

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

Date	By	Checked

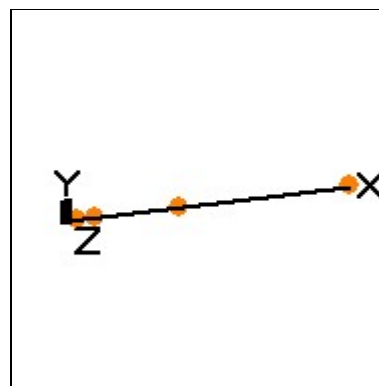
Filename	Run Date	Run Time	Duration
ANS_II_1_water.ms7	November 2, 2022	12:44:24 PM	00:00:00

Project Info	
Case Title	Case 1
Description	ANSI/ANS 6.6.1 Reference Problem II.1, Water Buildup
Geometry	7 - Cylinder Volume - Side Shields

Source Dimensions	
Height	1.1e+3 cm (35 ft)
Radius	182.88 cm (6 ft)

Dose Points			
A	X	Y	Z
#1	609.6 cm (20 ft 0.0 in)	91.44 cm (3 ft)	0.0 cm (0.0 in)
#2	1.5e+3 cm (50 ft)	91.44 cm (3 ft)	0.0 cm (0.0 in)
#3	6.1e+3 cm (200 ft)	91.44 cm (3 ft)	0.0 cm (0.0 in)
#4	1.5e+4 cm (500 ft)	91.44 cm (3 ft)	0.0 cm (0.0 in)

Shields			
Shield N	Dimension	Material	Density
Source	1.12e+08 cm <sup>3</sup>	Water	1
Transition		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	0.8	4.2034e+009	3.7500e+001	100.000%

Buildup: The material reference is Source Integration Parameters	
Radial	16
Circumferential	16
Y Direction (axial)	20

Results - Dose Point # 1 - (609.6,91.44,0) cm					
Energy (MeV)	Activity (Photons/sec)	Fluence Rate MeV/cm <sup>2</sup> /sec No Buildup	Fluence Rate MeV/cm <sup>2</sup> /sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.8	4.203e+09	1.932e+01	4.866e+01	3.675e-02	9.256e-02
<b>Totals</b>	<b>4.203e+09</b>	<b>1.932e+01</b>	<b>4.866e+01</b>	<b>3.675e-02</b>	<b>9.256e-02</b>

Results - Dose Point # 2 - (1524,91.44,0) cm					
		Fluence Rate	Fluence Rate	Exposure Rate	Exposure Rate

Energy (MeV)	Activity (Photons/sec)	MeV/cm <sup>2</sup> /sec No Buildup	MeV/cm <sup>2</sup> /sec With Buildup	mR/hr No Buildup	mR/hr With Buildup
0.8	4.203e+09	4.156e+00	1.084e+01	7.904e-03	2.061e-02
<b>Totals</b>	<b>4.203e+09</b>	<b>4.156e+00</b>	<b>1.084e+01</b>	<b>7.904e-03</b>	<b>2.061e-02</b>

**Results - Dose Point # 3 - (6096,91.44,0) cm**

Energy (MeV)	Activity (Photons/sec)	Fluence Rate MeV/cm <sup>2</sup> /sec No Buildup	Fluence Rate MeV/cm <sup>2</sup> /sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.8	4.203e+09	1.916e-01	6.231e-01	3.645e-04	1.185e-03
<b>Totals</b>	<b>4.203e+09</b>	<b>1.916e-01</b>	<b>6.231e-01</b>	<b>3.645e-04</b>	<b>1.185e-03</b>

**Results - Dose Point # 4 - (15240,91.44,0) cm**

Energy (MeV)	Activity (Photons/sec)	Fluence Rate MeV/cm <sup>2</sup> /sec No Buildup	Fluence Rate MeV/cm <sup>2</sup> /sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.8	4.203e+09	1.387e-02	6.675e-02	2.639e-05	1.270e-04
<b>Totals</b>	<b>4.203e+09</b>	<b>1.387e-02</b>	<b>6.675e-02</b>	<b>2.639e-05</b>	<b>1.270e-04</b>