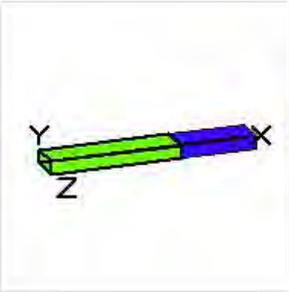


Appendix A6 Microshield Printouts

Case Summary of Truck Driver

Page 1 of 2

Micro Shield 8.02 SENES Consultants Limited (8.02-0000)					
Date		By		Checked	
Filename			Run Date	Run Time	Duration
37101-3- Truck driver- driving LML 6Nov09 REV.msd			November 10, 2009	11:54:34 AM	00:00:04
Project Info					
Case Title			Truck Driver		
Description			Driving		
Geometry			13 - Rectangular Volume		
Source Dimensions					
Length	837.25 cm (28 ft 1.5 in)				
Width	228.6 cm (7 ft 6.0 in)				
Height	86.36 cm (2 ft 10.0 in)				
Dose Points					
A	X	Y	Z		
#1	1.4e+3 cm (44 ft 9.0 in)	43.18 cm (1 ft 5.0 in)	114.3 cm (3 ft 9.0 in)		
Shields					
Shield N	Dimension	Material	Density		
Source	1.69e+07 cm ³	Yellowcake	1.61		
Shield 1	.152 cm	Iron	7.86		
Shield 2	346.0 cm	Air	0.00122		
Shield 3	.3 cm	Iron	7.86		
Shield 4	150.0 cm	Air	0.00122		
Shield 5	.3 cm	Iron	7.86		
Air Gap		Air	0.00122		
					
Source Input: Grouping Method - Standard Indices					
Number of Groups: 25 Lower Energy Cutoff: 0.015 Photons < 0.015: Included Library: ICRP-38					
Nuclide	Ci	Bq	µCi/cm ³	Bq/cm ³	
Pa-234	1.5735e-002	5.8218e+008	9.2973e-004	3.4400e+001	
Pa-234m	9.8341e+000	3.6386e+011	5.8108e-001	2.1500e+004	
Th-231	4.5282e-001	1.6755e+010	2.6757e-002	9.9000e+002	
Th-234	9.8341e+000	3.6386e+011	5.8108e-001	2.1500e+004	
U-234	9.8341e+000	3.6386e+011	5.8108e-001	2.1500e+004	
U-235	4.5282e-001	1.6755e+010	2.6757e-002	9.9000e+002	
U-238	9.8341e+000	3.6386e+011	5.8108e-001	2.1500e+004	
Buildup: The material reference is Air Gap					
Integration Parameters					
X Direction				70	
Y Direction				20	
Z Direction				20	
Results					
Energy (MeV)	Activity (Photons/sec)	Fluence Rate MeV/cm ² /sec No Buildup	Fluence Rate MeV/cm ² /sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.015	1.102e+11	3.512e-156	3.074e-24	3.012e-157	2.637e-25

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0.02	1.497e+10	2.066e-77	1.185e-24	7.155e-79	4.105e-26
0.03	2.487e+09	4.912e-29	3.731e-24	4.868e-31	3.698e-26
0.04	2.547e+07	3.052e-16	3.364e-14	1.350e-18	1.488e-16
0.05	7.052e+08	3.014e-09	4.437e-07	8.028e-12	1.182e-09
0.06	1.407e+10	2.141e-05	2.510e-03	4.253e-08	4.986e-06
0.08	2.434e+09	5.297e-04	2.625e-02	8.383e-07	4.155e-05
0.1	2.518e+10	4.362e-02	1.180e+00	6.673e-05	1.806e-03
0.15	2.832e+09	1.334e-02	1.691e-01	2.197e-05	2.785e-04
0.2	1.038e+10	1.729e-01	1.511e+00	3.052e-04	2.667e-03
0.3	2.777e+08	2.089e-02	1.241e-01	3.963e-05	2.353e-04
0.4	5.684e+07	1.086e-02	5.158e-02	2.116e-05	1.005e-04
0.5	9.941e+07	3.629e-02	1.480e-01	7.123e-05	2.905e-04
0.6	2.602e+08	1.541e-01	5.599e-01	3.008e-04	1.093e-03
0.8	1.736e+09	2.054e+00	6.324e+00	3.907e-03	1.203e-02
1.0	2.650e+09	5.117e+00	1.410e+01	9.433e-03	2.598e-02
1.5	2.618e+08	1.104e+00	2.551e+00	1.857e-03	4.292e-03
2.0	1.673e+08	1.110e+00	2.321e+00	1.716e-03	3.589e-03
Totals	1.888e+11	9.838e+00	2.907e+01	1.774e-02	5.241e-02

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Dose Equivalent Report

Program	MicroShield, Grove Software, Inc.
Version	8.02
Organization	SENES Consultants Limited
Serial #	8.02-0000
Date / Time	This case was run on Tuesday, November 10, 2009 at 11:54:34 AM
Filename	C:\Program Files\MicroShield 8\Examples\CaseFiles\37101-3\37101-3- Truck driver- driving LML 6Nov09 REV.msdc
Case Title	Truck Driver
Description	Driving
Geometry	13 - Rectangular Volume
Sensitivity	No

Results

Nominal Case			
Dose Point #1	(1.36e+03, 43.18, 114.3) cm		
Variable	Not Applicable		
Results (Summed over energies)			
	Units	Without Buildup	With Buildup
Photon Fluence Rate (flux)	Photons/cm ² /sec	1.080e+001	4.749e+001
Photon Energy Fluence Rate	MeV/cm ² /sec	9.838e+000	2.907e+001
Exposure and Dose Rates			
Exposure Rate in Air	mR/hr	1.774e-002	5.241e-002
Absorbed Dose Rate in Air	mGy/hr	1.549e-004	4.576e-004
Absorbed Dose Rate in Air	mrad/hr	1.549e-002	4.576e-002
Deep Dose Equivalent Rate (ICRP 51 - 1987)			
Parallel Geometry	mSv/hr	1.791e-004	5.418e-004
Opposed Geometry	mSv/hr	1.501e-004	4.404e-004
Rational Geometry	mSv/hr	1.501e-004	4.404e-004
Isotropic Geometry	mSv/hr	1.335e-004	3.930e-004
Shallow Dose Equivalent Rate (ICRP 51 - 1987)			
Parallel Geometry	mSv/hr	1.905e-004	5.734e-004
Opposed Geometry	mSv/hr	1.822e-004	5.419e-004
Rational Geometry	mSv/hr	1.822e-004	5.419e-004

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Isotropic Geometry	mSv/hr	1.420e-004	4.186e-004
Effective Dose Equivalent Rate (ICRP 51 - 1987)			
Anterior/Posterior Geometry	mSv/hr	1.603e-004	4.831e-004
Posterior/Anterior Geometry	mSv/hr	1.455e-004	4.330e-004
Lateral Geometry	mSv/hr	1.130e-004	3.304e-004
Rotational Geometry	mSv/hr	1.306e-004	3.871e-004
Isotropic Geometry	mSv/hr	1.140e-004	3.355e-004
Nominal Case			
Dose Point #1	(1.36e+03, 43.18, 114.3) cm		
Variable	Not Applicable		
Results (Summed over energies)			
	Units	Without Buildup	With Buildup
Photon Fluence Rate (flux)	Photons/cm ² /sec	1.080e+001	4.749e+001
Photon Energy Fluence Rate	MeV/cm ² /sec	9.838e+000	2.907e+001
Exposure and Dose Rates			
Exposure Rate in Air	mR/hr	1.774e-002	5.241e-002
Absorbed Dose Rate in Air	mGy/hr	1.549e-004	4.576e-004
Absorbed Dose Rate in Air	mrad/hr	1.549e-002	4.576e-002
Bladder Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.687e-004	5.126e-004
Postero-anterior Geometry	mSv/hr	1.202e-004	3.533e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	9.649e-005	2.782e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.249e-004	3.698e-004
Isotropic Geometry	mSv/hr	1.060e-004	3.116e-004
Bone (Red Marrow) Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.225e-004	3.613e-004
Postero-anterior Geometry	mSv/hr	1.493e-004	4.486e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	1.069e-004	3.126e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.255e-004	3.720e-004
Isotropic Geometry	mSv/hr	1.099e-004	3.235e-004

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Bone (Red Marrow) Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.357e-004	4.175e-004
Postero-anterior Geometry	mSv/hr	1.452e-004	4.560e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	5.170e-004	2.000e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.295e-004	3.972e-004
Isotropic Geometry	mSv/hr	1.139e-004	3.463e-004
Breast - Female Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.750e-004	5.291e-004
Postero-anterior Geometry	mSv/hr	1.226e-004	3.544e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	1.265e-004	3.707e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.355e-004	4.012e-004
Isotropic Geometry	mSv/hr	1.284e-004	3.790e-004
Colon Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.570e-004	4.736e-004
Postero-anterior Geometry	mSv/hr	1.351e-004	4.020e-004
Left Lateral Geometry	mSv/hr	9.574e-005	2.785e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	9.574e-005	2.785e-004
Rotational Geometry	mSv/hr	1.245e-004	3.688e-004
Isotropic Geometry	mSv/hr	1.032e-004	3.029e-004
Gonads - Female Ovaries Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.435e-004	4.325e-004
Postero-anterior Geometry	mSv/hr	1.413e-004	4.246e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	8.712e-005	2.533e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.237e-004	3.677e-004
Isotropic Geometry	mSv/hr	1.037e-004	3.037e-004
Gonads - Male Testes Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.833e-004	5.589e-004
Postero-anterior Geometry	mSv/hr	1.211e-004	3.513e-004

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Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	9.308e-005	2.655e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.247e-004	3.699e-004
Isotropic Geometry	mSv/hr	1.176e-004	3.462e-004
Gonads Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.644e-004	4.981e-004
Postero-anterior Geometry	mSv/hr	1.331e-004	3.932e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	9.079e-005	2.617e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.240e-004	3.681e-004
Isotropic Geometry	mSv/hr	1.924e-003	6.894e-003
Liver Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.562e-004	4.707e-004
Postero-anterior Geometry	mSv/hr	1.379e-004	4.108e-004
Left Lateral Geometry	mSv/hr	6.260e-005	1.762e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	1.352e-004	4.013e-004
Rotational Geometry	mSv/hr	1.280e-004	3.797e-004
Isotropic Geometry	mSv/hr	1.104e-004	3.244e-004
Lung Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.546e-004	4.632e-004
Postero-anterior Geometry	mSv/hr	1.638e-004	4.919e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	1.069e-004	3.119e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.364e-004	4.046e-004
Isotropic Geometry	mSv/hr	1.183e-004	3.484e-004
Oesophagus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.297e-004	3.839e-004
Postero-anterior Geometry	mSv/hr	1.403e-004	4.197e-004
Left Lateral Geometry	mSv/hr	1.189e-004	3.463e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	1.094e-004	3.181e-004

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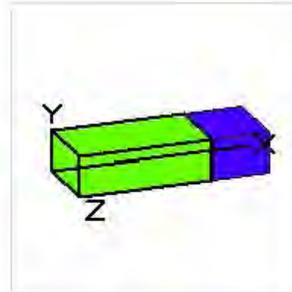
Rotational Geometry	mSv/hr	1.268e-004	3.744e-004
Isotropic Geometry	mSv/hr	1.084e-004	3.170e-004
Remainder Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.419e-004	4.246e-004
Postero-anterior Geometry	mSv/hr	1.421e-004	4.253e-004
Left Lateral Geometry	mSv/hr	1.069e-004	3.121e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	9.735e-005	2.824e-004
Rotational Geometry	mSv/hr	1.271e-004	3.764e-004
Isotropic Geometry	mSv/hr	1.093e-004	3.210e-004
Skin Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.510e-004	4.486e-004
Postero-anterior Geometry	mSv/hr	1.507e-004	4.474e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	1.294e-004	3.801e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.422e-004	4.207e-004
Isotropic Geometry	mSv/hr	1.331e-004	3.929e-004
Stomach Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.674e-004	5.091e-004
Postero-anterior Geometry	mSv/hr	1.214e-004	4.560e-004
Left Lateral Geometry	mSv/hr	1.357e-004	4.025e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	6.436e-005	1.808e-004
Rotational Geometry	mSv/hr	1.277e-004	3.788e-004
Isotropic Geometry	mSv/hr	1.089e-004	3.204e-004
Thyroid Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.931e-004	5.871e-004
Postero-anterior Geometry	mSv/hr	1.087e-004	3.142e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.676e-004	4.967e-004
Isotropic Geometry	mSv/hr	1.603e-004	4.774e-004

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Effective Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.561e-004	4.704e-004
Postero-anterior Geometry	mSv/hr	1.368e-004	4.065e-004
Left Lateral Geometry	mSv/hr	1.075e-004	3.140e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	1.014e-004	2.947e-004
Rotational Geometry	mSv/hr	1.294e-004	3.838e-004
Isotropic Geometry	mSv/hr	1.119e-004	3.291e-004
Eye Lens Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.728e-004	5.227e-004
Postero-anterior Geometry	mSv/hr	7.700e-005	2.160e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	1.557e-004	4.609e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.557e-004	4.609e-004
Isotropic Geometry	mSv/hr	1.419e-004	4.218e-004
Thymus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.776e-004	5.438e-004
Postero-anterior Geometry	mSv/hr	8.972e-005	2.607e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	1.087e-004	3.142e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	1.087e-004	3.142e-004
Isotropic Geometry	mSv/hr	1.294e-004	3.847e-004
Uterus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	1.460e-004	4.414e-004
Postero-anterior Geometry	mSv/hr	1.327e-004	3.959e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	8.770e-005	2.526e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	8.770e-005	2.526e-004
Isotropic Geometry	mSv/hr	1.195e-004	3.539e-004

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MicroShield 8.02 SENEC Consultants Limited (8.02-0000)				
Date	By	Checked		
Filename		Run Date	Run Time	Duration
37101-3- Truck driver- driving ORE dump truck 6Nov09 LML.msd		November 6, 2009	12:26:02 PM	00:00:01
Project Info				
Case Title	Truck Driver - ORE			
Description	Driving dump truck			
Geometry	13 - Rectangular Volume			
Source Dimensions				
Length	350.0 cm (11 ft 5.8 in)			
Width	200.0 cm (6 ft 6.7 in)			
Height	105.0 cm (3 ft 5.3 in)			
Dose Points				
A	X	Y	Z	
#1	520.6 cm (17 ft 1.0 in)	52.5 cm (1 ft 8.7 in)	100.0 cm (3 ft 3.4 in)	
Shields				
Shield N	Dimension	Material	Density	
Source	7.35e+06 cm ²	U ore	1.9	
Shield 1	.3 cm	Iron	7.86	
Shield 2	150.0 cm	Air	0.00122	
Shield 3	.3 cm	Iron	7.86	
Air Gap		Air	0.00122	
Source Input: Grouping Method - Standard Indices				
Number of Groups: 25				
Lower Energy Cutoff: 0.015				
Photons < 0.015: Included				
Library: ICRP-38				
Nuclide	Ci	Bq	µCi/cm ²	Bq/cm ²
At-218	1.8174e-006	6.7244e+004	2.4727e-007	9.1488e-003
Bi-210	9.0852e-003	3.3615e+008	1.2361e-003	4.5735e+001
Bi-214	9.0870e-003	3.3622e+008	1.2363e-003	4.5744e+001
Pa-234	2.9961e-005	1.1086e+006	4.0764e-006	1.5083e-001
Pa-234m	9.0682e-003	3.3552e+008	1.2338e-003	4.5649e+001
Pb-210	9.0852e-003	3.3615e+008	1.2361e-003	4.5735e+001
Pb-214	9.0852e-003	3.3615e+008	1.2361e-003	4.5735e+001
Po-210	9.0852e-003	3.3615e+008	1.2361e-003	4.5735e+001
Po-214	9.0852e-003	3.3615e+008	1.2361e-003	4.5735e+001
Po-218	9.0870e-003	3.3622e+008	1.2363e-003	4.5744e+001
Ra-226	9.0870e-003	3.3622e+008	1.2363e-003	4.5744e+001
Rn-222	9.0870e-003	3.3622e+008	1.2363e-003	4.5744e+001
Th-230	9.0870e-003	3.3622e+008	1.2363e-003	4.5744e+001
Th-234	9.0863e-003	3.3619e+008	1.2362e-003	4.5741e+001
U-234	9.0868e-003	3.3621e+008	1.2363e-003	4.5743e+001
U-238	9.0863e-003	3.3619e+008	1.2362e-003	4.5741e+001
Buildup: The material reference is Air Gap				
Integration Parameters				
X Direction				20



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		Y Direction	20			
		Z Direction	20			
Results						
Energy (MeV)	Activity (Photons/sec)	Fluence Rate MeV/cm ² /sec No Buildup	Fluence Rate MeV/cm ² /sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup	
0.015	2.414e+08	1.545e-124	4.964e-26	1.325e-125	4.258e-27	
0.02	1.546e+07	3.879e-58	9.020e-27	1.344e-59	3.124e-28	
0.03	4.393e+03	5.459e-24	1.630e-22	5.411e-26	1.615e-24	
0.04	4.308e+03	4.322e-14	2.719e-12	1.912e-16	1.203e-14	
0.05	1.795e+07	9.797e-07	7.814e-05	2.610e-09	2.082e-07	
0.06	1.419e+07	4.183e-05	2.842e-03	8.309e-08	5.645e-06	
0.08	8.223e+07	7.358e-03	2.662e-01	1.164e-05	4.213e-04	
0.1	2.259e+07	8.089e-03	1.725e-01	1.237e-05	2.639e-04	
0.15	8.207e+05	1.152e-03	1.212e-02	1.897e-06	1.996e-05	
0.2	3.665e+07	9.488e-02	7.055e-01	1.675e-04	1.245e-03	
0.3	7.011e+07	3.692e-01	1.924e+00	7.003e-04	3.650e-03	
0.4	1.285e+08	1.082e+00	4.591e+00	2.108e-03	8.945e-03	
0.5	7.145e+06	8.612e-02	3.177e-01	1.690e-04	6.237e-04	
0.6	1.637e+08	2.641e+00	8.774e+00	5.155e-03	1.713e-02	
0.8	3.495e+07	8.941e-01	2.551e+00	1.701e-03	4.852e-03	
1.0	9.781e+07	3.582e+00	9.231e+00	6.604e-03	1.702e-02	
1.5	6.515e+07	4.586e+00	1.004e+01	7.717e-03	1.689e-02	
2.0	9.304e+07	1.034e+01	2.059e+01	1.599e-02	3.184e-02	
3.0	5.723e+05	1.189e-01	2.111e-01	1.613e-04	2.863e-04	
Totals	1.092e+09	2.381e+01	5.939e+01	4.049e-02	1.032e-01	

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Dose Equivalent Report

Program	MicroShield, Grove Software, Inc.
Version	8.02
Organization	SENES Consultants Limited
Serial #	8.02-0000
Date / Time	This case was run on Friday, November 6, 2009 at 12:26:02 PM
Filename	C:\Program Files\MicroShield 8\Examples\CaseFiles\37101-3\37101-3- Truck driver- driving ORE dump truck 6Nov09 LML.msd
Case Title	Truck Driver - ORE
Description	Driving dump truck
Geometry	13 - Rectangular Volume
Sensitivity	No

Results

Nominal Case			
Dose Point #1	(520.6, 52.5, 100) cm		
Variable	Not Applicable		
Results (Summed over energies)			
	Units	Without Buildup	With Buildup
Photon Fluence Rate (flux)	Photons/cm ² /sec	2.213e+001	7.134e+001
Photon Energy Fluence Rate	MeV/cm ² /sec	2.381e+001	5.939e+001
Exposure and Dose Rates			
Exposure Rate in Air	mR/hr	4.049e-002	1.032e-001
Absorbed Dose Rate in Air	mGy/hr	3.535e-004	9.008e-004
Absorbed Dose Rate in Air	mrad/hr	3.535e-002	9.008e-002
Deep Dose Equivalent Rate (ICRP 51 - 1987)			
Parallel Geometry	mSv/hr	4.081e-004	1.055e-003
Opposed Geometry	mSv/hr	3.473e-004	8.774e-004
Rational Geometry	mSv/hr	3.473e-004	8.773e-004
Isotropic Geometry	mSv/hr	3.109e-004	7.847e-004
Shallow Dose Equivalent Rate (ICRP 51 - 1987)			
Parallel Geometry	mSv/hr	4.295e-004	1.108e-003
Opposed Geometry	mSv/hr	4.134e-004	1.061e-003
Rational Geometry	mSv/hr	4.134e-004	1.061e-003

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Isotropic Geometry	mSv/hr	3.273e-004	8.283e-004
Effective Dose Equivalent Rate (ICRP 51 - 1987)			
Anterior/Posterior Geometry	mSv/hr	3.654e-004	9.401e-004
Posterior/Anterior Geometry	mSv/hr	3.346e-004	8.511e-004
Lateral Geometry	mSv/hr	2.657e-004	6.638e-004
Rotational Geometry	mSv/hr	3.016e-004	7.647e-004
Isotropic Geometry	mSv/hr	2.663e-004	6.696e-004
Nominal Case			
Dose Point #1	(520.6, 52.5, 100) cm		
Variable	Not Applicable		
Results (Summed over energies)			
	Units	Without Buildup	With Buildup
Photon Fluence Rate (flux)	Photons/cm ² /sec	2.213e+001	7.134e+001
Photon Energy Fluence Rate	MeV/cm ² /sec	2.381e+001	5.939e+001
Exposure and Dose Rates			
Exposure Rate in Air	mR/hr	4.049e-002	1.032e-001
Absorbed Dose Rate in Air	mGy/hr	3.535e-004	9.008e-004
Absorbed Dose Rate in Air	mrad/hr	3.535e-002	9.008e-002
Bladder Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.809e-004	9.872e-004
Postero-anterior Geometry	mSv/hr	2.789e-004	7.009e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.295e-004	5.669e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	2.900e-004	7.329e-004
Isotropic Geometry	mSv/hr	2.488e-004	6.220e-004
Bone (Red Marrow) Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	2.844e-004	7.178e-004
Postero-anterior Geometry	mSv/hr	3.017e-004	7.430e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.509e-004	6.279e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	2.908e-004	7.369e-004
Isotropic Geometry	mSv/hr	2.568e-004	6.460e-004

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Bone (Red Marrow) Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.109e-004	8.001e-004
Postero-anterior Geometry	mSv/hr	3.310e-004	8.583e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	1.217e-003	4.219e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	2.984e-004	7.654e-004
Isotropic Geometry	mSv/hr	2.646e-004	6.737e-004
Breast - Female Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.980e-004	1.028e-003
Postero-anterior Geometry	mSv/hr	2.870e-004	7.148e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.941e-004	7.401e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	3.124e-004	7.923e-004
Isotropic Geometry	mSv/hr	2.971e-004	7.512e-004
Colon Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.556e-004	9.163e-004
Postero-anterior Geometry	mSv/hr	3.100e-004	7.886e-004
Left Lateral Geometry	mSv/hr	2.267e-004	5.633e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	2.267e-004	5.633e-004
Rotational Geometry	mSv/hr	2.882e-004	7.299e-004
Isotropic Geometry	mSv/hr	2.426e-004	6.073e-004
Gonads - Female Ovaries Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.303e-004	8.472e-004
Postero-anterior Geometry	mSv/hr	3.220e-004	8.256e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.057e-004	5.127e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	2.872e-004	7.293e-004
Isotropic Geometry	mSv/hr	2.413e-004	6.045e-004
Gonads - Male Testes Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	4.128e-004	1.073e-003
Postero-anterior Geometry	mSv/hr	2.810e-004	7.036e-004

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Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.254e-004	5.522e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	2.899e-004	7.338e-004
Isotropic Geometry	mSv/hr	2.724e-004	6.867e-004
Gonads Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.739e-004	9.653e-004
Postero-anterior Geometry	mSv/hr	3.053e-004	7.740e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.155e-004	5.320e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	2.891e-004	7.328e-004
Isotropic Geometry	mSv/hr	3.112e-002	1.031e-001
Liver Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.570e-004	9.174e-004
Postero-anterior Geometry	mSv/hr	3.174e-004	8.082e-004
Left Lateral Geometry	mSv/hr	1.554e-004	3.732e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	3.126e-004	7.930e-004
Rotational Geometry	mSv/hr	2.959e-004	7.494e-004
Isotropic Geometry	mSv/hr	2.586e-004	6.489e-004
Lung Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.524e-004	9.029e-004
Postero-anterior Geometry	mSv/hr	3.723e-004	9.568e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.520e-004	6.282e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	3.142e-004	7.972e-004
Isotropic Geometry	mSv/hr	2.757e-004	6.940e-004
Oesophagus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	2.982e-004	7.561e-004
Postero-anterior Geometry	mSv/hr	3.228e-004	8.240e-004
Left Lateral Geometry	mSv/hr	2.768e-004	6.920e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	2.561e-004	6.386e-004

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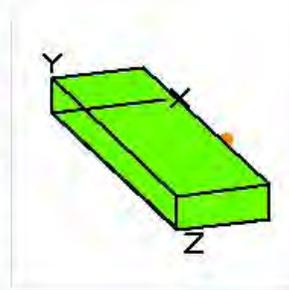
Rotational Geometry	mSv/hr	2.948e-004	7.428e-004
Isotropic Geometry	mSv/hr	2.526e-004	6.321e-004
Remainder Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.250e-004	8.302e-004
Postero-anterior Geometry	mSv/hr	3.253e-004	8.316e-004
Left Lateral Geometry	mSv/hr	2.511e-004	6.269e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	2.306e-004	5.720e-004
Rotational Geometry	mSv/hr	2.936e-004	7.438e-004
Isotropic Geometry	mSv/hr	2.561e-004	6.427e-004
Skin Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.460e-004	8.820e-004
Postero-anterior Geometry	mSv/hr	3.455e-004	8.802e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	3.002e-004	7.570e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	3.269e-004	8.301e-004
Isotropic Geometry	mSv/hr	3.075e-004	7.784e-004
Stomach Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.791e-004	9.833e-004
Postero-anterior Geometry	mSv/hr	2.819e-004	8.583e-004
Left Lateral Geometry	mSv/hr	3.124e-004	7.920e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	1.595e-004	3.825e-004
Rotational Geometry	mSv/hr	2.966e-004	7.513e-004
Isotropic Geometry	mSv/hr	2.561e-004	6.424e-004
Thyroid Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	4.324e-004	1.123e-003
Postero-anterior Geometry	mSv/hr	2.527e-004	6.279e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	3.833e-004	9.745e-004
Isotropic Geometry	mSv/hr	3.683e-004	9.380e-004

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Effective Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.554e-004	9.142e-004
Postero-anterior Geometry	mSv/hr	3.142e-004	7.991e-004
Left Lateral Geometry	mSv/hr	2.521e-004	6.301e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	2.391e-004	5.948e-004
Rotational Geometry	mSv/hr	2.997e-004	7.596e-004
Isotropic Geometry	mSv/hr	2.609e-004	6.556e-004
Eye Lens Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.883e-004	1.009e-003
Postero-anterior Geometry	mSv/hr	1.877e-004	4.514e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	3.556e-004	9.070e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	3.556e-004	9.070e-004
Isotropic Geometry	mSv/hr	3.283e-004	8.365e-004
Thymus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.977e-004	1.039e-003
Postero-anterior Geometry	mSv/hr	2.114e-004	5.251e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.562e-004	6.363e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	2.562e-004	6.363e-004
Isotropic Geometry	mSv/hr	2.976e-004	7.583e-004
Uterus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	3.325e-004	8.554e-004
Postero-anterior Geometry	mSv/hr	3.035e-004	7.743e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.113e-004	5.192e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	2.113e-004	5.192e-004
Isotropic Geometry	mSv/hr	2.753e-004	6.970e-004

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MicroShield 8.02 SENEC Consultants Limited (8.02-0000)					
Date	By	Checked			
Filename	Run Date	Run Time	Duration		
37101-3- Truck driver- inspecting 21Oct09.msd	November 9, 2010	12:03:18 PM	00:00:03		
Project Info					
Case Title	Truck Driver				
Description	Inspecting 50 cm from side of trailer				
Geometry	13 - Rectangular Volume				
Source Dimensions					
Length	228.6 cm (7 ft 6.0 in)				
Width	837.25 cm (28 ft 1.5 in)				
Height	86.36 cm (2 ft 10.0 in)				
Dose Points					
A	X	Y	Z		
#1	279.052 cm (9 ft 1.9 in)	43.18 cm (1 ft 5.0 in)	428.6 cm (14 ft 0.7 in)		
Shields					
Shield N	Dimension	Material	Density		
Source	1.69e+07 cm ²	Yellowcake	1.61		
Shield 1	.152 cm	Iron	7.86		
Shield 2	.3 cm	Iron	7.86		
Air Gap		Air	0.00122		
Source Input: Grouping Method - Standard Indices					
Number of Groups: 25					
Lower Energy Cutoff: 0.015					
Photons < 0.015: Included					
Library: ICRP-38					
Nuclide	Ci	Bq	µCi/cm ³	Bq/cm ³	
Pa-234	1.5735e-002	5.8218e+008	9.2973e-004	3.4400e+001	
Pa-234m	9.8341e+000	3.6386e+011	5.8108e-001	2.1500e+004	
Th-231	4.5282e-001	1.6755e+010	2.6757e-002	9.9000e+002	
Th-234	9.8341e+000	3.6386e+011	5.8108e-001	2.1500e+004	
U-234	9.8341e+000	3.6386e+011	5.8108e-001	2.1500e+004	
U-235	4.5282e-001	1.6755e+010	2.6757e-002	9.9000e+002	
U-238	9.8341e+000	3.6386e+011	5.8108e-001	2.1500e+004	
Buildup: The material reference is Air Gap					
Integration Parameters					
X Direction				40	
Y Direction				20	
Z Direction				20	
Results					
Energy (MeV)	Activity (Photons/sec)	Fluence Rate MeV/cm ² /sec No Buildup	Fluence Rate MeV/cm ² /sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.015	1.102e+11	3.582e-96	4.598e-23	3.073e-97	3.944e-24
0.02	1.497e+10	3.868e-49	1.773e-23	1.340e-50	6.141e-25
0.03	2.487e+09	3.194e-19	9.455e-18	3.165e-21	9.370e-20
0.04	2.547e+07	1.961e-11	1.258e-09	8.673e-14	5.562e-12



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0.05	7.052e+08	3.805e-06	3.127e-04	1.014e-08	8.329e-07
0.06	1.407e+10	5.424e-03	3.637e-01	1.077e-05	7.225e-04
0.08	2.434e+09	4.328e-02	1.409e+00	6.849e-05	2.229e-03
0.1	2.518e+10	2.565e+00	5.100e+01	3.924e-03	7.803e-02
0.15	2.832e+09	6.180e-01	6.732e+00	1.018e-03	1.109e-02
0.2	1.038e+10	7.683e+00	5.854e+01	1.356e-02	1.033e-01
0.3	2.777e+08	8.893e-01	4.756e+00	1.687e-03	9.023e-03
0.4	5.684e+07	4.511e-01	1.957e+00	8.790e-04	3.813e-03
0.5	9.941e+07	1.481e+00	5.560e+00	2.908e-03	1.091e-02
0.6	2.602e+08	6.202e+00	2.085e+01	1.211e-02	4.071e-02
0.8	1.736e+09	8.087e+01	2.322e+02	1.538e-01	4.416e-01
1.0	2.650e+09	1.981e+02	5.116e+02	3.652e-01	9.431e-01
1.5	2.618e+08	4.158e+01	9.091e+01	6.996e-02	1.530e-01
2.0	1.673e+08	4.120e+01	8.203e+01	6.372e-02	1.268e-01
Totals	1.888e+11	3.817e+02	1.068e+03	6.889e-01	1.924e+00

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Dose Equivalent Report

Program	MicroShield, Grove Software, Inc.
Version	8.02
Organization	SENES Consultants Limited
Serial #	8.02-0000
Date / Time	This case was run on Tuesday, November 9, 2010 at 12:03:18 PM
Filename	C:\Program Files\MicroShield 8\Examples\CaseFiles\37101-3\37101-3- Truck driver- inspecting 21Oct09.msdc
Case Title	Truck Driver
Description	Inspecting 50 cm from side of trailer
Geometry	13 - Rectangular Volume
Sensitivity	No

Results

Nominal Case			
Dose Point #1	(279.0519, 43.18, 428.6) cm		
Variable	Not Applicable		
Results (Summed over energies)			
	Units	Without Buildup	With Buildup
Photon Fluence Rate (flux)	Photons/cm ² /sec	4.338e+002	1.841e+003
Photon Energy Fluence Rate	MeV/cm ² /sec	3.817e+002	1.068e+003
Exposure and Dose Rates			
Exposure Rate in Air	mR/hr	6.889e-001	1.924e+000
Absorbed Dose Rate in Air	mGy/hr	6.014e-003	1.680e-002
Absorbed Dose Rate in Air	mrad/hr	6.014e-001	1.680e+000
Deep Dose Equivalent Rate (ICRP 51 - 1987)			
Parallel Geometry	mSv/hr	6.966e-003	1.997e-002
Opposed Geometry	mSv/hr	5.823e-003	1.616e-002
Rational Geometry	mSv/hr	5.823e-003	1.616e-002
Isotropic Geometry	mSv/hr	5.181e-003	1.443e-002
Shallow Dose Equivalent Rate (ICRP 51 - 1987)			
Parallel Geometry	mSv/hr	7.409e-003	2.111e-002
Opposed Geometry	mSv/hr	7.079e-003	1.992e-002
Rational Geometry	mSv/hr	7.079e-003	1.992e-002

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Isotropic Geometry	mSv/hr	5.512e-003	1.537e-002
Effective Dose Equivalent Rate (ICRP 51 - 1987)			
Anterior/Posterior Geometry	mSv/hr	6.233e-003	1.779e-002
Posterior/Anterior Geometry	mSv/hr	5.651e-003	1.592e-002
Lateral Geometry	mSv/hr	4.383e-003	1.212e-002
Rotational Geometry	mSv/hr	5.071e-003	1.423e-002
Isotropic Geometry	mSv/hr	4.423e-003	1.231e-002
Nominal Case			
Dose Point #1	(279.0519, 43.18, 428.6) cm		
Variable	Not Applicable		
Results (Summed over energies)			
	Units	Without Buildup	With Buildup
Photon Fluence Rate (flux)	Photons/cm ² /sec	4.338e+002	1.841e+003
Photon Energy Fluence Rate	MeV/cm ² /sec	3.817e+002	1.068e+003
Exposure and Dose Rates			
Exposure Rate in Air	mR/hr	6.889e-001	1.924e+000
Absorbed Dose Rate in Air	mGy/hr	6.014e-003	1.680e-002
Absorbed Dose Rate in Air	mrad/hr	6.014e-001	1.680e+000
Bladder Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.565e-003	1.890e-002
Postero-anterior Geometry	mSv/hr	4.665e-003	1.296e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	3.738e-003	1.018e-002
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	4.850e-003	1.359e-002
Isotropic Geometry	mSv/hr	4.114e-003	1.144e-002
Bone (Red Marrow) Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	4.754e-003	1.326e-002
Postero-anterior Geometry	mSv/hr	5.802e-003	1.652e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.145e-003	1.146e-002
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	4.875e-003	1.367e-002
Isotropic Geometry	mSv/hr	4.265e-003	1.187e-002

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Bone (Red Marrow) Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	5.282e-003	1.544e-002
Postero-anterior Geometry	mSv/hr	5.663e-003	1.693e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.090e-002	7.493e-002
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.042e-003	1.469e-002
Isotropic Geometry	mSv/hr	4.432e-003	1.279e-002
Breast - Female Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.809e-003	1.950e-002
Postero-anterior Geometry	mSv/hr	4.753e-003	1.297e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.907e-003	1.360e-002
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.263e-003	1.474e-002
Isotropic Geometry	mSv/hr	4.985e-003	1.392e-002
Colon Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.106e-003	1.745e-002
Postero-anterior Geometry	mSv/hr	5.249e-003	1.478e-002
Left Lateral Geometry	mSv/hr	3.712e-003	1.020e-002
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	3.712e-003	1.020e-002
Rotational Geometry	mSv/hr	4.835e-003	1.355e-002
Isotropic Geometry	mSv/hr	4.005e-003	1.111e-002
Gonads - Female Ovaries Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	5.580e-003	1.593e-002
Postero-anterior Geometry	mSv/hr	5.492e-003	1.563e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	3.378e-003	9.281e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	4.806e-003	1.351e-002
Isotropic Geometry	mSv/hr	4.023e-003	1.114e-002
Gonads - Male Testes Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.136e-003	2.062e-002
Postero-anterior Geometry	mSv/hr	4.694e-003	1.286e-002

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Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	3.602e-003	9.700e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	4.842e-003	1.359e-002
Isotropic Geometry	mSv/hr	4.562e-003	1.271e-002
Gonads Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.395e-003	1.836e-002
Postero-anterior Geometry	mSv/hr	5.169e-003	1.444e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	3.517e-003	9.576e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	4.817e-003	1.353e-002
Isotropic Geometry	mSv/hr	7.725e-002	2.565e-001
Liver Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.075e-003	1.734e-002
Postero-anterior Geometry	mSv/hr	5.358e-003	1.511e-002
Left Lateral Geometry	mSv/hr	2.420e-003	6.427e-003
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	5.250e-003	1.475e-002
Rotational Geometry	mSv/hr	4.969e-003	1.395e-002
Isotropic Geometry	mSv/hr	4.282e-003	1.191e-002
Lung Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.010e-003	1.705e-002
Postero-anterior Geometry	mSv/hr	6.368e-003	1.811e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.146e-003	1.143e-002
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.296e-003	1.487e-002
Isotropic Geometry	mSv/hr	4.591e-003	1.279e-002
Oesophagus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	5.038e-003	1.410e-002
Postero-anterior Geometry	mSv/hr	5.452e-003	1.544e-002
Left Lateral Geometry	mSv/hr	4.611e-003	1.269e-002
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	4.240e-003	1.166e-002

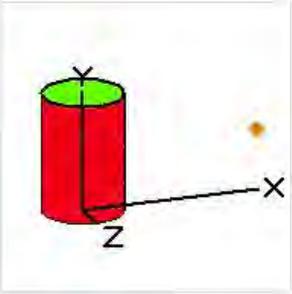
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Rotational Geometry	mSv/hr	4.924e-003	1.375e-002
Isotropic Geometry	mSv/hr	4.205e-003	1.162e-002
Remainder Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	5.515e-003	1.562e-002
Postero-anterior Geometry	mSv/hr	5.522e-003	1.565e-002
Left Lateral Geometry	mSv/hr	4.146e-003	1.144e-002
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	3.773e-003	1.034e-002
Rotational Geometry	mSv/hr	4.934e-003	1.383e-002
Isotropic Geometry	mSv/hr	4.240e-003	1.178e-002
Skin Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	5.865e-003	1.649e-002
Postero-anterior Geometry	mSv/hr	5.853e-003	1.644e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	5.022e-003	1.395e-002
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.522e-003	1.545e-002
Isotropic Geometry	mSv/hr	5.169e-003	1.442e-002
Stomach Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.513e-003	1.878e-002
Postero-anterior Geometry	mSv/hr	4.710e-003	1.693e-002
Left Lateral Geometry	mSv/hr	5.271e-003	1.479e-002
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	2.488e-003	6.592e-003
Rotational Geometry	mSv/hr	4.960e-003	1.392e-002
Isotropic Geometry	mSv/hr	4.226e-003	1.176e-002
Thyroid Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.516e-003	2.165e-002
Postero-anterior Geometry	mSv/hr	4.213e-003	1.150e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	6.510e-003	1.825e-002
Isotropic Geometry	mSv/hr	6.228e-003	1.755e-002

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Effective Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.071e-003	1.733e-002
Postero-anterior Geometry	mSv/hr	5.313e-003	1.494e-002
Left Lateral Geometry	mSv/hr	4.169e-003	1.151e-002
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	3.930e-003	1.080e-002
Rotational Geometry	mSv/hr	5.026e-003	1.410e-002
Isotropic Geometry	mSv/hr	4.343e-003	1.208e-002
Eye Lens Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.724e-003	1.926e-002
Postero-anterior Geometry	mSv/hr	2.976e-003	7.872e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	6.047e-003	1.693e-002
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	6.047e-003	1.693e-002
Isotropic Geometry	mSv/hr	5.511e-003	1.550e-002
Thymus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.917e-003	2.008e-002
Postero-anterior Geometry	mSv/hr	3.478e-003	9.552e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.214e-003	1.150e-002
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	4.214e-003	1.150e-002
Isotropic Geometry	mSv/hr	5.027e-003	1.414e-002
Uterus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	5.678e-003	1.627e-002
Postero-anterior Geometry	mSv/hr	5.156e-003	1.456e-002
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	3.397e-003	9.244e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	3.397e-003	9.244e-003
Isotropic Geometry	mSv/hr	4.639e-003	1.300e-002

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MicroShield 8.02 SENEC Consultants Limited (8.02-0000)					
Date	By	Checked			
Filename	Run Date	Run Time	Duration		
37101-3- Forklift driver 21 Oct 09.msd	November 9, 2010	11:51:29 AM	00:00:02		
Project Info					
Case Title	Forklift driver				
Description	1 55 gal drum				
Geometry	7 - Cylinder Volume - Side Shields				
Source Dimensions					
Height	86.36 cm (2 ft 10.0 in)				
Radius	28.575 cm (11.3 in)				
Dose Points					
A	X	Y	Z		
#1	128.727 cm (4 ft 2.7 in)	43.18 cm (1 ft 5.0 in)	0.0 cm (0 in)		
Shields					
Shield N	Dimension	Material	Density		
Source	2.22e+05 cm ³	Yellowcake	2.055		
Transition		Air	0.00122		
Air Gap		Air	0.00122		
Wall Clad	.152 cm	Iron	7.86		
					
Source Input: Grouping Method - Standard Indices					
Number of Groups: 25 Lower Energy Cutoff: 0.015 Photons < 0.015: Included Library: ICRP-38					
Nuclide	Ci	Bq	µCi/cm ³	Bq/cm ³	
Pa-234	2.0596e-004	7.6207e+006	9.2973e-004	3.4400e+001	
Pa-234m	1.2873e-001	4.7629e+009	5.8108e-001	2.1500e+004	
Th-231	5.9275e-003	2.1932e+008	2.6757e-002	9.9000e+002	
Th-234	1.2873e-001	4.7629e+009	5.8108e-001	2.1500e+004	
U-234	1.2873e-001	4.7629e+009	5.8108e-001	2.1500e+004	
U-235	5.9275e-003	2.1932e+008	2.6757e-002	9.9000e+002	
U-238	1.2873e-001	4.7629e+009	5.8108e-001	2.1500e+004	
Buildup: The material reference is Air Gap					
Integration Parameters					
Radial				20	
Circumferential				30	
Y Direction (axial)				20	
Results					
Energy (MeV)	Activity (Photons/sec)	Fluence Rate	Fluence Rate	Exposure Rate	Exposure Rate
		MeV/cm ² /sec No Buildup	MeV/cm ² /sec With Buildup	mR/hr No Buildup	mR/hr With Buildup
0.015	1.443e+09	4.039e-36	1.672e-24	3.465e-37	1.434e-25
0.02	1.960e+08	6.989e-21	2.753e-20	2.421e-22	9.538e-22
0.03	3.256e+07	5.257e-10	6.866e-09	5.210e-12	6.804e-11
0.04	3.334e+05	9.216e-08	2.154e-06	4.076e-10	9.524e-09
0.05	9.231e+06	1.297e-04	3.163e-03	3.454e-07	8.427e-06

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0.06	1.841e+08	1.846e-02	3.544e-01	3.666e-05	7.039e-04
0.08	3.186e+07	2.317e-02	2.993e-01	3.666e-05	4.736e-04
0.1	3.296e+08	7.323e-01	7.379e+00	1.120e-03	1.129e-02
0.15	3.707e+07	1.108e-01	7.824e-01	1.825e-04	1.288e-03
0.2	1.359e+08	1.176e+00	6.492e+00	2.076e-03	1.146e-02
0.3	3.635e+06	1.229e-01	5.161e-01	2.331e-04	9.791e-04
0.4	7.440e+05	5.957e-02	2.115e-01	1.161e-04	4.121e-04
0.5	1.301e+06	1.901e-01	5.997e-01	3.731e-04	1.177e-03
0.6	3.406e+06	7.794e-01	2.245e+00	1.521e-03	4.382e-03
0.8	2.272e+07	9.858e+00	2.482e+01	1.875e-02	4.722e-02
1.0	3.469e+07	2.361e+01	5.422e+01	4.352e-02	9.995e-02
1.5	3.427e+06	4.759e+00	9.423e+00	8.007e-03	1.585e-02
2.0	2.190e+06	4.602e+00	8.383e+00	7.116e-03	1.296e-02
Totals	2.471e+09	4.604e+01	1.157e+02	8.309e-02	2.082e-01

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Dose Equivalent Report

Program	MicroShield, Grove Software, Inc.
Version	8.02
Organization	SENES Consultants Limited
Serial #	8.02-0000
Date / Time	This case was run on Tuesday, November 9, 2010 at 11:51:29 AM
Filename	C:\Program Files\MicroShield 8\Examples\CaseFiles\37101-3\37101-3- Forklift driver 21Oct09.msd
Case Title	Forklift driver
Description	1 55 gal drum
Geometry	7 - Cylinder Volume - Side Shields
Sensitivity	No

Results

Nominal Case			
Dose Point #1	(128.7269, 43.18, 0) cm		
Variable	Not Applicable		
Results (Summed over energies)			
	Units	Without Buildup	With Buildup
Photon Fluence Rate (flux)	Photons/cm ² /sec	5.818e+001	2.241e+002
Photon Energy Fluence Rate	MeV/cm ² /sec	4.604e+001	1.157e+002
Exposure and Dose Rates			
Exposure Rate in Air	mR/hr	8.309e-002	2.082e-001
Absorbed Dose Rate in Air	mGy/hr	7.253e-004	1.817e-003
Absorbed Dose Rate in Air	mrads/hr	7.253e-002	1.817e-001
Deep Dose Equivalent Rate (ICRP 51 - 1987)			
Parallel Geometry	mSv/hr	8.448e-004	2.179e-003
Opposed Geometry	mSv/hr	7.013e-004	1.746e-003
Rational Geometry	mSv/hr	7.013e-004	1.745e-003
Isotropic Geometry	mSv/hr	6.244e-004	1.561e-003
Shallow Dose Equivalent Rate (ICRP 51 - 1987)			
Parallel Geometry	mSv/hr	8.975e-004	2.300e-003
Opposed Geometry	mSv/hr	8.550e-004	2.158e-003
Rational Geometry	mSv/hr	8.550e-004	2.158e-003

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Isotropic Geometry	mSv/hr	6.645e-004	1.662e-003
Effective Dose Equivalent Rate (ICRP 51 - 1987)			
Anterior/Posterior Geometry	mSv/hr	7.553e-004	1.939e-003
Posterior/Anterior Geometry	mSv/hr	6.827e-004	1.727e-003
Lateral Geometry	mSv/hr	5.274e-004	1.308e-003
Rotational Geometry	mSv/hr	6.121e-004	1.542e-003
Isotropic Geometry	mSv/hr	5.331e-004	1.332e-003
Nominal Case			
Dose Point #1	(128.7269, 43.18, 0) cm		
Variable	Not Applicable		
Results (Summed over energies)			
	Units	Without Buildup	With Buildup
Photon Fluence Rate (flux)	Photons/cm ² /sec	5.818e+001	2.241e+002
Photon Energy Fluence Rate	MeV/cm ² /sec	4.604e+001	1.157e+002
Exposure and Dose Rates			
Exposure Rate in Air	mR/hr	8.309e-002	2.082e-001
Absorbed Dose Rate in Air	mGy/hr	7.253e-004	1.817e-003
Absorbed Dose Rate in Air	mrad/hr	7.253e-002	1.817e-001
Bladder Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.970e-004	2.064e-003
Postero-anterior Geometry	mSv/hr	5.620e-004	1.401e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.485e-004	1.095e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.853e-004	1.473e-003
Isotropic Geometry	mSv/hr	4.956e-004	1.237e-003
Bone (Red Marrow) Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	5.731e-004	1.434e-003
Postero-anterior Geometry	mSv/hr	7.025e-004	1.798e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.988e-004	1.237e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.883e-004	1.480e-003
Isotropic Geometry	mSv/hr	5.139e-004	1.284e-003

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Bone (Red Marrow) Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.437e-004	1.703e-003
Postero-anterior Geometry	mSv/hr	6.936e-004	1.882e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	2.655e-003	8.107e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	6.139e-004	1.618e-003
Isotropic Geometry	mSv/hr	5.385e-004	1.405e-003
Breast - Female Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	8.255e-004	2.126e-003
Postero-anterior Geometry	mSv/hr	5.704e-004	1.394e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	5.908e-004	1.468e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	6.351e-004	1.596e-003
Isotropic Geometry	mSv/hr	6.011e-004	1.506e-003
Colon Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.400e-004	1.901e-003
Postero-anterior Geometry	mSv/hr	6.341e-004	1.603e-003
Left Lateral Geometry	mSv/hr	4.461e-004	1.100e-003
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	4.461e-004	1.100e-003
Rotational Geometry	mSv/hr	5.835e-004	1.468e-003
Isotropic Geometry	mSv/hr	4.823e-004	1.201e-003
Gonads - Female Ovaries Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.760e-004	1.734e-003
Postero-anterior Geometry	mSv/hr	6.650e-004	1.700e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.059e-004	9.998e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.804e-004	1.465e-003
Isotropic Geometry	mSv/hr	4.843e-004	1.204e-003
Gonads - Male Testes Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	8.669e-004	2.255e-003
Postero-anterior Geometry	mSv/hr	5.638e-004	1.384e-003

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Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.311e-004	1.040e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.845e-004	1.474e-003
Isotropic Geometry	mSv/hr	5.500e-004	1.375e-003
Gonads Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.757e-004	2.003e-003
Postero-anterior Geometry	mSv/hr	6.234e-004	1.562e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.219e-004	1.029e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.816e-004	1.467e-003
Isotropic Geometry	mSv/hr	9.679e-003	2.761e-002
Liver Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.360e-004	1.889e-003
Postero-anterior Geometry	mSv/hr	6.475e-004	1.640e-003
Left Lateral Geometry	mSv/hr	2.888e-004	6.866e-004
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	6.339e-004	1.600e-003
Rotational Geometry	mSv/hr	6.000e-004	1.513e-003
Isotropic Geometry	mSv/hr	5.159e-004	1.288e-003
Lung Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.272e-004	1.854e-003
Postero-anterior Geometry	mSv/hr	7.710e-004	1.970e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.987e-004	1.234e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	6.394e-004	1.613e-003
Isotropic Geometry	mSv/hr	5.534e-004	1.384e-003
Oesophagus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.078e-004	1.527e-003
Postero-anterior Geometry	mSv/hr	6.594e-004	1.677e-003
Left Lateral Geometry	mSv/hr	5.544e-004	1.367e-003
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	5.097e-004	1.256e-003

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Rotational Geometry	mSv/hr	5.937e-004	1.488e-003
Isotropic Geometry	mSv/hr	5.060e-004	1.255e-003
Remainder Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.671e-004	1.698e-003
Postero-anterior Geometry	mSv/hr	6.680e-004	1.701e-003
Left Lateral Geometry	mSv/hr	4.987e-004	1.234e-003
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	4.533e-004	1.114e-003
Rotational Geometry	mSv/hr	5.955e-004	1.498e-003
Isotropic Geometry	mSv/hr	5.107e-004	1.273e-003
Skin Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.083e-004	1.787e-003
Postero-anterior Geometry	mSv/hr	7.067e-004	1.782e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	6.049e-004	1.507e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	6.662e-004	1.673e-003
Isotropic Geometry	mSv/hr	6.232e-004	1.561e-003
Stomach Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.908e-004	2.051e-003
Postero-anterior Geometry	mSv/hr	5.677e-004	1.882e-003
Left Lateral Geometry	mSv/hr	6.363e-004	1.603e-003
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	2.967e-004	7.037e-004
Rotational Geometry	mSv/hr	5.987e-004	1.509e-003
Isotropic Geometry	mSv/hr	5.093e-004	1.272e-003
Thyroid Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	9.125e-004	2.364e-003
Postero-anterior Geometry	mSv/hr	5.057e-004	1.237e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	7.857e-004	1.976e-003
Isotropic Geometry	mSv/hr	7.525e-004	1.905e-003

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Effective Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	7.356e-004	1.887e-003
Postero-anterior Geometry	mSv/hr	6.417e-004	1.620e-003
Left Lateral Geometry	mSv/hr	5.016e-004	1.242e-003
Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Right Lateral Geometry	mSv/hr	4.723e-004	1.164e-003
Rotational Geometry	mSv/hr	6.067e-004	1.529e-003
Isotropic Geometry	mSv/hr	5.233e-004	1.306e-003
Eye Lens Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	8.153e-004	2.098e-003
Postero-anterior Geometry	mSv/hr	3.549e-004	8.393e-004
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	7.296e-004	1.832e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	7.296e-004	1.832e-003
Isotropic Geometry	mSv/hr	6.655e-004	1.680e-003
Thymus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	8.411e-004	2.197e-003
Postero-anterior Geometry	mSv/hr	4.179e-004	1.029e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	5.057e-004	1.237e-003
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	5.057e-004	1.237e-003
Isotropic Geometry	mSv/hr	6.072e-004	1.533e-003
Uterus Absorbed Dose (ICRP 74 - 1997)			
Antero-posterior Geometry	mSv/hr	6.884e-004	1.774e-003
Postero-anterior Geometry	mSv/hr	6.233e-004	1.580e-003
Left Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Lateral Geometry	mSv/hr	4.074e-004	9.937e-004
Right Lateral Geometry	mSv/hr	0.000e+000	0.000e+000
Rotational Geometry	mSv/hr	4.074e-004	9.937e-004
Isotropic Geometry	mSv/hr	5.599e-004	1.409e-003

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