RESRAD-BUILD Model Scenarios for 1-

Scenario No.	Surface	Receptor	Removable Fraction (%)
10 Sources (All ROCs Except U-235) [a]			
1	Floor	Child	1
2	Wall	Child	1
3	Floor	Child	10
4	Wall	Child	10
5	Floor	Child	20
6	Wall	Child	20
7	Floor	Adult	1
8	Wall	Adult	1
9	Floor	Adult	10
10	Wall	Adult	10
11	Floor	Adult	20
12	Wall	Adult	20
1 Source (U-235) [a]			
13	Floor	Child	1
14	Wall	Child	1
15	Floor	Child	10
16	Wall	Child	10
17	Floor	Child	20
18	Wall	Child	20
19	Floor	Adult	1
20	Wall	Adult	1
21	Floor	Adult	10
22	Wall	Adult	10
23	Floor	Adult	20
24	Wall	Adult	20

[a] Model can only run a maximum of 10 sources.

were selected to be run using RESRAD-BUILD in the

RESRAD-BUILD Pathway-Specific Cancer Risks for Radiological Building Surface Remediati

Source	ROC[a]	Building Surface RGs (dpm/100 cm^2)	Child Cancer Risk - Floor					
			External	Deposition	Immersion	Inhalation	Radon	Ingestion
Source 1	Am-241+D	100	1.02E-08	6.54E-13	4.97E-15	8.44E-09	0.00E+00	6.26E-10
Source 2	Co-60	5,000	2.41E-05	1.26E-09	2.66E-11	3.08E-10	0.00E+00	3.30E-09
Source 3	Cs-137	5,000	7.56E-06	4.66E-10	8.86E-12	1.62E-10	0.00E+00	5.66E-09
Source 4	Eu-152+D	5,000	1.42E-05	8.34E-10	1.64E-11	1.09E-09	0.00E+00	1.86E-09
Source 5	Eu-154	5,000	1.42E-05	8.00E-10	1.60E-11	1.23E-09	0.00E+00	2.91E-09
Source 6	H-3	5,000	0.00E+00	0.00E+00	0.00E+00	3.52E-12	0.00E+00	2.48E-11
Source 7	Pu-239+D	100	4.44E-10	2.84E-14	2.79E-17	1.01E-08	0.00E+00	8.02E-10
Source 8	Ra-226+D	100	5.17E-07	3.19E-11	6.52E-13	4.46E-09	6.56E-07	7.31E-09
Source 9	Sr-90	1,000	1.63E-08	1.01E-12	1.37E-14	3.08E-10	0.00E+00	3.75E-09
Source 10	Th-232+D	36.5	2.51E-07	1.13E-11	2.43E-13	1.52E-08	7.06E-08	2.77E-09
Source 11	U-235+D	488	2.41E-07	1.55E-11	2.62E-13	1.49E-08	0.00E+00	2.32E-09
		Total Child Risk	6.11E-05	3.42E-09	6.90E-11	5.62E-08	7.27E-07	3.13E-08

Source	ROC[a]	Building Surface RGs (dpm/100 cm^2)	Adult Cancer Risk - Floor					
			External	Deposition	Immersion	Inhalation	Radon	Ingestion
Source 1	Am-241+D	100	3.32E-08	2.09E-12	1.59E-14	5.39E-08	0.00E+00	9.99E-10
Source 2	Co-60	5,000	1.63E-05	8.50E-10	1.79E-11	4.16E-10	0.00E+00	1.11E-09
Source 3	Cs-137	5,000	1.83E-05	1.11E-09	2.12E-11	7.76E-10	0.00E+00	6.76E-09
Source 4	Eu-152+D	5,000	2.37E-05	1.38E-09	2.71E-11	3.61E-09	0.00E+00	1.54E-09
Source 5	Eu-154	5,000	1.71E-05	9.62E-10	1.92E-11	2.96E-09	0.00E+00	1.75E-09
Source 6	H-3	5,000	0.00E+00	0.00E+00	0.00E+00	1.11E-11	0.00E+00	1.96E-11
Source 7	Pu-239+D	100	1.47E-09	9.28E-14	9.09E-17	6.58E-08	0.00E+00	1.31E-09
Source 8	Ra-226+D	100	1.62E-06	1.02E-10	2.11E-12	2.85E-08	4.32E-06	1.18E-08
Source 9	Sr-90	1,000	3.92E-08	2.38E-12	3.24E-14	1.46E-09	0.00E+00	4.45E-09
Source 10	Th-232+D	36.5	8.32E-07	3.68E-11	7.92E-13	9.89E-08	4.68E-07	4.53E-09
Source 11	U-235+D	488	8.03E-07	5.16E-11	8.74E-13	9.98E-08	0.00E+00	3.87E-09
		Total Adult Risk	7.87E-05	4.50E-09	8.92E-11	3.56E-07	4.79E-06	3.81E-08

ion Goals, Residential Scenario, Hunters Point Naval Shipyard

	Child Cancer Risk - Wall								
Total	External	Deposition	Immersion	Inhalation	Radon	Ingestion	Total	External	Deposition
1.93E-08	4.32E-09	5.03E-13	3.26E-15	5.54E-09	0.00E+00	4.10E-10	1.03E-08	1.73E-08	2.01E-12
2.41E-05	1.02E-05	9.68E-10	1.75E-11	2.02E-10	0.00E+00	2.17E-09	1.02E-05	4.08E-05	3.87E-09
7.57E-06	3.20E-06	3.58E-10	5.81E-12	1.06E-10	0.00E+00	3.71E-09	3.20E-06	1.28E-05	1.43E-09
1.42E-05	6.02E-06	6.40E-10	1.07E-11	7.15E-10	0.00E+00	1.22E-09	6.02E-06	2.41E-05	2.56E-09
1.42E-05	6.01E-06	6.14E-10	1.05E-11	8.06E-10	0.00E+00	1.91E-09	6.01E-06	2.40E-05	2.46E-09
2.83E-11	0.00E+00	0.00E+00	0.00E+00	2.31E-12	0.00E+00	1.63E-11	1.86E-11	0.00E+00	0.00E+00
1.13E-08	1.60E-10	2.30E-14	1.83E-17	6.61E-09	0.00E+00	5.26E-10	7.30E-09	6.40E-10	9.20E-14
1.18E-06	2.19E-07	2.45E-11	4.27E-13	2.93E-09	4.30E-07	4.80E-09	6.57E-07	8.76E-07	9.80E-11
2.04E-08	6.92E-09	7.72E-13	8.96E-15	2.02E-10	0.00E+00	2.46E-09	9.58E-09	2.77E-08	3.09E-12
3.40E-07	1.06E-07	8.65E-12	1.59E-13	9.94E-09	4.63E-08	1.82E-09	1.64E-07	4.24E-07	3.46E-11
2.58E-07	1.02E-07	1.19E-11	1.72E-13	9.80E-09	0.00E+00	1.52E-09	1.13E-07	4.08E-07	4.76E-11
6.19E-05	2.59E-05	2.63E-09	4.53E-11	3.69E-08	4.76E-07	2.06E-08	2.64E-05	1.03E-04	1.05E-08

	Adult Cancer Risk - Wall								
Total	External	Deposition	Immersion	Inhalation	Radon	Ingestion	Total	External	Deposition
8.8E-08	1.40E-08	1.61E-12	1.04E-14	3.54E-08	0.00E+00	6.55E-10	5.01E-08	5.60E-08	6.44E-12
1.6E-05	6.90E-06	6.53E-10	1.18E-11	2.73E-10	0.00E+00	7.31E-10	6.90E-06	2.76E-05	2.61E-09
1.8E-05	7.75E-06	8.55E-10	1.39E-11	5.09E-10	0.00E+00	4.44E-09	7.76E-06	3.10E-05	3.42E-09
2.4E-05	1.00E-05	1.06E-09	1.78E-11	2.37E-09	0.00E+00	1.01E-09	1.00E-05	4.00E-05	4.24E-09
1.7E-05	7.26E-06	7.39E-10	1.26E-11	1.94E-09	0.00E+00	1.15E-09	7.26E-06	2.90E-05	2.96E-09
3.1E-11	0.00E+00	0.00E+00	0.00E+00	7.29E-12	0.00E+00	1.28E-11	2.01E-11	0.00E+00	0.00E+00
6.9E-08	5.30E-10	7.51E-14	5.96E-17	4.31E-08	0.00E+00	8.58E-10	4.45E-08	2.12E-09	3.00E-13
6.0E-06	6.88E-07	7.86E-11	1.39E-12	1.87E-08	2.84E-06	7.75E-09	3.55E-06	2.75E-06	3.14E-10
4.5E-08	1.66E-08	1.83E-12	2.12E-14	9.56E-10	0.00E+00	2.92E-09	2.05E-08	6.64E-08	7.32E-12
1.4E-06	3.53E-07	2.82E-11	5.19E-13	6.49E-08	3.07E-07	2.97E-09	7.28E-07	1.41E-06	1.13E-10
9.1E-07	3.39E-07	3.88E-11	5.61E-13	6.42E-08	0.00E+00	2.49E-09	4.06E-07	1.36E-06	1.55E-10
8.39E-05	3.33E-05	3.46E-09	5.86E-11	2.32E-07	3.15E-06	2.50E-08	3.67E-05	1.33E-04	1.38E-08

Child Cancer Risk - 4 Walls					Child Cancer Risk - Floor + 4 Walls				
Immersion	Inhalation	Radon	Ingestion	Total	External	Deposition	Immersion	Inhalation	Radon
1.30E-14	2.22E-08	0.00E+00	1.64E-09	4.11E-08	2.75E-08	2.67E-12	1.80E-14	3.06E-08	0.00E+00
7.00E-11	8.08E-10	0.00E+00	8.68E-09	4.08E-05	6.49E-05	5.13E-09	9.66E-11	1.12E-09	0.00E+00
2.32E-11	4.24E-10	0.00E+00	1.48E-08	1.28E-05	2.04E-05	1.90E-09	3.21E-11	5.86E-10	0.00E+00
4.28E-11	2.86E-09	0.00E+00	4.88E-09	2.41E-05	3.83E-05	3.39E-09	5.92E-11	3.95E-09	0.00E+00
4.20E-11	3.22E-09	0.00E+00	7.64E-09	2.41E-05	3.82E-05	3.26E-09	5.80E-11	4.45E-09	0.00E+00
0.00E+00	9.24E-12	0.00E+00	6.52E-11	7.44E-11	0.00E+00	0.00E+00	0.00E+00	1.28E-11	0.00E+00
7.32E-17	2.64E-08	0.00E+00	2.10E-09	2.92E-08	1.08E-09	1.20E-13	1.01E-16	3.65E-08	0.00E+00
1.71E-12	1.17E-08	1.72E-06	1.92E-08	2.63E-06	1.39E-06	1.30E-10	2.36E-12	1.62E-08	2.38E-06
3.58E-14	8.08E-10	0.00E+00	9.84E-09	3.83E-08	4.40E-08	4.10E-12	4.95E-14	1.12E-09	0.00E+00
6.36E-13	3.98E-08	1.85E-07	7.28E-09	6.56E-07	6.75E-07	4.59E-11	8.79E-13	5.50E-08	2.56E-07
6.88E-13	3.92E-08	0.00E+00	6.08E-09	4.53E-07	6.49E-07	6.31E-11	9.50E-13	5.41E-08	0.00E+00
1.81E-10	1.47E-07	1.91E-06	8.22E-08	1.06E-04	1.65E-04	1.39E-08	2.50E-10	2.04E-07	2.63E-06

Adult Cancer Risk - 4 Walls					Adult Cancer Risk - Floor + 4 Walls				
Immersion	Inhalation	Radon	Ingestion	Total	External	Deposition	Immersion	Inhalation	Radon
4.16E-14	1.42E-07	0.00E+00	2.62E-09	2.00E-07	8.92E-08	8.53E-12	5.75E-14	1.96E-07	0.00E+00
4.72E-11	1.09E-09	0.00E+00	2.92E-09	2.76E-05	4.39E-05	3.46E-09	6.51E-11	1.51E-09	0.00E+00
5.56E-11	2.04E-09	0.00E+00	1.78E-08	3.10E-05	4.93E-05	4.53E-09	7.68E-11	2.81E-09	0.00E+00
7.12E-11	9.48E-09	0.00E+00	4.04E-09	4.00E-05	6.37E-05	5.62E-09	9.83E-11	1.31E-08	0.00E+00
5.04E-11	7.76E-09	0.00E+00	4.60E-09	2.91E-05	4.61E-05	3.92E-09	6.96E-11	1.07E-08	0.00E+00
0.00E+00	2.92E-11	0.00E+00	5.12E-11	8.04E-11	0.00E+00	0.00E+00	0.00E+00	4.03E-11	0.00E+00
2.38E-16	1.72E-07	0.00E+00	3.43E-09	1.78E-07	3.59E-09	3.93E-13	3.29E-16	2.38E-07	0.00E+00
5.56E-12	7.48E-08	1.14E-05	3.10E-08	1.42E-05	4.37E-06	4.16E-10	7.67E-12	1.03E-07	1.57E-05
8.48E-14	3.82E-09	0.00E+00	1.17E-08	8.19E-08	1.06E-07	9.70E-12	1.17E-13	5.28E-09	0.00E+00
2.08E-12	2.60E-07	1.23E-06	1.19E-08	2.91E-06	2.24E-06	1.50E-10	2.87E-12	3.59E-07	1.70E-06
2.24E-12	2.57E-07	0.00E+00	9.96E-09	1.62E-06	2.16E-06	2.07E-10	3.12E-12	3.57E-07	0.00E+00
2.34E-10	9.29E-07	1.26E-05	9.99E-08	1.47E-04	2.12E-04	1.83E-08	3.24E-10	1.29E-06	1.74E-05

Ingestion	Total
2.27E-09	6.03E-08
1.20E-08	6.49E-05
2.05E-08	2.04E-05
6.74E-09	3.83E-05
1.06E-08	3.83E-05
9.00E-11	1.03E-10
2.91E-09	4.05E-08
2.65E-08	3.81E-06
1.36E-08	5.87E-08
1.01E-08	9.96E-07
8.40E-09	7.12E-07
1.14E-07	1.68E-04

Ingestion	Total
3.62E-09	2.88E-07
4.03E-09	4.39E-05
2.45E-08	4.93E-05
5.58E-09	6.37E-05
6.35E-09	4.62E-05
7.08E-11	1.11E-10
4.74E-09	2.47E-07
4.28E-08	2.02E-05
1.61E-08	1.27E-07
1.64E-08	4.32E-06
1.38E-08	2.53E-06
1.38E-07	2.31E-04

Source	ROC[a]	Building Surface RGs (dpm/100 cm^2)	Resident (Child + Adult) Cancer Risk - Floor					
			External	Deposition	Immersion	Inhalation	Radon	Ingestion
Source 1	Am-241+D	100	4.34E-08	2.74E-12	2.09E-14	6.23E-08	0.00E+00	1.63E-09
Source 2	Co-60	5,000	4.04E-05	2.11E-09	4.45E-11	7.24E-10	0.00E+00	4.41E-09
Source 3	Cs-137	5,000	2.59E-05	1.58E-09	3.01E-11	9.38E-10	0.00E+00	1.24E-08
Source 4	Eu-152+D	5,000	3.79E-05	2.21E-09	4.35E-11	4.70E-09	0.00E+00	3.40E-09
Source 5	Eu-154	5,000	3.13E-05	1.76E-09	3.52E-11	4.19E-09	0.00E+00	4.66E-09
Source 6	H-3	5,000	0.00E+00	0.00E+00	0.00E+00	1.46E-11	0.00E+00	4.44E-11
Source 7	Pu-239+D	100	1.91E-09	1.21E-13	1.19E-16	7.59E-08	0.00E+00	2.11E-09
Source 8	Ra-226+D	100	2.14E-06	1.34E-10	2.76E-12	3.30E-08	4.98E-06	1.91E-08
Source 9	Sr-90	1,000	5.55E-08	3.39E-12	4.61E-14	1.77E-09	0.00E+00	8.20E-09
Source 10	Th-232+D	36.5	1.08E-06	4.81E-11	1.04E-12	1.14E-07	5.39E-07	7.30E-09
Source 11	U-235+D	488	1.04E-06	6.71E-11	1.14E-12	1.15E-07	0.00E+00	6.19E-09
Total Resident Risk			**1.40E-04**	**7.92E-09**	**1.58E-10**	**4.12E-07**	**5.51E-06**	**6.95E-08**
Percent Pathway Contribution to Total			**95.883%**	**0.005%**	**0.000%**	**0.283%**	**3.782%**	**0.048%**

Notes:

[a] "+D" Indicates that all pathway-specific cancer risks include contributions from decay nuclides.

	Resident (Child + Adult) Cancer Risk - Wall							Resid	
Total	External	Deposition	Immersion	Inhalation	Radon	Ingestion	Total	External	Deposition
1.1E-07	1.83E-08	2.11E-12	1.37E-14	4.09E-08	0.00E+00	1.07E-09	6.03E-08	7.33E-08	8.45E-12
4.0E-05	1.71E-05	1.62E-09	2.93E-11	4.75E-10	0.00E+00	2.90E-09	1.71E-05	6.84E-05	6.48E-09
2.6E-05	1.10E-05	1.21E-09	1.97E-11	6.15E-10	0.00E+00	8.15E-09	1.10E-05	4.38E-05	4.85E-09
3.8E-05	1.60E-05	1.70E-09	2.85E-11	3.09E-09	0.00E+00	2.23E-09	1.60E-05	6.41E-05	6.80E-09
3.1E-05	1.33E-05	1.35E-09	2.31E-11	2.75E-09	0.00E+00	3.06E-09	1.33E-05	5.31E-05	5.41E-09
5.9E-11	0.00E+00	0.00E+00	0.00E+00	9.60E-12	0.00E+00	2.91E-11	3.87E-11	0.00E+00	0.00E+00
8.0E-08	6.90E-10	9.81E-14	7.79E-17	4.97E-08	0.00E+00	1.38E-09	5.18E-08	2.76E-09	3.92E-13
7.2E-06	9.07E-07	1.03E-10	1.82E-12	2.16E-08	3.27E-06	1.26E-08	4.21E-06	3.63E-06	4.12E-10
6.5E-08	2.35E-08	2.60E-12	3.02E-14	1.16E-09	0.00E+00	5.38E-09	3.01E-08	9.41E-08	1.04E-11
1.7E-06	4.59E-07	3.69E-11	6.78E-13	7.48E-08	3.53E-07	4.79E-09	8.92E-07	1.84E-06	1.47E-10
1.2E-06	4.41E-07	5.07E-11	7.33E-13	7.40E-08	0.00E+00	4.01E-09	5.19E-07	1.76E-06	2.03E-10
1.46E-04	**5.92E-05**	**6.08E-09**	**1.04E-10**	**2.69E-07**	**3.62E-06**	**4.55E-08**	**6.31E-05**	**2.37E-04**	**2.43E-08**
100%	**93.753%**	**0.010%**	**0.000%**	**0.426%**	**5.739%**	**0.072%**	**100%**	**93.753%**	**0.010%**

ent (Child + Adult) Cancer Risk - 4 Walls					Resident (Child + Adult) Cancer Risk - Floor +				
Immersion	Inhalation	Radon	Ingestion	Total	External	Deposition	Immersion	Inhalation	Radon
5.46E-14	1.64E-07	0.00E+00	4.26E-09	2.41E-07	1.17E-07	1.12E-11	7.55E-14	2.26E-07	0.00E+00
1.17E-10	1.90E-09	0.00E+00	1.16E-08	6.84E-05	1.09E-04	8.59E-09	1.62E-10	2.62E-09	0.00E+00
7.88E-11	2.46E-09	0.00E+00	3.26E-08	4.38E-05	6.97E-05	6.43E-09	1.09E-10	3.40E-09	0.00E+00
1.14E-10	1.23E-08	0.00E+00	8.92E-09	6.41E-05	1.02E-04	9.01E-09	1.58E-10	1.70E-08	0.00E+00
9.24E-11	1.10E-08	0.00E+00	1.22E-08	5.31E-05	8.44E-05	7.17E-09	1.28E-10	1.52E-08	0.00E+00
0.00E+00	3.84E-11	0.00E+00	1.16E-10	1.55E-10	0.00E+00	0.00E+00	0.00E+00	5.30E-11	0.00E+00
3.12E-16	1.99E-07	0.00E+00	5.54E-09	2.07E-07	4.67E-09	5.14E-13	4.30E-16	2.75E-07	0.00E+00
7.27E-12	8.65E-08	1.31E-05	5.02E-08	1.68E-05	5.77E-06	5.46E-10	1.00E-11	1.19E-07	1.81E-05
1.21E-13	4.63E-09	0.00E+00	2.15E-08	1.20E-07	1.50E-07	1.38E-11	1.67E-13	6.40E-09	0.00E+00
2.71E-12	2.99E-07	1.41E-06	1.92E-08	3.57E-06	2.92E-06	1.96E-10	3.75E-12	4.13E-07	1.95E-06
2.93E-12	2.96E-07	0.00E+00	1.60E-08	2.08E-06	2.81E-06	2.70E-10	4.07E-12	4.11E-07	0.00E+00
4.16E-10	**1.08E-06**	**1.45E-05**	**1.82E-07**	**2.53E-04**	**3.77E-04**	**3.22E-08**	**5.74E-10**	**1.49E-06**	**2.00E-05**
0.000%	**0.426%**	**5.739%**	**0.072%**	**100%**	**94.532%**	**0.008%**	**0.000%**	**0.374%**	**5.022%**

4 Walls	
Ingestion	**Total**
5.89E-09	3.49E-07
1.60E-08	1.09E-04
4.50E-08	6.97E-05
1.23E-08	1.02E-04
1.69E-08	8.44E-05
1.61E-10	2.14E-10
7.65E-09	2.87E-07
6.93E-08	2.40E-05
2.97E-08	1.86E-07
2.65E-08	5.31E-06
2.22E-08	3.24E-06
2.52E-07	**3.98E-04**
0.063%	**100%**

RESRAD-BUILD Pathway-Specific Doses for Radiological Building Surface Remediation Goals, F

Source	ROC[a]	Building Surface RGs (dpm/100 cm^2)	Child Dose - Floor[b]					
			External (mrem)	Deposition (mrem)	Immersion (mrem)	Inhalation (mrem)	Radon (mrem)	Ingestion (mrem)
Source 1	Am-241+D	100	1.62E-02	1.04E-06	7.87E-09	1.33E-01	0.00E+00	1.05E-02
Source 2	Co-60	5,000	3.16E+01	1.65E-03	3.48E-05	1.89E-03	0.00E+00	2.21E-03
Source 3	Cs-137	5,000	1.01E+01	6.25E-04	1.19E-05	4.35E-04	0.00E+00	6.53E-03
Source 4	Eu-152+D	5,000	1.88E+01	1.10E-03	2.17E-05	2.65E-03	0.00E+00	7.43E-04
Source 5	Eu-154	5,000	1.87E+01	1.05E-03	2.10E-05	3.06E-03	0.00E+00	9.75E-04
Source 6	H-3	5,000	0.00E+00	0.00E+00	1.25E-10	1.13E-06	0.00E+00	7.21E-06
Source 7	Pu-239+D	100	6.55E-04	4.19E-08	4.11E-11	1.30E-01	0.00E+00	1.03E-02
Source 8	Ra-226+D	100	6.82E-01	4.21E-05	8.59E-07	6.64E-03	1.10E+00	1.88E-02
Source 9	Sr-90	1,000	2.05E-02	1.26E-06	1.72E-08	3.55E-03	0.00E+00	3.97E-03
Source 10	Th-232+D	36.5	3.30E-01	1.48E-05	3.19E-07	2.05E-01	1.73E-01	4.68E-03
Source 11	U-235+D	488	3.37E-01	2.16E-05	3.66E-07	1.82E-01	0.00E+00	3.81E-03
		Total Child Dose	8.06E+01	4.51E-03	9.10E-05	6.68E-01	1.27E+00	6.25E-02

Source	ROC[a]	Building Surface RGs (dpm/100 cm^2)	Adult Dose - Floor[b]					
			External (mrem)	Deposition (mrem)	Immersion (mrem)	Inhalation (mrem)	Radon (mrem)	Ingestion (mrem)
Source 1	Am-241+D	100	5.25E-02	3.30E-06	2.51E-08	8.52E-01	0.00E+00	1.68E-02
Source 2	Co-60	5,000	2.13E+01	1.11E-03	2.34E-05	2.54E-03	0.00E+00	7.44E-04
Source 3	Cs-137	5,000	2.46E+01	1.50E-03	2.85E-05	2.08E-03	0.00E+00	7.81E-03
Source 4	Eu-152+D	5,000	3.13E+01	1.83E-03	3.59E-05	8.76E-03	0.00E+00	6.14E-04
Source 5	Eu-154	5,000	2.26E+01	1.27E-03	2.53E-05	7.35E-03	0.00E+00	5.86E-04
Source 6	H-3	5,000	0.00E+00	0.00E+00	1.97E-10	3.57E-06	0.00E+00	5.70E-06
Source 7	Pu-239+D	100	2.17E-03	1.37E-07	1.34E-10	8.47E-01	0.00E+00	1.68E-02
Source 8	Ra-226+D	100	2.14E+00	1.35E-04	2.79E-06	4.27E-02	3.61E+00	3.04E-02
Source 9	Sr-90	1,000	4.92E-02	2.99E-06	4.07E-08	1.68E-02	0.00E+00	4.71E-03
Source 10	Th-232+D	36.5	1.10E+00	4.84E-05	1.04E-06	1.34E+00	5.72E-01	7.64E-03
Source 11	U-235+D	488	1.12E+00	7.05E-05	1.19E-06	1.20E+00	0.00E+00	6.31E-03
		Total Adult Dose	1.04E+02	5.97E-03	1.18E-04	4.32E+00	4.18E+00	9.24E-02

Residential Scenario, Hunters Point Naval Shipyard

	Child Dose - Wall[b]							
Total (mrem/yr)	External (mrem)	Deposition (mrem)	Immersion (mrem)	Inhalation (mrem)	Radon (mrem)	Ingestion (mrem)	Total (mrem/yr)	External (mrem)
2.66E-02	6.84E-03	7.97E-07	5.16E-09	8.75E-02	0.00E+00	6.88E-03	1.69E-02	2.74E-02
5.27E+00	1.34E+01	1.26E-03	2.28E-05	1.24E-03	0.00E+00	1.45E-03	2.23E+00	5.36E+01
1.68E+00	4.30E+00	4.80E-04	7.80E-06	2.85E-04	0.00E+00	4.28E-03	7.18E-01	1.72E+01
3.13E+00	7.96E+00	8.47E-04	1.42E-05	1.74E-03	0.00E+00	4.87E-04	1.33E+00	3.18E+01
3.12E+00	7.92E+00	8.09E-04	1.38E-05	2.00E-03	0.00E+00	6.39E-04	1.32E+00	3.17E+01
1.39E-06	0.00E+00	0.00E+00	8.19E-11	7.42E-07	0.00E+00	4.73E-06	9.12E-07	0.00E+00
2.35E-02	2.36E-04	3.40E-08	2.70E-11	8.51E-02	0.00E+00	6.75E-03	1.53E-02	9.44E-04
3.01E-01	2.89E-01	3.23E-05	5.63E-07	4.35E-03	7.19E-01	1.23E-02	1.71E-01	1.16E+00
4.67E-03	8.70E-03	9.70E-07	1.13E-08	2.33E-03	0.00E+00	2.61E-03	2.27E-03	3.48E-02
1.19E-01	1.40E-01	1.14E-05	2.09E-07	1.35E-01	1.13E-01	3.07E-03	6.52E-02	5.60E-01
8.71E-02	1.43E-01	1.66E-05	2.40E-07	1.19E-01	0.00E+00	2.50E-03	4.41E-02	5.72E-01
1.38E+01	3.42E+01	3.46E-03	5.96E-05	4.39E-01	8.32E-01	4.10E-02	5.91E+00	1.37E+02

	Adult Dose - Wall[b]							
Total (mrem/yr)	External (mrem)	Deposition (mrem)	Immersion (mrem)	Inhalation (mrem)	Radon (mrem)	Ingestion (mrem)	Total (mrem/yr)	External (mrem)
4.61E-02	2.22E-02	2.54E-06	1.65E-08	5.59E-01	0.00E+00	1.10E-02	2.96E-02	8.88E-02
1.07E+00	9.02E+00	8.53E-04	1.54E-05	1.67E-03	0.00E+00	4.88E-04	4.51E-01	3.61E+01
1.23E+00	1.04E+01	1.15E-03	1.87E-05	1.36E-03	0.00E+00	5.12E-03	5.20E-01	4.16E+01
1.57E+00	1.33E+01	1.40E-03	2.35E-05	5.74E-03	0.00E+00	4.03E-04	6.65E-01	5.32E+01
1.13E+00	9.57E+00	9.73E-04	1.66E-05	4.82E-03	0.00E+00	3.84E-04	4.79E-01	3.83E+01
4.64E-07	0.00E+00	0.00E+00	1.29E-10	2.34E-06	0.00E+00	3.74E-06	3.04E-07	0.00E+00
4.33E-02	7.82E-04	1.11E-07	8.80E-11	5.56E-01	0.00E+00	1.10E-02	2.84E-02	3.13E-03
2.91E-01	9.07E-01	1.04E-04	1.83E-06	2.80E-02	2.37E+00	1.99E-02	1.66E-01	3.63E+00
3.54E-03	2.08E-02	2.30E-06	2.67E-08	1.10E-02	0.00E+00	3.09E-03	1.74E-03	8.32E-02
1.51E-01	4.64E-01	3.72E-05	6.84E-07	8.79E-01	3.75E-01	5.01E-03	8.62E-02	1.86E+00
1.16E-01	4.73E-01	5.42E-05	7.83E-07	7.85E-01	0.00E+00	4.14E-03	6.31E-02	1.89E+00
5.64E+00	4.42E+01	4.58E-03	7.75E-05	2.83E+00	2.75E+00	6.05E-02	2.49E+00	1.77E+02

Child Dose - 4 Walls[b]						Child Dc		
Deposition (mrem)	Immersion (mrem)	Inhalation (mrem)	Radon (mrem)	Ingestion (mrem)	Total (mrem/yr)	External (mrem)	Deposition (mrem)	Immersion (mrem)
3.19E-06	2.06E-08	3.50E-01	0.00E+00	2.75E-02	6.75E-02	4.36E-02	4.23E-06	2.85E-08
5.04E-03	9.12E-05	4.96E-03	0.00E+00	5.80E-03	8.94E+00	8.52E+01	6.69E-03	1.26E-04
1.92E-03	3.12E-05	1.14E-03	0.00E+00	1.71E-02	2.87E+00	2.73E+01	2.55E-03	4.31E-05
3.39E-03	5.68E-05	6.96E-03	0.00E+00	1.95E-03	5.31E+00	5.06E+01	4.49E-03	7.85E-05
3.24E-03	5.52E-05	8.00E-03	0.00E+00	2.56E-03	5.28E+00	5.04E+01	4.29E-03	7.62E-05
0.00E+00	3.28E-10	2.97E-06	0.00E+00	1.89E-05	3.65E-06	0.00E+00	0.00E+00	4.53E-10
1.36E-07	1.08E-10	3.40E-01	0.00E+00	2.70E-02	6.14E-02	1.60E-03	1.78E-07	1.49E-10
1.29E-04	2.25E-06	1.74E-02	2.88E+00	4.92E-02	6.83E-01	1.84E+00	1.71E-04	3.11E-06
3.88E-06	4.52E-08	9.32E-03	0.00E+00	1.04E-02	9.09E-03	5.53E-02	5.14E-06	6.24E-08
4.56E-05	8.36E-07	5.40E-01	4.52E-01	1.23E-02	2.61E-01	8.90E-01	6.04E-05	1.16E-06
6.64E-05	9.60E-07	4.76E-01	0.00E+00	1.00E-02	1.76E-01	9.09E-01	8.80E-05	1.33E-06
1.38E-02	2.39E-04	1.75E+00	3.33E+00	1.64E-01	2.37E+01	2.17E+02	1.83E-02	3.29E-04

Adult Dose - 4 Walls[b]						Adult Dc		
Deposition (mrem)	Immersion (mrem)	Inhalation (mrem)	Radon (mrem)	Ingestion (mrem)	Total (mrem/yr)	External (mrem)	Deposition (mrem)	Immersion (mrem)
1.02E-05	6.60E-08	2.24E+00	0.00E+00	4.40E-02	1.18E-01	1.41E-01	1.35E-05	9.11E-08
3.41E-03	6.16E-05	6.68E-03	0.00E+00	1.95E-03	1.80E+00	5.74E+01	4.52E-03	8.50E-05
4.60E-03	7.48E-05	5.44E-03	0.00E+00	2.05E-02	2.08E+00	6.62E+01	6.10E-03	1.03E-04
5.60E-03	9.40E-05	2.30E-02	0.00E+00	1.61E-03	2.66E+00	8.45E+01	7.43E-03	1.30E-04
3.89E-03	6.64E-05	1.93E-02	0.00E+00	1.54E-03	1.92E+00	6.09E+01	5.16E-03	9.17E-05
0.00E+00	5.16E-10	9.36E-06	0.00E+00	1.50E-05	1.22E-06	0.00E+00	0.00E+00	7.13E-10
4.44E-07	3.52E-10	2.22E+00	0.00E+00	4.40E-02	1.14E-01	5.30E-03	5.81E-07	4.86E-10
4.16E-04	7.32E-06	1.12E-01	9.48E+00	7.96E-02	6.65E-01	5.77E+00	5.51E-04	1.01E-05
9.20E-06	1.07E-07	4.40E-02	0.00E+00	1.24E-02	6.98E-03	1.32E-01	1.22E-05	1.48E-07
1.49E-04	2.74E-06	3.52E+00	1.50E+00	2.00E-02	3.45E-01	2.96E+00	1.97E-04	3.78E-06
2.17E-04	3.13E-06	3.14E+00	0.00E+00	1.66E-02	2.52E-01	3.01E+00	2.87E-04	4.32E-06
1.83E-02	3.10E-04	1.13E+01	1.10E+01	2.42E-01	9.96E+00	2.81E+02	2.43E-02	4.28E-04

›se - Floor + 4 Walls[b]			
Inhalation (mrem)	Radon (mrem)	Ingestion (mrem)	Total (mrem/yr)
4.83E-01	0.00E+00	3.80E-02	9.41E-02
6.85E-03	0.00E+00	8.01E-03	1.42E+01
1.58E-03	0.00E+00	2.37E-02	4.55E+00
9.61E-03	0.00E+00	2.69E-03	8.44E+00
1.11E-02	0.00E+00	3.53E-03	8.40E+00
4.10E-06	0.00E+00	2.61E-05	5.04E-06
4.70E-01	0.00E+00	3.73E-02	8.49E-02
2.40E-02	3.98E+00	6.80E-02	9.84E-01
1.29E-02	0.00E+00	1.44E-02	1.38E-02
7.45E-01	6.25E-01	1.70E-02	3.80E-01
6.58E-01	0.00E+00	1.38E-02	2.63E-01
2.42E+00	4.60E+00	2.26E-01	3.74E+01

›se - Floor + 4 Walls[b]			
Inhalation (mrem)	Radon (mrem)	Ingestion (mrem)	Total (mrem/yr)
3.09E+00	0.00E+00	6.08E-02	1.65E-01
9.22E-03	0.00E+00	2.70E-03	2.87E+00
7.52E-03	0.00E+00	2.83E-02	3.31E+00
3.17E-02	0.00E+00	2.23E-03	4.23E+00
2.66E-02	0.00E+00	2.12E-03	3.05E+00
1.29E-05	0.00E+00	2.07E-05	1.68E-06
3.07E+00	0.00E+00	6.08E-02	1.57E-01
1.55E-01	1.31E+01	1.10E-01	9.56E-01
6.08E-02	0.00E+00	1.71E-02	1.05E-02
4.86E+00	2.07E+00	2.77E-02	4.96E-01
4.34E+00	0.00E+00	2.29E-02	3.69E-01
1.56E+01	1.52E+01	3.35E-01	1.56E+01

Source	ROC[a]	Building Surface RGs (dpm/100 cm^2)	Resident (Child + Adult) Dose - Floor[b]					
			External (mrem/yr)	Deposition (mrem/yr)	Immersion (mrem/yr)	Inhalation (mrem/yr)	Radon (mrem/yr)	Ingestion (mrem/yr)
Source 1	Am-241+D	100	2.64E-03	1.67E-07	1.27E-09	3.79E-02	0.00E+00	1.05E-03
Source 2	Co-60	5,000	2.03E+00	1.06E-04	2.24E-06	1.70E-04	0.00E+00	1.14E-04
Source 3	Cs-137	5,000	1.33E+00	8.17E-05	1.55E-06	9.67E-05	0.00E+00	5.52E-04
Source 4	Eu-152+D	5,000	1.93E+00	1.13E-04	2.22E-06	4.39E-04	0.00E+00	5.22E-05
Source 5	Eu-154	5,000	1.59E+00	8.92E-05	1.78E-06	4.00E-04	0.00E+00	6.00E-05
Source 6	H-3	5,000	0.00E+00	0.00E+00	1.24E-11	1.81E-07	0.00E+00	4.97E-07
Source 7	Pu-239+D	100	1.09E-04	6.88E-09	6.73E-12	3.76E-02	0.00E+00	1.04E-03
Source 8	Ra-226+D	100	1.09E-01	6.81E-06	1.40E-07	1.90E-03	1.81E-01	1.89E-03
Source 9	Sr-90	1,000	2.68E-03	1.63E-07	2.23E-09	7.83E-04	0.00E+00	3.34E-04
Source 10	Th-232+D	36.5	5.50E-02	2.43E-06	5.23E-08	5.94E-02	2.87E-02	4.74E-04
Source 11	U-235+D	488	5.60E-02	3.54E-06	5.98E-08	5.32E-02	0.00E+00	3.89E-04
Total Resident Dose			**7.11E+00**	**4.03E-04**	**8.04E-06**	**1.92E-01**	**2.10E-01**	**5.96E-03**
Percent Pathway Contribution to Total			**94.573%**	**0.005%**	**0.000%**	**2.552%**	**2.791%**	**0.079%**

Notes:

[a] "+D" Indicates that all pathway-specific cancer risks include contributions from decay nuclides.

[b] Pathway-specific doses for separate child and adult resident receptor scenarios are presented as total mrem calculated over the e

	Resident (Child + Adult) Dose - Wall[b]							
Total (mrem/yr)	External (mrem/yr)	Deposition (mrem/yr)	Immersion (mrem/yr)	Inhalation (mrem/yr)	Radon (mrem/yr)	Ingestion (mrem/yr)	Total (mrem/yr)	External (mrem/yr)
4.2E-02	1.12E-03	1.28E-07	8.33E-10	2.49E-02	0.00E+00	6.88E-04	2.67E-02	4.47E-03
2.0E+00	8.62E-01	8.13E-05	1.47E-06	1.12E-04	0.00E+00	7.45E-05	8.63E-01	3.45E+00
1.3E+00	5.65E-01	6.27E-05	1.02E-06	6.33E-05	0.00E+00	3.62E-04	5.66E-01	2.26E+00
1.9E+00	8.18E-01	8.64E-05	1.45E-06	2.88E-04	0.00E+00	3.42E-05	8.18E-01	3.27E+00
1.6E+00	6.73E-01	6.85E-05	1.17E-06	2.62E-04	0.00E+00	3.93E-05	6.73E-01	2.69E+00
6.8E-07	0.00E+00	0.00E+00	8.11E-12	1.19E-07	0.00E+00	3.26E-07	4.44E-07	0.00E+00
3.9E-02	3.92E-05	5.58E-09	4.42E-12	2.47E-02	0.00E+00	6.83E-04	2.54E-02	1.57E-04
2.9E-01	4.60E-02	5.24E-06	9.20E-08	1.24E-03	1.19E-01	1.24E-03	1.67E-01	1.84E-01
3.8E-03	1.13E-03	1.26E-07	1.46E-09	5.13E-04	0.00E+00	2.19E-04	1.87E-03	4.54E-03
1.4E-01	2.32E-02	1.87E-06	3.43E-08	3.90E-02	1.88E-02	3.11E-04	8.13E-02	9.29E-02
1.1E-01	2.37E-02	2.72E-06	3.93E-08	3.48E-02	0.00E+00	2.55E-04	5.87E-02	9.48E-02
7.52E+00	**3.01E+00**	**3.09E-04**	**5.28E-06**	**1.26E-01**	**1.38E-01**	**3.90E-03**	**3.28E+00**	**1.21E+01**
100%	**91.845%**	**0.009%**	**0.000%**	**3.834%**	**4.193%**	**0.119%**	**100%**	**91.845%**

exposure duration (i.e., 6 years for a child and 20 years for an adult). Total doses for the child and adult scenarios, as well as f

Resident (Child + Adult) Dose - 4 Walls[b]						Resident (Child +		
Deposition (mrem/yr)	Immersion (mrem/yr)	Inhalation (mrem/yr)	Radon (mrem/yr)	Ingestion (mrem/yr)	Total (mrem/yr)	External (mrem/yr)	Deposition (mrem/yr)	Immersion (mrem/yr)
5.13E-07	3.33E-09	9.95E-02	0.00E+00	2.75E-03	1.07E-01	7.11E-03	6.80E-07	4.60E-09
3.25E-04	5.88E-06	4.48E-04	0.00E+00	2.98E-04	3.45E+00	5.48E+00	4.31E-04	8.12E-06
2.51E-04	4.08E-06	2.53E-04	0.00E+00	1.45E-03	2.26E+00	3.60E+00	3.33E-04	5.63E-06
3.46E-04	5.80E-06	1.15E-03	0.00E+00	1.37E-04	3.27E+00	5.20E+00	4.58E-04	8.02E-06
2.74E-04	4.68E-06	1.05E-03	0.00E+00	1.57E-04	2.69E+00	4.28E+00	3.63E-04	6.46E-06
0.00E+00	3.24E-11	4.74E-07	0.00E+00	1.30E-06	1.78E-06	0.00E+00	0.00E+00	4.48E-11
2.23E-08	1.77E-11	9.86E-02	0.00E+00	2.73E-03	1.02E-01	2.65E-04	2.92E-08	2.44E-11
2.10E-05	3.68E-07	4.98E-03	4.75E-01	4.95E-03	6.69E-01	2.93E-01	2.78E-05	5.09E-07
5.03E-07	5.85E-09	2.05E-03	0.00E+00	8.77E-04	7.47E-03	7.22E-03	6.67E-07	8.07E-09
7.48E-06	1.37E-07	1.56E-01	7.51E-02	1.24E-03	3.25E-01	1.48E-01	9.91E-06	1.90E-07
1.09E-05	1.57E-07	1.39E-01	0.00E+00	1.02E-03	2.35E-01	1.51E-01	1.44E-05	2.17E-07
1.24E-03	**2.11E-05**	**5.03E-01**	**5.50E-01**	**1.56E-02**	**1.31E+01**	**1.92E+01**	**1.64E-03**	**2.91E-05**
0.009%	**0.000%**	**3.834%**	**4.193%**	**0.119%**	**100%**	**92.838%**	**0.008%**	**0.000%**

or all resident receptor (i.e., child + adult) doses are calculated as average annual doses in mrem/yr by dividing the sum of the

Adult) Dose - Floor + 4 Walls[b]			
Inhalation (mrem/yr)	**Radon (mrem/yr)**	**Ingestion (mrem/yr)**	**Total (mrem/yr)**
1.37E-01	0.00E+00	3.80E-03	1.48E-01
6.18E-04	0.00E+00	4.12E-04	5.49E+00
3.50E-04	0.00E+00	2.00E-03	3.60E+00
1.59E-03	0.00E+00	1.89E-04	5.20E+00
1.45E-03	0.00E+00	2.17E-04	4.28E+00
6.55E-07	0.00E+00	1.80E-06	2.45E-06
1.36E-01	0.00E+00	3.77E-03	1.40E-01
6.87E-03	6.56E-01	6.85E-03	9.63E-01
2.83E-03	0.00E+00	1.21E-03	1.13E-02
2.15E-01	1.04E-01	1.72E-03	4.69E-01
1.92E-01	0.00E+00	1.41E-03	3.44E-01
6.95E-01	**7.60E-01**	**2.16E-02**	**2.06E+01**
3.367%	**3.683%**	**0.105%**	**100%**

: pathway-specific doses by the receptor exposure