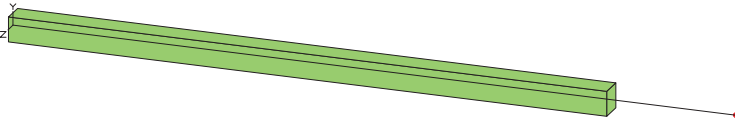


**Case Title: Hematite**  
**Description: Industrial Occ., Infinite Slab Unshielded Backfill - Am241**  
**Geometry: 16 - Infinite Slab**

**Source Dimensions**  
Thick 480.0 cm 15 ft 9.0 in

**Dose Points**

	<u>X</u>	<u>Y</u>	<u>Z</u>
# 1	580 cm 19 ft 0.3 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
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/cm<sup>3</sup></u>	<u>Bq/cm<sup>3</sup></u>
Ac-225	5.7977e-013	2.1451e-008
Am-241	9.5303e-001	3.5262e+004
At-217	5.7976e-013	2.1451e-008
Bi-213	5.7976e-013	2.1451e-008
Fr-221	5.7976e-013	2.1451e-008
Np-237	9.4869e-006	3.5102e-001
Pa-233	9.4540e-006	3.4980e-001
Pb-209	5.7973e-013	2.1450e-008
Po-213	5.6723e-013	2.0988e-008
Ra-225	5.8206e-013	2.1536e-008
Th-229	5.8547e-013	2.1662e-008
Tl-209	1.2523e-014	4.6334e-010
U-233	6.2013e-010	2.2945e-005

**Buildup**  
**The material reference is : Source**

**Results**

<u>Energy</u> <u>MeV</u>	<u>Activity</u> <u>photons/sec</u>	<u>Fluence Rate</u>		<u>Exposure Rate</u>	
		<u>No Buildup</u> <u>MeV/cm<sup>2</sup>/sec</u>	<u>With Buildup</u> <u>MeV/cm<sup>2</sup>/sec</u>	<u>No Buildup</u> <u>mR/hr</u>	<u>With Buildup</u> <u>mR/hr</u>
0.015	1.506e+04	5.172e+00	5.254e+00	4.436e-01	4.507e-01
0.03	8.837e+02	6.199e+00	7.262e+00	6.144e-02	7.198e-02
0.04	6.712e-09	1.310e-10	1.876e-10	5.792e-13	8.295e-13
0.05	4.909e-04	1.892e-05	3.164e-05	5.041e-08	8.429e-08
0.06	1.272e+04	7.879e+02	1.688e+03	1.565e+00	3.353e+00
0.08	5.581e-02	6.374e-03	1.651e-02	1.009e-05	2.613e-05
0.1	1.536e-01	2.591e-02	8.432e-02	3.964e-05	1.290e-04
0.15	6.010e-03	1.867e-03	7.604e-03	3.074e-06	1.252e-05
0.2	1.300e-03	6.056e-04	2.560e-03	1.069e-06	4.518e-06
0.3	1.751e-01	1.437e-01	5.862e-01	2.725e-04	1.112e-03
0.4	1.229e-02	1.513e-02	5.705e-02	2.949e-05	1.112e-04

Page : 2  
DOS File : Am-241 Unshielded.ms6  
Run Date: February 21, 2008  
Run Time: 2:38:25 PM  
Duration : 00:00:00

<u>Energy</u> <u>MeV</u>	<u>Activity</u> <u>photons/sec</u>	<u>Fluence Rate</u> <u>MeV/cm<sup>2</sup>/sec</u> <u>No Buildup</u>	<u>Fluence Rate</u> <u>MeV/cm<sup>2</sup>/sec</u> <u>With Buildup</u>	<u>Exposure Rate</u> <u>mR/hr</u> <u>No Buildup</u>	<u>Exposure Rate</u> <u>mR/hr</u> <u>With Buildup</u>
0.5	4.711e-10	7.989e-10	2.794e-09	1.568e-12	5.484e-12
0.6	4.031e-11	8.902e-11	2.897e-10	1.738e-13	5.655e-13
0.8	9.602e-11	3.237e-10	9.227e-10	6.157e-13	1.755e-12
1.0	1.028e-10	4.836e-10	1.252e-09	8.914e-13	2.308e-12
1.5	4.619e-10	4.030e-09	8.697e-09	6.780e-12	1.463e-11
TOTALS:	2.866e+04	7.994e+02	1.701e+03	2.070e+00	3.877e+00