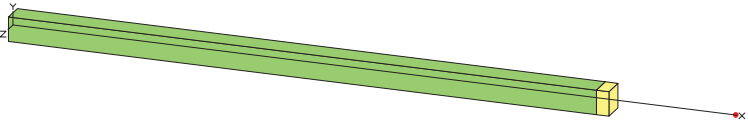


Case Title: Hematite
Description: Ind. Occ., Infinite Slab Shielded Backfill - EU 5.0%
Geometry: 16 - Infinite Slab

Source Dimensions
Thick 480.0 cm 15 ft 9.0 in

Dose Points

	<u>X</u>	<u>Y</u>	<u>Z</u>
# 1	590.16 cm 19 ft 4.3 in	0 cm 0.0 in	0 cm 0.0 in



Shields

<u>Shield Name</u>	<u>Dimension</u>	<u>Material</u>	<u>Density</u>
Source	Infinite	Concrete	1.6
Shield 1	.102 m	Concrete	2.35
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 : Grove

<u>Nuclide</u>	<u>μCi/cm³</u>	<u>Bq/cm³</u>
Ac-227	8.7732e-006	3.2461e-001
Bi-210	3.6957e-007	1.3674e-002
Bi-211	8.7135e-006	3.2240e-001
Bi-214	1.4782e-006	5.4692e-002
Fr-223	1.2107e-007	4.4796e-003
Pa-231	2.4655e-005	9.1224e-001
Pa-234	1.8248e-004	6.7518e+000
Pa-234m	1.1405e-001	4.2198e+003
Pb-210	3.7025e-007	1.3699e-002
Pb-211	8.7135e-006	3.2240e-001
Pb-214	1.4782e-006	5.4693e-002
Po-210	3.5132e-007	1.2999e-002
Po-211	2.3788e-008	8.8015e-004
Po-214	1.4779e-006	5.4681e-002
Po-215	8.7136e-006	3.2240e-001
Po-218	1.4785e-006	5.4704e-002
Ra-223	8.7136e-006	3.2240e-001
Ra-226	1.4800e-006	5.4759e-002
Rn-219	8.7136e-006	3.2240e-001
Rn-222	1.4785e-006	5.4704e-002
Th-227	8.6153e-006	3.1877e-001
Th-230	2.2872e-004	8.4628e+000
Th-231	3.8860e-002	1.4378e+003
Th-234	1.1405e-001	4.2198e+003
Tl-207	8.6897e-006	3.2152e-001
U-234	8.4703e-001	3.1340e+004
U-235	3.8860e-002	1.4378e+003
U-238	1.1405e-001	4.2198e+003

Buildup
The material reference is : Source

Results

<u>Energy</u> MeV	<u>Activity</u> photons/sec	<u>Fluence Rate</u> MeV/cm ² /sec		<u>Exposure Rate</u> mR/hr	
		<u>No Buildup</u>	<u>With Buildup</u>	<u>No Buildup</u>	<u>With Buildup</u>
0.015	5.563e+03	0.000e+00	0.000e+00	0.000e+00	0.000e+00
0.02	3.864e-03	2.950e-44	3.832e-44	1.022e-45	1.327e-45
0.03	2.108e+02	8.190e-14	1.523e-13	8.117e-16	1.509e-15
0.04	1.036e-02	1.831e-11	5.457e-11	8.098e-14	2.414e-13
0.05	3.701e+01	2.408e-05	1.131e-04	6.414e-08	3.012e-07
0.06	1.720e+02	1.949e-03	1.340e-02	3.871e-06	2.662e-05
0.08	1.748e+02	2.751e-02	2.978e-01	4.353e-05	4.712e-04
0.1	4.219e+02	2.249e-01	3.262e+00	3.440e-04	4.990e-03
0.15	2.261e+02	5.262e-01	9.649e+00	8.665e-04	1.589e-02
0.2	8.888e+02	4.750e+00	8.665e+01	8.383e-03	1.529e-01
0.3	7.422e-01	1.173e-02	1.832e-01	2.226e-05	3.475e-04
0.4	5.200e-01	1.738e-02	2.239e-01	3.387e-05	4.363e-04
0.5	6.182e-01	3.675e-02	4.005e-01	7.213e-05	7.861e-04
0.6	2.542e+00	2.408e-01	2.261e+00	4.701e-04	4.412e-03
0.8	1.403e+01	2.760e+00	1.997e+01	5.249e-03	3.799e-02
1.0	4.481e+01	1.547e+01	9.223e+01	2.851e-02	1.700e-01
1.5	9.553e-01	9.001e-01	3.768e+00	1.514e-03	6.340e-03
2.0	1.365e-01	2.545e-01	8.765e-01	3.936e-04	1.355e-03
TOTALS:	7.759e+03	2.522e+01	2.198e+02	4.591e-02	3.960e-01