

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

Date	By	Checked

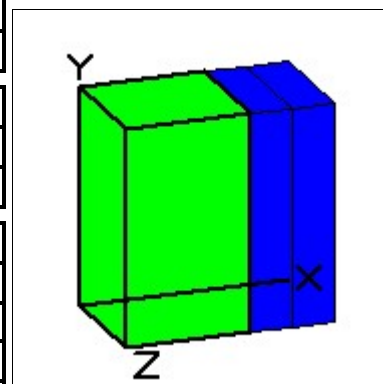
Filename	Run Date	Run Time	Duration
ESIS_2_2.ms7	November 11, 2022	9:55:13 AM	00:00:00

Project Info	
Case Title	ESIS Benchmark 2
Description	Dose point outside 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	456.5 cm (14 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
Shield 3	91.4 cm	Concrete	2.4
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 3	
Integration Parameters	
X Direction	16
Y Direction	16
Z Direction	16

Results					
		Fluence Rate	Fluence Rate	Exposure Rate	Exposure Rate

<b>Energy (MeV)</b>	<b>Activity (Photons/sec)</b>	<b>MeV/cm<sup>2</sup>/sec No Buildup</b>	<b>MeV/cm<sup>2</sup>/sec With Buildup</b>	<b>mR/hr No Buildup</b>	<b>mR/hr With Buildup</b>
0.4	1.431e+14	3.707e-05	9.435e-03	7.224e-08	1.838e-05
0.8	2.504e+14	8.951e-02	6.112e+00	1.703e-04	1.163e-02
1.3	1.001e+14	3.251e+00	9.217e+01	5.675e-03	1.609e-01
1.7	2.933e+14	8.843e+01	1.658e+03	1.436e-01	2.693e+00
2.2	1.431e+12	2.952e+00	3.904e+01	4.428e-03	5.857e-02
2.5	1.073e+12	5.302e+00	5.967e+01	7.631e-03	8.588e-02
3.5	4.292e+08	1.649e-02	1.268e-01	2.130e-05	1.639e-04
<b>Totals</b>	<b>7.894e+14</b>	<b>1.000e+02</b>	<b>1.855e+03</b>	<b>1.616e-01</b>	<b>3.010e+00</b>