

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

Date	By	Checked

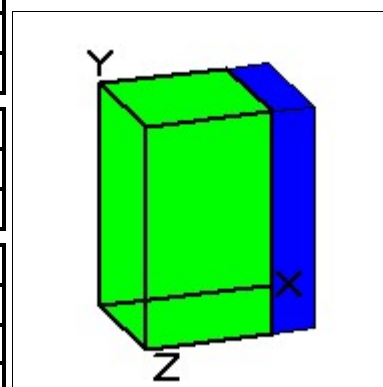
Filename	Run Date	Run Time	Duration
ESIS_2_1.ms7	November 11, 2022	9:58:15 AM	00:00:00

Project Info	
Case Title	ESIS Benchmark 2
Description	Dose point inside concrete wall
Geometry	13 - Rectangular Volume

Source Dimensions	
Length	273.0 cm (8 ft 11.5 in)
Width	273.0 cm (8 ft 11.5 in)
Height	479.9 cm (15 ft 8.9 in)

Dose Points			
A	X	Y	Z
#1	365.1 cm (11 ft 11.7 in)	240.0 cm (7 ft 10.5 in)	136.5 cm (4 ft 5.7 in)

Shields			
Shield N	Dimension	Material	Density
Source	3.58e+07 cm <sup>3</sup>	Water	1
Shield 1	2.54 cm	Iron	7.8
Shield 2	89.56 cm	Air	0.00122
Air Gap		Air	0.00122



Source Input: Grouping Method - User Defined Energies				
Group #	Energy (MeV)	Activity (Photons/sec)	Volume Source Photons/sec/cm <sup>3</sup>	% Energy Activity
1	0.4	1.4307e+014	4.0000e+006	6.415%
2	0.8	2.5037e+014	7.0000e+006	22.451%
3	1.3	1.0015e+014	2.8000e+006	14.593%
4	1.7	2.9329e+014	8.2000e+006	55.887%
5	2.2	1.4307e+012	4.0000e+004	0.353%
6	2.5	1.0730e+012	3.0000e+004	0.301%
7	3.5	4.2920e+008	1.2000e+001	0.000%

Buildup: The material reference is Shield 1	
Integration Parameters	
X Direction	16
Y Direction	16
Z Direction	16

Results					
Energy (MeV)	Activity (Photons/sec)	Fluence Rate MeV/cm <sup>2</sup> /sec	Fluence Rate MeV/cm <sup>2</sup> /sec	Exposure Rate mR/hr	Exposure Rate mR/hr

		No Buildup	With Buildup	No Buildup	With Buildup
0.4	1.431e+14	3.374e+05	1.675e+06	6.573e+02	3.264e+03
0.8	2.504e+14	3.065e+06	1.206e+07	5.831e+03	2.293e+04
1.3	1.001e+14	3.663e+06	1.141e+07	6.393e+03	1.991e+04
1.7	2.933e+14	1.907e+07	5.287e+07	3.098e+04	8.587e+04
2.2	1.431e+12	1.573e+05	3.953e+05	2.360e+02	5.931e+02
2.5	1.073e+12	1.515e+05	3.632e+05	2.181e+02	5.227e+02
3.5	4.292e+08	1.133e+02	2.410e+02	1.464e-01	3.114e-01
<b>Totals</b>	<b>7.894e+14</b>	<b>2.645e+07</b>	<b>7.877e+07</b>	<b>4.432e+04</b>	<b>1.331e+05</b>