

<b>MicroShield 9.02</b>
<b>Analogue &amp; Digital Measurements (9.02-0000)</b>

Date	By	Checked

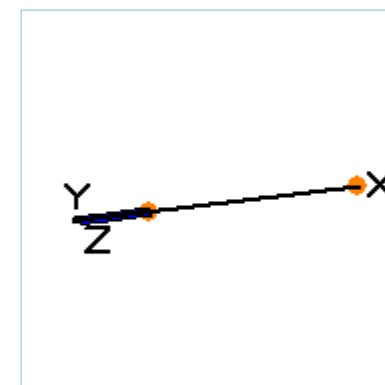
Filename	Run Date	Run Time	Duration
SD-R-10_End_Caps.ms	September 8, 2011	3:09:23 PM	00:00:00

Project Info	
Case Title	SD-R-10 Drawer Outer
Description	Cobalt 60 - 300 Ci - Source
Geometry	6 - Sphere

Source Dimensions	
Radius	1.43 cm (0.6 in)

Dose Points			
A	X	Y	Z
#1	35.33 cm (1 ft 1.9 in)	0.0 cm (0 in)	0.0 cm (0 in)
#2	135.33 cm (4 ft 5.3 in)	0.0 cm (0 in)	0.0 cm (0 in)

Shields			
Shield N	Dimension	Material	Density
Source	12.249 cm <sup>3</sup>	Air	0.00122
Transition	.6 cm	Iron	7.86
Shield 2	17.0 cm	Tungsten	18.721
Shield 3	.3 cm	Air	0.00122
Shield 4	2.0 cm	Tungsten	18.721
Shield 5	1.8 cm	Iron	7.86
Shield 6	11.6 cm	Air	0.00122
Shield 7	.6 cm	Iron	7.86
Air Gap		Air	0.00122



Source Input: Grouping Method - Actual Photon Energies			

Nuclide	Ci	Bq	$\mu\text{Ci}/\text{cm}^3$	$\text{Bq}/\text{cm}^3$
Co-60	3.0000e+002	1.1100e+013	2.4492e+007	9.0620e+011

**Buildup: The material reference is Shield 2  
Integration Parameters**

Rho (Radial)	10
Angle	10

**Results - Dose Point # 1 - (35.33,0,0) 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	Absorbed Dose Rate mrad/hr No Buildup	Absorbed Dose Rate mrad/hr With Buildup	Absorbed Dose Rate mGy/hr No Buildup	Absorbed Dose Rate mGy/hr With Buildup
0.6938	1.811e+09	2.479e-10	1.562e-09	4.786e-13	3.015e-12	4.178e-13	2.632e-12	4.178e-15	2.632e-14
1.1732	1.110e+13	3.222e-01	2.860e+00	5.758e-04	5.111e-03	5.027e-04	4.462e-03	5.027e-06	4.462e-05
1.3325	1.110e+13	1.993e+00	1.873e+01	3.457e-03	3.249e-02	3.018e-03	2.836e-02	3.018e-05	2.836e-04
<b>Totals</b>	<b>2.220e+13</b>	<b>2.315e+00</b>	<b>2.159e+01</b>	<b>4.033e-03</b>	<b>3.760e-02</b>	<b>3.521e-03</b>	<b>3.283e-02</b>	<b>3.521e-05</b>	<b>3.283e-04</b>

**Results - Dose Point # 2 - (135.33,0,0) 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	Absorbed Dose Rate mrad/hr No Buildup	Absorbed Dose Rate mrad/hr With Buildup	Absorbed Dose Rate mGy/hr No Buildup	Absorbed Dose Rate mGy/hr With Buildup
0.6938	1.811e+09	1.675e-11	1.055e-10	3.234e-14	2.037e-13	2.823e-14	1.779e-13	2.823e-16	1.779e-15
1.1732	1.110e+13	2.179e-02	1.934e-01	3.893e-05	3.457e-04	3.399e-05	3.018e-04	3.399e-07	3.018e-06
1.3325	1.110e+13	1.348e-01	1.267e+00	2.338e-04	2.198e-03	2.041e-04	1.919e-03	2.041e-06	1.919e-05
<b>Totals</b>	<b>2.220e+13</b>	<b>1.566e-01</b>	<b>1.461e+00</b>	<b>2.728e-04</b>	<b>2.544e-03</b>	<b>2.381e-04</b>	<b>2.221e-03</b>	<b>2.381e-06</b>	<b>2.221e-05</b>