MicroShield 7.02
Dominion (07-MSD-7.02-1318)

Date	By	Checked

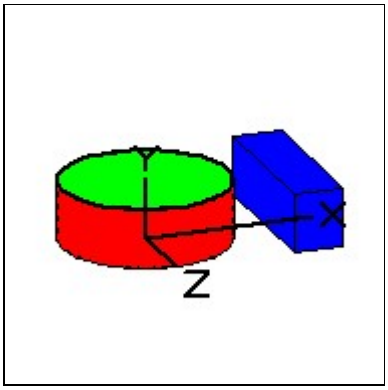
Filename	Run Date	Run Time	Duration
ESIS_1_2.ms7	November 11, 2022	9:39:42 AM	00:00:00

Project Info	
Case Title	ESIS Benchmark 1
Description	water filled steel tank with concrete shield
Geometry	7 - Cylinder Volume - Side Shields

Source Dimensions	
Height	108.3 cm (3 ft 6.6 in)
Radius	154.0 cm (5 ft 0.6 in)

Dose Points			
A	X	Y	Z
#1	311.0 cm (10 ft 2.4 in)	54.15 cm (1 ft 9.3 in)	0.0 cm (0.0 in)

Shields			
Shield N	Dimension	Material	Density
Source	8.07e+06 cm³	Water	1
Transition	63.46 cm	Air	0.00122
Shield 2	91.0 cm	Concrete	2.4
Air Gap		Air	0.00122
Wall Clad	2.54 cm	Iron	7.8



Source Input: Grouping Method - User Defined Energies				
Group #	Energy (MeV)	Activity (Photons/sec)	Volume Source Photons/sec/cm³	% Energy Activity
1	0.4	3.2276e+013	4.0000e+006	6.415%
2	0.8	5.6483e+013	7.0000e+006	22.451%
3	1.3	2.2593e+013	2.8000e+006	14.593%
4	1.7	6.6166e+013	8.2000e+006	55.887%
5	2.2	3.2276e+011	4.0000e+004	0.353%
6	2.5	2.4207e+011	3.0000e+004	0.301%
7	3.5	9.6828e+007	1.2000e+001	0.000%

Buildup: The material reference is Shield 2 Integration Parameters	
Radial	16
Circumferential	16
Y Direction (axial)	16

Results					
Energy (MeV)	Activity (Photons/sec)	Fluence Rate MeV/cm²/sec	Fluence Rate MeV/cm²/sec	Exposure Rate mR/hr	Exposure Rate mR/hr

		No Buildup	With Buildup	No Buildup	With Buildup
0.4	3.228e+13	3.144e-05	7.757e-03	6.126e-08	1.511e-05
0.8	5.648e+13	6.808e-02	4.489e+00	1.295e-04	8.539e-03
1.3	2.259e+13	2.249e+00	6.141e+01	3.925e-03	1.072e-01
1.7	6.617e+13	5.772e+01	1.041e+03	9.376e-02	1.691e+00
2.2	3.228e+11	1.820e+00	2.313e+01	2.730e-03	3.469e-02
2.5	2.421e+11	3.178e+00	3.436e+01	4.574e-03	4.945e-02
3.5	9.683e+07	9.190e-03	6.789e-02	1.188e-05	8.772e-05
Totals	**1.781e+14**	**6.505e+01**	**1.164e+03**	**1.051e-01**	**1.891e+00**