.52E+00	3.28E+01	1.20E+02	4.50E+01	3.32E+01	1.15E+02	6.49E-09
Francium (87)	Fr-219	1.81E-02	3.92E-03	1.11E-02	1.67E-02	3.85E-03	0.897	1.04E+09	2.81E+11	1.30E+12	4.59E+11	3.04E+11	1.32E+12	1.15E-07
Francium (87)	Fr-220	4.14E-02	1.12E-02	3.00E-02	4.07E-02	1.15E-02	0.968	7.98E+05	8.72E+07	3.21E+08	1.20E+08	8.88E+07	3.13E+08	4.67E-08
Francium (87)	Fr-220+D	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	0.896	7.98E+05	4.34E+05	2.59E+06	8.90E+05	5.40E+05	2.57E+06	2.32E-10
Francium (87)	Fr-220+E	8.99E+00	1.51E+00	4.38E+00	7.22E+00	1.52E+00	0.896	7.98E+05	4.34E+05	2.59E+06	8.90E+05	5.40E+05	2.57E+06	2.32E-10
Francium (87)	Fr-221	1.41E-01	3.38E-02	9.44E-02	1.36E-01	3.31E-02	0.919	7.59E+04	2.57E+06	1.07E+07	3.83E+06	2.66E+06	1.09E+07	1.45E-08
Francium (87)	Fr-221+D	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	0.972	7.59E+04	3.04E+05	1.44E+06	5.12E+05	3.37E+05	1.22E+06	1.72E-09
Francium (87)	Fr-221+E	1.12E+00	2.37E-01	6.68E-01	1.01E+00	2.81E-01	0.972	7.59E+04	3.04E+05	1.44E+06	5.12E+05	3.37E+05	1.22E+06	1.72E-09
Francium (87)	Fr-222	2.44E-02	1.47E-02	2.01E-02	2.37E-02	1.02E-01	0.927	2.53E+04	4.89E+06	8.12E+06	5.93E+06	5.05E+06	1.17E+06	8.33E-08
Francium (87)	Fr-223	1.81E-01	5.39E-02	1.29E-01	1.72E-01	9.06E-02	0.961	1.67E+04	4.21E+05	1.41E+06	5.92E+05	4.42E+05	8.41E+05	1.09E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Gallium (31)	Ga-65	6.38E+00	1.34E+00	3.77E+00	5.76E+00	1.41E+00	0.865	2.40E+04	1.90E+04	9.07E+04	3.22E+04	2.11E+04	8.59E+04	1.00E-10
Gallium (31)	Ga-66	1.57E+01	2.67E+00	7.70E+00	1.26E+01	2.63E+00	0.843	6.46E+02	2.13E+02	1.26E+03	4.36E+02	2.65E+02	1.28E+03	4.23E-11
Gallium (31)	Ga-67	6.81E-01	1.67E-01	4.57E-01	6.51E-01	1.65E-01	0.915	7.76E+01	5.45E+02	2.23E+03	8.13E+02	5.70E+02	2.26E+03	9.14E-10
Gallium (31)	Ga-68	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	5.36E+03	5.07E+03	2.44E+04	8.61E+03	5.61E+03	2.29E+04	1.25E-10
Gallium (31)	Ga-70	6.21E-02	1.92E-02	3.88E-02	5.56E-02	9.90E-02	0.864	1.72E+04	1.41E+06	4.54E+06	2.25E+06	1.57E+06	8.82E+05	1.11E-08
Gallium (31)	Ga-72	1.69E+01	2.95E+00	8.54E+00	1.39E+01	2.89E+00	0.871	4.31E+02	1.28E+02	7.35E+02	2.53E+02	1.56E+02	7.48E+02	4.15E-11
Gallium (31)	Ga-73	1.58E+00	3.51E-01	9.90E-01	1.48E+00	3.91E-01	0.929	1.24E+03	3.68E+03	1.66E+04	5.89E+03	3.94E+03	1.49E+04	4.22E-10
Gadolinium (64)	Gd-145	1.40E+01	2.46E+00	7.09E+00	1.15E+01	2.44E+00	0.814	1.59E+04	6.11E+03	3.48E+04	1.21E+04	7.43E+03	3.51E+04	1.08E-10
Gadolinium (64)	Gd-146	7.18E-01	2.26E-01	5.46E-01	7.11E-01	2.59E-01	0.943	5.24E+00	3.41E+01	1.08E+02	4.48E+01	3.44E+01	9.44E+01	1.84E-09
Gadolinium (64)	Gd-147	7.37E+00	1.47E+00	4.20E+00	6.51E+00	1.46E+00	0.911	1.59E+02	1.04E+02	5.20E+02	1.83E+02	1.18E+02	5.25E+02	1.86E-10
Gadolinium (64)	Gd-148	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.45E-03						
Gadolinium (64)	Gd-149	2.00E+00	4.46E-01	1.23E+00	1.84E+00	4.57E-01	0.892	2.69E+01	6.62E+01	2.96E+02	1.08E+02	7.19E+01	2.89E+02	7.11E-10
Gadolinium (64)	Gd-151	1.55E-01	5.02E-02	1.13E-01	1.51E-01	6.50E-02	0.93	2.11E+00	7.28E+01	2.25E+02	9.97E+01	7.51E+01	1.74E+02	1.01E-08
Gadolinium (64)	Gd-152	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.42E-15						
Gadolinium (64)	Gd-153	2.13E-01	8.37E-02	1.78E-01	2.13E-01	1.08E-01	0.945	1.05E+00	3.51E+01	8.92E+01	4.20E+01	3.51E+01	6.94E+01	9.98E-09
Gadolinium (64)	Gd-159	2.20E-01	5.28E-02	1.40E-01	2.07E-01	7.56E-02	0.9	3.27E+02	7.23E+03	3.02E+04	1.13E+04	7.69E+03	2.10E+04	6.82E-09
Germanium (32)	Ge-66	3.60E+00	7.59E-01	2.14E+00	3.28E+00	7.59E-01	0.915	2.67E+03	3.56E+03	1.69E+04	5.97E+03	3.90E+03	1.69E+04	1.70E-10
Germanium (32)	Ge-67	7.85E+00	1.62E+00	4.55E+00	7.01E+00	1.70E+00	0.843	1.95E+04	1.29E+04	6.26E+04	2.22E+04	1.44E+04	5.94E+04	8.60E-11
Germanium (32)	Ge-68	1.29E-06	1.29E-06	1.29E-06	1.29E-06	4.78E-05	1	8.78E-01	5.08E+06	5.08E+06	5.08E+06	5.08E+06	1.38E+05	7.64E-04
Germanium (32)	Ge-68+D	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	8.78E-01	1.42E+00	6.85E+00	2.42E+00	1.57E+00	6.42E+00	2.14E-10
Germanium (32)	Ge-68+E	5.26E+00	1.09E+00	3.10E+00	4.76E+00	1.17E+00	0.88	8.78E-01	1.42E+00	6.85E+00	2.42E+00	1.57E+00	6.42E+00	2.14E-10
Germanium (32)	Ge-69	5.02E+00	9.77E-01	2.80E+00	4.40E+00	9.79E-01	0.846	1.55E+02	1.60E+02	8.24E+02	2.88E+02	1.83E+02	8.22E+02	1.38E-10
Germanium (32)	Ge-71	1.31E-06	1.31E-06	1.31E-06	1.31E-06	4.84E-05	1	2.14E+01	7.17E+07	7.17E+07	7.17E+07	7.17E+07	1.94E+06	4.61E-04
Germanium (32)	Ge-75	1.76E-01	4.18E-02	1.14E-01	1.67E-01	8.40E-02	0.909	4.40E+03	1.20E+05	5.08E+05	1.86E+05	1.27E+05	2.52E+05	3.98E-09
Germanium (32)	Ge-77	6.06E+00	1.22E+00	3.49E+00	5.39E+00	1.27E+00	0.898	5.37E+02	4.32E+02	2.15E+03	7.51E+02	4.86E+02	2.06E+03	1.20E-10
Germanium (32)	Ge-78	1.40E+00	3.11E-01	8.90E-01	1.32E+00	3.12E-01	0.909	4.19E+03	1.45E+04	6.48E+04	2.27E+04	1.53E+04	6.47E+04	5.23E-10
Hydrogen (1)	H-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	5.61E-02						
Hafnium (72)	Hf-170	2.57E+00	5.86E-01	1.60E+00	2.37E+00	5.96E-01	0.949	3.79E+02	6.80E+02	2.99E+03	1.09E+03	7.39E+02	2.93E+03	5.92E-10
Hafnium (72)	Hf-172	2.14E-01	9.19E-02	1.87E-01	2.14E-01	1.16E-01	0.947	3.71E-01	2.58E+01	6.02E+01	2.97E+01	2.58E+01	4.78E+01	2.32E-08
Hafnium (72)	Hf-173	1.71E+00	4.27E-01	1.14E+00	1.62E+00	4.35E-01	0.913	2.53E+02	7.11E+02	2.84E+03	1.06E+03	7.50E+02	2.79E+03	9.44E-10
Hafnium (72)	Hf-175	1.72E+00	3.97E-01	1.09E+00	1.61E+00	4.03E-01	0.903	3.61E+00	1.05E+01	4.53E+01	1.65E+01	1.12E+01	4.47E+01	9.85E-10
Hafnium (72)	Hf-177m	1.09E+01	2.48E+00	6.92E+00	1.02E+01	2.45E+00	0.92	7.09E+03	3.11E+03	1.36E+04	4.88E+03	3.31E+03	1.38E+04	1.51E-10
Hafnium (72)	Hf-178m	1.21E+01	2.63E+00	7.40E+00	1.12E+01	2.59E+00	0.888	2.24E-02	4.13E-01	1.90E+00	6.74E-01	4.47E-01	1.93E+00	6.38E-09
Hafnium (72)	Hf-179m	4.33E+00	9.85E-01	2.74E+00	4.05E+00	9.83E-01	0.896	1.01E+01	1.14E+01	5.00E+01	1.80E+01	1.22E+01	5.01E+01	3.92E-10
Hafnium (72)	Hf-180m	4.98E+00	1.11E+00	3.11E+00	4.63E+00	1.10E+00	0.902	1.10E+03	1.08E+03	4.82E+03	1.72E+03	1.16E+03	4.85E+03	3.41E-10
Hafnium (72)	Hf-181	2.82E+00	6.17E-01	1.73E+00	2.61E+00	6.13E-01	0.893	5.97E+00	1.04E+01	4.75E+01	1.69E+01	1.12E+01	4.79E+01	6.13E-10
Hafnium (72)	Hf-182	1.15E+00	2.65E-01	7.46E-01	1.09E+00	2.60E-01	0.911	7.70E-08	4.18E+00	1.82E+01	6.44E+00	4.39E+00	1.85E+01	1.92E-02
Hafnium (72)	Hf-182+D						0.911	7.70E-08						
Hafnium (72)	Hf-182+E	8.65E+00	1.68E+00	4.77E+00	7.50E+00	1.66E+00	0.911	7.70E-08	5.56E-01	2.87E+00	1.01E+00	6.41E-01	2.90E+00	2.55E-03
Hafnium (72)	Hf-182m	4.81E+00	1.03E+00	2.89E+00	4.36E+00	1.02E+00	0.942	5.92E+03	5.72E+03	2.68E+04	9.53E+03	6.31E+03	2.69E+04	3.41E-10
Hafnium (72)	Hf-183	4.14E+00	8.37E-01	2.37E+00	3.67E+00	8.78E-01	0.866	5.69E+03	6.95E+03	3.44E+04	1.22E+04	7.83E+03	3.28E+04	4.34E-10
Hafnium (72)	Hf-184	1.10E+00	2.65E-01	7.27E-01	1.05E+00	2.87E-01	0.917	1.47E+03	6.41E+03	2.66E+04	9.68E+03	6.73E+03	2.45E+04	1.55E-09
Mercury (80)	Hg-193	7.09E-01	2.00E-01	5.07E-01	6.84E-01	2.10E-01	0.938	1.73E+03	1.14E+04	4.06E+04	1.60E+04	1.18E+04	3.86E+04	2.47E-09
Mercury (80)	Hg-193m	5.67E+00	1.14E+00	3.23E+00	5.00E+00	1.13E+00	0.965	5.47E+02	4.38E+02	2.17E+03	7.69E+02	4.97E+02	2.20E+03	3.00E-10
Mercury (80)	Hg-194	1.06E-05	1.06E-05	1.06E-05	1.06E-05	2.61E-04	1	2.67E-03	4.12E+05	4.12E+05	4.12E+05	4.12E+05	1.68E+04	5.82E-02
Mercury (80)	Hg-194+D	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	2.67E-03	7.46E-01	3.97E+00	1.39E+00	8.76E-01	4.05E+00	1.05E-07
Mercury (80)	Hg-194+E	6.15E+00	1.16E+00	3.30E+00	5.24E+00	1.13E+00	0.955	2.67E-03	7.46E-01	3.97E+00	1.39E+00	8.76E-01	4.05E+00	1.05E-07
Mercury (80)	Hg-195	9.23E-01	2.09E-01	5.60E-01	8.26E-01	2.16E-01	0.951	6.13E+02	3.06E+03	1.35E+04	5.05E+03	3.42E+03	1.31E+04	1.89E-09
Mercury (80)	Hg-195m	9.70E-01	2.24E-01	6.14E-01	9.01E-01	2.25E-01	0.998	1.46E+02	6.60E+02	2.86E+03	1.04E+03	7.11E+02	2.84E+03	1.71E-09
Mercury (80)	Hg-197	1.50E-01	5.99E-02	1.31E-01	1.50E-01	6.76E-02	0.965	9.47E+01	2.87E+03	7.18E+03	3.29E+03	2.87E+03	6.36E+03	1.16E-08
Mercury (80)	Hg-197m	3.19E-01	9.23E-02	2.37E-01	3.13E-01	9.48E-02	0.969	2.55E+02	3.62E+03	1.25E+04	4.87E+03	3.68E+03	1.22E+04	5.42E-09
Mercury (80)	Hg-199m	7.35E-01	1.92E-01	5.11E-01	7.09E-01	1.95E-01	0.932	8.55E+03	5.47E+04	2.09E+05	7.86E+04	5.67E+04	2.06E+05	2.47E-09
Mercury (80)	Hg-203	1.17E+00	2.65E-01	7.48E-01	1.10E+00	2.59E-01	0.911	5.43E+00	2.25E+01	9.90E+01	3.50E+01	2.37E+01	1.01E+02	1.63E-09
Holmium (67)	Ho-155	1.92E+00	4.21E-01	1.17E+00	1.76E+00	4.54E-01	0.926	7.59E+03	1.87E+04	8.52E+04	3.08E+04	2.04E+04	7.91E+04	7.41E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Holmium (67)	Ho-157	2.33E+00	5.17E-01	1.41E+00	2.11E+00	5.38E-01	0.923	2.89E+04	5.88E+04	2.66E+05	9.70E+04	6.51E+04	2.55E+05	6.20E-10
Holmium (67)	Ho-159	1.47E+00	3.69E-01	9.68E-01	1.38E+00	3.90E-01	0.927	1.10E+04	3.55E+04	1.41E+05	5.39E+04	3.78E+04	1.34E+05	9.93E-10
Holmium (67)	Ho-161	7.50E-02	3.92E-02	6.84E-02	7.48E-02	6.00E-02	0.957	2.43E+03	1.48E+05	2.84E+05	1.62E+05	1.49E+05	1.85E+05	1.91E-08
Holmium (67)	Ho-162	7.57E-01	1.65E-01	4.36E-01	6.62E-01	1.81E-01	0.879	2.43E+04	1.60E+05	7.32E+05	2.77E+05	1.83E+05	6.69E+05	2.07E-09
Holmium (67)	Ho-162m	3.08E+00	6.12E-01	1.71E+00	2.67E+00	6.19E-01	0.924	5.36E+03	8.25E+03	4.15E+04	1.48E+04	9.52E+03	4.11E+04	4.84E-10
Holmium (67)	Ho-164	3.80E-02	2.09E-02	3.58E-02	3.80E-02	3.94E-02	0.95	1.26E+04	1.52E+06	2.77E+06	1.62E+06	1.52E+06	1.47E+06	3.86E-08
Holmium (67)	Ho-164m	5.02E-02	3.00E-02	4.87E-02	5.02E-02	4.55E-02	0.957	9.71E+03	8.86E+05	1.48E+06	9.13E+05	8.86E+05	9.77E+05	2.90E-08
Holmium (67)	Ho-166	1.56E-01	4.10E-02	9.27E-02	1.35E-01	1.23E-01	0.897	2.27E+02	7.09E+03	2.70E+04	1.19E+04	8.19E+03	9.03E+03	1.01E-08
Holmium (67)	Ho-166m	9.64E+00	1.94E+00	5.56E+00	8.60E+00	1.93E+00	0.903	5.78E-04	5.03E-01	2.50E+00	8.73E-01	5.64E-01	2.52E+00	2.81E-07
Holmium (67)	Ho-167	1.83E+00	4.07E-01	1.15E+00	1.71E+00	4.10E-01	0.9	1.96E+03	5.20E+03	2.34E+04	8.32E+03	5.56E+03	2.33E+04	8.60E-10
Iodine (53)	I-120	1.66E+01	3.02E+00	8.67E+00	1.39E+01	3.06E+00	0.878	4.50E+03	1.35E+03	7.42E+03	2.59E+03	1.61E+03	7.34E+03	7.01E-11
Iodine (53)	I-120m	3.17E+01	5.87E+00	1.69E+01	2.70E+01	5.85E+00	0.857	6.87E+03	1.11E+03	5.98E+03	2.08E+03	1.30E+03	6.01E+03	3.75E-11
Iodine (53)	I-121	2.07E+00	4.51E-01	1.28E+00	1.92E+00	4.62E-01	0.892	2.86E+03	6.79E+03	3.12E+04	1.10E+04	7.32E+03	3.04E+04	5.57E-10
Iodine (53)	I-122	5.28E+00	1.10E+00	3.10E+00	4.76E+00	1.19E+00	0.875	1.01E+05	9.54E+04	4.59E+05	1.63E+05	1.06E+05	4.23E+05	2.25E-10
Iodine (53)	I-123	6.51E-01	1.67E-01	4.49E-01	6.30E-01	1.79E-01	0.956	4.60E+02	3.24E+03	1.26E+04	4.69E+03	3.34E+03	1.18E+04	1.68E-09
Iodine (53)	I-124	6.38E+00	1.21E+00	3.47E+00	5.50E+00	1.21E+00	0.875	6.05E+01	4.75E+01	2.51E+02	8.73E+01	5.51E+01	2.50E+02	1.89E-10
Iodine (53)	I-125	1.19E-02	1.10E-02	1.19E-02	1.19E-02	3.66E-02	0.986	4.21E+00	1.60E+03	1.73E+03	1.60E+03	1.60E+03	5.18E+02	9.22E-08
Iodine (53)	I-126	2.46E+00	5.05E-01	1.44E+00	2.22E+00	5.16E-01	0.881	1.94E+01	3.92E+01	1.91E+02	6.73E+01	4.35E+01	1.87E+02	4.94E-10
Iodine (53)	I-128	4.81E-01	1.11E-01	2.93E-01	4.40E-01	2.00E-01	0.89	1.46E+04	1.49E+05	6.45E+05	2.45E+05	1.63E+05	3.59E+05	2.54E-09
Iodine (53)	I-129	9.53E-03	8.21E-03	9.53E-03	9.53E-03	2.28E-02	0.98	4.41E-08	4.69E+02	5.45E+02	4.69E+02	4.69E+02	1.96E+02	2.66E+00
Iodine (53)	I-130	1.21E+01	2.41E+00	6.90E+00	1.08E+01	2.39E+00	0.872	4.91E+02	2.04E+02	1.03E+03	3.58E+02	2.29E+02	1.03E+03	1.05E-10
Iodine (53)	I-131	2.01E+00	4.31E-01	1.22E+00	1.85E+00	4.25E-01	0.891	3.15E+01	7.68E+01	3.59E+02	1.26E+02	8.34E+01	3.64E+02	6.20E-10
Iodine (53)	I-132	1.32E+01	2.56E+00	7.35E+00	1.16E+01	2.57E+00	0.892	2.64E+03	9.79E+02	5.07E+03	1.76E+03	1.12E+03	5.05E+03	9.50E-11
Iodine (53)	I-132m	1.75E+00	3.54E-01	1.01E+00	1.56E+00	3.63E-01	0.874	4.36E+03	1.25E+04	6.16E+04	2.17E+04	1.40E+04	6.02E+04	7.33E-10
Iodine (53)	I-133	3.41E+00	6.88E-01	1.96E+00	3.04E+00	7.20E-01	0.881	2.92E+02	4.25E+02	2.11E+03	7.41E+02	4.77E+02	2.02E+03	3.76E-10
Iodine (53)	I-134	1.55E+01	2.93E+00	8.43E+00	1.34E+01	2.95E+00	0.879	6.92E+03	2.23E+03	1.18E+04	4.09E+03	2.58E+03	1.17E+04	8.36E-11
Iodine (53)	I-135	9.72E+00	1.73E+00	5.00E+00	8.11E+00	1.72E+00	0.9	9.18E+02	4.60E+02	2.59E+03	8.94E+02	5.51E+02	2.61E+03	1.31E-10
Indium (49)	In-109	3.62E+00	7.29E-01	2.09E+00	3.23E+00	7.28E-01	0.899	1.45E+03	1.95E+03	9.66E+03	3.37E+03	2.18E+03	9.67E+03	2.85E-10
Indium (49)	In-110	1.76E+01	3.39E+00	9.75E+00	1.54E+01	3.36E+00	0.871	1.24E+03	3.54E+02	1.84E+03	6.39E+02	4.05E+02	1.85E+03	6.10E-11
Indium (49)	In-110m	8.95E+00	1.75E+00	4.98E+00	7.83E+00	1.79E+00	0.874	5.27E+03	2.95E+03	1.51E+04	5.30E+03	3.37E+03	1.48E+04	1.19E-10
Indium (49)	In-111	1.81E+00	4.29E-01	1.20E+00	1.74E+00	4.29E-01	0.952	8.94E+01	2.28E+02	9.59E+02	3.42E+02	2.37E+02	9.58E+02	5.48E-10
Indium (49)	In-112	1.45E+00	3.00E-01	8.50E-01	1.31E+00	3.20E-01	0.931	2.53E+04	8.21E+04	3.96E+05	1.40E+05	9.08E+04	3.72E+05	7.06E-10
Indium (49)	In-113m	1.33E+00	2.85E-01	8.13E-01	1.23E+00	2.84E-01	0.932	3.66E+03	1.29E+04	6.03E+04	2.12E+04	1.40E+04	6.07E+04	7.74E-10
Indium (49)	In-114	1.68E-02	3.04E-03	8.73E-03	1.41E-02	3.22E-03	0.869	3.04E+05	9.12E+07	5.04E+08	1.76E+08	1.09E+08	4.76E+08	6.64E-08
Indium (49)	In-114m	4.51E-01	9.70E-02	2.72E-01	4.12E-01	1.01E-01	0.946	5.11E+00	5.27E+01	2.45E+02	8.74E+01	5.77E+01	2.36E+02	2.28E-09
Indium (49)	In-114m+D	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	0.946	5.11E+00	5.08E+01	2.38E+02	8.51E+01	5.60E+01	2.29E+02	2.20E-09
Indium (49)	In-114m+E	4.68E-01	1.00E-01	2.80E-01	4.25E-01	1.04E-01	0.946	5.11E+00	5.08E+01	2.38E+02	8.51E+01	5.60E+01	2.29E+02	2.20E-09
Indium (49)	In-115	3.54E-04	1.30E-04	2.83E-04	3.51E-04	4.17E-04	0.927	1.36E-16	1.63E+04	4.45E+04	2.04E+04	1.65E+04	1.39E+04	2.68E+10
Indium (49)	In-115m	7.93E-01	1.74E-01	4.94E-01	7.40E-01	1.76E-01	0.917	1.35E+03	8.15E+03	3.71E+04	1.31E+04	8.73E+03	3.67E+04	1.34E-09
Indium (49)	In-116m	1.52E+01	2.70E+00	7.85E+00	1.27E+01	2.66E+00	0.892	6.73E+03	2.18E+03	1.22E+04	4.21E+03	2.60E+03	1.24E+04	7.28E-11
Indium (49)	In-117	3.64E+00	7.76E-01	2.20E+00	3.34E+00	7.75E-01	0.897	8.32E+03	1.12E+04	5.23E+04	1.85E+04	1.22E+04	5.24E+04	3.05E-10
Indium (49)	In-117m	4.29E-01	1.02E-01	2.80E-01	4.07E-01	1.46E-01	0.923	3.13E+03	3.46E+04	1.45E+05	5.30E+04	3.65E+04	1.02E+05	2.51E-09
Indium (49)	In-119	4.42E+00	8.71E-01	2.48E+00	3.90E+00	9.36E-01	0.871	1.52E+05	1.73E+05	8.76E+05	3.08E+05	1.96E+05	8.15E+05	2.63E-10
Indium (49)	In-119m	9.03E-02	3.73E-02	6.30E-02	8.37E-02	1.52E-01	0.93	2.02E+04	1.06E+06	2.56E+06	1.51E+06	1.14E+06	6.28E+05	1.20E-08
Iridium (77)	Ir-182	7.35E+00	1.52E+00	4.27E+00	6.56E+00	1.56E+00	0.928	2.43E+04	1.56E+04	7.56E+04	2.68E+04	1.75E+04	7.33E+04	2.27E-10
Iridium (77)	Ir-184	1.08E+01	2.09E+00	5.97E+00	9.36E+00	2.08E+00	0.944	2.01E+03	8.62E+02	4.47E+03	1.56E+03	9.96E+02	4.49E+03	1.53E-10
Iridium (77)	Ir-185	3.34E+00	6.25E-01	1.76E+00	2.80E+00	6.22E-01	0.953	4.34E+02	5.97E+02	3.19E+03	1.13E+03	7.12E+02	3.20E+03	4.94E-10
Iridium (77)	Ir-186	9.25E+00	1.79E+00	5.11E+00	8.00E+00	1.76E+00	0.942	3.84E+02	1.93E+02	9.97E+02	3.50E+02	2.23E+02	1.01E+03	1.81E-10
Iridium (77)	Ir-186m	5.28E+00	1.06E+00	3.00E+00	4.64E+00	1.07E+00	0.878	3.47E+03	3.28E+03	1.63E+04	5.76E+03	3.73E+03	1.62E+04	3.41E-10
Iridium (77)	Ir-187	1.79E+00	3.88E-01	1.06E+00	1.60E+00	3.93E-01	0.958	5.78E+02	1.48E+03	6.81E+03	2.49E+03	1.65E+03	6.72E+03	9.28E-10
Iridium (77)	Ir-188	9.55E+00	1.70E+00	4.89E+00	7.89E+00	1.66E+00	0.908	1.46E+02	7.39E+01	4.16E+02	1.44E+02	8.94E+01	4.26E+02	1.84E-10
Iridium (77)	Ir-189	2.18E-01	7.31E-02	1.70E-01	2.14E-01	8.16E-02	0.954	1.90E+01	4.00E+02	1.19E+03	5.15E+02	4.07E+02	1.07E+03	7.72E-09
Iridium (77)	Ir-190	7.53E+00	1.60E+00	4.51E+00	6.86E+00	1.59E+00	0.928	2.09E+01	1.31E+01	6.16E+01	2.19E+01	1.44E+01	6.22E+01	2.31E-10
Iridium (77)	Ir-190m	2.05E-06	2.05E-06	2.05E-06	2.05E-06	6.21E-05	1	5.06E+03	1.08E+10	1.08E+10	1.08E+10	1.08E+10	3.57E+08	7.87E-04

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Iridium (77)	Ir-190n	8.15E+00	1.73E+00	4.90E+00	7.46E+00	1.72E+00	0.955	1.96E+03	1.10E+03	5.18E+03	1.83E+03	1.20E+03	5.24E+03	2.07E-10
Iridium (77)	Ir-191m	2.05E-01	6.86E-02	1.63E-01	2.03E-01	7.39E-02	0.945	4.42E+06	1.00E+08	2.99E+08	1.26E+08	1.01E+08	2.78E+08	8.37E-09
Iridium (77)	Ir-192	4.27E+00	9.19E-01	2.63E+00	3.95E+00	9.07E-01	0.957	3.42E+00	3.79E+00	1.76E+01	6.15E+00	4.09E+00	1.78E+01	4.13E-10
Iridium (77)	Ir-192m	6.86E-01	1.75E-01	4.81E-01	6.71E-01	1.72E-01	0.925	2.88E-03	6.91E+00	2.71E+01	9.86E+00	7.06E+00	2.76E+01	8.95E-07
Iridium (77)	Ir-194	5.24E-01	1.19E-01	3.13E-01	4.74E-01	2.11E-01	0.902	3.17E+02	2.94E+03	1.29E+04	4.91E+03	3.25E+03	7.29E+03	3.49E-09
Iridium (77)	Ir-194m	1.27E+01	2.63E+00	7.52E+00	1.15E+01	2.60E+00	0.881	1.48E+00	7.49E-01	3.62E+00	1.27E+00	8.25E-01	3.66E+00	1.91E-10
Iridium (77)	Ir-195	1.46E-01	5.37E-02	1.21E-01	1.45E-01	8.60E-02	0.954	2.43E+03	7.62E+04	2.08E+05	9.23E+04	7.68E+04	1.30E+05	1.19E-08
Iridium (77)	Ir-195m	2.00E+00	4.51E-01	1.24E+00	1.84E+00	4.64E-01	0.998	1.60E+03	3.51E+03	1.55E+04	5.64E+03	3.82E+03	1.51E+04	8.32E-10
Potassium (19)	K-38	2.00E+01	3.47E+00	1.00E+01	1.64E+01	3.47E+00	0.844	4.77E+04	1.24E+04	7.14E+04	2.47E+04	1.51E+04	7.14E+04	1.92E-11
Potassium (19)	K-40	9.94E-01	1.77E-01	5.04E-01	8.21E-01	2.38E-01	0.826	5.41E-10	5.33E+00	2.99E+01	1.05E+01	6.46E+00	2.23E+01	7.65E-01
Potassium (19)	K-42	1.84E+00	3.49E-01	9.42E-01	1.52E+00	4.64E-01	0.823	4.91E+02	1.42E+03	7.50E+03	2.78E+03	1.72E+03	5.63E+03	2.36E-10
Potassium (19)	K-43	5.32E+00	1.10E+00	3.13E+00	4.83E+00	1.10E+00	0.878	2.69E+02	2.52E+02	1.22E+03	4.28E+02	2.77E+02	1.22E+03	7.83E-11
Potassium (19)	K-44	1.47E+01	2.46E+00	7.11E+00	1.17E+01	2.47E+00	0.799	1.65E+04	6.13E+03	3.67E+04	1.27E+04	7.68E+03	3.65E+04	3.18E-11
Potassium (19)	K-45	1.18E+01	2.01E+00	5.86E+00	9.59E+00	2.05E+00	0.833	1.82E+04	8.10E+03	4.75E+04	1.64E+04	9.99E+03	4.66E+04	3.88E-11
Krypton (36)	Kr-74	6.19E+00	1.33E+00	3.73E+00	5.67E+00	1.40E+00	0.923	3.17E+04	2.43E+04	1.13E+05	4.03E+04	2.65E+04	1.07E+05	1.10E-10
Krypton (36)	Kr-76	2.18E+00	4.76E-01	1.35E+00	2.03E+00	4.70E-01	0.971	4.10E+02	8.48E+02	3.89E+03	1.37E+03	9.10E+02	3.93E+03	3.05E-10
Krypton (36)	Kr-77	5.32E+00	1.15E+00	3.25E+00	4.89E+00	1.21E+00	0.894	4.88E+03	4.49E+03	2.08E+04	7.36E+03	4.89E+03	1.97E+04	1.38E-10
Krypton (36)	Kr-79	1.36E+00	2.83E-01	8.08E-01	1.24E+00	2.79E-01	0.893	1.73E+02	6.26E+02	3.00E+03	1.05E+03	6.87E+02	3.05E+03	5.54E-10
Krypton (36)	Kr-81	2.76E-02	6.23E-03	1.77E-02	2.63E-02	6.99E-03	0.999	3.30E-06	1.59E+02	7.04E+02	2.48E+02	1.67E+02	6.27E+02	7.57E-03
Krypton (36)	Kr-81m	5.84E-01	1.41E-01	3.95E-01	5.65E-01	1.38E-01	0.968	1.68E+06	1.30E+07	5.38E+07	1.92E+07	1.35E+07	5.52E+07	1.22E-09
Krypton (36)	Kr-83m	2.52E-05	2.44E-05	2.52E-05	2.52E-05	4.17E-04	1	3.32E+03	5.77E+08	5.95E+08	5.77E+08	5.77E+08	3.49E+07	2.80E-05
Krypton (36)	Kr-85	1.35E-02	3.08E-03	8.21E-03	1.23E-02	1.23E-02	0.884	6.46E-02	3.79E+02	1.66E+03	6.24E+02	4.15E+02	4.18E+02	9.68E-07
Krypton (36)	Kr-85m	6.96E-01	1.73E-01	4.77E-01	6.73E-01	1.83E-01	0.928	1.36E+03	9.19E+03	3.70E+04	1.34E+04	9.50E+03	3.49E+04	1.12E-09
Krypton (36)	Kr-87	5.02E+00	8.95E-01	2.54E+00	4.12E+00	9.80E-01	0.849	4.77E+03	4.91E+03	2.75E+04	9.71E+03	5.98E+03	2.51E+04	1.74E-10
Krypton (36)	Kr-88	1.26E+01	2.07E+00	6.06E+00	1.01E+01	2.02E+00	0.916	2.14E+03	8.11E+02	4.94E+03	1.69E+03	1.02E+03	5.06E+03	6.48E-11
Lanthanum (57)	La-131	3.47E+00	7.39E-01	2.07E+00	3.17E+00	7.64E-01	0.896	6.17E+03	8.70E+03	4.09E+04	1.46E+04	9.52E+03	3.95E+04	3.58E-10
Lanthanum (57)	La-132	1.19E+01	2.22E+00	6.36E+00	1.01E+01	2.22E+00	0.879	1.26E+03	5.30E+02	2.84E+03	9.91E+02	6.22E+02	2.84E+03	1.07E-10
Lanthanum (57)	La-134	3.84E+00	8.02E-01	2.26E+00	3.47E+00	8.75E-01	0.89	5.46E+04	7.00E+04	3.35E+05	1.19E+05	7.75E+04	3.07E+05	3.33E-10
Lanthanum (57)	La-135	6.77E-02	2.09E-02	4.42E-02	6.21E-02	3.55E-02	0.943	3.11E+02	2.14E+04	6.92E+04	3.27E+04	2.33E+04	4.08E+04	1.80E-08
Lanthanum (57)	La-137	1.04E-02	8.82E-03	1.04E-02	1.04E-02	2.29E-02	0.978	1.16E-05	4.30E+02	5.08E+02	4.30E+02	4.30E+02	1.96E+02	9.89E-03
Lanthanum (57)	La-138	7.53E+00	1.34E+00	3.90E+00	6.30E+00	1.32E+00	0.842	5.13E-12	6.90E-01	3.87E+00	1.33E+00	8.25E-01	3.94E+00	3.60E+01
Lanthanum (57)	La-140	1.43E+01	2.54E+00	7.33E+00	1.19E+01	2.52E+00	0.868	1.51E+02	5.33E+01	3.00E+02	1.04E+02	6.40E+01	3.02E+02	9.61E-11
Lanthanum (57)	La-141	3.10E-01	7.11E-02	1.70E-01	2.61E-01	1.77E-01	0.829	1.54E+03	2.64E+04	1.15E+05	4.81E+04	3.13E+04	4.60E+04	4.67E-09
Lanthanum (57)	La-142	1.78E+01	2.93E+00	8.56E+00	1.42E+01	2.91E+00	0.88	3.94E+03	1.10E+03	6.69E+03	2.29E+03	1.38E+03	6.74E+03	7.69E-11
Lanthanum (57)	La-143	6.64E-01	1.45E-01	3.58E-01	5.58E-01	2.65E-01	0.853	2.56E+04	1.98E+05	9.05E+05	3.67E+05	2.36E+05	4.96E+05	2.15E-09
Lutetium (71)	Lu-169	5.89E+00	1.12E+00	3.17E+00	5.02E+00	1.12E+00	0.922	1.78E+02	1.44E+02	7.57E+02	2.67E+02	1.69E+02	7.59E+02	2.64E-10
Lutetium (71)	Lu-170	1.56E+01	2.63E+00	7.65E+00	1.26E+01	2.56E+00	0.941	1.26E+02	3.77E+01	2.24E+02	7.70E+01	4.68E+01	2.30E+02	9.84E-11
Lutetium (71)	Lu-171	3.62E+00	7.50E-01	2.09E+00	3.21E+00	7.63E-01	0.941	3.08E+01	3.96E+01	1.91E+02	6.86E+01	4.47E+01	1.88E+02	4.27E-10
Lutetium (71)	Lu-172	1.08E+01	2.07E+00	5.89E+00	9.33E+00	2.05E+00	0.92	3.78E+01	1.66E+01	8.68E+01	3.05E+01	1.93E+01	8.75E+01	1.47E-10
Lutetium (71)	Lu-173	3.75E-01	1.17E-01	2.72E-01	3.60E-01	1.35E-01	0.907	5.06E-01	1.64E+01	5.25E+01	2.26E+01	1.71E+01	4.55E+01	1.09E-08
Lutetium (71)	Lu-174	5.35E-01	1.20E-01	3.08E-01	4.61E-01	1.31E-01	0.917	2.09E-01	9.89E+00	4.39E+01	1.72E+01	1.15E+01	4.05E+01	1.59E-08
Lutetium (71)	Lu-174m	1.29E-01	4.94E-02	1.01E-01	1.23E-01	6.22E-02	0.948	1.78E+00	7.69E+01	2.00E+02	9.79E+01	8.08E+01	1.59E+02	1.46E-08
Lutetium (71)	Lu-176	2.33E+00	5.39E-01	1.51E+00	2.22E+00	5.33E-01	0.912	1.93E-11	2.06E+00	8.91E+00	3.18E+00	2.16E+00	9.01E+00	3.65E+01
Lutetium (71)	Lu-176m	3.90E-02	1.67E-02	3.32E-02	3.90E-02	6.54E-02	0.947	1.65E+03	1.96E+05	4.58E+05	2.30E+05	1.96E+05	1.17E+05	4.05E-08
Lutetium (71)	Lu-177	1.45E-01	3.71E-02	1.01E-01	1.41E-01	3.75E-02	0.923	3.77E+01	1.23E+03	4.82E+03	1.78E+03	1.27E+03	4.78E+03	1.12E-08
Lutetium (71)	Lu-177m	4.61E+00	1.09E+00	3.00E+00	4.36E+00	1.09E+00	0.941	1.57E+00	2.00E+00	8.49E+00	3.08E+00	2.12E+00	8.50E+00	4.38E-10
Lutetium (71)	Lu-178	8.50E-01	1.66E-01	4.51E-01	7.16E-01	2.51E-01	0.836	1.28E+04	7.90E+04	4.04E+05	1.49E+05	9.38E+04	2.68E+05	2.13E-09
Lutetium (71)	Lu-178m	5.39E+00	1.23E+00	3.43E+00	5.05E+00	1.26E+00	0.904	1.60E+04	1.44E+04	6.34E+04	2.27E+04	1.54E+04	6.17E+04	3.10E-10
Lutetium (71)	Lu-179	1.54E-01	3.90E-02	1.02E-01	1.47E-01	8.95E-02	0.905	1.32E+03	4.16E+04	1.64E+05	6.26E+04	4.36E+04	7.15E+04	1.09E-08
Mendelevium (101)	Md-257	4.61E-01	1.16E-01	3.15E-01	4.42E-01	1.18E-01	0.995	1.17E+03	1.12E+04	4.42E+04	1.63E+04	1.16E+04	4.36E+04	4.77E-09
Mendelevium (101)	Md-258	1.86E-03	1.04E-03	1.68E-03	1.86E-03	3.87E-03	0.996	4.60E+00	1.10E+04	1.97E+04	1.21E+04	1.10E+04	5.27E+03	1.20E-06
Magnesium (12)	Mg-28	8.15E+00	1.50E+00	4.31E+00	6.92E+00	1.47E+00	0.872	2.90E+02	1.79E+02	9.75E+02	3.38E+02	2.11E+02	9.92E+02	3.35E-11
Manganese (25)	Mn-51	5.52E+00	1.15E+00	3.25E+00	5.00E+00	1.25E+00	0.882	7.88E+03	7.09E+03	3.40E+04	1.21E+04	7.83E+03	3.14E+04	8.90E-11
Manganese (25)	Mn-52	2.07E+01	3.82E+00	1.10E+01	1.77E+01	3.76E+00	0.836	4.52E+01	1.14E+01	6.20E+01	2.15E+01	1.34E+01	6.31E+01	2.55E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Manganese (25)	Mn-52m	1.44E+01	2.70E+00	7.74E+00	1.23E+01	2.75E+00	0.848	1.73E+04	6.20E+03	3.30E+04	1.15E+04	7.24E+03	3.24E+04	3.62E-11
Manganese (25)	Mn-53	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.87E-07						
Manganese (25)	Mn-54	4.85E+00	9.36E-01	2.69E+00	4.23E+00	9.23E-01	0.858	8.09E-01	1.54E+00	7.95E+00	2.77E+00	1.76E+00	8.07E+00	1.99E-10
Manganese (25)	Mn-56	1.05E+01	1.87E+00	5.37E+00	8.73E+00	1.89E+00	0.827	2.35E+03	1.19E+03	6.69E+03	2.32E+03	1.43E+03	6.60E+03	5.48E-11
Molybdenum (42)	Mo-101	8.24E+00	1.51E+00	4.35E+00	6.98E+00	1.53E+00	0.917	2.49E+04	1.44E+04	7.88E+04	2.74E+04	1.71E+04	7.78E+04	1.14E-10
Molybdenum (42)	Mo-90	4.29E+00	9.06E-01	2.57E+00	3.90E+00	9.08E-01	0.884	1.07E+03	1.24E+03	5.85E+03	2.06E+03	1.36E+03	5.84E+03	2.02E-10
Molybdenum (42)	Mo-93	4.16E-04	4.18E-04	4.16E-04	4.16E-04	4.53E-03	1	1.98E-04	1.05E+04	1.05E+04	1.05E+04	1.05E+04	9.67E+02	9.60E-03
Molybdenum (42)	Mo-93m	1.36E+01	2.48E+00	7.14E+00	1.15E+01	2.42E+00	0.861	8.86E+02	3.33E+02	1.82E+03	6.31E+02	3.93E+02	1.87E+03	6.77E-11
Molybdenum (42)	Mo-99	8.34E-01	1.71E-01	4.81E-01	7.44E-01	2.08E-01	0.929	9.20E+01	5.20E+02	2.54E+03	9.01E+02	5.83E+02	2.09E+03	1.09E-09
Nitrogen (7)	N-13	5.61E+00	1.16E+00	3.30E+00	5.09E+00	1.20E+00	0.883	3.66E+04	3.23E+04	1.56E+05	5.49E+04	3.56E+04	1.51E+05	2.23E-11
Sodium (11)	Na-22	1.29E+01	2.44E+00	7.01E+00	1.11E+01	2.39E+00	0.861	2.66E-01	4.50E-01	2.37E+00	8.26E-01	5.20E-01	2.42E+00	7.21E-11
Sodium (11)	Na-24	2.72E+01	4.33E+00	1.27E+01	2.13E+01	4.19E+00	0.806	4.05E+02	8.08E+01	5.08E+02	1.73E+02	1.03E+02	5.25E+02	9.29E-12
Niobium (41)	Nb-88	2.37E+01	4.64E+00	1.33E+01	2.09E+01	4.69E+00	0.871	2.55E+04	5.41E+03	2.76E+04	9.66E+03	6.13E+03	2.73E+04	3.63E-11
Niobium (41)	Nb-89	8.32E+00	1.56E+00	4.46E+00	7.09E+00	1.62E+00	0.885	2.99E+03	1.78E+03	9.45E+03	3.31E+03	2.08E+03	9.11E+03	1.03E-10
Niobium (41)	Nb-89m	1.07E+01	2.20E+00	6.25E+00	9.64E+00	2.26E+00	0.89	5.52E+03	2.55E+03	1.23E+04	4.35E+03	2.82E+03	1.20E+04	7.97E-11
Niobium (41)	Nb-90	2.65E+01	4.53E+00	1.32E+01	2.14E+01	4.42E+00	0.851	4.16E+02	8.08E+01	4.72E+02	1.63E+02	9.98E+01	4.84E+02	3.39E-11
Niobium (41)	Nb-93m	7.35E-05	7.35E-05	7.35E-05	7.35E-05	7.96E-04	1	5.10E-02	6.11E+04	6.11E+04	6.11E+04	6.11E+04	5.64E+03	2.17E-04
Niobium (41)	Nb-94	9.10E+00	1.77E+00	5.07E+00	7.98E+00	1.74E+00	0.861	3.41E-05	5.59E-01	2.88E+00	1.00E+00	6.37E-01	2.93E+00	2.99E-06
Niobium (41)	Nb-95	4.42E+00	8.62E-01	2.46E+00	3.88E+00	8.50E-01	0.863	7.20E+00	8.27E+00	4.24E+01	1.48E+01	9.42E+00	4.30E+01	2.12E-10
Niobium (41)	Nb-95m	2.93E-01	6.79E-02	1.92E-01	2.82E-01	6.90E-02	0.988	7.01E+01	1.06E+03	4.58E+03	1.62E+03	1.10E+03	4.51E+03	2.79E-09
Niobium (41)	Nb-96	1.44E+01	2.78E+00	7.94E+00	1.25E+01	2.73E+00	0.866	2.60E+02	9.16E+01	4.73E+02	1.66E+02	1.05E+02	4.82E+02	6.56E-11
Niobium (41)	Nb-97	3.73E+00	7.46E-01	2.13E+00	3.32E+00	7.88E-01	0.87	5.05E+03	6.82E+03	3.41E+04	1.20E+04	7.66E+03	3.23E+04	2.54E-10
Niobium (41)	Nb-97m	4.18E+00	8.21E-01	2.35E+00	3.69E+00	8.11E-01	0.87	3.64E+05	4.39E+05	2.23E+06	7.80E+05	4.97E+05	2.26E+06	2.27E-10
Niobium (41)	Nb-98	1.44E+01	2.72E+00	7.80E+00	1.24E+01	2.77E+00	0.84	7.07E+03	2.55E+03	1.35E+04	4.73E+03	2.97E+03	1.33E+04	6.87E-11
Neodymium (60)	Nd-136	1.28E+00	2.95E-01	7.93E-01	1.17E+00	3.19E-01	0.884	7.19E+03	2.79E+04	1.21E+05	4.50E+04	3.04E+04	1.12E+05	1.02E-09
Neodymium (60)	Nd-138	8.77E-02	2.89E-02	6.17E-02	8.36E-02	4.38E-02	0.945	1.20E+03	6.37E+04	1.93E+05	9.04E+04	6.68E+04	1.28E+05	1.42E-08
Neodymium (60)	Nd-139	2.16E+00	4.46E-01	1.25E+00	1.94E+00	4.75E-01	0.87	1.23E+04	2.85E+04	1.39E+05	4.93E+04	3.18E+04	1.30E+05	6.28E-10
Neodymium (60)	Nd-139m	8.90E+00	1.73E+00	4.92E+00	7.74E+00	1.73E+00	0.898	1.10E+03	6.05E+02	3.12E+03	1.09E+03	6.96E+02	3.12E+03	1.48E-10
Neodymium (60)	Nd-141	2.87E-01	6.55E-02	1.67E-01	2.54E-01	7.98E-02	0.942	2.44E+03	3.95E+04	1.73E+05	6.77E+04	4.47E+04	1.42E+05	4.43E-09
Neodymium (60)	Nd-141m	4.36E+00	8.54E-01	2.44E+00	3.84E+00	8.54E-01	0.865	3.50E+05	4.06E+05	2.08E+06	7.26E+05	4.62E+05	2.08E+06	3.17E-10
Neodymium (60)	Nd-147	6.17E-01	1.45E-01	3.88E-01	5.69E-01	1.63E-01	0.89	2.30E+01	1.84E+02	7.84E+02	2.92E+02	1.99E+02	6.94E+02	2.27E-09
Neodymium (60)	Nd-149	1.90E+00	4.25E-01	1.18E+00	1.76E+00	4.74E-01	0.927	3.51E+03	8.72E+03	3.90E+04	1.40E+04	9.43E+03	3.50E+04	7.18E-10
Neodymium (60)	Nd-151	5.13E+00	1.02E+00	2.89E+00	4.49E+00	1.08E+00	0.928	2.93E+04	2.69E+04	1.36E+05	4.78E+04	3.07E+04	1.28E+05	2.70E-10
Neon (10)	Ne-19	5.65E+00	1.18E+00	3.34E+00	5.13E+00	1.28E+00	0.883	1.27E+06	1.11E+06	5.32E+06	1.89E+06	1.23E+06	4.90E+06	3.24E-11
Nickel (28)	Ni-56	9.68E+00	1.92E+00	5.48E+00	8.54E+00	1.89E+00	0.869	4.15E+01	2.16E+01	1.09E+02	3.81E+01	2.45E+01	1.11E+02	5.66E-11
Nickel (28)	Ni-57	1.17E+01	2.11E+00	6.08E+00	9.83E+00	2.05E+00	0.829	1.68E+02	7.58E+01	4.22E+02	1.46E+02	9.04E+01	4.33E+02	4.98E-11
Nickel (28)	Ni-59	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	9.24E-06						
Nickel (28)	Ni-63	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.22E-03						
Nickel (28)	Ni-65	3.41E+00	6.12E-01	1.76E+00	2.85E+00	6.64E-01	0.831	2.41E+03	3.72E+03	2.08E+04	7.23E+03	4.45E+03	1.91E+04	1.95E-10
Nickel (28)	Ni-66	3.64E-05	1.77E-05	3.23E-05	3.62E-05	3.30E-05	0.927	1.11E+02	1.44E+07	2.97E+07	1.63E+07	1.45E+07	1.59E+07	1.66E-05
Neptunium (93)	Np-232	6.58E+00	1.33E+00	3.77E+00	5.84E+00	1.32E+00	0.916	2.48E+04	1.80E+04	8.94E+04	3.14E+04	2.03E+04	8.98E+04	3.27E-10
Neptunium (93)	Np-233	2.95E-01	8.77E-02	2.24E-01	2.91E-01	9.09E-02	0.951	1.01E+04	1.57E+05	5.29E+05	2.07E+05	1.59E+05	5.10E+05	7.07E-09
Neptunium (93)	Np-234	8.77E+00	1.56E+00	4.49E+00	7.27E+00	1.53E+00	0.966	5.75E+01	2.97E+01	1.68E+02	5.80E+01	3.58E+01	1.71E+02	2.35E-10
Neptunium (93)	Np-235	2.82E-03	1.07E-03	2.29E-03	2.82E-03	3.34E-03	1	6.39E-01	2.10E+03	5.52E+03	2.58E+03	2.10E+03	1.78E+03	1.50E-06
Neptunium (93)	Np-236	4.16E-01	1.22E-01	3.15E-01	4.12E-01	1.30E-01	0.999	6.03E-06	1.05E+01	3.61E+01	1.39E+01	1.06E+01	3.38E+01	8.01E-04
Neptunium (93)	Np-236m	1.72E-01	4.87E-02	1.25E-01	1.66E-01	5.11E-02	0.999	2.70E+02	6.89E+03	2.43E+04	9.44E+03	7.11E+03	2.31E+04	1.17E-08
Neptunium (93)	Np-237	6.94E-02	2.31E-02	5.52E-02	6.92E-02	2.94E-02	0.973	3.24E-07	6.49E+01	1.95E+02	8.15E+01	6.51E+01	1.53E+02	9.21E-02
Neptunium (93)	Np-237+D						0.973	3.24E-07						
Neptunium (93)	Np-237+E	1.01E+00	2.41E-01	6.66E-01	9.59E-01	2.46E-01	0.973	3.24E-07	4.46E+00	1.87E+01	6.76E+00	4.70E+00	1.83E+01	6.34E-03
Neptunium (93)	Np-238	3.25E+00	6.10E-01	1.75E+00	2.80E+00	6.23E-01	0.995	1.19E+02	1.62E+02	8.62E+02	3.00E+02	1.88E+02	8.44E+02	6.26E-10
Neptunium (93)	Np-239	6.88E-01	1.77E-01	4.79E-01	6.66E-01	1.80E-01	0.945	1.07E+02	7.23E+02	2.82E+03	1.04E+03	7.48E+02	2.77E+03	3.12E-09
Neptunium (93)	Np-240	7.25E+00	1.45E+00	4.12E+00	6.42E+00	1.45E+00	0.954	5.60E+03	3.55E+03	1.78E+04	6.24E+03	4.01E+03	1.78E+04	2.95E-10
Neptunium (93)	Np-240m	1.90E+00	3.80E-01	1.07E+00	1.68E+00	4.52E-01	0.97	4.92E+04	1.17E+05	5.84E+05	2.07E+05	1.33E+05	4.92E+05	1.11E-09
Oxygen (8)	O-15	5.61E+00	1.17E+00	3.32E+00	5.09E+00	1.25E+00	0.883	1.79E+05	1.58E+05	7.58E+05	2.67E+05	1.74E+05	7.10E+05	2.57E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Osmium (76)	Os-180	1.41E-01	5.22E-02	1.13E-01	1.36E-01	6.29E-02	0.97	1.66E+04	5.30E+05	1.43E+06	6.64E+05	5.48E+05	1.19E+06	1.12E-08
Osmium (76)	Os-181	6.75E+00	1.33E+00	3.77E+00	5.87E+00	1.32E+00	0.918	3.47E+03	2.45E+03	1.24E+04	4.39E+03	2.82E+03	1.26E+04	2.48E-10
Osmium (76)	Os-182	2.07E+00	4.70E-01	1.29E+00	1.92E+00	4.74E-01	0.95	2.76E+02	6.15E+02	2.71E+03	9.84E+02	6.62E+02	2.69E+03	7.87E-10
Osmium (76)	Os-185	3.90E+00	7.96E-01	2.24E+00	3.47E+00	7.95E-01	0.871	2.69E+00	3.72E+00	1.82E+01	6.49E+00	4.18E+00	1.83E+01	4.97E-10
Osmium (76)	Os-189m	1.76E-06	1.76E-06	1.76E-06	1.76E-06	5.64E-05	1	1.01E+03	2.51E+09	2.52E+09	2.51E+09	2.51E+09	7.86E+07	9.11E-04
Osmium (76)	Os-190m	8.50E+00	1.78E+00	5.09E+00	7.76E+00	1.76E+00	0.887	3.68E+04	2.14E+04	1.02E+05	3.57E+04	2.34E+04	1.03E+05	2.14E-10
Osmium (76)	Os-191	2.14E-01	7.27E-02	1.72E-01	2.13E-01	7.88E-02	0.945	1.64E+01	3.55E+02	1.05E+03	4.43E+02	3.58E+02	9.66E+02	8.01E-09
Osmium (76)	Os-191m	1.38E-02	6.21E-03	1.26E-02	1.38E-02	7.47E-03	0.98	4.66E+02	1.51E+05	3.35E+05	1.66E+05	1.51E+05	2.79E+05	1.20E-07
Osmium (76)	Os-193	3.41E-01	8.11E-02	2.18E-01	3.17E-01	1.12E-01	0.939	2.02E+02	2.77E+03	1.16E+04	4.33E+03	2.98E+03	8.43E+03	5.12E-09
Osmium (76)	Os-194	9.31E-04	6.17E-04	9.18E-04	9.31E-04	1.11E-03	0.994	1.16E-01	5.01E+03	7.56E+03	5.08E+03	5.01E+03	4.19E+03	1.63E-05
Osmium (76)	Os-194+D	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	0.903	1.16E-01	9.80E+00	4.29E+01	1.64E+01	1.08E+01	2.42E+01	3.19E-08
Osmium (76)	Os-194+E	5.24E-01	1.20E-01	3.13E-01	4.74E-01	2.12E-01	0.903	1.16E-01	9.80E+00	4.29E+01	1.64E+01	1.08E+01	2.42E+01	3.19E-08
Phosphorus (15)	P-30	5.69E+00	1.21E+00	3.38E+00	5.17E+00	1.32E+00	0.883	1.46E+05	1.27E+05	5.99E+05	2.14E+05	1.40E+05	5.48E+05	5.08E-11
Phosphorus (15)	P-32	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	0.927	1.77E+01	4.11E+03	6.75E+03	4.96E+03	4.23E+03	8.41E+02	1.44E-08
Phosphorus (15)	P-33	5.02E-05	2.37E-05	4.40E-05	5.00E-05	4.25E-05	0.927	9.96E+00	9.38E+05	1.99E+06	1.07E+06	9.41E+05	1.11E+06	6.03E-06
Protactinium (91)	Pa-227	5.65E-02	1.92E-02	4.61E-02	5.65E-02	2.11E-02	1	9.51E+03	7.37E+05	2.17E+06	9.04E+05	7.37E+05	1.97E+06	3.41E-08
Protactinium (91)	Pa-228	6.38E+00	1.24E+00	3.54E+00	5.54E+00	1.23E+00	1	2.76E+02	1.89E+02	9.72E+02	3.41E+02	2.18E+02	9.86E+02	3.04E-10
Protactinium (91)	Pa-230	3.56E+00	7.14E-01	2.03E+00	3.13E+00	7.08E-01	1	1.45E+01	1.79E+01	8.91E+01	3.13E+01	2.03E+01	8.99E+01	5.49E-10
Protactinium (91)	Pa-231	1.76E-01	4.03E-02	1.12E-01	1.66E-01	4.41E-02	0.994	2.12E-05	2.50E+01	1.09E+02	3.92E+01	2.66E+01	9.99E+01	5.30E-04
Protactinium (91)	Pa-232	5.35E+00	1.04E+00	2.98E+00	4.68E+00	1.03E+00	0.952	1.93E+02	1.66E+02	8.54E+02	2.98E+02	1.90E+02	8.63E+02	3.87E-10
Protactinium (91)	Pa-233	9.40E-01	2.18E-01	6.10E-01	8.90E-01	2.17E-01	0.951	9.37E+00	4.59E+01	1.98E+02	7.08E+01	4.85E+01	1.99E+02	2.22E-09
Protactinium (91)	Pa-234	1.09E+01	2.11E+00	6.04E+00	9.47E+00	2.10E+00	0.957	9.06E+02	3.81E+02	1.97E+03	6.86E+02	4.38E+02	1.97E+03	1.91E-10
Protactinium (91)	Pa-234m	9.85E-02	3.13E-02	6.21E-02	8.80E-02	1.26E-01	0.999	3.11E+05	1.39E+07	4.36E+07	2.20E+07	1.55E+07	1.08E+07	2.02E-08
Lead (82)	Pb-195m	8.67E+00	1.78E+00	5.04E+00	7.78E+00	1.77E+00	0.902	2.31E+04	1.29E+04	6.30E+04	2.22E+04	1.44E+04	6.31E+04	2.12E-10
Lead (82)	Pb-198	2.05E+00	4.74E-01	1.31E+00	1.92E+00	4.74E-01	0.936	2.53E+03	5.77E+03	2.50E+04	9.07E+03	6.16E+03	2.50E+04	8.76E-10
Lead (82)	Pb-199	8.56E+00	1.61E+00	4.61E+00	7.31E+00	1.59E+00	0.958	4.05E+03	2.16E+03	1.15E+04	4.02E+03	2.53E+03	1.17E+04	2.06E-10
Lead (82)	Pb-200	7.63E-01	2.11E-01	5.46E-01	7.39E-01	2.17E-01	0.939	2.82E+02	1.73E+03	6.25E+03	2.41E+03	1.78E+03	6.07E+03	2.37E-09
Lead (82)	Pb-201	3.99E+00	8.34E-01	2.35E+00	3.58E+00	8.26E-01	0.96	6.46E+02	7.38E+02	3.53E+03	1.25E+03	8.23E+02	3.57E+03	4.46E-10
Lead (82)	Pb-202	7.33E-06	7.33E-06	7.33E-06	7.33E-06	2.23E-04	1	2.31E-06	5.98E+05	5.98E+05	5.98E+05	5.98E+05	1.97E+04	1.01E+02
Lead (82)	Pb-202+D	1.40E+01					0.906	2.31E-06	3.45E-01					5.86E-05
Lead (82)	Pb-202+E	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	0.906	2.31E-06	2.07E+00	9.39E+00	3.38E+00	2.25E+00	9.42E+00	3.52E-04
Lead (82)	Pb-202m	1.17E+01	2.29E+00	6.56E+00	1.03E+01	2.25E+00	0.994	1.68E+03	6.34E+02	3.22E+03	1.13E+03	7.19E+02	3.28E+03	1.48E-10
Lead (82)	Pb-203	1.38E+00	3.34E-01	9.12E-01	1.31E+00	3.34E-01	0.921	1.17E+02	4.02E+02	1.66E+03	6.08E+02	4.23E+02	1.66E+03	1.36E-09
Lead (82)	Pb-205	8.19E-06	8.19E-06	8.19E-06	8.19E-06	2.43E-04	1	4.85E-08	5.35E+05	5.35E+05	5.35E+05	5.35E+05	1.80E+04	4.39E+03
Lead (82)	Pb-209	7.52E-04	2.95E-04	5.95E-04	7.40E-04	3.72E-03	0.927	1.87E+03	1.17E+07	2.99E+07	1.48E+07	1.19E+07	2.37E+06	2.55E-06
Lead (82)	Pb-210	1.98E-03	1.26E-03	1.96E-03	1.98E-03	2.49E-03	0.996	3.11E-02	2.26E+03	3.54E+03	2.28E+03	2.26E+03	1.80E+03	2.96E-05
Lead (82)	Pb-211	2.91E-01	6.17E-02	1.69E-01	2.59E-01	1.11E-01	0.894	1.01E+04	1.70E+05	8.01E+05	2.92E+05	1.91E+05	4.46E+05	6.89E-09
Lead (82)	Pb-212	6.45E-01	1.59E-01	4.36E-01	6.21E-01	1.58E-01	0.919	5.71E+02	4.21E+03	1.71E+04	6.23E+03	4.38E+03	1.73E+04	3.04E-09
Lead (82)	Pb-214	1.24E+00	2.78E-01	7.80E-01	1.16E+00	2.80E-01	0.929	1.36E+04	5.17E+04	2.31E+05	8.22E+04	5.52E+04	2.29E+05	1.58E-09
Palladium (46)	Pd-100	2.89E-01	1.04E-01	2.41E-01	2.89E-01	1.24E-01	0.973	6.97E+01	1.09E+03	3.01E+03	1.30E+03	1.09E+03	2.54E+03	3.02E-09
Palladium (46)	Pd-101	1.74E+00	3.52E-01	1.01E+00	1.55E+00	3.61E-01	0.893	7.34E+02	2.07E+03	1.02E+04	3.58E+03	2.32E+03	9.98E+03	5.54E-10
Palladium (46)	Pd-103	1.88E-03	1.43E-03	1.66E-03	1.84E-03	8.95E-03	0.998	1.49E+01	3.47E+04	4.57E+04	3.94E+04	3.56E+04	7.31E+03	4.66E-07
Palladium (46)	Pd-107	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.07E-07						
Palladium (46)	Pd-109	1.80E-02	7.22E-03	1.41E-02	1.75E-02	4.35E-02	0.992	4.52E+02	1.11E+05	2.77E+05	1.41E+05	1.14E+05	4.59E+04	5.19E-08
Promethium (61)	Pm-141	4.18E+00	8.43E-01	2.39E+00	3.71E+00	9.02E-01	0.877	1.74E+04	2.08E+04	1.03E+05	3.65E+04	2.35E+04	9.65E+04	3.27E-10
Promethium (61)	Pm-142	4.89E+00	1.03E+00	2.85E+00	4.40E+00	1.12E+00	0.88	5.40E+05	5.50E+05	2.62E+06	9.41E+05	6.10E+05	2.39E+06	2.81E-10
Promethium (61)	Pm-143	1.66E+00	3.36E-01	9.40E-01	1.47E+00	3.47E-01	0.918	9.55E-01	4.46E+00	2.21E+01	7.88E+00	5.05E+00	2.14E+01	1.30E-09
Promethium (61)	Pm-144	8.65E+00	1.75E+00	4.98E+00	7.72E+00	1.74E+00	0.875	6.97E-01	8.03E-01	3.98E+00	1.40E+00	9.00E-01	4.00E+00	3.22E-10
Promethium (61)	Pm-145	2.31E-02	1.58E-02	2.26E-02	2.31E-02	3.05E-02	0.968	3.92E-02	2.00E+02	2.92E+02	2.04E+02	2.00E+02	1.51E+02	1.43E-06
Promethium (61)	Pm-146	4.12E+00	8.37E-01	2.39E+00	3.69E+00	8.39E-01	0.873	1.25E-01	1.30E+00	6.37E+00	2.24E+00	1.45E+00	6.36E+00	2.93E-09
Promethium (61)	Pm-147	4.29E-05	1.88E-05	3.66E-05	4.27E-05	3.27E-05	0.942	2.64E-01	1.23E+05	2.81E+05	1.45E+05	1.24E+05	1.62E+05	1.33E-04
Promethium (61)	Pm-148	3.49E+00	6.49E-01	1.85E+00	2.97E+00	7.13E-01	0.845	4.71E+01	7.00E+01	3.76E+02	1.32E+02	8.23E+01	3.42E+02	4.27E-10
Promethium (61)	Pm-148m	1.12E+01	2.26E+00	6.43E+00	1.00E+01	2.23E+00	0.875	6.12E+00	2.73E+00	1.36E+01	4.78E+00	3.06E+00	1.38E+01	1.28E-10
Promethium (61)	Pm-149	5.95E-02	1.45E-02	3.77E-02	5.56E-02	4.71E-02	0.898	1.14E+02	9.38E+03	3.86E+04	1.48E+04	1.00E+04	1.18E+04	2.37E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Promethium (61)	Pm-150	8.56E+00	1.59E+00	4.57E+00	7.29E+00	1.65E+00	0.899	2.27E+03	1.29E+03	6.94E+03	2.42E+03	1.51E+03	6.71E+03	1.66E-10
Promethium (61)	Pm-151	1.61E+00	3.52E-01	9.88E-01	1.48E+00	3.71E-01	0.939	2.14E+02	6.19E+02	2.83E+03	1.01E+03	6.72E+02	2.69E+03	8.49E-10
Polonium (84)	Po-203	9.53E+00	1.80E+00	5.17E+00	8.17E+00	1.79E+00	0.935	9.92E+03	4.88E+03	2.58E+04	9.00E+03	5.69E+03	2.60E+04	1.94E-10
Polonium (84)	Po-205	9.16E+00	1.74E+00	4.96E+00	7.87E+00	1.72E+00	0.955	3.37E+03	1.69E+03	8.91E+03	3.12E+03	1.97E+03	9.02E+03	1.99E-10
Polonium (84)	Po-207	7.59E+00	1.47E+00	4.20E+00	6.58E+00	1.45E+00	0.955	1.04E+03	6.29E+02	3.25E+03	1.14E+03	7.25E+02	3.30E+03	2.43E-10
Polonium (84)	Po-210	4.92E-05	9.55E-06	2.74E-05	4.31E-05	9.44E-06	0.86	1.83E+00	2.25E+05	1.16E+06	4.05E+05	2.57E+05	1.17E+06	5.02E-05
Polonium (84)	Po-211	4.48E-02	8.77E-03	2.52E-02	3.94E-02	8.66E-03	0.865	4.24E+07	4.79E+09	2.45E+10	8.52E+09	5.45E+09	2.48E+10	4.63E-08
Polonium (84)	Po-212	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.17E+13						
Polonium (84)	Po-213	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	5.20E+12						
Polonium (84)	Po-214	4.83E-04	9.36E-05	2.69E-04	4.23E-04	9.25E-05	0.861	1.33E+11	1.40E+15	7.23E+15	2.52E+15	1.60E+15	7.31E+15	4.37E-06
Polonium (84)	Po-215	9.44E-04	2.00E-04	5.69E-04	8.67E-04	1.96E-04	0.89	1.23E+10	6.40E+13	3.03E+14	1.06E+14	6.97E+13	3.08E+14	2.18E-06
Polonium (84)	Po-216	9.81E-05	1.90E-05	5.45E-05	8.60E-05	1.88E-05	0.86	1.46E+08	7.56E+12	3.90E+13	1.36E+13	8.63E+12	3.95E+13	2.18E-05
Polonium (84)	Po-218	5.32E-05	1.02E-05	2.93E-05	4.64E-05	1.01E-05	0.858	1.19E+05	1.15E+10	5.95E+10	2.08E+10	1.31E+10	6.03E+10	4.06E-05
Praseodymium (59)	Pr-136	1.22E+01	2.35E+00	6.71E+00	1.06E+01	2.38E+00	0.855	2.78E+04	1.17E+04	6.06E+04	2.12E+04	1.34E+04	5.98E+04	1.11E-10
Praseodymium (59)	Pr-137	2.69E+00	5.54E-01	1.56E+00	2.41E+00	5.80E-01	0.885	4.76E+03	8.76E+03	4.25E+04	1.51E+04	9.78E+03	4.06E+04	4.90E-10
Praseodymium (59)	Pr-138	4.53E+00	9.57E-01	2.67E+00	4.08E+00	1.05E+00	0.879	2.51E+05	2.76E+05	1.31E+06	4.69E+05	3.06E+05	1.19E+06	2.94E-10
Praseodymium (59)	Pr-138m	1.42E+01	2.76E+00	7.89E+00	1.24E+01	2.74E+00	0.868	2.89E+03	1.03E+03	5.28E+03	1.85E+03	1.18E+03	5.32E+03	9.53E-11
Praseodymium (59)	Pr-139	5.56E-01	1.20E-01	3.25E-01	4.98E-01	1.37E-01	0.937	1.35E+03	1.13E+04	5.25E+04	1.94E+04	1.26E+04	4.61E+04	2.27E-09
Praseodymium (59)	Pr-142	4.03E-01	8.17E-02	2.09E-01	3.32E-01	1.72E-01	0.821	3.17E+02	4.20E+03	2.07E+04	8.11E+03	5.10E+03	9.87E+03	3.65E-09
Praseodymium (59)	Pr-142m	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	2.49E+04						
Praseodymium (59)	Pr-143	2.91E-03	1.52E-03	2.39E-03	2.85E-03	2.40E-02	0.864	1.87E+01	3.25E+04	6.21E+04	3.96E+04	3.31E+04	3.93E+03	4.83E-07
Praseodymium (59)	Pr-144	2.67E-01	7.14E-02	1.52E-01	2.28E-01	1.90E-01	0.821	2.11E+04	4.22E+05	1.57E+06	7.38E+05	4.94E+05	5.91E+05	5.59E-09
Praseodymium (59)	Pr-144m	1.20E-02	6.23E-03	9.66E-03	1.14E-02	1.23E-02	0.964	5.06E+04	1.92E+07	3.69E+07	2.38E+07	2.02E+07	1.88E+07	1.06E-07
Praseodymium (59)	Pr-145	9.51E-02	2.69E-02	5.82E-02	8.49E-02	1.09E-01	0.86	1.02E+03	5.44E+04	1.93E+05	8.89E+04	6.09E+04	4.72E+04	1.51E-08
Praseodymium (59)	Pr-147	4.74E+00	9.57E-01	2.69E+00	4.18E+00	1.04E+00	0.896	2.68E+04	2.76E+04	1.37E+05	4.87E+04	3.13E+04	1.25E+05	2.94E-10
Platinum (78)	Pt-186	4.01E+00	8.21E-01	2.31E+00	3.58E+00	8.17E-01	0.887	3.04E+03	3.74E+03	1.83E+04	6.48E+03	4.19E+03	1.83E+04	4.44E-10
Platinum (78)	Pt-188	7.68E-01	2.05E-01	5.32E-01	7.37E-01	2.12E-01	0.928	2.48E+01	1.52E+02	5.71E+02	2.20E+02	1.59E+02	5.51E+02	2.24E-09
Platinum (78)	Pt-189	1.47E+00	3.39E-01	9.08E-01	1.33E+00	3.49E-01	0.947	5.58E+02	1.76E+03	7.61E+03	2.84E+03	1.94E+03	7.40E+03	1.15E-09
Platinum (78)	Pt-191	1.24E+00	3.11E-01	8.17E-01	1.16E+00	3.24E-01	0.945	9.03E+01	3.37E+02	1.34E+03	5.13E+02	3.61E+02	1.29E+03	1.38E-09
Platinum (78)	Pt-193	6.30E-06	6.30E-06	6.30E-06	6.30E-06	1.80E-04	1	1.39E-02	7.00E+05	7.00E+05	7.00E+05	7.00E+05	2.45E+04	1.89E-02
Platinum (78)	Pt-193m	2.22E-02	9.34E-03	1.98E-02	2.22E-02	1.09E-02	0.976	5.84E+01	1.18E+04	2.81E+04	1.33E+04	1.18E+04	2.41E+04	7.57E-08
Platinum (78)	Pt-195m	1.65E-01	6.40E-02	1.42E-01	1.65E-01	7.22E-02	0.955	6.29E+01	1.75E+03	4.51E+03	2.04E+03	1.75E+03	3.99E+03	1.05E-08
Platinum (78)	Pt-197	7.25E-02	2.29E-02	5.61E-02	7.14E-02	2.79E-02	0.961	3.32E+02	2.08E+04	6.59E+04	2.69E+04	2.12E+04	5.42E+04	2.40E-08
Platinum (78)	Pt-197m	3.04E-01	8.08E-02	2.07E-01	2.89E-01	8.50E-02	0.959	3.86E+03	5.80E+04	2.18E+05	8.51E+04	6.10E+04	2.07E+05	5.74E-09
Platinum (78)	Pt-199	1.10E+00	2.33E-01	6.53E-01	9.96E-01	2.88E-01	0.927	1.18E+04	5.10E+04	2.40E+05	8.56E+04	5.61E+04	1.94E+05	1.66E-09
Platinum (78)	Pt-200	2.01E-01	5.84E-02	1.47E-01	1.96E-01	6.37E-02	0.95	4.86E+02	1.11E+04	3.84E+04	1.52E+04	1.14E+04	3.51E+04	8.88E-09
Plutonium (94)	Pu-234	2.07E-01	6.43E-02	1.63E-01	2.07E-01	6.75E-02	0.999	6.90E+02	1.46E+04	4.70E+04	1.86E+04	1.46E+04	4.48E+04	9.62E-09
Plutonium (94)	Pu-235	3.04E-01	8.88E-02	2.28E-01	2.97E-01	9.34E-02	0.955	1.44E+04	2.17E+05	7.44E+05	2.90E+05	2.23E+05	7.07E+05	6.88E-09
Plutonium (94)	Pu-236	1.81E-04	1.18E-04	1.61E-04	1.79E-04	8.58E-04	0.999	2.43E-01	2.73E+04	4.18E+04	3.07E+04	2.76E+04	5.76E+03	5.14E-05
Plutonium (94)	Pu-237	1.45E-01	4.57E-02	1.14E-01	1.45E-01	4.96E-02	0.999	5.58E+00	1.70E+02	5.38E+02	2.15E+02	1.70E+02	4.95E+02	1.40E-08
Plutonium (94)	Pu-238	1.16E-04	8.77E-05	1.08E-04	1.16E-04	7.31E-04	0.999	7.90E-03	3.78E+04	5.02E+04	4.08E+04	3.81E+04	6.03E+03	2.21E-03
Plutonium (94)	Pu-239	2.63E-04	8.88E-05	1.88E-04	2.52E-04	3.31E-04	0.999	2.88E-05	1.67E+04	4.94E+04	2.33E+04	1.74E+04	1.32E+04	2.69E-01
Plutonium (94)	Pu-240	1.12E-04	8.58E-05	1.06E-04	1.12E-04	7.01E-04	0.999	1.06E-04	3.91E+04	5.11E+04	4.15E+04	3.91E+04	6.25E+03	1.72E-01
Plutonium (94)	Pu-241	5.30E-06	1.63E-06	4.10E-06	5.28E-06	2.01E-06	0.974	4.81E-02	8.70E+05	2.82E+06	1.12E+06	8.73E+05	2.29E+06	8.45E-03
Plutonium (94)	Pu-242	9.90E-05	7.25E-05	9.21E-05	9.90E-05	5.81E-04	0.999	1.84E-06	4.43E+04	6.04E+04	4.76E+04	4.43E+04	7.54E+03	1.13E+01
Plutonium (94)	Pu-243	7.11E-02	2.33E-02	5.61E-02	7.01E-02	2.65E-02	0.952	1.22E+03	7.93E+04	2.42E+05	1.00E+05	8.04E+04	2.13E+05	3.05E-08
Plutonium (94)	Pu-244	1.38E-01	2.41E-02	6.96E-02	1.13E-01	2.36E-02	1.78	8.66E-09	1.79E+01	1.02E+02	3.54E+01	2.18E+01	1.04E+02	9.77E-01
Plutonium (94)	Pu-244+D	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	0.973	8.66E-09	2.21E+00	1.11E+01	3.94E+00	2.51E+00	9.41E+00	1.21E-01
Plutonium (94)	Pu-244+E	2.03E+00	4.05E-01	1.14E+00	1.79E+00	4.78E-01	0.973	8.66E-09	2.21E+00	1.11E+01	3.94E+00	2.51E+00	9.41E+00	1.21E-01
Plutonium (94)	Pu-245	2.22E+00	4.61E-01	1.31E+00	2.00E+00	4.74E-01	0.95	5.78E+02	1.20E+03	5.79E+03	2.04E+03	1.34E+03	5.63E+03	9.88E-10
Plutonium (94)	Pu-246	5.17E-01	1.38E-01	3.66E-01	5.04E-01	1.44E-01	0.955	2.33E+01	2.07E+02	7.77E+02	2.93E+02	2.12E+02	7.45E+02	4.24E-09
Radium (88)	Ra-222	4.70E-02	1.03E-02	2.95E-02	4.40E-02	1.01E-02	0.903	5.75E+05	5.94E+07	2.70E+08	9.47E+07	6.34E+07	2.76E+08	4.45E-08
Radium (88)	Ra-223	5.52E-01	1.41E-01	3.79E-01	5.30E-01	1.41E-01	0.958	2.21E+01	1.83E+02	7.19E+02	2.67E+02	1.91E+02	7.16E+02	3.58E-09
Radium (88)	Ra-223+D	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	0.945	2.21E+01	7.38E+01	3.14E+02	1.15E+02	7.89E+01	2.39E+02	1.44E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Radium (88)	Ra-223+E	1.39E+00	3.26E-01	8.90E-01	1.30E+00	4.29E-01	0.945	2.21E+01	7.38E+01	3.14E+02	1.15E+02	7.89E+01	2.39E+02	1.44E-09
Radium (88)	Ra-224	4.72E-02	1.09E-02	3.10E-02	4.51E-02	1.07E-02	0.916	6.91E+01	7.00E+03	3.02E+04	1.07E+04	7.32E+03	3.09E+04	4.40E-08
Radium (88)	Ra-224+D	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	0.898	6.91E+01	3.49E+01	2.02E+02	7.01E+01	4.30E+01	2.01E+02	2.19E-10
Radium (88)	Ra-224+E	9.66E+00	1.67E+00	4.81E+00	7.83E+00	1.68E+00	0.898	6.91E+01	3.49E+01	2.02E+02	7.01E+01	4.30E+01	2.01E+02	2.19E-10
Radium (88)	Ra-225	8.60E-03	6.21E-03	8.54E-03	8.58E-03	1.25E-02	0.977	1.71E+01	8.91E+03	1.23E+04	8.97E+03	8.93E+03	6.14E+03	2.28E-07
Radium (88)	Ra-225+D	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	0.964	1.71E+01	6.53E+01	3.00E+02	1.08E+02	7.19E+01	2.49E+02	1.67E-09
Radium (88)	Ra-225+E	1.19E+00	2.59E-01	7.18E-01	1.08E+00	3.12E-01	0.964	1.71E+01	6.53E+01	3.00E+02	1.08E+02	7.19E+01	2.49E+02	1.67E-09
Radium (88)	Ra-226	2.91E-02	7.24E-03	2.00E-02	2.82E-02	7.13E-03	0.928	4.33E-04	1.62E+02	6.52E+02	2.37E+02	1.68E+02	6.62E+02	1.64E-04
Radium (88)	Ra-226+D	1.06E+01					0.926	4.33E-04	4.46E-01					4.51E-07
Radium (88)	Ra-226+E	1.06E+01	1.94E+00	5.60E+00	8.95E+00	1.97E+00	0.926	4.33E-04	4.46E-01	2.44E+00	8.46E-01	5.28E-01	2.40E+00	4.51E-07
Radium (88)	Ra-227	7.87E-01	1.76E-01	4.89E-01	7.31E-01	2.12E-01	0.979	8.63E+03	4.91E+04	2.20E+05	7.90E+04	5.28E+04	1.82E+05	2.50E-09
Radium (88)	Ra-227+D						0.979	8.63E+03						
Radium (88)	Ra-228	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.21E-01						
Radium (88)	Ra-228+D	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	0.926	1.21E-01	8.88E-01	4.67E+00	1.63E+00	1.03E+00	4.58E+00	3.26E-09
Radium (88)	Ra-228+E	1.53E+01	2.74E+00	7.89E+00	1.27E+01	2.78E+00	0.926	1.21E-01	3.28E-01	1.83E+00	6.36E-01	3.94E-01	1.81E+00	1.20E-09
Rubidium (37)	Rb-79	7.39E+00	1.54E+00	4.38E+00	6.70E+00	1.61E+00	0.914	1.59E+04	1.03E+04	4.94E+04	1.74E+04	1.14E+04	4.73E+04	9.95E-11
Rubidium (37)	Rb-80	7.03E+00	1.49E+00	4.16E+00	6.38E+00	1.61E+00	0.883	6.43E+05	4.53E+05	2.14E+06	7.67E+05	5.00E+05	1.98E+06	1.10E-10
Rubidium (37)	Rb-81	3.26E+00	6.94E-01	1.98E+00	3.00E+00	6.98E-01	0.902	1.33E+03	1.97E+03	9.28E+03	3.26E+03	2.14E+03	9.22E+03	2.34E-10
Rubidium (37)	Rb-81m	1.18E-02	4.21E-03	9.85E-03	1.18E-02	5.73E-03	0.999	1.14E+04	4.22E+06	1.18E+07	5.07E+06	4.22E+06	8.71E+06	5.83E-08
Rubidium (37)	Rb-82	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	2.80E+05	2.27E+05	1.08E+06	3.86E+05	2.51E+05	9.92E+05	1.29E-10
Rubidium (37)	Rb-82m	1.69E+01	3.25E+00	9.33E+00	1.47E+01	3.20E+00	0.862	9.79E+02	2.94E+02	1.53E+03	5.34E+02	3.38E+02	1.56E+03	4.77E-11
Rubidium (37)	Rb-83	2.74E+00	5.63E-01	1.61E+00	2.48E+00	5.55E-01	0.944	2.93E+00	5.25E+00	2.55E+01	8.95E+00	5.80E+00	2.59E+01	2.88E-10
Rubidium (37)	Rb-84	5.26E+00	1.03E+00	2.95E+00	4.63E+00	1.02E+00	0.94	7.72E+00	6.84E+00	3.51E+01	1.22E+01	7.78E+00	3.53E+01	1.44E-10
Rubidium (37)	Rb-86	5.87E-01	1.17E-01	3.19E-01	5.04E-01	1.95E-01	0.844	1.36E+01	1.20E+02	6.00E+02	2.21E+02	1.40E+02	3.61E+02	1.47E-09
Rubidium (37)	Rb-87	1.21E-04	5.24E-05	1.04E-04	1.21E-04	8.52E-05	0.927	1.47E-11	3.90E+04	9.02E+04	4.56E+04	3.91E+04	5.55E+04	4.46E+05
Rubidium (37)	Rb-88	4.21E+00	7.61E-01	2.11E+00	3.43E+00	8.65E-01	0.809	2.05E+04	2.63E+04	1.46E+05	5.26E+04	3.23E+04	1.28E+05	2.19E-10
Rubidium (37)	Rb-89	1.30E+01	2.28E+00	6.56E+00	1.07E+01	2.30E+00	0.847	2.40E+04	9.52E+03	5.45E+04	1.89E+04	1.16E+04	5.39E+04	6.86E-11
Rhenium (75)	Re-177	3.28E+00	6.66E-01	1.85E+00	2.85E+00	6.94E-01	0.89	2.60E+04	3.90E+04	1.92E+05	6.93E+04	4.49E+04	1.84E+05	5.15E-10
Rhenium (75)	Re-178	7.05E+00	1.32E+00	3.75E+00	5.95E+00	1.34E+00	0.873	2.76E+04	1.96E+04	1.05E+05	3.69E+04	2.33E+04	1.03E+05	2.46E-10
Rhenium (75)	Re-180	6.60E+00	1.31E+00	3.69E+00	5.76E+00	1.31E+00	0.859	1.50E+05	1.16E+05	5.85E+05	2.07E+05	1.33E+05	5.85E+05	2.70E-10
Rhenium (75)	Re-181	3.99E+00	8.39E-01	2.35E+00	3.58E+00	8.40E-01	0.945	3.04E+02	3.52E+02	1.68E+03	5.99E+02	3.93E+02	1.67E+03	4.08E-10
Rhenium (75)	Re-182	1.03E+01	2.03E+00	5.76E+00	8.93E+00	2.02E+00	0.94	9.49E+01	4.31E+01	2.17E+02	7.67E+01	4.95E+01	2.19E+02	1.60E-10
Rhenium (75)	Re-182m	6.70E+00	1.27E+00	3.60E+00	5.69E+00	1.26E+00	0.926	4.78E+02	3.38E+02	1.78E+03	6.28E+02	3.97E+02	1.79E+03	2.49E-10
Rhenium (75)	Re-184	4.92E+00	9.79E-01	2.76E+00	4.31E+00	9.77E-01	0.897	6.66E+00	6.61E+00	3.32E+01	1.18E+01	7.55E+00	3.33E+01	3.55E-10
Rhenium (75)	Re-184m	1.90E+00	4.16E-01	1.14E+00	1.72E+00	4.19E-01	0.952	1.53E+00	4.73E+00	2.16E+01	7.87E+00	5.24E+00	2.15E+01	1.10E-09
Rhenium (75)	Re-186	7.18E-02	2.24E-02	5.45E-02	7.07E-02	5.16E-02	0.954	6.70E+01	4.28E+03	1.37E+04	5.65E+03	4.35E+03	5.96E+03	2.31E-08
Rhenium (75)	Re-186m	2.35E-02	1.13E-02	2.14E-02	2.35E-02	1.49E-02	0.985	3.47E-06	1.89E+02	3.94E+02	2.07E+02	1.89E+02	2.98E+02	1.97E-02
Rhenium (75)	Re-186m+D	9.55E-02					0.973	3.47E-06	4.72E+01					4.91E-03
Rhenium (75)	Re-186m+E	9.53E-02	3.36E-02	7.59E-02	9.42E-02	6.65E-02	0.973	3.47E-06	4.72E+01	1.34E+02	5.93E+01	4.78E+01	6.77E+01	4.92E-03
Rhenium (75)	Re-187	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	1.39E-11						
Rhenium (75)	Re-188	3.11E-01	7.87E-02	1.96E-01	2.85E-01	1.69E-01	0.903	3.58E+02	5.57E+03	2.20E+04	8.86E+03	6.08E+03	1.02E+04	5.68E-09
Rhenium (75)	Re-188m	1.69E-01	6.83E-02	1.46E-01	1.68E-01	7.90E-02	0.953	1.96E+04	5.33E+05	1.32E+06	6.16E+05	5.35E+05	1.14E+06	9.93E-09
Rhenium (75)	Re-189	3.08E-01	7.57E-02	2.05E-01	2.95E-01	9.81E-02	0.921	2.50E+02	3.86E+03	1.57E+04	5.79E+03	4.03E+03	1.21E+04	5.67E-09
Rhodium (45)	Rh-100	1.72E+01	2.98E+00	8.65E+00	1.41E+01	2.91E+00	0.886	2.92E+02	8.41E+01	4.84E+02	1.67E+02	1.02E+02	4.97E+02	5.59E-11
Rhodium (45)	Rh-101	1.12E+00	2.78E-01	7.68E-01	1.09E+00	2.80E-01	0.931	2.17E-01	4.66E+00	1.88E+01	6.81E+00	4.81E+00	1.87E+01	4.22E-09
Rhodium (45)	Rh-101m	1.51E+00	3.30E-01	9.42E-01	1.41E+00	3.30E-01	0.907	5.83E+01	1.87E+02	8.53E+02	2.99E+02	2.00E+02	8.52E+02	6.29E-10
Rhodium (45)	Rh-102	1.22E+01	2.39E+00	6.84E+00	1.07E+01	2.36E+00	0.861	2.39E-01	4.70E-01	2.40E+00	8.36E-01	5.33E-01	2.43E+00	3.90E-10
Rhodium (45)	Rh-102m	2.65E+00	5.43E-01	1.54E+00	2.39E+00	5.57E-01	0.987	1.22E+00	2.90E+00	1.42E+01	4.98E+00	3.22E+00	1.38E+01	4.70E-10
Rhodium (45)	Rh-103m	1.70E-04	1.63E-04	1.70E-04	1.70E-04	1.03E-03	0.998	6.49E+03	1.68E+08	1.74E+08	1.68E+08	1.68E+08	2.75E+07	5.17E-06
Rhodium (45)	Rh-105	3.97E-01	8.75E-02	2.50E-01	3.73E-01	8.66E-02	0.905	1.72E+02	2.09E+03	9.50E+03	3.32E+03	2.23E+03	9.60E+03	2.48E-09
Rhodium (45)	Rh-106	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	7.31E+05	2.91E+06	1.30E+07	4.97E+06	3.26E+06	9.01E+06	8.20E-10
Rhodium (45)	Rh-106m	1.71E+01	3.25E+00	9.34E+00	1.48E+01	3.21E+00	0.87	2.76E+03	8.14E+02	4.28E+03	1.49E+03	9.39E+02	4.33E+03	6.07E-11
Rhodium (45)	Rh-107	1.62E+00	3.56E-01	1.01E+00	1.51E+00	3.94E-01	0.9	1.68E+04	5.05E+04	2.29E+05	8.11E+04	5.40E+04	2.07E+05	6.24E-10
Rhodium (45)	Rh-99	3.15E+00	6.60E-01	1.86E+00	2.83E+00	6.61E-01	0.891	1.58E+01	2.47E+01	1.18E+02	4.17E+01	2.74E+01	1.18E+02	3.00E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Rhodium (45)	Rh-99m	3.79E+00	7.53E-01	2.16E+00	3.36E+00	7.46E-01	0.859	1.29E+03	1.74E+03	8.74E+03	3.04E+03	1.96E+03	8.83E+03	2.59E-10
Radon (86)	Rn-218	4.25E-03	8.56E-04	2.44E-03	3.80E-03	8.46E-04	0.875	6.24E+08	7.35E+11	3.65E+12	1.28E+12	8.22E+11	3.69E+12	4.98E-07
Radon (86)	Rn-219	2.85E-01	6.29E-02	1.78E-01	2.67E-01	6.16E-02	0.911	5.52E+06	9.30E+07	4.22E+08	1.49E+08	9.95E+07	4.31E+08	7.16E-09
Radon (86)	Rn-219+D	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	0.931	5.52E+06	3.10E+07	1.40E+08	5.06E+07	3.37E+07	8.97E+07	2.39E-09
Radon (86)	Rn-219+E	8.37E-01	1.85E-01	5.13E-01	7.70E-01	2.89E-01	0.931	5.52E+06	3.10E+07	1.40E+08	5.06E+07	3.37E+07	8.97E+07	2.39E-09
Radon (86)	Rn-220	2.14E-03	4.36E-04	1.25E-03	1.92E-03	4.31E-04	0.88	3.93E+05	9.12E+08	4.48E+09	1.57E+09	1.02E+09	4.54E+09	9.91E-07
Radon (86)	Rn-222	2.18E-03	4.51E-04	1.29E-03	1.98E-03	4.46E-04	0.883	6.62E+01	1.50E+05	7.27E+05	2.55E+05	1.66E+05	7.36E+05	9.79E-07
Radon (86)	Rn-222+D	1.06E+01	1.94E+00	5.58E+00	8.91E+00	1.96E+00	0.926	6.62E+01	2.96E+01	1.61E+02	5.61E+01	3.51E+01	1.60E+02	1.93E-10
Radon (86)	Rn-222+E	1.06E+01	1.94E+00	5.58E+00	8.93E+00	2.01E+00	0.926	6.62E+01	2.96E+01	1.61E+02	5.61E+01	3.50E+01	1.56E+02	1.93E-10
Ruthenium (44)	Ru-103	2.57E+00	5.32E-01	1.51E+00	2.33E+00	5.24E-01	0.882	6.44E+00	1.24E+01	6.03E+01	2.12E+01	1.37E+01	6.11E+01	3.86E-10
Ruthenium (44)	Ru-105	4.40E+00	8.88E-01	2.54E+00	3.94E+00	9.13E-01	0.898	1.37E+03	1.52E+03	7.51E+03	2.63E+03	1.69E+03	7.31E+03	2.26E-10
Ruthenium (44)	Ru-105+D	4.79E+00	9.75E-01	2.78E+00	4.31E+00	9.99E-01	0.991	1.37E+03	1.26E+03	6.20E+03	2.17E+03	1.40E+03	6.05E+03	1.88E-10
Ruthenium (44)	Ru-106	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.87E-01						
Ruthenium (44)	Ru-106+D	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	6.87E-01	5.51E+00	2.47E+01	9.40E+00	6.16E+00	1.70E+01	1.65E-09
Ruthenium (44)	Ru-106+E	1.24E+00	2.78E-01	7.29E-01	1.11E+00	4.03E-01	0.883	6.87E-01	5.51E+00	2.47E+01	9.40E+00	6.16E+00	1.70E+01	1.65E-09
Ruthenium (44)	Ru-94	2.89E+00	5.87E-01	1.68E+00	2.59E+00	5.84E-01	0.951	7.03E+03	1.12E+04	5.51E+04	1.93E+04	1.25E+04	5.55E+04	2.91E-10
Ruthenium (44)	Ru-97	1.09E+00	2.54E-01	7.14E-01	1.04E+00	2.52E-01	0.949	8.72E+01	3.68E+02	1.59E+03	5.64E+02	3.86E+02	1.60E+03	7.95E-10
Sulfur (16)	S-35	1.22E-05	6.96E-06	1.13E-05	1.22E-05	1.55E-05	0.927	2.89E+00	1.18E+06	2.08E+06	1.28E+06	1.18E+06	9.32E+05	2.78E-05
Antimony (51)	Sb-115	4.94E+00	1.02E+00	2.91E+00	4.48E+00	1.04E+00	0.891	1.15E+04	1.14E+04	5.52E+04	1.94E+04	1.26E+04	5.40E+04	2.22E-10
Antimony (51)	Sb-116	1.30E+01	2.37E+00	6.84E+00	1.10E+01	2.37E+00	0.867	2.31E+04	8.93E+03	4.92E+04	1.70E+04	1.06E+04	4.92E+04	8.72E-11
Antimony (51)	Sb-116m	1.83E+01	3.47E+00	9.94E+00	1.58E+01	3.42E+00	0.856	6.04E+03	1.69E+03	8.91E+03	3.11E+03	1.96E+03	9.04E+03	6.28E-11
Antimony (51)	Sb-117	7.35E-01	1.83E-01	4.98E-01	7.05E-01	1.93E-01	0.962	2.17E+03	1.34E+04	5.41E+04	1.98E+04	1.40E+04	5.13E+04	1.41E-09
Antimony (51)	Sb-118m	1.51E+01	2.82E+00	8.11E+00	1.29E+01	2.79E+00	0.87	1.21E+03	4.04E+02	2.17E+03	7.53E+02	4.72E+02	2.19E+03	7.62E-11
Antimony (51)	Sb-119	4.48E-03	4.35E-03	4.49E-03	4.48E-03	1.82E-02	0.992	1.59E+02	1.57E+05	1.62E+05	1.57E+05	1.57E+05	3.86E+04	2.28E-07
Antimony (51)	Sb-120	2.44E+00	5.07E-01	1.43E+00	2.20E+00	5.45E-01	0.927	2.29E+04	4.43E+04	2.14E+05	7.55E+04	4.92E+04	1.99E+05	4.50E-10
Antimony (51)	Sb-120m	1.43E+01	2.70E+00	7.74E+00	1.23E+01	2.66E+00	0.88	4.39E+01	1.53E+01	8.08E+01	2.82E+01	1.78E+01	8.21E+01	8.12E-11
Antimony (51)	Sb-122	2.48E+00	5.07E-01	1.44E+00	2.22E+00	5.66E-01	0.875	9.37E+01	1.89E+02	9.24E+02	3.27E+02	2.11E+02	8.29E+02	4.78E-10
Antimony (51)	Sb-124	1.11E+01	2.00E+00	5.78E+00	9.33E+00	1.98E+00	0.871	4.20E+00	1.94E+00	1.07E+01	3.71E+00	2.30E+00	1.08E+01	1.11E-10
Antimony (51)	Sb-124m	1.98E+00	3.99E-01	1.14E+00	1.77E+00	4.01E-01	0.875	2.35E+05	5.95E+05	2.95E+06	1.03E+06	6.66E+05	2.93E+06	6.09E-10
Antimony (51)	Sb-124n	1.37E-05	1.34E-05	1.38E-05	1.37E-05	5.92E-05	0.993	1.80E+04	5.80E+09	5.93E+09	5.78E+09	5.80E+09	1.34E+09	7.74E-05
Antimony (51)	Sb-125	2.28E+00	4.74E-01	1.34E+00	2.07E+00	4.77E-01	0.881	2.50E-01	2.47E+00	1.19E+01	4.18E+00	2.71E+00	1.18E+01	2.39E-09
Antimony (51)	Sb-126	1.60E+01	3.21E+00	9.14E+00	1.43E+01	3.17E+00	0.866	2.04E+01	6.43E+00	3.22E+01	1.13E+01	7.23E+00	3.25E+01	7.71E-11
Antimony (51)	Sb-126m	8.71E+00	1.76E+00	5.02E+00	7.80E+00	1.81E+00	0.872	1.92E+04	1.11E+04	5.48E+04	1.92E+04	1.24E+04	5.32E+04	1.41E-10
Antimony (51)	Sb-127	3.86E+00	7.76E-01	2.22E+00	3.45E+00	7.89E-01	0.883	6.57E+01	8.44E+01	4.20E+02	1.47E+02	9.45E+01	4.13E+02	3.17E-10
Antimony (51)	Sb-128	1.76E+01	3.49E+00	9.98E+00	1.56E+01	3.48E+00	0.885	6.74E+02	1.89E+02	9.56E+02	3.34E+02	2.14E+02	9.59E+02	6.97E-11
Antimony (51)	Sb-128m	1.13E+01	2.26E+00	6.43E+00	1.00E+01	2.32E+00	0.863	3.50E+04	1.57E+04	7.88E+04	2.76E+04	1.77E+04	7.65E+04	1.12E-10
Antimony (51)	Sb-129	8.54E+00	1.60E+00	4.61E+00	7.33E+00	1.60E+00	0.875	1.41E+03	8.24E+02	4.40E+03	1.53E+03	9.60E+02	4.40E+03	1.47E-10
Antimony (51)	Sb-130	1.88E+01	3.66E+00	1.05E+01	1.64E+01	3.66E+00	0.863	9.11E+03	2.45E+03	1.26E+04	4.42E+03	2.81E+03	1.26E+04	6.80E-11
Antimony (51)	Sb-131	1.13E+01	2.05E+00	5.93E+00	9.55E+00	2.07E+00	0.858	1.58E+04	7.15E+03	3.94E+04	1.36E+04	8.47E+03	3.91E+04	1.15E-10
Scandium (21)	Sc-43	5.95E+00	1.24E+00	3.54E+00	5.43E+00	1.25E+00	0.886	1.56E+03	1.30E+03	6.20E+03	2.18E+03	1.42E+03	6.18E+03	6.93E-11
Scandium (21)	Sc-44	1.24E+01	2.39E+00	6.86E+00	1.08E+01	2.43E+00	0.863	1.55E+03	6.32E+02	3.29E+03	1.14E+03	7.24E+02	3.23E+03	3.49E-11
Scandium (21)	Sc-44m	1.44E+00	3.13E-01	8.93E-01	1.34E+00	3.06E-01	0.902	1.04E+02	3.48E+02	1.61E+03	5.63E+02	3.75E+02	1.65E+03	2.87E-10
Scandium (21)	Sc-46	1.20E+01	2.24E+00	6.43E+00	1.03E+01	2.19E+00	0.847	3.02E+00	1.37E+00	7.33E+00	2.55E+00	1.60E+00	7.48E+00	4.05E-11
Scandium (21)	Sc-47	4.61E-01	1.18E-01	3.25E-01	4.51E-01	1.16E-01	0.926	7.55E+01	7.75E+02	3.03E+03	1.10E+03	7.91E+02	3.07E+03	9.36E-10
Scandium (21)	Sc-48	2.03E+01	3.69E+00	1.07E+01	1.72E+01	3.63E+00	0.84	1.39E+02	3.56E+01	1.96E+02	6.78E+01	4.22E+01	2.00E+02	2.39E-11
Scandium (21)	Sc-49	3.60E-02	1.88E-02	2.74E-02	3.39E-02	1.19E-01	0.815	6.35E+03	9.47E+05	1.81E+06	1.24E+06	1.00E+06	2.86E+05	1.42E-08
Selenium (34)	Se-70	5.32E+00	1.12E+00	3.17E+00	4.83E+00	1.16E+00	0.936	8.88E+03	7.82E+03	3.72E+04	1.31E+04	8.61E+03	3.57E+04	1.20E-10
Selenium (34)	Se-73	5.69E+00	1.22E+00	3.43E+00	5.22E+00	1.25E+00	0.905	8.49E+02	7.22E+02	3.37E+03	1.20E+03	7.87E+02	3.29E+03	1.21E-10
Selenium (34)	Se-73m	1.33E+00	2.78E-01	7.87E-01	1.21E+00	2.94E-01	0.941	9.34E+03	3.26E+04	1.56E+05	5.52E+04	3.59E+04	1.48E+05	4.94E-10
Selenium (34)	Se-75	1.83E+00	4.29E-01	1.20E+00	1.75E+00	4.21E-01	0.918	2.11E+00	6.27E+00	2.67E+01	9.51E+00	6.57E+00	2.72E+01	4.32E-10
Selenium (34)	Se-77m	3.64E-01	9.23E-02	2.54E-01	3.54E-01	9.07E-02	0.98	1.25E+06	1.54E+07	6.06E+07	2.21E+07	1.58E+07	6.17E+07	1.84E-09
Selenium (34)	Se-79	1.53E-05	8.69E-06	1.42E-05	1.53E-05	1.91E-05	0.927	1.07E-05	3.09E+05	5.44E+05	3.33E+05	3.09E+05	2.47E+05	4.45E+00
Selenium (34)	Se-81	6.53E-02	2.00E-02	4.27E-02	6.06E-02	9.50E-02	0.878	1.97E+04	1.50E+06	4.92E+06	2.30E+06	1.62E+06	1.03E+06	1.20E-08
Selenium (34)	Se-81m	4.57E-02	1.40E-02	3.56E-02	4.57E-02	1.47E-02	0.987	6.36E+03	6.18E+05	2.01E+06	7.93E+05	6.18E+05	1.92E+06	1.53E-08

		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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Selenium (34)	Se-83	1.44E+01	2.69E+00	7.74E+00	1.23E+01	2.67E+00	0.881	1.62E+04	5.59E+03	3.00E+04	1.04E+04	6.53E+03	3.01E+04	5.56E-11
Silicon (14)	Si-31	1.98E-02	9.62E-03	1.47E-02	1.85E-02	8.33E-02	0.834	2.32E+03	6.15E+05	1.26E+06	8.27E+05	6.58E+05	1.46E+05	1.60E-08
Silicon (14)	Si-32	2.97E-05	1.51E-05	2.67E-05	2.97E-05	2.92E-05	0.927	1.54E-03	1.59E+05	3.14E+05	1.77E+05	1.59E+05	1.62E+05	6.43E-03
Silicon (14)	Si-32+D	2.04E-02					0.928	1.54E-03	2.32E+02					9.35E-06
Silicon (14)	Si-32+E	2.03E-02	1.24E-02	1.69E-02	1.98E-02	9.94E-02	0.928	1.54E-03	2.32E+02	3.81E+02	2.80E+02	2.39E+02	4.75E+01	9.37E-06
Samarium (62)	Sm-141	8.00E+00	1.58E+00	4.49E+00	7.03E+00	1.62E+00	0.851	3.57E+04	2.30E+04	1.16E+05	4.09E+04	2.61E+04	1.13E+05	1.76E-10
Samarium (62)	Sm-141m	1.13E+01	2.20E+00	6.29E+00	9.87E+00	2.21E+00	0.89	1.61E+04	7.02E+03	3.60E+04	1.26E+04	8.04E+03	3.60E+04	1.19E-10
Samarium (62)	Sm-142	3.79E-01	8.84E-02	2.29E-01	3.43E-01	1.04E-01	0.944	5.02E+03	6.16E+04	2.64E+05	1.02E+05	6.79E+04	2.23E+05	3.38E-09
Samarium (62)	Sm-145	5.43E-02	3.60E-02	5.32E-02	5.43E-02	6.49E-02	0.965	7.44E-01	1.19E+02	1.79E+02	1.21E+02	1.19E+02	9.92E+01	4.48E-08
Samarium (62)	Sm-146	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.73E-09						
Samarium (62)	Sm-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	6.54E-12						
Samarium (62)	Sm-151	6.75E-07	6.68E-07	6.75E-07	6.75E-07	4.13E-06	0.998	7.70E-03	6.53E+06	6.60E+06	6.53E+06	6.53E+06	1.07E+06	2.48E-01
Samarium (62)	Sm-153	1.39E-01	5.17E-02	1.13E-01	1.39E-01	7.12E-02	0.94	1.30E+02	4.35E+03	1.17E+04	5.34E+03	4.37E+03	8.51E+03	9.93E-09
Samarium (62)	Sm-155	3.66E-01	1.12E-01	2.76E-01	3.60E-01	1.82E-01	0.925	1.65E+04	2.13E+05	6.97E+05	2.83E+05	2.17E+05	4.29E+05	3.90E-09
Samarium (62)	Sm-156	4.83E-01	1.25E-01	3.36E-01	4.68E-01	1.31E-01	0.924	6.46E+02	6.34E+03	2.45E+04	9.12E+03	6.54E+03	2.34E+04	2.97E-09
Tin (50)	Sn-110	1.43E+00	3.21E-01	9.08E-01	1.35E+00	3.23E-01	0.956	1.52E+03	4.87E+03	2.17E+04	7.66E+03	5.16E+03	2.15E+04	6.85E-10
Tin (50)	Sn-111	2.87E+00	5.61E-01	1.60E+00	2.50E+00	5.85E-01	0.871	1.03E+04	1.81E+04	9.24E+04	3.24E+04	2.08E+04	8.87E+04	3.77E-10
Tin (50)	Sn-113	2.65E-02	8.39E-03	1.82E-02	2.54E-02	1.90E-02	0.992	2.20E+00	4.12E+02	1.30E+03	5.99E+02	4.30E+02	5.74E+02	4.11E-08
Tin (50)	Sn-117m	5.97E-01	1.56E-01	4.21E-01	5.86E-01	1.63E-01	0.961	1.86E+01	1.42E+02	5.43E+02	2.01E+02	1.45E+02	5.18E+02	1.73E-09
Tin (50)	Sn-119m	2.09E-03	2.03E-03	2.11E-03	2.09E-03	8.72E-03	0.992	8.63E-01	3.16E+03	3.24E+03	3.13E+03	3.16E+03	7.56E+02	8.44E-07
Tin (50)	Sn-121	1.71E-04	6.79E-05	1.41E-04	1.70E-04	1.03E-04	0.927	2.24E+02	6.20E+06	1.56E+07	7.50E+06	6.25E+06	1.03E+07	6.49E-06
Tin (50)	Sn-121m	1.43E-03	1.27E-03	1.42E-03	1.43E-03	4.20E-03	0.986	1.26E-02	3.13E+03	3.52E+03	3.14E+03	3.13E+03	1.06E+03	5.82E-05
Tin (50)	Sn-121m+D	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	0.986	1.26E-02	2.86E+03	3.39E+03	2.91E+03	2.86E+03	1.04E+03	5.33E-05
Tin (50)	Sn-121m+E	1.56E-03	1.32E-03	1.53E-03	1.56E-03	4.28E-03	0.986	1.26E-02	2.86E+03	3.39E+03	2.91E+03	2.86E+03	1.04E+03	5.33E-05
Tin (50)	Sn-123	5.30E-02	1.46E-02	3.15E-02	4.64E-02	7.59E-02	0.843	1.96E+00	2.24E+02	8.12E+02	3.76E+02	2.55E+02	1.56E+02	2.73E-08
Tin (50)	Sn-123m	5.91E-01	1.54E-01	4.16E-01	5.78E-01	2.02E-01	0.936	9.09E+03	7.19E+04	2.76E+05	1.02E+05	7.36E+04	2.11E+05	1.89E-09
Tin (50)	Sn-125	1.92E+00	3.66E-01	1.02E+00	1.63E+00	4.46E-01	0.857	2.62E+01	6.98E+01	3.67E+02	1.31E+02	8.22E+01	3.01E+02	6.45E-10
Tin (50)	Sn-126	1.30E-01	4.74E-02	1.09E-01	1.30E-01	5.62E-02	0.957	6.93E-06	3.53E+01	9.66E+01	4.22E+01	3.52E+01	8.14E+01	1.24E-03
Tin (50)	Sn-126+D	8.84E+00	1.81E+00	5.13E+00	7.93E+00	1.87E+00	0.874	6.93E-06	5.67E-01	2.78E+00	9.77E-01	6.32E-01	2.68E+00	2.00E-05
Tin (50)	Sn-126+E	1.11E+01	2.26E+00	6.42E+00	9.92E+00	2.31E+00	0.874	6.93E-06	4.52E-01	2.22E+00	7.81E-01	5.05E-01	2.17E+00	1.60E-05
Tin (50)	Sn-127	1.15E+01	2.11E+00	6.08E+00	9.74E+00	2.10E+00	0.928	2.89E+03	1.18E+03	6.47E+03	2.24E+03	1.40E+03	6.50E+03	1.01E-10
Tin (50)	Sn-128	3.30E+00	7.03E-01	1.98E+00	3.00E+00	7.29E-01	0.904	6.16E+03	9.05E+03	4.25E+04	1.51E+04	9.94E+03	4.09E+04	3.65E-10
Strontium (38)	Sr-80	9.94E-05	9.94E-05	9.94E-05	9.94E-05	1.87E-03	1	3.64E+03	1.60E+08	1.60E+08	1.60E+08	1.60E+08	8.54E+06	6.84E-06
Strontium (38)	Sr-81	7.53E+00	1.59E+00	4.48E+00	6.83E+00	1.67E+00	0.895	1.43E+04	9.28E+03	4.40E+04	1.56E+04	1.02E+04	4.19E+04	1.02E-10
Strontium (38)	Sr-82	9.77E-05	9.77E-05	9.77E-05	9.77E-05	1.83E-03	1	1.01E+01	4.53E+05	4.53E+05	4.53E+05	4.53E+05	2.42E+04	7.13E-06
Strontium (38)	Sr-82+D	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	1.01E+01	8.20E+00	3.91E+01	1.39E+01	9.06E+00	3.58E+01	1.29E-10
Strontium (38)	Sr-82+E	6.12E+00	1.28E+00	3.60E+00	5.54E+00	1.40E+00	0.883	1.01E+01	8.20E+00	3.91E+01	1.39E+01	9.06E+00	3.58E+01	1.29E-10
Strontium (38)	Sr-83	4.49E+00	8.88E-01	2.54E+00	3.97E+00	8.88E-01	0.906	1.87E+02	2.02E+02	1.02E+03	3.57E+02	2.28E+02	1.02E+03	1.73E-10
Strontium (38)	Sr-85	2.76E+00	5.71E-01	1.63E+00	2.50E+00	5.65E-01	0.968	3.90E+00	6.53E+00	3.16E+01	1.11E+01	7.21E+00	3.19E+01	2.76E-10
Strontium (38)	Sr-85m	1.04E+00	2.42E-01	6.86E-01	9.98E-01	2.36E-01	0.921	5.24E+03	2.40E+04	1.03E+05	3.63E+04	2.50E+04	1.06E+05	7.55E-10
Strontium (38)	Sr-87m	1.68E+00	3.60E-01	1.03E+00	1.56E+00	3.55E-01	0.917	2.16E+03	6.14E+03	2.87E+04	1.01E+04	6.63E+03	2.91E+04	4.79E-10
Strontium (38)	Sr-89	1.51E-02	8.97E-03	1.24E-02	1.47E-02	8.01E-02	0.856	5.01E+00	1.71E+03	2.88E+03	2.07E+03	1.76E+03	3.22E+02	5.90E-08
Strontium (38)	Sr-90	6.45E-04	2.35E-04	5.07E-04	6.36E-04	1.91E-03	0.927	2.38E-02	7.41E+03	2.03E+04	9.43E+03	7.52E+03	2.50E+03	5.44E-05
Strontium (38)	Sr-90+D	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	1	2.38E-02	1.09E+02	1.87E+02	1.34E+02	1.13E+02	3.39E+01	8.00E-07
Strontium (38)	Sr-90+E	4.07E-02	2.37E-02	3.30E-02	3.94E-02	1.31E-01	1	2.38E-02	1.09E+02	1.87E+02	1.34E+02	1.13E+02	3.39E+01	8.00E-07
Strontium (38)	Sr-91	4.12E+00	7.91E-01	2.26E+00	3.58E+00	8.48E-01	0.862	6.39E+02	7.88E+02	4.11E+03	1.44E+03	9.07E+02	3.83E+03	2.18E-10
Strontium (38)	Sr-92	8.30E+00	1.46E+00	4.25E+00	6.90E+00	1.44E+00	0.831	2.24E+03	1.42E+03	8.06E+03	2.78E+03	1.71E+03	8.23E+03	1.13E-10
Tantalum (73)	Ta-172	8.78E+00	1.71E+00	4.85E+00	7.61E+00	1.74E+00	0.913	9.90E+03	5.41E+03	2.78E+04	9.79E+03	6.24E+03	2.73E+04	1.82E-10
Tantalum (73)	Ta-173	2.98E+00	6.34E-01	1.75E+00	2.67E+00	6.71E-01	0.93	1.66E+03	2.63E+03	1.24E+04	4.48E+03	2.94E+03	1.17E+04	5.30E-10
Tantalum (73)	Ta-174	3.21E+00	6.86E-01	1.90E+00	2.89E+00	7.18E-01	0.865	5.06E+03	7.99E+03	3.73E+04	1.35E+04	8.86E+03	3.57E+04	5.33E-10
Tantalum (73)	Ta-175	5.18E+00	9.96E-01	2.82E+00	4.42E+00	9.91E-01	0.934	5.78E+02	5.23E+02	2.72E+03	9.63E+02	6.13E+02	2.74E+03	3.07E-10
Tantalum (73)	Ta-176	1.32E+01	2.29E+00	6.64E+00	1.08E+01	2.25E+00	0.941	7.51E+02	2.66E+02	1.52E+03	5.27E+02	3.23E+02	1.55E+03	1.21E-10
Tantalum (73)	Ta-177	1.57E-01	5.73E-02	1.23E-01	1.51E-01	6.85E-02	0.941	1.07E+02	3.18E+03	8.72E+03	4.06E+03	3.31E+03	7.29E+03	1.02E-08
Tantalum (73)	Ta-178	4.16E-01	1.02E-01	2.52E-01	3.62E-01	1.12E-01	0.905	3.91E+04	4.55E+05	1.86E+06	7.52E+05	5.23E+05	1.69E+06	4.02E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Tantalum (73)	Ta-178m	4.79E+00	1.11E+00	3.06E+00	4.49E+00	1.11E+00	0.906	2.76E+03	2.78E+03	1.20E+04	4.36E+03	2.97E+03	1.20E+04	3.48E-10
Tantalum (73)	Ta-179	4.87E-02	2.48E-02	4.57E-02	4.87E-02	3.21E-02	0.959	3.80E-01	1.13E+02	2.21E+02	1.20E+02	1.13E+02	1.71E+02	1.03E-07
Tantalum (73)	Ta-180	2.57E+00	6.04E-01	1.67E+00	2.44E+00	6.05E-01	0.912	6.93E-14	1.87E+00	7.95E+00	2.87E+00	1.97E+00	7.95E+00	9.41E+03
Tantalum (73)	Ta-180m	8.17E-02	3.86E-02	7.46E-02	8.17E-02	4.94E-02	0.946	7.49E+02	4.25E+04	8.99E+04	4.65E+04	4.25E+04	7.03E+04	1.98E-08
Tantalum (73)	Ta-182	7.50E+00	1.41E+00	4.03E+00	6.40E+00	1.40E+00	0.925	2.20E+00	1.56E+00	8.30E+00	2.91E+00	1.83E+00	8.36E+00	2.51E-10
Tantalum (73)	Ta-182m	9.42E-01	2.56E-01	6.70E-01	9.18E-01	2.63E-01	0.928	2.30E+04	1.15E+05	4.25E+05	1.62E+05	1.18E+05	4.13E+05	1.77E-09
Tantalum (73)	Ta-183	1.20E+00	3.04E-01	8.11E-01	1.15E+00	3.13E-01	0.932	4.96E+01	1.95E+02	7.67E+02	2.87E+02	2.04E+02	7.45E+02	1.40E-09
Tantalum (73)	Ta-184	8.80E+00	1.80E+00	5.13E+00	7.89E+00	1.81E+00	0.914	6.98E+02	3.80E+02	1.86E+03	6.52E+02	4.24E+02	1.85E+03	1.94E-10
Tantalum (73)	Ta-185	7.98E-01	2.09E-01	5.39E-01	7.57E-01	2.92E-01	0.923	7.43E+03	4.42E+04	1.69E+05	6.54E+04	4.66E+04	1.21E+05	2.13E-09
Tantalum (73)	Ta-186	8.43E+00	1.76E+00	4.98E+00	7.61E+00	1.84E+00	0.913	3.47E+04	1.97E+04	9.43E+04	3.34E+04	2.19E+04	9.03E+04	2.05E-10
Terbium (65)	Tb-147	9.12E+00	1.78E+00	5.05E+00	7.96E+00	1.81E+00	0.859	3.68E+03	2.06E+03	1.05E+04	3.71E+03	2.36E+03	1.04E+04	1.59E-10
Terbium (65)	Tb-149	9.47E+00	1.77E+00	5.07E+00	8.08E+00	1.75E+00	0.863	1.46E+03	7.84E+02	4.20E+03	1.46E+03	9.19E+02	4.24E+03	1.55E-10
Terbium (65)	Tb-150	9.75E+00	1.88E+00	5.35E+00	8.45E+00	1.89E+00	0.868	1.86E+03	9.60E+02	4.97E+03	1.75E+03	1.11E+03	4.96E+03	1.51E-10
Terbium (65)	Tb-151	4.59E+00	9.72E-01	2.72E+00	4.16E+00	9.78E-01	0.892	3.45E+02	3.69E+02	1.74E+03	6.22E+02	4.07E+02	1.73E+03	3.14E-10
Terbium (65)	Tb-153	9.18E-01	2.28E-01	5.97E-01	8.56E-01	2.44E-01	0.931	1.08E+02	5.54E+02	2.24E+03	8.52E+02	5.94E+02	2.09E+03	1.52E-09
Terbium (65)	Tb-154	1.47E+01	2.50E+00	7.24E+00	1.19E+01	2.43E+00	0.889	2.84E+02	9.52E+01	5.59E+02	1.93E+02	1.18E+02	5.76E+02	1.00E-10
Terbium (65)	Tb-155	4.20E-01	1.27E-01	3.08E-01	4.08E-01	1.46E-01	0.937	4.75E+01	5.30E+02	1.75E+03	7.22E+02	5.44E+02	1.52E+03	3.35E-09
Terbium (65)	Tb-156	1.04E+01	2.00E+00	5.69E+00	8.99E+00	1.97E+00	0.883	4.74E+01	2.25E+01	1.18E+02	4.13E+01	2.61E+01	1.19E+02	1.44E-10
Terbium (65)	Tb-156m	2.97E-02	1.76E-02	2.89E-02	2.97E-02	2.58E-02	0.957	2.49E+02	3.84E+04	6.47E+04	3.94E+04	3.84E+04	4.42E+04	4.67E-08
Terbium (65)	Tb-156n	5.46E-03	2.63E-03	4.90E-03	5.46E-03	3.68E-03	0.955	1.21E+03	1.02E+06	2.12E+06	1.14E+06	1.02E+06	1.51E+06	2.54E-07
Terbium (65)	Tb-157	2.31E-03	1.53E-03	2.28E-03	2.31E-03	2.57E-03	0.962	4.62E-03	1.97E+03	2.99E+03	2.01E+03	1.97E+03	1.78E+03	1.30E-04
Terbium (65)	Tb-158	4.46E+00	8.67E-01	2.46E+00	3.86E+00	8.74E-01	0.854	4.62E-03	1.15E+00	5.93E+00	2.09E+00	1.33E+00	5.88E+00	7.65E-08
Terbium (65)	Tb-160	6.53E+00	1.24E+00	3.56E+00	5.63E+00	1.24E+00	0.861	3.50E+00	2.81E+00	1.48E+01	5.15E+00	3.26E+00	1.48E+01	2.50E-10
Terbium (65)	Tb-161	4.64E-02	2.29E-02	4.20E-02	4.61E-02	3.44E-02	0.954	3.66E+01	3.62E+03	7.33E+03	4.01E+03	3.65E+03	4.88E+03	3.09E-08
Technetium (43)	Tc-101	1.73E+00	3.80E-01	1.08E+00	1.62E+00	4.26E-01	0.894	2.57E+04	7.26E+04	3.30E+05	1.17E+05	7.77E+04	2.95E+05	5.55E-10
Technetium (43)	Tc-104	1.22E+01	2.22E+00	6.34E+00	1.02E+01	2.28E+00	0.898	2.00E+04	8.03E+03	4.40E+04	1.54E+04	9.59E+03	4.29E+04	8.09E-11
Technetium (43)	Tc-93	9.06E+00	1.58E+00	4.59E+00	7.48E+00	1.54E+00	0.891	2.21E+03	1.20E+03	6.89E+03	2.37E+03	1.45E+03	7.04E+03	9.79E-11
Technetium (43)	Tc-93m	4.49E+00	7.65E-01	2.24E+00	3.66E+00	7.35E-01	0.898	8.37E+03	9.09E+03	5.34E+04	1.82E+04	1.12E+04	5.56E+04	1.96E-10
Technetium (43)	Tc-94	1.54E+01	2.98E+00	8.56E+00	1.35E+01	2.95E+00	0.87	1.24E+03	4.06E+02	2.10E+03	7.31E+02	4.64E+02	2.12E+03	5.96E-11
Technetium (43)	Tc-94m	1.09E+01	2.09E+00	5.95E+00	9.42E+00	2.12E+00	0.859	7.00E+03	3.28E+03	1.71E+04	6.00E+03	3.79E+03	1.68E+04	8.55E-11
Technetium (43)	Tc-95	4.53E+00	8.82E-01	2.54E+00	3.97E+00	8.75E-01	0.877	3.04E+02	3.35E+02	1.72E+03	5.98E+02	3.82E+02	1.73E+03	2.03E-10
Technetium (43)	Tc-95m	3.67E+00	7.44E-01	2.13E+00	3.28E+00	7.38E-01	0.873	4.15E+00	5.75E+00	2.84E+01	9.94E+00	6.44E+00	2.87E+01	2.56E-10
Technetium (43)	Tc-96	1.45E+01	2.80E+00	8.02E+00	1.27E+01	2.77E+00	0.86	5.91E+01	2.07E+01	1.08E+02	3.75E+01	2.38E+01	1.09E+02	6.54E-11
Technetium (43)	Tc-96m	2.65E-01	5.04E-02	1.44E-01	2.28E-01	5.25E-02	0.938	7.07E+03	1.25E+05	6.56E+05	2.30E+05	1.45E+05	6.29E+05	3.28E-09
Technetium (43)	Tc-97	5.63E-04	5.67E-04	5.63E-04	5.63E-04	5.43E-03	1	2.67E-07	7.78E+03	7.73E+03	7.78E+03	7.78E+03	8.07E+02	5.49E+00
Technetium (43)	Tc-97m	1.53E-03	8.82E-04	1.34E-03	1.53E-03	5.19E-03	0.999	2.91E+00	8.81E+03	1.53E+04	1.01E+04	8.80E+03	2.60E+03	5.70E-07
Technetium (43)	Tc-98	8.06E+00	1.59E+00	4.57E+00	7.14E+00	1.58E+00	0.867	1.65E-07	6.27E-01	3.17E+00	1.11E+00	7.07E-01	3.21E+00	7.23E-04
Technetium (43)	Tc-99	1.08E-04	4.64E-05	9.21E-05	1.08E-04	7.55E-05	0.927	3.25E-06	4.37E+04	1.02E+05	5.13E+04	4.38E+04	6.26E+04	2.58E+00
Technetium (43)	Tc-99m	5.02E-01	1.35E-01	3.64E-01	4.96E-01	1.33E-01	0.946	1.01E+03	9.31E+03	3.47E+04	1.28E+04	9.41E+03	3.51E+04	1.77E-09
Tellurium (52)	Te-116	1.73E-01	5.17E-02	1.24E-01	1.65E-01	7.07E-02	0.98	2.44E+03	6.31E+04	2.11E+05	8.80E+04	6.59E+04	1.54E+05	5.83E-09
Tellurium (52)	Te-121	3.10E+00	6.36E-01	1.81E+00	2.80E+00	6.38E-01	0.902	1.49E+01	2.33E+01	1.14E+02	4.00E+01	2.58E+01	1.13E+02	3.68E-10
Tellurium (52)	Te-121m	9.90E-01	2.28E-01	6.36E-01	9.34E-01	2.31E-01	0.917	1.64E+00	9.82E+00	4.28E+01	1.53E+01	1.04E+01	4.21E+01	1.40E-09
Tellurium (52)	Te-123	4.63E-03	4.42E-03	4.64E-03	4.63E-03	1.66E-02	0.989	6.93E-14	9.58E+02	1.00E+03	9.54E+02	9.58E+02	2.67E+02	3.30E+06
Tellurium (52)	Te-123m	5.71E-01	1.49E-01	4.03E-01	5.60E-01	1.54E-01	0.951	2.11E+00	1.94E+01	7.43E+01	2.75E+01	1.98E+01	7.19E+01	2.19E-09
Tellurium (52)	Te-125m	1.11E-02	9.59E-03	1.08E-02	1.11E-02	3.10E-02	0.986	4.36E+00	1.77E+03	2.05E+03	1.81E+03	1.77E+03	6.32E+02	9.84E-08
Tellurium (52)	Te-127	2.67E-02	5.91E-03	1.64E-02	2.46E-02	1.20E-02	0.894	6.49E+02	1.19E+05	5.38E+05	1.94E+05	1.29E+05	2.65E+05	4.53E-08
Tellurium (52)	Te-127m	4.16E-03	3.13E-03	3.84E-03	4.10E-03	9.99E-03	0.983	2.32E+00	2.76E+03	3.66E+03	2.98E+03	2.79E+03	1.15E+03	2.93E-07
Tellurium (52)	Te-129	3.13E-01	6.98E-02	1.87E-01	2.83E-01	1.33E-01	0.889	5.23E+03	8.23E+04	3.70E+05	1.38E+05	9.10E+04	1.94E+05	3.94E-09
Tellurium (52)	Te-129m	1.75E-01	3.84E-02	1.01E-01	1.56E-01	6.65E-02	0.985	7.53E+00	1.91E+02	8.72E+02	3.30E+02	2.15E+02	5.04E+02	6.35E-09
Tellurium (52)	Te-131	2.24E+00	4.77E-01	1.33E+00	2.01E+00	5.53E-01	0.917	1.46E+04	3.11E+04	1.46E+05	5.23E+04	3.46E+04	1.26E+05	5.43E-10
Tellurium (52)	Te-131m	8.24E+00	1.58E+00	4.53E+00	7.16E+00	1.56E+00	0.949	2.02E+02	1.13E+02	5.91E+02	2.06E+02	1.30E+02	5.97E+02	1.42E-10
Tellurium (52)	Te-132	9.94E-01	2.39E-01	6.60E-01	9.55E-01	2.47E-01	0.936	7.76E+01	3.65E+02	1.52E+03	5.50E+02	3.80E+02	1.47E+03	1.21E-09
Tellurium (52)	Te-133	5.37E+00	1.05E+00	3.00E+00	4.70E+00	1.12E+00	0.842	2.93E+04	2.83E+04	1.45E+05	5.07E+04	3.24E+04	1.36E+05	2.50E-10
Tellurium (52)	Te-133m	1.36E+01	2.57E+00	7.39E+00	1.17E+01	2.61E+00	0.927	6.57E+03	2.29E+03	1.21E+04	4.21E+03	2.65E+03	1.19E+04	8.98E-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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Tellurium (52)	Te-134	4.76E+00	9.87E-01	2.80E+00	4.29E+00	9.90E-01	0.872	8.71E+03	9.20E+03	4.44E+04	1.56E+04	1.02E+04	4.42E+04	2.75E-10
()	Test Isotope													
Thorium (90)	Th-226	3.02E-02	8.21E-03	2.18E-02	2.95E-02	8.46E-03	0.947	1.18E+04	1.80E+06	6.64E+06	2.50E+06	1.85E+06	6.44E+06	6.71E-08
Thorium (90)	Th-227	4.79E-01	1.13E-01	3.15E-01	4.57E-01	1.14E-01	0.971	1.35E+01	1.27E+02	5.38E+02	1.93E+02	1.33E+02	5.32E+02	4.15E-09
Thorium (90)	Th-228	7.16E-03	2.09E-03	5.32E-03	7.03E-03	2.49E-03	0.98	3.62E-01	7.44E+02	2.55E+03	1.00E+03	7.58E+02	2.14E+03	9.09E-07
Thorium (90)	Th-229	2.89E-01	8.69E-02	2.20E-01	2.85E-01	9.21E-02	0.959	9.44E-05	1.58E+01	5.26E+01	2.08E+01	1.60E+01	4.96E+01	7.44E-05
Thorium (90)	Th-229+D	1.48E+00					0.972	9.44E-05	3.04E+00					1.43E-05
Thorium (90)	Th-229+E	1.48E+00	3.47E-01	9.38E-01	1.37E+00	4.04E-01	0.972	9.44E-05	3.05E+00	1.30E+01	4.80E+00	3.30E+00	1.12E+01	1.43E-05
Thorium (90)	Th-230	1.07E-03	3.84E-04	8.62E-04	1.06E-03	7.43E-04	0.997	9.00E-06	4.11E+03	1.14E+04	5.10E+03	4.16E+03	5.91E+03	2.04E-01
Thorium (90)	Th-231	3.21E-02	1.16E-02	2.63E-02	3.19E-02	1.81E-02	0.985	2.38E+02	3.30E+04	9.13E+04	4.02E+04	3.32E+04	5.85E+04	6.21E-08
Thorium (90)	Th-232	4.55E-04	1.87E-04	3.82E-04	4.51E-04	5.31E-04	0.998	4.93E-11	9.64E+03	2.35E+04	1.15E+04	9.72E+03	8.27E+03	8.80E+04
Thorium (90)	Th-232+D						0.998	4.93E-11						
Thorium (90)	Th-234	2.13E-02	7.63E-03	1.77E-02	2.13E-02	8.74E-03	0.957	1.05E+01	2.26E+03	6.30E+03	2.71E+03	2.26E+03	5.50E+03	9.77E-08
Thorium (90)	Th-234+D	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.991	1.05E+01	2.99E+02	1.01E+03	4.66E+02	3.30E+02	3.29E+02	1.29E-08
Thorium (90)	Th-234+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.991	1.05E+01	2.99E+02	1.01E+03	4.66E+02	3.30E+02	3.29E+02	1.29E-08
Titanium (22)	Ti-44	3.13E-01	1.24E-01	2.74E-01	3.13E-01	1.38E-01	0.945	1.47E-02	1.49E+01	3.75E+01	1.70E+01	1.49E+01	3.39E+01	8.68E-08
Titanium (22)	Ti-44+D	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	0.871	1.47E-02	3.98E-01	2.01E+00	7.09E-01	4.54E-01	1.97E+00	2.32E-09
Titanium (22)	Ti-44+E	1.27E+01	2.52E+00	7.14E+00	1.12E+01	2.57E+00	0.871	1.47E-02	3.98E-01	2.01E+00	7.09E-01	4.54E-01	1.97E+00	2.32E-09
Titanium (22)	Ti-45	4.77E+00	9.88E-01	2.82E+00	4.35E+00	1.01E+00	0.882	1.97E+03	2.05E+03	9.90E+03	3.48E+03	2.25E+03	9.69E+03	9.08E-11
Thallium (81)	Tl-194	4.08E+00	8.63E-01	2.42E+00	3.71E+00	8.58E-01	0.886	1.10E+04	1.34E+04	6.32E+04	2.25E+04	1.47E+04	6.36E+04	4.56E-10
Thallium (81)	Tl-194m	1.26E+01	2.61E+00	7.39E+00	1.14E+01	2.60E+00	0.927	1.11E+04	4.15E+03	2.01E+04	7.10E+03	4.61E+03	2.02E+04	1.41E-10
Thallium (81)	Tl-195	7.50E+00	1.37E+00	3.94E+00	6.29E+00	1.35E+00	0.944	5.23E+03	3.24E+03	1.77E+04	6.17E+03	3.86E+03	1.79E+04	2.34E-10
Thallium (81)	Tl-197	2.07E+00	4.38E-01	1.21E+00	1.83E+00	4.40E-01	0.934	2.14E+03	4.84E+03	2.29E+04	8.28E+03	5.47E+03	2.28E+04	8.66E-10
Thallium (81)	Tl-198	1.20E+01	2.18E+00	6.27E+00	1.01E+01	2.12E+00	0.948	1.15E+03	4.40E+02	2.43E+03	8.45E+02	5.25E+02	2.49E+03	1.48E-10
Thallium (81)	Tl-198m	6.34E+00	1.33E+00	3.77E+00	5.76E+00	1.32E+00	0.981	3.25E+03	2.29E+03	1.09E+04	3.85E+03	2.52E+03	1.10E+04	2.71E-10
Thallium (81)	Tl-199	1.08E+00	2.61E-01	7.01E-01	1.01E+00	2.65E-01	0.931	8.18E+02	3.55E+03	1.47E+04	5.49E+03	3.81E+03	1.45E+04	1.68E-09
Thallium (81)	Tl-200	7.42E+00	1.44E+00	4.12E+00	6.45E+00	1.42E+00	0.952	2.33E+02	1.44E+02	7.42E+02	2.60E+02	1.66E+02	7.52E+02	2.41E-10
Thallium (81)	Tl-201	2.44E-01	8.54E-02	2.00E-01	2.42E-01	9.29E-02	0.944	8.31E+01	1.58E+03	4.51E+03	1.93E+03	1.59E+03	4.15E+03	7.41E-09
Thallium (81)	Tl-202	2.33E+00	5.15E-01	1.43E+00	2.14E+00	5.13E-01	0.906	2.07E+01	4.29E+01	1.94E+02	6.99E+01	4.66E+01	1.95E+02	8.13E-10
Thallium (81)	Tl-204	3.88E-03	1.65E-03	3.30E-03	3.86E-03	1.26E-02	0.963	1.83E-01	1.28E+03	3.02E+03	1.51E+03	1.29E+03	3.95E+02	2.77E-06
Thallium (81)	Tl-206	1.26E-02	7.48E-03	1.04E-02	1.23E-02	7.08E-02	0.934	8.67E+04	3.23E+07	5.44E+07	3.90E+07	3.31E+07	5.74E+06	1.49E-07
Thallium (81)	Tl-207	2.29E-02	8.47E-03	1.54E-02	2.11E-02	6.49E-02	0.855	7.64E+04	1.71E+07	4.62E+07	2.53E+07	1.86E+07	6.03E+06	8.97E-08
Thallium (81)	Tl-208	2.18E+01	3.56E+00	1.04E+01	1.73E+01	3.47E+00	0.879	1.19E+05	2.71E+04	1.66E+05	5.68E+04	3.41E+04	1.71E+05	9.22E-11
Thallium (81)	Tl-209	1.22E+01	2.22E+00	6.40E+00	1.03E+01	2.24E+00	0.865	1.66E+05	6.85E+04	3.78E+05	1.31E+05	8.17E+04	3.74E+05	1.68E-10
Thulium (69)	Tm-162	1.08E+01	1.92E+00	5.52E+00	8.93E+00	1.90E+00	0.883	1.68E+04	7.71E+03	4.33E+04	1.51E+04	9.32E+03	4.38E+04	1.44E-10
Thulium (69)	Tm-166	1.12E+01	2.01E+00	5.80E+00	9.33E+00	1.98E+00	0.912	7.88E+02	3.39E+02	1.88E+03	6.53E+02	4.06E+02	1.91E+03	1.38E-10
Thulium (69)	Tm-167	5.07E-01	1.40E-01	3.52E-01	4.89E-01	1.53E-01	0.928	2.74E+01	2.55E+02	9.25E+02	3.67E+02	2.64E+02	8.45E+02	3.01E-09
Thulium (69)	Tm-170	1.41E-02	6.17E-03	1.21E-02	1.40E-02	3.08E-02	0.944	1.97E+00	7.55E+02	1.72E+03	8.75E+02	7.57E+02	3.44E+02	1.27E-07
Thulium (69)	Tm-171	9.38E-04	4.89E-04	8.86E-04	9.38E-04	6.48E-04	0.953	3.61E-01	5.84E+03	1.12E+04	6.18E+03	5.84E+03	8.45E+03	5.37E-06
Thulium (69)	Tm-172	2.91E+00	5.26E-01	1.51E+00	2.42E+00	5.68E-01	0.898	9.55E+01	1.60E+02	8.85E+02	3.09E+02	1.92E+02	8.19E+02	5.60E-10
Thulium (69)	Tm-173	2.03E+00	4.38E-01	1.24E+00	1.88E+00	4.53E-01	0.895	7.37E+02	1.77E+03	8.23E+03	2.90E+03	1.91E+03	7.96E+03	8.08E-10
Thulium (69)	Tm-175	5.99E+00	1.18E+00	3.38E+00	5.26E+00	1.21E+00	0.892	2.40E+04	1.97E+04	9.97E+04	3.49E+04	2.24E+04	9.70E+04	2.79E-10
Uranium (92)	U-230	3.95E-03	1.17E-03	2.91E-03	3.86E-03	1.81E-03	0.987	1.22E+01	1.36E+04	4.60E+04	1.85E+04	1.40E+04	2.98E+04	5.01E-07
Uranium (92)	U-231	2.07E-01	6.64E-02	1.64E-01	2.07E-01	7.47E-02	0.961	6.02E+01	1.33E+03	4.13E+03	1.67E+03	1.33E+03	3.68E+03	9.87E-09
Uranium (92)	U-232	7.91E-04	3.02E-04	6.30E-04	7.81E-04	9.42E-04	0.997	9.63E-03	5.58E+03	1.46E+04	7.00E+03	5.65E+03	4.69E+03	2.61E-04
Uranium (92)	U-233	1.26E-03	3.64E-04	8.97E-04	1.22E-03	6.99E-04	0.998	4.37E-06	3.48E+03	1.21E+04	4.89E+03	3.59E+03	6.28E+03	3.59E-01
Uranium (92)	U-234	3.43E-04	1.56E-04	2.89E-04	3.43E-04	6.84E-04	0.998	2.83E-06	1.28E+04	2.81E+04	1.52E+04	1.28E+04	6.42E+03	2.05E+00
Uranium (92)	U-235	6.58E-01	1.65E-01	4.57E-01	6.42E-01	1.63E-01	0.96	9.85E-10	6.93E+00	2.76E+01	9.99E+00	7.11E+00	2.79E+01	3.21E+00
Uranium (92)	U-235+D	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	0.96	9.85E-10	6.61E+00	2.58E+01	9.45E+00	6.78E+00	2.51E+01	3.06E+00
Uranium (92)	U-235+E	6.90E-01	1.77E-01	4.83E-01	6.73E-01	1.82E-01	0.96	9.85E-10	6.61E+00	2.58E+01	9.45E+00	6.78E+00	2.51E+01	
Uranium (92)	U-236	1.77E-04	9.72E-05	1.56E-04	1.77E-04	5.87E-04	0.999	2.96E-08	2.47E+04	4.51E+04	2.81E+04	2.47E+04	7.47E+03	3.82E+02
Uranium (92)	U-237	4.81E-01	1.36E-01	3.51E-01	4.70E-01	1.44E-01	0.953	3.75E+01	3.58E+02	1.26E+03	4.91E+02	3.66E+02	1.20E+03	4.39E-09
Uranium (92)	U-238	7.94E-05	6.29E-05	7.83E-05	7.94E-05	4.94E-04	1	1.55E-10	5.51E+04	6.97E+04	5.59E+04	5.51E+04	8.87E+03	1.64E+05
Uranium (92)	U-238+D	1.56E-01					0.979	1.55E-10	2.87E+01					8.55E+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)	Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)	External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)	Area Correction Factor	Lambda	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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Uranium (92)	U-238+E	1.55E-01	4.59E-02	9.96E-02	1.40E-01	1.41E-01	0.979	1.55E-10	2.88E+01	9.75E+01	4.49E+01	3.19E+01	3.17E+01	8.57E+01
Uranium (92)	U-239	1.58E-01	5.17E-02	1.19E-01	1.51E-01	9.63E-02	0.958	1.55E+04	4.48E+05	1.37E+06	5.95E+05	4.69E+05	7.35E+05	1.34E-08
Uranium (92)	U-240	1.11E-03	8.06E-04	1.08E-03	1.11E-03	3.72E-03	0.998	4.31E+02	1.71E+06	2.35E+06	1.75E+06	1.71E+06	5.08E+05	1.84E-06
Vanadium (23)	V-47	5.50E+00	1.14E+00	3.25E+00	4.98E+00	1.23E+00	0.882	1.12E+04	1.01E+04	4.85E+04	1.71E+04	1.11E+04	4.53E+04	8.23E-11
Vanadium (23)	V-48	1.74E+01	3.23E+00	9.31E+00	1.49E+01	3.17E+00	0.844	1.56E+01	4.65E+00	2.51E+01	8.69E+00	5.44E+00	2.55E+01	2.78E-11
Vanadium (23)	V-49	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	7.67E-01						
Tungsten (74)	W-176	4.18E-01	1.59E-01	3.52E-01	4.18E-01	1.80E-01	0.942	2.64E+03	2.94E+04	7.72E+04	3.48E+04	2.94E+04	6.83E+04	3.80E-09
Tungsten (74)	W-177	4.55E+00	9.72E-01	2.69E+00	4.07E+00	9.78E-01	0.927	2.70E+03	2.80E+03	1.31E+04	4.75E+03	3.14E+03	1.30E+04	3.57E-10
Tungsten (74)	W-178	2.13E-02	1.05E-02	1.98E-02	2.13E-02	1.33E-02	0.971	1.17E+01	2.47E+03	5.03E+03	2.66E+03	2.47E+03	3.95E+03	7.33E-08
Tungsten (74)	W-178+D	4.37E-01					0.915	1.17E+01	1.28E+02					3.78E-09
Tungsten (74)	W-178+E	4.37E-01					0.915	1.17E+01	1.28E+02					3.78E-09
Tungsten (74)	W-179	8.09E-02	4.14E-02	7.57E-02	8.09E-02	5.81E-02	0.967	9.71E+03	5.44E+05	1.06E+06	5.81E+05	5.44E+05	7.57E+05	1.94E-08
Tungsten (74)	W-181	6.49E-02	3.17E-02	6.04E-02	6.49E-02	4.01E-02	0.956	2.09E+00	1.68E+02	3.44E+02	1.81E+02	1.68E+02	2.72E+02	2.83E-08
Tungsten (74)	W-185	3.82E-04	1.40E-04	3.10E-04	3.79E-04	2.00E-04	0.945	3.37E+00	4.23E+04	1.16E+05	5.22E+04	4.27E+04	8.10E+04	4.51E-06
Tungsten (74)	W-187	2.57E+00	5.33E-01	1.50E+00	2.31E+00	5.46E-01	0.94	2.54E+02	4.60E+02	2.22E+03	7.88E+02	5.12E+02	2.17E+03	6.57E-10
Tungsten (74)	W-188	8.90E-03	2.11E-03	5.84E-03	8.47E-03	2.12E-03	0.911	3.64E+00	2.02E+03	8.54E+03	3.08E+03	2.13E+03	8.47E+03	2.02E-07
Xenon (54)	Xe-120	2.13E+00	4.49E-01	1.25E+00	1.92E+00	4.68E-01	0.951	9.11E+03	1.97E+04	9.33E+04	3.35E+04	2.18E+04	8.96E+04	5.04E-10
Xenon (54)	Xe-121	1.09E+01	1.98E+00	5.67E+00	9.10E+00	1.97E+00	0.902	9.08E+03	4.05E+03	2.23E+04	7.78E+03	4.85E+03	2.24E+04	1.05E-10
Xenon (54)	Xe-122	2.33E-01	5.71E-02	1.50E-01	2.20E-01	7.04E-02	0.906	3.02E+02	6.26E+03	2.56E+04	9.73E+03	6.63E+03	2.07E+04	4.91E-09
Xenon (54)	Xe-123	3.41E+00	6.84E-01	1.94E+00	3.00E+00	7.04E-01	0.903	2.92E+03	4.15E+03	2.07E+04	7.30E+03	4.71E+03	2.01E+04	3.39E-10
Xenon (54)	Xe-125	1.19E+00	2.74E-01	7.59E-01	1.12E+00	2.88E-01	0.906	3.57E+02	1.46E+03	6.30E+03	2.27E+03	1.55E+03	5.99E+03	9.89E-10
Xenon (54)	Xe-127	1.21E+00	2.89E-01	7.98E-01	1.16E+00	2.99E-01	0.933	6.95E+00	2.70E+01	1.13E+02	4.09E+01	2.82E+01	1.09E+02	9.58E-10
Xenon (54)	Xe-129m	5.69E-02	2.35E-02	4.35E-02	5.56E-02	4.85E-02	0.979	3.16E+01	2.49E+03	6.02E+03	3.26E+03	2.55E+03	2.91E+03	1.97E-08
Xenon (54)	Xe-131m	1.92E-02	8.58E-03	1.52E-02	1.88E-02	1.87E-02	0.981	2.13E+01	4.94E+03	1.11E+04	6.26E+03	5.04E+03	5.08E+03	5.91E-08
Xenon (54)	Xe-133	8.71E-02	3.49E-02	7.46E-02	8.73E-02	4.61E-02	0.964	4.82E+01	2.52E+03	6.28E+03	2.94E+03	2.51E+03	4.75E+03	1.35E-08
Xenon (54)	Xe-133m	1.18E-01	3.13E-02	7.94E-02	1.14E-01	4.12E-02	0.973	1.16E+02	4.40E+03	1.66E+04	6.55E+03	4.58E+03	1.26E+04	9.83E-09
Xenon (54)	Xe-135	1.23E+00	2.78E-01	7.89E-01	1.16E+00	2.92E-01	0.907	6.68E+02	2.63E+03	1.16E+04	4.09E+03	2.77E+03	1.11E+04	1.03E-09
Xenon (54)	Xe-135m	2.35E+00	4.83E-01	1.37E+00	2.13E+00	4.89E-01	0.884	2.38E+04	5.02E+04	2.44E+05	8.59E+04	5.55E+04	2.41E+05	5.52E-10
Xenon (54)	Xe-138	6.99E+00	1.23E+00	3.54E+00	5.76E+00	1.25E+00	0.893	2.57E+04	1.80E+04	1.03E+05	3.56E+04	2.19E+04	1.01E+05	1.88E-10
Yttrium (39)	Y-86	2.14E+01	3.95E+00	1.14E+01	1.83E+01	3.89E+00	0.898	4.12E+02	9.37E+01	5.08E+02	1.76E+02	1.10E+02	5.17E+02	3.79E-11
Yttrium (39)	Y-86m	1.06E+00	2.44E-01	6.88E-01	1.00E+00	2.38E-01	0.919	7.59E+03	3.43E+04	1.48E+05	5.26E+04	3.60E+04	1.52E+05	7.53E-10
Yttrium (39)	Y-87	2.44E+00	5.09E-01	1.45E+00	2.22E+00	5.03E-01	0.969	7.56E+01	1.40E+02	6.71E+02	2.36E+02	1.54E+02	6.79E+02	3.12E-10
Yttrium (39)	Y-88	1.69E+01	2.91E+00	8.45E+00	1.38E+01	2.81E+00	0.881	2.37E+00	7.71E-01	4.47E+00	1.54E+00	9.40E-01	4.62E+00	5.55E-11
Yttrium (39)	Y-90	4.01E-02	2.35E-02	3.25E-02	3.88E-02	1.28E-01	1	9.49E+01	1.04E+04	1.77E+04	1.28E+04	1.07E+04	3.24E+03	1.91E-08
Yttrium (39)	Y-90m	3.26E+00	7.05E-01	2.00E+00	3.02E+00	6.97E-01	0.912	1.90E+03	2.80E+03	1.30E+04	4.58E+03	3.03E+03	1.31E+04	2.57E-10
Yttrium (39)	Y-91	3.79E-02	1.36E-02	2.46E-02	3.39E-02	8.71E-02	0.837	4.32E+00	6.06E+02	1.69E+03	9.31E+02	6.75E+02	2.63E+02	2.47E-08
Yttrium (39)	Y-91m	2.95E+00	6.01E-01	1.71E+00	2.65E+00	5.95E-01	0.892	7.33E+03	1.22E+04	5.99E+04	2.10E+04	1.36E+04	6.05E+04	2.94E-10
Yttrium (39)	Y-92	1.60E+00	3.30E-01	8.78E-01	1.38E+00	4.47E-01	0.843	1.71E+03	5.57E+03	2.70E+04	1.01E+04	6.47E+03	1.99E+04	5.80E-10
Yttrium (39)	Y-93	5.97E-01	1.33E-01	3.32E-01	5.11E-01	2.45E-01	0.814	6.01E+02	5.42E+03	2.44E+04	9.74E+03	6.33E+03	1.32E+04	1.63E-09
Yttrium (39)	Y-94	6.81E+00	1.29E+00	3.64E+00	5.80E+00	1.39E+00	0.83	1.91E+04	1.48E+04	7.81E+04	2.77E+04	1.74E+04	7.25E+04	1.41E-10
Yttrium (39)	Y-95	5.97E+00	9.94E-01	2.83E+00	4.70E+00	1.06E+00	0.829	3.40E+04	3.01E+04	1.81E+05	6.34E+04	3.83E+04	1.69E+05	1.63E-10
Ytterbium (70)	Yb-162	4.20E-01	1.29E-01	3.15E-01	4.12E-01	1.42E-01	0.937	1.93E+04	2.15E+05	6.97E+05	2.86E+05	2.19E+05	6.33E+05	3.50E-09
Ytterbium (70)	Yb-166	1.27E-01	6.47E-02	1.18E-01	1.27E-01	8.68E-02	0.952	1.07E+02	3.87E+03	7.61E+03	4.16E+03	3.87E+03	5.67E+03	1.17E-08
Ytterbium (70)	Yb-167	7.98E-01	2.48E-01	5.93E-01	7.74E-01	2.77E-01	0.928	2.08E+04	1.23E+05	3.96E+05	1.66E+05	1.27E+05	3.55E+05	1.92E-09
Ytterbium (70)	Yb-169	9.96E-01	2.95E-01	7.25E-01	9.70E-01	3.24E-01	0.921	7.90E+00	3.77E+01	1.28E+02	5.18E+01	3.88E+01	1.16E+02	1.57E-09
Ytterbium (70)	Yb-175	1.94E-01	4.38E-02	1.23E-01	1.82E-01	4.36E-02	0.901	6.04E+01	1.51E+03	6.70E+03	2.40E+03	1.62E+03	6.72E+03	8.51E-09
Ytterbium (70)	Yb-177	1.04E+00	2.09E-01	5.86E-01	9.10E-01	2.53E-01	0.882	3.20E+03	1.52E+04	7.60E+04	2.71E+04	1.74E+04	6.27E+04	1.63E-09
Ytterbium (70)	Yb-178	1.82E-01	3.95E-02	1.12E-01	1.69E-01	4.20E-02	0.898	4.92E+03	1.32E+05	6.07E+05	2.15E+05	1.42E+05	5.71E+05	9.26E-09
Zinc (30)	Zn-62	2.35E+00	4.87E-01	1.38E+00	2.13E+00	4.84E-01	0.879	6.56E+02	1.39E+03	6.71E+03	2.36E+03	1.54E+03	6.75E+03	2.55E-10
Zinc (30)	Zn-63	6.14E+00	1.27E+00	3.58E+00	5.52E+00	1.35E+00	0.862	9.56E+03	7.92E+03	3.84E+04	1.36E+04	8.80E+03	3.59E+04	1.01E-10
Zinc (30)	Zn-65	3.51E+00	6.43E-01	1.86E+00	2.97E+00	6.31E-01	0.843	1.04E+00	2.38E+00	1.30E+01	4.49E+00	2.82E+00	1.32E+01	2.90E-10
Zinc (30)	Zn-69	2.93E-03	1.51E-03	2.39E-03	2.87E-03	2.43E-02	0.892	6.39E+03	1.07E+07	2.08E+07	1.31E+07	1.09E+07	1.29E+06	2.25E-07
Zinc (30)	Zn-69m	2.24E+00	4.72E-01	1.34E+00	2.05E+00	4.64E-01	0.889	4.41E+02	9.71E+02	4.61E+03	1.62E+03	1.06E+03	4.68E+03	2.95E-10
Zinc (30)	Zn-71m	8.60E+00	1.76E+00	5.02E+00	7.74E+00	1.80E+00	0.868	1.55E+03	9.09E+02	4.44E+03	1.56E+03	1.01E+03	4.35E+03	8.09E-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)**	**Soil Volume External Exposure DCF (15 cm) (mrem/yr per pCi/g)**	**External Exposure DCF (Ground Plane) (mrem/yr per pCi/cm^2)**	**Area Correction Factor**	**Lambda**	**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	0.986	1.66E+05	3.72E+07	1.53E+08	5.63E+07	3.94E+07	1.43E+08	9.72E-08
Zinc (30)	Zn-72	5.97E-01	1.58E-01	4.27E-01	5.86E-01	1.56E-01	0.943	1.31E+02	1.02E+03	3.84E+03	1.42E+03	1.04E+03	3.88E+03	1.09E-09
Zirconium (40)	Zr-86	1.32E+00	2.98E-01	8.43E-01	1.25E+00	2.99E-01	0.982	3.68E+02	1.25E+03	5.50E+03	1.95E+03	1.32E+03	5.49E+03	5.65E-10
Zirconium (40)	Zr-88	2.09E+00	4.46E-01	1.27E+00	1.92E+00	4.40E-01	0.97	3.03E+00	6.89E+00	3.23E+01	1.13E+01	7.49E+00	3.27E+01	3.88E-10
Zirconium (40)	Zr-89	6.73E+00	1.30E+00	3.73E+00	5.87E+00	1.28E+00	0.932	7.74E+01	5.40E+01	2.80E+02	9.75E+01	6.19E+01	2.83E+02	1.21E-10
Zirconium (40)	Zr-93	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	4.53E-07						
Zirconium (40)	Zr-95	4.23E+00	8.32E-01	2.39E+00	3.75E+00	8.22E-01	0.865	3.95E+00	4.82E+00	2.45E+01	8.55E+00	5.44E+00	2.48E+01	2.25E-10
Zirconium (40)	Zr-97	1.08E+00	2.13E-01	5.91E-01	9.33E-01	2.92E-01	0.863	3.59E+02	1.68E+03	8.57E+03	3.08E+03	1.96E+03	6.25E+03	8.82E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	8.95E+03	3.37E+04	1.26E+04	9.17E+03	3.35E+04	1.86E-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	1.36E+03	4.79E+03	1.85E+03	1.39E+03	4.58E+03	2.36E-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	7.87E+01	3.67E+02	1.31E+02	8.69E+01	3.11E+02	1.36E-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	1.24E+03	5.05E+03	1.83E+03	1.29E+03	4.48E+03	2.61E-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	6.96E+03	2.36E+04	9.24E+03	7.05E+03	1.89E+04	9.63E-05
Actinium (89)	Ac-228	5.65E+00	1.07E+00	3.08E+00	4.89E+00	1.10E+00	9.90E+02	1.19	6.43E+02	3.38E+03	1.18E+03	7.43E+02	3.32E+03	2.87E-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	5.29E+03	2.85E+04	9.88E+03	6.19E+03	2.84E+04	3.71E-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	4.82E+03	2.38E+04	8.37E+03	5.40E+03	2.32E+04	1.74E-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	5.80E+03	2.86E+04	1.01E+04	6.50E+03	2.75E+04	2.09E-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	1.25E+03	6.54E+03	2.28E+03	1.44E+03	6.64E+03	4.78E-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	5.87E+03	3.09E+04	1.08E+04	6.81E+03	3.04E+04	1.09E-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	8.11E+00	3.83E+01	1.35E+01	8.85E+00	3.84E+01	2.68E-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	1.41E+04	6.80E+04	2.40E+04	1.56E+04	6.37E+04	1.91E-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	6.81E+00	3.55E+01	1.24E+01	7.84E+00	3.61E+01	4.66E-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	4.86E+06	1.86E+07	7.90E+06	5.35E+06	5.31E+06	6.62E-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	4.06E-01	2.00E+00	7.02E-01	4.52E-01	2.02E+00	1.56E-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	4.87E-01	2.41E+00	8.44E-01	5.44E-01	2.41E+00	1.87E-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	1.78E+08	4.37E+08	2.11E+08	1.77E+08	2.07E+08	6.81E-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	1.38E+07	4.68E+07	2.20E+07	1.52E+07	1.72E+07	3.32E-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	3.67E-01	1.94E+00	6.73E-01	4.24E-01	1.97E+00	7.74E-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	4.31E-01	2.28E+00	7.89E-01	4.97E-01	2.31E+00	9.08E-11
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	8.75E+02	3.83E+03	1.39E+03	9.34E+02	1.98E+03	5.55E-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	1.81E+03	9.51E+03	3.38E+03	2.13E+03	8.41E+03	2.02E-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	1.60E+04	8.64E+04	3.05E+04	1.90E+04	7.86E+04	1.96E-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	2.30E-01	1.30E+00	4.48E-01	2.77E-01	1.32E+00	1.20E-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	5.44E+04	3.24E+05	1.12E+05	6.77E+04	3.15E+05	1.82E-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	1.00E+04	4.33E+04	1.56E+04	1.07E+04	4.34E+04	9.22E-10
Americium (95)	Am-238	5.02E+00	9.74E-01	2.78E+00	4.35E+00	9.65E-01	3.72E+03	1.21	2.69E+03	1.39E+04	4.85E+03	3.10E+03	1.40E+04	3.34E-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	1.90E+03	7.07E+03	2.65E+03	1.94E+03	6.90E+03	1.72E-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	7.42E+01	3.85E+02	1.35E+02	8.54E+01	3.88E+02	2.89E-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	8.48E+01	1.71E+02	9.12E+01	8.48E+01	1.16E+02	2.47E-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	2.69E+04	8.63E+04	3.43E+04	2.69E+04	6.41E+04	3.33E-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	2.19E+03	4.86E+03	2.65E+03	2.20E+03	1.19E+03	2.09E-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	5.45E+01	1.92E+02	7.56E+01	5.65E+01	1.38E+02	5.21E-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	2.65E+01	6.69E+01	3.04E+01	2.65E+01	5.87E+01	1.33E-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	4.39E+00	1.58E+01	6.08E+00	4.52E+00	1.52E+01	2.21E-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	4.80E+02	2.43E+03	8.53E+02	5.43E+02	2.42E+03	3.78E-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	4.11E+06	6.78E+06	4.93E+06	4.21E+06	6.81E+05	1.39E-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	7.46E+04	2.89E+05	1.08E+05	7.71E+04	2.06E+05	1.20E-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	8.91E+03	4.30E+04	1.53E+04	9.92E+03	4.13E+04	4.56E-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	9.00E+03	4.78E+04	1.67E+04	1.05E+04	4.65E+04	2.95E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	4.36E+03	1.19E+04	5.56E+03	4.43E+03	1.18E+03	1.28E-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	1.59E+03	8.94E+03	3.09E+03	1.91E+03	8.87E+03	3.81E-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	1.56E+04	7.37E+04	2.63E+04	1.72E+04	6.75E+04	8.73E-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	9.20E+03	4.51E+04	1.60E+04	1.03E+04	4.29E+04	5.14E-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	1.06E+03	5.71E+03	1.99E+03	1.24E+03	5.71E+03	2.09E-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	1.14E+02	5.32E+02	1.87E+02	1.24E+02	5.36E+02	1.67E-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	1.38E+02	6.43E+02	2.27E+02	1.50E+02	6.49E+02	2.02E-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	8.37E+01	4.25E+02	1.49E+02	9.50E+01	4.09E+02	5.01E-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	1.22E+03	2.22E+03	1.27E+03	1.22E+03	1.58E+03	5.48E-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	1.24E+01	6.06E+01	2.13E+01	1.38E+01	5.98E+01	1.25E-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	3.37E+02	1.67E+03	6.00E+02	3.85E+02	1.40E+03	2.15E-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	1.24E+04	5.46E+04	1.95E+04	1.32E+04	3.40E+04	1.18E-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	1.98E+03	1.06E+04	3.73E+03	2.33E+03	1.00E+04	7.47E-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	1.63E+03	8.55E+03	3.00E+03	1.89E+03	8.71E+03	1.94E-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	2.56E+04	7.31E+04	3.13E+04	2.58E+04	6.79E+04	1.24E-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	2.81E+04	8.84E+04	3.67E+04	2.91E+04	8.29E+04	1.37E-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	7.73E+14	3.62E+15	1.27E+15	8.37E+14	3.68E+15	1.48E-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	5.73E+13	1.62E+14	6.89E+13	5.73E+13	1.52E+14	3.30E-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	1.48E+12	7.05E+12	2.49E+12	1.63E+12	7.15E+12	9.21E-07
Astatine (85)	At-218	4.87E-03	2.70E-03	4.66E-03	4.87E-03	4.25E-03	1.09E+07	1.5	6.58E+09	1.18E+10	6.87E+09	6.58E+09	7.54E+09	2.55E-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	2.09E+03	7.31E+03	2.91E+03	2.17E+03	6.92E+03	2.28E-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	9.28E+01	4.94E+02	1.73E+02	1.09E+02	5.03E+02	2.27E-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	3.19E+01	7.97E+01	3.66E+01	3.19E+01	7.01E+01	8.72E-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	2.62E+06	1.12E+07	4.00E+06	2.75E+06	1.14E+07	1.38E-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	1.57E+02	7.41E+02	2.60E+02	1.72E+02	7.16E+02	6.43E-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	1.58E+02	6.21E+02	2.28E+02	1.63E+02	6.22E+02	5.51E-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	7.72E+02	2.93E+03	1.09E+03	7.89E+02	2.94E+03	3.70E-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	1.73E+04	8.88E+04	3.16E+04	2.00E+04	7.16E+04	8.91E-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	1.04E+02	5.07E+02	1.77E+02	1.15E+02	5.12E+02	1.25E-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	1.70E+05	7.78E+05	2.84E+05	1.87E+05	4.67E+05	4.81E-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	1.81E+04	8.10E+04	2.93E+04	1.95E+04	7.56E+04	1.17E-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	1.35E+03	5.45E+03	2.06E+03	1.42E+03	4.54E+03	3.22E-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	3.43E+01	1.56E+02	5.60E+01	3.74E+01	1.53E+02	4.06E-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	3.98E+05	1.25E+06	5.11E+05	4.01E+05	1.10E+06	4.05E-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	2.01E+00	8.75E+00	3.17E+00	2.14E+00	8.39E+00	8.04E-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	2.16E+03	8.90E+03	3.32E+03	2.28E+03	7.74E+03	3.57E-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	3.39E+03	1.37E+04	5.18E+03	3.54E+03	1.17E+04	4.20E-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	1.56E+05	7.82E+05	2.73E+05	1.75E+05	7.77E+05	2.90E-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	7.00E+04	2.35E+05	1.01E+05	7.36E+04	9.19E+04	4.28E-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	7.46E+01	3.52E+02	1.25E+02	8.17E+01	3.23E+02	1.02E-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	1.55E+04	7.70E+04	2.72E+04	1.75E+04	7.12E+04	2.12E-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	2.12E+04	1.10E+05	3.86E+04	2.44E+04	1.09E+05	1.70E-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	3.48E+03	9.56E+03	4.45E+03	3.53E+03	8.78E+02	1.56E-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	6.49E+01	3.12E+02	1.09E+02	7.13E+01	3.16E+02	1.86E-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	2.75E+03	1.37E+04	4.81E+03	3.10E+03	1.38E+04	1.07E-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	1.63E+03	8.34E+03	2.94E+03	1.87E+03	8.25E+03	1.89E-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	8.64E+02	4.47E+03	1.56E+03	9.92E+02	4.53E+03	9.32E-11
Bismuth (83)	Bi-203	1.44E+01	2.59E+00	7.48E+00	1.20E+01	2.54E+00	5.16E+02	1.18	1.33E+02	7.39E+02	2.56E+02	1.59E+02	7.53E+02	1.02E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	6.06E+00	3.36E+01	1.17E+01	7.26E+00	3.44E+01	1.46E-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	7.89E+00	4.15E+01	1.44E+01	9.15E+00	4.20E+01	7.78E-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	4.21E-01	2.18E+00	7.63E-01	4.85E-01	2.20E+00	9.27E-09
Bismuth (83)	Bi-210	5.45E-03	3.15E-03	4.53E-03	5.35E-03	4.10E-02	5.05E+01	1.25	3.24E+04	5.59E+04	3.89E+04	3.29E+04	4.30E+03	2.61E-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	2.79E+00	1.24E+01	4.38E+00	2.96E+00	1.27E+01	4.92E-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	3.37E+00	1.48E+01	5.28E+00	3.58E+00	1.23E+01	5.95E-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	2.56E+06	1.16E+07	4.10E+06	2.73E+06	1.18E+07	6.16E-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	1.98E+04	1.03E+05	3.65E+04	2.30E+04	8.38E+04	1.35E-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	2.66E+03	1.59E+04	5.50E+03	3.31E+03	1.58E+04	1.82E-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	4.02E+04	1.87E+05	6.66E+04	4.40E+04	1.47E+05	2.08E-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	3.45E+04	1.66E+05	5.93E+04	3.86E+04	1.36E+05	1.79E-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	7.44E+03	4.18E+04	1.45E+04	8.95E+03	4.13E+04	1.69E-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	8.59E+03	4.83E+04	1.67E+04	1.03E+04	4.77E+04	1.95E-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	1.89E+02	7.21E+02	2.68E+02	1.94E+02	7.10E+02	1.76E-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	9.40E+01	4.79E+02	1.68E+02	1.08E+02	4.82E+02	3.25E-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	8.59E+00	3.15E+01	1.20E+01	8.84E+00	3.09E+01	8.20E-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	1.35E+06	2.18E+06	1.45E+06	1.35E+06	8.10E+05	8.23E-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	1.34E+03	7.13E+03	2.47E+03	1.55E+03	7.12E+03	3.44E-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	1.92E+03	1.15E+04	3.94E+03	2.39E+03	1.17E+04	1.91E-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	1.33E+03	7.41E+03	2.57E+03	1.59E+03	7.44E+03	2.17E-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	2.05E+03	9.75E+03	3.43E+03	2.25E+03	9.44E+03	8.02E-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	8.74E+01	4.91E+02	1.69E+02	1.05E+02	4.95E+02	3.44E-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	2.18E+02	1.04E+03	3.63E+02	2.38E+02	1.05E+03	3.00E-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	1.68E+05	8.18E+05	2.90E+05	1.88E+05	6.20E+05	1.25E-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	4.58E+05	5.92E+05	4.59E+05	4.58E+05	2.54E+05	5.17E-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	4.15E+01	2.18E+02	7.55E+01	4.77E+01	2.22E+02	3.84E-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	2.09E+05	9.21E+05	3.48E+05	2.30E+05	2.78E+05	1.33E-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	3.82E+03	2.29E+04	7.95E+03	4.80E+03	2.28E+04	5.43E-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	1.17E+04	5.63E+04	1.98E+04	1.29E+04	5.53E+04	1.39E-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	3.19E+05	5.43E+05	3.41E+05	3.19E+05	2.36E+05	7.15E-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	1.08E+05	2.31E+05	1.23E+05	1.08E+05	1.30E+05	6.06E-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	3.25E+01	1.81E+02	6.27E+01	3.87E+01	1.81E+02	5.31E-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	7.72E+03	5.21E+04	1.76E+04	1.03E+04	5.36E+04	1.76E-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	1.81E+04	8.40E+04	3.04E+04	2.01E+04	8.02E+04	5.78E-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	6.86E+04	2.34E+05	1.02E+05	7.35E+04	1.13E+05	1.52E-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	3.49E+02	6.99E+02	4.03E+02	3.49E+02	2.20E+02	1.36E-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	2.40E+04	5.61E+04	2.82E+04	2.41E+04	3.46E+04	7.06E+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	5.97E+03	1.60E+04	7.56E+03	6.04E+03	1.73E+03	2.57E-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	3.25E+02	1.56E+03	5.50E+02	3.58E+02	1.46E+03	6.38E-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	1.45E+02	6.26E+02	2.56E+02	1.67E+02	1.98E+02	5.72E-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	1.41E+03	7.63E+03	2.64E+03	1.65E+03	7.55E+03	1.31E-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	5.39E+02	3.11E+03	1.07E+03	6.56E+02	3.20E+03	6.78E-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	2.28E+04	2.78E+04	2.28E+04	2.28E+04	1.14E+04	7.02E-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	1.29E+02	6.31E+02	2.20E+02	1.43E+02	6.35E+02	9.83E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	3.94E+04	1.15E+05	5.76E+04	4.24E+04	6.61E+04	1.55E-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	3.48E+03	1.36E+04	5.32E+03	3.69E+03	1.11E+04	5.24E-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	1.32E+01	4.94E+01	1.86E+01	1.34E+01	4.56E+01	1.93E-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	9.44E+01	3.48E+02	1.31E+02	9.56E+01	3.37E+02	3.32E-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	4.80E+02	2.17E+03	7.88E+02	5.23E+02	1.88E+03	7.23E-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	8.13E+01	2.70E+02	1.08E+02	8.20E+01	2.44E+02	2.55E-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	1.80E+01	6.58E+01	2.97E+01	2.06E+01	2.84E+01	5.67E-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	4.66E+08	4.77E+08	4.66E+08	4.66E+08	6.19E+07	1.18E-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	3.69E+06	5.23E+06	4.07E+06	3.69E+06	8.01E+05	1.03E-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	5.14E+04	5.27E+04	5.14E+04	5.14E+04	6.90E+03	3.26E-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	2.05E+00	9.47E+00	3.34E+00	2.22E+00	9.61E+00	5.02E-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	3.90E+04	3.99E+04	3.90E+04	3.90E+04	5.21E+03	3.57E-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	6.84E+00	2.57E+01	9.56E+00	6.98E+00	2.49E+01	4.32E-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	1.22E+00	6.98E+00	2.40E+00	1.48E+00	7.20E+00	2.26E-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	6.86E+05	1.49E+06	7.89E+05	6.88E+05	7.42E+05	2.37E-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	1.24E-01	7.10E-01	2.45E-01	1.51E-01	7.39E-01	1.46E-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	1.47E+03	4.02E+03	2.01E+03	1.53E+03	2.79E+02	4.46E-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	3.86E+03	2.32E+04	8.06E+03	4.86E+03	2.28E+04	2.91E-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	2.81E+03	1.56E+04	5.41E+03	3.36E+03	1.51E+04	3.25E-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	3.37E+04	1.12E+05	4.37E+04	3.39E+04	1.08E+05	6.15E-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	2.60E+05	2.75E+05	2.61E+05	2.60E+05	3.25E+04	1.29E-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	1.09E+01	4.92E+01	1.76E+01	1.18E+01	4.90E+01	6.60E-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	4.79E+04	6.01E+04	5.16E+04	4.84E+04	7.50E+03	1.45E-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	6.26E+00	2.47E+01	9.04E+00	6.46E+00	2.42E+01	1.21E-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	3.56E+04	3.69E+04	3.56E+04	3.56E+04	4.23E+03	4.40E-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	1.06E+01	3.59E+01	1.38E+01	1.06E+01	3.44E+01	6.15E-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	3.77E+04	3.95E+04	3.77E+04	3.77E+04	4.64E+03	1.23E-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	2.16E+00	1.01E+01	3.54E+00	2.34E+00	1.02E+01	2.33E-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	2.49E+00	1.14E+01	4.04E+00	2.69E+00	1.14E+01	2.69E-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	3.68E-01	2.12E+00	7.30E-01	4.48E-01	2.19E+00	8.90E-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	1.93E+05	9.17E+05	3.27E+05	2.13E+05	5.34E+05	1.64E-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	2.24E+00					1.52E-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	1.11E+02	5.74E+02	2.00E+02	1.27E+02	5.70E+02	3.44E-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	5.70E-01	3.29E+00	1.14E+00	6.96E-01	3.39E+00	1.93E-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	1.16E+01	4.11E+01	1.56E+01	1.17E+01	4.17E+01	1.37E-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	2.44E+00	1.25E+01	4.35E+00	2.77E+00	1.26E+01	7.68E-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	1.24E+09	1.27E+09	1.24E+09	1.24E+09	2.84E+08	2.10E-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	2.63E-01	1.48E+00	5.08E-01	3.14E-01	1.51E+00	2.33E-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	5.59E+06	2.72E+07	1.02E+07	6.61E+06	2.53E+07	1.87E-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	4.16E+04	1.43E+05	6.04E+04	4.50E+04	8.76E+04	1.34E-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	5.94E+03	3.36E+04	1.16E+04	7.15E+03	3.31E+04	2.73E-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	4.61E+02	1.97E+03	7.06E+02	4.88E+02	2.01E+03	1.62E-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	5.65E+03	2.64E+04	9.39E+03	6.19E+03	2.52E+04	6.21E-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	2.03E+02	9.27E+02	3.24E+02	2.17E+02	9.47E+02	2.20E-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	8.01E+03	3.88E+04	1.37E+04	8.87E+03	3.68E+04	2.40E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	1.35E+05	6.31E+05	2.26E+05	1.48E+05	5.87E+05	1.48E-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	1.64E+03	7.69E+03	2.73E+03	1.80E+03	7.56E+03	4.16E-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	6.86E+04	3.28E+05	1.16E+05	7.57E+04	3.06E+05	1.82E-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	5.05E+02	2.30E+03	8.26E+02	5.47E+02	2.19E+03	6.68E-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	1.58E+04	7.60E+04	2.69E+04	1.74E+04	7.01E+04	3.27E-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	1.12E+04	1.25E+04	1.12E+04	1.12E+04	4.22E+03	1.10E-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	3.68E+01	1.83E+02	6.43E+01	4.14E+01	1.83E+02	2.41E-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	4.89E-01	2.49E+00	8.67E-01	5.54E-01	2.52E+00	3.78E-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	1.09E+05	3.46E+05	1.44E+05	1.10E+05	2.70E+05	1.36E-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	1.09E+05	2.15E+05	1.21E+05	1.09E+05	1.11E+05	9.47E+01
Cesium (55)	Cs-135m	9.19E+00	1.78E+00	5.11E+00	8.04E+00	1.76E+00	6.87E+03	1.18	2.78E+03	1.43E+04	5.00E+03	3.18E+03	1.45E+04	1.06E-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	5.75E+00	2.99E+01	1.04E+01	6.60E+00	3.04E+01	7.85E-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	4.24E+03	9.15E+03	5.23E+03	4.31E+03	1.01E+03	4.88E-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	1.17E+00	5.85E+00	2.05E+00	1.31E+00	5.79E+00	1.34E-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	2.92E+03	1.66E+04	5.75E+03	3.54E+03	1.63E+04	6.91E-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	2.49E+03	1.39E+04	4.82E+03	2.98E+03	1.40E+04	1.85E-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	1.43E+03	6.95E+03	2.44E+03	1.58E+03	6.80E+03	9.48E-11
Copper (29)	Cu-62	5.60E+00	1.18E+00	3.30E+00	5.07E+00	1.30E+00	3.74E+04	1.2	2.44E+04	1.16E+05	4.13E+04	2.69E+04	1.05E+05	7.85E-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	1.67E+03	8.15E+03	2.86E+03	1.85E+03	8.18E+03	4.35E-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	4.82E+05	2.17E+06	8.62E+05	5.58E+05	1.13E+06	8.63E-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	7.14E+02	2.80E+03	1.02E+03	7.34E+02	2.84E+03	9.46E-10
Dysprosium (66)	Dy-155	3.06E+00	6.23E-01	1.75E+00	2.70E+00	6.28E-01	6.07E+02	1.19	7.29E+02	3.58E+03	1.27E+03	8.24E+02	3.55E+03	3.61E-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	1.60E+03	7.01E+03	2.53E+03	1.71E+03	6.90E+03	6.52E-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	1.64E+02	2.59E+02	1.67E+02	1.64E+02	1.62E+02	2.89E-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	7.63E+04	2.99E+05	1.21E+05	8.34E+04	1.16E+05	9.39E-09
Dysprosium (66)	Dy-166	7.93E-02	3.19E-02	6.51E-02	7.76E-02	4.10E-02	7.44E+01	1.26	3.26E+03	8.10E+03	3.97E+03	3.33E+03	6.31E+03	1.41E-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	1.36E+03	6.95E+03	2.45E+03	1.57E+03	6.96E+03	2.27E-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	4.80E+04	7.98E+04	4.93E+04	4.80E+04	5.35E+04	2.62E-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	7.89E+05	1.91E+06	9.38E+05	7.92E+05	1.21E+06	9.51E-06
Erbium (68)	Er-171	1.81E+00	4.18E-01	1.16E+00	1.70E+00	4.49E-01	8.07E+02	1.22	1.60E+03	6.93E+03	2.50E+03	1.70E+03	6.44E+03	6.58E-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	1.63E+02	7.71E+02	2.74E+02	1.80E+02	7.75E+02	4.41E-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	4.91E+03	2.42E+04	8.59E+03	5.58E+03	2.43E+04	8.24E-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	1.85E+03	6.44E+03	2.46E+03	1.86E+03	6.17E+03	4.90E-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	2.44E+04	9.47E+04	3.78E+04	2.61E+04	5.07E+04	9.69E-07
Einsteinium (99)	Es-254	1.13E-02	4.16E-03	8.47E-03	1.09E-02	1.14E-02	9.17E-01	1.39	4.26E+02	1.16E+03	5.70E+02	4.42E+02	4.24E+02	2.29E-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	1.08E+00	5.77E+00	2.01E+00	1.26E+00	5.72E+00	5.81E-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	2.13E+02	1.07E+03	3.74E+02	2.41E+02	1.05E+03	6.81E-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	1.85E+01	1.01E+02	3.52E+01	2.19E+01	1.02E+02	1.22E-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	1.41E+01	7.35E+01	2.56E+01	1.62E+01	7.45E+01	7.27E-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	1.51E+01	7.29E+01	2.62E+01	1.70E+01	7.16E+01	4.09E-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	1.40E+00	7.14E+00	2.50E+00	1.59E+00	7.20E+00	8.69E-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	5.54E+01	1.95E+02	8.25E+01	5.88E+01	1.54E+02	5.89E-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	5.79E-01	3.03E+00	1.06E+00	6.73E-01	3.04E+00	3.29E-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	1.46E+03	7.32E+03	2.62E+03	1.67E+03	6.18E+03	6.59E-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	5.37E-01	2.84E+00	9.94E-01	6.25E-01	2.85E+00	2.04E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	2.31E+01	6.62E+01	2.83E+01	2.31E+01	5.98E+01	4.97E-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	7.72E+00	4.37E+01	1.51E+01	9.31E+00	4.38E+01	1.40E-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	1.18E+03	5.18E+03	1.92E+03	1.29E+03	4.47E+03	9.00E-10
Europium (63)	Eu-158	6.30E+00	1.19E+00	3.38E+00	5.37E+00	1.26E+00	7.94E+03	1.17	4.73E+03	2.52E+04	8.84E+03	5.55E+03	2.37E+04	1.83E-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	2.16E+03	1.05E+04	3.67E+03	2.38E+03	1.06E+04	2.27E-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	6.90E+02	3.20E+03	1.13E+03	7.47E+02	3.21E+03	9.48E-11
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	2.98E+00	1.65E+01	5.69E+00	3.54E+00	1.68E+01	6.00E-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	3.87E+05	6.26E+05	4.07E+05	3.87E+05	2.56E+05	6.50E+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	1.61E+02	7.82E+02	2.92E+02	1.90E+02	7.26E+02	2.70E-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	9.01E+06	9.18E+06	9.01E+06	9.01E+06	1.34E+06	1.65E-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	9.71E+02	3.47E+03	1.31E+03	9.84E+02	3.35E+03	5.65E-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	3.16E+07	4.71E+07	3.50E+07	3.16E+07	8.51E+06	8.30E-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	1.82E+05	4.10E+05	2.16E+05	1.83E+05	1.29E+05	2.97E-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	2.31E+01	8.47E+01	3.18E+01	2.35E+01	8.13E+01	4.58E-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	2.06E+11	9.52E+11	3.36E+11	2.23E+11	9.68E+11	8.42E-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	5.91E+07	2.18E+08	8.15E+07	6.02E+07	2.13E+08	3.16E-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	3.41E+05	2.04E+06	7.00E+05	4.25E+05	2.02E+06	1.83E-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	1.86E+06	7.76E+06	2.78E+06	1.93E+06	7.90E+06	1.05E-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	2.53E+05	1.20E+06	4.27E+05	2.81E+05	1.01E+06	1.43E-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	3.62E+06	6.00E+06	4.39E+06	3.73E+06	8.66E+05	6.16E-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	2.95E+05	9.92E+05	4.15E+05	3.11E+05	5.90E+05	7.65E-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	1.37E+04	6.55E+04	2.33E+04	1.52E+04	6.20E+04	7.23E-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	1.58E+02	9.30E+02	3.22E+02	1.96E+02	9.45E+02	3.13E-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	4.06E+02	1.66E+03	6.06E+02	4.25E+02	1.68E+03	6.81E-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	3.72E+03	1.79E+04	6.33E+03	4.12E+03	1.68E+04	9.17E-11
Gallium (31)	Ga-70	6.21E-02	1.92E-02	3.88E-02	5.56E-02	9.90E-02	1.72E+04	1.17	1.04E+06	3.36E+06	1.66E+06	1.16E+06	6.52E+05	8.19E-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	9.70E+01	5.57E+02	1.92E+02	1.18E+02	5.67E+02	3.15E-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	2.77E+03	1.25E+04	4.43E+03	2.97E+03	1.12E+04	3.18E-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	4.32E+03	2.46E+04	8.54E+03	5.25E+03	2.48E+04	7.64E-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	2.55E+01	8.12E+01	3.35E+01	2.58E+01	7.07E+01	1.38E-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	7.97E+01	3.98E+02	1.40E+02	9.02E+01	4.02E+02	1.43E-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	4.86E+01	2.17E+02	7.89E+01	5.28E+01	2.12E+02	5.22E-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	5.35E+01	1.65E+02	7.32E+01	5.52E+01	1.28E+02	7.44E-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	2.62E+01	6.65E+01	3.13E+01	2.62E+01	5.18E+01	7.44E-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	5.30E+03	2.21E+04	8.31E+03	5.64E+03	1.54E+04	5.00E-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	2.69E+03	1.27E+04	4.51E+03	2.95E+03	1.28E+04	1.29E-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	9.11E+03	4.42E+04	1.57E+04	1.02E+04	4.20E+04	6.08E-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	3.19E+06	3.19E+06	3.19E+06	3.19E+06	8.63E+04	4.79E-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	1.04E+00	5.04E+00	1.77E+00	1.16E+00	4.71E+00	1.57E-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	1.15E+02	5.88E+02	2.06E+02	1.31E+02	5.87E+02	9.87E-11
Germanium (32)	Ge-71	1.31E-06	1.31E-06	1.31E-06	1.31E-06	4.84E-05	2.14E+01	1.59	4.50E+07	4.50E+07	4.50E+07	4.50E+07	1.22E+06	2.89E-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	8.94E+04	3.77E+05	1.38E+05	9.41E+04	1.87E+05	2.96E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	3.26E+02	1.62E+03	5.67E+02	3.67E+02	1.55E+03	9.07E-11
Germanium (32)	Ge-78	1.40E+00	3.11E-01	8.90E-01	1.32E+00	3.12E-01	4.19E+03	1.22	1.07E+04	4.81E+04	1.69E+04	1.14E+04	4.81E+04	3.89E-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	5.30E+02	2.33E+03	8.54E+02	5.76E+02	2.29E+03	4.61E-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	1.88E+01	4.39E+01	2.17E+01	1.88E+01	3.49E+01	1.70E-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	5.27E+02	2.11E+03	7.87E+02	5.56E+02	2.07E+03	6.99E-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	7.72E+00	3.34E+01	1.22E+01	8.24E+00	3.30E+01	7.26E-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	2.34E+03	1.02E+04	3.67E+03	2.49E+03	1.04E+04	1.13E-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	3.03E-01	1.39E+00	4.94E-01	3.28E-01	1.41E+00	4.68E-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	8.35E+00	3.67E+01	1.32E+01	8.93E+00	3.68E+01	2.88E-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	7.97E+02	3.57E+03	1.27E+03	8.58E+02	3.60E+03	2.52E-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	7.68E+00	3.50E+01	1.25E+01	8.29E+00	3.53E+01	4.52E-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	3.10E+00	1.35E+01	4.79E+00	3.26E+00	1.37E+01	1.42E-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	4.48E+03	2.10E+04	7.45E+03	4.94E+03	2.10E+04	2.67E-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	5.07E+03	2.51E+04	8.87E+03	5.72E+03	2.39E+04	3.16E-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	4.71E+03	1.95E+04	7.11E+03	4.94E+03	1.80E+04	1.14E-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	8.05E+03	2.86E+04	1.12E+04	8.33E+03	2.72E+04	1.74E-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	3.50E+02	1.74E+03	6.15E+02	3.97E+02	1.76E+03	2.39E-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	2.69E+05	2.69E+05	2.69E+05	2.69E+05	1.10E+04	3.80E-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	6.04E-01	3.22E+00	1.13E+00	7.10E-01	3.28E+00	8.54E-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	2.28E+03	1.01E+04	3.76E+03	2.54E+03	9.73E+03	1.40E-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	5.04E+02	2.18E+03	7.96E+02	5.42E+02	2.17E+03	1.31E-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	1.97E+03	4.94E+03	2.26E+03	1.97E+03	4.38E+03	7.97E-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	2.59E+03	8.94E+03	3.49E+03	2.64E+03	8.71E+03	3.88E-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	3.93E+04	1.50E+05	5.65E+04	4.08E+04	1.48E+05	1.78E-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	1.65E+01	7.28E+01	2.58E+01	1.75E+01	7.44E+01	1.20E-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	1.43E+04	6.52E+04	2.36E+04	1.56E+04	6.05E+04	5.67E-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	4.48E+04	2.02E+05	7.39E+04	4.96E+04	1.94E+05	4.72E-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	2.68E+04	1.06E+05	4.06E+04	2.85E+04	1.01E+05	7.49E-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	1.10E+05	2.11E+05	1.21E+05	1.11E+05	1.38E+05	1.42E-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	1.17E+05	5.35E+05	2.02E+05	1.33E+05	4.88E+05	1.51E-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	6.44E+03	3.24E+04	1.16E+04	7.44E+03	3.21E+04	3.78E-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	1.14E+06	2.08E+06	1.21E+06	1.14E+06	1.10E+06	2.89E-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	6.68E+05	1.12E+06	6.88E+05	6.68E+05	7.36E+05	2.19E-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	5.37E+03	2.04E+04	9.03E+03	6.20E+03	6.83E+03	7.64E-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	3.82E-01	1.90E+00	6.62E-01	4.28E-01	1.91E+00	2.13E-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	3.84E+03	1.73E+04	6.15E+03	4.11E+03	1.72E+04	6.36E-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	1.02E+03	5.61E+03	1.95E+03	1.22E+03	5.54E+03	5.29E-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	8.14E+02	4.39E+03	1.53E+03	9.54E+02	4.41E+03	2.76E-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	4.93E+03	2.26E+04	8.01E+03	5.32E+03	2.21E+04	4.05E-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	6.96E+04	3.35E+05	1.19E+05	7.73E+04	3.09E+05	1.64E-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	2.44E+03	9.53E+03	3.53E+03	2.52E+03	8.90E+03	1.27E-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	3.52E+01	1.86E+02	6.46E+01	4.08E+01	1.85E+02	1.40E-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	1.21E+03	1.31E+03	1.21E+03	1.21E+03	3.91E+02	6.96E-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	2.87E+01	1.40E+02	4.91E+01	3.18E+01	1.37E+02	3.61E-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	1.10E+05	4.75E+05	1.80E+05	1.20E+05	2.64E+05	1.87E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	3.54E+02	4.12E+02	3.54E+02	3.54E+02	1.48E+02	2.01E+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	1.49E+02	7.53E+02	2.62E+02	1.68E+02	7.57E+02	7.67E-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	5.65E+01	2.64E+02	9.30E+01	6.14E+01	2.68E+02	4.56E-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	7.41E+02	3.84E+03	1.33E+03	8.47E+02	3.82E+03	7.19E-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	9.05E+03	4.47E+04	1.57E+04	1.01E+04	4.37E+04	5.32E-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	3.14E+02	1.56E+03	5.48E+02	3.53E+02	1.49E+03	2.78E-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	1.67E+03	8.85E+03	3.07E+03	1.94E+03	8.77E+03	6.28E-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	3.59E+02	2.02E+03	6.98E+02	4.30E+02	2.03E+03	1.02E-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	1.45E+03	7.18E+03	2.51E+03	1.62E+03	7.19E+03	2.12E-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	1.72E+02	7.25E+02	2.59E+02	1.79E+02	7.25E+02	4.15E-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	6.29E+04	3.04E+05	1.07E+05	6.95E+04	2.85E+05	5.41E-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	9.83E+03	4.59E+04	1.61E+04	1.06E+04	4.62E+04	5.89E-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	6.69E+07	3.70E+08	1.29E+08	7.98E+07	3.49E+08	4.87E-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	3.99E+01	1.86E+02	6.61E+01	4.37E+01	1.79E+02	1.73E-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	4.79E+01	2.24E+02	8.02E+01	5.27E+01	2.16E+02	2.07E-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	1.21E+04	3.29E+04	1.51E+04	1.22E+04	1.03E+04	1.98E+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	6.02E+03	2.74E+04	9.66E+03	6.45E+03	2.71E+04	9.93E-10
Indium (49)	In-116m	1.52E+01	2.70E+00	7.85E+00	1.27E+01	2.66E+00	6.73E+03	1.16	1.68E+03	9.43E+03	3.25E+03	2.01E+03	9.59E+03	5.62E-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	8.30E+03	3.89E+04	1.37E+04	9.05E+03	3.90E+04	2.27E-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	2.55E+04	1.07E+05	3.91E+04	2.69E+04	7.50E+04	1.85E-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	1.27E+05	6.44E+05	2.26E+05	1.44E+05	5.99E+05	1.93E-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	7.58E+05	1.83E+06	1.09E+06	8.17E+05	4.51E+05	8.65E-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	1.21E+04	5.85E+04	2.08E+04	1.35E+04	5.67E+04	1.75E-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	6.86E+02	3.55E+03	1.24E+03	7.92E+02	3.57E+03	1.22E-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	4.71E+02	2.52E+03	8.94E+02	5.62E+02	2.53E+03	3.90E-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	1.14E+03	5.26E+03	1.92E+03	1.27E+03	5.18E+03	7.15E-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	5.77E+01	3.25E+02	1.13E+02	6.99E+01	3.33E+02	1.44E-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	2.76E+02	8.24E+02	3.56E+02	2.81E+02	7.39E+02	5.33E-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	1.00E+01	4.70E+01	1.67E+01	1.10E+01	4.75E+01	1.76E-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	6.91E+09	6.91E+09	6.91E+09	6.91E+09	2.28E+08	5.04E-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	8.65E+02	4.07E+03	1.44E+03	9.45E+02	4.11E+03	1.63E-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	6.77E+07	2.02E+08	8.51E+07	6.83E+07	1.88E+08	5.67E-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	2.99E+00	1.39E+01	4.85E+00	3.23E+00	1.41E+01	3.26E-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	5.16E+00	2.03E+01	7.36E+00	5.28E+00	2.07E+01	6.69E-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	2.21E+03	9.73E+03	3.70E+03	2.45E+03	5.49E+03	2.63E-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	5.49E-01	2.65E+00	9.29E-01	6.05E-01	2.68E+00	1.40E-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	5.23E+04	1.42E+05	6.33E+04	5.27E+04	8.90E+04	8.15E-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	2.64E+03	1.17E+04	4.24E+03	2.87E+03	1.13E+04	6.25E-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	9.12E+03	5.25E+04	1.81E+04	1.11E+04	5.25E+04	1.41E-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	3.84E+00	2.16E+01	7.59E+00	4.66E+00	1.61E+01	5.51E-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	1.03E+03	5.40E+03	2.00E+03	1.24E+03	4.05E+03	1.70E-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	1.85E+02	8.93E+02	3.13E+02	2.03E+02	8.94E+02	5.73E-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	4.33E+03	2.59E+04	8.96E+03	5.42E+03	2.57E+04	2.24E-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	5.92E+03	3.48E+04	1.20E+04	7.31E+03	3.41E+04	2.84E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	1.85E+04	8.62E+04	3.07E+04	2.02E+04	8.17E+04	8.38E-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	6.37E+02	2.92E+03	1.03E+03	6.84E+02	2.96E+03	2.29E-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	3.30E+03	1.52E+04	5.40E+03	3.59E+03	1.44E+04	1.01E-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	4.31E+02	2.06E+03	7.24E+02	4.73E+02	2.10E+03	3.81E-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	1.05E+02	4.67E+02	1.65E+02	1.11E+02	4.16E+02	5.02E-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	9.68E+06	4.00E+07	1.43E+07	1.00E+07	4.10E+07	9.05E-10
Krypton (36)	Kr-83m	2.52E-05	2.44E-05	2.52E-05	2.52E-05	4.17E-04	3.32E+03	1.49	3.87E+08	3.98E+08	3.87E+08	3.87E+08	2.34E+07	1.88E-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	2.80E+02	1.22E+03	4.59E+02	3.06E+02	3.08E+02	7.13E-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	6.79E+03	2.73E+04	9.89E+03	7.01E+03	2.58E+04	8.26E-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	3.63E+03	2.03E+04	7.18E+03	4.42E+03	1.86E+04	1.28E-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	6.54E+02	3.98E+03	1.36E+03	8.21E+02	4.09E+03	5.23E-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	6.43E+03	3.02E+04	1.08E+04	7.04E+03	2.92E+04	2.65E-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	3.97E+02	2.13E+03	7.43E+02	4.67E+02	2.13E+03	8.04E-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	5.18E+04	2.48E+05	8.83E+04	5.74E+04	2.28E+05	2.47E-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	1.57E+04	5.10E+04	2.41E+04	1.72E+04	3.00E+04	1.32E-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	3.25E+02	3.84E+02	3.25E+02	3.25E+02	1.48E+02	7.48E-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	5.02E-01	2.81E+00	9.70E-01	6.00E-01	2.87E+00	2.62E+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	4.01E+01	2.26E+02	7.81E+01	4.82E+01	2.27E+02	7.23E-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	1.90E+04	8.29E+04	3.48E+04	2.26E+04	3.32E+04	3.37E-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	8.55E+02	5.20E+03	1.78E+03	1.07E+03	5.24E+03	5.98E-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	1.47E+05	6.71E+05	2.72E+05	1.75E+05	3.68E+05	1.59E-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	1.13E+02	5.96E+02	2.10E+02	1.33E+02	5.98E+02	2.08E-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	3.04E+01	1.80E+02	6.20E+01	3.77E+01	1.86E+02	7.92E-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	3.11E+01	1.50E+02	5.38E+01	3.50E+01	1.47E+02	3.35E-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	1.30E+01	6.81E+01	2.39E+01	1.51E+01	6.86E+01	1.15E-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	1.19E+01	3.81E+01	1.64E+01	1.24E+01	3.30E+01	7.90E-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	7.56E+00	3.36E+01	1.31E+01	8.78E+00	3.10E+01	1.22E-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	5.64E+01	1.47E+02	7.18E+01	5.92E+01	1.17E+02	1.07E-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	1.53E+00	6.62E+00	2.36E+00	1.61E+00	6.69E+00	2.71E+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	1.43E+05	3.35E+05	1.68E+05	1.43E+05	8.53E+04	2.96E-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	9.17E+02	3.58E+03	1.32E+03	9.45E+02	3.55E+03	8.35E-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	1.54E+00	6.51E+00	2.36E+00	1.62E+00	6.51E+00	3.36E-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	5.69E+04	2.91E+05	1.07E+05	6.76E+04	1.93E+05	1.53E-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	1.07E+04	4.69E+04	1.68E+04	1.14E+04	4.57E+04	2.30E-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	3.07E+04	1.21E+05	4.62E+04	3.22E+04	5.27E+04	8.06E-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	8.58E+03	3.40E+04	1.25E+04	8.95E+03	3.36E+04	3.67E-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	7.99E+03	1.43E+04	8.82E+03	7.99E+03	3.83E+03	8.70E-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	1.34E+02	7.28E+02	2.53E+02	1.57E+02	7.40E+02	2.50E-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	5.21E+03	2.50E+04	8.87E+03	5.76E+03	2.30E+04	6.54E-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	8.22E+00	4.45E+01	1.54E+01	9.63E+00	4.53E+01	1.83E-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	4.50E+03	2.39E+04	8.36E+03	5.25E+03	2.35E+04	2.63E-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	1.12E+00	5.80E+00	2.02E+00	1.28E+00	5.88E+00	1.45E-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	8.52E+02	4.80E+03	1.67E+03	1.02E+03	4.73E+03	3.93E-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	1.14E+04	6.21E+04	2.16E+04	1.35E+04	6.14E+04	8.95E-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	8.84E+02	4.18E+03	1.47E+03	9.73E+02	4.18E+03	1.44E-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	7.55E+03	7.52E+03	7.55E+03	7.55E+03	6.93E+02	6.88E-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	2.46E+02	1.34E+03	4.66E+02	2.90E+02	1.38E+03	5.00E-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	4.03E+02	1.97E+03	6.99E+02	4.52E+02	1.62E+03	8.42E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	2.38E+04	1.15E+05	4.04E+04	2.62E+04	1.11E+05	1.64E-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	3.30E-01	1.74E+00	6.07E-01	3.82E-01	1.78E+00	5.29E-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	5.81E+01	3.65E+02	1.25E+02	7.44E+01	3.77E+02	6.68E-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	3.97E+03	2.03E+04	7.09E+03	4.50E+03	2.01E+04	2.66E-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	5.97E+01	3.49E+02	1.20E+02	7.38E+01	3.58E+02	2.51E-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	4.38E+04	4.38E+04	4.38E+04	4.38E+04	4.05E+03	1.55E-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	4.08E-01	2.10E+00	7.32E-01	4.65E-01	2.14E+00	2.18E-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	6.04E+00	3.10E+01	1.08E+01	6.89E+00	3.14E+01	1.55E-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	7.85E+02	3.39E+03	1.20E+03	8.17E+02	3.33E+03	2.07E-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	6.74E+01	3.48E+02	1.22E+02	7.72E+01	3.54E+02	4.83E-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	4.99E+03	2.50E+04	8.76E+03	5.61E+03	2.36E+04	1.86E-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	3.23E+05	1.64E+06	5.73E+05	3.65E+05	1.66E+06	1.67E-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	1.83E+03	9.72E+03	3.40E+03	2.13E+03	9.57E+03	4.93E-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	2.00E+04	8.70E+04	3.24E+04	2.19E+04	8.05E+04	7.36E-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	4.73E+04	1.43E+05	6.71E+04	4.96E+04	9.47E+04	1.05E-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	2.06E+04	1.00E+05	3.56E+04	2.30E+04	9.40E+04	4.54E-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	4.60E+02	2.37E+03	8.31E+02	5.29E+02	2.37E+03	1.12E-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	3.00E+04	1.32E+05	5.15E+04	3.40E+04	1.08E+05	3.37E-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	2.97E+05	1.52E+06	5.31E+05	3.38E+05	1.52E+06	2.32E-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	1.34E+02	5.70E+02	2.13E+02	1.45E+02	5.05E+02	1.65E-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	6.64E+03	2.97E+04	1.07E+04	7.18E+03	2.67E+04	5.47E-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	2.12E+04	1.07E+05	3.76E+04	2.42E+04	1.01E+05	2.12E-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	8.20E+05	3.92E+06	1.39E+06	9.03E+05	3.61E+06	2.38E-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	1.58E+01	7.99E+01	2.80E+01	1.80E+01	8.11E+01	4.15E-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	5.43E+01	3.02E+02	1.05E+02	6.48E+01	3.10E+02	3.57E-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	2.68E+03	1.50E+04	5.21E+03	3.21E+03	1.38E+04	1.41E-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	1.07E+07	2.19E+07	1.20E+07	1.07E+07	1.18E+07	1.23E-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	1.36E+04	6.73E+04	2.37E+04	1.53E+04	6.77E+04	2.46E-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	1.11E+05	3.72E+05	1.46E+05	1.12E+05	3.59E+05	4.97E-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	2.44E+01	1.38E+02	4.76E+01	2.94E+01	1.40E+02	1.93E-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	1.48E+03	3.89E+03	1.82E+03	1.48E+03	1.25E+03	1.06E-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	4.52E+01	1.35E+02	5.68E+01	4.53E+01	1.07E+02	6.41E-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	1.35E+02	7.18E+02	2.50E+02	1.57E+02	7.03E+02	5.22E-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	5.19E+02	2.02E+03	7.45E+02	5.36E+02	1.99E+03	2.24E-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	2.77E+03	1.39E+04	4.88E+03	3.13E+03	1.39E+04	2.30E-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	9.18E+04	4.59E+05	1.63E+05	1.04E+05	3.87E+05	8.69E-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	1.16E+05	5.58E+05	1.97E+05	1.28E+05	5.23E+05	1.89E-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	3.71E+05	1.00E+06	4.64E+05	3.83E+05	8.31E+05	7.82E-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	1.89E+03	9.58E+03	3.38E+03	2.17E+03	9.66E+03	1.91E-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	4.69E+02	2.07E+03	7.51E+02	5.05E+02	2.05E+03	6.00E-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	2.70E+00	1.32E+01	4.70E+00	3.03E+00	1.32E+01	3.60E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	1.60E+09	1.60E+09	1.60E+09	1.60E+09	4.99E+07	5.78E-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	1.57E+04	7.46E+04	2.62E+04	1.72E+04	7.56E+04	1.57E-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	2.41E+02	7.11E+02	3.01E+02	2.43E+02	6.57E+02	5.44E-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	9.89E+04	2.20E+05	1.09E+05	9.89E+04	1.83E+05	7.87E-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	2.07E+03	8.72E+03	3.24E+03	2.23E+03	6.32E+03	3.84E-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	3.28E+03	4.95E+03	3.33E+03	3.28E+03	2.74E+03	1.07E-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	7.41E+00	3.24E+01	1.24E+01	8.19E+00	1.83E+01	2.41E-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	9.35E+04	4.41E+05	1.58E+05	1.03E+05	4.03E+05	3.74E-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	3.04E+03	4.99E+03	3.66E+03	3.13E+03	6.22E+02	1.07E-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	6.93E+05	1.47E+06	7.90E+05	6.96E+05	8.19E+05	4.46E-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	5.29E+05	1.56E+06	6.49E+05	5.29E+05	1.41E+06	2.45E-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	1.55E+02	7.93E+02	2.78E+02	1.78E+02	8.05E+02	2.48E-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	1.46E+01	7.27E+01	2.55E+01	1.66E+01	7.33E+01	4.48E-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	1.78E+01	7.77E+01	2.79E+01	1.89E+01	7.09E+01	3.77E-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	1.31E+02	6.76E+02	2.36E+02	1.50E+02	6.83E+02	3.06E-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	3.38E+01	1.46E+02	5.21E+01	3.57E+01	1.46E+02	1.63E-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	3.02E+02	1.56E+03	5.43E+02	3.46E+02	1.56E+03	1.51E-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	1.16E+07	3.64E+07	1.84E+07	1.30E+07	9.06E+06	1.69E-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	9.54E+03	4.65E+04	1.64E+04	1.06E+04	4.66E+04	1.57E-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	4.25E+03	1.84E+04	6.67E+03	4.53E+03	1.84E+04	6.45E-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	1.75E+03	9.28E+03	3.24E+03	2.04E+03	9.42E+03	1.67E-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	1.20E+03	4.34E+03	1.67E+03	1.24E+03	4.21E+03	1.65E-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	5.79E+02	2.77E+03	9.83E+02	6.45E+02	2.79E+03	3.49E-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	3.80E+05	3.80E+05	3.80E+05	3.80E+05	1.25E+04	6.44E+01
Lead (82)	Pb-202+D	1.40E+01					2.31E-06	1.23	2.54E-01					4.31E-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	5.30E+02	2.70E+03	9.42E+02	6.02E+02	2.75E+03	1.24E-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	2.87E+02	1.18E+03	4.34E+02	3.02E+02	1.18E+03	9.69E-10
Lead (82)	Pb-205	8.19E-06	8.19E-06	8.19E-06	8.19E-06	2.43E-04	4.85E-08	1.57	3.40E+05	3.40E+05	3.40E+05	3.40E+05	1.15E+04	2.79E+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	8.67E+06	2.21E+07	1.10E+07	8.80E+06	1.75E+06	1.88E-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	1.50E+03	2.35E+03	1.52E+03	1.50E+03	1.19E+03	1.97E-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	1.27E+05	6.00E+05	2.19E+05	1.43E+05	3.34E+05	5.16E-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	3.01E+03	1.22E+04	4.45E+03	3.13E+03	1.23E+04	2.17E-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	3.85E+04	1.72E+05	6.12E+04	4.11E+04	1.70E+05	1.18E-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	7.98E+02	2.21E+03	9.59E+02	7.98E+02	1.86E+03	2.22E-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	1.47E+03	7.26E+03	2.55E+03	1.65E+03	7.10E+03	3.94E-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	2.57E+04	3.38E+04	2.92E+04	2.64E+04	5.41E+03	3.45E-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	8.28E+04	2.06E+05	1.05E+05	8.48E+04	3.42E+04	3.87E-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	1.54E+04	7.61E+04	2.69E+04	1.73E+04	7.11E+04	2.41E-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	4.04E+05	1.92E+06	6.92E+05	4.49E+05	1.76E+06	2.06E-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	3.42E+00	1.69E+01	6.03E+00	3.87E+00	1.64E+01	9.93E-10
Promethium (61)	Pm-144	8.65E+00	1.75E+00	4.98E+00	7.72E+00	1.74E+00	6.97E-01	1.19	5.89E-01	2.92E+00	1.02E+00	6.60E-01	2.93E+00	2.36E-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	1.51E+02	2.21E+02	1.55E+02	1.51E+02	1.15E+02	1.08E-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	9.45E-01	4.65E+00	1.63E+00	1.06E+00	4.64E+00	2.14E-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	9.24E+04	2.10E+05	1.08E+05	9.28E+04	1.21E+05	9.98E-05
Promethium (61)	Pm-148	3.49E+00	6.49E-01	1.85E+00	2.97E+00	7.13E-01	4.71E+01	1.16	5.09E+01	2.73E+02	9.57E+01	5.98E+01	2.49E+02	3.10E-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	2.01E+00	1.00E+01	3.51E+00	2.25E+00	1.01E+01	9.42E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	6.94E+03	2.86E+04	1.10E+04	7.43E+03	8.76E+03	1.75E-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	9.94E+02	5.35E+03	1.86E+03	1.17E+03	5.17E+03	1.28E-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	4.76E+02	2.18E+03	7.76E+02	5.17E+02	2.07E+03	6.53E-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	3.85E+03	2.03E+04	7.10E+03	4.49E+03	2.05E+04	1.53E-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	1.36E+03	7.17E+03	2.51E+03	1.58E+03	7.26E+03	1.60E-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	5.04E+02	2.60E+03	9.11E+02	5.81E+02	2.64E+03	1.94E-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	1.64E+05	8.47E+05	2.95E+05	1.88E+05	8.57E+05	3.66E-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	3.50E+09	1.79E+10	6.23E+09	3.98E+09	1.81E+10	3.39E-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	1.02E+15	5.28E+15	1.84E+15	1.17E+15	5.34E+15	3.19E-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	4.72E+13	2.23E+14	7.83E+13	5.13E+13	2.27E+14	1.60E-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	5.52E+12	2.85E+13	9.94E+12	6.30E+12	2.88E+13	1.59E-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	8.36E+09	4.34E+10	1.52E+10	9.57E+09	4.40E+10	2.96E-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	8.47E+03	4.40E+04	1.54E+04	9.75E+03	4.34E+04	8.04E-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	6.45E+03	3.13E+04	1.11E+04	7.20E+03	2.99E+04	3.61E-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	2.02E+05	9.58E+05	3.44E+05	2.24E+05	8.75E+05	2.16E-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	7.56E+02	3.88E+03	1.36E+03	8.64E+02	3.91E+03	7.01E-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	8.64E+03	4.00E+04	1.48E+04	9.64E+03	3.52E+04	1.73E-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	3.02E+03	1.49E+04	5.83E+03	3.67E+03	7.10E+03	2.63E-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	2.37E+04	4.54E+04	2.89E+04	2.42E+04	2.87E+03	3.53E-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	3.02E+05	1.13E+06	5.28E+05	3.54E+05	4.23E+05	4.00E-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	1.44E+07	2.78E+07	1.79E+07	1.52E+07	1.41E+07	7.97E-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	3.96E+04	1.40E+05	6.48E+04	4.44E+04	3.44E+04	1.10E-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	2.08E+04	1.03E+05	3.67E+04	2.36E+04	9.44E+04	2.22E-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	2.76E+03	1.35E+04	4.78E+03	3.09E+03	1.35E+04	3.28E-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	1.08E+02	4.06E+02	1.57E+02	1.13E+02	3.92E+02	1.59E-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	1.33E+03	5.75E+03	2.15E+03	1.46E+03	5.59E+03	8.72E-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	2.49E+02	9.95E+02	3.79E+02	2.67E+02	9.55E+02	1.02E-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	4.49E+05	4.49E+05	4.49E+05	4.49E+05	1.58E+04	1.21E-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	7.89E+03	1.87E+04	8.85E+03	7.89E+03	1.61E+04	5.06E-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	1.17E+03	3.03E+03	1.37E+03	1.17E+03	2.68E+03	7.06E-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	1.41E+04	4.47E+04	1.83E+04	1.44E+04	3.68E+04	1.63E-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	4.06E+04	1.53E+05	5.97E+04	4.27E+04	1.45E+05	4.03E-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	3.91E+04	1.84E+05	6.57E+04	4.31E+04	1.49E+05	1.28E-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	7.74E+03	2.67E+04	1.06E+04	7.96E+03	2.45E+04	6.18E-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	1.07E+04	3.45E+04	1.36E+04	1.07E+04	3.29E+04	7.06E-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	1.53E+05	5.24E+05	2.04E+05	1.57E+05	4.98E+05	4.85E-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	1.92E+04	2.95E+04	2.16E+04	1.94E+04	4.06E+03	3.62E-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	1.23E+02	3.90E+02	1.56E+02	1.23E+02	3.60E+02	1.01E-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	2.66E+04	3.54E+04	2.88E+04	2.68E+04	4.24E+03	1.56E-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	1.18E+04	3.48E+04	1.64E+04	1.23E+04	9.33E+03	1.89E-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	2.75E+04	3.60E+04	2.93E+04	2.75E+04	4.40E+03	1.21E-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	6.02E+05	1.95E+06	7.77E+05	6.04E+05	1.59E+06	5.85E-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	3.12E+04	4.26E+04	3.35E+04	3.12E+04	5.31E+03	7.95E+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	5.63E+04	1.71E+05	7.12E+04	5.70E+04	1.51E+05	2.17E-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	2.24E+01	1.28E+02	4.44E+01	2.73E+01	1.31E+02	1.23E+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	1.74E+00	8.76E+00	3.10E+00	1.98E+00	7.41E+00	9.54E-02

		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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	9.32E+02	4.49E+03	1.58E+03	1.04E+03	4.37E+03	7.67E-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	1.50E+02	5.64E+02	2.12E+02	1.54E+02	5.41E+02	3.08E-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	4.38E+07	1.99E+08	6.98E+07	4.68E+07	2.04E+08	3.28E-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	1.34E+02	5.27E+02	1.96E+02	1.40E+02	5.25E+02	2.62E-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	6.29E+01	2.68E+02	9.83E+01	6.73E+01	2.04E+02	1.23E-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	5.14E+03	2.22E+04	7.83E+03	5.37E+03	2.27E+04	3.23E-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	2.72E+01	1.58E+02	5.46E+01	3.35E+01	1.56E+02	1.71E-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	6.31E+03	8.74E+03	6.36E+03	6.33E+03	4.35E+03	1.61E-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	5.19E+01	2.38E+02	8.60E+01	5.72E+01	1.98E+02	1.33E-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	1.17E+02	4.69E+02	1.70E+02	1.20E+02	4.76E+02	1.18E-04
Radium (88)	Ra-226+D	1.06E+01					4.33E-04	1.17	3.54E-01					3.58E-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	3.64E+04	1.63E+05	5.86E+04	3.92E+04	1.35E+05	1.86E-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	7.03E-01	3.70E+00	1.29E+00	8.13E-01	3.62E+00	2.58E-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	7.76E+03	3.71E+04	1.31E+04	8.56E+03	3.56E+04	7.48E-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	3.34E+05	1.57E+06	5.65E+05	3.68E+05	1.46E+06	8.07E-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	1.42E+03	6.67E+03	2.34E+03	1.54E+03	6.63E+03	1.68E-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	2.88E+06	8.09E+06	3.46E+06	2.88E+06	5.95E+06	3.98E-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	1.67E+05	7.97E+05	2.84E+05	1.85E+05	7.31E+05	9.50E-11
Rubidium (37)	Rb-82m	1.69E+01	3.25E+00	9.33E+00	1.47E+01	3.20E+00	9.79E+02	1.19	2.14E+02	1.11E+03	3.88E+02	2.45E+02	1.13E+03	3.47E-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	3.94E+00	1.92E+01	6.73E+00	4.36E+00	1.95E+01	2.16E-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	5.33E+00	2.73E+01	9.51E+00	6.06E+00	2.75E+01	1.13E-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	8.69E+01	4.35E+02	1.60E+02	1.01E+02	2.62E+02	1.07E-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	2.88E+04	6.66E+04	3.37E+04	2.89E+04	4.10E+04	3.30E+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	1.87E+04	1.04E+05	3.74E+04	2.30E+04	9.12E+04	1.56E-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	7.03E+03	4.02E+04	1.39E+04	8.56E+03	3.98E+04	5.07E-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	2.91E+04	1.44E+05	5.18E+04	3.35E+04	1.38E+05	3.85E-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	1.47E+04	7.83E+04	2.76E+04	1.74E+04	7.70E+04	1.84E-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	8.41E+04	4.25E+05	1.50E+05	9.64E+04	4.25E+05	1.96E-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	2.78E+02	1.32E+03	4.71E+02	3.09E+02	1.32E+03	3.21E-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	5.01E+00	2.52E+01	8.94E+00	5.73E+00	2.53E+01	2.69E-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	3.68E+00	1.68E+01	6.12E+00	4.08E+00	1.67E+01	8.57E-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	3.13E+03	1.01E+04	4.13E+03	3.18E+03	4.36E+03	1.69E-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	1.22E+02	2.55E+02	1.34E+02	1.22E+02	1.92E+02	1.27E-02
Rhenium (75)	Re-186m+D	9.55E-02					3.47E-06	1.17	3.94E+01					4.10E-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	4.10E+03	1.62E+04	6.53E+03	4.48E+03	7.55E+03	4.19E-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	3.65E+05	9.03E+05	4.22E+05	3.67E+05	7.80E+05	6.81E-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	2.78E+03	1.13E+04	4.17E+03	2.90E+03	8.71E+03	4.08E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	6.43E+01	3.70E+02	1.28E+02	7.82E+01	3.80E+02	4.28E-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	3.37E+00	1.36E+01	4.93E+00	3.48E+00	1.35E+01	3.05E-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	1.35E+02	6.13E+02	2.15E+02	1.44E+02	6.13E+02	4.52E-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	3.39E-01	1.73E+00	6.03E-01	3.85E-01	1.75E+00	2.81E-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	2.35E+00	1.15E+01	4.03E+00	2.61E+00	1.12E+01	3.81E-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	1.24E+08	1.29E+08	1.24E+08	1.24E+08	2.04E+07	3.83E-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	1.55E+03	7.05E+03	2.47E+03	1.65E+03	7.12E+03	1.84E-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	2.16E+06	9.67E+06	3.69E+06	2.41E+06	6.68E+06	6.08E-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	6.03E+02	3.17E+03	1.10E+03	6.96E+02	3.21E+03	4.49E-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	3.73E+04	1.70E+05	6.00E+04	3.99E+04	1.53E+05	4.62E-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	1.78E+01	8.51E+01	3.02E+01	1.98E+01	8.51E+01	2.17E-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	1.23E+03	6.18E+03	2.15E+03	1.39E+03	6.25E+03	1.83E-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	5.39E+11	2.68E+12	9.38E+11	6.03E+11	2.71E+12	3.65E-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	6.90E+07	3.13E+08	1.10E+08	7.38E+07	3.19E+08	5.31E-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	2.56E+07	1.15E+08	4.17E+07	2.78E+07	7.40E+07	1.97E-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	6.70E+08	3.29E+09	1.15E+09	7.48E+08	3.34E+09	7.28E-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	1.11E+05	5.35E+05	1.87E+05	1.22E+05	5.41E+05	7.20E-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	2.34E+01	1.28E+02	4.45E+01	2.78E+01	1.26E+02	1.53E-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	9.14E+00	4.43E+01	1.55E+01	1.01E+01	4.49E+01	2.84E-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	1.14E+03	5.67E+03	1.98E+03	1.28E+03	5.51E+03	1.70E-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	1.23E+03	6.04E+03	2.12E+03	1.37E+03	5.89E+03	1.83E-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	4.09E+00	1.83E+01	6.97E+00	4.57E+00	1.26E+01	1.22E-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	8.68E+03	4.27E+04	1.49E+04	9.67E+03	4.30E+04	2.25E-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	2.72E+02	1.17E+03	4.16E+02	2.85E+02	1.18E+03	5.87E-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	8.76E+05	1.54E+06	9.43E+05	8.76E+05	6.89E+05	2.06E-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	8.41E+03	4.07E+04	1.43E+04	9.29E+03	3.99E+04	1.64E-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	6.65E+03	3.66E+04	1.27E+04	7.88E+03	3.66E+04	6.50E-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	1.23E+03	6.49E+03	2.26E+03	1.43E+03	6.58E+03	4.57E-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	1.02E+04	4.10E+04	1.50E+04	1.06E+04	3.89E+04	1.07E-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	2.99E+02	1.61E+03	5.57E+02	3.49E+02	1.62E+03	5.64E-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	1.18E+05	1.22E+05	1.18E+05	1.18E+05	2.91E+04	1.71E-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	1.39E+02	6.77E+02	2.39E+02	1.55E+02	6.07E+02	3.50E-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	1.46E+00	8.07E+00	2.79E+00	1.73E+00	8.12E+00	8.34E-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	4.36E+05	2.16E+06	7.58E+05	4.88E+05	2.15E+06	4.46E-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	4.37E+09	4.47E+09	4.35E+09	4.37E+09	1.01E+09	5.83E-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	1.79E+00	8.62E+00	3.04E+00	1.97E+00	8.55E+00	1.74E-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	4.69E+00	2.34E+01	8.23E+00	5.27E+00	2.37E+01	5.62E-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	8.09E+03	4.01E+04	1.41E+04	9.04E+03	3.90E+04	1.03E-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	6.25E+01	3.11E+02	1.09E+02	7.00E+01	3.06E+02	2.35E-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	6.16E+02	3.29E+03	1.14E+03	7.18E+02	3.29E+03	1.10E-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	1.79E+03	9.25E+03	3.23E+03	2.05E+03	9.22E+03	4.97E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	5.29E+03	2.91E+04	1.01E+04	6.26E+03	2.89E+04	8.49E-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	9.55E+02	4.57E+03	1.60E+03	1.05E+03	4.55E+03	5.11E-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	4.63E+02	2.41E+03	8.37E+02	5.30E+02	2.37E+03	2.56E-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	2.59E+02	1.19E+03	4.19E+02	2.79E+02	1.22E+03	2.14E-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	9.94E-01	5.32E+00	1.85E+00	1.16E+00	5.43E+00	2.94E-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	5.79E+02	2.26E+03	8.22E+02	5.91E+02	2.29E+03	7.00E-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	2.58E+01	1.42E+02	4.90E+01	3.05E+01	1.44E+02	1.73E-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	6.80E+05	1.30E+06	8.93E+05	7.21E+05	2.06E+05	1.02E-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	5.87E+03	2.79E+04	9.84E+03	6.46E+03	2.68E+04	8.98E-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	5.34E+02	2.49E+03	8.85E+02	5.81E+02	2.43E+03	8.90E-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	2.49E+04	1.20E+05	4.22E+04	2.75E+04	1.13E+05	3.78E-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	4.39E+00	1.87E+01	6.66E+00	4.59E+00	1.90E+01	3.02E-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	1.10E+07	4.35E+07	1.58E+07	1.13E+07	4.43E+07	1.32E-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	2.29E+05	4.02E+05	2.46E+05	2.29E+05	1.83E+05	3.29E+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	1.10E+06	3.60E+06	1.68E+06	1.18E+06	7.55E+05	8.77E-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	4.02E+05	1.31E+06	5.16E+05	4.02E+05	1.25E+06	9.94E-09
Selenium (34)	Se-83	1.44E+01	2.69E+00	7.74E+00	1.23E+01	2.67E+00	1.62E+04	1.17	4.21E+03	2.26E+04	7.84E+03	4.92E+03	2.27E+04	4.19E-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	4.45E+05	9.13E+05	5.98E+05	4.76E+05	1.05E+05	1.15E-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	1.18E+05	2.32E+05	1.31E+05	1.18E+05	1.20E+05	4.75E-03
Silicon (14)	Si-32+D	2.04E-02					1.54E-03	1.25	1.72E+02					6.93E-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	1.65E+04	8.36E+04	2.94E+04	1.88E+04	8.14E+04	1.26E-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	5.29E+03	2.72E+04	9.51E+03	6.06E+03	2.71E+04	8.98E-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	4.71E+04	2.02E+05	7.78E+04	5.20E+04	1.71E+05	2.59E-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	8.95E+01	1.35E+02	9.14E+01	8.95E+01	7.49E+01	3.39E-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	4.86E+06	4.91E+06	4.86E+06	4.86E+06	7.94E+05	1.85E-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	3.23E+03	8.72E+03	3.97E+03	3.25E+03	6.33E+03	7.38E-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	1.58E+05	5.17E+05	2.10E+05	1.61E+05	3.18E+05	2.89E-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	4.68E+03	1.81E+04	6.74E+03	4.83E+03	1.73E+04	2.20E-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	3.72E+03	1.66E+04	5.85E+03	3.94E+03	1.64E+04	5.24E-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	1.31E+04	6.71E+04	2.35E+04	1.51E+04	6.44E+04	2.74E-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	3.10E+02	9.79E+02	4.51E+02	3.24E+02	4.32E+02	3.10E-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	1.07E+02	4.10E+02	1.52E+02	1.09E+02	3.91E+02	1.31E-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	2.37E+03	2.44E+03	2.35E+03	2.37E+03	5.68E+02	6.34E-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	4.58E+06	1.15E+07	5.54E+06	4.62E+06	7.60E+06	4.80E-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	2.35E+03	2.66E+03	2.36E+03	2.35E+03	8.01E+02	4.39E-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	2.81E+03	3.32E+03	2.86E+03	2.81E+03	1.03E+03	5.23E-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	1.62E+02	5.89E+02	2.72E+02	1.85E+02	1.13E+02	1.98E-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	5.40E+04	2.07E+05	7.68E+04	5.52E+04	1.58E+05	1.42E-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	5.15E+01	2.71E+02	9.66E+01	6.06E+01	2.22E+02	4.76E-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	2.61E+01	7.16E+01	3.13E+01	2.61E+01	6.03E+01	9.22E-04
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	4.18E-01	2.05E+00	7.21E-01	4.66E-01	1.98E+00	1.48E-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	9.45E+02	5.17E+03	1.79E+03	1.12E+03	5.19E+03	8.06E-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	6.65E+03	3.12E+04	1.11E+04	7.31E+03	3.01E+04	2.68E-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	1.09E+08	1.09E+08	1.09E+08	1.09E+08	5.82E+06	4.66E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	6.90E+03	3.27E+04	1.16E+04	7.61E+03	3.11E+04	7.59E-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	3.09E+05	3.09E+05	3.09E+05	3.09E+05	1.65E+04	4.86E-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	6.04E+00	2.88E+01	1.03E+01	6.67E+00	2.64E+01	9.50E-11
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	1.48E+02	7.48E+02	2.62E+02	1.67E+02	7.48E+02	1.27E-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	5.04E+00	2.44E+01	8.54E+00	5.56E+00	2.46E+01	2.13E-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	1.77E+04	7.57E+04	2.67E+04	1.84E+04	7.78E+04	5.56E-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	4.58E+03	2.14E+04	7.51E+03	4.95E+03	2.18E+04	3.58E-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	1.25E+03	2.10E+03	1.51E+03	1.28E+03	2.35E+02	4.31E-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	5.48E+03	1.50E+04	6.97E+03	5.56E+03	1.85E+03	4.02E-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	7.79E+01	1.34E+02	9.60E+01	8.05E+01	2.42E+01	5.72E-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	5.79E+02	3.02E+03	1.06E+03	6.66E+02	2.81E+03	1.60E-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	1.03E+03	5.82E+03	2.00E+03	1.24E+03	5.94E+03	8.19E-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	4.19E+03	2.16E+04	7.60E+03	4.84E+03	2.12E+04	1.41E-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	2.03E+03	9.57E+03	3.47E+03	2.27E+03	9.04E+03	4.10E-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	5.74E+03	2.68E+04	9.68E+03	6.37E+03	2.57E+04	3.83E-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	4.16E+02	2.17E+03	7.66E+02	4.88E+02	2.18E+03	2.44E-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	2.06E+02	1.18E+03	4.08E+02	2.50E+02	1.20E+03	9.35E-11
Tantalum (73)	Ta-177	1.57E-01	5.73E-02	1.23E-01	1.51E-01	6.85E-02	1.07E+02	1.27	2.36E+03	6.48E+03	3.01E+03	2.46E+03	5.41E+03	7.56E-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	8.34E+01	1.64E+02	8.89E+01	8.34E+01	1.27E+02	7.62E-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	1.38E+00	5.89E+00	2.13E+00	1.46E+00	5.89E+00	6.98E+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	3.13E+04	6.62E+04	3.43E+04	3.13E+04	5.18E+04	1.46E-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	1.24E+00	6.58E+00	2.30E+00	1.45E+00	6.63E+00	1.99E-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	8.53E+04	3.14E+05	1.20E+05	8.75E+04	3.06E+05	1.31E-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	1.46E+02	5.74E+02	2.15E+02	1.52E+02	5.58E+02	1.05E-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	2.91E+02	1.42E+03	4.99E+02	3.24E+02	1.42E+03	1.49E-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	3.29E+04	1.26E+05	4.88E+04	3.47E+04	9.01E+04	1.59E-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	1.50E+04	7.19E+04	2.55E+04	1.67E+04	6.88E+04	1.57E-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	1.50E+03	7.68E+03	2.70E+03	1.72E+03	7.56E+03	1.16E-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	5.79E+02	3.10E+03	1.08E+03	6.79E+02	3.13E+03	1.14E-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	7.08E+02	3.66E+03	1.29E+03	8.17E+02	3.65E+03	1.11E-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	2.74E+02	1.29E+03	4.61E+02	3.02E+02	1.28E+03	2.32E-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	4.19E+02	1.69E+03	6.44E+02	4.49E+02	1.58E+03	1.15E-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	7.41E+01	4.35E+02	1.50E+02	9.15E+01	4.48E+02	7.80E-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	3.96E+02	1.31E+03	5.40E+02	4.07E+02	1.14E+03	2.50E-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	1.69E+01	8.85E+01	3.10E+01	1.96E+01	8.95E+01	1.08E-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	2.90E+04	4.89E+04	2.98E+04	2.90E+04	3.33E+04	3.53E-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	7.67E+05	1.59E+06	8.55E+05	7.67E+05	1.14E+06	1.91E-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	1.49E+03	2.26E+03	1.52E+03	1.49E+03	1.34E+03	9.83E-05
Terbium (65)	Tb-158	4.46E+00	8.67E-01	2.46E+00	3.86E+00	8.74E-01	4.62E-03	1.18	8.35E-01	4.29E+00	1.51E+00	9.65E-01	4.26E+00	5.54E-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	2.06E+00	1.08E+01	3.78E+00	2.39E+00	1.09E+01	1.83E-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	2.68E+03	5.42E+03	2.96E+03	2.70E+03	3.61E+03	2.28E-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	5.33E+04	2.43E+05	8.56E+04	5.71E+04	2.17E+05	4.08E-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	6.23E+03	3.41E+04	1.19E+04	7.43E+03	3.33E+04	6.28E-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	9.14E+02	5.26E+03	1.81E+03	1.11E+03	5.38E+03	7.47E-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	7.03E+03	4.13E+04	1.41E+04	8.64E+03	4.30E+04	1.51E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	2.98E+02	1.54E+03	5.36E+02	3.40E+02	1.55E+03	4.37E-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	2.39E+03	1.24E+04	4.37E+03	2.76E+03	1.22E+04	6.23E-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	2.43E+02	1.25E+03	4.34E+02	2.77E+02	1.26E+03	1.47E-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	4.11E+00	2.03E+01	7.10E+00	4.60E+00	2.05E+01	1.83E-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	1.50E+01	7.80E+01	2.72E+01	1.72E+01	7.88E+01	4.74E-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	9.06E+04	4.77E+05	1.67E+05	1.05E+05	4.57E+05	2.39E-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	5.63E+03	5.59E+03	5.63E+03	5.63E+03	5.84E+02	3.98E+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	6.43E+03	1.12E+04	7.35E+03	6.42E+03	1.90E+03	4.16E-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	4.58E-01	2.32E+00	8.08E-01	5.17E-01	2.34E+00	5.28E-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	3.23E+04	7.52E+04	3.79E+04	3.24E+04	4.63E+04	1.91E+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	6.99E+03	2.61E+04	9.65E+03	7.07E+03	2.64E+04	1.33E-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	4.77E+04	1.60E+05	6.66E+04	4.99E+04	1.17E+05	4.41E-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	1.74E+01	8.45E+01	2.98E+01	1.92E+01	8.42E+01	2.74E-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	7.25E+00	3.15E+01	1.13E+01	7.68E+00	3.11E+01	1.04E-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	7.23E+02	7.56E+02	7.20E+02	7.23E+02	2.02E+02	2.49E+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	1.46E+01	5.59E+01	2.07E+01	1.49E+01	5.41E+01	1.65E-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	1.34E+03	1.55E+03	1.37E+03	1.34E+03	4.78E+02	7.43E-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	8.80E+04	3.97E+05	1.43E+05	9.53E+04	1.95E+05	3.34E-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	2.08E+03	2.75E+03	2.25E+03	2.10E+03	8.64E+02	2.20E-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	5.97E+04	2.68E+05	1.00E+05	6.60E+04	1.41E+05	2.85E-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	1.51E+02	6.87E+02	2.60E+02	1.69E+02	3.97E+02	5.01E-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	2.38E+04	1.12E+05	4.00E+04	2.64E+04	9.63E+04	4.15E-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	9.12E+01	4.75E+02	1.66E+02	1.05E+02	4.81E+02	1.15E-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	2.73E+02	1.14E+03	4.11E+02	2.84E+02	1.10E+03	9.01E-10
Tellurium (52)	Te-133	5.37E+00	1.05E+00	3.00E+00	4.70E+00	1.12E+00	2.93E+04	1.18	2.02E+04	1.03E+05	3.62E+04	2.31E+04	9.70E+04	1.78E-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	1.81E+03	9.54E+03	3.32E+03	2.10E+03	9.39E+03	7.10E-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	6.68E+03	3.22E+04	1.14E+04	7.41E+03	3.21E+04	1.99E-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	1.23E+06	4.52E+06	1.70E+06	1.26E+06	4.38E+06	4.56E-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	9.22E+01	3.90E+02	1.40E+02	9.67E+01	3.86E+02	3.00E-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	5.08E+02	1.74E+03	6.85E+02	5.17E+02	1.46E+03	6.20E-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	1.08E+01	3.61E+01	1.42E+01	1.10E+01	3.40E+01	5.10E-05
Thorium (90)	Th-229+D	1.48E+00					9.44E-05	1.16	2.56E+00					1.20E-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	2.83E+03	7.88E+03	3.51E+03	2.87E+03	4.07E+03	1.40E-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	2.30E+04	6.38E+04	2.81E+04	2.32E+04	4.08E+04	4.34E-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	6.64E+03	1.62E+04	7.90E+03	6.69E+03	5.69E+03	6.06E+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	1.55E+03	4.33E+03	1.87E+03	1.55E+03	3.78E+03	6.72E-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	2.57E+02	8.71E+02	4.01E+02	2.85E+02	2.83E+02	1.11E-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	1.12E+01	2.82E+01	1.28E+01	1.12E+01	2.55E+01	6.53E-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	2.97E-01	1.50E+00	5.30E-01	3.39E-01	1.47E+00	1.73E-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	1.51E+03	7.28E+03	2.55E+03	1.66E+03	7.12E+03	6.68E-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	9.76E+03	4.62E+04	1.64E+04	1.07E+04	4.65E+04	3.33E-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	3.20E+03	1.55E+04	5.48E+03	3.56E+03	1.55E+04	1.08E-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	2.56E+03	1.40E+04	4.87E+03	3.05E+03	1.42E+04	1.85E-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	3.70E+03	1.75E+04	6.32E+03	4.18E+03	1.74E+04	6.61E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	3.58E+02	1.97E+03	6.87E+02	4.28E+02	2.03E+03	1.20E-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	1.84E+03	8.76E+03	3.10E+03	2.02E+03	8.85E+03	2.18E-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	2.62E+03	1.09E+04	4.04E+03	2.81E+03	1.07E+04	1.23E-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	1.16E+02	5.96E+02	2.08E+02	1.33E+02	6.03E+02	1.93E-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	1.10E+03	3.13E+03	1.34E+03	1.10E+03	2.88E+03	5.14E-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	3.16E+01	1.43E+02	5.14E+01	3.43E+01	1.43E+02	5.98E-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	8.92E+02	2.10E+03	1.05E+03	8.97E+02	2.75E+02	1.93E-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	2.26E+07	3.80E+07	2.73E+07	2.32E+07	4.02E+06	1.04E-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	1.24E+07	3.36E+07	1.84E+07	1.35E+07	4.39E+06	6.53E-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	2.11E+04	1.29E+05	4.42E+04	2.65E+04	1.33E+05	7.17E-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	5.11E+04	2.81E+05	9.76E+04	6.09E+04	2.79E+05	1.25E-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	5.84E+03	3.29E+04	1.14E+04	7.06E+03	3.32E+04	1.09E-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	2.67E+02	1.48E+03	5.14E+02	3.20E+02	1.50E+03	1.09E-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	1.90E+02	6.90E+02	2.73E+02	1.97E+02	6.30E+02	2.25E-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	5.64E+02	1.29E+03	6.55E+02	5.66E+02	2.58E+02	9.47E-08
Thulium (69)	Tm-171	9.38E-04	4.89E-04	8.86E-04	9.38E-04	6.48E-04	3.61E-01	1.27	4.39E+03	8.42E+03	4.65E+03	4.39E+03	6.35E+03	4.03E-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	1.25E+02	6.89E+02	2.41E+02	1.50E+02	6.38E+02	4.36E-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	1.31E+03	6.08E+03	2.14E+03	1.41E+03	5.88E+03	5.97E-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	1.48E+04	7.51E+04	2.63E+04	1.69E+04	7.30E+04	2.10E-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	9.45E+03	3.18E+04	1.28E+04	9.68E+03	2.06E+04	3.47E-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	9.15E+02	2.85E+03	1.16E+03	9.15E+02	2.54E+03	6.81E-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	3.89E+03	1.02E+04	4.88E+03	3.93E+03	3.26E+03	1.82E-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	2.43E+03	8.42E+03	3.41E+03	2.51E+03	4.38E+03	2.51E-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	8.91E+03	1.96E+04	1.06E+04	8.91E+03	4.47E+03	1.43E+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	5.11E+00	2.04E+01	7.37E+00	5.25E+00	2.06E+01	2.37E+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	6.17E+00	2.41E+01	8.81E+00	6.32E+00	2.34E+01	2.86E+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	1.72E+04	3.15E+04	1.96E+04	1.73E+04	5.21E+03	2.67E+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	2.54E+02	8.98E+02	3.49E+02	2.60E+02	8.53E+02	3.12E-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	3.84E+04	4.86E+04	3.90E+04	3.84E+04	6.19E+03	1.14E+05
Uranium (92)	U-238+D	1.56E-01					1.55E-10	1.23	2.29E+01					6.81E+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	3.26E+05	9.98E+05	4.34E+05	3.42E+05	5.35E+05	9.78E-09
Uranium (92)	U-240	1.11E-03	8.06E-04	1.08E-03	1.11E-03	3.72E-03	4.31E+02	1.41	1.21E+06	1.66E+06	1.24E+06	1.21E+06	3.59E+05	1.31E-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	7.41E+03	3.57E+04	1.26E+04	8.19E+03	3.33E+04	6.05E-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	3.36E+00	1.81E+01	6.29E+00	3.94E+00	1.84E+01	2.01E-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	2.17E+04	5.71E+04	2.57E+04	2.17E+04	5.05E+04	2.81E-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	2.17E+03	1.02E+04	3.67E+03	2.43E+03	1.01E+04	2.76E-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	1.78E+03	3.62E+03	1.92E+03	1.78E+03	2.85E+03	5.28E-08
Tungsten (74)	W-178+D	4.37E-01					1.17E+01	1.19	9.82E+01					2.91E-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	4.05E+05	7.92E+05	4.33E+05	4.05E+05	5.64E+05	1.45E-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	1.25E+02	2.55E+02	1.34E+02	1.25E+02	2.02E+02	2.10E-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	3.00E+04	8.21E+04	3.71E+04	3.03E+04	5.76E+04	3.20E-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	3.53E+02	1.70E+03	6.05E+02	3.93E+02	1.66E+03	5.04E-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	1.47E+03	6.20E+03	2.24E+03	1.54E+03	6.15E+03	1.47E-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	1.53E+04	7.22E+04	2.59E+04	1.69E+04	6.93E+04	3.90E-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	3.10E+03	1.71E+04	5.95E+03	3.71E+03	1.71E+04	8.01E-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	2.51E+07	1.03E+08	3.79E+07	2.66E+07	9.61E+07	6.55E-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	4.45E+03	1.82E+04	6.91E+03	4.71E+03	1.47E+04	3.49E-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	3.12E+03	1.56E+04	5.50E+03	3.55E+03	1.52E+04	2.55E-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	1.06E+03	4.58E+03	1.65E+03	1.12E+03	4.35E+03	7.18E-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	2.01E+01	8.42E+01	3.05E+01	2.11E+01	8.15E+01	7.15E-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	1.88E+03	4.55E+03	2.46E+03	1.93E+03	2.20E+03	1.49E-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	3.74E+03	8.37E+03	4.74E+03	3.81E+03	3.85E+03	4.47E-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	1.89E+03	4.72E+03	2.21E+03	1.89E+03	3.57E+03	1.01E-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	3.34E+03	1.26E+04	4.98E+03	3.48E+03	9.60E+03	7.46E-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	1.95E+03	8.59E+03	3.03E+03	2.05E+03	8.18E+03	7.63E-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	3.69E+04	1.80E+05	6.32E+04	4.08E+04	1.78E+05	4.06E-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	1.40E+04	7.99E+04	2.76E+04	1.70E+04	7.84E+04	1.46E-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	7.18E+01	3.90E+02	1.35E+02	8.41E+01	3.96E+02	2.91E-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	2.55E+04	1.10E+05	3.92E+04	2.69E+04	1.13E+05	5.62E-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	1.08E+02	5.17E+02	1.82E+02	1.19E+02	5.23E+02	2.41E-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	5.85E-01	3.40E+00	1.17E+00	7.14E-01	3.51E+00	4.21E-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	7.35E+03	1.25E+04	9.08E+03	7.60E+03	2.30E+03	1.35E-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	2.10E+03	9.72E+03	3.43E+03	2.27E+03	9.84E+03	1.93E-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	4.38E+02	1.22E+03	6.74E+02	4.89E+02	1.91E+02	1.79E-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	9.08E+03	4.46E+04	1.56E+04	1.01E+04	4.50E+04	2.19E-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	4.03E+03	1.95E+04	7.33E+03	4.68E+03	1.44E+04	4.19E-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	3.80E+03	1.71E+04	6.82E+03	4.43E+03	9.24E+03	1.14E-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	1.06E+04	5.57E+04	1.97E+04	1.24E+04	5.17E+04	1.01E-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	2.22E+04	1.33E+05	4.68E+04	2.82E+04	1.25E+05	1.20E-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	1.61E+05	5.22E+05	2.14E+05	1.64E+05	4.74E+05	2.62E-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	2.91E+03	5.73E+03	3.13E+03	2.91E+03	4.27E+03	8.77E-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	9.16E+04	2.95E+05	1.23E+05	9.45E+04	2.64E+05	1.43E-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	2.79E+01	9.42E+01	3.83E+01	2.86E+01	8.56E+01	1.16E-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	1.12E+03	4.95E+03	1.77E+03	1.19E+03	4.97E+03	6.29E-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	1.14E+04	5.69E+04	2.03E+04	1.31E+04	4.70E+04	1.22E-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	9.75E+04	4.48E+05	1.58E+05	1.05E+05	4.22E+05	6.84E-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	1.02E+03	4.91E+03	1.73E+03	1.12E+03	4.94E+03	1.87E-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	5.71E+03	2.76E+04	9.78E+03	6.34E+03	2.59E+04	7.30E-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	1.73E+00	9.41E+00	3.26E+00	2.04E+00	9.59E+00	2.10E-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	7.96E+06	1.55E+07	9.76E+06	8.11E+06	9.60E+05	1.67E-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	7.16E+02	3.40E+03	1.19E+03	7.81E+02	3.45E+03	2.17E-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	6.60E+02	3.22E+03	1.13E+03	7.33E+02	3.16E+03	5.87E-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	7.45E+02	2.82E+03	1.04E+03	7.59E+02	2.84E+03	7.97E-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	9.22E+02	4.07E+03	1.44E+03	9.75E+02	4.06E+03	4.18E-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	5.27E+00	2.47E+01	8.67E+00	5.73E+00	2.50E+01	2.96E-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	4.20E+01	2.18E+02	7.59E+01	4.82E+01	2.20E+02	9.38E-11
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	3.53E+00	1.79E+01	6.25E+00	3.98E+00	1.82E+01	1.64E-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	1.24E+03	6.32E+03	2.27E+03	1.44E+03	4.61E+03	6.50E-10