

Summary : RESRAD Default

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Dose Conversion Factor (and Related) Parameter Summary

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	DCF's for external ground radiation, (mrem/yr)/(pCi/g)			
A-1	Ac-225 (Source: FGR 12)	6.371E-02	6.371E-02	DCF1 (1)
A-1	Ac-227 (Source: FGR 12)	4.951E-04	4.951E-04	DCF1 (2)
A-1	Ac-228 (Source: FGR 12)	5.978E+00	5.978E+00	DCF1 (3)
A-1	Ag-108 (Source: FGR 12)	1.143E-01	1.143E-01	DCF1 (4)
A-1	Ag-108m (Source: FGR 12)	9.640E+00	9.640E+00	DCF1 (5)
A-1	Am-241 (Source: FGR 12)	4.372E-02	4.372E-02	DCF1 (6)
A-1	Am-243 (Source: FGR 12)	1.420E-01	1.420E-01	DCF1 (7)
A-1	At-217 (Source: FGR 12)	1.773E-03	1.773E-03	DCF1 (8)
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 (9)
A-1	At-219 (Source: no data)	0.000E+00	-2.000E+00	DCF1 (10)
A-1	Ba-137m (Source: FGR 12)	3.606E+00	3.606E+00	DCF1 (11)
A-1	Bi-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 (12)
A-1	Bi-211 (Source: FGR 12)	2.559E-01	2.559E-01	DCF1 (13)
A-1	Bi-212 (Source: FGR 12)	1.171E+00	1.171E+00	DCF1 (14)
A-1	Bi-213 (Source: FGR 12)	7.660E-01	7.660E-01	DCF1 (15)
A-1	Bi-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 (16)
A-1	Bi-215 (Source: no data)	0.000E+00	-2.000E+00	DCF1 (17)
A-1	C-14 (Source: FGR 12)	1.345E-05	1.345E-05	DCF1 (18)
A-1	Cm-243 (Source: FGR 12)	5.829E-01	5.829E-01	DCF1 (19)
A-1	Cm-244 (Source: FGR 12)	1.259E-04	1.259E-04	DCF1 (20)
A-1	Co-60 (Source: FGR 12)	1.622E+01	1.622E+01	DCF1 (21)
A-1	Cs-134 (Source: FGR 12)	9.472E+00	9.472E+00	DCF1 (22)
A-1	Cs-137 (Source: FGR 12)	7.510E-04	7.510E-04	DCF1 (23)
A-1	Eu-152 (Source: FGR 12)	7.006E+00	7.006E+00	DCF1 (24)
A-1	Eu-154 (Source: FGR 12)	7.678E+00	7.678E+00	DCF1 (25)
A-1	Eu-155 (Source: FGR 12)	1.822E-01	1.822E-01	DCF1 (26)
A-1	Fe-55 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (27)
A-1	Fr-221 (Source: FGR 12)	1.536E-01	1.536E-01	DCF1 (28)
A-1	Fr-223 (Source: FGR 12)	1.980E-01	1.980E-01	DCF1 (29)
A-1	Gd-152 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (30)
A-1	H-3 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (31)
A-1	Hg-206 (Source: no data)	0.000E+00	-2.000E+00	DCF1 (32)
A-1	Nb-94 (Source: FGR 12)	9.677E+00	9.677E+00	DCF1 (33)
A-1	Nd-144 (Source: Zion ROC Screen BFM)	0.000E+00	-1.000E+00	DCF1 (34)
A-1	Ni-59 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (35)
A-1	Ni-63 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (36)
A-1	Np-237 (Source: FGR 12)	7.790E-02	7.790E-02	DCF1 (37)
A-1	Np-239 (Source: FGR 12)	7.529E-01	7.529E-01	DCF1 (38)
A-1	Pa-231 (Source: FGR 12)	1.906E-01	1.906E-01	DCF1 (39)
A-1	Pa-233 (Source: FGR 12)	1.020E+00	1.020E+00	DCF1 (40)
A-1	Pb-209 (Source: FGR 12)	7.734E-04	7.734E-04	DCF1 (41)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 (42)
A-1	Pb-211 (Source: FGR 12)	3.064E-01	3.064E-01	DCF1 (43)
A-1	Pb-212 (Source: FGR 12)	7.043E-01	7.043E-01	DCF1 (44)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 (45)
A-1	Pm-147 (Source: FGR 12)	5.007E-05	5.007E-05	DCF1 (46)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 (47)
A-1	Po-211 (Source: FGR 12)	4.764E-02	4.764E-02	DCF1 (48)
A-1	Po-212 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (49)

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	Po-213 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (50)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 (51)
A-1	Po-215 (Source: FGR 12)	1.016E-03	1.016E-03	DCF1 (52)
A-1	Po-216 (Source: FGR 12)	1.042E-04	1.042E-04	DCF1 (53)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 (54)
A-1	Pu-238 (Source: FGR 12)	1.513E-04	1.513E-04	DCF1 (55)
A-1	Pu-239 (Source: FGR 12)	2.952E-04	2.952E-04	DCF1 (56)
A-1	Pu-240 (Source: FGR 12)	1.467E-04	1.467E-04	DCF1 (57)
A-1	Pu-241 (Source: FGR 12)	5.904E-06	5.904E-06	DCF1 (58)
A-1	Ra-223 (Source: FGR 12)	6.034E-01	6.034E-01	DCF1 (59)
A-1	Ra-224 (Source: FGR 12)	5.119E-02	5.119E-02	DCF1 (60)
A-1	Ra-225 (Source: FGR 12)	1.102E-02	1.102E-02	DCF1 (61)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 (62)
A-1	Ra-228 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (63)
A-1	Rn-218 (Source: FGR 12)	4.540E-03	4.540E-03	DCF1 (64)
A-1	Rn-219 (Source: FGR 12)	3.083E-01	3.083E-01	DCF1 (65)
A-1	Rn-220 (Source: FGR 12)	2.298E-03	2.298E-03	DCF1 (66)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 (67)
A-1	Sb-125 (Source: FGR 12)	2.447E+00	2.447E+00	DCF1 (68)
A-1	Sm-147 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (69)
A-1	Sm-148 (Source: Zion ROC Screen BFM)	0.000E+00	-1.000E+00	DCF1 (70)
A-1	Sr-90 (Source: FGR 12)	7.043E-04	7.043E-04	DCF1 (71)
A-1	Tc-99 (Source: FGR 12)	1.255E-04	1.255E-04	DCF1 (72)
A-1	Te-125m (Source: FGR 12)	1.515E-02	1.515E-02	DCF1 (73)
A-1	Th-227 (Source: FGR 12)	5.212E-01	5.212E-01	DCF1 (74)
A-1	Th-228 (Source: FGR 12)	7.940E-03	7.940E-03	DCF1 (75)
A-1	Th-229 (Source: FGR 12)	3.213E-01	3.213E-01	DCF1 (76)
A-1	Th-230 (Source: FGR 12)	1.209E-03	1.209E-03	DCF1 (77)
A-1	Th-231 (Source: FGR 12)	3.643E-02	3.643E-02	DCF1 (78)
A-1	Th-232 (Source: FGR 12)	5.212E-04	5.212E-04	DCF1 (79)
A-1	Tl-206 (Source: FGR 12)	7.697E-03	7.697E-03	DCF1 (80)
A-1	Tl-207 (Source: FGR 12)	1.980E-02	1.980E-02	DCF1 (81)
A-1	Tl-208 (Source: FGR 12)	2.298E+01	2.298E+01	DCF1 (82)
A-1	Tl-209 (Source: FGR 12)	1.293E+01	1.293E+01	DCF1 (83)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 (84)
A-1	U-233 (Source: FGR 12)	1.397E-03	1.397E-03	DCF1 (85)
A-1	U-234 (Source: FGR 12)	4.017E-04	4.017E-04	DCF1 (86)
A-1	U-235 (Source: FGR 12)	7.211E-01	7.211E-01	DCF1 (87)
A-1	U-235m (Source: no data)	0.000E+00	-1.000E+00	DCF1 (88)
A-1	U-236 (Source: FGR 12)	2.148E-04	2.148E-04	DCF1 (89)
A-1	U-237 (Source: FGR 12)	5.306E-01	5.306E-01	DCF1 (90)
A-1	Y-90 (Source: FGR 12)	2.391E-02	2.391E-02	DCF1 (91)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Ac-227+D	6.724E+00	6.700E+00	DCF2 (1)
B-1	Ac-227+D1	6.724E+00	6.700E+00	DCF2 (2)
B-1	Ac-227+D2	6.708E+00	6.700E+00	DCF2 (3)
B-1	Ac-227+D3	6.708E+00	6.700E+00	DCF2 (4)
B-1	Ac-227+D4	6.700E+00	6.700E+00	DCF2 (5)
B-1	Ac-227+D5	6.700E+00	6.700E+00	DCF2 (6)

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
B-1	Ag-108m+D	2.830E-04	2.830E-04	DCF2(7)
B-1	Am-241	4.440E-01	4.440E-01	DCF2(8)
B-1	Am-243+D	4.400E-01	4.400E-01	DCF2(9)
B-1	C-14(p) (Class: ORGANIC)	2.090E-06	2.090E-06	DCF2(21)
B-1	C-14(g) (Class: CO2)	2.350E-08	2.350E-08	C14GInhDCF
B-1	Cm-243	3.070E-01	3.070E-01	DCF2(22)
B-1	Cm-244	2.480E-01	2.480E-01	DCF2(46)
B-1	Co-60	2.190E-04	2.190E-04	DCF2(49)
B-1	Cs-134	4.620E-05	4.620E-05	DCF2(50)
B-1	Cs-137+D	3.190E-05	3.190E-05	DCF2(51)
B-1	Eu-152	2.210E-04	2.210E-04	DCF2(52)
B-1	Eu-154	2.860E-04	2.860E-04	DCF2(54)
B-1	Eu-155	4.140E-05	4.140E-05	DCF2(55)
B-1	Fe-55	2.690E-06	2.690E-06	DCF2(56)
B-1	Gd-152	2.430E-01	2.430E-01	DCF2(57)
B-1	H-3	6.400E-08	6.400E-08	DCF2(58)
B-1	Nb-94	4.140E-04	4.140E-04	DCF2(59)
B-1	Nd-144	7.040E-02	-1.000E+00	DCF2(60)
B-1	Ni-59	2.700E-06	2.700E-06	DCF2(61)
B-1	Ni-63	6.290E-06	6.290E-06	DCF2(62)
B-1	Np-237+D	5.400E-01	5.400E-01	DCF2(63)
B-1	Pa-231	1.280E+00	1.280E+00	DCF2(64)
B-1	Pb-210+D	1.380E-02	1.360E-02	DCF2(70)
B-1	Pb-210+D1	1.380E-02	1.360E-02	DCF2(71)
B-1	Pb-210+D2	1.360E-02	1.360E-02	DCF2(72)
B-1	Pm-147	3.920E-05	3.920E-05	DCF2(73)
B-1	Po-210	9.400E-03	9.400E-03	DCF2(74)
B-1	Pu-238	3.920E-01	3.920E-01	DCF2(75)
B-1	Pu-239	4.290E-01	4.290E-01	DCF2(91)
B-1	Pu-239+D	4.290E-01	4.290E-01	DCF2(97)
B-1	Pu-240	4.290E-01	4.290E-01	DCF2(103)
B-1	Pu-241	8.250E-03	8.250E-03	DCF2(105)
B-1	Pu-241+D	8.254E-03	8.250E-03	DCF2(106)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2(107)
B-1	Ra-226+D1	8.594E-03	8.580E-03	DCF2(110)
B-1	Ra-226+D2	8.587E-03	8.580E-03	DCF2(113)
B-1	Ra-226+D3	8.587E-03	8.580E-03	DCF2(116)
B-1	Ra-226+D4	8.580E-03	8.580E-03	DCF2(119)
B-1	Ra-228+D	5.078E-03	4.770E-03	DCF2(122)
B-1	Sb-125	1.220E-05	1.220E-05	DCF2(123)
B-1	Sm-147	7.470E-02	7.470E-02	DCF2(125)
B-1	Sm-148	7.340E-02	-1.000E+00	DCF2(126)
B-1	Sr-90+D	1.308E-03	1.300E-03	DCF2(127)
B-1	Tc-99	8.320E-06	8.320E-06	DCF2(128)
B-1	Te-125m	7.290E-06	7.290E-06	DCF2(129)
B-1	Th-228+D	3.454E-01	3.420E-01	DCF2(130)
B-1	Th-229+D	2.169E+00	2.150E+00	DCF2(131)
B-1	Th-230	3.260E-01	3.260E-01	DCF2(132)
B-1	Th-232	1.640E+00	1.640E+00	DCF2(147)
B-1	U-233	1.350E-01	1.350E-01	DCF2(148)

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
B-1	U-234	1.320E-01	1.320E-01	DCF2(149)
B-1	U-235+D	1.230E-01	1.230E-01	DCF2(164)
B-1	U-236	1.250E-01	1.250E-01	DCF2(170)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Ac-227+D	1.480E-02	1.410E-02	DCF3(1)
D-1	Ac-227+D1	1.480E-02	1.410E-02	DCF3(2)
D-1	Ac-227+D2	1.477E-02	1.410E-02	DCF3(3)
D-1	Ac-227+D3	1.477E-02	1.410E-02	DCF3(4)
D-1	Ac-227+D4	1.411E-02	1.410E-02	DCF3(5)
D-1	Ac-227+D5	1.411E-02	1.410E-02	DCF3(6)
D-1	Ag-108m+D	7.620E-06	7.620E-06	DCF3(7)
D-1	Am-241	3.640E-03	3.640E-03	DCF3(8)
D-1	Am-243+D	3.623E-03	3.620E-03	DCF3(9)
D-1	C-14	2.090E-06	2.090E-06	DCF3(21)
D-1	Cm-243	2.510E-03	2.510E-03	DCF3(22)
D-1	Cm-244	2.020E-03	2.020E-03	DCF3(46)
D-1	Co-60	2.690E-05	2.690E-05	DCF3(49)
D-1	Cs-134	7.330E-05	7.330E-05	DCF3(50)
D-1	Cs-137+D	5.000E-05	5.000E-05	DCF3(51)
D-1	Eu-152	6.480E-06	6.480E-06	DCF3(52)
D-1	Eu-154	9.550E-06	9.550E-06	DCF3(54)
D-1	Eu-155	1.530E-06	1.530E-06	DCF3(55)
D-1	Fe-55	6.070E-07	6.070E-07	DCF3(56)
D-1	Gd-152	1.610E-04	1.610E-04	DCF3(57)
D-1	H-3	6.400E-08	6.400E-08	DCF3(58)
D-1	Nb-94	7.140E-06	7.140E-06	DCF3(59)
D-1	Nd-144	1.510E-04	-1.000E+00	DCF3(60)
D-1	Ni-59	2.100E-07	2.100E-07	DCF3(61)
D-1	Ni-63	5.770E-07	5.770E-07	DCF3(62)
D-1	Np-237+D	4.444E-03	4.440E-03	DCF3(63)
D-1	Pa-231	1.060E-02	1.060E-02	DCF3(64)
D-1	Pb-210+D	5.376E-03	5.370E-03	DCF3(70)
D-1	Pb-210+D1	5.376E-03	5.370E-03	DCF3(71)
D-1	Pb-210+D2	5.370E-03	5.370E-03	DCF3(72)
D-1	Pm-147	1.050E-06	1.050E-06	DCF3(73)
D-1	Po-210	1.900E-03	1.900E-03	DCF3(74)
D-1	Pu-238	3.200E-03	3.200E-03	DCF3(75)
D-1	Pu-239	3.540E-03	3.540E-03	DCF3(91)
D-1	Pu-239+D	3.540E-03	3.540E-03	DCF3(97)
D-1	Pu-240	3.540E-03	3.540E-03	DCF3(103)
D-1	Pu-241	6.840E-05	6.840E-05	DCF3(105)
D-1	Pu-241+D	7.157E-05	6.840E-05	DCF3(106)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3(107)
D-1	Ra-226+D1	1.321E-03	1.320E-03	DCF3(110)
D-1	Ra-226+D2	1.320E-03	1.320E-03	DCF3(113)
D-1	Ra-226+D3	1.320E-03	1.320E-03	DCF3(116)
D-1	Ra-226+D4	1.320E-03	1.320E-03	DCF3(119)
D-1	Ra-228+D	1.442E-03	1.440E-03	DCF3(122)
D-1	Sb-125	2.810E-06	2.810E-06	DCF3(123)

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-1	Sm-147	1.850E-04	1.850E-04	DCF3(125)
D-1	Sm-148	1.580E-04	-1.000E+00	DCF3(126)
D-1	Sr-90+D	1.528E-04	1.420E-04	DCF3(127)
D-1	Tc-99	1.460E-06	1.460E-06	DCF3(128)
D-1	Te-125m	3.670E-06	3.670E-06	DCF3(129)
D-1	Th-228+D	8.086E-04	3.960E-04	DCF3(130)
D-1	Th-229+D	4.027E-03	3.530E-03	DCF3(131)
D-1	Th-230	5.480E-04	5.480E-04	DCF3(132)
D-1	Th-232	2.730E-03	2.730E-03	DCF3(147)
D-1	U-233	2.890E-04	2.890E-04	DCF3(148)
D-1	U-234	2.830E-04	2.830E-04	DCF3(149)
D-1	U-235+D	2.673E-04	2.660E-04	DCF3(164)
D-1	U-236	2.690E-04	2.690E-04	DCF3(170)
D-34	Food transfer factors:			
D-34	Ac-227+D , plant/soil concentration ratio, dimensionless	1.000E-03	2.500E-03	RTF(1,1)
D-34	Ac-227+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-05	2.000E-05	RTF(1,2)
D-34	Ac-227+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-06	2.000E-05	RTF(1,3)
D-34				
D-34	Ac-227+D1 , plant/soil concentration ratio, dimensionless	1.000E-03	2.500E-03	RTF(2,1)
D-34	Ac-227+D1 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-05	2.000E-05	RTF(2,2)
D-34	Ac-227+D1 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-06	2.000E-05	RTF(2,3)
D-34				
D-34	Ac-227+D2 , plant/soil concentration ratio, dimensionless	1.000E-03	2.500E-03	RTF(3,1)
D-34	Ac-227+D2 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-05	2.000E-05	RTF(3,2)
D-34	Ac-227+D2 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-06	2.000E-05	RTF(3,3)
D-34				
D-34	Ac-227+D3 , plant/soil concentration ratio, dimensionless	1.000E-03	2.500E-03	RTF(4,1)
D-34	Ac-227+D3 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-05	2.000E-05	RTF(4,2)
D-34	Ac-227+D3 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-06	2.000E-05	RTF(4,3)
D-34				
D-34	Ac-227+D4 , plant/soil concentration ratio, dimensionless	1.000E-03	2.500E-03	RTF(5,1)
D-34	Ac-227+D4 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-05	2.000E-05	RTF(5,2)
D-34	Ac-227+D4 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-06	2.000E-05	RTF(5,3)
D-34				
D-34	Ac-227+D5 , plant/soil concentration ratio, dimensionless	1.000E-03	2.500E-03	RTF(6,1)
D-34	Ac-227+D5 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-05	2.000E-05	RTF(6,2)
D-34	Ac-227+D5 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-06	2.000E-05	RTF(6,3)
D-34				
D-34	Ag-108m+D , plant/soil concentration ratio, dimensionless	7.400E-03	1.500E-01	RTF(7,1)
D-34	Ag-108m+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.200E-03	3.000E-03	RTF(7,2)
D-34	Ag-108m+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	9.500E-03	2.500E-02	RTF(7,3)
D-34				
D-34	Am-241 , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(8,1)
D-34	Am-241 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.700E-05	5.000E-05	RTF(8,2)
D-34	Am-241 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.200E-06	2.000E-06	RTF(8,3)
D-34				
D-34	Am-243+D , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(9,1)
D-34	Am-243+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.700E-05	5.000E-05	RTF(9,2)
D-34	Am-243+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.200E-06	2.000E-06	RTF(9,3)

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-34	C-14 , plant/soil concentration ratio, dimensionless	1.280E+00	5.500E+00	RTF(21,1)
D-34	C-14 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	6.000E-02	3.100E-02	RTF(21,2)
D-34	C-14 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.200E-06	1.200E-02	RTF(21,3)
D-34				
D-34	Cm-243 , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(22,1)
D-34	Cm-243 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	4.000E-05	2.000E-05	RTF(22,2)
D-34	Cm-243 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.700E-06	2.000E-06	RTF(22,3)
D-34				
D-34	Cm-244 , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(46,1)
D-34	Cm-244 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	4.000E-05	2.000E-05	RTF(46,2)
D-34	Cm-244 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.700E-06	2.000E-06	RTF(46,3)
D-34				
D-34	Co-60 , plant/soil concentration ratio, dimensionless	1.500E-01	8.000E-02	RTF(49,1)
D-34	Co-60 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.800E-02	2.000E-02	RTF(49,2)
D-34	Co-60 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-03	2.000E-03	RTF(49,3)
D-34				
D-34	Cs-134 , plant/soil concentration ratio, dimensionless	7.800E-02	4.000E-02	RTF(50,1)
D-34	Cs-134 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	6.500E-02	3.000E-02	RTF(50,2)
D-34	Cs-134 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.400E-02	8.000E-03	RTF(50,3)
D-34				
D-34	Cs-137+D , plant/soil concentration ratio, dimensionless	7.800E-02	4.000E-02	RTF(51,1)
D-34	Cs-137+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	6.500E-02	3.000E-02	RTF(51,2)
D-34	Cs-137+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.400E-02	8.000E-03	RTF(51,3)
D-34				
D-34	Eu-152 , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(52,1)
D-34	Eu-152 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	4.000E-03	2.000E-03	RTF(52,2)
D-34	Eu-152 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-05	5.000E-05	RTF(52,3)
D-34				
D-34	Eu-154 , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(54,1)
D-34	Eu-154 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	4.000E-03	2.000E-03	RTF(54,2)
D-34	Eu-154 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-05	5.000E-05	RTF(54,3)
D-34				
D-34	Eu-155 , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(55,1)
D-34	Eu-155 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	4.000E-03	2.000E-03	RTF(55,2)
D-34	Eu-155 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-05	5.000E-05	RTF(55,3)
D-34				
D-34	Fe-55 , plant/soil concentration ratio, dimensionless	1.900E-03	1.000E-03	RTF(56,1)
D-34	Fe-55 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.900E-02	2.000E-02	RTF(56,2)
D-34	Fe-55 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.700E-04	3.000E-04	RTF(56,3)
D-34				
D-34	Gd-152 , plant/soil concentration ratio, dimensionless	2.000E-03	2.500E-03	RTF(57,1)
D-34	Gd-152 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-03	2.000E-03	RTF(57,2)
D-34	Gd-152 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-05	2.000E-05	RTF(57,3)
D-34				
D-34	H-3 , plant/soil concentration ratio, dimensionless	4.800E+00	4.800E+00	RTF(58,1)
D-34	H-3 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.200E-02	1.200E-02	RTF(58,2)
D-34	H-3 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-02	1.000E-02	RTF(58,3)
D-34				

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-34	Nb-94 , plant/soil concentration ratio, dimensionless	2.100E-02	1.000E-02	RTF(59,1)
D-34	Nb-94 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.800E-06	3.000E-07	RTF(59,2)
D-34	Nb-94 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.200E-06	2.000E-06	RTF(59,3)
D-34				
D-34	Nd-144 , plant/soil concentration ratio, dimensionless	2.000E-03	2.400E-03	RTF(60,1)
D-34	Nd-144 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-03	2.000E-03	RTF(60,2)
D-34	Nd-144 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-05	2.000E-05	RTF(60,3)
D-34				
D-34	Ni-59 , plant/soil concentration ratio, dimensionless	9.200E-02	5.000E-02	RTF(61,1)
D-34	Ni-59 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-03	5.000E-03	RTF(61,2)
D-34	Ni-59 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.200E-02	2.000E-02	RTF(61,3)
D-34				
D-34	Ni-63 , plant/soil concentration ratio, dimensionless	9.200E-02	5.000E-02	RTF(62,1)
D-34	Ni-63 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-03	5.000E-03	RTF(62,2)
D-34	Ni-63 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.200E-02	2.000E-02	RTF(62,3)
D-34				
D-34	Np-237+D , plant/soil concentration ratio, dimensionless	2.000E-02	2.000E-02	RTF(63,1)
D-34	Np-237+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(63,2)
D-34	Np-237+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-05	5.000E-06	RTF(63,3)
D-34				
D-34	Pa-231 , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF(64,1)
D-34	Pa-231 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-06	5.000E-03	RTF(64,2)
D-34	Pa-231 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-06	5.000E-06	RTF(64,3)
D-34				
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	4.000E-03	1.000E-02	RTF(70,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04	RTF(70,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04	RTF(70,3)
D-34				
D-34	Pb-210+D1 , plant/soil concentration ratio, dimensionless	4.000E-03	1.000E-02	RTF(71,1)
D-34	Pb-210+D1 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04	RTF(71,2)
D-34	Pb-210+D1 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04	RTF(71,3)
D-34				
D-34	Pb-210+D2 , plant/soil concentration ratio, dimensionless	4.000E-03	1.000E-02	RTF(72,1)
D-34	Pb-210+D2 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04	RTF(72,2)
D-34	Pb-210+D2 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.000E-04	3.000E-04	RTF(72,3)
D-34				
D-34	Pm-147 , plant/soil concentration ratio, dimensionless	4.200E-03	2.500E-03	RTF(73,1)
D-34	Pm-147 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	4.000E-03	2.000E-03	RTF(73,2)
D-34	Pm-147 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.100E-04	2.000E-05	RTF(73,3)
D-34				
D-34	Po-210 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(74,1)
D-34	Po-210 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-03	5.000E-03	RTF(74,2)
D-34	Po-210 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.000E-04	3.400E-04	RTF(74,3)
D-34				
D-34	Pu-238 , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(75,1)
D-34	Pu-238 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.100E-04	1.000E-04	RTF(75,2)
D-34	Pu-238 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.370E-06	1.000E-06	RTF(75,3)
D-34				

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Dose Conversion Factor (and Related) Parameter Summary (continued)
 Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-34	Pu-239 , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(91,1)
D-34	Pu-239 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.100E-04	1.000E-04	RTF(91,2)
D-34	Pu-239 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.370E-06	1.000E-06	RTF(91,3)
D-34				
D-34	Pu-239+D , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(97,1)
D-34	Pu-239+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.100E-04	1.000E-04	RTF(97,2)
D-34	Pu-239+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.370E-06	1.000E-06	RTF(97,3)
D-34				
D-34	Pu-240 , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(103,1)
D-34	Pu-240 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.100E-04	1.000E-04	RTF(103,2)
D-34	Pu-240 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.370E-06	1.000E-06	RTF(103,3)
D-34				
D-34	Pu-241 , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(105,1)
D-34	Pu-241 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.100E-04	1.000E-04	RTF(105,2)
D-34	Pu-241 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.370E-06	1.000E-06	RTF(105,3)
D-34				
D-34	Pu-241+D , plant/soil concentration ratio, dimensionless	1.800E-03	1.000E-03	RTF(106,1)
D-34	Pu-241+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.100E-04	1.000E-04	RTF(106,2)
D-34	Pu-241+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.370E-06	1.000E-06	RTF(106,3)
D-34				
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(107,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(107,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(107,3)
D-34				
D-34	Ra-226+D1 , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(110,1)
D-34	Ra-226+D1 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(110,2)
D-34	Ra-226+D1 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(110,3)
D-34				
D-34	Ra-226+D2 , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(113,1)
D-34	Ra-226+D2 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(113,2)
D-34	Ra-226+D2 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(113,3)
D-34				
D-34	Ra-226+D3 , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(116,1)
D-34	Ra-226+D3 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(116,2)
D-34	Ra-226+D3 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(116,3)
D-34				
D-34	Ra-226+D4 , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(119,1)
D-34	Ra-226+D4 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(119,2)
D-34	Ra-226+D4 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(119,3)
D-34				
D-34	Ra-228+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(122,1)
D-34	Ra-228+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(122,2)
D-34	Ra-228+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(122,3)
D-34				
D-34	Sb-125 , plant/soil concentration ratio, dimensionless	1.900E-02	1.000E-02	RTF(123,1)
D-34	Sb-125 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.850E-03	1.000E-03	RTF(123,2)
D-34	Sb-125 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.100E-04	1.000E-04	RTF(123,3)
D-34				

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-34	Sm-147 , plant/soil concentration ratio, dimensionless	2.000E-03	2.500E-03	RTF(125,1)
D-34	Sm-147 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-03	2.000E-03	RTF(125,2)
D-34	Sm-147 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-05	2.000E-05	RTF(125,3)
D-34				
D-34	Sm-148 , plant/soil concentration ratio, dimensionless	2.000E-03	2.500E-03	RTF(126,1)
D-34	Sm-148 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	2.000E-03	2.000E-03	RTF(126,2)
D-34	Sm-148 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-05	2.000E-05	RTF(126,3)
D-34				
D-34	Sr-90+D , plant/soil concentration ratio, dimensionless	5.900E-01	3.000E-01	RTF(127,1)
D-34	Sr-90+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-03	8.000E-03	RTF(127,2)
D-34	Sr-90+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.700E-03	2.000E-03	RTF(127,3)
D-34				
D-34	Tc-99 , plant/soil concentration ratio, dimensionless	9.110E+00	5.000E+00	RTF(128,1)
D-34	Tc-99 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.600E-04	1.000E-04	RTF(128,2)
D-34	Tc-99 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.600E-03	1.000E-03	RTF(128,3)
D-34				
D-34	Te-125m , plant/soil concentration ratio, dimensionless	1.000E-01	6.000E-01	RTF(129,1)
D-34	Te-125m , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	7.000E-03	7.000E-03	RTF(129,2)
D-34	Te-125m , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-04	5.000E-04	RTF(129,3)
D-34				
D-34	Th-228+D , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(130,1)
D-34	Th-228+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(130,2)
D-34	Th-228+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-06	5.000E-06	RTF(130,3)
D-34				
D-34	Th-229+D , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(131,1)
D-34	Th-229+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(131,2)
D-34	Th-229+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-06	5.000E-06	RTF(131,3)
D-34				
D-34	Th-230 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(132,1)
D-34	Th-230 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(132,2)
D-34	Th-230 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-06	5.000E-06	RTF(132,3)
D-34				
D-34	Th-232 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(147,1)
D-34	Th-232 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(147,2)
D-34	Th-232 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-06	5.000E-06	RTF(147,3)
D-34				
D-34	U-233 , plant/soil concentration ratio, dimensionless	2.000E-03	2.500E-03	RTF(148,1)
D-34	U-233 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	3.400E-04	RTF(148,2)
D-34	U-233 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.000E-04	6.000E-04	RTF(148,3)
D-34				
D-34	U-234 , plant/soil concentration ratio, dimensionless	2.000E-03	2.500E-03	RTF(149,1)
D-34	U-234 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	3.400E-04	RTF(149,2)
D-34	U-234 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.000E-04	6.000E-04	RTF(149,3)
D-34				
D-34	U-235+D , plant/soil concentration ratio, dimensionless	2.000E-03	2.500E-03	RTF(164,1)
D-34	U-235+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	3.400E-04	RTF(164,2)
D-34	U-235+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.000E-04	6.000E-04	RTF(164,3)
D-34				

Summary : RESRAD Default

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-34	U-236 , plant/soil concentration ratio, dimensionless	2.000E-03	2.500E-03	RTF(170,1)
D-34	U-236 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	3.400E-04	RTF(170,2)
D-34	U-236 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.000E-04	6.000E-04	RTF(170,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Ac-227+D , fish	1.500E+01	1.500E+01	BIOFAC(1,1)
D-5	Ac-227+D , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(1,2)
D-5				
D-5	Ac-227+D1 , fish	1.500E+01	1.500E+01	BIOFAC(2,1)
D-5	Ac-227+D1 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(2,2)
D-5				
D-5	Ac-227+D2 , fish	1.500E+01	1.500E+01	BIOFAC(3,1)
D-5	Ac-227+D2 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(3,2)
D-5				
D-5	Ac-227+D3 , fish	1.500E+01	1.500E+01	BIOFAC(4,1)
D-5	Ac-227+D3 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(4,2)
D-5				
D-5	Ac-227+D4 , fish	1.500E+01	1.500E+01	BIOFAC(5,1)
D-5	Ac-227+D4 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(5,2)
D-5				
D-5	Ac-227+D5 , fish	1.500E+01	1.500E+01	BIOFAC(6,1)
D-5	Ac-227+D5 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(6,2)
D-5				
D-5	Ag-108m+D , fish	5.000E+00	5.000E+00	BIOFAC(7,1)
D-5	Ag-108m+D , crustacea and mollusks	7.700E+02	7.700E+02	BIOFAC(7,2)
D-5				
D-5	Am-241 , fish	3.000E+01	3.000E+01	BIOFAC(8,1)
D-5	Am-241 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(8,2)
D-5				
D-5	Am-243+D , fish	3.000E+01	3.000E+01	BIOFAC(9,1)
D-5	Am-243+D , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(9,2)
D-5				
D-5	C-14 , fish	5.000E+04	5.000E+04	BIOFAC(21,1)
D-5	C-14 , crustacea and mollusks	9.100E+03	9.100E+03	BIOFAC(21,2)
D-5				
D-5	Cm-243 , fish	3.000E+01	3.000E+01	BIOFAC(22,1)
D-5	Cm-243 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(22,2)
D-5				
D-5	Cm-244 , fish	3.000E+01	3.000E+01	BIOFAC(46,1)
D-5	Cm-244 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(46,2)
D-5				
D-5	Co-60 , fish	3.000E+02	3.000E+02	BIOFAC(49,1)
D-5	Co-60 , crustacea and mollusks	2.000E+02	2.000E+02	BIOFAC(49,2)
D-5				
D-5	Cs-134 , fish	2.000E+03	2.000E+03	BIOFAC(50,1)
D-5	Cs-134 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(50,2)
D-5				
D-5	Cs-137+D , fish	2.000E+03	2.000E+03	BIOFAC(51,1)
D-5	Cs-137+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(51,2)
D-5				

Summary : RESRAD Default

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-5	Eu-152 , fish	5.000E+01	5.000E+01	BIOFAC (52,1)
D-5	Eu-152 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC (52,2)
D-5				
D-5	Eu-154 , fish	5.000E+01	5.000E+01	BIOFAC (54,1)
D-5	Eu-154 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC (54,2)
D-5				
D-5	Eu-155 , fish	5.000E+01	5.000E+01	BIOFAC (55,1)
D-5	Eu-155 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC (55,2)
D-5				
D-5	Fe-55 , fish	2.000E+02	2.000E+02	BIOFAC (56,1)
D-5	Fe-55 , crustacea and mollusks	3.200E+03	3.200E+03	BIOFAC (56,2)
D-5				
D-5	Gd-152 , fish	2.500E+01	2.500E+01	BIOFAC (57,1)
D-5	Gd-152 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC (57,2)
D-5				
D-5	H-3 , fish	1.000E+00	1.000E+00	BIOFAC (58,1)
D-5	H-3 , crustacea and mollusks	1.000E+00	1.000E+00	BIOFAC (58,2)
D-5				
D-5	Nb-94 , fish	3.000E+02	3.000E+02	BIOFAC (59,1)
D-5	Nb-94 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC (59,2)
D-5				
D-5	Nd-144 , fish	1.000E+02	1.000E+02	BIOFAC (60,1)
D-5	Nd-144 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC (60,2)
D-5				
D-5	Ni-59 , fish	1.000E+02	1.000E+02	BIOFAC (61,1)
D-5	Ni-59 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC (61,2)
D-5				
D-5	Ni-63 , fish	1.000E+02	1.000E+02	BIOFAC (62,1)
D-5	Ni-63 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC (62,2)
D-5				
D-5	Np-237+D , fish	3.000E+01	3.000E+01	BIOFAC (63,1)
D-5	Np-237+D , crustacea and mollusks	4.000E+02	4.000E+02	BIOFAC (63,2)
D-5				
D-5	Pa-231 , fish	1.000E+01	1.000E+01	BIOFAC (64,1)
D-5	Pa-231 , crustacea and mollusks	1.100E+02	1.100E+02	BIOFAC (64,2)
D-5				
D-5	Pb-210+D , fish	3.000E+02	3.000E+02	BIOFAC (70,1)
D-5	Pb-210+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC (70,2)
D-5				
D-5	Pb-210+D1 , fish	3.000E+02	3.000E+02	BIOFAC (71,1)
D-5	Pb-210+D1 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC (71,2)
D-5				
D-5	Pb-210+D2 , fish	3.000E+02	3.000E+02	BIOFAC (72,1)
D-5	Pb-210+D2 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC (72,2)
D-5				
D-5	Pm-147 , fish	3.000E+01	3.000E+01	BIOFAC (73,1)
D-5	Pm-147 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC (73,2)
D-5				
D-5	Po-210 , fish	1.000E+02	1.000E+02	BIOFAC (74,1)
D-5	Po-210 , crustacea and mollusks	2.000E+04	2.000E+04	BIOFAC (74,2)

Summary : RESRAD Default

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-5	Pu-238 , fish	3.000E+01	3.000E+01	BIOFAC(75,1)
D-5	Pu-238 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(75,2)
D-5				
D-5	Pu-239 , fish	3.000E+01	3.000E+01	BIOFAC(91,1)
D-5	Pu-239 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(91,2)
D-5				
D-5	Pu-239+D , fish	3.000E+01	3.000E+01	BIOFAC(97,1)
D-5	Pu-239+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(97,2)
D-5				
D-5	Pu-240 , fish	3.000E+01	3.000E+01	BIOFAC(103,1)
D-5	Pu-240 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(103,2)
D-5				
D-5	Pu-241 , fish	3.000E+01	3.000E+01	BIOFAC(105,1)
D-5	Pu-241 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(105,2)
D-5				
D-5	Pu-241+D , fish	3.000E+01	3.000E+01	BIOFAC(106,1)
D-5	Pu-241+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(106,2)
D-5				
D-5	Ra-226+D , fish	5.000E+01	5.000E+01	BIOFAC(107,1)
D-5	Ra-226+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(107,2)
D-5				
D-5	Ra-226+D1 , fish	5.000E+01	5.000E+01	BIOFAC(110,1)
D-5	Ra-226+D1 , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(110,2)
D-5				
D-5	Ra-226+D2 , fish	5.000E+01	5.000E+01	BIOFAC(113,1)
D-5	Ra-226+D2 , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(113,2)
D-5				
D-5	Ra-226+D3 , fish	5.000E+01	5.000E+01	BIOFAC(116,1)
D-5	Ra-226+D3 , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(116,2)
D-5				
D-5	Ra-226+D4 , fish	5.000E+01	5.000E+01	BIOFAC(119,1)
D-5	Ra-226+D4 , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(119,2)
D-5				
D-5	Ra-228+D , fish	5.000E+01	5.000E+01	BIOFAC(122,1)
D-5	Ra-228+D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(122,2)
D-5				
D-5	Sb-125 , fish	1.000E+02	1.000E+02	BIOFAC(123,1)
D-5	Sb-125 , crustacea and mollusks	1.000E+01	1.000E+01	BIOFAC(123,2)
D-5				
D-5	Sm-147 , fish	2.500E+01	2.500E+01	BIOFAC(125,1)
D-5	Sm-147 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(125,2)
D-5				
D-5	Sm-148 , fish	2.500E+01	2.500E+01	BIOFAC(126,1)
D-5	Sm-148 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(126,2)
D-5				
D-5	Sr-90+D , fish	6.000E+01	6.000E+01	BIOFAC(127,1)
D-5	Sr-90+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(127,2)
D-5				
D-5	Tc-99 , fish	2.000E+01	2.000E+01	BIOFAC(128,1)
D-5	Tc-99 , crustacea and mollusks	5.000E+00	5.000E+00	BIOFAC(128,2)

Summary : RESRAD Default

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Zion ROC Screen BFM Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-5	Te-125m , fish	4.000E+02	4.000E+02	BIOFAC(129,1)
D-5	Te-125m , crustacea and mollusks	7.500E+01	7.500E+01	BIOFAC(129,2)
D-5				
D-5	Th-228+D , fish	1.000E+02	1.000E+02	BIOFAC(130,1)
D-5	Th-228+D , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(130,2)
D-5				
D-5	Th-229+D , fish	1.000E+02	1.000E+02	BIOFAC(131,1)
D-5	Th-229+D , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(131,2)
D-5				
D-5	Th-230 , fish	1.000E+02	1.000E+02	BIOFAC(132,1)
D-5	Th-230 , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(132,2)
D-5				
D-5	Th-232 , fish	1.000E+02	1.000E+02	BIOFAC(147,1)
D-5	Th-232 , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(147,2)
D-5				
D-5	U-233 , fish	1.000E+01	1.000E+01	BIOFAC(148,1)
D-5	U-233 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(148,2)
D-5				
D-5	U-234 , fish	1.000E+01	1.000E+01	BIOFAC(149,1)
D-5	U-234 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(149,2)
D-5				
D-5	U-235+D , fish	1.000E+01	1.000E+01	BIOFAC(164,1)
D-5	U-235+D , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(164,2)
D-5				
D-5	U-236 , fish	1.000E+01	1.000E+01	BIOFAC(170,1)
D-5	U-236 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(170,2)

#For DCF1(xxx) only, factors are for infinite depth & area. See ETEG table in Ground Pathway of Detailed Report.

*Base Case means Default.Lib w/o Associate Nuclide contributions.

Summary : RESRAD Default

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Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	6.450E+04	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.500E-01	2.000E+00	---	THICK0
R011	Fraction of contamination that is submerged	0.000E+00	0.000E+00	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	2.870E+02	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T(2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T(3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T(4)
R011	Times for calculations (yr)	3.000E+01	3.000E+01	---	T(5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T(6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T(7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T(8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(10)
R012	Initial principal radionuclide (pCi/g): Ag-108m	1.000E+00	0.000E+00	---	S1(7)
R012	Initial principal radionuclide (pCi/g): Am-241	1.000E+00	0.000E+00	---	S1(8)
R012	Initial principal radionuclide (pCi/g): Am-243	1.000E+00	0.000E+00	---	S1(9)
R012	Initial principal radionuclide (pCi/g): C-14	1.000E+00	0.000E+00	---	S1(21)
R012	Initial principal radionuclide (pCi/g): Cm-243	1.000E+00	0.000E+00	---	S1(22)
R012	Initial principal radionuclide (pCi/g): Cm-244	1.000E+00	0.000E+00	---	S1(46)
R012	Initial principal radionuclide (pCi/g): Co-60	1.000E+00	0.000E+00	---	S1(49)
R012	Initial principal radionuclide (pCi/g): Cs-134	1.000E+00	0.000E+00	---	S1(50)
R012	Initial principal radionuclide (pCi/g): Cs-137	1.000E+00	0.000E+00	---	S1(51)
R012	Initial principal radionuclide (pCi/g): Eu-152	1.000E+00	0.000E+00	---	S1(52)
R012	Initial principal radionuclide (pCi/g): Eu-154	1.000E+00	0.000E+00	---	S1(54)
R012	Initial principal radionuclide (pCi/g): Eu-155	1.000E+00	0.000E+00	---	S1(55)
R012	Initial principal radionuclide (pCi/g): Fe-55	1.000E+00	0.000E+00	---	S1(56)
R012	Initial principal radionuclide (pCi/g): H-3	1.000E+00	0.000E+00	---	S1(58)
R012	Initial principal radionuclide (pCi/g): Nb-94	1.000E+00	0.000E+00	---	S1(59)
R012	Initial principal radionuclide (pCi/g): Ni-59	1.000E+00	0.000E+00	---	S1(61)
R012	Initial principal radionuclide (pCi/g): Ni-63	1.000E+00	0.000E+00	---	S1(62)
R012	Initial principal radionuclide (pCi/g): Np-237	1.000E+00	0.000E+00	---	S1(63)
R012	Initial principal radionuclide (pCi/g): Pm-147	1.000E+00	0.000E+00	---	S1(73)
R012	Initial principal radionuclide (pCi/g): Pu-238	1.000E+00	0.000E+00	---	S1(75)
R012	Initial principal radionuclide (pCi/g): Pu-239	1.000E+00	0.000E+00	---	S1(91)
R012	Initial principal radionuclide (pCi/g): Pu-240	1.000E+00	0.000E+00	---	S1(103)
R012	Initial principal radionuclide (pCi/g): Pu-241	1.000E+00	0.000E+00	---	S1(105)
R012	Initial principal radionuclide (pCi/g): Sb-125	1.000E+00	0.000E+00	---	S1(123)
R012	Initial principal radionuclide (pCi/g): Sr-90	1.000E+00	0.000E+00	---	S1(127)
R012	Initial principal radionuclide (pCi/g): Tc-99	1.000E+00	0.000E+00	---	S1(128)
R012	Concentration in groundwater (pCi/L): Ag-108m	not used	0.000E+00	---	W1(7)
R012	Concentration in groundwater (pCi/L): Am-241	not used	0.000E+00	---	W1(8)
R012	Concentration in groundwater (pCi/L): Am-243	not used	0.000E+00	---	W1(9)
R012	Concentration in groundwater (pCi/L): C-14	not used	0.000E+00	---	W1(21)
R012	Concentration in groundwater (pCi/L): Cm-243	not used	0.000E+00	---	W1(22)
R012	Concentration in groundwater (pCi/L): Cm-244	not used	0.000E+00	---	W1(46)
R012	Concentration in groundwater (pCi/L): Co-60	not used	0.000E+00	---	W1(49)
R012	Concentration in groundwater (pCi/L): Cs-134	not used	0.000E+00	---	W1(50)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R012	Concentration in groundwater (pCi/L): Cs-137	not used	0.000E+00	---	W1 (51)
R012	Concentration in groundwater (pCi/L): Eu-152	not used	0.000E+00	---	W1 (52)
R012	Concentration in groundwater (pCi/L): Eu-154	not used	0.000E+00	---	W1 (54)
R012	Concentration in groundwater (pCi/L): Eu-155	not used	0.000E+00	---	W1 (55)
R012	Concentration in groundwater (pCi/L): Fe-55	not used	0.000E+00	---	W1 (56)
R012	Concentration in groundwater (pCi/L): H-3	not used	0.000E+00	---	W1 (58)
R012	Concentration in groundwater (pCi/L): Nb-94	not used	0.000E+00	---	W1 (59)
R012	Concentration in groundwater (pCi/L): Ni-59	not used	0.000E+00	---	W1 (61)
R012	Concentration in groundwater (pCi/L): Ni-63	not used	0.000E+00	---	W1 (62)
R012	Concentration in groundwater (pCi/L): Np-237	not used	0.000E+00	---	W1 (63)
R012	Concentration in groundwater (pCi/L): Pm-147	not used	0.000E+00	---	W1 (73)
R012	Concentration in groundwater (pCi/L): Pu-238	not used	0.000E+00	---	W1 (75)
R012	Concentration in groundwater (pCi/L): Pu-239	not used	0.000E+00	---	W1 (91)
R012	Concentration in groundwater (pCi/L): Pu-240	not used	0.000E+00	---	W1 (**)
R012	Concentration in groundwater (pCi/L): Pu-241	not used	0.000E+00	---	W1 (**)
R012	Concentration in groundwater (pCi/L): Sb-125	not used	0.000E+00	---	W1 (**)
R012	Concentration in groundwater (pCi/L): Sr-90	not used	0.000E+00	---	W1 (**)
R012	Concentration in groundwater (pCi/L): Tc-99	not used	0.000E+00	---	W1 (**)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVER0
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.800E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.500E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	3.500E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	6.600E-02	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	2.880E+03	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	9.700E-01	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	4.200E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	7.200E+00	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	6.250E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	8.300E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	1.900E-01	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	1.000E+06	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	1.000E-03	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	1.800E+00	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	3.500E-01	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	2.900E-01	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	6.600E-02	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	2.880E+03	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	3.900E-03	2.000E-02	---	HGWT
R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	0.000E+00	1.000E-03	---	VWT
R014	Well pump intake depth (m below water table)	3.300E+00	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	ND	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	2.250E+03	2.500E+02	---	UW

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R015	Number of unsaturated zone strata	1	1	---	NS
R015	Unsat. zone 1, thickness (m)	3.450E+00	4.000E+00	---	H(1)
R015	Unsat. zone 1, soil density (g/cm**3)	1.800E+00	1.500E+00	---	DENSUZ(1)
R015	Unsat. zone 1, total porosity	3.500E-01	4.000E-01	---	TPUZ(1)
R015	Unsat. zone 1, effective porosity	2.900E-01	2.000E-01	---	EPUZ(1)
R015	Unsat. zone 1, field capacity	6.600E-02	2.000E-01	---	FCUZ(1)
R015	Unsat. zone 1, soil-specific b parameter	9.700E-01	5.300E+00	---	BUZ(1)
R015	Unsat. zone 1, hydraulic conductivity (m/yr)	2.880E+03	1.000E+01	---	HCUZ(1)
R016	Distribution coefficients for Ag-108m				
R016	Contaminated zone (cm**3/g)	5.260E+01	0.000E+00	---	DCNUCC (7)
R016	Unsat. zone 1 (cm**3/g)	5.260E+01	0.000E+00	---	DCNUCU (7,1)
R016	Saturated zone (cm**3/g)	5.260E+01	0.000E+00	---	DCNUCS (7)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.253E-02	ALEACH (7)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (7)
R016	Distribution coefficients for Am-241				
R016	Contaminated zone (cm**3/g)	1.770E+02	2.000E+01	---	DCNUCC (8)
R016	Unsat. zone 1 (cm**3/g)	1.770E+02	2.000E+01	---	DCNUCU (8,1)
R016	Saturated zone (cm**3/g)	1.770E+02	2.000E+01	---	DCNUCS (8)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	6.700E-03	ALEACH (8)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (8)
R016	Distribution coefficients for Am-243				
R016	Contaminated zone (cm**3/g)	1.770E+02	2.000E+01	---	DCNUCC (9)
R016	Unsat. zone 1 (cm**3/g)	1.770E+02	2.000E+01	---	DCNUCU (9,1)
R016	Saturated zone (cm**3/g)	1.770E+02	2.000E+01	---	DCNUCS (9)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	6.700E-03	ALEACH (9)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (9)
R016	Distribution coefficients for C-14				
R016	Contaminated zone (cm**3/g)	1.240E+00	0.000E+00	---	DCNUCC(21)
R016	Unsat. zone 1 (cm**3/g)	1.240E+00	0.000E+00	---	DCNUCU(21,1)
R016	Saturated zone (cm**3/g)	1.240E+00	0.000E+00	---	DCNUCS(21)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.291E-01	ALEACH(21)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(21)
R016	Distribution coefficients for Cm-243				
R016	Contaminated zone (cm**3/g)	1.990E+03	-1.000E+00	---	DCNUCC(22)
R016	Unsat. zone 1 (cm**3/g)	1.990E+03	-1.000E+00	---	DCNUCU(22,1)
R016	Saturated zone (cm**3/g)	1.990E+03	-1.000E+00	---	DCNUCS(22)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	5.960E-04	ALEACH(22)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(22)
R016	Distribution coefficients for Cm-244				
R016	Contaminated zone (cm**3/g)	1.990E+03	-1.000E+00	---	DCNUCC(46)
R016	Unsat. zone 1 (cm**3/g)	1.990E+03	-1.000E+00	---	DCNUCU(46,1)
R016	Saturated zone (cm**3/g)	1.990E+03	-1.000E+00	---	DCNUCS(46)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	5.960E-04	ALEACH(46)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(46)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R016	Distribution coefficients for Co-60				
R016	Contaminated zone (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCC (49)
R016	Unsaturated zone 1 (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCU (49,1)
R016	Saturated zone (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCS (49)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.022E-03	ALEACH (49)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (49)
R016	Distribution coefficients for Cs-134				
R016	Contaminated zone (cm**3/g)	6.150E+02	4.600E+03	---	DCNUCC (50)
R016	Unsaturated zone 1 (cm**3/g)	6.150E+02	4.600E+03	---	DCNUCU (50,1)
R016	Saturated zone (cm**3/g)	6.150E+02	4.600E+03	---	DCNUCS (50)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.929E-03	ALEACH (50)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (50)
R016	Distribution coefficients for Cs-137				
R016	Contaminated zone (cm**3/g)	6.150E+02	4.600E+03	---	DCNUCC (51)
R016	Unsaturated zone 1 (cm**3/g)	6.150E+02	4.600E+03	---	DCNUCU (51,1)
R016	Saturated zone (cm**3/g)	6.150E+02	4.600E+03	---	DCNUCS (51)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.929E-03	ALEACH (51)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (51)
R016	Distribution coefficients for Eu-152				
R016	Contaminated zone (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCC (52)
R016	Unsaturated zone 1 (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCU (52,1)
R016	Saturated zone (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCS (52)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.248E-02	ALEACH (52)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (52)
R016	Distribution coefficients for Eu-154				
R016	Contaminated zone (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCC (54)
R016	Unsaturated zone 1 (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCU (54,1)
R016	Saturated zone (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCS (54)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.248E-02	ALEACH (54)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (54)
R016	Distribution coefficients for Eu-155				
R016	Contaminated zone (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCC (55)
R016	Unsaturated zone 1 (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCU (55,1)
R016	Saturated zone (cm**3/g)	9.500E+01	-1.000E+00	---	DCNUCS (55)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.248E-02	ALEACH (55)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (55)
R016	Distribution coefficients for Fe-55				
R016	Contaminated zone (cm**3/g)	2.857E+03	1.000E+03	---	DCNUCC (56)
R016	Unsaturated zone 1 (cm**3/g)	2.857E+03	1.000E+03	---	DCNUCU (56,1)
R016	Saturated zone (cm**3/g)	2.857E+03	1.000E+03	---	DCNUCS (56)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	4.152E-04	ALEACH (56)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (56)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R016	Distribution coefficients for H-3				
R016	Contaminated zone (cm**3/g)	4.000E-02	0.000E+00	---	DCNUCC (58)
R016	Unsaturated zone 1 (cm**3/g)	4.000E-02	0.000E+00	---	DCNUCU (58,1)
R016	Saturated zone (cm**3/g)	4.000E-02	0.000E+00	---	DCNUCS (58)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.547E+01	ALEACH (58)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (58)
R016	Distribution coefficients for Nb-94				
R016	Contaminated zone (cm**3/g)	4.460E+01	0.000E+00	---	DCNUCC (59)
R016	Unsaturated zone 1 (cm**3/g)	4.460E+01	0.000E+00	---	DCNUCU (59,1)
R016	Saturated zone (cm**3/g)	4.460E+01	0.000E+00	---	DCNUCS (59)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.657E-02	ALEACH (59)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (59)
R016	Distribution coefficients for Ni-59				
R016	Contaminated zone (cm**3/g)	6.200E+01	1.000E+03	---	DCNUCC (61)
R016	Unsaturated zone 1 (cm**3/g)	6.200E+01	1.000E+03	---	DCNUCU (61,1)
R016	Saturated zone (cm**3/g)	6.200E+01	1.000E+03	---	DCNUCS (61)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.912E-02	ALEACH (61)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (61)
R016	Distribution coefficients for Ni-63				
R016	Contaminated zone (cm**3/g)	6.200E+01	1.000E+03	---	DCNUCC (62)
R016	Unsaturated zone 1 (cm**3/g)	6.200E+01	1.000E+03	---	DCNUCU (62,1)
R016	Saturated zone (cm**3/g)	6.200E+01	1.000E+03	---	DCNUCS (62)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.912E-02	ALEACH (62)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (62)
R016	Distribution coefficients for Np-237				
R016	Contaminated zone (cm**3/g)	3.750E+00	-1.000E+00	---	DCNUCC (63)
R016	Unsaturated zone 1 (cm**3/g)	3.750E+00	-1.000E+00	---	DCNUCU (63,1)
R016	Saturated zone (cm**3/g)	3.750E+00	-1.000E+00	---	DCNUCS (63)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.132E-01	ALEACH (63)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (63)
R016	Distribution coefficients for Pm-147				
R016	Contaminated zone (cm**3/g)	9.480E+01	-1.000E+00	---	DCNUCC (73)
R016	Unsaturated zone 1 (cm**3/g)	9.480E+01	-1.000E+00	---	DCNUCU (73,1)
R016	Saturated zone (cm**3/g)	9.480E+01	-1.000E+00	---	DCNUCS (73)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.251E-02	ALEACH (73)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (73)
R016	Distribution coefficients for Pu-238				
R016	Contaminated zone (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCC (75)
R016	Unsaturated zone 1 (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCU (75,1)
R016	Saturated zone (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCS (75)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	4.425E-03	ALEACH (75)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (75)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
	Distribution coefficients for Pu-239				
R016	Contaminated zone (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCC (91)
R016	Unsaturated zone 1 (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCU (91,1)
R016	Saturated zone (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCS (91)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	4.425E-03	ALEACH (91)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (91)
	Distribution coefficients for Pu-240				
R016	Contaminated zone (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCC (**)
R016	Unsaturated zone 1 (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCU (**,1)
R016	Saturated zone (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCS (**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	4.425E-03	ALEACH (**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (**)
	Distribution coefficients for Pu-241				
R016	Contaminated zone (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCC (**)
R016	Unsaturated zone 1 (cm**3/g)	2.600E+01	2.000E+03	---	DCNUCU (**,1)
R016	Saturated zone (cm**3/g)	2.680E+02	2.000E+03	---	DCNUCS (**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	4.425E-03	ALEACH (**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (**)
	Distribution coefficients for Sb-125				
R016	Contaminated zone (cm**3/g)	1.700E+01	0.000E+00	---	DCNUCC (**)
R016	Unsaturated zone 1 (cm**3/g)	1.700E+01	0.000E+00	---	DCNUCU (**,1)
R016	Saturated zone (cm**3/g)	1.700E+01	0.000E+00	---	DCNUCS (**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	6.962E-02	ALEACH (**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (**)
	Distribution coefficients for Sr-90				
R016	Contaminated zone (cm**3/g)	2.300E+00	3.000E+01	---	DCNUCC (**)
R016	Unsaturated zone 1 (cm**3/g)	2.300E+00	3.000E+01	---	DCNUCU (**,1)
R016	Saturated zone (cm**3/g)	2.300E+00	3.000E+01	---	DCNUCS (**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	5.076E-01	ALEACH (**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (**)
	Distribution coefficients for Tc-99				
R016	Contaminated zone (cm**3/g)	6.000E-02	0.000E+00	---	DCNUCC (**)
R016	Unsaturated zone 1 (cm**3/g)	6.000E-02	0.000E+00	---	DCNUCU (**,1)
R016	Saturated zone (cm**3/g)	6.000E-02	0.000E+00	---	DCNUCS (**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.227E+01	ALEACH (**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (**)
	Distribution coefficients for daughter Ac-227				
R016	Contaminated zone (cm**3/g)	8.250E+02	2.000E+01	---	DCNUCC (1)
R016	Unsaturated zone 1 (cm**3/g)	8.250E+02	2.000E+01	---	DCNUCU (1,1)
R016	Saturated zone (cm**3/g)	8.250E+02	2.000E+01	---	DCNUCS (1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.438E-03	ALEACH (1)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (1)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
	Distribution coefficients for daughter Gd-152				
R016	Contaminated zone (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCC (57)
R016	Unsaturated zone 1 (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCU (57,1)
R016	Saturated zone (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCS (57)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.438E-03	ALEACH (57)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (57)
	Distribution coefficients for daughter Nd-144				
R016	Contaminated zone (cm**3/g)	1.580E+02	1.580E+02	---	DCNUCC (60)
R016	Unsaturated zone 1 (cm**3/g)	1.580E+02	1.580E+02	---	DCNUCU (60,1)
R016	Saturated zone (cm**3/g)	1.580E+02	1.580E+02	---	DCNUCS (60)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	7.505E-03	ALEACH (60)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (60)
	Distribution coefficients for daughter Pa-231				
R016	Contaminated zone (cm**3/g)	3.800E+02	5.000E+01	---	DCNUCC (64)
R016	Unsaturated zone 1 (cm**3/g)	3.800E+02	5.000E+01	---	DCNUCU (64,1)
R016	Saturated zone (cm**3/g)	3.800E+02	5.000E+01	---	DCNUCS (64)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.121E-03	ALEACH (64)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (64)
	Distribution coefficients for daughter Pb-210				
R016	Contaminated zone (cm**3/g)	2.392E+03	1.000E+02	---	DCNUCC (70)
R016	Unsaturated zone 1 (cm**3/g)	2.392E+03	1.000E+02	---	DCNUCU (70,1)
R016	Saturated zone (cm**3/g)	2.392E+03	1.000E+02	---	DCNUCS (70)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	4.959E-04	ALEACH (70)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (70)
	Distribution coefficients for daughter Po-210				
R016	Contaminated zone (cm**3/g)	1.810E+02	1.000E+01	---	DCNUCC (74)
R016	Unsaturated zone 1 (cm**3/g)	1.810E+02	1.000E+01	---	DCNUCU (74,1)
R016	Saturated zone (cm**3/g)	1.810E+02	1.000E+01	---	DCNUCS (74)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	6.552E-03	ALEACH (74)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (74)
	Distribution coefficients for daughter Ra-226				
R016	Contaminated zone (cm**3/g)	3.533E+03	7.000E+01	---	DCNUCC (**)
R016	Unsaturated zone 1 (cm**3/g)	3.533E+03	7.000E+01	---	DCNUCU (**,1)
R016	Saturated zone (cm**3/g)	3.533E+03	7.000E+01	---	DCNUCS (**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.357E-04	ALEACH (**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (**)
	Distribution coefficients for daughter Ra-228				
R016	Contaminated zone (cm**3/g)	3.533E+03	7.000E+01	---	DCNUCC (**)
R016	Unsaturated zone 1 (cm**3/g)	3.533E+03	7.000E+01	---	DCNUCU (**,1)
R016	Saturated zone (cm**3/g)	3.533E+03	7.000E+01	---	DCNUCS (**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.357E-04	ALEACH (**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (**)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R016	Distribution coefficients for daughter Sm-147				
R016	Contaminated zone (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.438E-03	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter Sm-148				
R016	Contaminated zone (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	8.250E+02	-1.000E+00	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.438E-03	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter Te-125m				
R016	Contaminated zone (cm**3/g)	0.000E+00	0.000E+00	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	0.000E+00	0.000E+00	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	0.000E+00	0.000E+00	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.235E+01	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter Th-228				
R016	Contaminated zone (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.016E-04	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter Th-229				
R016	Contaminated zone (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.016E-04	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter Th-230				
R016	Contaminated zone (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.016E-04	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter Th-232				
R016	Contaminated zone (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	5.884E+03	6.000E+04	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.016E-04	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R016	Distribution coefficients for daughter U-233				
R016	Contaminated zone (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.411E-03	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter U-234				
R016	Contaminated zone (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.411E-03	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter U-235				
R016	Contaminated zone (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.411E-03	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R016	Distribution coefficients for daughter U-236				
R016	Contaminated zone (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCC(**)
R016	Unsaturated zone 1 (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCU(**,1)
R016	Saturated zone (cm**3/g)	1.260E+02	5.000E+01	---	DCNUCS(**)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	9.411E-03	ALEACH(**)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(**)
R017	Inhalation rate (m**3/yr)	8.400E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	2.350E-05	1.000E-04	---	MLINH
R017	Exposure duration	3.000E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	5.500E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	4.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	6.490E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	1.240E-01	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE (1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE (2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE (3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE (4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE (5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE (6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE (7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE (8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE (9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE(10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE(11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE(12)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA(1)
R017	Ring 2	not used	2.732E-01	---	FRACA(2)
R017	Ring 3	not used	0.000E+00	---	FRACA(3)
R017	Ring 4	not used	0.000E+00	---	FRACA(4)
R017	Ring 5	not used	0.000E+00	---	FRACA(5)
R017	Ring 6	not used	0.000E+00	---	FRACA(6)
R017	Ring 7	not used	0.000E+00	---	FRACA(7)
R017	Ring 8	not used	0.000E+00	---	FRACA(8)
R017	Ring 9	not used	0.000E+00	---	FRACA(9)
R017	Ring 10	not used	0.000E+00	---	FRACA(10)
R017	Ring 11	not used	0.000E+00	---	FRACA(11)
R017	Ring 12	not used	0.000E+00	---	FRACA(12)
R018	Fruits, vegetables and grain consumption (kg/yr)	1.120E+02	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	2.140E+01	1.400E+01	---	DIET(2)
R018	Milk consumption (L/yr)	2.330E+02	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	6.510E+01	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	1.830E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	4.780E+02	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	1.000E+00	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	1.000E+00	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	1.000E+00	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	1.000E+00	-1	---	FPLANT
R018	Contamination fraction of meat	1.000E+00	-1	---	FMEAT
R018	Contamination fraction of milk	1.000E+00	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	2.830E+01	6.800E+01	---	LFI5
R019	Livestock fodder intake for milk (kg/day)	6.520E+01	5.500E+01	---	LFI6
R019	Livestock water intake for meat (L/day)	5.060E+01	5.000E+01	---	LWI5
R019	Livestock water intake for milk (L/day)	6.000E+01	1.600E+02	---	LWI6
R019	Livestock soil intake (kg/day)	5.000E-01	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	4.000E-04	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	1.220E+00	9.000E-01	---	DROOT
R019	Drinking water fraction from ground water	1.000E+00	1.000E+00	---	FGWDW
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Livestock water fraction from ground water	1.000E+00	1.000E+00	---	FGWLW
R019	Irrigation fraction from ground water	1.000E+00	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	1.750E+00	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	2.900E+00	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	1.900E+00	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	2.460E-01	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	1.230E-01	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	8.200E-02	8.000E-02	---	TE(3)

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R19B	Translocation Factor for Non-Leafy	1.000E-01	1.000E-01	---	TIV(1)
R19B	Translocation Factor for Leafy	1.000E+00	1.000E+00	---	TIV(2)
R19B	Translocation Factor for Fodder	1.000E+00	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	3.500E-01	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	3.500E-01	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	3.500E-01	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	3.500E-01	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	5.800E-01	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	3.500E-01	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	3.300E+01	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	2.000E-05	2.000E-05	---	C12WTR
C14	C-12 concentration in contaminated soil (g/g)	3.000E-02	3.000E-02	---	C12CZ
C14	Fraction of vegetation carbon from soil	2.000E-02	2.000E-02	---	CSOIL
C14	Fraction of vegetation carbon from air	9.800E-01	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	4.300E-01	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	7.000E-07	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	1.000E-10	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	2.500E-01	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	1.000E-01	2.000E-01	---	AVFG5
STOR	Storage times of contaminated foodstuffs (days):				
STOR	Fruits, non-leafy vegetables, and grain	1.400E+01	1.400E+01	---	STOR_T(1)
STOR	Leafy vegetables	1.000E+00	1.000E+00	---	STOR_T(2)
STOR	Milk	1.000E+00	1.000E+00	---	STOR_T(3)
STOR	Meat and poultry	1.000E+00	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)
STOR	Well water	1.000E+00	1.000E+00	---	STOR_T(7)
STOR	Surface water	1.000E+00	1.000E+00	---	STOR_T(8)
STOR	Livestock fodder	4.500E+01	4.500E+01	---	STOR_T(9)
R021	Thickness of building foundation (m)	not used	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	not used	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	not used	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	not used	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	not used	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	512	---	---	NPTS

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	17	---	---	KYMAX

Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	active
4 -- meat ingestion	active
5 -- milk ingestion	active
6 -- aquatic foods	suppressed
7 -- drinking water	active
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Summary : RESRAD Default

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Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	64500.00 square meters	Ag-108m	1.000E+00
Thickness:	0.15 meters	Am-241	1.000E+00
Cover Depth:	0.00 meters	Am-243	1.000E+00
		C-14	1.000E+00
		Cm-243	1.000E+00
		Cm-244	1.000E+00
		Co-60	1.000E+00
		Cs-134	1.000E+00
		Cs-137	1.000E+00
		Eu-152	1.000E+00
		Eu-154	1.000E+00
		Eu-155	1.000E+00
		Fe-55	1.000E+00
		H-3	1.000E+00
		Nb-94	1.000E+00
		Ni-59	1.000E+00
		Ni-63	1.000E+00
		Np-237	1.000E+00
		Pm-147	1.000E+00
		Pu-238	1.000E+00
		Pu-239	1.000E+00
		Pu-240	1.000E+00
		Pu-241	1.000E+00
		Sb-125	1.000E+00
		Sr-90	1.000E+00
		Tc-99	1.000E+00

Total Dose TDOSE(t), mrem/yr

Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years)	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
TDOSE(t):	2.801E+01	2.409E+01	1.923E+01	1.136E+01	4.946E+00	3.116E+01	1.454E-04	3.793E-03
M(t):	1.121E+00	9.637E-01	7.690E-01	4.545E-01	1.979E-01	1.247E+00	5.817E-06	1.517E-04

Maximum TDOSE(t): 3.220E+01 mrem/yr at t = 75.1 ± 0.2 years

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 7.507E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	3.008E-01	0.0093	1.068E-07	0.0000	0.000E+00	0.0000	3.645E-05	0.0000	3.280E-05	0.0000	3.711E-04	0.0000	4.233E-06	0.0000
Am-241	7.979E-03	0.0002	5.567E-04	0.0000	0.000E+00	0.0000	1.413E-02	0.0004	8.926E-04	0.0000	1.823E-04	0.0000	6.717E-03	0.0002
Am-243	1.347E-01	0.0042	6.198E-04	0.0000	0.000E+00	0.0000	1.580E-02	0.0005	1.000E-03	0.0000	2.036E-04	0.0000	7.512E-03	0.0002
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	2.177E-02	0.0007	1.147E-04	0.0000	0.000E+00	0.0000	2.904E-03	0.0001	1.304E-04	0.0000	4.314E-05	0.0000	1.381E-03	0.0000
Cm-244	2.661E-06	0.0000	3.286E-05	0.0000	0.000E+00	0.0000	8.291E-04	0.0000	4.079E-05	0.0000	1.189E-05	0.0000	3.943E-04	0.0000
Co-60	1.234E-04	0.0000	2.305E-11	0.0000	0.000E+00	0.0000	7.258E-07	0.0000	1.140E-06	0.0000	2.347E-07	0.0000	4.167E-09	0.0000
Cs-134	1.496E-11	0.0000	9.068E-19	0.0000	0.000E+00	0.0000	1.918E-13	0.0000	4.897E-13	0.0000	5.514E-13	0.0000	2.118E-15	0.0000
Cs-137	9.922E-02	0.0031	1.141E-08	0.0000	0.000E+00	0.0000	2.384E-03	0.0001	6.086E-03	0.0002	6.853E-03	0.0002	2.632E-05	0.0000
Eu-152	1.031E-02	0.0003	4.219E-09	0.0000	0.000E+00	0.0000	5.311E-07	0.0000	1.706E-06	0.0000	7.809E-08	0.0000	1.821E-07	0.0000
Eu-154	1.210E-03	0.0000	5.895E-10	0.0000	0.000E+00	0.0000	8.451E-08	0.0000	2.715E-07	0.0000	1.242E-08	0.0000	2.897E-08	0.0000
Eu-155	3.417E-07	0.0000	6.322E-13	0.0000	0.000E+00	0.0000	1.003E-10	0.0000	3.223E-10	0.0000	1.475E-11	0.0000	3.439E-11	0.0000
Fe-55	0.000E+00	0.0000	2.999E-17	0.0000	0.000E+00	0.0000	2.211E-14	0.0000	9.063E-13	0.0000	3.978E-14	0.0000	9.962E-15	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	2.414E-01	0.0075	1.302E-07	0.0000	0.000E+00	0.0000	8.069E-05	0.0000	1.571E-08	0.0000	1.168E-07	0.0000	3.305E-06	0.0000
Ni-59	0.000E+00	0.0000	1.494E-09	0.0000	0.000E+00	0.0000	1.828E-05	0.0000	3.239E-06	0.0000	1.121E-04	0.0000	1.711E-07	0.0000
Ni-63	0.000E+00	0.0000	2.064E-09	0.0000	0.000E+00	0.0000	2.979E-05	0.0000	5.276E-06	0.0000	1.827E-04	0.0000	2.787E-07	0.0000
Np-237	2.557E-08	0.0000	2.577E-09	0.0000	0.000E+00	0.0000	1.755E-08	0.0000	1.335E-08	0.0000	2.396E-08	0.0000	7.975E-09	0.0000
Pm-147	1.281E-14	0.0000	3.814E-15	0.0000	0.000E+00	0.0000	4.658E-14	0.0000	9.223E-14	0.0000	9.879E-15	0.0000	1.664E-14	0.0000
Pu-238	2.099E-05	0.0000	3.626E-04	0.0000	0.000E+00	0.0000	9.163E-03	0.0003	1.117E-03	0.0000	5.094E-05	0.0000	4.357E-03	0.0001
Pu-239	5.399E-05	0.0000	7.195E-04	0.0000	0.000E+00	0.0000	1.838E-02	0.0006	2.241E-03	0.0001	1.016E-04	0.0000	8.738E-03	0.0003
Pu-240	3.706E-05	0.0000	7.153E-04	0.0000	0.000E+00	0.0000	1.827E-02	0.0006	2.228E-03	0.0001	1.010E-04	0.0000	8.688E-03	0.0003
Pu-241	2.781E-04	0.0000	1.976E-05	0.0000	0.000E+00	0.0000	5.015E-04	0.0000	3.223E-05	0.0000	6.404E-06	0.0000	2.384E-04	0.0000
Sb-125	1.422E-11	0.0000	8.617E-19	0.0000	0.000E+00	0.0000	7.682E-15	0.0000	1.710E-15	0.0000	4.733E-16	0.0000	2.978E-16	0.0000
Sr-90	1.976E-20	0.0000	1.107E-23	0.0000	0.000E+00	0.0000	1.325E-18	0.0000	1.892E-19	0.0000	4.713E-19	0.0000	1.903E-21	0.0000
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	8.179E-01	0.0254	3.141E-03	0.0001	0.000E+00	0.0000	8.253E-02	0.0026	1.381E-02	0.0004	8.220E-03	0.0003	3.806E-02	0.0012

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 7.507E+01 years

Water Dependent Pathways

Radio- Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.013E-01	0.0094
Am-241	1.025E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.017E-06	0.0000	1.094E-06	0.0000	6.194E-08	0.0000	3.057E-02	0.0009
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.598E-01	0.0050
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.634E-02	0.0008
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.312E-03	0.0000
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.255E-04	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.620E-11	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.146E-01	0.0036
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.031E-02	0.0003
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.211E-03	0.0000
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.421E-07	0.0000
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.782E-13	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.415E-01	0.0075
Ni-59	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.338E-04	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.180E-04	0.0000
Np-237	2.836E+01	0.8805	0.000E+00	0.0000	0.000E+00	0.0000	2.220E+00	0.0689	3.036E-01	0.0094	1.722E-02	0.0005	3.090E+01	0.9594
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.820E-13	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.507E-02	0.0005
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.023E-02	0.0009
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.004E-02	0.0009
Pu-241	8.362E-07	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.532E-08	0.0000	8.897E-09	0.0000	5.031E-10	0.0000	1.077E-03	0.0000
Sb-125	3.043E-10	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.235E-11	0.0000	1.931E-11	0.0000	7.228E-12	0.0000	3.674E-10	0.0000
Sr-90	2.538E-01	0.0079	0.000E+00	0.0000	0.000E+00	0.0000	2.447E-02	0.0008	2.200E-02	0.0007	4.234E-02	0.0013	3.426E-01	0.0106
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	2.861E+01	0.8884	0.000E+00	0.0000	0.000E+00	0.0000	2.244E+00	0.0697	3.256E-01	0.0101	5.955E-02	0.0018	3.220E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	3.367E+00	0.1202	2.674E-06	0.0000	0.000E+00	0.0000	9.114E-04	0.0000	8.209E-04	0.0000	9.286E-03	0.0003	1.060E-04	0.0000
Am-241	1.655E-02	0.0006	4.228E-03	0.0002	0.000E+00	0.0000	1.072E-01	0.0038	6.779E-03	0.0002	1.385E-03	0.0000	5.102E-02	0.0018
Am-243	3.322E-01	0.0119	4.193E-03	0.0001	0.000E+00	0.0000	1.068E-01	0.0038	6.753E-03	0.0002	1.379E-03	0.0000	5.083E-02	0.0018
C-14	2.268E-07	0.0000	1.927E-05	0.0000	0.000E+00	0.0000	1.402E-01	0.0050	6.793E-02	0.0024	7.094E-02	0.0025	1.307E-06	0.0000
Cm-243	2.132E-01	0.0076	2.900E-03	0.0001	0.000E+00	0.0000	7.332E-02	0.0026	3.254E-03	0.0001	1.095E-03	0.0000	3.490E-02	0.0012
Cm-244	4.735E-05	0.0000	2.326E-03	0.0001	0.000E+00	0.0000	5.859E-02	0.0021	2.601E-03	0.0001	8.751E-04	0.0000	2.789E-02	0.0010
Co-60	5.102E+00	0.1821	1.962E-06	0.0000	0.000E+00	0.0000	6.170E-02	0.0022	9.681E-02	0.0035	1.991E-02	0.0007	3.546E-04	0.0000
Cs-134	2.813E+00	0.1004	3.750E-07	0.0000	0.000E+00	0.0000	7.925E-02	0.0028	2.022E-01	0.0072	2.275E-01	0.0081	8.758E-04	0.0000
Cs-137	1.182E+00	0.0422	3.013E-07	0.0000	0.000E+00	0.0000	6.289E-02	0.0022	1.605E-01	0.0057	1.806E-01	0.0064	6.951E-04	0.0000
Eu-152	2.327E+00	0.0831	2.048E-06	0.0000	0.000E+00	0.0000	2.575E-04	0.0000	8.279E-04	0.0000	3.788E-05	0.0000	8.837E-05	0.0000
Eu-154	2.506E+00	0.0895	2.612E-06	0.0000	0.000E+00	0.0000	3.740E-04	0.0000	1.203E-03	0.0000	5.503E-05	0.0000	1.284E-04	0.0000
Eu-155	6.368E-02	0.0023	3.662E-07	0.0000	0.000E+00	0.0000	5.804E-05	0.0000	1.866E-04	0.0000	8.541E-06	0.0000	1.992E-05	0.0000
Fe-55	0.000E+00	0.0000	2.272E-08	0.0000	0.000E+00	0.0000	1.673E-05	0.0000	6.866E-04	0.0000	3.013E-05	0.0000	7.548E-06	0.0000
H-3	0.000E+00	0.0000	3.800E-05	0.0000	0.000E+00	0.0000	4.085E-04	0.0000	6.513E-05	0.0000	5.116E-04	0.0000	3.309E-08	0.0000
Nb-94	3.328E+00	0.1188	3.907E-06	0.0000	0.000E+00	0.0000	2.419E-03	0.0001	4.712E-07	0.0000	3.500E-06	0.0000	9.917E-05	0.0000
Ni-59	0.000E+00	0.0000	2.557E-08	0.0000	0.000E+00	0.0000	3.126E-04	0.0000	5.533E-05	0.0000	1.914E-03	0.0001	2.928E-06	0.0000
Ni-63	0.000E+00	0.0000	5.937E-08	0.0000	0.000E+00	0.0000	8.559E-04	0.0000	1.515E-04	0.0000	5.241E-03	0.0002	8.017E-06	0.0000
Np-237	3.446E-01	0.0123	4.434E-03	0.0002	0.000E+00	0.0000	1.257E+00	0.0449	1.415E-01	0.0051	5.898E-03	0.0002	5.371E-02	0.0019
Pm-147	1.655E-05	0.0000	3.275E-07	0.0000	0.000E+00	0.0000	6.309E-05	0.0000	1.224E-04	0.0000	1.250E-05	0.0000	1.291E-05	0.0000
Pu-238	5.740E-05	0.0000	3.726E-03	0.0001	0.000E+00	0.0000	9.405E-02	0.0034	1.148E-02	0.0004	5.201E-04	0.0000	4.476E-02	0.0016
Pu-239	1.095E-04	0.0000	4.093E-03	0.0001	0.000E+00	0.0000	1.045E-01	0.0037	1.275E-02	0.0005	5.776E-04	0.0000	4.972E-02	0.0018
Pu-240	5.587E-05	0.0000	4.093E-03	0.0001	0.000E+00	0.0000	1.044E-01	0.0037	1.275E-02	0.0005	5.776E-04	0.0000	4.971E-02	0.0018
Pu-241	1.995E-05	0.0000	8.018E-05	0.0000	0.000E+00	0.0000	2.055E-03	0.0001	2.458E-04	0.0000	1.198E-05	0.0000	9.780E-04	0.0000
Sb-125	7.413E-01	0.0265	1.014E-07	0.0000	0.000E+00	0.0000	8.964E-04	0.0000	1.993E-04	0.0000	5.476E-05	0.0000	3.504E-05	0.0000
Sr-90	6.969E-03	0.0002	9.709E-06	0.0000	0.000E+00	0.0000	1.158E+00	0.0413	1.639E-01	0.0058	4.076E-01	0.0145	1.669E-03	0.0001
Tc-99	3.880E-06	0.0000	6.523E-09	0.0000	0.000E+00	0.0000	1.926E-02	0.0007	6.326E-05	0.0000	5.187E-03	0.0002	1.685E-06	0.0000
Total	2.234E+01	0.7976	3.016E-02	0.0011	0.000E+00	0.0000	3.436E+00	0.1226	8.939E-01	0.0319	9.412E-01	0.0336	3.676E-01	0.0131

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.378E+00	0.1206
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.872E-01	0.0067
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.021E-01	0.0179
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.791E-01	0.0100
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.287E-01	0.0117
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.233E-02	0.0033
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.280E+00	0.1885
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.323E+00	0.1186
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.586E+00	0.0566
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.329E+00	0.0831
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.508E+00	0.0895
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.396E-02	0.0023
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.410E-04	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.023E-03	0.0000
Nb-94	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.330E+00	0.1189
Ni-59	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.285E-03	0.0001
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.256E-03	0.0002
Np-237	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.807E+00	0.0645
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.278E-04	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.546E-01	0.0055
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.717E-01	0.0061
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.716E-01	0.0061
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.391E-03	0.0001
Sb-125	1.413E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	9.771E-05	0.0000	7.808E-05	0.0000	2.695E-05	0.0000	7.441E-01	0.0266
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.738E+00	0.0620
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.452E-02	0.0009
Total	1.413E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	9.771E-05	0.0000	7.808E-05	0.0000	2.695E-05	0.0000	2.801E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	3.281E+00	0.1362	2.584E-06	0.0000	0.000E+00	0.0000	8.808E-04	0.0000	7.933E-04	0.0000	8.973E-03	0.0004	1.024E-04	0.0000
Am-241	1.641E-02	0.0007	4.151E-03	0.0002	0.000E+00	0.0000	1.053E-01	0.0044	6.655E-03	0.0003	1.359E-03	0.0001	5.009E-02	0.0021
Am-243	3.297E-01	0.0137	4.123E-03	0.0002	0.000E+00	0.0000	1.050E-01	0.0044	6.640E-03	0.0003	1.356E-03	0.0001	4.998E-02	0.0021
C-14	2.216E-17	0.0000	1.864E-15	0.0000	0.000E+00	0.0000	3.115E-11	0.0000	7.920E-11	0.0000	8.278E-11	0.0000	1.264E-16	0.0000
Cm-243	2.079E-01	0.0086	2.802E-03	0.0001	0.000E+00	0.0000	7.084E-02	0.0029	3.144E-03	0.0001	1.058E-03	0.0000	3.372E-02	0.0014
Cm-244	4.555E-05	0.0000	2.215E-03	0.0001	0.000E+00	0.0000	5.580E-02	0.0023	2.478E-03	0.0001	8.333E-04	0.0000	2.656E-02	0.0011
Co-60	4.457E+00	0.1850	1.701E-06	0.0000	0.000E+00	0.0000	5.351E-02	0.0022	8.396E-02	0.0035	1.727E-02	0.0007	3.075E-04	0.0000
Cs-134	2.003E+00	0.0831	2.649E-07	0.0000	0.000E+00	0.0000	5.598E-02	0.0023	1.429E-01	0.0059	1.607E-01	0.0067	6.186E-04	0.0000
Cs-137	1.150E+00	0.0477	2.909E-07	0.0000	0.000E+00	0.0000	6.073E-02	0.0025	1.550E-01	0.0064	1.744E-01	0.0072	6.712E-04	0.0000
Eu-152	2.179E+00	0.0904	1.902E-06	0.0000	0.000E+00	0.0000	2.392E-04	0.0000	7.690E-04	0.0000	3.519E-05	0.0000	8.208E-05	0.0000
Eu-154	2.278E+00	0.0945	2.355E-06	0.0000	0.000E+00	0.0000	3.373E-04	0.0000	1.085E-03	0.0000	4.963E-05	0.0000	1.158E-04	0.0000
Eu-155	5.436E-02	0.0023	3.095E-07	0.0000	0.000E+00	0.0000	4.907E-05	0.0000	1.578E-04	0.0000	7.219E-06	0.0000	1.684E-05	0.0000
Fe-55	0.000E+00	0.0000	1.746E-08	0.0000	0.000E+00	0.0000	1.285E-05	0.0000	5.274E-04	0.0000	2.315E-05	0.0000	5.798E-06	0.0000
H-3	0.000E+00	0.0000	1.672E-17	0.0000	0.000E+00	0.0000	4.843E-16	0.0000	7.114E-16	0.0000	5.618E-15	0.0000	1.456E-20	0.0000
Nb-94	3.234E+00	0.1342	3.766E-06	0.0000	0.000E+00	0.0000	2.332E-03	0.0001	4.543E-07	0.0000	3.374E-06	0.0000	9.560E-05	0.0000
Ni-59	0.000E+00	0.0000	2.484E-08	0.0000	0.000E+00	0.0000	3.036E-04	0.0000	5.375E-05	0.0000	1.859E-03	0.0001	2.843E-06	0.0000
Ni-63	0.000E+00	0.0000	5.727E-08	0.0000	0.000E+00	0.0000	8.257E-04	0.0000	1.462E-04	0.0000	5.056E-03	0.0002	7.732E-06	0.0000
Np-237	2.517E-01	0.0104	3.209E-03	0.0001	0.000E+00	0.0000	9.115E-01	0.0378	1.025E-01	0.0043	4.276E-03	0.0002	3.887E-02	0.0016
Pm-147	1.255E-05	0.0000	2.459E-07	0.0000	0.000E+00	0.0000	4.737E-05	0.0000	9.187E-05	0.0000	9.383E-06	0.0000	9.693E-06	0.0000
Pu-238	5.669E-05	0.0000	3.643E-03	0.0002	0.000E+00	0.0000	9.197E-02	0.0038	1.122E-02	0.0005	5.086E-04	0.0000	4.377E-02	0.0018
Pu-239	1.089E-04	0.0000	4.034E-03	0.0002	0.000E+00	0.0000	1.029E-01	0.0043	1.256E-02	0.0005	5.693E-04	0.0000	4.900E-02	0.0020
Pu-240	5.562E-05	0.0000	4.034E-03	0.0002	0.000E+00	0.0000	1.029E-01	0.0043	1.256E-02	0.0005	5.692E-04	0.0000	4.899E-02	0.0020
Pu-241	4.466E-05	0.0000	8.181E-05	0.0000	0.000E+00	0.0000	2.095E-03	0.0001	2.413E-04	0.0000	1.339E-05	0.0000	9.970E-04	0.0000
Sb-125	5.368E-01	0.0223	7.289E-08	0.0000	0.000E+00	0.0000	6.492E-04	0.0000	1.446E-04	0.0000	3.998E-05	0.0000	2.519E-05	0.0000
Sr-90	4.090E-03	0.0002	5.648E-06	0.0000	0.000E+00	0.0000	6.754E-01	0.0280	9.622E-02	0.0040	2.396E-01	0.0099	9.708E-04	0.0000
Tc-99	1.819E-11	0.0000	3.029E-14	0.0000	0.000E+00	0.0000	1.250E-07	0.0000	8.603E-10	0.0000	7.080E-08	0.0000	7.823E-12	0.0000
Total	1.998E+01	0.8294	2.831E-02	0.0012	0.000E+00	0.0000	2.400E+00	0.0996	6.398E-01	0.0266	6.186E-01	0.0257	3.450E-01	0.0143

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.291E+00	0.1366
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.839E-01	0.0076
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.968E-01	0.0206
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.931E-10	0.0000
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.195E-01	0.0133
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.793E-02	0.0036
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.612E+00	0.1914
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.363E+00	0.0981
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.541E+00	0.0640
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.180E+00	0.0905
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.279E+00	0.0946
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.459E-02	0.0023
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.692E-04	0.0000
H-3	2.614E-03	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	3.805E-04	0.0000	1.748E-04	0.0000	8.173E-04	0.0000	3.986E-03	0.0002
Nb-94	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.236E+00	0.1343
Ni-59	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.220E-03	0.0001
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.036E-03	0.0003
Np-237	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.312E+00	0.0545
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.711E-04	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.512E-01	0.0063
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.692E-01	0.0070
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.691E-01	0.0070
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.473E-03	0.0001
Sb-125	5.992E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	4.386E-04	0.0000	3.769E-04	0.0000	1.403E-04	0.0000	5.446E-01	0.0226
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.016E+00	0.0422
Tc-99	5.418E-02	0.0022	0.000E+00	0.0000	0.000E+00	0.0000	8.998E-03	0.0004	8.639E-05	0.0000	4.749E-03	0.0002	6.801E-02	0.0028
Total	6.279E-02	0.0026	0.000E+00	0.0000	0.000E+00	0.0000	9.817E-03	0.0004	6.381E-04	0.0000	5.707E-03	0.0002	2.409E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	3.113E+00	0.1619	2.412E-06	0.0000	0.000E+00	0.0000	8.222E-04	0.0000	7.405E-04	0.0000	8.376E-03	0.0004	9.558E-05	0.0000
Am-241	1.614E-02	0.0008	4.000E-03	0.0002	0.000E+00	0.0000	1.014E-01	0.0053	6.413E-03	0.0003	1.310E-03	0.0001	4.827E-02	0.0025
Am-243	3.248E-01	0.0169	3.985E-03	0.0002	0.000E+00	0.0000	1.015E-01	0.0053	6.418E-03	0.0003	1.311E-03	0.0001	4.830E-02	0.0025
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	1.976E-01	0.0103	2.614E-03	0.0001	0.000E+00	0.0000	6.610E-02	0.0034	2.934E-03	0.0002	9.872E-04	0.0001	3.146E-02	0.0016
Cm-244	4.215E-05	0.0000	2.009E-03	0.0001	0.000E+00	0.0000	5.060E-02	0.0026	2.248E-03	0.0001	7.554E-04	0.0000	2.408E-02	0.0013
Co-60	3.400E+00	0.1768	1.278E-06	0.0000	0.000E+00	0.0000	4.022E-02	0.0021	6.310E-02	0.0033	1.298E-02	0.0007	2.311E-04	0.0000
Cs-134	1.015E+00	0.0528	1.321E-07	0.0000	0.000E+00	0.0000	2.791E-02	0.0015	7.124E-02	0.0037	8.015E-02	0.0042	3.085E-04	0.0000
Cs-137	1.090E+00	0.0567	2.712E-07	0.0000	0.000E+00	0.0000	5.661E-02	0.0029	1.445E-01	0.0075	1.625E-01	0.0085	6.256E-04	0.0000
Eu-152	1.909E+00	0.0993	1.640E-06	0.0000	0.000E+00	0.0000	2.063E-04	0.0000	6.633E-04	0.0000	3.035E-05	0.0000	7.080E-05	0.0000
Eu-154	1.881E+00	0.0978	1.915E-06	0.0000	0.000E+00	0.0000	2.743E-04	0.0000	8.820E-04	0.0000	4.036E-05	0.0000	9.414E-05	0.0000
Eu-155	3.961E-02	0.0021	2.211E-07	0.0000	0.000E+00	0.0000	3.504E-05	0.0000	1.127E-04	0.0000	5.155E-06	0.0000	1.203E-05	0.0000
Fe-55	0.000E+00	0.0000	1.030E-08	0.0000	0.000E+00	0.0000	7.582E-06	0.0000	3.111E-04	0.0000	1.365E-05	0.0000	3.420E-06	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	3.052E+00	0.1588	3.498E-06	0.0000	0.000E+00	0.0000	2.166E-03	0.0001	4.220E-07	0.0000	3.134E-06	0.0000	8.880E-05	0.0000
Ni-59	0.000E+00	0.0000	2.342E-08	0.0000	0.000E+00	0.0000	2.863E-04	0.0000	5.068E-05	0.0000	1.753E-03	0.0001	2.681E-06	0.0000
Ni-63	0.000E+00	0.0000	5.326E-08	0.0000	0.000E+00	0.0000	7.679E-04	0.0000	1.359E-04	0.0000	4.702E-03	0.0002	7.191E-06	0.0000
Np-237	1.342E-01	0.0070	1.681E-03	0.0001	0.000E+00	0.0000	4.773E-01	0.0248	5.369E-02	0.0028	2.239E-03	0.0001	2.035E-02	0.0011
Pm-147	7.212E-06	0.0000	1.385E-07	0.0000	0.000E+00	0.0000	2.668E-05	0.0000	5.175E-05	0.0000	5.285E-06	0.0000	5.460E-06	0.0000
Pu-238	5.531E-05	0.0000	3.482E-03	0.0002	0.000E+00	0.0000	8.791E-02	0.0046	1.073E-02	0.0006	4.863E-04	0.0000	4.184E-02	0.0022
Pu-239	1.078E-04	0.0000	3.917E-03	0.0002	0.000E+00	0.0000	9.996E-02	0.0052	1.220E-02	0.0006	5.528E-04	0.0000	4.758E-02	0.0025
Pu-240	5.512E-05	0.0000	3.916E-03	0.0002	0.000E+00	0.0000	9.994E-02	0.0052	1.220E-02	0.0006	5.527E-04	0.0000	4.756E-02	0.0025
Pu-241	8.973E-05	0.0000	8.440E-05	0.0000	0.000E+00	0.0000	2.158E-03	0.0001	2.324E-04	0.0000	1.582E-05	0.0000	1.027E-03	0.0001
Sb-125	2.815E-01	0.0146	3.759E-08	0.0000	0.000E+00	0.0000	3.348E-04	0.0000	7.454E-05	0.0000	2.062E-05	0.0000	1.299E-05	0.0000
Sr-90	1.409E-03	0.0001	1.911E-06	0.0000	0.000E+00	0.0000	2.285E-01	0.0119	3.255E-02	0.0017	8.105E-02	0.0042	3.284E-04	0.0000
Tc-99	4.001E-22	0.0000	6.526E-25	0.0000	0.000E+00	0.0000	2.694E-18	0.0000	1.854E-20	0.0000	1.526E-18	0.0000	1.686E-22	0.0000
Total	1.646E+01	0.8560	2.570E-02	0.0013	0.000E+00	0.0000	1.445E+00	0.0752	4.214E-01	0.0219	3.599E-01	0.0187	3.124E-01	0.0162

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.123E+00	0.1625
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.776E-01	0.0092
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.863E-01	0.0253
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.017E-01	0.0157
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.974E-02	0.0041
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.517E+00	0.1829
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.195E+00	0.0621
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.454E+00	0.0756
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.910E+00	0.0993
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.882E+00	0.0979
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.978E-02	0.0021
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.358E-04	0.0000
H-3	3.223E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	4.901E-04	0.0000	2.235E-04	0.0000	1.068E-03	0.0001	5.005E-03	0.0003
Nb-94	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.055E+00	0.1589
Ni-59	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.093E-03	0.0001
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.613E-03	0.0003
Np-237	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.894E-01	0.0359
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.653E-05	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.445E-01	0.0075
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.643E-01	0.0085
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.642E-01	0.0085
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.608E-03	0.0002
Sb-125	3.847E-03	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	2.826E-04	0.0000	2.444E-04	0.0000	9.149E-05	0.0000	2.864E-01	0.0149
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.438E-01	0.0179
Tc-99	1.516E-01	0.0079	0.000E+00	0.0000	0.000E+00	0.0000	2.692E-02	0.0014	2.836E-04	0.0000	1.670E-02	0.0009	1.955E-01	0.0102
Total	1.587E-01	0.0083	0.000E+00	0.0000	0.000E+00	0.0000	2.769E-02	0.0014	7.514E-04	0.0000	1.785E-02	0.0009	1.923E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	2.587E+00	0.2277	1.888E-06	0.0000	0.000E+00	0.0000	6.438E-04	0.0001	5.798E-04	0.0001	6.558E-03	0.0006	7.484E-05	0.0000
Am-241	1.524E-02	0.0013	3.500E-03	0.0003	0.000E+00	0.0000	8.876E-02	0.0078	5.612E-03	0.0005	1.146E-03	0.0001	4.224E-02	0.0037
Am-243	3.078E-01	0.0271	3.525E-03	0.0003	0.000E+00	0.0000	8.979E-02	0.0079	5.678E-03	0.0005	1.159E-03	0.0001	4.273E-02	0.0038
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	1.653E-01	0.0145	2.045E-03	0.0002	0.000E+00	0.0000	5.169E-02	0.0045	2.296E-03	0.0002	7.719E-04	0.0001	2.460E-02	0.0022
Cm-244	3.214E-05	0.0000	1.421E-03	0.0001	0.000E+00	0.0000	3.580E-02	0.0032	1.595E-03	0.0001	5.340E-04	0.0000	1.704E-02	0.0015
Co-60	1.316E+00	0.1158	4.689E-07	0.0000	0.000E+00	0.0000	1.475E-02	0.0013	2.315E-02	0.0020	4.761E-03	0.0004	8.478E-05	0.0000
Cs-134	9.393E-02	0.0083	1.153E-08	0.0000	0.000E+00	0.0000	2.436E-03	0.0002	6.218E-03	0.0005	6.996E-03	0.0006	2.692E-05	0.0000
Cs-137	9.008E-01	0.0793	2.113E-07	0.0000	0.000E+00	0.0000	4.410E-02	0.0039	1.126E-01	0.0099	1.266E-01	0.0111	4.874E-04	0.0000
Eu-152	1.199E+00	0.1055	9.742E-07	0.0000	0.000E+00	0.0000	1.225E-04	0.0000	3.939E-04	0.0000	1.803E-05	0.0000	4.205E-05	0.0000
Eu-154	9.610E-01	0.0846	9.255E-07	0.0000	0.000E+00	0.0000	1.326E-04	0.0000	4.262E-04	0.0000	1.950E-05	0.0000	4.549E-05	0.0000
Eu-155	1.307E-02	0.0012	6.781E-08	0.0000	0.000E+00	0.0000	1.075E-05	0.0000	3.456E-05	0.0000	1.581E-06	0.0000	3.689E-06	0.0000
Fe-55	0.000E+00	0.0000	1.618E-09	0.0000	0.000E+00	0.0000	1.191E-06	0.0000	4.887E-05	0.0000	2.145E-06	0.0000	5.372E-07	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	2.490E+00	0.2191	2.693E-06	0.0000	0.000E+00	0.0000	1.668E-03	0.0001	3.249E-07	0.0000	2.413E-06	0.0000	6.837E-05	0.0000
Ni-59	0.000E+00	0.0000	1.900E-08	0.0000	0.000E+00	0.0000	2.323E-04	0.0000	4.112E-05	0.0000	1.422E-03	0.0001	2.175E-06	0.0000
Ni-63	0.000E+00	0.0000	4.116E-08	0.0000	0.000E+00	0.0000	5.935E-04	0.0001	1.051E-04	0.0000	3.635E-03	0.0003	5.558E-06	0.0000
Np-237	1.483E-02	0.0013	1.740E-04	0.0000	0.000E+00	0.0000	4.941E-02	0.0043	5.558E-03	0.0005	2.320E-04	0.0000	2.107E-03	0.0002
Pm-147	1.039E-06	0.0000	1.851E-08	0.0000	0.000E+00	0.0000	3.567E-06	0.0000	6.918E-06	0.0000	7.065E-07	0.0000	7.299E-07	0.0000
Pu-238	5.071E-05	0.0000	2.962E-03	0.0003	0.000E+00	0.0000	7.479E-02	0.0066	9.127E-03	0.0008	4.139E-04	0.0000	3.560E-02	0.0031
Pu-239	1.038E-04	0.0000	3.521E-03	0.0003	0.000E+00	0.0000	8.987E-02	0.0079	1.097E-02	0.0010	4.970E-04	0.0000	4.277E-02	0.0038
Pu-240	5.338E-05	0.0000	3.519E-03	0.0003	0.000E+00	0.0000	8.980E-02	0.0079	1.096E-02	0.0010	4.966E-04	0.0000	4.274E-02	0.0038
Pu-241	2.090E-04	0.0000	8.789E-05	0.0000	0.000E+00	0.0000	2.240E-03	0.0002	2.032E-04	0.0000	2.121E-05	0.0000	1.066E-03	0.0001
Sb-125	2.932E-02	0.0026	3.688E-09	0.0000	0.000E+00	0.0000	3.285E-05	0.0000	7.315E-06	0.0000	2.023E-06	0.0000	1.275E-06	0.0000
Sr-90	3.373E-05	0.0000	4.287E-08	0.0000	0.000E+00	0.0000	5.127E-03	0.0005	7.304E-04	0.0001	1.819E-03	0.0002	7.368E-06	0.0000
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.009E+01	0.8883	2.076E-02	0.0018	0.000E+00	0.0000	6.420E-01	0.0565	1.963E-01	0.0173	1.571E-01	0.0138	2.517E-01	0.0222

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
 As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.595E+00	0.2284
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.565E-01	0.0138
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.507E-01	0.0397
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.467E-01	0.0217
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.643E-02	0.0050
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.358E+00	0.1196
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.096E-01	0.0096
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.185E+00	0.1043
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.199E+00	0.1056
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.616E-01	0.0846
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.312E-02	0.0012
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.274E-05	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.491E+00	0.2193
Ni-59	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.698E-03	0.0001
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.339E-03	0.0004
Np-237	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.231E-02	0.0064
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.298E-05	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.229E-01	0.0108
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.477E-01	0.0130
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.476E-01	0.0130
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.828E-03	0.0003
Sb-125	7.120E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	5.230E-05	0.0000	4.521E-05	0.0000	1.692E-05	0.0000	3.019E-02	0.0027
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.717E-03	0.0007
Tc-99	8.204E-27	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.050E-27	0.0000	3.890E-29	0.0000	2.832E-27	0.0000	1.312E-26	0.0000
Total	7.120E-04	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	5.230E-05	0.0000	4.521E-05	0.0000	1.692E-05	0.0000	1.136E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 3.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	1.489E+00	0.3010	9.038E-07	0.0000	0.000E+00	0.0000	3.082E-04	0.0001	2.775E-04	0.0001	3.139E-03	0.0006	3.582E-05	0.0000
Am-241	1.290E-02	0.0026	2.302E-03	0.0005	0.000E+00	0.0000	5.838E-02	0.0118	3.691E-03	0.0007	7.540E-04	0.0002	2.778E-02	0.0056
Am-243	2.604E-01	0.0526	2.391E-03	0.0005	0.000E+00	0.0000	6.091E-02	0.0123	3.854E-03	0.0008	7.862E-04	0.0002	2.898E-02	0.0059
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	9.757E-02	0.0197	9.755E-04	0.0002	0.000E+00	0.0000	2.467E-02	0.0050	1.098E-03	0.0002	3.680E-04	0.0001	1.174E-02	0.0024
Cm-244	1.484E-05	0.0000	5.109E-04	0.0001	0.000E+00	0.0000	1.287E-02	0.0026	5.810E-04	0.0001	1.910E-04	0.0000	6.126E-03	0.0012
Co-60	8.508E-02	0.0172	2.572E-08	0.0000	0.000E+00	0.0000	8.092E-04	0.0002	1.270E-03	0.0003	2.612E-04	0.0001	4.650E-06	0.0000
Cs-134	1.021E-04	0.0000	1.046E-11	0.0000	0.000E+00	0.0000	2.210E-06	0.0000	5.641E-06	0.0000	6.347E-06	0.0000	2.442E-08	0.0000
Cs-137	5.102E-01	0.1031	9.969E-08	0.0000	0.000E+00	0.0000	2.081E-02	0.0042	5.312E-02	0.0107	5.977E-02	0.0121	2.300E-04	0.0000
Eu-152	3.096E-01	0.0626	2.117E-07	0.0000	0.000E+00	0.0000	2.662E-05	0.0000	8.559E-05	0.0000	3.917E-06	0.0000	9.136E-06	0.0000
Eu-154	1.375E-01	0.0278	1.116E-07	0.0000	0.000E+00	0.0000	1.598E-05	0.0000	5.137E-05	0.0000	2.351E-06	0.0000	5.483E-06	0.0000
Eu-155	5.462E-04	0.0001	2.231E-09	0.0000	0.000E+00	0.0000	3.537E-07	0.0000	1.137E-06	0.0000	5.203E-08	0.0000	1.214E-07	0.0000
Fe-55	0.000E+00	0.0000	7.866E-12	0.0000	0.000E+00	0.0000	5.792E-09	0.0000	2.376E-07	0.0000	1.043E-08	0.0000	2.612E-09	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	1.357E+00	0.2744	1.228E-06	0.0000	0.000E+00	0.0000	7.607E-04	0.0002	1.482E-07	0.0000	1.101E-06	0.0000	3.118E-05	0.0000
Ni-59	0.000E+00	0.0000	1.006E-08	0.0000	0.000E+00	0.0000	1.230E-04	0.0000	2.178E-05	0.0000	7.537E-04	0.0002	1.152E-06	0.0000
Ni-63	0.000E+00	0.0000	1.899E-08	0.0000	0.000E+00	0.0000	2.738E-04	0.0001	4.847E-05	0.0000	1.677E-03	0.0003	2.564E-06	0.0000
Np-237	2.691E-05	0.0000	2.672E-07	0.0000	0.000E+00	0.0000	7.308E-05	0.0000	8.269E-06	0.0000	4.466E-07	0.0000	3.145E-06	0.0000
Pm-147	4.066E-09	0.0000	5.677E-11	0.0000	0.000E+00	0.0000	1.094E-08	0.0000	2.121E-08	0.0000	2.166E-09	0.0000	2.238E-09	0.0000
Pu-238	3.946E-05	0.0000	1.798E-03	0.0004	0.000E+00	0.0000	4.539E-02	0.0092	5.539E-03	0.0011	2.516E-04	0.0001	2.160E-02	0.0044
Pu-239	9.185E-05	0.0000	2.501E-03	0.0005	0.000E+00	0.0000	6.385E-02	0.0129	7.790E-03	0.0016	3.530E-04	0.0001	3.038E-02	0.0061
Pu-240	4.861E-05	0.0000	2.496E-03	0.0005	0.000E+00	0.0000	6.370E-02	0.0129	7.772E-03	0.0016	3.522E-04	0.0001	3.031E-02	0.0061
Pu-241	3.469E-04	0.0001	7.270E-05	0.0000	0.000E+00	0.0000	1.847E-03	0.0004	1.334E-04	0.0000	2.176E-05	0.0000	8.788E-04	0.0002
Sb-125	4.475E-05	0.0000	4.675E-12	0.0000	0.000E+00	0.0000	4.164E-08	0.0000	9.273E-09	0.0000	2.565E-09	0.0000	1.616E-09	0.0000
Sr-90	7.739E-10	0.0000	8.020E-13	0.0000	0.000E+00	0.0000	9.593E-08	0.0000	1.367E-08	0.0000	3.404E-08	0.0000	1.379E-10	0.0000
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	4.261E+00	0.8614	1.305E-02	0.0026	0.000E+00	0.0000	3.548E-01	0.0717	8.535E-02	0.0173	6.870E-02	0.0139	1.581E-01	0.0320

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
 As mrem/yr and Fraction of Total Dose At t = 3.000E+01 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.493E+00	0.3018
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.058E-01	0.0214
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.573E-01	0.0722
C-14	1.561E-03	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	2.495E-03	0.0005	8.469E-04	0.0002	7.221E-04	0.0001	5.625E-03	0.0011
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.364E-01	0.0276
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.030E-02	0.0041
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.742E-02	0.0177
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.163E-04	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.442E-01	0.1302
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.097E-01	0.0626
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.376E-01	0.0278
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.479E-04	0.0001
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.565E-07	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.358E+00	0.2745
Ni-59	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.997E-04	0.0002
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.002E-03	0.0004
Np-237	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.121E-04	0.0000
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.068E-08	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.462E-02	0.0151
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.050E-01	0.0212
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.047E-01	0.0212
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.300E-03	0.0007
Sb-125	7.292E-06	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.356E-07	0.0000	4.629E-07	0.0000	1.732E-07	0.0000	5.327E-05	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.446E-07	0.0000
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.568E-03	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	2.496E-03	0.0005	8.473E-04	0.0002	7.223E-04	0.0001	4.946E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	8.946E-10	0.0000	1.565E-16	0.0000	0.000E+00	0.0000	5.364E-10	0.0000	3.199E-10	0.0000	7.442E-09	0.0000	6.204E-15	0.0000
Am-241	8.876E-11	0.0000	1.203E-12	0.0000	0.000E+00	0.0000	3.059E-07	0.0000	4.194E-09	0.0000	1.634E-09	0.0000	1.452E-11	0.0000
Am-243	8.082E-10	0.0000	1.391E-12	0.0000	0.000E+00	0.0000	3.553E-07	0.0000	4.884E-09	0.0000	1.894E-09	0.0000	1.686E-11	0.0000
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	8.282E-11	0.0000	1.682E-13	0.0000	0.000E+00	0.0000	4.265E-08	0.0000	4.191E-10	0.0000	2.611E-10	0.0000	2.024E-12	0.0000
Cm-244	1.518E-13	0.0000	3.658E-14	0.0000	0.000E+00	0.0000	9.259E-09	0.0000	1.107E-10	0.0000	5.209E-11	0.0000	4.394E-13	0.0000
Co-60	2.834E-14	0.0000	2.392E-21	0.0000	0.000E+00	0.0000	7.569E-13	0.0000	7.405E-12	0.0000	2.100E-12	0.0000	4.325E-19	0.0000
Cs-134	2.078E-23	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.327E-21	0.0000	1.449E-20	0.0000	2.559E-20	0.0000	1.457E-27	0.0000
Cs-137	2.918E-10	0.0000	1.643E-17	0.0000	0.000E+00	0.0000	3.449E-08	0.0000	3.817E-07	0.0000	6.744E-07	0.0000	3.791E-14	0.0000
Eu-152	1.289E-11	0.0000	2.356E-18	0.0000	0.000E+00	0.0000	2.974E-12	0.0000	2.619E-12	0.0000	2.363E-13	0.0000	1.017E-16	0.0000
Eu-154	7.095E-13	0.0000	1.602E-19	0.0000	0.000E+00	0.0000	2.303E-13	0.0000	2.027E-13	0.0000	1.828E-14	0.0000	7.873E-18	0.0000
Eu-155	6.494E-17	0.0000	3.514E-23	0.0000	0.000E+00	0.0000	5.592E-17	0.0000	4.911E-17	0.0000	4.428E-18	0.0000	1.911E-21	0.0000
Fe-55	0.000E+00	0.0000	1.609E-28	0.0000	0.000E+00	0.0000	1.189E-21	0.0000	1.091E-20	0.0000	9.166E-22	0.0000	5.345E-26	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	6.988E-10	0.0000	1.799E-16	0.0000	0.000E+00	0.0000	1.120E-09	0.0000	3.530E-13	0.0000	5.078E-12	0.0000	4.566E-15	0.0000
Ni-59	0.000E+00	0.0000	2.479E-18	0.0000	0.000E+00	0.0000	3.047E-10	0.0000	2.595E-10	0.0000	1.363E-08	0.0000	2.838E-16	0.0000
Ni-63	0.000E+00	0.0000	2.891E-18	0.0000	0.000E+00	0.0000	4.192E-10	0.0000	3.569E-10	0.0000	1.875E-08	0.0000	3.904E-16	0.0000
Np-237	2.083E-16	0.0000	5.795E-18	0.0000	0.000E+00	0.0000	3.814E-13	0.0000	6.564E-14	0.0000	2.276E-13	0.0000	1.780E-17	0.0000
Pm-147	2.485E-25	0.0000	9.552E-24	0.0000	0.000E+00	0.0000	8.154E-19	0.0000	3.806E-19	0.0000	8.033E-20	0.0000	3.483E-23	0.0000
Pu-238	1.908E-12	0.0000	7.102E-13	0.0000	0.000E+00	0.0000	1.798E-07	0.0000	4.756E-09	0.0000	4.149E-10	0.0000	8.533E-12	0.0000
Pu-239	1.826E-12	0.0000	1.708E-12	0.0000	0.000E+00	0.0000	4.372E-07	0.0000	1.156E-08	0.0000	9.997E-10	0.0000	2.075E-11	0.0000
Pu-240	3.992E-12	0.0000	1.695E-12	0.0000	0.000E+00	0.0000	4.338E-07	0.0000	1.148E-08	0.0000	9.921E-10	0.0000	2.059E-11	0.0000
Pu-241	3.167E-12	0.0000	4.318E-14	0.0000	0.000E+00	0.0000	1.098E-08	0.0000	1.514E-10	0.0000	5.845E-11	0.0000	5.211E-13	0.0000
Sb-125	3.116E-23	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.020E-23	0.0000	4.027E-23	0.0000	2.135E-23	0.0000	3.087E-28	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.965E-29	0.0000	1.100E-28	0.0000	3.059E-28	0.0000	0.000E+00	0.0000
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	2.890E-09	0.0000	6.955E-12	0.0000	0.000E+00	0.0000	1.812E-06	0.0000	4.202E-07	0.0000	7.206E-07	0.0000	8.427E-11	0.0000

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
 As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.193E-09	0.0000
Am-241	2.786E-04	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.180E-05	0.0000	2.980E-06	0.0000	1.689E-07	0.0000	3.038E-04	0.0000
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.629E-07	0.0000
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.342E-08	0.0000
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.422E-09	0.0000
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.029E-11	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.143E-20	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.091E-06	0.0000
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.871E-11	0.0000
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.161E-12	0.0000
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.744E-16	0.0000
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.301E-20	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.824E-09	0.0000
Ni-59	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.420E-08	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.953E-08	0.0000
Np-237	2.860E+01	0.9178	0.000E+00	0.0000	0.000E+00	0.0000	2.239E+00	0.0718	3.063E-01	0.0098	1.737E-02	0.0006	3.116E+01	1.0000
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.276E-18	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.850E-07	0.0000
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.498E-07	0.0000
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.463E-07	0.0000
Pu-241	4.728E-06	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.699E-07	0.0000	5.055E-08	0.0000	2.864E-09	0.0000	5.162E-06	0.0000
Sb-125	1.007E-12	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.396E-14	0.0000	6.394E-14	0.0000	2.394E-14	0.0000	1.169E-12	0.0000
Sr-90	3.981E-07	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.873E-08	0.0000	3.530E-08	0.0000	6.854E-08	0.0000	5.407E-07	0.0000
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	2.860E+01	0.9178	0.000E+00	0.0000	0.000E+00	0.0000	2.239E+00	0.0718	3.063E-01	0.0098	1.737E-02	0.0006	3.116E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Am-241	1.141E-04	0.7842	0.000E+00	0.0000	0.000E+00	0.0000	8.929E-06	0.0614	1.222E-06	0.0084	6.928E-08	0.0005	1.243E-04	0.8545
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ni-59	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Np-237	1.560E-05	0.1073	0.000E+00	0.0000	0.000E+00	0.0000	1.212E-06	0.0083	1.329E-07	0.0009	3.767E-07	0.0026	1.732E-05	0.1191
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Pu-241	3.521E-06	0.0242	0.000E+00	0.0000	0.000E+00	0.0000	2.757E-07	0.0019	3.771E-08	0.0003	2.139E-09	0.0000	3.837E-06	0.0264
Sb-125	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	1.332E-04	0.9157	0.000E+00	0.0000	0.000E+00	0.0000	1.042E-05	0.0716	1.392E-06	0.0096	4.481E-07	0.0031	1.454E-04	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ag-108m	4.342E-04	0.1145	0.000E+00	0.0000	0.000E+00	0.0000	3.382E-05	0.0089	1.488E-05	0.0039	2.505E-04	0.0660	7.334E-04	0.1934
Am-241	3.620E-05	0.0095	0.000E+00	0.0000	0.000E+00	0.0000	2.834E-06	0.0007	3.877E-07	0.0001	2.201E-08	0.0000	3.944E-05	0.0104
Am-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-243	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cm-244	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Eu-154	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Eu-155	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Fe-55	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Nb-94	2.626E-03	0.6924	0.000E+00	0.0000	0.000E+00	0.0000	2.057E-04	0.0542	5.062E-08	0.0000	5.103E-07	0.0001	2.832E-03	0.7467
Ni-59	5.984E-06	0.0016	0.000E+00	0.0000	0.000E+00	0.0000	4.811E-07	0.0001	3.170E-07	0.0001	1.145E-05	0.0030	1.824E-05	0.0048
Ni-63	1.622E-08	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.304E-09	0.0000	8.594E-10	0.0000	3.105E-08	0.0000	4.943E-08	0.0000
Np-237	1.584E-05	0.0042	0.000E+00	0.0000	0.000E+00	0.0000	1.231E-06	0.0003	1.328E-07	0.0000	3.756E-07	0.0001	1.758E-05	0.0046
Pm-147	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Pu-240	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Pu-241	1.408E-04	0.0371	0.000E+00	0.0000	0.000E+00	0.0000	1.094E-05	0.0029	9.720E-08	0.0000	2.781E-08	0.0000	1.518E-04	0.0400
Sb-125	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Tc-99	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	3.259E-03	0.8593	0.000E+00	0.0000	0.000E+00	0.0000	2.550E-04	0.0672	1.586E-05	0.0042	2.629E-04	0.0693	3.793E-03	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Ag-108m+D	Ag-108m+D	1.000E+00	3.378E+00	3.291E+00	3.123E+00	2.595E+00	1.493E+00	9.193E-09	0.000E+00	7.334E-04
Am-241	Am-241	1.000E+00	1.872E-01	1.839E-01	1.776E-01	1.565E-01	1.058E-01	3.119E-07	0.000E+00	0.000E+00
Am-241	Np-237+D	1.000E+00	2.937E-07	7.827E-07	1.371E-06	1.787E-06	1.283E-06	3.035E-04	1.243E-04	3.944E-05
Am-241	U-233	1.000E+00	9.825E-15	5.576E-14	2.256E-13	1.039E-12	2.491E-12	5.529E-11	4.462E-10	9.157E-10
Am-241	Th-229+D	1.000E+00	3.877E-18	5.334E-17	5.332E-16	8.907E-15	8.709E-14	2.396E-14	1.617E-12	1.503E-11
Am-241	ΣDSR(j)		1.872E-01	1.839E-01	1.776E-01	1.565E-01	1.058E-01	3.038E-04	1.243E-04	3.944E-05
Am-243+D	Am-243+D	9.829E-01	4.935E-01	4.883E-01	4.780E-01	4.429E-01	3.511E-01	3.555E-07	0.000E+00	0.000E+00
Am-243+D	Pu-239+D	9.829E-01	2.418E-06	7.153E-06	1.618E-05	4.329E-05	8.731E-05	1.133E-09	0.000E+00	0.000E+00
Am-243+D	U-235+D	9.829E-01	1.450E-15	1.008E-14	5.239E-14	4.406E-13	3.064E-12	7.501E-18	0.000E+00	0.000E+00
Am-243+D	Pa-231	9.829E-01	4.406E-20	6.822E-19	7.894E-18	1.891E-16	3.232E-15	6.204E-19	0.000E+00	0.000E+00
Am-243+D	Ac-227+D	9.829E-01	2.427E-22	6.726E-21	1.546E-19	1.036E-17	5.127E-16	4.481E-20	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		4.935E-01	4.883E-01	4.780E-01	4.430E-01	3.512E-01	3.567E-07	0.000E+00	0.000E+00
Am-243+D	Am-243+D	2.720E-03	1.366E-03	1.351E-03	1.323E-03	1.226E-03	9.718E-04	9.840E-10	0.000E+00	0.000E+00
Am-243+D	Pu-239+D	2.720E-03	6.692E-09	1.980E-08	4.478E-08	1.198E-07	2.416E-07	3.136E-12	0.000E+00	0.000E+00
Am-243+D	U-235+D	2.720E-03	4.013E-18	2.790E-17	1.450E-16	1.220E-15	8.481E-15	2.076E-20	0.000E+00	0.000E+00
Am-243+D	Pa-231	2.720E-03	1.219E-22	1.888E-21	2.185E-20	5.234E-19	8.946E-18	1.717E-21	0.000E+00	0.000E+00
Am-243+D	Ac-227+D1	2.720E-03	5.283E-25	1.639E-23	4.034E-22	2.824E-20	1.419E-18	1.211E-22	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		1.366E-03	1.351E-03	1.323E-03	1.226E-03	9.721E-04	9.871E-10	0.000E+00	0.000E+00
Am-243+D	Am-243+D	1.375E-02	6.905E-03	6.832E-03	6.688E-03	6.198E-03	4.913E-03	4.975E-09	0.000E+00	0.000E+00
Am-243+D	Pu-239+D	1.375E-02	3.383E-08	1.001E-07	2.264E-07	6.057E-07	1.222E-06	1.586E-11	0.000E+00	0.000E+00
Am-243+D	U-235+D	1.375E-02	2.029E-17	1.410E-16	7.331E-16	6.165E-15	4.288E-14	1.050E-19	0.000E+00	0.000E+00
Am-243+D	Pa-231	1.375E-02	6.165E-22	9.546E-21	1.105E-19	2.646E-18	4.523E-17	8.681E-21	0.000E+00	0.000E+00
Am-243+D	Ac-227+D2	1.375E-02	2.394E-24	7.436E-23	1.830E-21	1.279E-19	6.373E-18	6.107E-22	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		6.905E-03	6.832E-03	6.688E-03	6.198E-03	4.914E-03	4.990E-09	0.000E+00	0.000E+00
Am-243+D	Am-243+D	3.806E-05	1.911E-05	1.891E-05	1.851E-05	1.715E-05	1.360E-05	1.377E-11	0.000E+00	0.000E+00
Am-243+D	Pu-239+D	3.806E-05	9.363E-11	2.770E-10	6.265E-10	1.676E-09	3.381E-09	4.388E-14	0.000E+00	0.000E+00
Am-243+D	U-235+D	3.806E-05	5.615E-20	3.903E-19	2.029E-18	1.706E-17	1.187E-16	2.905E-22	0.000E+00	0.000E+00
Am-243+D	Pa-231	3.806E-05	1.706E-24	2.642E-23	3.057E-22	7.324E-21	1.252E-19	2.403E-23	0.000E+00	0.000E+00
Am-243+D	Ac-227+D3	3.806E-05	6.683E-27	2.076E-25	5.109E-24	3.569E-22	1.780E-20	1.690E-24	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		1.911E-05	1.891E-05	1.851E-05	1.715E-05	1.360E-05	1.381E-11	0.000E+00	0.000E+00
Am-243+D	Am-243+D	8.252E-07	4.143E-07	4.100E-07	4.013E-07	3.719E-07	2.948E-07	2.985E-13	0.000E+00	0.000E+00
Am-243+D	Pu-239+D	8.252E-07	2.030E-12	6.006E-12	1.358E-11	3.635E-11	7.330E-11	9.514E-16	0.000E+00	0.000E+00
Am-243+D	U-235+D	8.252E-07	1.217E-21	8.462E-21	4.399E-20	3.699E-19	2.573E-18	6.298E-24	0.000E+00	0.000E+00
Am-243+D	Pa-231	8.252E-07	3.699E-26	5.728E-25	6.627E-24	1.588E-22	2.714E-21	5.209E-25	0.000E+00	0.000E+00
Am-243+D	Ac-227+D4	8.252E-07	9.776E-29	3.052E-27	7.514E-26	5.195E-24	2.491E-22	3.498E-26	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		4.143E-07	4.100E-07	4.013E-07	3.719E-07	2.949E-07	2.994E-13	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Am-243+D	Am-243+D	2.284E-09	1.147E-09	1.135E-09	1.111E-09	1.029E-09	8.159E-10	8.261E-16	0.000E+00	0.000E+00
Am-243+D	Pu-239+D	2.284E-09	5.618E-15	1.662E-14	3.759E-14	1.006E-13	2.029E-13	2.633E-18	0.000E+00	0.000E+00
Am-243+D	U-235+D	2.284E-09	3.369E-24	2.342E-23	1.217E-22	1.024E-21	7.121E-21	1.743E-26	0.000E+00	0.000E+00
Am-243+D	Pa-231	2.284E-09	1.024E-28	1.585E-27	1.834E-26	4.395E-25	7.511E-24	1.442E-27	0.000E+00	0.000E+00
Am-243+D	Ac-227+D5	2.284E-09	2.740E-31	8.552E-30	2.105E-28	1.456E-26	6.990E-25	9.682E-29	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		1.147E-09	1.135E-09	1.111E-09	1.029E-09	8.161E-10	8.287E-16	0.000E+00	0.000E+00
Am-243+D	Am-243+D	5.901E-04	2.963E-04	2.931E-04	2.869E-04	2.659E-04	2.108E-04	2.134E-10	0.000E+00	0.000E+00
Am-243+D	Pu-239	5.901E-04	1.452E-09	4.295E-09	9.713E-09	2.599E-08	5.242E-08	6.803E-13	0.000E+00	0.000E+00
Am-243+D	U-235+D	5.901E-04	8.705E-19	6.051E-18	3.145E-17	2.645E-16	1.840E-15	4.503E-21	0.000E+00	0.000E+00
Am-243+D	Pa-231	5.901E-04	2.645E-23	4.096E-22	4.739E-21	1.135E-19	1.941E-18	3.725E-22	0.000E+00	0.000E+00
Am-243+D	Ac-227+D	5.901E-04	1.457E-25	4.038E-24	9.281E-23	6.222E-21	3.078E-19	2.690E-23	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		2.963E-04	2.932E-04	2.870E-04	2.660E-04	2.109E-04	2.141E-10	0.000E+00	0.000E+00
Am-243+D	Am-243+D	1.633E-06	8.200E-07	8.113E-07	7.942E-07	7.360E-07	5.834E-07	5.907E-13	0.000E+00	0.000E+00
Am-243+D	Pu-239	1.633E-06	4.017E-12	1.189E-11	2.688E-11	7.193E-11	1.451E-10	1.883E-15	0.000E+00	0.000E+00
Am-243+D	U-235+D	1.633E-06	2.409E-21	1.675E-20	8.705E-20	7.321E-19	5.092E-18	1.246E-23	0.000E+00	0.000E+00
Am-243+D	Pa-231	1.633E-06	7.321E-26	1.134E-24	1.312E-23	3.143E-22	5.371E-21	1.031E-24	0.000E+00	0.000E+00
Am-243+D	Ac-227+D1	1.633E-06	3.172E-28	9.839E-27	2.422E-25	1.695E-23	8.520E-22	7.269E-26	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		8.200E-07	8.113E-07	7.942E-07	7.361E-07	5.836E-07	5.926E-13	0.000E+00	0.000E+00
Am-243+D	Am-243+D	8.257E-06	4.146E-06	4.102E-06	4.015E-06	3.721E-06	2.950E-06	2.987E-12	0.000E+00	0.000E+00
Am-243+D	Pu-239	8.257E-06	2.031E-11	6.009E-11	1.359E-10	3.637E-10	7.334E-10	9.519E-15	0.000E+00	0.000E+00
Am-243+D	U-235+D	8.257E-06	1.218E-20	8.467E-20	4.401E-19	3.701E-18	2.574E-17	6.301E-23	0.000E+00	0.000E+00
Am-243+D	Pa-231	8.257E-06	3.701E-25	5.731E-24	6.631E-23	1.589E-21	2.715E-20	5.212E-24	0.000E+00	0.000E+00
Am-243+D	Ac-227+D2	8.257E-06	1.437E-27	4.464E-26	1.099E-24	7.676E-23	3.826E-21	3.667E-25	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		4.146E-06	4.102E-06	4.015E-06	3.721E-06	2.950E-06	2.996E-12	0.000E+00	0.000E+00
Am-243+D	Am-243+D	2.285E-08	1.147E-08	1.135E-08	1.111E-08	1.030E-08	8.164E-09	8.266E-15	0.000E+00	0.000E+00
Am-243+D	Pu-239	2.285E-08	5.621E-14	1.663E-13	3.761E-13	1.006E-12	2.030E-12	2.635E-17	0.000E+00	0.000E+00
Am-243+D	U-235+D	2.285E-08	3.371E-23	2.343E-22	1.218E-21	1.024E-20	7.125E-20	1.744E-25	0.000E+00	0.000E+00
Am-243+D	Pa-231	2.285E-08	1.024E-27	1.586E-26	1.835E-25	4.397E-24	7.515E-23	1.442E-26	0.000E+00	0.000E+00
Am-243+D	Ac-227+D3	2.285E-08	4.012E-30	1.246E-28	3.067E-27	2.143E-25	1.069E-23	1.015E-27	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		1.147E-08	1.135E-08	1.111E-08	1.030E-08	8.166E-09	8.292E-15	0.000E+00	0.000E+00
Am-243+D	Am-243+D	4.954E-10	2.488E-10	2.461E-10	2.409E-10	2.233E-10	1.770E-10	1.792E-16	0.000E+00	0.000E+00
Am-243+D	Pu-239	4.954E-10	1.219E-15	3.606E-15	8.155E-15	2.182E-14	4.401E-14	5.712E-19	0.000E+00	0.000E+00
Am-243+D	U-235+D	4.954E-10	7.309E-25	5.080E-24	2.641E-23	2.221E-22	1.545E-21	3.781E-27	0.000E+00	0.000E+00
Am-243+D	Pa-231	4.954E-10	2.221E-29	3.439E-28	3.979E-27	9.533E-26	1.629E-24	3.127E-28	0.000E+00	0.000E+00
Am-243+D	Ac-227+D4	4.954E-10	5.869E-32	1.832E-30	4.511E-29	3.119E-27	1.495E-25	2.100E-29	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		2.488E-10	2.461E-10	2.409E-10	2.233E-10	1.770E-10	1.798E-16	0.000E+00	0.000E+00

Summary : RESRAD Default

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Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Am-243+D	Am-243+D	1.371E-12	6.885E-13	6.812E-13	6.668E-13	6.179E-13	4.899E-13	4.960E-19	0.000E+00	0.000E+00
Am-243+D	Pu-239	1.371E-12	3.373E-18	9.979E-18	2.257E-17	6.039E-17	1.218E-16	1.581E-21	0.000E+00	0.000E+00
Am-243+D	U-235+D	1.371E-12	2.023E-27	1.406E-26	7.309E-26	6.147E-25	4.275E-24	1.046E-29	0.000E+00	0.000E+00
Am-243+D	Pa-231	1.371E-12	6.146E-32	9.517E-31	1.101E-29	2.638E-28	4.509E-27	8.655E-31	0.000E+00	0.000E+00
Am-243+D	Ac-227+D5	1.371E-12	1.645E-34	5.134E-33	1.264E-31	8.742E-30	4.196E-28	5.812E-32	0.000E+00	0.000E+00
Am-243+D	ΣDSR(j)		6.885E-13	6.812E-13	6.668E-13	6.180E-13	4.900E-13	4.975E-19	0.000E+00	0.000E+00
C-14	C-14	1.000E+00	2.791E-01	1.931E-10	1.806E-30	0.000E+00	5.625E-03	0.000E+00	0.000E+00	0.000E+00
Cm-243	Cm-243	2.359E-03	7.754E-04	7.536E-04	7.117E-04	5.819E-04	3.216E-04	1.011E-10	0.000E+00	0.000E+00
Cm-243	Am-243+D	2.359E-03	5.527E-08	1.630E-07	3.660E-07	9.583E-07	1.870E-06	3.772E-12	0.000E+00	0.000E+00
Cm-243	Pu-239+D	2.359E-03	1.808E-13	1.242E-12	6.291E-12	4.811E-11	2.505E-10	7.468E-15	0.000E+00	0.000E+00
Cm-243	U-235+D	2.359E-03	8.148E-23	1.209E-21	1.376E-20	3.331E-19	6.184E-18	3.830E-23	0.000E+00	0.000E+00
Cm-243	Pa-231	2.359E-03	1.942E-27	6.248E-26	1.560E-24	1.079E-22	4.988E-21	2.517E-24	0.000E+00	0.000E+00
Cm-243	Ac-227+D	2.359E-03	9.390E-30	5.232E-28	2.519E-26	4.838E-24	6.613E-22	1.624E-25	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		7.754E-04	7.537E-04	7.121E-04	5.828E-04	3.235E-04	1.049E-10	0.000E+00	0.000E+00
Cm-243	Cm-243	6.529E-06	2.146E-06	2.086E-06	1.970E-06	1.610E-06	8.902E-07	2.798E-13	0.000E+00	0.000E+00
Cm-243	Am-243+D	6.529E-06	1.530E-10	4.511E-10	1.013E-09	2.652E-09	5.175E-09	1.044E-14	0.000E+00	0.000E+00
Cm-243	Pu-239+D	6.529E-06	5.004E-16	3.438E-15	1.741E-14	1.332E-13	6.932E-13	2.067E-17	0.000E+00	0.000E+00
Cm-243	U-235+D	6.529E-06	2.255E-25	3.347E-24	3.809E-23	9.219E-22	1.712E-20	1.060E-25	0.000E+00	0.000E+00
Cm-243	Pa-231	6.529E-06	5.374E-30	1.729E-28	4.317E-27	2.985E-25	1.380E-23	6.965E-27	0.000E+00	0.000E+00
Cm-243	Ac-227+D1	6.529E-06	1.973E-32	1.244E-30	6.479E-29	1.311E-26	1.827E-24	4.375E-28	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		2.146E-06	2.086E-06	1.971E-06	1.613E-06	8.954E-07	2.903E-13	0.000E+00	0.000E+00
Cm-243	Cm-243	3.301E-05	1.085E-05	1.054E-05	9.958E-06	8.141E-06	4.500E-06	1.415E-12	0.000E+00	0.000E+00
Cm-243	Am-243+D	3.301E-05	7.734E-10	2.281E-09	5.121E-09	1.341E-08	2.617E-08	5.278E-14	0.000E+00	0.000E+00
Cm-243	Pu-239+D	3.301E-05	2.530E-15	1.738E-14	8.803E-14	6.732E-13	3.505E-12	1.045E-16	0.000E+00	0.000E+00
Cm-243	U-235+D	3.301E-05	1.140E-24	1.692E-23	1.926E-22	4.661E-21	8.653E-20	5.359E-25	0.000E+00	0.000E+00
Cm-243	Pa-231	3.301E-05	2.717E-29	8.743E-28	2.182E-26	1.509E-24	6.979E-23	3.521E-26	0.000E+00	0.000E+00
Cm-243	Ac-227+D2	3.301E-05	8.933E-32	5.641E-30	2.939E-28	5.937E-26	8.207E-24	2.207E-27	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		1.085E-05	1.055E-05	9.964E-06	8.155E-06	4.527E-06	1.467E-12	0.000E+00	0.000E+00
Cm-243	Cm-243	9.135E-08	3.003E-08	2.918E-08	2.756E-08	2.253E-08	1.246E-08	3.915E-15	0.000E+00	0.000E+00
Cm-243	Am-243+D	9.135E-08	2.140E-12	6.312E-12	1.417E-11	3.711E-11	7.242E-11	1.461E-16	0.000E+00	0.000E+00
Cm-243	Pu-239+D	9.135E-08	7.002E-18	4.811E-17	2.436E-16	1.863E-15	9.699E-15	2.892E-19	0.000E+00	0.000E+00
Cm-243	U-235+D	9.135E-08	3.155E-27	4.683E-26	5.330E-25	1.290E-23	2.395E-22	1.483E-27	0.000E+00	0.000E+00
Cm-243	Pa-231	9.135E-08	7.519E-32	2.420E-30	6.040E-29	4.177E-27	1.932E-25	9.746E-29	0.000E+00	0.000E+00
Cm-243	Ac-227+D3	9.135E-08	2.494E-34	1.575E-32	8.204E-31	1.657E-28	2.292E-26	6.108E-30	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		3.003E-08	2.919E-08	2.758E-08	2.257E-08	1.253E-08	4.061E-15	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Cm-243	Cm-243	1.981E-09	6.510E-10	6.327E-10	5.975E-10	4.885E-10	2.700E-10	8.488E-17	0.000E+00	0.000E+00
Cm-243	Am-243+D	1.981E-09	4.641E-14	1.368E-13	3.073E-13	8.045E-13	1.570E-12	3.167E-18	0.000E+00	0.000E+00
Cm-243	Pu-239+D	1.981E-09	1.518E-19	1.043E-18	5.282E-18	4.039E-17	2.103E-16	6.270E-21	0.000E+00	0.000E+00
Cm-243	U-235+D	1.981E-09	6.841E-29	1.015E-27	1.156E-26	2.797E-25	5.192E-24	3.215E-29	0.000E+00	0.000E+00
Cm-243	Pa-231	1.981E-09	1.630E-33	5.246E-32	1.310E-30	9.055E-29	4.188E-27	2.113E-30	0.000E+00	0.000E+00
Cm-243	Ac-227+D4	1.981E-09	3.639E-36	2.312E-34	1.206E-32	2.411E-30	3.207E-28	1.264E-31	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		6.510E-10	6.328E-10	5.978E-10	4.893E-10	2.716E-10	8.805E-17	0.000E+00	0.000E+00
Cm-243	Cm-243	5.481E-12	1.802E-12	1.751E-12	1.654E-12	1.352E-12	7.474E-13	2.349E-19	0.000E+00	0.000E+00
Cm-243	Am-243+D	5.481E-12	1.284E-16	3.787E-16	8.505E-16	2.227E-15	4.345E-15	8.765E-21	0.000E+00	0.000E+00
Cm-243	Pu-239+D	5.481E-12	4.202E-22	2.887E-21	1.462E-20	1.118E-19	5.820E-19	1.735E-23	0.000E+00	0.000E+00
Cm-243	U-235+D	5.481E-12	1.893E-31	2.810E-30	3.198E-29	7.740E-28	1.437E-26	8.899E-32	0.000E+00	0.000E+00
Cm-243	Pa-231	5.481E-12	4.512E-36	1.452E-34	3.624E-33	2.506E-31	1.159E-29	5.848E-33	0.000E+00	0.000E+00
Cm-243	Ac-227+D5	5.481E-12	1.020E-38	6.479E-37	3.378E-35	6.759E-33	9.000E-31	3.498E-34	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		1.802E-12	1.751E-12	1.655E-12	1.354E-12	7.517E-13	2.437E-19	0.000E+00	0.000E+00
Cm-243	Cm-243	1.416E-06	4.655E-07	4.524E-07	4.273E-07	3.493E-07	1.931E-07	6.069E-14	0.000E+00	0.000E+00
Cm-243	Am-243+D	1.416E-06	3.318E-11	9.785E-11	2.197E-10	5.753E-10	1.123E-09	2.265E-15	0.000E+00	0.000E+00
Cm-243	Pu-239	1.416E-06	1.026E-16	7.271E-16	3.735E-15	2.878E-14	1.502E-13	4.481E-18	0.000E+00	0.000E+00
Cm-243	U-235+D	1.416E-06	4.892E-26	7.260E-25	8.263E-24	2.000E-22	3.713E-21	2.299E-26	0.000E+00	0.000E+00
Cm-243	Pa-231	1.416E-06	1.166E-30	3.751E-29	9.364E-28	6.475E-26	2.995E-24	1.511E-27	0.000E+00	0.000E+00
Cm-243	Ac-227+D	1.416E-06	5.638E-33	3.141E-31	1.512E-29	2.904E-27	3.970E-25	9.748E-29	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		4.655E-07	4.525E-07	4.275E-07	3.499E-07	1.942E-07	6.296E-14	0.000E+00	0.000E+00
Cm-243	Cm-243	3.920E-09	1.288E-09	1.252E-09	1.183E-09	9.668E-10	5.344E-10	1.680E-16	0.000E+00	0.000E+00
Cm-243	Am-243+D	3.920E-09	9.184E-14	2.708E-13	6.082E-13	1.592E-12	3.107E-12	6.268E-18	0.000E+00	0.000E+00
Cm-243	Pu-239	3.920E-09	2.839E-19	2.012E-18	1.034E-17	7.965E-17	4.157E-16	1.240E-20	0.000E+00	0.000E+00
Cm-243	U-235+D	3.920E-09	1.354E-28	2.009E-27	2.287E-26	5.535E-25	1.028E-23	6.364E-29	0.000E+00	0.000E+00
Cm-243	Pa-231	3.920E-09	3.226E-33	1.038E-31	2.592E-30	1.792E-28	8.288E-27	4.182E-30	0.000E+00	0.000E+00
Cm-243	Ac-227+D1	3.920E-09	1.184E-35	7.467E-34	3.889E-32	7.872E-30	1.097E-27	2.627E-31	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		1.288E-09	1.252E-09	1.183E-09	9.684E-10	5.375E-10	1.743E-16	0.000E+00	0.000E+00
Cm-243	Cm-243	1.982E-08	6.513E-09	6.330E-09	5.979E-09	4.888E-09	2.702E-09	8.493E-16	0.000E+00	0.000E+00
Cm-243	Am-243+D	1.982E-08	4.643E-13	1.369E-12	3.075E-12	8.050E-12	1.571E-11	3.169E-17	0.000E+00	0.000E+00
Cm-243	Pu-239	1.982E-08	1.435E-18	1.017E-17	5.226E-17	4.027E-16	2.101E-15	6.270E-20	0.000E+00	0.000E+00
Cm-243	U-235+D	1.982E-08	6.845E-28	1.016E-26	1.156E-25	2.798E-24	5.195E-23	3.217E-28	0.000E+00	0.000E+00
Cm-243	Pa-231	1.982E-08	1.631E-32	5.249E-31	1.310E-29	9.060E-28	4.190E-26	2.114E-29	0.000E+00	0.000E+00
Cm-243	Ac-227+D2	1.982E-08	5.363E-35	3.387E-33	1.765E-31	3.564E-29	4.927E-27	1.325E-30	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		6.514E-09	6.332E-09	5.982E-09	4.896E-09	2.718E-09	8.810E-16	0.000E+00	0.000E+00
Cm-243	Cm-243	5.484E-11	1.803E-11	1.752E-11	1.655E-11	1.353E-11	7.478E-12	2.350E-18	0.000E+00	0.000E+00
Cm-243	Am-243+D	5.484E-11	1.285E-15	3.789E-15	8.510E-15	2.228E-14	4.348E-14	8.770E-20	0.000E+00	0.000E+00
Cm-243	Pu-239	5.484E-11	3.973E-21	2.816E-20	1.446E-19	1.114E-18	5.816E-18	1.735E-22	0.000E+00	0.000E+00
Cm-243	U-235+D	5.484E-11	1.894E-30	2.812E-29	3.200E-28	7.744E-27	1.438E-25	8.904E-31	0.000E+00	0.000E+00
Cm-243	Pa-231	5.484E-11	4.514E-35	1.453E-33	3.626E-32	2.508E-30	1.160E-28	5.851E-32	0.000E+00	0.000E+00
Cm-243	Ac-227+D3	5.484E-11	1.497E-37	9.454E-36	4.925E-34	9.949E-32	1.376E-29	3.667E-33	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		1.803E-11	1.752E-11	1.656E-11	1.355E-11	7.521E-12	2.438E-18	0.000E+00	0.000E+00

Summary : RESRAD Default

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Dose/Source Ratios Summed Over All Pathways
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Cm-243	Cm-243	1.189E-12	3.908E-13	3.798E-13	3.587E-13	2.933E-13	1.621E-13	5.096E-20	0.000E+00	0.000E+00
Cm-243	Am-243+D	1.189E-12	2.786E-17	8.215E-17	1.845E-16	4.830E-16	9.426E-16	1.901E-21	0.000E+00	0.000E+00
Cm-243	Pu-239	1.189E-12	8.613E-23	6.105E-22	3.136E-21	2.416E-20	1.261E-19	3.762E-24	0.000E+00	0.000E+00
Cm-243	U-235+D	1.189E-12	4.107E-32	6.096E-31	6.938E-30	1.679E-28	3.117E-27	1.930E-32	0.000E+00	0.000E+00
Cm-243	Pa-231	1.189E-12	9.787E-37	3.149E-35	7.862E-34	5.436E-32	2.514E-30	1.269E-33	0.000E+00	0.000E+00
Cm-243	Ac-227+D4	1.189E-12	2.184E-39	1.388E-37	7.238E-36	1.448E-33	1.925E-31	7.589E-35	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		3.909E-13	3.799E-13	3.589E-13	2.938E-13	1.631E-13	5.286E-20	0.000E+00	0.000E+00
Cm-243	Cm-243	3.291E-15	1.082E-15	1.051E-15	9.929E-16	8.117E-16	4.487E-16	1.410E-22	0.000E+00	0.000E+00
Cm-243	Am-243+D	3.291E-15	7.711E-20	2.274E-19	5.106E-19	1.337E-18	2.609E-18	5.262E-24	0.000E+00	0.000E+00
Cm-243	Pu-239	3.291E-15	2.384E-25	1.690E-24	8.679E-24	6.687E-23	3.490E-22	1.041E-26	0.000E+00	0.000E+00
Cm-243	U-235+D	3.291E-15	1.137E-34	1.687E-33	1.920E-32	4.647E-31	8.627E-30	5.343E-35	0.000E+00	0.000E+00
Cm-243	Pa-231	3.291E-15	2.707E-39	8.717E-38	2.176E-36	1.505E-34	6.958E-33	3.511E-36	0.000E+00	0.000E+00
Cm-243	Ac-227+D5	3.291E-15	5.709E-42	3.883E-40	2.028E-38	4.058E-36	5.403E-34	2.100E-37	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		1.082E-15	1.051E-15	9.934E-16	8.130E-16	4.513E-16	1.463E-22	0.000E+00	0.000E+00
Cm-243	Cm-243	9.805E-01	3.223E-01	3.132E-01	2.958E-01	2.419E-01	1.337E-01	4.202E-08	0.000E+00	0.000E+00
Cm-243	Pu-239+D	9.805E-01	2.398E-06	7.039E-06	1.565E-05	3.944E-05	6.759E-05	5.489E-10	0.000E+00	0.000E+00
Cm-243	U-235+D	9.805E-01	1.440E-15	9.961E-15	5.120E-14	4.136E-13	2.575E-12	4.500E-18	0.000E+00	0.000E+00
Cm-243	Pa-231	9.805E-01	4.380E-20	6.757E-19	7.753E-18	1.803E-16	2.836E-15	4.229E-19	0.000E+00	0.000E+00
Cm-243	Ac-227+D	9.805E-01	2.414E-22	6.669E-21	1.523E-19	9.963E-18	4.600E-16	3.205E-20	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		3.223E-01	3.132E-01	2.958E-01	2.419E-01	1.338E-01	4.257E-08	0.000E+00	0.000E+00
Cm-243	Cm-243	2.714E-03	8.920E-04	8.669E-04	8.188E-04	6.694E-04	3.700E-04	1.163E-10	0.000E+00	0.000E+00
Cm-243	Pu-239+D	2.714E-03	6.636E-09	1.948E-08	4.331E-08	1.092E-07	1.871E-07	1.519E-12	0.000E+00	0.000E+00
Cm-243	U-235+D	2.714E-03	3.986E-18	2.757E-17	1.417E-16	1.145E-15	7.128E-15	1.245E-20	0.000E+00	0.000E+00
Cm-243	Pa-231	2.714E-03	1.212E-22	1.870E-21	2.146E-20	4.989E-19	7.849E-18	1.171E-21	0.000E+00	0.000E+00
Cm-243	Ac-227+D1	2.714E-03	5.255E-25	1.625E-23	3.974E-22	2.715E-20	1.273E-18	8.671E-23	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		8.920E-04	8.669E-04	8.188E-04	6.695E-04	3.702E-04	1.178E-10	0.000E+00	0.000E+00
Cm-243	Cm-243	1.372E-02	4.510E-03	4.383E-03	4.139E-03	3.384E-03	1.871E-03	5.880E-10	0.000E+00	0.000E+00
Cm-243	Pu-239+D	1.372E-02	3.355E-08	9.850E-08	2.190E-07	5.519E-07	9.458E-07	7.680E-12	0.000E+00	0.000E+00
Cm-243	U-235+D	1.372E-02	2.015E-17	1.394E-16	7.163E-16	5.788E-15	3.604E-14	6.297E-20	0.000E+00	0.000E+00
Cm-243	Pa-231	1.372E-02	6.129E-22	9.455E-21	1.085E-19	2.522E-18	3.968E-17	5.918E-21	0.000E+00	0.000E+00
Cm-243	Ac-227+D2	1.372E-02	2.381E-24	7.374E-23	1.803E-21	1.229E-19	5.719E-18	4.374E-22	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		4.510E-03	4.383E-03	4.140E-03	3.385E-03	1.872E-03	5.957E-10	0.000E+00	0.000E+00
Cm-243	Cm-243	3.797E-05	1.248E-05	1.213E-05	1.146E-05	9.366E-06	5.177E-06	1.627E-12	0.000E+00	0.000E+00
Cm-243	Pu-239+D	3.797E-05	9.286E-11	2.726E-10	6.060E-10	1.527E-09	2.618E-09	2.126E-14	0.000E+00	0.000E+00
Cm-243	U-235+D	3.797E-05	5.577E-20	3.857E-19	1.983E-18	1.602E-17	9.974E-17	1.743E-22	0.000E+00	0.000E+00
Cm-243	Pa-231	3.797E-05	1.696E-24	2.617E-23	3.002E-22	6.981E-21	1.098E-19	1.638E-23	0.000E+00	0.000E+00
Cm-243	Ac-227+D3	3.797E-05	6.647E-27	2.058E-25	5.033E-24	3.432E-22	1.597E-20	1.211E-24	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		1.248E-05	1.213E-05	1.146E-05	9.368E-06	5.180E-06	1.649E-12	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Cm-243	Cm-243	8.232E-07	2.706E-07	2.630E-07	2.484E-07	2.031E-07	1.122E-07	3.528E-14	0.000E+00	0.000E+00
Cm-243	Pu-239+D	8.232E-07	2.013E-12	5.910E-12	1.314E-11	3.311E-11	5.675E-11	4.608E-16	0.000E+00	0.000E+00
Cm-243	U-235+D	8.232E-07	1.209E-21	8.363E-21	4.298E-20	3.473E-19	2.162E-18	3.778E-24	0.000E+00	0.000E+00
Cm-243	Pa-231	8.232E-07	3.678E-26	5.673E-25	6.510E-24	1.514E-22	2.381E-21	3.551E-25	0.000E+00	0.000E+00
Cm-243	Ac-227+D4	8.232E-07	9.724E-29	3.027E-27	7.402E-26	4.995E-24	2.235E-22	2.505E-26	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		2.706E-07	2.630E-07	2.484E-07	2.031E-07	1.123E-07	3.574E-14	0.000E+00	0.000E+00
Cm-243	Cm-243	2.278E-09	7.489E-10	7.279E-10	6.874E-10	5.620E-10	3.107E-10	9.765E-17	0.000E+00	0.000E+00
Cm-243	Pu-239+D	2.278E-09	5.572E-15	1.636E-14	3.636E-14	9.165E-14	1.571E-13	1.275E-18	0.000E+00	0.000E+00
Cm-243	U-235+D	2.278E-09	3.346E-24	2.315E-23	1.190E-22	9.611E-22	5.985E-21	1.046E-26	0.000E+00	0.000E+00
Cm-243	Pa-231	2.278E-09	1.018E-28	1.570E-27	1.802E-26	4.189E-25	6.590E-24	9.828E-28	0.000E+00	0.000E+00
Cm-243	Ac-227+D5	2.278E-09	2.725E-31	8.481E-30	2.074E-28	1.400E-26	6.272E-25	6.934E-29	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		7.489E-10	7.279E-10	6.875E-10	5.621E-10	3.108E-10	9.892E-17	0.000E+00	0.000E+00
Cm-243	Cm-243	5.887E-04	1.935E-04	1.881E-04	1.776E-04	1.452E-04	8.026E-05	2.523E-11	0.000E+00	0.000E+00
Cm-243	Pu-239	5.887E-04	1.440E-09	4.226E-09	9.395E-09	2.368E-08	4.058E-08	3.295E-13	0.000E+00	0.000E+00
Cm-243	U-235+D	5.887E-04	8.646E-19	5.980E-18	3.074E-17	2.483E-16	1.546E-15	2.702E-21	0.000E+00	0.000E+00
Cm-243	Pa-231	5.887E-04	2.630E-23	4.057E-22	4.655E-21	1.082E-19	1.703E-18	2.539E-22	0.000E+00	0.000E+00
Cm-243	Ac-227+D	5.887E-04	1.449E-25	4.004E-24	9.141E-23	5.981E-21	2.761E-19	1.924E-23	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		1.935E-04	1.881E-04	1.776E-04	1.452E-04	8.031E-05	2.556E-11	0.000E+00	0.000E+00
Cm-243	Cm-243	1.629E-06	5.355E-07	5.205E-07	4.916E-07	4.019E-07	2.221E-07	6.982E-14	0.000E+00	0.000E+00
Cm-243	Pu-239	1.629E-06	3.984E-12	1.170E-11	2.600E-11	6.553E-11	1.123E-10	9.120E-16	0.000E+00	0.000E+00
Cm-243	U-235+D	1.629E-06	2.393E-21	1.655E-20	8.506E-20	6.873E-19	4.279E-18	7.477E-24	0.000E+00	0.000E+00
Cm-243	Pa-231	1.629E-06	7.278E-26	1.123E-24	1.288E-23	2.995E-22	4.712E-21	7.028E-25	0.000E+00	0.000E+00
Cm-243	Ac-227+D1	1.629E-06	3.155E-28	9.758E-27	2.386E-25	1.630E-23	7.645E-22	5.206E-26	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		5.355E-07	5.205E-07	4.916E-07	4.019E-07	2.223E-07	7.074E-14	0.000E+00	0.000E+00
Cm-243	Cm-243	8.237E-06	2.707E-06	2.631E-06	2.485E-06	2.032E-06	1.123E-06	3.530E-13	0.000E+00	0.000E+00
Cm-243	Pu-239	8.237E-06	2.014E-11	5.913E-11	1.315E-10	3.313E-10	5.678E-10	4.611E-15	0.000E+00	0.000E+00
Cm-243	U-235+D	8.237E-06	1.210E-20	8.367E-20	4.301E-19	3.475E-18	2.164E-17	3.780E-23	0.000E+00	0.000E+00
Cm-243	Pa-231	8.237E-06	3.680E-25	5.676E-24	6.513E-23	1.514E-21	2.382E-20	3.553E-24	0.000E+00	0.000E+00
Cm-243	Ac-227+D2	8.237E-06	1.430E-27	4.427E-26	1.083E-24	7.380E-23	3.433E-21	2.626E-25	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		2.707E-06	2.631E-06	2.485E-06	2.032E-06	1.124E-06	3.576E-13	0.000E+00	0.000E+00
Cm-243	Cm-243	2.280E-08	7.493E-09	7.282E-09	6.878E-09	5.623E-09	3.108E-09	9.770E-16	0.000E+00	0.000E+00
Cm-243	Pu-239	2.280E-08	5.575E-14	1.637E-13	3.638E-13	9.170E-13	1.571E-12	1.276E-17	0.000E+00	0.000E+00
Cm-243	U-235+D	2.280E-08	3.348E-23	2.316E-22	1.190E-21	9.617E-21	5.988E-20	1.046E-25	0.000E+00	0.000E+00
Cm-243	Pa-231	2.280E-08	1.018E-27	1.571E-26	1.803E-25	4.191E-24	6.594E-23	9.833E-27	0.000E+00	0.000E+00
Cm-243	Ac-227+D3	2.280E-08	3.991E-30	1.236E-28	3.022E-27	2.060E-25	9.589E-24	7.268E-28	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		7.493E-09	7.283E-09	6.878E-09	5.624E-09	3.110E-09	9.898E-16	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Cm-243	Cm-243	4.942E-10	1.625E-10	1.579E-10	1.491E-10	1.219E-10	6.739E-11	2.118E-17	0.000E+00	0.000E+00
Cm-243	Pu-239	4.942E-10	1.209E-15	3.548E-15	7.888E-15	1.988E-14	3.407E-14	2.767E-19	0.000E+00	0.000E+00
Cm-243	U-235+D	4.942E-10	7.259E-25	5.021E-24	2.581E-23	2.085E-22	1.298E-21	2.268E-27	0.000E+00	0.000E+00
Cm-243	Pa-231	4.942E-10	2.208E-29	3.406E-28	3.908E-27	9.087E-26	1.430E-24	2.132E-28	0.000E+00	0.000E+00
Cm-243	Ac-227+D4	4.942E-10	5.838E-32	1.817E-30	4.444E-29	2.999E-27	1.342E-25	1.504E-29	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		1.625E-10	1.579E-10	1.491E-10	1.219E-10	6.742E-11	2.146E-17	0.000E+00	0.000E+00
Cm-243	Cm-243	1.368E-12	4.496E-13	4.370E-13	4.127E-13	3.374E-13	1.865E-13	5.862E-20	0.000E+00	0.000E+00
Cm-243	Pu-239	1.368E-12	3.345E-18	9.820E-18	2.183E-17	5.502E-17	9.429E-17	7.657E-22	0.000E+00	0.000E+00
Cm-243	U-235+D	1.368E-12	2.009E-27	1.390E-26	7.142E-26	5.770E-25	3.593E-24	6.278E-30	0.000E+00	0.000E+00
Cm-243	Pa-231	1.368E-12	6.111E-32	9.427E-31	1.082E-29	2.515E-28	3.956E-27	5.900E-31	0.000E+00	0.000E+00
Cm-243	Ac-227+D5	1.368E-12	1.636E-34	5.091E-33	1.245E-31	8.405E-30	3.765E-28	4.163E-32	0.000E+00	0.000E+00
Cm-243	ΣDSR(j)		4.496E-13	4.370E-13	4.127E-13	3.375E-13	1.866E-13	5.939E-20	0.000E+00	0.000E+00
Cm-244	Cm-244	1.371E-06	1.266E-07	1.205E-07	1.092E-07	7.717E-08	2.754E-08	1.110E-14	0.000E+00	0.000E+00
Cm-244	Cm-244	5.750E-08	5.308E-09	5.055E-09	4.582E-09	3.237E-09	1.155E-09	4.654E-16	0.000E+00	0.000E+00
Cm-244	Pu-240	5.750E-08	5.138E-13	1.499E-12	3.286E-12	7.896E-12	1.201E-11	7.633E-17	0.000E+00	0.000E+00
Cm-244	ΣDSR(j)		5.309E-09	5.056E-09	4.585E-09	3.245E-09	1.167E-09	5.418E-16	0.000E+00	0.000E+00
Cm-244	Cm-244	1.000E+00	9.232E-02	8.791E-02	7.968E-02	5.629E-02	2.009E-02	8.095E-09	0.000E+00	0.000E+00
Cm-244	Pu-240	1.000E+00	8.936E-06	2.607E-05	5.714E-05	1.373E-04	2.089E-04	1.328E-09	0.000E+00	0.000E+00
Cm-244	U-236	1.000E+00	1.680E-14	1.169E-13	5.905E-13	4.367E-12	2.062E-11	3.644E-16	0.000E+00	0.000E+00
Cm-244	Th-232	1.000E+00	7.406E-25	1.057E-23	1.159E-22	2.582E-21	3.821E-20	2.525E-24	0.000E+00	0.000E+00
Cm-244	Ra-228+D	1.000E+00	4.716E-25	1.456E-23	3.459E-22	2.093E-20	7.258E-19	1.091E-22	0.000E+00	0.000E+00
Cm-244	Th-228+D	1.000E+00	2.959E-26	1.705E-24	7.685E-23	1.016E-20	5.897E-19	1.035E-24	0.000E+00	0.000E+00
Cm-244	ΣDSR(j)		9.233E-02	8.793E-02	7.974E-02	5.643E-02	2.030E-02	9.422E-09	0.000E+00	0.000E+00
Co-60	Co-60	1.000E+00	5.280E+00	4.612E+00	3.517E+00	1.358E+00	8.742E-02	1.029E-11	0.000E+00	0.000E+00
Cs-134	Cs-134	1.000E+00	3.323E+00	2.363E+00	1.195E+00	1.096E-01	1.163E-04	4.143E-20	0.000E+00	0.000E+00
Cs-137+D	Cs-137+D	1.000E+00	1.586E+00	1.541E+00	1.454E+00	1.185E+00	6.442E-01	1.091E-06	0.000E+00	0.000E+00
Eu-152	Eu-152	7.210E-01	1.679E+00	1.572E+00	1.377E+00	8.647E-01	2.233E-01	1.349E-11	0.000E+00	0.000E+00
Eu-152	Eu-152	2.790E-01	6.497E-01	6.082E-01	5.328E-01	3.346E-01	8.642E-02	5.221E-12	0.000E+00	0.000E+00
Eu-152	Gd-152	2.790E-01	1.902E-17	5.475E-17	1.174E-16	2.643E-16	3.534E-16	1.342E-21	0.000E+00	0.000E+00
Eu-152	Sm-148	2.790E-01	5.694E-34	3.876E-33	1.926E-32	1.383E-31	6.296E-31	1.097E-35	0.000E+00	0.000E+00
Eu-152	Nd-144	2.790E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Eu-152	ΣDSR(j)		6.497E-01	6.082E-01	5.328E-01	3.346E-01	8.642E-02	5.221E-12	0.000E+00	0.000E+00
Eu-154	Eu-154	1.000E+00	2.508E+00	2.279E+00	1.882E+00	9.616E-01	1.376E-01	1.161E-12	0.000E+00	0.000E+00
Eu-155	Eu-155	1.000E+00	6.396E-02	5.459E-02	3.978E-02	1.312E-02	5.479E-04	1.744E-16	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Fe-55	Fe-55	1.000E+00	7.410E-04	5.692E-04	3.358E-04	5.274E-05	2.565E-07	1.301E-20	0.000E+00	0.000E+00
H-3	H-3	1.000E+00	1.023E-03	3.986E-03	5.005E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Nb-94	Nb-94	1.000E+00	3.330E+00	3.236E+00	3.055E+00	2.491E+00	1.358E+00	1.824E-09	0.000E+00	2.832E-03
Ni-59	Ni-59	1.000E+00	2.285E-03	2.220E-03	2.093E-03	1.698E-03	8.997E-04	1.420E-08	0.000E+00	1.824E-05
Ni-63	Ni-63	1.000E+00	6.256E-03	6.036E-03	5.613E-03	4.339E-03	2.002E-03	1.953E-08	0.000E+00	4.943E-08
Np-237+D	Np-237+D	1.000E+00	1.807E+00	1.312E+00	6.894E-01	7.231E-02	1.118E-04	3.116E+01	0.000E+00	0.000E+00
Np-237+D	U-233	1.000E+00	8.261E-08	1.962E-07	3.283E-07	4.131E-07	2.779E-07	1.045E-05	1.723E-05	1.717E-05
Np-237+D	Th-229+D	1.000E+00	4.685E-11	2.966E-10	1.291E-09	6.582E-09	2.014E-08	5.265E-09	9.627E-08	4.095E-07
Np-237+D	ΣDSR(j)		1.807E+00	1.312E+00	6.894E-01	7.231E-02	1.121E-04	3.116E+01	1.732E-05	1.758E-05
Pm-147	Pm-147	1.000E+00	2.278E-04	1.711E-04	9.653E-05	1.298E-05	4.068E-08	8.855E-22	0.000E+00	0.000E+00
Pm-147	Sm-147	1.000E+00	6.957E-14	1.816E-13	3.243E-13	4.547E-13	3.632E-13	1.275E-18	0.000E+00	0.000E+00
Pm-147	ΣDSR(j)		2.278E-04	1.711E-04	9.653E-05	1.298E-05	4.068E-08	1.276E-18	0.000E+00	0.000E+00
Pu-238	Pu-238	1.850E-09	2.860E-10	2.797E-10	2.673E-10	2.274E-10	1.380E-10	3.422E-16	0.000E+00	0.000E+00
Pu-238	Pu-238	9.996E-01	1.545E-01	1.511E-01	1.444E-01	1.229E-01	7.459E-02	1.849E-07	0.000E+00	0.000E+00
Pu-238	U-234	9.996E-01	4.969E-08	1.467E-07	3.288E-07	8.487E-07	1.543E-06	1.067E-11	0.000E+00	0.000E+00
Pu-238	Th-230	9.996E-01	1.012E-13	6.793E-13	3.429E-12	2.692E-11	1.533E-10	3.955E-15	0.000E+00	0.000E+00
Pu-238	Ra-226+D	9.996E-01	2.235E-15	3.376E-14	3.894E-13	9.647E-12	1.873E-10	1.584E-14	0.000E+00	0.000E+00
Pu-238	Pb-210+D	9.996E-01	3.680E-18	9.191E-17	1.931E-15	1.178E-13	5.076E-12	2.097E-15	0.000E+00	0.000E+00
Pu-238	Po-210	9.996E-01	3.620E-19	1.708E-17	6.011E-16	5.503E-14	2.781E-12	4.727E-16	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		1.545E-01	1.511E-01	1.444E-01	1.229E-01	7.459E-02	1.849E-07	0.000E+00	0.000E+00
Pu-238	Pu-238	1.319E-06	2.040E-07	1.995E-07	1.907E-07	1.622E-07	9.846E-08	2.441E-13	0.000E+00	0.000E+00
Pu-238	U-234	1.319E-06	6.559E-14	1.937E-13	4.340E-13	1.120E-12	2.037E-12	1.409E-17	0.000E+00	0.000E+00
Pu-238	Th-230	1.319E-06	1.336E-19	8.966E-19	4.526E-18	3.553E-17	2.023E-16	5.220E-21	0.000E+00	0.000E+00
Pu-238	Ra-226+D	1.319E-06	2.950E-21	4.456E-20	5.140E-19	1.273E-17	2.473E-16	2.091E-20	0.000E+00	0.000E+00
Pu-238	Pb-210+D1	1.319E-06	2.707E-24	8.614E-23	2.134E-21	1.457E-19	6.556E-18	2.654E-21	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		2.040E-07	1.995E-07	1.907E-07	1.622E-07	9.846E-08	2.441E-13	0.000E+00	0.000E+00
Pu-238	Pu-238	1.899E-08	2.936E-09	2.871E-09	2.744E-09	2.335E-09	1.417E-09	3.513E-15	0.000E+00	0.000E+00
Pu-238	U-234	1.899E-08	9.442E-16	2.788E-15	6.246E-15	1.613E-14	2.932E-14	2.028E-19	0.000E+00	0.000E+00
Pu-238	Th-230	1.899E-08	1.923E-21	1.291E-20	6.515E-20	5.114E-19	2.912E-18	7.514E-23	0.000E+00	0.000E+00
Pu-238	Ra-226+D	1.899E-08	4.246E-23	6.414E-22	7.399E-21	1.833E-19	3.559E-18	3.010E-22	0.000E+00	0.000E+00
Pu-238	Pb-210+D2	1.899E-08	3.885E-26	1.236E-24	3.063E-23	2.091E-21	9.403E-20	3.816E-23	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		2.936E-09	2.871E-09	2.744E-09	2.335E-09	1.417E-09	3.513E-15	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pu-238	Pu-238	2.100E-04	3.246E-05	3.174E-05	3.034E-05	2.581E-05	1.567E-05	3.884E-11	0.000E+00	0.000E+00
Pu-238	U-234	2.100E-04	1.044E-11	3.082E-11	6.905E-11	1.783E-10	3.241E-10	2.242E-15	0.000E+00	0.000E+00
Pu-238	Th-230	2.100E-04	2.125E-17	1.427E-16	7.202E-16	5.653E-15	3.220E-14	8.307E-19	0.000E+00	0.000E+00
Pu-238	Ra-226+D1	2.100E-04	4.690E-19	7.088E-18	8.177E-17	2.026E-15	3.935E-14	3.328E-18	0.000E+00	0.000E+00
Pu-238	Pb-210+D	2.100E-04	7.729E-22	1.930E-20	4.056E-19	2.474E-17	1.066E-15	4.405E-19	0.000E+00	0.000E+00
Pu-238	Po-210	2.100E-04	7.604E-23	3.588E-21	1.263E-19	1.156E-17	5.841E-16	9.929E-20	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		3.246E-05	3.174E-05	3.034E-05	2.581E-05	1.567E-05	3.884E-11	0.000E+00	0.000E+00
Pu-238	Pu-238	2.771E-10	4.284E-11	4.190E-11	4.005E-11	3.407E-11	2.068E-11	5.127E-17	0.000E+00	0.000E+00
Pu-238	U-234	2.771E-10	1.378E-17	4.068E-17	9.115E-17	2.353E-16	4.279E-16	2.959E-21	0.000E+00	0.000E+00
Pu-238	Th-230	2.771E-10	2.806E-23	1.883E-22	9.507E-22	7.463E-21	4.250E-20	1.096E-24	0.000E+00	0.000E+00
Pu-238	Ra-226+D1	2.771E-10	6.190E-25	9.356E-24	1.079E-22	2.675E-21	5.194E-20	4.393E-24	0.000E+00	0.000E+00
Pu-238	Pb-210+D1	2.771E-10	5.687E-28	1.809E-26	4.483E-25	3.061E-23	1.377E-21	5.575E-25	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		4.284E-11	4.190E-11	4.005E-11	3.407E-11	2.068E-11	5.127E-17	0.000E+00	0.000E+00
Pu-238	Pu-238	3.989E-12	6.167E-13	6.031E-13	5.764E-13	4.904E-13	2.977E-13	7.379E-19	0.000E+00	0.000E+00
Pu-238	U-234	3.989E-12	1.983E-19	5.855E-19	1.312E-18	3.387E-18	6.159E-18	4.259E-23	0.000E+00	0.000E+00
Pu-238	Th-230	3.989E-12	4.038E-25	2.711E-24	1.368E-23	1.074E-22	6.117E-22	1.578E-26	0.000E+00	0.000E+00
Pu-238	Ra-226+D1	3.989E-12	8.910E-27	1.347E-25	1.554E-24	3.850E-23	7.476E-22	6.323E-26	0.000E+00	0.000E+00
Pu-238	Pb-210+D2	3.989E-12	8.160E-30	2.597E-28	6.433E-27	4.393E-25	1.975E-23	8.016E-27	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		6.167E-13	6.031E-13	5.764E-13	4.904E-13	2.977E-13	7.380E-19	0.000E+00	0.000E+00
Pu-238	Pu-238	1.998E-04	3.088E-05	3.020E-05	2.886E-05	2.456E-05	1.491E-05	3.695E-11	0.000E+00	0.000E+00
Pu-238	U-234	1.998E-04	9.931E-12	2.932E-11	6.570E-11	1.696E-10	3.084E-10	2.133E-15	0.000E+00	0.000E+00
Pu-238	Th-230	1.998E-04	2.022E-17	1.357E-16	6.852E-16	5.379E-15	3.063E-14	7.903E-19	0.000E+00	0.000E+00
Pu-238	Ra-226+D2	1.998E-04	4.011E-19	6.072E-18	7.007E-17	1.733E-15	3.341E-14	3.164E-18	0.000E+00	0.000E+00
Pu-238	Pb-210+D	1.998E-04	7.353E-22	1.837E-20	3.859E-19	2.353E-17	1.014E-15	4.191E-19	0.000E+00	0.000E+00
Pu-238	Po-210	1.998E-04	7.235E-23	3.414E-21	1.201E-19	1.100E-17	5.557E-16	9.447E-20	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		3.088E-05	3.020E-05	2.886E-05	2.456E-05	1.491E-05	3.695E-11	0.000E+00	0.000E+00
Pu-238	Pu-238	2.637E-10	4.076E-11	3.986E-11	3.810E-11	3.242E-11	1.968E-11	4.878E-17	0.000E+00	0.000E+00
Pu-238	U-234	2.637E-10	1.311E-17	3.870E-17	8.672E-17	2.239E-16	4.071E-16	2.815E-21	0.000E+00	0.000E+00
Pu-238	Th-230	2.637E-10	2.669E-23	1.792E-22	9.045E-22	7.100E-21	4.043E-20	1.043E-24	0.000E+00	0.000E+00
Pu-238	Ra-226+D2	2.637E-10	5.295E-25	8.015E-24	9.250E-23	2.288E-21	4.410E-20	4.177E-24	0.000E+00	0.000E+00
Pu-238	Pb-210+D1	2.637E-10	5.411E-28	1.721E-26	4.265E-25	2.913E-23	1.310E-21	5.305E-25	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		4.076E-11	3.986E-11	3.810E-11	3.242E-11	1.968E-11	4.878E-17	0.000E+00	0.000E+00
Pu-238	Pu-238	3.795E-12	5.867E-13	5.738E-13	5.484E-13	4.666E-13	2.832E-13	7.021E-19	0.000E+00	0.000E+00
Pu-238	U-234	3.795E-12	1.887E-19	5.571E-19	1.248E-18	3.223E-18	5.860E-18	4.052E-23	0.000E+00	0.000E+00
Pu-238	Th-230	3.795E-12	3.842E-25	2.579E-24	1.302E-23	1.022E-22	5.820E-22	1.502E-26	0.000E+00	0.000E+00
Pu-238	Ra-226+D2	3.795E-12	7.622E-27	1.154E-25	1.331E-24	3.293E-23	6.347E-22	6.012E-26	0.000E+00	0.000E+00
Pu-238	Pb-210+D2	3.795E-12	7.764E-30	2.470E-28	6.121E-27	4.179E-25	1.879E-23	7.626E-27	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		5.867E-13	5.738E-13	5.484E-13	4.666E-13	2.832E-13	7.021E-19	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pu-238	Pu-238	4.196E-08	6.486E-09	6.343E-09	6.063E-09	5.158E-09	3.131E-09	7.762E-15	0.000E+00	0.000E+00
Pu-238	U-234	4.196E-08	2.086E-15	6.159E-15	1.380E-14	3.563E-14	6.478E-14	4.480E-19	0.000E+00	0.000E+00
Pu-238	Th-230	4.196E-08	4.248E-21	2.851E-20	1.439E-19	1.130E-18	6.434E-18	1.660E-22	0.000E+00	0.000E+00
Pu-238	Ra-226+D3	4.196E-08	8.425E-23	1.275E-21	1.472E-20	3.640E-19	7.017E-18	6.646E-22	0.000E+00	0.000E+00
Pu-238	Pb-210+D	4.196E-08	1.544E-25	3.858E-24	8.106E-23	4.943E-21	2.131E-19	8.802E-23	0.000E+00	0.000E+00
Pu-238	Po-210	4.196E-08	1.520E-26	7.170E-25	2.523E-23	2.310E-21	1.167E-19	1.984E-23	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		6.486E-09	6.343E-09	6.063E-09	5.158E-09	3.131E-09	7.762E-15	0.000E+00	0.000E+00
Pu-238	Pu-238	5.538E-14	8.562E-15	8.373E-15	8.003E-15	6.809E-15	4.133E-15	1.025E-20	0.000E+00	0.000E+00
Pu-238	U-234	5.538E-14	2.753E-21	8.130E-21	1.822E-20	4.703E-20	8.551E-20	5.913E-25	0.000E+00	0.000E+00
Pu-238	Th-230	5.538E-14	5.607E-27	3.764E-26	1.900E-25	1.491E-24	8.493E-24	2.191E-28	0.000E+00	0.000E+00
Pu-238	Ra-226+D3	5.538E-14	1.112E-28	1.683E-27	1.943E-26	4.805E-25	9.262E-24	8.773E-28	0.000E+00	0.000E+00
Pu-238	Pb-210+D1	5.538E-14	1.136E-31	3.616E-30	8.959E-29	6.118E-27	2.752E-25	1.114E-28	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		8.562E-15	8.373E-15	8.003E-15	6.809E-15	4.133E-15	1.025E-20	0.000E+00	0.000E+00
Pu-238	Pu-238	7.972E-16	1.232E-16	1.205E-16	1.152E-16	9.801E-17	5.949E-17	1.475E-22	0.000E+00	0.000E+00
Pu-238	U-234	7.972E-16	3.963E-23	1.170E-22	2.622E-22	6.769E-22	1.231E-21	8.511E-27	0.000E+00	0.000E+00
Pu-238	Th-230	7.972E-16	8.070E-29	5.417E-28	2.735E-27	2.147E-26	1.222E-25	3.154E-30	0.000E+00	0.000E+00
Pu-238	Ra-226+D3	7.972E-16	1.601E-30	2.423E-29	2.796E-28	6.916E-27	1.333E-25	1.263E-29	0.000E+00	0.000E+00
Pu-238	Pb-210+D2	7.972E-16	1.631E-33	5.189E-32	1.286E-30	8.779E-29	3.947E-27	1.602E-30	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		1.232E-16	1.205E-16	1.152E-16	9.801E-17	5.949E-17	1.475E-22	0.000E+00	0.000E+00
Pu-238	Pu-238	2.000E-07	3.092E-08	3.023E-08	2.890E-08	2.459E-08	1.492E-08	3.700E-14	0.000E+00	0.000E+00
Pu-238	U-234	2.000E-07	9.943E-15	2.936E-14	6.578E-14	1.698E-13	3.088E-13	2.135E-18	0.000E+00	0.000E+00
Pu-238	Th-230	2.000E-07	2.025E-20	1.359E-19	6.860E-19	5.385E-18	3.067E-17	7.913E-22	0.000E+00	0.000E+00
Pu-238	Ra-226+D4	2.000E-07	9.766E-23	1.553E-21	1.821E-20	4.399E-19	7.554E-18	3.165E-21	0.000E+00	0.000E+00
Pu-238	Pb-210+D	2.000E-07	7.362E-25	1.839E-23	3.864E-22	2.356E-20	1.016E-18	4.196E-22	0.000E+00	0.000E+00
Pu-238	Po-210	2.000E-07	7.243E-26	3.418E-24	1.203E-22	1.101E-20	5.564E-19	9.458E-23	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		3.092E-08	3.023E-08	2.890E-08	2.459E-08	1.492E-08	3.700E-14	0.000E+00	0.000E+00
Pu-238	Pu-238	2.640E-13	4.081E-14	3.991E-14	3.815E-14	3.246E-14	1.970E-14	4.884E-20	0.000E+00	0.000E+00
Pu-238	U-234	2.640E-13	1.312E-20	3.875E-20	8.683E-20	2.242E-19	4.076E-19	2.819E-24	0.000E+00	0.000E+00
Pu-238	Th-230	2.640E-13	2.673E-26	1.794E-25	9.056E-25	7.109E-24	4.048E-23	1.044E-27	0.000E+00	0.000E+00
Pu-238	Ra-226+D4	2.640E-13	1.289E-28	2.049E-27	2.404E-26	5.806E-25	9.972E-24	4.178E-27	0.000E+00	0.000E+00
Pu-238	Pb-210+D1	2.640E-13	5.417E-31	1.724E-29	4.270E-28	2.916E-26	1.312E-24	5.311E-28	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		4.081E-14	3.991E-14	3.815E-14	3.246E-14	1.970E-14	4.884E-20	0.000E+00	0.000E+00
Pu-238	Pu-238	3.800E-15	5.875E-16	5.745E-16	5.491E-16	4.672E-16	2.836E-16	7.029E-22	0.000E+00	0.000E+00
Pu-238	U-234	3.800E-15	1.889E-22	5.578E-22	1.250E-21	3.226E-21	5.867E-21	4.057E-26	0.000E+00	0.000E+00
Pu-238	Th-230	3.800E-15	3.847E-28	2.582E-27	1.303E-26	1.023E-25	5.827E-25	1.503E-29	0.000E+00	0.000E+00
Pu-238	Ra-226+D4	3.800E-15	1.856E-30	2.950E-29	3.460E-28	8.358E-27	1.435E-25	6.014E-29	0.000E+00	0.000E+00
Pu-238	Pb-210+D2	3.800E-15	7.773E-33	2.473E-31	6.128E-30	4.184E-28	1.881E-26	7.635E-30	0.000E+00	0.000E+00
Pu-238	ΣDSR(j)		5.875E-16	5.745E-16	5.491E-16	4.672E-16	2.836E-16	7.030E-22	0.000E+00	0.000E+00

Summary : RESRAD Default

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Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pu-239	Pu-239	5.901E-04	1.013E-04	9.986E-05	9.696E-05	8.717E-05	6.194E-05	2.654E-10	0.000E+00	0.000E+00
Pu-239	U-235+D	5.901E-04	9.093E-14	2.708E-13	6.211E-13	1.751E-12	4.192E-12	3.134E-18	0.000E+00	0.000E+00
Pu-239	Pa-231	5.901E-04	3.765E-18	2.696E-17	1.404E-16	1.133E-15	6.702E-15	4.012E-19	0.000E+00	0.000E+00
Pu-239	Ac-227+D	5.901E-04	2.449E-20	3.313E-19	3.555E-18	8.093E-17	1.359E-15	3.454E-20	0.000E+00	0.000E+00
Pu-239	ΣDSR(j)		1.013E-04	9.986E-05	9.696E-05	8.717E-05	6.194E-05	2.654E-10	0.000E+00	0.000E+00
Pu-239	Pu-239	1.633E-06	2.804E-07	2.764E-07	2.684E-07	2.413E-07	1.714E-07	7.345E-13	0.000E+00	0.000E+00
Pu-239	U-235+D	1.633E-06	2.517E-16	7.494E-16	1.719E-15	4.845E-15	1.160E-14	8.674E-21	0.000E+00	0.000E+00
Pu-239	Pa-231	1.633E-06	1.042E-20	7.461E-20	3.887E-19	3.135E-18	1.855E-17	1.110E-21	0.000E+00	0.000E+00
Pu-239	Ac-227+D1	1.633E-06	5.545E-23	8.297E-22	9.418E-21	2.217E-19	3.767E-18	9.370E-23	0.000E+00	0.000E+00
Pu-239	ΣDSR(j)		2.804E-07	2.764E-07	2.684E-07	2.413E-07	1.714E-07	7.345E-13	0.000E+00	0.000E+00
Pu-239	Pu-239	8.257E-06	1.418E-06	1.397E-06	1.357E-06	1.220E-06	8.667E-07	3.714E-12	0.000E+00	0.000E+00
Pu-239	U-235+D	8.257E-06	1.272E-15	3.789E-15	8.690E-15	2.450E-14	5.866E-14	4.385E-20	0.000E+00	0.000E+00
Pu-239	Pa-231	8.257E-06	5.268E-20	3.772E-19	1.965E-18	1.585E-17	9.378E-17	5.614E-21	0.000E+00	0.000E+00
Pu-239	Ac-227+D2	8.257E-06	2.514E-22	3.766E-21	4.275E-20	1.004E-18	1.692E-17	4.727E-22	0.000E+00	0.000E+00
Pu-239	ΣDSR(j)		1.418E-06	1.397E-06	1.357E-06	1.220E-06	8.667E-07	3.714E-12	0.000E+00	0.000E+00
Pu-239	Pu-239	2.285E-08	3.923E-09	3.867E-09	3.755E-09	3.376E-09	2.399E-09	1.028E-14	0.000E+00	0.000E+00
Pu-239	U-235+D	2.285E-08	3.521E-18	1.049E-17	2.405E-17	6.780E-17	1.623E-16	1.214E-22	0.000E+00	0.000E+00
Pu-239	Pa-231	2.285E-08	1.458E-22	1.044E-21	5.439E-21	4.386E-20	2.596E-19	1.554E-23	0.000E+00	0.000E+00
Pu-239	Ac-227+D3	2.285E-08	7.018E-25	1.051E-23	1.193E-22	2.802E-21	4.725E-20	1.308E-24	0.000E+00	0.000E+00
Pu-239	ΣDSR(j)		3.923E-09	3.867E-09	3.755E-09	3.376E-09	2.399E-09	1.028E-14	0.000E+00	0.000E+00
Pu-239	Pu-239	4.954E-10	8.506E-11	8.384E-11	8.141E-11	7.319E-11	5.200E-11	2.228E-16	0.000E+00	0.000E+00
Pu-239	U-235+D	4.954E-10	7.634E-20	2.273E-19	5.214E-19	1.470E-18	3.520E-18	2.631E-24	0.000E+00	0.000E+00
Pu-239	Pa-231	4.954E-10	3.161E-24	2.263E-23	1.179E-22	9.509E-22	5.627E-21	3.368E-25	0.000E+00	0.000E+00
Pu-239	Ac-227+D4	4.954E-10	1.029E-26	1.548E-25	1.756E-24	4.080E-23	6.612E-22	2.707E-26	0.000E+00	0.000E+00
Pu-239	ΣDSR(j)		8.506E-11	8.384E-11	8.141E-11	7.319E-11	5.200E-11	2.228E-16	0.000E+00	0.000E+00
Pu-239	Pu-239	1.371E-12	2.354E-13	2.320E-13	2.253E-13	2.026E-13	1.439E-13	6.167E-19	0.000E+00	0.000E+00
Pu-239	U-235+D	1.371E-12	2.113E-22	6.292E-22	1.443E-21	4.068E-21	9.741E-21	7.283E-27	0.000E+00	0.000E+00
Pu-239	Pa-231	1.371E-12	8.749E-27	6.264E-26	3.263E-25	2.632E-24	1.557E-23	9.323E-28	0.000E+00	0.000E+00
Pu-239	Ac-227+D5	1.371E-12	2.885E-29	4.337E-28	4.920E-27	1.144E-25	1.856E-24	7.493E-29	0.000E+00	0.000E+00
Pu-239	ΣDSR(j)		2.354E-13	2.320E-13	2.253E-13	2.026E-13	1.439E-13	6.167E-19	0.000E+00	0.000E+00
Pu-239+D	Pu-239+D	9.829E-01	1.688E-01	1.663E-01	1.615E-01	1.452E-01	1.032E-01	4.421E-07	0.000E+00	0.000E+00
Pu-239+D	U-235+D	9.829E-01	1.515E-10	4.510E-10	1.034E-09	2.916E-09	6.983E-09	5.220E-15	0.000E+00	0.000E+00
Pu-239+D	Pa-231	9.829E-01	6.271E-15	4.491E-14	2.339E-13	1.887E-12	1.116E-11	6.683E-16	0.000E+00	0.000E+00
Pu-239+D	Ac-227+D	9.829E-01	4.079E-17	5.519E-16	5.921E-15	1.348E-13	2.263E-12	5.753E-17	0.000E+00	0.000E+00
Pu-239+D	ΣDSR(j)		1.688E-01	1.663E-01	1.615E-01	1.452E-01	1.032E-01	4.421E-07	0.000E+00	0.000E+00
Pu-239+D	Pu-239+D	2.720E-03	4.671E-04	4.603E-04	4.470E-04	4.019E-04	2.855E-04	1.223E-09	0.000E+00	0.000E+00
Pu-239+D	U-235+D	2.720E-03	4.192E-13	1.248E-12	2.863E-12	8.071E-12	1.933E-11	1.445E-17	0.000E+00	0.000E+00
Pu-239+D	Pa-231	2.720E-03	1.736E-17	1.243E-16	6.474E-16	5.221E-15	3.090E-14	1.850E-18	0.000E+00	0.000E+00
Pu-239+D	Ac-227+D1	2.720E-03	9.236E-20	1.382E-18	1.569E-17	3.693E-16	6.274E-15	1.561E-19	0.000E+00	0.000E+00
Pu-239+D	ΣDSR(j)		4.671E-04	4.603E-04	4.470E-04	4.019E-04	2.855E-04	1.223E-09	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Dose/Source Ratios Summed Over All Pathways
 Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pu-239+D	Pu-239+D	1.375E-02	2.361E-03	2.327E-03	2.260E-03	2.032E-03	1.444E-03	6.186E-09	0.000E+00	0.000E+00
Pu-239+D	U-235+D	1.375E-02	2.119E-12	6.311E-12	1.447E-11	4.080E-11	9.771E-11	7.304E-17	0.000E+00	0.000E+00
Pu-239+D	Pa-231	1.375E-02	8.775E-17	6.283E-16	3.273E-15	2.640E-14	1.562E-13	9.351E-18	0.000E+00	0.000E+00
Pu-239+D	Ac-227+D2	1.375E-02	4.188E-19	6.273E-18	7.120E-17	1.672E-15	2.818E-14	7.873E-19	0.000E+00	0.000E+00
Pu-239+D	ΣDSR(j)		2.361E-03	2.327E-03	2.260E-03	2.032E-03	1.444E-03	6.186E-09	0.000E+00	0.000E+00
Pu-239+D	Pu-239+D	3.806E-05	6.535E-06	6.441E-06	6.254E-06	5.623E-06	3.995E-06	1.712E-11	0.000E+00	0.000E+00
Pu-239+D	U-235+D	3.806E-05	5.865E-15	1.747E-14	4.006E-14	1.129E-13	2.704E-13	2.022E-19	0.000E+00	0.000E+00
Pu-239+D	Pa-231	3.806E-05	2.429E-19	1.739E-18	9.059E-18	7.306E-17	4.323E-16	2.588E-20	0.000E+00	0.000E+00
Pu-239+D	Ac-227+D3	3.806E-05	1.169E-21	1.751E-20	1.987E-19	4.668E-18	7.870E-17	2.179E-21	0.000E+00	0.000E+00
Pu-239+D	ΣDSR(j)		6.535E-06	6.441E-06	6.254E-06	5.623E-06	3.995E-06	1.712E-11	0.000E+00	0.000E+00
Pu-239+D	Pu-239+D	8.252E-07	1.417E-07	1.396E-07	1.356E-07	1.219E-07	8.662E-08	3.712E-13	0.000E+00	0.000E+00
Pu-239+D	U-235+D	8.252E-07	1.272E-16	3.787E-16	8.685E-16	2.448E-15	5.863E-15	4.383E-21	0.000E+00	0.000E+00
Pu-239+D	Pa-231	8.252E-07	5.265E-21	3.770E-20	1.964E-19	1.584E-18	9.373E-18	5.611E-22	0.000E+00	0.000E+00
Pu-239+D	Ac-227+D4	8.252E-07	1.714E-23	2.578E-22	2.925E-21	6.796E-20	1.101E-18	4.509E-23	0.000E+00	0.000E+00
Pu-239+D	ΣDSR(j)		1.417E-07	1.396E-07	1.356E-07	1.219E-07	8.662E-08	3.712E-13	0.000E+00	0.000E+00
Pu-239+D	Pu-239+D	2.284E-09	3.921E-10	3.865E-10	3.753E-10	3.374E-10	2.397E-10	1.027E-15	0.000E+00	0.000E+00
Pu-239+D	U-235+D	2.284E-09	3.519E-19	1.048E-18	2.404E-18	6.776E-18	1.623E-17	1.213E-23	0.000E+00	0.000E+00
Pu-239+D	Pa-231	2.284E-09	1.457E-23	1.043E-22	5.436E-22	4.384E-21	2.594E-20	1.553E-24	0.000E+00	0.000E+00
Pu-239+D	Ac-227+D5	2.284E-09	4.805E-26	7.224E-25	8.196E-24	1.905E-22	3.091E-21	1.248E-25	0.000E+00	0.000E+00
Pu-239+D	ΣDSR(j)		3.921E-10	3.865E-10	3.753E-10	3.374E-10	2.397E-10	1.027E-15	0.000E+00	0.000E+00
Pu-240	Pu-240	5.750E-08	9.869E-09	9.726E-09	9.443E-09	8.485E-09	6.019E-09	2.566E-14	0.000E+00	0.000E+00
Pu-240	Pu-240	1.000E+00	1.716E-01	1.691E-01	1.642E-01	1.476E-01	1.047E-01	4.463E-07	0.000E+00	0.000E+00
Pu-240	U-236	1.000E+00	4.956E-10	1.468E-09	3.316E-09	8.795E-09	1.729E-08	1.581E-13	0.000E+00	0.000E+00
Pu-240	Th-232	1.000E+00	2.795E-20	1.879E-19	9.529E-19	7.604E-18	4.531E-17	1.414E-21	0.000E+00	0.000E+00
Pu-240	Ra-228+D	1.000E+00	2.263E-20	3.369E-19	3.704E-18	7.692E-17	9.861E-16	6.343E-20	0.000E+00	0.000E+00
Pu-240	Th-228+D	1.000E+00	1.666E-21	4.696E-20	9.824E-19	4.271E-17	8.556E-16	6.072E-22	0.000E+00	0.000E+00
Pu-240	ΣDSR(j)		1.716E-01	1.691E-01	1.642E-01	1.476E-01	1.047E-01	4.463E-07	0.000E+00	0.000E+00
Pu-241	Pu-241	1.000E+00	3.239E-03	3.041E-03	2.682E-03	1.720E-03	4.653E-04	6.959E-11	0.000E+00	1.423E-24
Pu-241	Am-241	1.000E+00	1.475E-04	4.271E-04	9.222E-04	2.105E-03	2.834E-03	1.113E-08	0.000E+00	1.506E-04
Pu-241	Np-237+D	1.000E+00	1.547E-10	1.007E-09	4.265E-09	1.830E-08	3.233E-08	5.147E-06	3.837E-06	1.218E-06
Pu-241	U-233	1.000E+00	4.175E-18	5.073E-17	4.545E-16	6.257E-15	3.825E-14	7.112E-13	1.143E-11	2.594E-11
Pu-241	Th-229+D	1.000E+00	1.259E-21	3.569E-20	7.743E-19	3.803E-17	9.643E-16	3.519E-16	3.752E-14	4.090E-13
Pu-241	ΣDSR(j)		3.386E-03	3.469E-03	3.604E-03	3.825E-03	3.300E-03	5.159E-06	3.837E-06	1.518E-04
Pu-241+D	Pu-241+D	2.450E-05	4.811E-06	4.560E-06	4.097E-06	2.813E-06	9.477E-07	1.904E-15	0.000E+00	3.649E-29
Pu-241+D	Np-237+D	2.450E-05	7.090E-12	1.849E-11	3.069E-11	3.136E-11	9.502E-12	3.704E-09	1.389E-13	1.105E-28
Pu-241+D	U-233	2.450E-05	2.379E-19	1.332E-18	5.219E-18	2.121E-17	3.507E-17	8.381E-16	2.266E-15	2.258E-15
Pu-241+D	Th-229+D	2.450E-05	9.413E-23	1.283E-21	1.254E-20	1.924E-19	1.479E-18	3.279E-19	1.167E-17	5.294E-17
Pu-241+D	ΣDSR(j)		4.811E-06	4.560E-06	4.097E-06	2.813E-06	9.478E-07	3.704E-09	1.412E-13	2.311E-15

Summary : RESRAD Default

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Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g)							
			0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Sb-125	Sb-125	7.686E-01	5.704E-01	4.131E-01	2.166E-01	2.256E-02	3.443E-05	9.907E-23	0.000E+00	0.000E+00
Sb-125	Sb-125	2.314E-01	1.717E-01	1.243E-01	6.519E-02	6.790E-03	1.036E-05	2.982E-23	0.000E+00	0.000E+00
Sb-125	Te-125m	2.314E-01	1.951E-03	7.200E-03	4.597E-03	8.397E-04	8.483E-06	1.169E-12	8.172E-38	0.000E+00
Sb-125	∑DSR(j)		1.736E-01	1.315E-01	6.979E-02	7.630E-03	1.884E-05	1.169E-12	8.172E-38	0.000E+00
Sr-90+D	Sr-90+D	1.000E+00	1.738E+00	1.016E+00	3.438E-01	7.717E-03	1.446E-07	5.407E-07	0.000E+00	0.000E+00
Tc-99	Tc-99	1.000E+00	2.452E-02	6.801E-02	1.955E-01	1.312E-26	0.000E+00	0.000E+00	0.000E+00	0.000E+00

The DSR includes contributions from associated (half-life ≤ 30 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g

Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Nuclide (i)	t=	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Ag-108m	7.400E+00	7.596E+00	8.005E+00	9.635E+00	1.675E+01	2.719E+09	*7.853E+12	3.409E+04	
Am-241	1.336E+02	1.359E+02	1.408E+02	1.598E+02	2.363E+02	8.229E+04	2.012E+05	6.339E+05	
Am-243	4.979E+01	5.032E+01	5.141E+01	5.547E+01	6.996E+01	6.890E+07	*1.996E+11	*1.996E+11	
C-14	8.959E+01	1.294E+11	*4.479E+12	*4.479E+12	4.445E+03	*4.479E+12	*4.479E+12	*4.479E+12	
Cm-243	7.606E+01	7.826E+01	8.286E+01	1.013E+02	1.833E+02	5.758E+08	*5.054E+13	*5.054E+13	
Cm-244	2.708E+02	2.843E+02	3.135E+02	4.430E+02	1.232E+03	2.653E+09	*8.092E+13	*8.092E+13	
Co-60	4.734E+00	5.421E+00	7.109E+00	1.840E+01	2.860E+02	2.430E+12	*1.113E+15	*1.113E+15	
Cs-134	7.524E+00	1.058E+01	2.092E+01	2.281E+02	2.150E+05	*1.283E+15	*1.283E+15	*1.283E+15	
Cs-137	1.576E+01	1.622E+01	1.719E+01	2.111E+01	3.881E+01	2.292E+07	*8.593E+13	*8.593E+13	
Eu-152	1.074E+01	1.147E+01	1.309E+01	2.084E+01	8.071E+01	1.336E+12	*1.727E+14	*1.727E+14	
Eu-154	9.969E+00	1.097E+01	1.328E+01	2.600E+01	1.817E+02	2.154E+13	*2.685E+14	*2.685E+14	
Eu-155	3.909E+02	4.579E+02	6.285E+02	1.905E+03	4.563E+04	*4.815E+14	*4.815E+14	*4.815E+14	
Fe-55	3.374E+04	4.392E+04	7.446E+04	4.740E+05	9.747E+07	*2.335E+15	*2.335E+15	*2.335E+15	
H-3	2.443E+04	6.271E+03	4.995E+03	*9.621E+15	*9.621E+15	*9.621E+15	*9.621E+15	*9.621E+15	
Nb-94	7.507E+00	7.726E+00	8.184E+00	1.004E+01	1.841E+01	1.371E+10	*1.856E+11	8.827E+03	
Ni-59	1.094E+04	1.126E+04	1.194E+04	1.472E+04	2.779E+04	1.761E+09	*5.906E+10	1.371E+06	
Ni-63	3.996E+03	4.142E+03	4.454E+03	5.762E+03	1.249E+04	1.280E+09	*5.586E+13	5.058E+08	
Np-237	1.383E+01	1.905E+01	3.626E+01	3.457E+02	2.230E+05	8.022E-01	1.443E+06	1.422E+06	
Pm-147	1.098E+05	1.461E+05	2.590E+05	1.926E+06	6.146E+08	*9.212E+14	*9.212E+14	*9.212E+14	
Pu-238	1.617E+02	1.654E+02	1.730E+02	2.033E+02	3.350E+02	1.351E+08	*1.712E+13	*1.712E+13	
Pu-239	1.456E+02	1.477E+02	1.521E+02	1.692E+02	2.382E+02	5.558E+07	*6.202E+10	*6.202E+10	
Pu-240	1.457E+02	1.478E+02	1.522E+02	1.694E+02	2.388E+02	5.601E+07	*2.269E+11	*2.269E+11	
Pu-241	7.373E+03	7.198E+03	6.929E+03	6.531E+03	7.575E+03	4.843E+06	6.516E+06	1.646E+05	
Sb-125	3.360E+01	4.590E+01	8.730E+01	8.281E+02	4.693E+05	2.139E+13	*1.029E+15	*1.029E+15	
Sr-90	1.439E+01	2.460E+01	7.271E+01	3.240E+03	1.729E+08	4.624E+07	*1.366E+14	*1.366E+14	
Tc-99	1.020E+03	3.676E+02	1.279E+02	*1.695E+10	*1.695E+10	*1.695E+10	*1.695E+10	*1.695E+10	

*At specific activity limit

Summary : RESRAD Default

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Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g
 at tmin = time of minimum single radionuclide soil guideline
 and at tmax = time of maximum total dose = 75.1 ± 0.2 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin)	G(i,tmin) (pCi/g)	DSR(i,tmax)	G(i,tmax) (pCi/g)
Ag-108m	1.000E+00	0.000E+00	3.378E+00	7.400E+00	3.013E-01	8.298E+01
Am-241	1.000E+00	0.000E+00	1.872E-01	1.336E+02	3.057E-02	8.178E+02
Am-243	1.000E+00	0.000E+00	5.021E-01	4.979E+01	1.598E-01	1.564E+02
C-14	1.000E+00	0.000E+00	2.791E-01	8.959E+01	0.000E+00	*4.479E+12
Cm-243	1.000E+00	0.000E+00	3.287E-01	7.606E+01	2.634E-02	9.491E+02
Cm-244	1.000E+00	0.000E+00	9.233E-02	2.708E+02	1.312E-03	1.906E+04
Co-60	1.000E+00	0.000E+00	5.280E+00	4.734E+00	1.255E-04	1.993E+05
Cs-134	1.000E+00	0.000E+00	3.323E+00	7.524E+00	1.620E-11	1.544E+12
Cs-137	1.000E+00	0.000E+00	1.586E+00	1.576E+01	1.146E-01	2.182E+02
Eu-152	1.000E+00	0.000E+00	2.329E+00	1.074E+01	1.031E-02	2.424E+03
Eu-154	1.000E+00	0.000E+00	2.508E+00	9.969E+00	1.211E-03	2.065E+04
Eu-155	1.000E+00	0.000E+00	6.396E-02	3.909E+02	3.421E-07	7.307E+07
Fe-55	1.000E+00	0.000E+00	7.410E-04	3.374E+04	9.782E-13	2.556E+13
H-3	1.000E+00	1.399 ± 0.003	5.457E-03	4.581E+03	0.000E+00	*9.621E+15
Nb-94	1.000E+00	0.000E+00	3.330E+00	7.507E+00	2.415E-01	1.035E+02
Ni-59	1.000E+00	0.000E+00	2.285E-03	1.094E+04	1.338E-04	1.868E+05
Ni-63	1.000E+00	0.000E+00	6.256E-03	3.996E+03	2.180E-04	1.147E+05
Np-237	1.000E+00	120.3 ± 0.2	3.123E+01	8.006E-01	3.090E+01	8.092E-01
Pm-147	1.000E+00	0.000E+00	2.278E-04	1.098E+05	1.820E-13	1.374E+14
Pu-238	1.000E+00	0.000E+00	1.546E-01	1.617E+02	1.507E-02	1.659E+03
Pu-239	1.000E+00	0.000E+00	1.717E-01	1.456E+02	3.023E-02	8.269E+02
Pu-240	1.000E+00	0.000E+00	1.716E-01	1.457E+02	3.004E-02	8.322E+02
Pu-241	1.000E+00	11.69 ± 0.02	3.835E-03	6.519E+03	1.077E-03	2.320E+04
Sb-125	1.000E+00	0.000E+00	7.441E-01	3.360E+01	3.674E-10	6.805E+10
Sr-90	1.000E+00	0.000E+00	1.738E+00	1.439E+01	3.426E-01	7.297E+01
Tc-99	1.000E+00	3.077 ± 0.006	1.957E-01	1.277E+02	0.000E+00	*1.695E+10

*At specific activity limit

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways

Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF (i)	DOSE (j, t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Ag-108m	Ag-108m	1.000E+00	3.378E+00	3.291E+00	3.123E+00	2.595E+00	1.493E+00	9.193E-09	0.000E+00	7.334E-04
Am-241	Am-241	1.000E+00	1.872E-01	1.839E-01	1.776E-01	1.565E-01	1.058E-01	3.119E-07	0.000E+00	0.000E+00
Am-241	Pu-241	1.000E+00	1.475E-04	4.271E-04	9.222E-04	2.105E-03	2.834E-03	1.113E-08	0.000E+00	1.506E-04
Am-241	ΣDOSE (j)		1.873E-01	1.843E-01	1.785E-01	1.586E-01	1.086E-01	3.230E-07	0.000E+00	1.506E-04
Np-237	Am-241	1.000E+00	2.937E-07	7.827E-07	1.371E-06	1.787E-06	1.283E-06	3.035E-04	1.243E-04	3.944E-05
Np-237	Np-237	1.000E+00	1.807E+00	1.312E+00	6.894E-01	7.231E-02	1.118E-04	3.116E+01	0.000E+00	0.000E+00
Np-237	Pu-241	1.000E+00	1.547E-10	1.007E-09	4.265E-09	1.830E-08	3.233E-08	5.147E-06	3.837E-06	1.218E-06
Np-237	Pu-241	2.450E-05	7.090E-12	1.849E-11	3.069E-11	3.136E-11	9.502E-12	3.704E-09	1.389E-13	1.104E-28
Np-237	ΣDOSE (j)		1.807E+00	1.312E+00	6.894E-01	7.231E-02	1.131E-04	3.116E+01	1.281E-04	4.066E-05
U-233	Am-241	1.000E+00	9.825E-15	5.576E-14	2.256E-13	1.039E-12	2.491E-12	5.529E-11	4.462E-10	9.157E-10
U-233	Np-237	1.000E+00	8.261E-08	1.962E-07	3.283E-07	4.131E-07	2.779E-07	1.045E-05	1.723E-05	1.717E-05
U-233	Pu-241	1.000E+00	4.175E-18	5.073E-17	4.545E-16	6.257E-15	3.825E-14	7.112E-13	1.143E-11	2.594E-11
U-233	Pu-241	2.450E-05	2.379E-19	1.332E-18	5.219E-18	2.121E-17	3.507E-17	8.381E-16	2.266E-15	2.258E-15
U-233	ΣDOSE (j)		8.261E-08	1.962E-07	3.283E-07	4.131E-07	2.779E-07	1.045E-05	1.723E-05	1.717E-05
Th-229	Am-241	1.000E+00	3.877E-18	5.334E-17	5.332E-16	8.907E-15	8.709E-14	2.396E-14	1.617E-12	1.503E-11
Th-229	Np-237	1.000E+00	4.685E-11	2.966E-10	1.291E-09	6.582E-09	2.014E-08	5.265E-09	9.627E-08	4.095E-07
Th-229	Pu-241	1.000E+00	1.259E-21	3.569E-20	7.743E-19	3.803E-17	9.643E-16	3.519E-16	3.752E-14	4.090E-13
Th-229	Pu-241	2.450E-05	9.413E-23	1.283E-21	1.254E-20	1.924E-19	1.479E-18	3.279E-19	1.167E-17	5.294E-17
Th-229	ΣDOSE (j)		4.685E-11	2.966E-10	1.291E-09	6.582E-09	2.014E-08	5.265E-09	9.627E-08	4.096E-07
Am-243	Am-243	9.829E-01	4.935E-01	4.883E-01	4.780E-01	4.429E-01	3.511E-01	3.555E-07	0.000E+00	0.000E+00
Am-243	Am-243	2.720E-03	1.366E-03	1.351E-03	1.323E-03	1.226E-03	9.718E-04	9.840E-10	0.000E+00	0.000E+00
Am-243	Cm-243	2.359E-03	5.527E-08	1.630E-07	3.660E-07	9.583E-07	1.870E-06	3.772E-12	0.000E+00	0.000E+00
Am-243	Cm-243	6.529E-06	1.530E-10	4.511E-10	1.013E-09	2.652E-09	5.175E-09	1.044E-14	0.000E+00	0.000E+00
Am-243	Cm-243	3.301E-05	7.734E-10	2.281E-09	5.121E-09	1.341E-08	2.617E-08	5.278E-14	0.000E+00	0.000E+00
Am-243	Cm-243	9.135E-08	2.140E-12	6.312E-12	1.417E-11	3.711E-11	7.242E-11	1.461E-16	0.000E+00	0.000E+00
Am-243	Cm-243	1.981E-09	4.641E-14	1.368E-13	3.073E-13	8.045E-13	1.570E-12	3.167E-18	0.000E+00	0.000E+00
Am-243	Cm-243	5.481E-12	1.284E-16	3.787E-16	8.505E-16	2.227E-15	4.345E-15	8.765E-21	0.000E+00	0.000E+00
Am-243	Cm-243	1.416E-06	3.318E-11	9.785E-11	2.197E-10	5.753E-10	1.123E-09	2.265E-15	0.000E+00	0.000E+00
Am-243	Cm-243	3.920E-09	9.184E-14	2.708E-13	6.082E-13	1.592E-12	3.107E-12	6.268E-18	0.000E+00	0.000E+00
Am-243	Cm-243	1.982E-08	4.643E-13	1.369E-12	3.075E-12	8.050E-12	1.571E-11	3.169E-17	0.000E+00	0.000E+00
Am-243	Cm-243	5.484E-11	1.285E-15	3.789E-15	8.510E-15	2.228E-14	4.348E-14	8.770E-20	0.000E+00	0.000E+00
Am-243	Cm-243	1.189E-12	2.786E-17	8.215E-17	1.845E-16	4.830E-16	9.426E-16	1.901E-21	0.000E+00	0.000E+00
Am-243	Cm-243	3.291E-15	7.711E-20	2.274E-19	5.106E-19	1.337E-18	2.609E-18	5.262E-24	0.000E+00	0.000E+00
Am-243	ΣDOSE (j)		4.949E-01	4.896E-01	4.793E-01	4.442E-01	3.521E-01	3.565E-07	0.000E+00	0.000E+00
Pu-239	Am-243	9.829E-01	2.418E-06	7.153E-06	1.618E-05	4.329E-05	8.731E-05	1.133E-09	0.000E+00	0.000E+00
Pu-239	Am-243	2.720E-03	6.692E-09	1.980E-08	4.478E-08	1.198E-07	2.416E-07	3.136E-12	0.000E+00	0.000E+00
Pu-239	Am-243	1.375E-02	3.383E-08	1.001E-07	2.264E-07	6.057E-07	1.222E-06	1.586E-11	0.000E+00	0.000E+00
Pu-239	Am-243	3.806E-05	9.363E-11	2.770E-10	6.265E-10	1.676E-09	3.381E-09	4.388E-14	0.000E+00	0.000E+00
Pu-239	Am-243	8.252E-07	2.030E-12	6.006E-12	1.358E-11	3.635E-11	7.330E-11	9.514E-16	0.000E+00	0.000E+00
Pu-239	Am-243	2.284E-09	5.618E-15	1.662E-14	3.759E-14	1.006E-13	2.029E-13	2.633E-18	0.000E+00	0.000E+00
Pu-239	Cm-243	2.359E-03	1.808E-13	1.242E-12	6.291E-12	4.811E-11	2.505E-10	7.468E-15	0.000E+00	0.000E+00
Pu-239	Cm-243	6.529E-06	5.004E-16	3.438E-15	1.741E-14	1.332E-13	6.932E-13	2.067E-17	0.000E+00	0.000E+00
Pu-239	Cm-243	3.301E-05	2.530E-15	1.738E-14	8.803E-14	6.732E-13	3.505E-12	1.045E-16	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE (j,t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pu-239	Cm-243	9.135E-08	7.002E-18	4.811E-17	2.436E-16	1.863E-15	9.699E-15	2.892E-19	0.000E+00	0.000E+00
Pu-239	Cm-243	1.981E-09	1.518E-19	1.043E-18	5.282E-18	4.039E-17	2.103E-16	6.270E-21	0.000E+00	0.000E+00
Pu-239	Cm-243	5.481E-12	4.202E-22	2.887E-21	1.462E-20	1.118E-19	5.820E-19	1.735E-23	0.000E+00	0.000E+00
Pu-239	Cm-243	9.805E-01	2.398E-06	7.039E-06	1.565E-05	3.944E-05	6.759E-05	5.489E-10	0.000E+00	0.000E+00
Pu-239	Cm-243	2.714E-03	6.636E-09	1.948E-08	4.331E-08	1.092E-07	1.871E-07	1.519E-12	0.000E+00	0.000E+00
Pu-239	Cm-243	1.372E-02	3.355E-08	9.850E-08	2.190E-07	5.519E-07	9.458E-07	7.680E-12	0.000E+00	0.000E+00
Pu-239	Cm-243	3.797E-05	9.286E-11	2.726E-10	6.060E-10	1.527E-09	2.618E-09	2.126E-14	0.000E+00	0.000E+00
Pu-239	Cm-243	8.232E-07	2.013E-12	5.910E-12	1.314E-11	3.311E-11	5.675E-11	4.608E-16	0.000E+00	0.000E+00
Pu-239	Cm-243	2.278E-09	5.572E-15	1.636E-14	3.636E-14	9.165E-14	1.571E-13	1.275E-18	0.000E+00	0.000E+00
Pu-239	Pu-239	9.829E-01	1.688E-01	1.663E-01	1.615E-01	1.452E-01	1.032E-01	4.421E-07	0.000E+00	0.000E+00
Pu-239	ΣDOSE(j)		1.688E-01	1.663E-01	1.615E-01	1.453E-01	1.033E-01	4.438E-07	0.000E+00	0.000E+00
U-235	Am-243	9.829E-01	1.450E-15	1.008E-14	5.239E-14	4.406E-13	3.064E-12	7.501E-18	0.000E+00	0.000E+00
U-235	Am-243	2.720E-03	4.013E-18	2.790E-17	1.450E-16	1.220E-15	8.481E-15	2.076E-20	0.000E+00	0.000E+00
U-235	Am-243	1.375E-02	2.029E-17	1.410E-16	7.331E-16	6.165E-15	4.288E-14	1.050E-19	0.000E+00	0.000E+00
U-235	Am-243	3.806E-05	5.615E-20	3.903E-19	2.029E-18	1.706E-17	1.187E-16	2.905E-22	0.000E+00	0.000E+00
U-235	Am-243	8.252E-07	1.217E-21	8.462E-21	4.399E-20	3.699E-19	2.573E-18	6.298E-24	0.000E+00	0.000E+00
U-235	Am-243	2.284E-09	3.369E-24	2.342E-23	1.217E-22	1.024E-21	7.121E-21	1.743E-26	0.000E+00	0.000E+00
U-235	Am-243	5.901E-04	8.705E-19	6.051E-18	3.145E-17	2.645E-16	1.840E-15	4.503E-21	0.000E+00	0.000E+00
U-235	Am-243	1.633E-06	2.409E-21	1.675E-20	8.705E-20	7.321E-19	5.092E-18	1.246E-23	0.000E+00	0.000E+00
U-235	Am-243	8.257E-06	1.218E-20	8.467E-20	4.401E-19	3.701E-18	2.574E-17	6.301E-23	0.000E+00	0.000E+00
U-235	Am-243	2.285E-08	3.371E-23	2.343E-22	1.218E-21	1.024E-20	7.125E-20	1.744E-25	0.000E+00	0.000E+00
U-235	Am-243	4.954E-10	7.309E-25	5.080E-24	2.641E-23	2.221E-22	1.545E-21	3.781E-27	0.000E+00	0.000E+00
U-235	Am-243	1.371E-12	2.023E-27	1.406E-26	7.309E-26	6.147E-25	4.275E-24	1.034E-29	0.000E+00	0.000E+00
U-235	Cm-243	2.359E-03	8.148E-23	1.209E-21	1.376E-20	3.331E-19	6.184E-18	3.830E-23	0.000E+00	0.000E+00
U-235	Cm-243	6.529E-06	2.255E-25	3.347E-24	3.809E-23	9.219E-22	1.712E-20	1.060E-25	0.000E+00	0.000E+00
U-235	Cm-243	3.301E-05	1.140E-24	1.692E-23	1.926E-22	4.661E-21	8.653E-20	5.359E-25	0.000E+00	0.000E+00
U-235	Cm-243	9.135E-08	3.155E-27	4.683E-26	5.330E-25	1.290E-23	2.395E-22	1.483E-27	0.000E+00	0.000E+00
U-235	Cm-243	1.981E-09	6.734E-29	1.015E-27	1.156E-26	2.797E-25	5.192E-24	3.178E-29	0.000E+00	0.000E+00
U-235	Cm-243	5.481E-12	0.000E+00	2.515E-30	2.993E-29	7.740E-28	1.437E-26	0.000E+00	0.000E+00	0.000E+00
U-235	Cm-243	1.416E-06	4.892E-26	7.260E-25	8.263E-24	2.000E-22	3.713E-21	2.299E-26	0.000E+00	0.000E+00
U-235	Cm-243	3.920E-09	1.349E-28	2.009E-27	2.287E-26	5.535E-25	1.028E-23	6.290E-29	0.000E+00	0.000E+00
U-235	Cm-243	1.982E-08	6.845E-28	1.016E-26	1.156E-25	2.798E-24	5.195E-23	3.217E-28	0.000E+00	0.000E+00
U-235	Cm-243	5.484E-11	1.695E-30	2.629E-29	3.200E-28	7.744E-27	1.438E-25	0.000E+00	0.000E+00	0.000E+00
U-235	Cm-243	1.189E-12	0.000E+00	0.000E+00	6.218E-30	1.673E-28	3.117E-27	0.000E+00	0.000E+00	0.000E+00
U-235	Cm-243	3.291E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.935E-30	0.000E+00	0.000E+00	0.000E+00
U-235	Cm-243	9.805E-01	1.440E-15	9.961E-15	5.120E-14	4.136E-13	2.575E-12	4.500E-18	0.000E+00	0.000E+00
U-235	Cm-243	2.714E-03	3.986E-18	2.757E-17	1.417E-16	1.145E-15	7.128E-15	1.245E-20	0.000E+00	0.000E+00
U-235	Cm-243	1.372E-02	2.015E-17	1.394E-16	7.163E-16	5.788E-15	3.604E-14	6.297E-20	0.000E+00	0.000E+00
U-235	Cm-243	3.797E-05	5.577E-20	3.857E-19	1.983E-18	1.602E-17	9.974E-17	1.743E-22	0.000E+00	0.000E+00
U-235	Cm-243	8.232E-07	1.209E-21	8.363E-21	4.298E-20	3.473E-19	2.162E-18	3.778E-24	0.000E+00	0.000E+00
U-235	Cm-243	2.278E-09	3.346E-24	2.315E-23	1.190E-22	9.611E-22	5.985E-21	1.046E-26	0.000E+00	0.000E+00
U-235	Cm-243	5.887E-04	8.646E-19	5.980E-18	3.074E-17	2.483E-16	1.546E-15	2.702E-21	0.000E+00	0.000E+00
U-235	Cm-243	1.629E-06	2.393E-21	1.655E-20	8.506E-20	6.873E-19	4.279E-18	7.477E-24	0.000E+00	0.000E+00
U-235	Cm-243	8.237E-06	1.210E-20	8.367E-20	4.301E-19	3.475E-18	2.164E-17	3.780E-23	0.000E+00	0.000E+00
U-235	Cm-243	2.280E-08	3.348E-23	2.316E-22	1.190E-21	9.617E-21	5.988E-20	1.046E-25	0.000E+00	0.000E+00
U-235	Cm-243	4.942E-10	7.259E-25	5.021E-24	2.581E-23	2.085E-22	1.298E-21	2.268E-27	0.000E+00	0.000E+00
U-235	Cm-243	1.368E-12	2.009E-27	1.390E-26	7.142E-26	5.770E-25	3.593E-24	5.577E-30	0.000E+00	0.000E+00
U-235	Pu-239	5.901E-04	9.093E-14	2.708E-13	6.211E-13	1.751E-12	4.192E-12	3.134E-18	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways

Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE (j,t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
U-235	Pu-239	1.633E-06	2.517E-16	7.494E-16	1.719E-15	4.845E-15	1.160E-14	8.674E-21	0.000E+00	0.000E+00
U-235	Pu-239	8.257E-06	1.272E-15	3.789E-15	8.690E-15	2.450E-14	5.866E-14	4.385E-20	0.000E+00	0.000E+00
U-235	Pu-239	2.285E-08	3.521E-18	1.049E-17	2.405E-17	6.780E-17	1.623E-16	1.214E-22	0.000E+00	0.000E+00
U-235	Pu-239	4.954E-10	7.634E-20	2.273E-19	5.214E-19	1.470E-18	3.520E-18	2.631E-24	0.000E+00	0.000E+00
U-235	Pu-239	1.371E-12	2.113E-22	6.292E-22	1.443E-21	4.068E-21	9.741E-21	7.282E-27	0.000E+00	0.000E+00
U-235	Pu-239	9.829E-01	1.515E-10	4.510E-10	1.034E-09	2.916E-09	6.983E-09	5.220E-15	0.000E+00	0.000E+00
U-235	Pu-239	2.720E-03	4.192E-13	1.248E-12	2.863E-12	8.071E-12	1.933E-11	1.445E-17	0.000E+00	0.000E+00
U-235	Pu-239	1.375E-02	2.119E-12	6.311E-12	1.447E-11	4.080E-11	9.771E-11	7.304E-17	0.000E+00	0.000E+00
U-235	Pu-239	3.806E-05	5.865E-15	1.747E-14	4.006E-14	1.129E-13	2.704E-13	2.022E-19	0.000E+00	0.000E+00
U-235	Pu-239	8.252E-07	1.272E-16	3.787E-16	8.685E-16	2.448E-15	5.863E-15	4.383E-21	0.000E+00	0.000E+00
U-235	Pu-239	2.284E-09	3.519E-19	1.048E-18	2.404E-18	6.776E-18	1.623E-17	1.213E-23	0.000E+00	0.000E+00
U-235	ΣDOSE (j)		1.541E-10	4.589E-10	1.053E-09	2.968E-09	7.110E-09	5.323E-15	0.000E+00	0.000E+00
Pa-231	Am-243	9.829E-01	4.406E-20	6.822E-19	7.894E-18	1.891E-16	3.232E-15	6.204E-19	0.000E+00	0.000E+00
Pa-231	Am-243	2.720E-03	1.219E-22	1.888E-21	2.185E-20	5.234E-19	8.946E-18	1.717E-21	0.000E+00	0.000E+00
Pa-231	Am-243	1.375E-02	6.165E-22	9.546E-21	1.105E-19	2.646E-18	4.523E-17	8.681E-21	0.000E+00	0.000E+00
Pa-231	Am-243	3.806E-05	1.706E-24	2.642E-23	3.057E-22	7.324E-21	1.252E-19	2.403E-23	0.000E+00	0.000E+00
Pa-231	Am-243	8.252E-07	3.699E-26	5.728E-25	6.627E-24	1.588E-22	2.714E-21	5.209E-25	0.000E+00	0.000E+00
Pa-231	Am-243	2.284E-09	1.007E-28	1.585E-27	1.834E-26	4.395E-25	7.511E-24	1.442E-27	0.000E+00	0.000E+00
Pa-231	Am-243	5.901E-04	2.645E-23	4.096E-22	4.739E-21	1.135E-19	1.941E-18	3.725E-22	0.000E+00	0.000E+00
Pa-231	Am-243	1.633E-06	7.321E-26	1.134E-24	1.312E-23	3.143E-22	5.371E-21	1.031E-24	0.000E+00	0.000E+00
Pa-231	Am-243	8.257E-06	3.701E-25	5.731E-24	6.631E-23	1.589E-21	2.715E-20	5.212E-24	0.000E+00	0.000E+00
Pa-231	Am-243	2.285E-08	1.024E-27	1.586E-26	1.835E-25	4.397E-24	7.515E-23	1.442E-26	0.000E+00	0.000E+00
Pa-231	Am-243	4.954E-10	2.100E-29	3.433E-28	3.979E-27	9.533E-26	1.629E-24	3.124E-28	0.000E+00	0.000E+00
Pa-231	Am-243	1.371E-12	0.000E+00	0.000E+00	9.629E-30	2.636E-28	4.509E-27	0.000E+00	0.000E+00	0.000E+00
Pa-231	Cm-243	2.359E-03	1.942E-27	6.248E-26	1.560E-24	1.079E-22	4.988E-21	2.517E-24	0.000E+00	0.000E+00
Pa-231	Cm-243	6.529E-06	4.616E-30	1.716E-28	4.317E-27	2.985E-25	1.380E-23	6.965E-27	0.000E+00	0.000E+00
Pa-231	Cm-243	3.301E-05	2.669E-29	8.743E-28	2.182E-26	1.509E-24	6.979E-23	3.521E-26	0.000E+00	0.000E+00
Pa-231	Cm-243	9.135E-08	0.000E+00	2.103E-30	5.967E-29	4.177E-27	1.932E-25	9.667E-29	0.000E+00	0.000E+00
Pa-231	Cm-243	1.981E-09	0.000E+00	0.000E+00	1.144E-30	8.954E-29	4.188E-27	2.096E-30	0.000E+00	0.000E+00
Pa-231	Cm-243	5.481E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.006E-29	0.000E+00	0.000E+00	0.000E+00
Pa-231	Cm-243	1.416E-06	1.001E-30	3.699E-29	9.364E-28	6.475E-26	2.995E-24	1.511E-27	0.000E+00	0.000E+00
Pa-231	Cm-243	3.920E-09	0.000E+00	0.000E+00	2.264E-30	1.783E-28	8.288E-27	4.148E-30	0.000E+00	0.000E+00
Pa-231	Cm-243	1.982E-08	0.000E+00	0.000E+00	1.246E-29	9.050E-28	4.190E-26	2.097E-29	0.000E+00	0.000E+00
Pa-231	Cm-243	5.484E-11	0.000E+00	0.000E+00	0.000E+00	2.192E-30	1.147E-28	0.000E+00	0.000E+00	0.000E+00
Pa-231	Cm-243	1.189E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.181E-30	0.000E+00	0.000E+00	0.000E+00
Pa-231	Cm-243	3.291E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pa-231	Cm-243	9.805E-01	4.380E-20	6.757E-19	7.753E-18	1.803E-16	2.836E-15	4.229E-19	0.000E+00	0.000E+00
Pa-231	Cm-243	2.714E-03	1.212E-22	1.870E-21	2.146E-20	4.989E-19	7.849E-18	1.171E-21	0.000E+00	0.000E+00
Pa-231	Cm-243	1.372E-02	6.129E-22	9.455E-21	1.085E-19	2.522E-18	3.968E-17	5.918E-21	0.000E+00	0.000E+00
Pa-231	Cm-243	3.797E-05	1.696E-24	2.617E-23	3.002E-22	6.981E-21	1.098E-19	1.638E-23	0.000E+00	0.000E+00
Pa-231	Cm-243	8.232E-07	3.678E-26	5.673E-25	6.510E-24	1.514E-22	2.381E-21	3.551E-25	0.000E+00	0.000E+00
Pa-231	Cm-243	2.278E-09	1.001E-28	1.570E-27	1.802E-26	4.189E-25	6.590E-24	9.819E-28	0.000E+00	0.000E+00
Pa-231	Cm-243	5.887E-04	2.630E-23	4.057E-22	4.655E-21	1.082E-19	1.703E-18	2.539E-22	0.000E+00	0.000E+00
Pa-231	Cm-243	1.629E-06	7.278E-26	1.123E-24	1.288E-23	2.995E-22	4.712E-21	7.028E-25	0.000E+00	0.000E+00
Pa-231	Cm-243	8.237E-06	3.680E-25	5.676E-24	6.513E-23	1.514E-21	2.382E-20	3.553E-24	0.000E+00	0.000E+00
Pa-231	Cm-243	2.280E-08	1.018E-27	1.571E-26	1.803E-25	4.191E-24	6.594E-23	9.833E-27	0.000E+00	0.000E+00
Pa-231	Cm-243	4.942E-10	2.087E-29	3.400E-28	3.908E-27	9.087E-26	1.430E-24	2.130E-28	0.000E+00	0.000E+00
Pa-231	Cm-243	1.368E-12	0.000E+00	0.000E+00	9.458E-30	2.503E-28	3.956E-27	0.000E+00	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF (i)	DOSE (j, t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pa-231	Pu-239	5.901E-04	3.765E-18	2.696E-17	1.404E-16	1.133E-15	6.702E-15	4.012E-19	0.000E+00	0.000E+00
Pa-231	Pu-239	1.633E-06	1.042E-20	7.461E-20	3.887E-19	3.135E-18	1.855E-17	1.110E-21	0.000E+00	0.000E+00
Pa-231	Pu-239	8.257E-06	5.268E-20	3.772E-19	1.965E-18	1.585E-17	9.378E-17	5.614E-21	0.000E+00	0.000E+00
Pa-231	Pu-239	2.285E-08	1.458E-22	1.044E-21	5.439E-21	4.386E-20	2.596E-19	1.554E-23	0.000E+00	0.000E+00
Pa-231	Pu-239	4.954E-10	3.161E-24	2.263E-23	1.179E-22	9.509E-22	5.627E-21	3.368E-25	0.000E+00	0.000E+00
Pa-231	Pu-239	1.371E-12	8.749E-27	6.264E-26	3.263E-25	2.632E-24	1.557E-23	9.314E-28	0.000E+00	0.000E+00
Pa-231	Pu-239	9.829E-01	6.271E-15	4.491E-14	2.339E-13	1.887E-12	1.116E-11	6.683E-16	0.000E+00	0.000E+00
Pa-231	Pu-239	2.720E-03	1.736E-17	1.243E-16	6.474E-16	5.221E-15	3.090E-14	1.850E-18	0.000E+00	0.000E+00
Pa-231	Pu-239	1.375E-02	8.775E-17	6.283E-16	3.273E-15	2.640E-14	1.562E-13	9.351E-18	0.000E+00	0.000E+00
Pa-231	Pu-239	3.806E-05	2.429E-19	1.739E-18	9.059E-18	7.306E-17	4.323E-16	2.588E-20	0.000E+00	0.000E+00
Pa-231	Pu-239	8.252E-07	5.265E-21	3.770E-20	1.964E-19	1.584E-18	9.373E-18	5.611E-22	0.000E+00	0.000E+00
Pa-231	Pu-239	2.284E-09	1.457E-23	1.043E-22	5.436E-22	4.384E-21	2.594E-20	1.553E-24	0.000E+00	0.000E+00
Pa-231	ΣDOSE (j)		6.380E-15	4.569E-14	2.380E-13	1.920E-12	1.136E-11	6.810E-16	0.000E+00	0.000E+00
Ac-227	Am-243	9.829E-01	2.427E-22	6.726E-21	1.546E-19	1.036E-17	5.127E-16	4.481E-20	0.000E+00	0.000E+00
Ac-227	Am-243	5.901E-04	1.457E-25	4.038E-24	9.281E-23	6.222E-21	3.078E-19	2.690E-23	0.000E+00	0.000E+00
Ac-227	Cm-243	2.359E-03	8.939E-30	5.232E-28	2.519E-26	4.838E-24	6.613E-22	1.624E-25	0.000E+00	0.000E+00
Ac-227	Cm-243	1.416E-06	0.000E+00	0.000E+00	1.427E-29	2.904E-27	3.970E-25	9.633E-29	0.000E+00	0.000E+00
Ac-227	Cm-243	9.805E-01	2.414E-22	6.669E-21	1.523E-19	9.963E-18	4.600E-16	3.205E-20	0.000E+00	0.000E+00
Ac-227	Cm-243	5.887E-04	1.449E-25	4.004E-24	9.141E-23	5.981E-21	2.761E-19	1.924E-23	0.000E+00	0.000E+00
Ac-227	Pu-239	5.901E-04	2.449E-20	3.313E-19	3.555E-18	8.093E-17	1.359E-15	3.454E-20	0.000E+00	0.000E+00
Ac-227	Pu-239	9.829E-01	4.079E-17	5.519E-16	5.921E-15	1.348E-13	2.263E-12	5.753E-17	0.000E+00	0.000E+00
Ac-227	ΣDOSE (j)		4.081E-17	5.522E-16	5.925E-15	1.349E-13	2.265E-12	5.765E-17	0.000E+00	0.000E+00
Ac-227	Am-243	2.720E-03	5.283E-25	1.639E-23	4.034E-22	2.824E-20	1.419E-18	1.211E-22	0.000E+00	0.000E+00
Ac-227	Am-243	1.375E-02	2.394E-24	7.436E-23	1.830E-21	1.279E-19	6.373E-18	6.107E-22	0.000E+00	0.000E+00
Ac-227	Am-243	1.633E-06	3.163E-28	9.839E-27	2.422E-25	1.695E-23	8.520E-22	7.269E-26	0.000E+00	0.000E+00
Ac-227	Cm-243	6.529E-06	0.000E+00	0.000E+00	6.412E-29	1.311E-26	1.827E-24	4.366E-28	0.000E+00	0.000E+00
Ac-227	Cm-243	3.920E-09	0.000E+00	0.000E+00	0.000E+00	7.418E-30	1.097E-27	0.000E+00	0.000E+00	0.000E+00
Ac-227	Cm-243	2.714E-03	5.255E-25	1.625E-23	3.974E-22	2.715E-20	1.273E-18	8.671E-23	0.000E+00	0.000E+00
Ac-227	Cm-243	1.629E-06	3.146E-28	9.758E-27	2.386E-25	1.630E-23	7.645E-22	5.206E-26	0.000E+00	0.000E+00
Ac-227	Pu-239	1.633E-06	5.545E-23	8.297E-22	9.418E-21	2.217E-19	3.767E-18	9.370E-23	0.000E+00	0.000E+00
Ac-227	Pu-239	2.720E-03	9.236E-20	1.382E-18	1.569E-17	3.693E-16	6.274E-15	1.561E-19	0.000E+00	0.000E+00
Ac-227	ΣDOSE (j)		9.242E-20	1.383E-18	1.570E-17	3.697E-16	6.287E-15	1.570E-19	0.000E+00	0.000E+00
Am-243	Am-243	1.375E-02	6.905E-03	6.832E-03	6.688E-03	6.198E-03	4.913E-03	4.975E-09	0.000E+00	0.000E+00
Am-243	Am-243	3.806E-05	1.911E-05	1.891E-05	1.851E-05	1.715E-05	1.360E-05	1.377E-11	0.000E+00	0.000E+00
Am-243	ΣDOSE (j)		6.924E-03	6.851E-03	6.706E-03	6.215E-03	4.927E-03	4.988E-09	0.000E+00	0.000E+00
Ac-227	Am-243	3.806E-05	6.683E-27	2.076E-25	5.109E-24	3.569E-22	1.780E-20	1.690E-24	0.000E+00	0.000E+00
Ac-227	Am-243	8.252E-07	9.734E-29	3.052E-27	7.514E-26	5.195E-24	2.491E-22	3.498E-26	0.000E+00	0.000E+00
Ac-227	Am-243	2.285E-08	2.249E-30	1.242E-28	3.067E-27	2.143E-25	1.069E-23	1.015E-27	0.000E+00	0.000E+00
Ac-227	Cm-243	9.135E-08	0.000E+00	0.000E+00	0.000E+00	1.652E-28	2.292E-26	6.039E-30	0.000E+00	0.000E+00
Ac-227	Cm-243	5.484E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.298E-29	0.000E+00	0.000E+00	0.000E+00
Ac-227	Cm-243	3.797E-05	6.647E-27	2.058E-25	5.033E-24	3.432E-22	1.597E-20	1.211E-24	0.000E+00	0.000E+00
Ac-227	Cm-243	2.280E-08	2.237E-30	1.232E-28	3.022E-27	2.060E-25	9.589E-24	7.267E-28	0.000E+00	0.000E+00
Ac-227	Pu-239	2.285E-08	7.018E-25	1.051E-23	1.193E-22	2.802E-21	4.725E-20	1.308E-24	0.000E+00	0.000E+00
Ac-227	Pu-239	3.806E-05	1.169E-21	1.751E-20	1.987E-19	4.668E-18	7.870E-17	2.179E-21	0.000E+00	0.000E+00
Ac-227	ΣDOSE (j)		1.170E-21	1.752E-20	1.989E-19	4.671E-18	7.878E-17	2.183E-21	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE (j,t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Am-243	Am-243	8.252E-07	4.143E-07	4.100E-07	4.013E-07	3.719E-07	2.948E-07	2.985E-13	0.000E+00	0.000E+00
Am-243	Am-243	2.284E-09	1.147E-09	1.135E-09	1.111E-09	1.029E-09	8.159E-10	8.261E-16	0.000E+00	0.000E+00
Am-243	ΣDOSE (j)		4.155E-07	4.111E-07	4.024E-07	3.729E-07	2.956E-07	2.993E-13	0.000E+00	0.000E+00
Ac-227	Am-243	2.284E-09	0.000E+00	7.718E-30	2.097E-28	1.456E-26	6.990E-25	9.580E-29	0.000E+00	0.000E+00
Ac-227	Am-243	1.371E-12	0.000E+00	0.000E+00	0.000E+00	7.929E-30	4.196E-28	0.000E+00	0.000E+00	0.000E+00
Ac-227	Cm-243	5.481E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ac-227	Cm-243	3.291E-15	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ac-227	Cm-243	2.278E-09	0.000E+00	7.654E-30	2.065E-28	1.400E-26	6.272E-25	6.861E-29	0.000E+00	0.000E+00
Ac-227	Cm-243	1.368E-12	0.000E+00	0.000E+00	0.000E+00	7.623E-30	3.765E-28	0.000E+00	0.000E+00	0.000E+00
Ac-227	Pu-239	1.371E-12	2.838E-29	4.337E-28	4.920E-27	1.144E-25	1.856E-24	7.414E-29	0.000E+00	0.000E+00
Ac-227	Pu-239	2.284E-09	4.805E-26	7.224E-25	8.196E-24	1.905E-22	3.091E-21	1.248E-25	0.000E+00	0.000E+00
Ac-227	ΣDOSE (j)		4.808E-26	7.229E-25	8.201E-24	1.906E-22	3.094E-21	1.250E-25	0.000E+00	0.000E+00
Am-243	Am-243	5.901E-04	2.963E-04	2.931E-04	2.869E-04	2.659E-04	2.108E-04	2.134E-10	0.000E+00	0.000E+00
Am-243	Am-243	1.633E-06	8.200E-07	8.113E-07	7.942E-07	7.360E-07	5.834E-07	5.907E-13	0.000E+00	0.000E+00
Am-243	ΣDOSE (j)		2.971E-04	2.940E-04	2.877E-04	2.667E-04	2.114E-04	2.140E-10	0.000E+00	0.000E+00
Pu-239	Am-243	5.901E-04	1.452E-09	4.295E-09	9.713E-09	2.599E-08	5.242E-08	6.803E-13	0.000E+00	0.000E+00
Pu-239	Am-243	1.633E-06	4.017E-12	1.189E-11	2.688E-11	7.193E-11	1.451E-10	1.883E-15	0.000E+00	0.000E+00
Pu-239	Am-243	8.257E-06	2.031E-11	6.009E-11	1.359E-10	3.637E-10	7.334E-10	9.519E-15	0.000E+00	0.000E+00
Pu-239	Am-243	2.285E-08	5.621E-14	1.663E-13	3.761E-13	1.006E-12	2.030E-12	2.635E-17	0.000E+00	0.000E+00
Pu-239	Am-243	4.954E-10	1.219E-15	3.606E-15	8.155E-15	2.182E-14	4.401E-14	5.712E-19	0.000E+00	0.000E+00
Pu-239	Am-243	1.371E-12	3.373E-18	9.979E-18	2.257E-17	6.039E-17	1.218E-16	1.581E-21	0.000E+00	0.000E+00
Pu-239	Cm-243	1.416E-06	1.026E-16	7.271E-16	3.735E-15	2.878E-14	1.502E-13	4.481E-18	0.000E+00	0.000E+00
Pu-239	Cm-243	3.920E-09	2.839E-19	2.012E-18	1.034E-17	7.965E-17	4.157E-16	1.240E-20	0.000E+00	0.000E+00
Pu-239	Cm-243	1.982E-08	1.435E-18	1.017E-17	5.226E-17	4.027E-16	2.101E-15	6.270E-20	0.000E+00	0.000E+00
Pu-239	Cm-243	5.484E-11	3.973E-21	2.816E-20	1.446E-19	1.114E-18	5.816E-18	1.735E-22	0.000E+00	0.000E+00
Pu-239	Cm-243	1.189E-12	8.613E-23	6.105E-22	3.136E-21	2.416E-20	1.261E-19	3.762E-24	0.000E+00	0.000E+00
Pu-239	Cm-243	3.291E-15	2.384E-25	1.690E-24	8.679E-24	6.687E-23	3.490E-22	1.041E-26	0.000E+00	0.000E+00
Pu-239	Cm-243	5.887E-04	1.440E-09	4.226E-09	9.395E-09	2.368E-08	4.058E-08	3.295E-13	0.000E+00	0.000E+00
Pu-239	Cm-243	1.629E-06	3.984E-12	1.170E-11	2.600E-11	6.553E-11	1.123E-10	9.120E-16	0.000E+00	0.000E+00
Pu-239	Cm-243	8.237E-06	2.014E-11	5.913E-11	1.315E-10	3.313E-10	5.678E-10	4.611E-15	0.000E+00	0.000E+00
Pu-239	Cm-243	2.280E-08	5.575E-14	1.637E-13	3.638E-13	9.170E-13	1.571E-12	1.276E-17	0.000E+00	0.000E+00
Pu-239	Cm-243	4.942E-10	1.209E-15	3.548E-15	7.888E-15	1.988E-14	3.407E-14	2.767E-19	0.000E+00	0.000E+00
Pu-239	Cm-243	1.368E-12	3.345E-18	9.820E-18	2.183E-17	5.502E-17	9.429E-17	7.657E-22	0.000E+00	0.000E+00
Pu-239	Pu-239	5.901E-04	1.013E-04	9.986E-05	9.696E-05	8.717E-05	6.194E-05	2.654E-10	0.000E+00	0.000E+00
Pu-239	ΣDOSE (j)		1.013E-04	9.986E-05	9.698E-05	8.722E-05	6.203E-05	2.664E-10	0.000E+00	0.000E+00
Am-243	Am-243	8.257E-06	4.146E-06	4.102E-06	4.015E-06	3.721E-06	2.950E-06	2.987E-12	0.000E+00	0.000E+00
Am-243	Am-243	2.285E-08	1.147E-08	1.135E-08	1.111E-08	1.030E-08	8.164E-09	8.266E-15	0.000E+00	0.000E+00
Am-243	ΣDOSE (j)		4.157E-06	4.113E-06	4.026E-06	3.731E-06	2.958E-06	2.995E-12	0.000E+00	0.000E+00
Ac-227	Am-243	8.257E-06	1.437E-27	4.464E-26	1.099E-24	7.676E-23	3.826E-21	3.667E-25	0.000E+00	0.000E+00
Ac-227	Cm-243	3.301E-05	0.000E+00	5.256E-30	2.930E-28	5.937E-26	8.207E-24	2.207E-27	0.000E+00	0.000E+00
Ac-227	Cm-243	1.982E-08	0.000E+00	0.000E+00	0.000E+00	3.525E-29	4.927E-27	1.310E-30	0.000E+00	0.000E+00
Ac-227	Cm-243	1.372E-02	2.381E-24	7.374E-23	1.803E-21	1.229E-19	5.719E-18	4.374E-22	0.000E+00	0.000E+00
Ac-227	Cm-243	8.237E-06	1.430E-27	4.427E-26	1.083E-24	7.380E-23	3.433E-21	2.626E-25	0.000E+00	0.000E+00
Ac-227	Pu-239	8.257E-06	2.514E-22	3.766E-21	4.275E-20	1.004E-18	1.692E-17	4.727E-22	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways

Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE (j,t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Ac-227	Pu-239	1.375E-02	4.188E-19	6.273E-18	7.120E-17	1.672E-15	2.818E-14	7.873E-19	0.000E+00	0.000E+00
Ac-227	ΣDOSE (j)		4.190E-19	6.276E-18	7.125E-17	1.673E-15	2.820E-14	7.882E-19	0.000E+00	0.000E+00
Am-243	Am-243	4.954E-10	2.488E-10	2.461E-10	2.409E-10	2.233E-10	1.770E-10	1.792E-16	0.000E+00	0.000E+00
Am-243	Am-243	1.371E-12	6.885E-13	6.812E-13	6.668E-13	6.179E-13	4.899E-13	4.960E-19	0.000E+00	0.000E+00
Am-243	ΣDOSE (j)		2.494E-10	2.468E-10	2.416E-10	2.239E-10	1.775E-10	1.797E-16	0.000E+00	0.000E+00
Ac-227	Am-243	4.954E-10	0.000E+00	0.000E+00	4.440E-29	3.119E-27	1.495E-25	2.078E-29	0.000E+00	0.000E+00
Ac-227	Cm-243	1.981E-09	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.207E-28	0.000E+00	0.000E+00	0.000E+00
Ac-227	Cm-243	1.189E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ac-227	Cm-243	8.232E-07	9.682E-29	3.027E-27	7.402E-26	4.995E-24	2.235E-22	2.505E-26	0.000E+00	0.000E+00
Ac-227	Cm-243	4.942E-10	0.000E+00	0.000E+00	4.374E-29	2.999E-27	1.342E-25	1.488E-29	0.000E+00	0.000E+00
Ac-227	Pu-239	4.954E-10	1.029E-26	1.548E-25	1.756E-24	4.080E-23	6.612E-22	2.707E-26	0.000E+00	0.000E+00
Ac-227	Pu-239	8.252E-07	1.714E-23	2.578E-22	2.925E-21	6.796E-20	1.101E-18	4.509E-23	0.000E+00	0.000E+00
Ac-227	ΣDOSE (j)		1.716E-23	2.580E-22	2.927E-21	6.800E-20	1.102E-18	4.515E-23	0.000E+00	0.000E+00
C-14	C-14	1.000E+00	2.791E-01	1.931E-10	0.000E+00	0.000E+00	5.625E-03	0.000E+00	0.000E+00	0.000E+00
Cm-243	Cm-243	2.359E-03	7.754E-04	7.536E-04	7.117E-04	5.819E-04	3.216E-04	1.011E-10	0.000E+00	0.000E+00
Cm-243	Cm-243	6.529E-06	2.146E-06	2.086E-06	1.970E-06	1.610E-06	8.902E-07	2.798E-13	0.000E+00	0.000E+00
Cm-243	ΣDOSE (j)		7.775E-04	7.557E-04	7.137E-04	5.835E-04	3.225E-04	1.014E-10	0.000E+00	0.000E+00
Cm-243	Cm-243	3.301E-05	1.085E-05	1.054E-05	9.958E-06	8.141E-06	4.500E-06	1.415E-12	0.000E+00	0.000E+00
Cm-243	Cm-243	9.135E-08	3.003E-08	2.918E-08	2.756E-08	2.253E-08	1.246E-08	3.915E-15	0.000E+00	0.000E+00
Cm-243	ΣDOSE (j)		1.088E-05	1.057E-05	9.986E-06	8.164E-06	4.513E-06	1.418E-12	0.000E+00	0.000E+00
Cm-243	Cm-243	1.981E-09	6.510E-10	6.327E-10	5.975E-10	4.885E-10	2.700E-10	8.488E-17	0.000E+00	0.000E+00
Cm-243	Cm-243	5.481E-12	1.802E-12	1.751E-12	1.654E-12	1.352E-12	7.474E-13	2.349E-19	0.000E+00	0.000E+00
Cm-243	ΣDOSE (j)		6.528E-10	6.344E-10	5.992E-10	4.899E-10	2.708E-10	8.511E-17	0.000E+00	0.000E+00
Cm-243	Cm-243	1.416E-06	4.655E-07	4.524E-07	4.273E-07	3.493E-07	1.931E-07	6.069E-14	0.000E+00	0.000E+00
Cm-243	Cm-243	3.920E-09	1.288E-09	1.252E-09	1.183E-09	9.668E-10	5.344E-10	1.680E-16	0.000E+00	0.000E+00
Cm-243	ΣDOSE (j)		4.668E-07	4.537E-07	4.285E-07	3.503E-07	1.936E-07	6.086E-14	0.000E+00	0.000E+00
Cm-243	Cm-243	1.982E-08	6.513E-09	6.330E-09	5.979E-09	4.888E-09	2.702E-09	8.493E-16	0.000E+00	0.000E+00
Cm-243	Cm-243	5.484E-11	1.803E-11	1.752E-11	1.655E-11	1.353E-11	7.478E-12	2.350E-18	0.000E+00	0.000E+00
Cm-243	ΣDOSE (j)		6.531E-09	6.348E-09	5.995E-09	4.901E-09	2.709E-09	8.516E-16	0.000E+00	0.000E+00
Cm-243	Cm-243	1.189E-12	3.908E-13	3.798E-13	3.587E-13	2.933E-13	1.621E-13	5.096E-20	0.000E+00	0.000E+00
Cm-243	Cm-243	3.291E-15	1.082E-15	1.051E-15	9.929E-16	8.117E-16	4.487E-16	1.410E-22	0.000E+00	0.000E+00
Cm-243	ΣDOSE (j)		3.919E-13	3.809E-13	3.597E-13	2.941E-13	1.626E-13	5.110E-20	0.000E+00	0.000E+00
Cm-243	Cm-243	9.805E-01	3.223E-01	3.132E-01	2.958E-01	2.419E-01	1.337E-01	4.202E-08	0.000E+00	0.000E+00
Cm-243	Cm-243	2.714E-03	8.920E-04	8.669E-04	8.188E-04	6.694E-04	3.700E-04	1.163E-10	0.000E+00	0.000E+00
Cm-243	ΣDOSE (j)		3.232E-01	3.141E-01	2.967E-01	2.425E-01	1.341E-01	4.214E-08	0.000E+00	0.000E+00
Cm-243	Cm-243	1.372E-02	4.510E-03	4.383E-03	4.139E-03	3.384E-03	1.871E-03	5.880E-10	0.000E+00	0.000E+00
Cm-243	Cm-243	3.797E-05	1.248E-05	1.213E-05	1.146E-05	9.366E-06	5.177E-06	1.627E-12	0.000E+00	0.000E+00
Cm-243	ΣDOSE (j)		4.522E-03	4.395E-03	4.151E-03	3.393E-03	1.876E-03	5.896E-10	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE(j,t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Cm-243	Cm-243	8.232E-07	2.706E-07	2.630E-07	2.484E-07	2.031E-07	1.122E-07	3.528E-14	0.000E+00	0.000E+00
Cm-243	Cm-243	2.278E-09	7.489E-10	7.279E-10	6.874E-10	5.620E-10	3.107E-10	9.765E-17	0.000E+00	0.000E+00
Cm-243	ΣDOSE(j)		2.713E-07	2.637E-07	2.491E-07	2.036E-07	1.126E-07	3.538E-14	0.000E+00	0.000E+00
Cm-243	Cm-243	5.887E-04	1.935E-04	1.881E-04	1.776E-04	1.452E-04	8.026E-05	2.523E-11	0.000E+00	0.000E+00
Cm-243	Cm-243	1.629E-06	5.355E-07	5.205E-07	4.916E-07	4.019E-07	2.221E-07	6.982E-14	0.000E+00	0.000E+00
Cm-243	ΣDOSE(j)		1.940E-04	1.886E-04	1.781E-04	1.456E-04	8.049E-05	2.530E-11	0.000E+00	0.000E+00
Cm-243	Cm-243	8.237E-06	2.707E-06	2.631E-06	2.485E-06	2.032E-06	1.123E-06	3.530E-13	0.000E+00	0.000E+00
Cm-243	Cm-243	2.280E-08	7.493E-09	7.282E-09	6.878E-09	5.623E-09	3.108E-09	9.770E-16	0.000E+00	0.000E+00
Cm-243	ΣDOSE(j)		2.715E-06	2.639E-06	2.492E-06	2.037E-06	1.126E-06	3.540E-13	0.000E+00	0.000E+00
Cm-243	Cm-243	4.942E-10	1.625E-10	1.579E-10	1.491E-10	1.219E-10	6.739E-11	2.118E-17	0.000E+00	0.000E+00
Cm-243	Cm-243	1.368E-12	4.496E-13	4.370E-13	4.127E-13	3.374E-13	1.865E-13	5.862E-20	0.000E+00	0.000E+00
Cm-243	ΣDOSE(j)		1.629E-10	1.583E-10	1.495E-10	1.222E-10	6.758E-11	2.124E-17	0.000E+00	0.000E+00
Cm-244	Cm-244	1.371E-06	1.266E-07	1.205E-07	1.092E-07	7.717E-08	2.754E-08	1.110E-14	0.000E+00	0.000E+00
Cm-244	Cm-244	5.750E-08	5.308E-09	5.055E-09	4.582E-09	3.237E-09	1.155E-09	4.654E-16	0.000E+00	0.000E+00
Cm-244	ΣDOSE(j)		1.319E-07	1.256E-07	1.138E-07	8.041E-08	2.869E-08	1.156E-14	0.000E+00	0.000E+00
Pu-240	Cm-244	5.750E-08	5.138E-13	1.499E-12	3.286E-12	7.896E-12	1.201E-11	7.633E-17	0.000E+00	0.000E+00
Pu-240	Pu-240	5.750E-08	9.869E-09	9.726E-09	9.443E-09	8.485E-09	6.019E-09	2.566E-14	0.000E+00	0.000E+00
Pu-240	ΣDOSE(j)		9.869E-09	9.728E-09	9.446E-09	8.493E-09	6.031E-09	2.574E-14	0.000E+00	0.000E+00
Cm-244	Cm-244	1.000E+00	9.232E-02	8.791E-02	7.968E-02	5.629E-02	2.009E-02	8.095E-09	0.000E+00	0.000E+00
Pu-240	Cm-244	1.000E+00	8.936E-06	2.607E-05	5.714E-05	1.373E-04	2.089E-04	1.328E-09	0.000E+00	0.000E+00
U-236	Cm-244	1.000E+00	1.680E-14	1.169E-13	5.905E-13	4.367E-12	2.062E-11	3.644E-16	0.000E+00	0.000E+00
U-236	Pu-240	1.000E+00	4.956E-10	1.468E-09	3.316E-09	8.795E-09	1.729E-08	1.581E-13	0.000E+00	0.000E+00
U-236	ΣDOSE(j)		4.956E-10	1.469E-09	3.316E-09	8.800E-09	1.731E-08	1.585E-13	0.000E+00	0.000E+00
Th-232	Cm-244	1.000E+00	7.406E-25	1.057E-23	1.159E-22	2.582E-21	3.821E-20	2.525E-24	0.000E+00	0.000E+00
Th-232	Pu-240	1.000E+00	2.795E-20	1.879E-19	9.529E-19	7.604E-18	4.531E-17	1.414E-21	0.000E+00	0.000E+00
Th-232	ΣDOSE(j)		2.795E-20	1.880E-19	9.530E-19	7.607E-18	4.535E-17	1.417E-21	0.000E+00	0.000E+00
Ra-228	Cm-244	1.000E+00	4.716E-25	1.456E-23	3.459E-22	2.093E-20	7.258E-19	1.091E-22	0.000E+00	0.000E+00
Ra-228	Pu-240	1.000E+00	2.263E-20	3.369E-19	3.704E-18	7.692E-17	9.861E-16	6.343E-20	0.000E+00	0.000E+00
Ra-228	ΣDOSE(j)		2.263E-20	3.369E-19	3.704E-18	7.694E-17	9.868E-16	6.354E-20	0.000E+00	0.000E+00
Th-228	Cm-244	1.000E+00	2.959E-26	1.705E-24	7.685E-23	1.016E-20	5.897E-19	1.035E-24	0.000E+00	0.000E+00
Th-228	Pu-240	1.000E+00	1.666E-21	4.696E-20	9.824E-19	4.271E-17	8.556E-16	6.072E-22	0.000E+00	0.000E+00
Th-228	ΣDOSE(j)		1.666E-21	4.696E-20	9.824E-19	4.272E-17	8.562E-16	6.082E-22	0.000E+00	0.000E+00
Co-60	Co-60	1.000E+00	5.280E+00	4.612E+00	3.517E+00	1.358E+00	8.742E-02	1.029E-11	0.000E+00	0.000E+00
Cs-134	Cs-134	1.000E+00	3.323E+00	2.363E+00	1.195E+00	1.096E-01	1.163E-04	4.143E-20	0.000E+00	0.000E+00
Cs-137	Cs-137	1.000E+00	1.586E+00	1.541E+00	1.454E+00	1.185E+00	6.442E-01	1.091E-06	0.000E+00	0.000E+00

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Individual Nuclide Dose Summed Over All Pathways

Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE(j,t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Eu-152	Eu-152	7.210E-01	1.679E+00	1.572E+00	1.377E+00	8.647E-01	2.233E-01	1.349E-11	0.000E+00	0.000E+00
Eu-152	Eu-152	2.790E-01	6.497E-01	6.082E-01	5.328E-01	3.346E-01	8.642E-02	5.221E-12	0.000E+00	0.000E+00
Eu-152	ΣDOSE(j)		2.329E+00	2.180E+00	1.910E+00	1.199E+00	3.097E-01	1.871E-11	0.000E+00	0.000E+00
Gd-152	Eu-152	2.790E-01	1.902E-17	5.475E-17	1.174E-16	2.643E-16	3.534E-16	1.342E-21	0.000E+00	0.000E+00
Sm-148	Eu-152	2.790E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Nd-144	Eu-152	2.790E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Eu-154	Eu-154	1.000E+00	2.508E+00	2.279E+00	1.882E+00	9.616E-01	1.376E-01	1.161E-12	0.000E+00	0.000E+00
Eu-155	Eu-155	1.000E+00	6.396E-02	5.459E-02	3.978E-02	1.312E-02	5.479E-04	1.744E-16	0.000E+00	0.000E+00
Fe-55	Fe-55	1.000E+00	7.410E-04	5.692E-04	3.358E-04	5.274E-05	2.565E-07	1.301E-20	0.000E+00	0.000E+00
H-3	H-3	1.000E+00	1.023E-03	3.986E-03	5.005E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Nb-94	Nb-94	1.000E+00	3.330E+00	3.236E+00	3.055E+00	2.491E+00	1.358E+00	1.824E-09	0.000E+00	2.832E-03
Ni-59	Ni-59	1.000E+00	2.285E-03	2.220E-03	2.093E-03	1.698E-03	8.997E-04	1.420E-08	0.000E+00	1.824E-05
Ni-63	Ni-63	1.000E+00	6.256E-03	6.036E-03	5.613E-03	4.339E-03	2.002E-03	1.953E-08	0.000E+00	4.943E-08
Pm-147	Pm-147	1.000E+00	2.278E-04	1.711E-04	9.653E-05	1.298E-05	4.068E-08	8.855E-22	0.000E+00	0.000E+00
Sm-147	Pm-147	1.000E+00	6.957E-14	1.816E-13	3.243E-13	4.547E-13	3.632E-13	1.275E-18	0.000E+00	0.000E+00
Pu-238	Pu-238	1.850E-09	2.860E-10	2.797E-10	2.673E-10	2.274E-10	1.380E-10	3.422E-16	0.000E+00	0.000E+00
Pu-238	Pu-238	9.996E-01	1.545E-01	1.511E-01	1.444E-01	1.229E-01	7.459E-02	1.849E-07	0.000E+00	0.000E+00
Pu-238	ΣDOSE(j)		1.545E-01	1.511E-01	1.444E-01	1.229E-01	7.459E-02	1.849E-07	0.000E+00	0.000E+00
U-234	Pu-238	9.996E-01	4.969E-08	1.467E-07	3.288E-07	8.487E-07	1.543E-06	1.067E-11	0.000E+00	0.000E+00
U-234	Pu-238	1.899E-08	9.442E-16	2.788E-15	6.246E-15	1.613E-14	2.932E-14	2.028E-19	0.000E+00	0.000E+00
U-234	Pu-238	2.100E-04	1.044E-11	3.082E-11	6.905E-11	1.783E-10	3.241E-10	2.242E-15	0.000E+00	0.000E+00
U-234	Pu-238	2.771E-10	1.378E-17	4.068E-17	9.115E-17	2.353E-16	4.279E-16	2.959E-21	0.000E+00	0.000E+00
U-234	Pu-238	3.989E-12	1.983E-19	5.855E-19	1.312E-18	3.387E-18	6.159E-18	4.259E-23	0.000E+00	0.000E+00
U-234	Pu-238	1.998E-04	9.931E-12	2.932E-11	6.570E-11	1.696E-10	3.084E-10	2.133E-15	0.000E+00	0.000E+00
U-234	Pu-238	2.637E-10	1.311E-17	3.870E-17	8.672E-17	2.239E-16	4.071E-16	2.815E-21	0.000E+00	0.000E+00
U-234	Pu-238	3.795E-12	1.887E-19	5.571E-19	1.248E-18	3.223E-18	5.860E-18	4.052E-23	0.000E+00	0.000E+00
U-234	Pu-238	4.196E-08	2.086E-15	6.159E-15	1.380E-14	3.563E-14	6.478E-14	4.480E-19	0.000E+00	0.000E+00
U-234	Pu-238	5.538E-14	2.753E-21	8.130E-21	1.822E-20	4.703E-20	8.551E-20	5.913E-25	0.000E+00	0.000E+00
U-234	Pu-238	7.972E-16	3.963E-23	1.170E-22	2.622E-22	6.769E-22	1.231E-21	8.510E-27	0.000E+00	0.000E+00
U-234	Pu-238	2.000E-07	9.943E-15	2.936E-14	6.578E-14	1.698E-13	3.088E-13	2.135E-18	0.000E+00	0.000E+00
U-234	Pu-238	2.640E-13	1.312E-20	3.875E-20	8.683E-20	2.242E-19	4.076E-19	2.819E-24	0.000E+00	0.000E+00
U-234	Pu-238	3.800E-15	1.889E-22	5.578E-22	1.250E-21	3.226E-21	5.867E-21	4.057E-26	0.000E+00	0.000E+00
U-234	ΣDOSE(j)		4.971E-08	1.468E-07	3.289E-07	8.491E-07	1.544E-06	1.068E-11	0.000E+00	0.000E+00
Th-230	Pu-238	9.996E-01	1.012E-13	6.793E-13	3.429E-12	2.692E-11	1.533E-10	3.955E-15	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways

Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE (j,t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Th-230	Pu-238	1.899E-08	1.923E-21	1.291E-20	6.515E-20	5.114E-19	2.912E-18	7.514E-23	0.000E+00	0.000E+00
Th-230	Pu-238	2.100E-04	2.125E-17	1.427E-16	7.202E-16	5.653E-15	3.220E-14	8.307E-19	0.000E+00	0.000E+00
Th-230	Pu-238	2.771E-10	2.806E-23	1.883E-22	9.507E-22	7.463E-21	4.250E-20	1.096E-24	0.000E+00	0.000E+00
Th-230	Pu-238	3.989E-12	4.038E-25	2.711E-24	1.368E-23	1.074E-22	6.117E-22	1.578E-26	0.000E+00	0.000E+00
Th-230	Pu-238	1.998E-04	2.022E-17	1.357E-16	6.852E-16	5.379E-15	3.063E-14	7.903E-19	0.000E+00	0.000E+00
Th-230	Pu-238	2.637E-10	2.669E-23	1.792E-22	9.045E-22	7.100E-21	4.043E-20	1.043E-24	0.000E+00	0.000E+00
Th-230	Pu-238	3.795E-12	3.842E-25	2.579E-24	1.302E-23	1.022E-22	5.820E-22	1.502E-26	0.000E+00	0.000E+00
Th-230	Pu-238	4.196E-08	4.248E-21	2.851E-20	1.439E-19	1.130E-18	6.434E-18	1.660E-22	0.000E+00	0.000E+00
Th-230	Pu-238	5.538E-14	5.607E-27	3.764E-26	1.900E-25	1.491E-24	8.493E-24	2.191E-28	0.000E+00	0.000E+00
Th-230	Pu-238	7.972E-16	8.070E-29	5.417E-28	2.735E-27	2.147E-26	1.222E-25	3.034E-30	0.000E+00	0.000E+00
Th-230	Pu-238	2.000E-07	2.025E-20	1.359E-19	6.860E-19	5.385E-18	3.067E-17	7.913E-22	0.000E+00	0.000E+00
Th-230	Pu-238	2.640E-13	2.673E-26	1.794E-25	9.056E-25	7.109E-24	4.048E-23	1.044E-27	0.000E+00	0.000E+00
Th-230	Pu-238	3.800E-15	3.847E-28	2.582E-27	1.303E-26	1.023E-25	5.827E-25	1.446E-29	0.000E+00	0.000E+00
Th-230	ΣDOSE (j)		1.012E-13	6.795E-13	3.430E-12	2.693E-11	1.533E-10	3.956E-15	0.000E+00	0.000E+00
Ra-226	Pu-238	9.996E-01	2.235E-15	3.376E-14	3.894E-13	9.647E-12	1.873E-10	1.584E-14	0.000E+00	0.000E+00
Ra-226	Pu-238	1.899E-08	4.246E-23	6.414E-22	7.399E-21	1.833E-19	3.559E-18	3.010E-22	0.000E+00	0.000E+00
Ra-226	ΣDOSE (j)		2.235E-15	3.376E-14	3.894E-13	9.647E-12	1.873E-10	1.584E-14	0.000E+00	0.000E+00
Pb-210	Pu-238	9.996E-01	3.680E-18	9.191E-17	1.931E-15	1.178E-13	5.076E-12	2.097E-15	0.000E+00	0.000E+00
Pb-210	Pu-238	1.319E-06	2.707E-24	8.614E-23	2.134E-21	1.457E-19	6.556E-18	2.654E-21	0.000E+00	0.000E+00
Pb-210	Pu-238	2.100E-04	7.729E-22	1.930E-20	4.056E-19	2.474E-17	1.066E-15	4.405E-19	0.000E+00	0.000E+00
Pb-210	Pu-238	1.998E-04	7.353E-22	1.837E-20	3.859E-19	2.353E-17	1.014E-15	4.191E-19	0.000E+00	0.000E+00
Pb-210	Pu-238	4.196E-08	1.544E-25	3.858E-24	8.106E-23	4.943E-21	2.131E-19	8.802E-23	0.000E+00	0.000E+00
Pb-210	Pu-238	2.000E-07	7.362E-25	1.839E-23	3.864E-22	2.356E-20	1.016E-18	4.196E-22	0.000E+00	0.000E+00
Pb-210	ΣDOSE (j)		3.681E-18	9.195E-17	1.932E-15	1.178E-13	5.078E-12	2.098E-15	0.000E+00	0.000E+00
Po-210	Pu-238	9.996E-01	3.620E-19	1.708E-17	6.011E-16	5.503E-14	2.781E-12	4.727E-16	0.000E+00	0.000E+00
Po-210	Pu-238	2.100E-04	7.604E-23	3.588E-21	1.263E-19	1.156E-17	5.841E-16	9.929E-20	0.000E+00	0.000E+00
Po-210	Pu-238	1.998E-04	7.235E-23	3.414E-21	1.201E-19	1.100E-17	5.557E-16	9.447E-20	0.000E+00	0.000E+00
Po-210	Pu-238	4.196E-08	1.520E-26	7.170E-25	2.523E-23	2.310E-21	1.167E-19	1.984E-23	0.000E+00	0.000E+00
Po-210	Pu-238	2.000E-07	7.243E-26	3.418E-24	1.203E-22	1.101E-20	5.564E-19	9.458E-23	0.000E+00	0.000E+00
Po-210	ΣDOSE (j)		3.622E-19	1.709E-17	6.014E-16	5.506E-14	2.782E-12	4.729E-16	0.000E+00	0.000E+00
Pu-238	Pu-238	1.319E-06	2.040E-07	1.995E-07	1.907E-07	1.622E-07	9.846E-08	2.441E-13	0.000E+00	0.000E+00
Pu-238	Pu-238	1.899E-08	2.936E-09	2.871E-09	2.744E-09	2.335E-09	1.417E-09	3.513E-15	0.000E+00	0.000E+00
Pu-238	ΣDOSE (j)		2.069E-07	2.023E-07	1.934E-07	1.646E-07	9.987E-08	2.476E-13	0.000E+00	0.000E+00
U-234	Pu-238	1.319E-06	6.559E-14	1.937E-13	4.340E-13	1.120E-12	2.037E-12	1.409E-17	0.000E+00	0.000E+00
Th-230	Pu-238	1.319E-06	1.336E-19	8.966E-19	4.526E-18	3.553E-17	2.023E-16	5.220E-21	0.000E+00	0.000E+00
Ra-226	Pu-238	1.319E-06	2.950E-21	4.456E-20	5.140E-19	1.273E-17	2.473E-16	2.091E-20	0.000E+00	0.000E+00
Pb-210	Pu-238	1.899E-08	3.885E-26	1.236E-24	3.063E-23	2.091E-21	9.403E-20	3.816E-23	0.000E+00	0.000E+00
Pb-210	Pu-238	3.989E-12	7.244E-30	2.596E-28	6.433E-27	4.393E-25	1.975E-23	8.015E-27	0.000E+00	0.000E+00
Pb-210	Pu-238	3.795E-12	6.892E-30	2.470E-28	6.121E-27	4.179E-25	1.879E-23	7.626E-27	0.000E+00	0.000E+00
Pb-210	Pu-238	7.972E-16	0.000E+00	0.000E+00	0.000E+00	8.729E-29	3.946E-27	0.000E+00	0.000E+00	0.000E+00
Pb-210	Pu-238	3.800E-15	0.000E+00	0.000E+00	5.484E-30	4.184E-28	1.881E-26	6.877E-30	0.000E+00	0.000E+00
Pb-210	ΣDOSE (j)		3.887E-26	1.237E-24	3.064E-23	2.092E-21	9.407E-20	3.818E-23	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways

Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE (j, t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pu-238	Pu-238	2.100E-04	3.246E-05	3.174E-05	3.034E-05	2.581E-05	1.567E-05	3.884E-11	0.000E+00	0.000E+00
Pu-238	Pu-238	2.771E-10	4.284E-11	4.190E-11	4.005E-11	3.407E-11	2.068E-11	5.127E-17	0.000E+00	0.000E+00
Pu-238	ΣDOSE (j)		3.246E-05	3.174E-05	3.034E-05	2.581E-05	1.567E-05	3.884E-11	0.000E+00	0.000E+00
Ra-226	Pu-238	2.100E-04	4.690E-19	7.088E-18	8.177E-17	2.026E-15	3.935E-14	3.328E-18	0.000E+00	0.000E+00
Ra-226	Pu-238	2.771E-10	6.190E-25	9.356E-24	1.079E-22	2.675E-21	5.194E-20	4.393E-24	0.000E+00	0.000E+00
Ra-226	Pu-238	3.989E-12	8.910E-27	1.347E-25	1.554E-24	3.850E-23	7.476E-22	6.323E-26	0.000E+00	0.000E+00
Ra-226	ΣDOSE (j)		4.690E-19	7.088E-18	8.177E-17	2.026E-15	3.935E-14	3.328E-18	0.000E+00	0.000E+00
Pb-210	Pu-238	2.771E-10	5.686E-28	1.809E-26	4.483E-25	3.061E-23	1.377E-21	5.575E-25	0.000E+00	0.000E+00
Pb-210	Pu-238	2.637E-10	5.410E-28	1.721E-26	4.265E-25	2.913E-23	1.310E-21	5.305E-25	0.000E+00	0.000E+00
Pb-210	Pu-238	5.538E-14	0.000E+00	1.584E-30	8.895E-29	6.118E-27	2.752E-25	1.114E-28	0.000E+00	0.000E+00
Pb-210	Pu-238	2.640E-13	0.000E+00	1.711E-29	4.270E-28	2.916E-26	1.312E-24	5.311E-28	0.000E+00	0.000E+00
Pb-210	ΣDOSE (j)		1.110E-27	3.533E-26	8.753E-25	5.977E-23	2.689E-21	1.089E-24	0.000E+00	0.000E+00
Pu-238	Pu-238	3.989E-12	6.167E-13	6.031E-13	5.764E-13	4.904E-13	2.977E-13	7.379E-19	0.000E+00	0.000E+00
Pu-238	Pu-238	1.998E-04	3.088E-05	3.020E-05	2.886E-05	2.456E-05	1.491E-05	3.695E-11	0.000E+00	0.000E+00
Pu-238	ΣDOSE (j)		3.088E-05	3.020E-05	2.886E-05	2.456E-05	1.491E-05	3.695E-11	0.000E+00	0.000E+00
Ra-226	Pu-238	1.998E-04	4.011E-19	6.072E-18	7.007E-17	1.733E-15	3.341E-14	3.164E-18	0.000E+00	0.000E+00
Ra-226	Pu-238	3.795E-12	7.621E-27	1.154E-25	1.331E-24	3.293E-23	6.347E-22	6.012E-26	0.000E+00	0.000E+00
Ra-226	ΣDOSE (j)		4.011E-19	6.072E-18	7.007E-17	1.733E-15	3.341E-14	3.164E-18	0.000E+00	0.000E+00
Pu-238	Pu-238	2.637E-10	4.076E-11	3.986E-11	3.810E-11	3.242E-11	1.968E-11	4.878E-17	0.000E+00	0.000E+00
Pu-238	Pu-238	3.795E-12	5.867E-13	5.738E-13	5.484E-13	4.666E-13	2.832E-13	7.021E-19	0.000E+00	0.000E+00
Pu-238	ΣDOSE (j)		4.135E-11	4.043E-11	3.865E-11	3.288E-11	1.996E-11	4.948E-17	0.000E+00	0.000E+00
Ra-226	Pu-238	2.637E-10	5.295E-25	8.015E-24	9.250E-23	2.288E-21	4.410E-20	4.177E-24	0.000E+00	0.000E+00
Pu-238	Pu-238	4.196E-08	6.486E-09	6.343E-09	6.063E-09	5.158E-09	3.131E-09	7.762E-15	0.000E+00	0.000E+00
Pu-238	Pu-238	5.538E-14	8.562E-15	8.373E-15	8.003E-15	6.809E-15	4.133E-15	1.025E-20	0.000E+00	0.000E+00
Pu-238	ΣDOSE (j)		6.486E-09	6.343E-09	6.063E-09	5.158E-09	3.131E-09	7.762E-15	0.000E+00	0.000E+00
Ra-226	Pu-238	4.196E-08	8.425E-23	1.275E-21	1.472E-20	3.640E-19	7.017E-18	6.646E-22	0.000E+00	0.000E+00
Ra-226	Pu-238	5.538E-14	1.107E-28	1.683E-27	1.943E-26	4.805E-25	9.262E-24	8.767E-28	0.000E+00	0.000E+00
Ra-226	Pu-238	7.972E-16	1.218E-30	2.384E-29	2.796E-28	6.916E-27	1.333E-25	1.178E-29	0.000E+00	0.000E+00
Ra-226	ΣDOSE (j)		8.425E-23	1.275E-21	1.472E-20	3.640E-19	7.017E-18	6.646E-22	0.000E+00	0.000E+00
Pu-238	Pu-238	7.972E-16	1.232E-16	1.205E-16	1.152E-16	9.801E-17	5.949E-17	1.475E-22	0.000E+00	0.000E+00
Pu-238	Pu-238	2.000E-07	3.092E-08	3.023E-08	2.890E-08	2.459E-08	1.492E-08	3.700E-14	0.000E+00	0.000E+00
Pu-238	ΣDOSE (j)		3.092E-08	3.023E-08	2.890E-08	2.459E-08	1.492E-08	3.700E-14	0.000E+00	0.000E+00
Ra-226	Pu-238	2.000E-07	9.766E-23	1.553E-21	1.821E-20	4.399E-19	7.554E-18	3.165E-21	0.000E+00	0.000E+00
Ra-226	Pu-238	3.800E-15	1.337E-30	2.857E-29	3.460E-28	8.357E-27	1.435E-25	6.014E-29	0.000E+00	0.000E+00
Ra-226	ΣDOSE (j)		9.766E-23	1.553E-21	1.821E-20	4.399E-19	7.554E-18	3.165E-21	0.000E+00	0.000E+00
Pu-238	Pu-238	2.640E-13	4.081E-14	3.991E-14	3.815E-14	3.246E-14	1.970E-14	4.884E-20	0.000E+00	0.000E+00
Pu-238	Pu-238	3.800E-15	5.875E-16	5.745E-16	5.491E-16	4.672E-16	2.836E-16	7.029E-22	0.000E+00	0.000E+00
Pu-238	ΣDOSE (j)		4.140E-14	4.048E-14	3.870E-14	3.292E-14	1.998E-14	4.954E-20	0.000E+00	0.000E+00

Summary : RESRAD Default

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Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	DOSE(j,t), mrem/yr							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Ra-226	Pu-238	2.640E-13	1.289E-28	2.049E-27	2.404E-26	5.806E-25	9.972E-24	4.178E-27	0.000E+00	0.000E+00
Pu-239	Pu-239	1.633E-06	2.804E-07	2.764E-07	2.684E-07	2.413E-07	1.714E-07	7.345E-13	0.000E+00	0.000E+00
Pu-239	Pu-239	8.257E-06	1.418E-06	1.397E-06	1.357E-06	1.220E-06	8.667E-07	3.714E-12	0.000E+00	0.000E+00
Pu-239	ΣDOSE(j)		1.698E-06	1.674E-06	1.625E-06	1.461E-06	1.038E-06	4.448E-12	0.000E+00	0.000E+00
Pu-239	Pu-239	2.285E-08	3.923E-09	3.867E-09	3.755E-09	3.376E-09	2.399E-09	1.028E-14	0.000E+00	0.000E+00
Pu-239	Pu-239	4.954E-10	8.506E-11	8.384E-11	8.141E-11	7.319E-11	5.200E-11	2.228E-16	0.000E+00	0.000E+00
Pu-239	ΣDOSE(j)		4.009E-09	3.951E-09	3.836E-09	3.449E-09	2.451E-09	1.050E-14	0.000E+00	0.000E+00
Pu-239	Pu-239	1.371E-12	2.354E-13	2.320E-13	2.253E-13	2.026E-13	1.439E-13	6.167E-19	0.000E+00	0.000E+00
Pu-239	Pu-239	2.720E-03	4.671E-04	4.603E-04	4.470E-04	4.019E-04	2.855E-04	1.223E-09	0.000E+00	0.000E+00
Pu-239	Pu-239	1.375E-02	2.361E-03	2.327E-03	2.260E-03	2.032E-03	1.444E-03	6.186E-09	0.000E+00	0.000E+00
Pu-239	ΣDOSE(j)		2.828E-03	2.788E-03	2.707E-03	2.434E-03	1.729E-03	7.409E-09	0.000E+00	0.000E+00
Pu-239	Pu-239	3.806E-05	6.535E-06	6.441E-06	6.254E-06	5.623E-06	3.995E-06	1.712E-11	0.000E+00	0.000E+00
Pu-239	Pu-239	8.252E-07	1.417E-07	1.396E-07	1.356E-07	1.219E-07	8.662E-08	3.712E-13	0.000E+00	0.000E+00
Pu-239	ΣDOSE(j)		6.677E-06	6.581E-06	6.390E-06	5.745E-06	4.082E-06	1.749E-11	0.000E+00	0.000E+00
Pu-239	Pu-239	2.284E-09	3.921E-10	3.865E-10	3.753E-10	3.374E-10	2.397E-10	1.027E-15	0.000E+00	0.000E+00
Pu-240	Pu-240	1.000E+00	1.716E-01	1.691E-01	1.642E-01	1.476E-01	1.047E-01	4.463E-07	0.000E+00	0.000E+00
Pu-241	Pu-241	1.000E+00	3.239E-03	3.041E-03	2.682E-03	1.720E-03	4.653E-04	6.959E-11	0.000E+00	1.423E-24
Pu-241	Pu-241	2.450E-05	4.811E-06	4.560E-06	4.097E-06	2.813E-06	9.477E-07	1.904E-15	0.000E+00	3.644E-29
Pu-241	ΣDOSE(j)		3.243E-03	3.046E-03	2.686E-03	1.722E-03	4.662E-04	6.959E-11	0.000E+00	1.423E-24
Sb-125	Sb-125	7.686E-01	5.704E-01	4.131E-01	2.166E-01	2.256E-02	3.443E-05	9.907E-23	0.000E+00	0.000E+00
Sb-125	Sb-125	2.314E-01	1.717E-01	1.243E-01	6.519E-02	6.790E-03	1.036E-05	2.982E-23	0.000E+00	0.000E+00
Sb-125	ΣDOSE(j)		7.421E-01	5.374E-01	2.818E-01	2.935E-02	4.479E-05	1.289E-22	0.000E+00	0.000E+00
Te-125m	Sb-125	2.314E-01	1.951E-03	7.200E-03	4.597E-03	8.397E-04	8.483E-06	1.169E-12	0.000E+00	0.000E+00
Sr-90	Sr-90	1.000E+00	1.738E+00	1.016E+00	3.438E-01	7.717E-03	1.446E-07	5.407E-07	0.000E+00	0.000E+00
Tc-99	Tc-99	1.000E+00	2.452E-02	6.801E-02	1.955E-01	1.312E-26	0.000E+00	0.000E+00	0.000E+00	0.000E+00

THF(i) is the thread fraction of the parent nuclide.

Summary : RESRAD Default

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Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Ag-108m	Ag-108m	1.000E+00	1.000E+00	9.761E-01	9.300E-01	7.851E-01	4.840E-01	8.899E-02	7.048E-04	3.115E-11
Am-241	Am-241	1.000E+00	1.000E+00	9.917E-01	9.754E-01	9.203E-01	7.795E-01	4.359E-01	8.282E-02	2.476E-04
Am-241	Pu-241	1.000E+00	0.000E+00	1.556E-03	4.394E-03	1.192E-02	2.072E-02	1.555E-02	2.990E-03	8.939E-06
Am-241	ΣS(j):		1.000E+00	9.933E-01	9.798E-01	9.322E-01	8.002E-01	4.514E-01	8.581E-02	2.566E-04
Np-237	Am-241	1.000E+00	0.000E+00	2.764E-07	6.199E-07	9.295E-07	8.264E-07	4.621E-07	8.781E-08	2.625E-10
Np-237	Np-237	1.000E+00	1.000E+00	7.311E-01	3.907E-01	4.362E-02	8.297E-05	2.491E-14	1.546E-41	0.000E+00
Np-237	Pu-241	1.000E+00	0.000E+00	2.293E-10	1.637E-09	9.067E-09	2.062E-08	1.645E-08	3.170E-09	9.478E-12
Np-237	Pu-241	2.450E-05	0.000E+00	6.615E-12	1.408E-11	1.662E-11	6.249E-12	1.560E-13	4.103E-18	3.832E-34
Np-237	ΣS(j):		1.000E+00	7.311E-01	3.907E-01	4.362E-02	8.382E-05	4.786E-07	9.098E-08	2.720E-10
U-233	Am-241	1.000E+00	0.000E+00	6.319E-13	4.652E-12	2.908E-11	9.471E-11	1.845E-10	9.663E-11	6.887E-13
U-233	Np-237	1.000E+00	0.000E+00	3.720E-06	8.332E-06	1.242E-05	1.080E-05	5.589E-06	8.503E-07	1.168E-09
U-233	Pu-241	1.000E+00	0.000E+00	3.424E-16	7.724E-15	1.654E-13	1.434E-12	5.178E-12	3.259E-12	2.455E-14
U-233	Pu-241	2.450E-05	0.000E+00	1.525E-17	1.087E-16	6.003E-16	1.347E-15	1.006E-15	1.555E-16	2.135E-19
U-233	ΣS(j):		0.000E+00	3.720E-06	8.332E-06	1.242E-05	1.080E-05	5.590E-06	8.504E-07	1.168E-09
Th-229	Am-241	1.000E+00	0.000E+00	2.043E-17	4.737E-16	1.123E-14	1.314E-13	1.134E-12	3.828E-12	4.318E-12
Th-229	Np-237	1.000E+00	0.000E+00	1.851E-10	1.370E-09	8.773E-09	3.092E-08	8.199E-08	1.230E-07	1.071E-07
Th-229	Pu-241	1.000E+00	0.000E+00	8.235E-21	5.773E-19	4.562E-17	1.435E-15	2.537E-14	1.112E-13	1.320E-13
Th-229	Pu-241	2.450E-05	0.000E+00	4.949E-22	1.121E-20	2.441E-19	2.244E-18	1.057E-17	1.831E-17	1.619E-17
Th-229	ΣS(j):		0.000E+00	1.851E-10	1.370E-09	8.773E-09	3.092E-08	8.199E-08	1.230E-07	1.072E-07
Am-243	Am-243	9.829E-01	9.829E-01	9.762E-01	9.631E-01	9.183E-01	8.017E-01	4.983E-01	1.280E-01	1.101E-03
Am-243	Am-243	2.720E-03	2.720E-03	2.702E-03	2.665E-03	2.542E-03	2.219E-03	1.379E-03	3.544E-04	3.048E-06
Am-243	Cm-243	2.359E-03	0.000E+00	2.184E-07	6.352E-07	1.900E-06	4.216E-06	5.287E-06	1.632E-06	1.411E-08
Am-243	Cm-243	6.529E-06	0.000E+00	6.045E-10	1.758E-09	5.260E-09	1.167E-08	1.463E-08	4.516E-09	3.905E-11
Am-243	Cm-243	3.301E-05	0.000E+00	3.056E-09	8.888E-09	2.659E-08	5.900E-08	7.397E-08	2.283E-08	1.974E-10
Am-243	Cm-243	9.135E-08	0.000E+00	8.459E-12	2.460E-11	7.360E-11	1.633E-10	2.047E-10	6.319E-11	5.464E-13
Am-243	Cm-243	1.981E-09	0.000E+00	1.834E-13	5.333E-13	1.596E-12	3.540E-12	4.439E-12	1.370E-12	1.185E-14
Am-243	Cm-243	5.481E-12	0.000E+00	5.075E-16	1.476E-15	4.416E-15	9.797E-15	1.228E-14	3.792E-15	3.278E-17
Am-243	Cm-243	1.416E-06	0.000E+00	1.311E-10	3.814E-10	1.141E-09	2.531E-09	3.174E-09	9.797E-10	8.470E-12
Am-243	Cm-243	3.920E-09	0.000E+00	3.629E-13	1.055E-12	3.158E-12	7.006E-12	8.784E-12	2.711E-12	2.344E-14
Am-243	Cm-243	1.982E-08	0.000E+00	1.835E-12	5.336E-12	1.596E-11	3.542E-11	4.441E-11	1.371E-11	1.185E-13
Am-243	Cm-243	5.484E-11	0.000E+00	5.078E-15	1.477E-14	4.418E-14	9.803E-14	1.229E-13	3.794E-14	3.280E-16
Am-243	Cm-243	1.189E-12	0.000E+00	1.101E-16	3.202E-16	9.579E-16	2.125E-15	2.665E-15	8.225E-16	7.112E-18
Am-243	Cm-243	3.291E-15	0.000E+00	3.047E-19	8.861E-19	2.651E-18	5.882E-18	7.375E-18	2.276E-18	1.968E-20
Am-243	ΣS(j):		9.856E-01	9.789E-01	9.657E-01	9.209E-01	8.039E-01	4.996E-01	1.284E-01	1.105E-03
Pu-239	Am-243	9.829E-01	0.000E+00	2.810E-05	8.335E-05	2.671E-04	7.163E-04	1.614E-03	1.601E-03	1.269E-04
Pu-239	Am-243	2.720E-03	0.000E+00	7.777E-08	2.307E-07	7.393E-07	1.982E-06	4.467E-06	4.431E-06	3.513E-07
Pu-239	Am-243	1.375E-02	0.000E+00	3.932E-07	1.166E-06	3.738E-06	1.002E-05	2.258E-05	2.240E-05	1.776E-06
Pu-239	Am-243	3.806E-05	0.000E+00	1.088E-09	3.228E-09	1.034E-08	2.774E-08	6.250E-08	6.200E-08	4.916E-09
Pu-239	Am-243	8.252E-07	0.000E+00	2.359E-11	6.998E-11	2.243E-10	6.014E-10	1.355E-09	1.344E-09	1.066E-10
Pu-239	Am-243	2.284E-09	0.000E+00	6.529E-14	1.937E-13	6.207E-13	1.664E-12	3.750E-12	3.720E-12	2.950E-13
Pu-239	Cm-243	2.359E-03	0.000E+00	3.151E-12	2.770E-11	2.834E-10	2.027E-09	1.064E-08	1.575E-08	1.415E-09
Pu-239	Cm-243	6.529E-06	0.000E+00	8.722E-15	7.666E-14	7.845E-13	5.609E-12	2.944E-11	4.360E-11	3.917E-12
Pu-239	Cm-243	3.301E-05	0.000E+00	4.410E-14	3.876E-13	3.966E-12	2.836E-11	1.488E-10	2.204E-10	1.980E-11

Summary : RESRAD Default

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Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pu-239	Cm-243	9.135E-08	0.000E+00	1.220E-16	1.073E-15	1.098E-14	7.849E-14	4.119E-13	6.101E-13	5.480E-14
Pu-239	Cm-243	1.981E-09	0.000E+00	2.646E-18	2.326E-17	2.380E-16	1.702E-15	8.930E-15	1.323E-14	1.188E-15
Pu-239	Cm-243	5.481E-12	0.000E+00	7.323E-21	6.436E-20	6.586E-19	4.710E-18	2.471E-17	3.661E-17	3.288E-18
Pu-239	Cm-243	9.805E-01	0.000E+00	2.779E-05	8.100E-05	2.444E-04	5.567E-04	7.817E-04	3.703E-04	1.643E-05
Pu-239	Cm-243	2.714E-03	0.000E+00	7.690E-08	2.242E-07	6.764E-07	1.541E-06	2.164E-06	1.025E-06	4.547E-08
Pu-239	Cm-243	1.372E-02	0.000E+00	3.888E-07	1.133E-06	3.420E-06	7.789E-06	1.094E-05	5.181E-06	2.299E-07
Pu-239	Cm-243	3.797E-05	0.000E+00	1.076E-09	3.137E-09	9.465E-09	2.156E-08	3.027E-08	1.434E-08	6.362E-10
Pu-239	Cm-243	8.232E-07	0.000E+00	2.333E-11	6.800E-11	2.052E-10	4.674E-10	6.563E-10	3.109E-10	1.379E-11
Pu-239	Cm-243	2.278E-09	0.000E+00	6.457E-14	1.882E-13	5.679E-13	1.294E-12	1.816E-12	8.604E-13	3.817E-14
Pu-239	Pu-239	9.829E-01	9.829E-01	9.785E-01	9.698E-01	9.401E-01	8.600E-01	6.296E-01	2.584E-01	1.143E-02
Pu-239	ΣS(j):		9.829E-01	9.786E-01	9.700E-01	9.406E-01	8.612E-01	6.320E-01	2.604E-01	1.158E-02
U-235	Am-243	9.829E-01	0.000E+00	1.382E-14	1.226E-13	1.299E-12	1.019E-11	7.023E-11	1.660E-10	2.299E-11
U-235	Am-243	2.720E-03	0.000E+00	3.824E-17	3.394E-16	3.594E-15	2.820E-14	1.944E-13	4.596E-13	6.362E-14
U-235	Am-243	1.375E-02	0.000E+00	1.933E-16	1.716E-15	1.817E-14	1.425E-13	9.827E-13	2.323E-12	3.216E-13
U-235	Am-243	3.806E-05	0.000E+00	5.350E-19	4.749E-18	5.029E-17	3.945E-16	2.720E-15	6.430E-15	8.902E-16
U-235	Am-243	8.252E-07	0.000E+00	1.160E-20	1.030E-19	1.090E-18	8.553E-18	5.896E-17	1.394E-16	1.930E-17
U-235	Am-243	2.284E-09	0.000E+00	3.210E-23	2.850E-22	3.017E-21	2.367E-20	1.632E-19	3.858E-19	5.341E-20
U-235	Am-243	5.901E-04	0.000E+00	8.294E-18	7.363E-17	7.796E-16	6.116E-15	4.216E-14	9.969E-14	1.380E-14
U-235	Am-243	1.633E-06	0.000E+00	2.296E-20	2.038E-19	2.158E-18	1.693E-17	1.167E-16	2.759E-16	3.820E-17
U-235	Am-243	8.257E-06	0.000E+00	1.161E-19	1.030E-18	1.091E-17	8.558E-17	5.899E-16	1.395E-15	1.931E-16
U-235	Am-243	2.285E-08	0.000E+00	3.212E-22	2.851E-21	3.019E-20	2.369E-19	1.633E-18	3.860E-18	5.344E-19
U-235	Am-243	4.954E-10	0.000E+00	6.964E-24	6.182E-23	6.546E-22	5.135E-21	3.540E-20	8.370E-20	1.159E-20
U-235	Am-243	1.371E-12	0.000E+00	1.927E-26	1.711E-25	1.812E-24	1.421E-23	9.797E-23	2.316E-22	3.207E-23
U-235	Cm-243	2.359E-03	0.000E+00	1.035E-21	2.732E-20	9.357E-19	2.026E-17	3.586E-16	1.464E-15	2.529E-16
U-235	Cm-243	6.529E-06	0.000E+00	2.864E-24	7.562E-23	2.590E-21	5.608E-20	9.924E-19	4.052E-18	7.001E-19
U-235	Cm-243	3.301E-05	0.000E+00	1.448E-23	3.823E-22	1.309E-20	2.835E-19	5.017E-18	2.049E-17	3.539E-18
U-235	Cm-243	9.135E-08	0.000E+00	4.008E-26	1.058E-24	3.623E-23	7.846E-22	1.389E-20	5.670E-20	9.795E-21
U-235	Cm-243	1.981E-09	0.000E+00	8.689E-28	2.294E-26	7.856E-25	1.701E-23	3.010E-22	1.229E-21	2.124E-22
U-235	Cm-243	5.481E-12	0.000E+00	2.405E-30	6.349E-29	2.174E-27	4.708E-26	8.332E-25	3.402E-24	5.878E-25
U-235	Cm-243	1.416E-06	0.000E+00	6.213E-25	1.640E-23	5.617E-22	1.216E-20	2.153E-19	8.790E-19	1.519E-19
U-235	Cm-243	3.920E-09	0.000E+00	1.720E-27	4.540E-26	1.555E-24	3.367E-23	5.958E-22	2.433E-21	4.203E-22
U-235	Cm-243	1.982E-08	0.000E+00	8.694E-27	2.295E-25	7.860E-24	1.702E-22	3.012E-21	1.230E-20	2.125E-21
U-235	Cm-243	5.484E-11	0.000E+00	2.406E-29	6.352E-28	2.175E-26	4.711E-25	8.336E-24	3.404E-23	5.881E-24
U-235	Cm-243	1.189E-12	0.000E+00	5.217E-31	1.377E-29	4.716E-28	1.021E-26	1.807E-25	7.380E-25	1.275E-25
U-235	Cm-243	3.291E-15	0.000E+00	1.444E-33	3.811E-32	1.305E-30	2.827E-29	5.002E-28	2.043E-27	3.529E-28
U-235	Cm-243	9.805E-01	0.000E+00	1.370E-14	1.202E-13	1.223E-12	8.585E-12	4.213E-11	5.162E-11	3.232E-12
U-235	Cm-243	2.714E-03	0.000E+00	3.792E-17	3.327E-16	3.384E-15	2.376E-14	1.166E-13	1.429E-13	8.946E-15
U-235	Cm-243	1.372E-02	0.000E+00	1.917E-16	1.682E-15	1.711E-14	1.201E-13	5.896E-13	7.223E-13	4.523E-14
U-235	Cm-243	3.797E-05	0.000E+00	5.306E-19	4.655E-18	4.735E-17	3.325E-16	1.632E-15	1.999E-15	1.252E-16
U-235	Cm-243	8.232E-07	0.000E+00	1.150E-20	1.009E-19	1.026E-18	7.208E-18	3.538E-17	4.334E-17	2.714E-18
U-235	Cm-243	2.278E-09	0.000E+00	3.184E-23	2.793E-22	2.841E-21	1.995E-20	9.791E-20	1.199E-19	7.511E-21
U-235	Cm-243	5.887E-04	0.000E+00	8.226E-18	7.217E-17	7.340E-16	5.154E-15	2.530E-14	3.099E-14	1.941E-15
U-235	Cm-243	1.629E-06	0.000E+00	2.277E-20	1.997E-19	2.031E-18	1.427E-17	7.001E-17	8.577E-17	5.371E-18
U-235	Cm-243	8.237E-06	0.000E+00	1.151E-19	1.010E-18	1.027E-17	7.212E-17	3.539E-16	4.336E-16	2.715E-17
U-235	Cm-243	2.280E-08	0.000E+00	3.186E-22	2.795E-21	2.842E-20	1.996E-19	9.796E-19	1.200E-18	7.515E-20
U-235	Cm-243	4.942E-10	0.000E+00	6.906E-24	6.060E-23	6.163E-22	4.327E-21	2.124E-20	2.602E-20	1.629E-21
U-235	Cm-243	1.368E-12	0.000E+00	1.911E-26	1.677E-25	1.706E-24	1.198E-23	5.878E-23	7.201E-23	4.509E-24
U-235	Pu-239	5.901E-04	0.000E+00	5.770E-13	1.707E-12	5.421E-12	1.417E-11	2.935E-11	2.384E-11	1.354E-12

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
U-235	Pu-239	1.633E-06	0.000E+00	1.597E-15	4.725E-15	1.500E-14	3.922E-14	8.122E-14	6.599E-14	3.747E-15
U-235	Pu-239	8.257E-06	0.000E+00	8.073E-15	2.389E-14	7.586E-14	1.983E-13	4.106E-13	3.336E-13	1.894E-14
U-235	Pu-239	2.285E-08	0.000E+00	2.234E-17	6.611E-17	2.099E-16	5.487E-16	1.136E-15	9.234E-16	5.243E-17
U-235	Pu-239	4.954E-10	0.000E+00	4.844E-19	1.433E-18	4.552E-18	1.190E-17	2.464E-17	2.002E-17	1.137E-18
U-235	Pu-239	1.371E-12	0.000E+00	1.341E-21	3.967E-21	1.260E-20	3.293E-20	6.819E-20	5.541E-20	3.146E-21
U-235	Pu-239	9.829E-01	0.000E+00	9.611E-10	2.843E-09	9.030E-09	2.360E-08	4.888E-08	3.972E-08	2.255E-09
U-235	Pu-239	2.720E-03	0.000E+00	2.660E-12	7.870E-12	2.499E-11	6.532E-11	1.353E-10	1.099E-10	6.241E-12
U-235	Pu-239	1.375E-02	0.000E+00	1.345E-11	3.979E-11	1.264E-10	3.303E-10	6.839E-10	5.557E-10	3.155E-11
U-235	Pu-239	3.806E-05	0.000E+00	3.722E-14	1.101E-13	3.497E-13	9.140E-13	1.893E-12	1.538E-12	8.733E-14
U-235	Pu-239	8.252E-07	0.000E+00	8.069E-16	2.387E-15	7.582E-15	1.982E-14	4.104E-14	3.335E-14	1.893E-15
U-235	Pu-239	2.284E-09	0.000E+00	2.233E-18	6.607E-18	2.098E-17	5.484E-17	1.136E-16	9.229E-17	5.240E-18
U-235	ΣS(j):		0.000E+00	9.778E-10	2.893E-09	9.190E-09	2.403E-08	4.984E-08	4.063E-08	2.321E-09
Pa-231	Am-243	9.829E-01	0.000E+00	9.753E-20	2.602E-18	9.245E-17	2.217E-15	5.442E-14	4.672E-13	4.255E-13
Pa-231	Am-243	2.720E-03	0.000E+00	2.699E-22	7.202E-21	2.559E-19	6.136E-18	1.506E-16	1.293E-15	1.178E-15
Pa-231	Am-243	1.375E-02	0.000E+00	1.365E-21	3.641E-20	1.294E-18	3.102E-17	7.615E-16	6.537E-15	5.954E-15
Pa-231	Am-243	3.806E-05	0.000E+00	3.777E-24	1.008E-22	3.580E-21	8.586E-20	2.107E-18	1.809E-17	1.648E-17
Pa-231	Am-243	8.252E-07	0.000E+00	8.188E-26	2.185E-24	7.762E-23	1.861E-21	4.569E-20	3.923E-19	3.572E-19
Pa-231	Am-243	2.284E-09	0.000E+00	2.266E-28	6.046E-27	2.148E-25	5.152E-24	1.265E-22	1.086E-21	9.887E-22
Pa-231	Am-243	5.901E-04	0.000E+00	5.855E-23	1.562E-21	5.550E-20	1.331E-18	3.267E-17	2.805E-16	2.555E-16
Pa-231	Am-243	1.633E-06	0.000E+00	1.621E-25	4.324E-24	1.536E-22	3.684E-21	9.042E-20	7.763E-19	7.070E-19
Pa-231	Am-243	8.257E-06	0.000E+00	8.193E-25	2.186E-23	7.766E-22	1.862E-20	4.571E-19	3.925E-18	3.574E-18
Pa-231	Am-243	2.285E-08	0.000E+00	2.267E-27	6.050E-26	2.149E-24	5.155E-23	1.265E-21	1.086E-20	9.893E-21
Pa-231	Am-243	4.954E-10	0.000E+00	4.916E-29	1.312E-27	4.660E-26	1.118E-24	2.743E-23	2.355E-22	2.145E-22
Pa-231	Am-243	1.371E-12	0.000E+00	1.361E-31	3.630E-30	1.290E-28	3.093E-27	7.592E-26	6.518E-25	5.936E-25
Pa-231	Cm-243	2.359E-03	0.000E+00	5.483E-27	4.357E-25	5.030E-23	3.372E-21	2.208E-19	3.501E-18	4.263E-18
Pa-231	Cm-243	6.529E-06	0.000E+00	1.518E-29	1.206E-27	1.392E-25	9.334E-24	6.111E-22	9.690E-21	1.180E-20
Pa-231	Cm-243	3.301E-05	0.000E+00	7.672E-29	6.096E-27	7.038E-25	4.719E-23	3.089E-21	4.899E-20	5.965E-20
Pa-231	Cm-243	9.135E-08	0.000E+00	2.123E-31	1.687E-29	1.948E-27	1.306E-25	8.550E-24	1.356E-22	1.651E-22
Pa-231	Cm-243	1.981E-09	0.000E+00	4.604E-33	3.658E-31	4.223E-29	2.831E-27	1.854E-25	2.940E-24	3.579E-24
Pa-231	Cm-243	5.481E-12	0.000E+00	1.274E-35	1.012E-33	1.169E-31	7.836E-30	5.131E-28	8.135E-27	9.906E-27
Pa-231	Cm-243	1.416E-06	0.000E+00	3.292E-30	2.616E-28	3.020E-26	2.025E-24	1.326E-22	2.102E-21	2.559E-21
Pa-231	Cm-243	3.920E-09	0.000E+00	9.111E-33	7.239E-31	8.358E-29	5.604E-27	3.669E-25	5.817E-24	7.084E-24
Pa-231	Cm-243	1.982E-08	0.000E+00	4.606E-32	3.660E-30	4.225E-28	2.833E-26	1.855E-24	2.941E-23	3.581E-23
Pa-231	Cm-243	5.484E-11	0.000E+00	1.275E-34	1.013E-32	1.169E-30	7.841E-29	5.133E-27	8.140E-26	9.912E-26
Pa-231	Cm-243	1.189E-12	0.000E+00	2.764E-36	2.196E-34	2.535E-32	1.700E-30	1.113E-28	1.765E-27	2.149E-27
Pa-231	Cm-243	3.291E-15	0.000E+00	7.649E-39	6.078E-37	7.017E-35	4.705E-33	3.080E-31	4.884E-30	5.947E-30
Pa-231	Cm-243	9.805E-01	0.000E+00	9.687E-20	2.562E-18	8.831E-17	1.949E-15	3.709E-14	1.934E-13	9.246E-14
Pa-231	Cm-243	2.714E-03	0.000E+00	2.681E-22	7.091E-21	2.444E-19	5.394E-18	1.027E-16	5.353E-16	2.559E-16
Pa-231	Cm-243	1.372E-02	0.000E+00	1.355E-21	3.585E-20	1.236E-18	2.727E-17	5.190E-16	2.706E-15	1.294E-15
Pa-231	Cm-243	3.797E-05	0.000E+00	3.751E-24	9.921E-23	3.420E-21	7.548E-20	1.436E-18	7.490E-18	3.580E-18
Pa-231	Cm-243	8.232E-07	0.000E+00	8.133E-26	2.151E-24	7.414E-23	1.636E-21	3.114E-20	1.624E-19	7.763E-20
Pa-231	Cm-243	2.278E-09	0.000E+00	2.251E-28	5.953E-27	2.052E-25	4.529E-24	8.619E-23	4.494E-22	2.148E-22
Pa-231	Cm-243	5.887E-04	0.000E+00	5.816E-23	1.538E-21	5.302E-20	1.170E-18	2.227E-17	1.161E-16	5.551E-17
Pa-231	Cm-243	1.629E-06	0.000E+00	1.610E-25	4.257E-24	1.467E-22	3.239E-21	6.163E-20	3.214E-19	1.536E-19
Pa-231	Cm-243	8.237E-06	0.000E+00	8.137E-25	2.152E-23	7.418E-22	1.637E-20	3.116E-19	1.625E-18	7.767E-19
Pa-231	Cm-243	2.280E-08	0.000E+00	2.252E-27	5.956E-26	2.053E-24	4.531E-23	8.624E-22	4.497E-21	2.150E-21
Pa-231	Cm-243	4.942E-10	0.000E+00	4.883E-29	1.291E-27	4.451E-26	9.824E-25	1.870E-23	9.749E-23	4.660E-23
Pa-231	Cm-243	1.368E-12	0.000E+00	1.351E-31	3.574E-30	1.232E-28	2.719E-27	5.175E-26	2.698E-25	1.290E-25

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pa-231	Pu-239	5.901E-04	0.000E+00	6.112E-18	5.439E-17	5.808E-16	4.670E-15	3.518E-14	1.090E-13	4.260E-14
Pa-231	Pu-239	1.633E-06	0.000E+00	1.691E-20	1.505E-19	1.607E-18	1.293E-17	9.736E-17	3.017E-16	1.179E-16
Pa-231	Pu-239	8.257E-06	0.000E+00	8.552E-20	7.610E-19	8.127E-18	6.535E-17	4.922E-16	1.525E-15	5.961E-16
Pa-231	Pu-239	2.285E-08	0.000E+00	2.367E-22	2.106E-21	2.249E-20	1.809E-19	1.362E-18	4.221E-18	1.650E-18
Pa-231	Pu-239	4.954E-10	0.000E+00	5.131E-24	4.566E-23	4.876E-22	3.921E-21	2.954E-20	9.151E-20	3.577E-20
Pa-231	Pu-239	1.371E-12	0.000E+00	1.420E-26	1.264E-25	1.350E-24	1.085E-23	8.175E-23	2.533E-22	9.900E-23
Pa-231	Pu-239	9.829E-01	0.000E+00	1.018E-14	9.059E-14	9.674E-13	7.779E-12	5.860E-11	1.815E-10	7.096E-11
Pa-231	Pu-239	2.720E-03	0.000E+00	2.817E-17	2.507E-16	2.678E-15	2.153E-14	1.622E-13	5.025E-13	1.964E-13
Pa-231	Pu-239	1.375E-02	0.000E+00	1.424E-16	1.268E-15	1.354E-14	1.089E-13	8.199E-13	2.540E-12	9.929E-13
Pa-231	Pu-239	3.806E-05	0.000E+00	3.942E-19	3.508E-18	3.746E-17	3.013E-16	2.269E-15	7.031E-15	2.748E-15
Pa-231	Pu-239	8.252E-07	0.000E+00	8.547E-21	7.606E-20	8.123E-19	6.531E-18	4.920E-17	1.524E-16	5.958E-17
Pa-231	Pu-239	2.284E-09	0.000E+00	2.365E-23	2.105E-22	2.248E-21	1.808E-20	1.362E-19	4.219E-19	1.649E-19
Pa-231	ΣS(j) :		0.000E+00	1.036E-14	9.217E-14	9.845E-13	7.919E-12	5.971E-11	1.854E-10	7.273E-11
Ac-227	Am-243	9.829E-01	0.000E+00	7.720E-22	6.113E-20	6.973E-18	4.531E-16	2.727E-14	3.849E-13	4.321E-13
Ac-227	Am-243	5.901E-04	0.000E+00	4.635E-25	3.670E-23	4.187E-21	2.720E-19	1.637E-17	2.311E-16	2.594E-16
Ac-227	Cm-243	2.359E-03	0.000E+00	3.478E-29	8.225E-27	3.080E-24	5.745E-22	9.858E-20	2.776E-18	4.312E-18
Ac-227	Cm-243	1.416E-06	0.000E+00	2.088E-32	4.938E-30	1.849E-27	3.449E-25	5.918E-23	1.666E-21	2.589E-21
Ac-227	Cm-243	9.805E-01	0.000E+00	7.675E-22	6.034E-20	6.717E-18	4.073E-16	1.953E-14	1.678E-13	9.519E-14
Ac-227	Cm-243	5.887E-04	0.000E+00	4.608E-25	3.623E-23	4.033E-21	2.445E-19	1.173E-17	1.007E-16	5.715E-17
Ac-227	Pu-239	5.901E-04	0.000E+00	6.441E-20	1.696E-18	5.761E-17	1.223E-15	2.110E-14	9.779E-14	4.397E-14
Ac-227	Pu-239	9.829E-01	0.000E+00	1.073E-16	2.825E-15	9.595E-14	2.038E-12	3.514E-11	1.629E-10	7.323E-11
Ac-227	ΣS(j) :		0.000E+00	1.074E-16	2.827E-15	9.602E-14	2.040E-12	3.521E-11	1.635E-10	7.380E-11
Ac-227	Am-243	2.720E-03	0.000E+00	2.137E-24	1.692E-22	1.930E-20	1.254E-18	7.548E-17	1.065E-15	1.196E-15
Ac-227	Am-243	1.375E-02	0.000E+00	1.080E-23	8.553E-22	9.757E-20	6.340E-18	3.816E-16	5.385E-15	6.046E-15
Ac-227	Am-243	1.633E-06	0.000E+00	1.283E-27	1.016E-25	1.159E-23	7.529E-22	4.532E-20	6.395E-19	7.179E-19
Ac-227	Cm-243	6.529E-06	0.000E+00	9.625E-32	2.276E-29	8.525E-27	1.590E-24	2.728E-22	7.682E-21	1.193E-20
Ac-227	Cm-243	3.920E-09	0.000E+00	5.778E-35	1.367E-32	5.118E-30	9.546E-28	1.638E-25	4.612E-24	7.165E-24
Ac-227	Cm-243	2.714E-03	0.000E+00	2.124E-24	1.670E-22	1.859E-20	1.127E-18	5.405E-17	4.644E-16	2.634E-16
Ac-227	Cm-243	1.629E-06	0.000E+00	1.275E-27	1.003E-25	1.116E-23	6.767E-22	3.245E-20	2.788E-19	1.582E-19
Ac-227	Pu-239	1.633E-06	0.000E+00	1.783E-22	4.694E-21	1.594E-19	3.386E-18	5.839E-17	2.706E-16	1.217E-16
Ac-227	Pu-239	2.720E-03	0.000E+00	2.969E-19	7.819E-18	2.656E-16	5.640E-15	9.726E-14	4.508E-13	2.027E-13
Ac-227	ΣS(j) :		0.000E+00	2.971E-19	7.825E-18	2.659E-16	5.652E-15	9.783E-14	4.580E-13	2.103E-13
Am-243	Am-243	1.375E-02	1.375E-02	1.366E-02	1.348E-02	1.285E-02	1.122E-02	6.972E-03	1.792E-03	1.541E-05
Am-243	Am-243	3.806E-05	3.806E-05	3.781E-05	3.729E-05	3.556E-05	3.104E-05	1.930E-05	4.958E-06	4.265E-08
Am-243	ΣS(j) :		1.379E-02	1.370E-02	1.351E-02	1.289E-02	1.125E-02	6.991E-03	1.797E-03	1.545E-05
Ac-227	Am-243	3.806E-05	0.000E+00	2.990E-26	2.367E-24	2.701E-22	1.755E-20	1.056E-18	1.490E-17	1.673E-17
Ac-227	Am-243	8.252E-07	0.000E+00	6.482E-28	5.132E-26	5.855E-24	3.804E-22	2.290E-20	3.231E-19	3.628E-19
Ac-227	Am-243	2.285E-08	0.000E+00	1.795E-29	1.421E-27	1.621E-25	1.053E-23	6.341E-22	8.948E-21	1.005E-20
Ac-227	Cm-243	9.135E-08	0.000E+00	1.347E-33	3.185E-31	1.193E-28	2.225E-26	3.818E-24	1.075E-22	1.670E-22
Ac-227	Cm-243	5.484E-11	0.000E+00	8.085E-37	1.912E-34	7.161E-32	1.336E-29	2.292E-27	6.453E-26	1.003E-25
Ac-227	Cm-243	3.797E-05	0.000E+00	2.972E-26	2.337E-24	2.601E-22	1.577E-20	7.563E-19	6.498E-18	3.686E-18
Ac-227	Cm-243	2.280E-08	0.000E+00	1.784E-29	1.403E-27	1.562E-25	9.469E-24	4.541E-22	3.901E-21	2.213E-21
Ac-227	Pu-239	2.285E-08	0.000E+00	2.494E-24	6.569E-23	2.231E-21	4.738E-20	8.171E-19	3.787E-18	1.703E-18
Ac-227	Pu-239	3.806E-05	0.000E+00	4.155E-21	1.094E-19	3.716E-18	7.891E-17	1.361E-15	6.308E-15	2.836E-15
Ac-227	ΣS(j) :		0.000E+00	4.157E-21	1.095E-19	3.719E-18	7.900E-17	1.364E-15	6.333E-15	2.858E-15

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Am-243	Am-243	8.252E-07	8.252E-07	8.196E-07	8.086E-07	7.710E-07	6.731E-07	4.183E-07	1.075E-07	9.248E-10
Am-243	Am-243	2.284E-09	2.284E-09	2.268E-09	2.238E-09	2.134E-09	1.863E-09	1.158E-09	2.975E-10	2.559E-12
Am-243	ΣS(j):		8.275E-07	8.219E-07	8.108E-07	7.732E-07	6.749E-07	4.195E-07	1.078E-07	9.273E-10
Ac-227	Am-243	2.284E-09	0.000E+00	1.794E-30	1.420E-28	1.620E-26	1.053E-24	6.337E-23	8.943E-22	1.004E-21
Ac-227	Am-243	1.371E-12	0.000E+00	1.077E-33	8.528E-32	9.728E-30	6.321E-28	3.805E-26	5.369E-25	6.027E-25
Ac-227	Cm-243	5.481E-12	0.000E+00	8.081E-38	1.911E-35	7.158E-33	1.335E-30	2.291E-28	6.450E-27	1.002E-26
Ac-227	Cm-243	3.291E-15	0.000E+00	4.851E-41	1.147E-38	4.297E-36	8.015E-34	1.375E-31	3.872E-30	6.016E-30
Ac-227	Cm-243	2.278E-09	0.000E+00	1.783E-30	1.402E-28	1.561E-26	9.464E-25	4.538E-23	3.899E-22	2.212E-22
Ac-227	Cm-243	1.368E-12	0.000E+00	1.071E-33	8.418E-32	9.370E-30	5.682E-28	2.725E-26	2.341E-25	1.328E-25
Ac-227	Pu-239	1.371E-12	0.000E+00	1.497E-28	3.941E-27	1.339E-25	2.843E-24	4.903E-23	2.272E-22	1.022E-22
Ac-227	Pu-239	2.284E-09	0.000E+00	2.493E-25	6.565E-24	2.230E-22	4.735E-21	8.166E-20	3.785E-19	1.702E-19
Ac-227	ΣS(j):		0.000E+00	2.495E-25	6.569E-24	2.231E-22	4.740E-21	8.182E-20	3.800E-19	1.715E-19
Am-243	Am-243	5.901E-04	5.901E-04	5.861E-04	5.782E-04	5.513E-04	4.813E-04	2.991E-04	7.687E-05	6.613E-07
Am-243	Am-243	1.633E-06	1.633E-06	1.622E-06	1.600E-06	1.526E-06	1.332E-06	8.279E-07	2.127E-07	1.830E-09
Am-243	ΣS(j):		5.917E-04	5.877E-04	5.798E-04	5.529E-04	4.826E-04	3.000E-04	7.708E-05	6.631E-07
Pu-239	Am-243	5.901E-04	0.000E+00	1.687E-08	5.004E-08	1.604E-07	4.300E-07	9.689E-07	9.612E-07	7.621E-08
Pu-239	Am-243	1.633E-06	0.000E+00	4.669E-11	1.385E-10	4.439E-10	1.190E-09	2.682E-09	2.660E-09	2.109E-10
Pu-239	Am-243	8.257E-06	0.000E+00	2.360E-10	7.002E-10	2.244E-09	6.017E-09	1.356E-08	1.345E-08	1.066E-09
Pu-239	Am-243	2.285E-08	0.000E+00	6.533E-13	1.938E-12	6.211E-12	1.665E-11	3.752E-11	3.722E-11	2.951E-12
Pu-239	Am-243	4.954E-10	0.000E+00	1.416E-14	4.201E-14	1.346E-13	3.610E-13	8.135E-13	8.070E-13	6.399E-14
Pu-239	Am-243	1.371E-12	0.000E+00	3.920E-17	1.163E-16	3.727E-16	9.992E-16	2.251E-15	2.234E-15	1.771E-16
Pu-239	Cm-243	1.416E-06	0.000E+00	1.892E-15	1.663E-14	1.702E-13	1.217E-12	6.385E-12	9.458E-12	8.496E-13
Pu-239	Cm-243	3.920E-09	0.000E+00	5.236E-18	4.602E-17	4.710E-16	3.368E-15	1.767E-14	2.618E-14	2.351E-15
Pu-239	Cm-243	1.982E-08	0.000E+00	2.647E-17	2.327E-16	2.381E-15	1.703E-14	8.934E-14	1.323E-13	1.189E-14
Pu-239	Cm-243	5.484E-11	0.000E+00	7.327E-20	6.440E-19	6.590E-18	4.712E-17	2.473E-16	3.663E-16	3.290E-17
Pu-239	Cm-243	1.189E-12	0.000E+00	1.589E-21	1.396E-20	1.429E-19	1.022E-18	5.361E-18	7.941E-18	7.133E-19
Pu-239	Cm-243	3.291E-15	0.000E+00	4.396E-24	3.864E-23	3.954E-22	2.827E-21	1.484E-20	2.198E-20	1.974E-21
Pu-239	Cm-243	5.887E-04	0.000E+00	1.668E-08	4.863E-08	1.467E-07	3.342E-07	4.693E-07	2.223E-07	9.863E-09
Pu-239	Cm-243	1.629E-06	0.000E+00	4.617E-11	1.346E-10	4.061E-10	9.250E-10	1.299E-09	6.152E-10	2.730E-11
Pu-239	Cm-243	8.237E-06	0.000E+00	2.334E-10	6.804E-10	2.053E-09	4.676E-09	6.567E-09	3.110E-09	1.380E-10
Pu-239	Cm-243	2.280E-08	0.000E+00	6.460E-13	1.883E-12	5.682E-12	1.294E-11	1.817E-11	8.608E-12	3.819E-13
Pu-239	Cm-243	4.942E-10	0.000E+00	1.401E-14	4.083E-14	1.232E-13	2.806E-13	3.940E-13	1.866E-13	8.280E-15
Pu-239	Cm-243	1.368E-12	0.000E+00	3.876E-17	1.130E-16	3.410E-16	7.766E-16	1.091E-15	5.165E-16	2.292E-17
Pu-239	Pu-239	5.901E-04	5.901E-04	5.875E-04	5.823E-04	5.644E-04	5.163E-04	3.780E-04	1.551E-04	6.864E-06
Pu-239	ΣS(j):		5.901E-04	5.875E-04	5.824E-04	5.647E-04	5.171E-04	3.795E-04	1.563E-04	6.952E-06
Am-243	Am-243	8.257E-06	8.257E-06	8.201E-06	8.090E-06	7.714E-06	6.734E-06	4.186E-06	1.076E-06	9.253E-09
Am-243	Am-243	2.285E-08	2.285E-08	2.270E-08	2.239E-08	2.135E-08	1.864E-08	1.158E-08	2.977E-09	2.561E-11
Am-243	ΣS(j):		8.280E-06	8.223E-06	8.112E-06	7.736E-06	6.753E-06	4.197E-06	1.079E-06	9.278E-09
Ac-227	Am-243	8.257E-06	0.000E+00	6.485E-27	5.135E-25	5.858E-23	3.806E-21	2.291E-19	3.233E-18	3.630E-18
Ac-227	Cm-243	3.301E-05	0.000E+00	4.866E-31	1.151E-28	4.310E-26	8.039E-24	1.379E-21	3.884E-20	6.034E-20
Ac-227	Cm-243	1.982E-08	0.000E+00	2.921E-34	6.909E-32	2.588E-29	4.826E-27	8.281E-25	2.332E-23	3.622E-23
Ac-227	Cm-243	1.372E-02	0.000E+00	1.074E-23	8.443E-22	9.398E-20	5.699E-18	2.733E-16	2.348E-15	1.332E-15
Ac-227	Cm-243	8.237E-06	0.000E+00	6.447E-27	5.069E-25	5.642E-23	3.421E-21	1.641E-19	1.410E-18	7.996E-19
Ac-227	Pu-239	8.257E-06	0.000E+00	9.013E-22	2.373E-20	8.060E-19	1.712E-17	2.952E-16	1.368E-15	6.152E-16

Summary : RESRAD Default

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Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g								
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03	
Ac-227	Pu-239	1.375E-02	0.000E+00	1.501E-18	3.953E-17	1.343E-15	2.851E-14	4.917E-13	2.279E-12	1.025E-12	
Ac-227	ΣS(j):		0.000E+00	1.502E-18	3.956E-17	1.343E-15	2.854E-14	4.923E-13	2.283E-12	1.027E-12	
Am-243	Am-243	4.954E-10	4.954E-10	4.921E-10	4.854E-10	4.629E-10	4.041E-10	2.511E-10	6.454E-11	5.552E-13	
Am-243	Am-243	1.371E-12	1.371E-12	1.362E-12	1.344E-12	1.281E-12	1.118E-12	6.951E-13	1.786E-13	1.537E-15	
Am-243	ΣS(j):		4.968E-10	4.934E-10	4.868E-10	4.642E-10	4.052E-10	2.518E-10	6.472E-11	5.567E-13	
Ac-227	Am-243	4.954E-10	0.000E+00	3.891E-31	3.081E-29	3.515E-27	2.284E-25	1.375E-23	1.940E-22	2.178E-22	
Ac-227	Cm-243	1.981E-09	0.000E+00	2.920E-35	6.905E-33	2.586E-30	4.823E-28	8.277E-26	2.330E-24	3.620E-24	
Ac-227	Cm-243	1.189E-12	0.000E+00	1.753E-38	4.146E-36	1.553E-33	2.896E-31	4.969E-29	1.399E-27	2.174E-27	
Ac-227	Cm-243	8.232E-07	0.000E+00	6.443E-28	5.066E-26	5.639E-24	3.420E-22	1.640E-20	1.409E-19	7.992E-20	
Ac-227	Cm-243	4.942E-10	0.000E+00	3.868E-31	3.041E-29	3.386E-27	2.053E-25	9.844E-24	8.458E-23	4.798E-23	
Ac-227	Pu-239	4.954E-10	0.000E+00	5.408E-26	1.424E-24	4.837E-23	1.027E-21	1.771E-20	8.210E-20	3.691E-20	
Ac-227	Pu-239	8.252E-07	0.000E+00	9.008E-23	2.372E-21	8.056E-20	1.711E-18	2.951E-17	1.368E-16	6.148E-17	
Ac-227	ΣS(j):		0.000E+00	9.013E-23	2.374E-21	8.061E-20	1.712E-18	2.954E-17	1.370E-16	6.160E-17	
C-14	C-14	1.000E+00	1.000E+00	9.769E-11	9.324E-31	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Cm-243	Cm-243	2.359E-03	2.359E-03	2.302E-03	2.192E-03	1.848E-03	1.134E-03	2.053E-04	1.555E-06	5.877E-14	
Cm-243	Cm-243	6.529E-06	6.529E-06	6.371E-06	6.068E-06	5.114E-06	3.138E-06	5.682E-07	4.303E-09	1.627E-16	
Cm-243	ΣS(j):		2.365E-03	2.308E-03	2.198E-03	1.853E-03	1.137E-03	2.059E-04	1.559E-06	5.894E-14	
Cm-243	Cm-243	3.301E-05	3.301E-05	3.221E-05	3.068E-05	2.586E-05	1.587E-05	2.872E-06	2.175E-08	8.224E-16	
Cm-243	Cm-243	9.135E-08	9.135E-08	8.915E-08	8.490E-08	7.156E-08	4.391E-08	7.950E-09	6.021E-11	2.276E-18	
Cm-243	ΣS(j):		3.310E-05	3.230E-05	3.076E-05	2.593E-05	1.591E-05	2.880E-06	2.181E-08	8.247E-16	
Cm-243	Cm-243	1.981E-09	1.981E-09	1.933E-09	1.841E-09	1.551E-09	9.521E-10	1.724E-10	1.305E-12	4.935E-20	
Cm-243	Cm-243	5.481E-12	5.481E-12	5.349E-12	5.094E-12	4.294E-12	2.635E-12	4.770E-13	3.613E-15	1.366E-22	
Cm-243	ΣS(j):		1.986E-09	1.938E-09	1.846E-09	1.556E-09	9.547E-10	1.728E-10	1.309E-12	4.948E-20	
Cm-243	Cm-243	1.416E-06	1.416E-06	1.382E-06	1.316E-06	1.109E-06	6.808E-07	1.232E-07	9.334E-10	3.529E-17	
Cm-243	Cm-243	3.920E-09	3.920E-09	3.825E-09	3.643E-09	3.070E-09	1.884E-09	3.411E-10	2.583E-12	9.766E-20	
Cm-243	ΣS(j):		1.420E-06	1.386E-06	1.320E-06	1.112E-06	6.827E-07	1.236E-07	9.360E-10	3.538E-17	
Cm-243	Cm-243	1.982E-08	1.982E-08	1.934E-08	1.842E-08	1.552E-08	9.526E-09	1.724E-09	1.306E-11	4.937E-19	
Cm-243	Cm-243	5.484E-11	5.484E-11	5.352E-11	5.097E-11	4.296E-11	2.636E-11	4.773E-12	3.615E-14	1.366E-21	
Cm-243	ΣS(j):		1.987E-08	1.939E-08	1.847E-08	1.557E-08	9.552E-09	1.729E-09	1.310E-11	4.951E-19	
Cm-243	Cm-243	1.189E-12	1.189E-12	1.160E-12	1.105E-12	9.314E-13	5.716E-13	1.035E-13	7.837E-16	2.963E-23	
Cm-243	Cm-243	3.291E-15	3.291E-15	3.211E-15	3.058E-15	2.578E-15	1.582E-15	2.864E-16	2.169E-18	8.199E-26	
Cm-243	ΣS(j):		1.192E-12	1.164E-12	1.108E-12	9.340E-13	5.732E-13	1.038E-13	7.858E-16	2.971E-23	
Cm-243	Cm-243	9.805E-01	9.805E-01	9.569E-01	9.113E-01	7.681E-01	4.714E-01	8.533E-02	6.463E-04	2.443E-11	
Cm-243	Cm-243	2.714E-03	2.714E-03	2.648E-03	2.522E-03	2.126E-03	1.305E-03	2.362E-04	1.789E-06	6.762E-14	
Cm-243	ΣS(j):		9.832E-01	9.595E-01	9.138E-01	7.702E-01	4.727E-01	8.557E-02	6.480E-04	2.450E-11	
Cm-243	Cm-243	1.372E-02	1.372E-02	1.339E-02	1.275E-02	1.075E-02	6.595E-03	1.194E-03	9.043E-06	3.418E-13	
Cm-243	Cm-243	3.797E-05	3.797E-05	3.706E-05	3.529E-05	2.975E-05	1.825E-05	3.304E-06	2.503E-08	9.461E-16	
Cm-243	ΣS(j):		1.376E-02	1.343E-02	1.279E-02	1.078E-02	6.614E-03	1.197E-03	9.068E-06	3.428E-13	

Summary : RESRAD Default

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Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g								
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03	
Cm-243	Cm-243	8.232E-07	8.232E-07	8.034E-07	7.651E-07	6.449E-07	3.957E-07	7.164E-08	5.426E-10	2.051E-17	
Cm-243	Cm-243	2.278E-09	2.278E-09	2.223E-09	2.118E-09	1.785E-09	1.095E-09	1.983E-10	1.502E-12	5.677E-20	
Cm-243	ΣS(j):		8.255E-07	8.056E-07	7.672E-07	6.467E-07	3.968E-07	7.184E-08	5.441E-10	2.057E-17	
Cm-243	Cm-243	5.887E-04	5.887E-04	5.745E-04	5.471E-04	4.611E-04	2.830E-04	5.123E-05	3.880E-07	1.467E-14	
Cm-243	Cm-243	1.629E-06	1.629E-06	1.590E-06	1.514E-06	1.276E-06	7.832E-07	1.418E-07	1.074E-09	4.059E-17	
Cm-243	ΣS(j):		5.903E-04	5.761E-04	5.486E-04	4.624E-04	2.838E-04	5.137E-05	3.891E-07	1.471E-14	
Cm-243	Cm-243	8.237E-06	8.237E-06	8.038E-06	7.655E-06	6.452E-06	3.960E-06	7.168E-07	5.429E-09	2.052E-16	
Cm-243	Cm-243	2.280E-08	2.280E-08	2.225E-08	2.119E-08	1.786E-08	1.096E-08	1.984E-09	1.502E-11	5.680E-19	
Cm-243	ΣS(j):		8.260E-06	8.060E-06	7.676E-06	6.470E-06	3.971E-06	7.188E-07	5.444E-09	2.058E-16	
Cm-243	Cm-243	4.942E-10	4.942E-10	4.823E-10	4.593E-10	3.872E-10	2.376E-10	4.301E-11	3.257E-13	1.231E-20	
Cm-243	Cm-243	1.368E-12	1.368E-12	1.335E-12	1.271E-12	1.072E-12	6.576E-13	1.190E-13	9.016E-16	3.408E-23	
Cm-243	ΣS(j):		4.956E-10	4.837E-10	4.606E-10	3.882E-10	2.382E-10	4.313E-11	3.266E-13	1.235E-20	
Cm-244	Cm-244	1.371E-06	1.371E-06	1.319E-06	1.220E-06	9.293E-07	4.269E-07	2.805E-08	1.175E-11	1.765E-23	
Cm-244	Cm-244	5.750E-08	5.750E-08	5.531E-08	5.117E-08	3.897E-08	1.790E-08	1.177E-09	4.927E-13	7.402E-25	
Cm-244	ΣS(j):		1.429E-06	1.374E-06	1.271E-06	9.682E-07	4.448E-07	2.923E-08	1.224E-11	1.839E-23	
Pu-240	Cm-244	5.750E-08	0.000E+00	5.942E-12	1.707E-11	4.911E-11	9.923E-11	1.087E-10	4.539E-11	1.904E-12	
Pu-240	Pu-240	5.750E-08	5.750E-08	5.724E-08	5.672E-08	5.495E-08	5.019E-08	3.655E-08	1.477E-08	6.194E-10	
Pu-240	ΣS(j):		5.750E-08	5.725E-08	5.674E-08	5.500E-08	5.029E-08	3.666E-08	1.481E-08	6.213E-10	
Cm-244	Cm-244	1.000E+00	1.000E+00	9.619E-01	8.899E-01	6.778E-01	3.114E-01	2.046E-02	8.568E-06	1.287E-17	
Pu-240	Cm-244	1.000E+00	0.000E+00	1.033E-04	2.969E-04	8.541E-04	1.726E-03	1.891E-03	7.894E-04	3.311E-05	
U-236	Cm-244	1.000E+00	0.000E+00	1.535E-12	1.334E-11	1.314E-10	8.500E-10	3.434E-09	3.497E-09	1.990E-10	
U-236	Pu-240	1.000E+00	0.000E+00	2.939E-08	8.695E-08	2.761E-07	7.210E-07	1.489E-06	1.197E-06	6.483E-08	
U-236	ΣS(j):		0.000E+00	2.939E-08	8.697E-08	2.762E-07	7.218E-07	1.492E-06	1.201E-06	6.503E-08	
Th-232	Cm-244	1.000E+00	0.000E+00	2.536E-23	6.669E-22	2.256E-20	4.754E-19	8.277E-18	4.645E-17	7.943E-17	
Th-232	Pu-240	1.000E+00	0.000E+00	7.266E-19	6.478E-18	6.966E-17	5.713E-16	4.637E-15	1.865E-14	2.920E-14	
Th-232	ΣS(j):		0.000E+00	7.267E-19	6.479E-18	6.968E-17	5.718E-16	4.645E-15	1.870E-14	2.927E-14	
Ra-228	Cm-244	1.000E+00	0.000E+00	7.481E-25	5.660E-23	5.558E-21	2.519E-19	6.960E-18	4.494E-17	7.926E-17	
Ra-228	Pu-240	1.000E+00	0.000E+00	2.837E-20	7.174E-19	2.144E-17	3.471E-16	4.045E-15	1.813E-14	2.914E-14	
Ra-228	ΣS(j):		0.000E+00	2.837E-20	7.174E-19	2.144E-17	3.474E-16	4.052E-15	1.818E-14	2.921E-14	
Th-228	Cm-244	1.000E+00	0.000E+00	5.142E-26	1.054E-23	2.543E-21	1.904E-19	6.535E-18	4.445E-17	7.923E-17	
Th-228	Pu-240	1.000E+00	0.000E+00	2.411E-21	1.620E-19	1.128E-17	2.807E-16	3.853E-15	1.796E-14	2.913E-14	
Th-228	ΣS(j):		0.000E+00	2.411E-21	1.620E-19	1.129E-17	2.809E-16	3.859E-15	1.801E-14	2.921E-14	
Co-60	Co-60	1.000E+00	1.000E+00	8.759E-01	6.720E-01	2.658E-01	1.877E-02	1.758E-06	5.429E-18	0.000E+00	
Cs-134	Cs-134	1.000E+00	1.000E+00	7.135E-01	3.632E-01	3.418E-02	3.991E-05	2.173E-15	9.809E-45	0.000E+00	
Cs-137	Cs-137	1.000E+00	1.000E+00	9.754E-01	9.280E-01	7.795E-01	4.737E-01	8.286E-02	5.690E-04	1.527E-11	

Summary : RESRAD Default

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Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g								
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03	
Eu-152	Eu-152	7.210E-01	7.210E-01	6.765E-01	5.956E-01	3.814E-01	1.067E-01	1.236E-03	3.636E-09	1.585E-28	
Eu-152	Eu-152	2.790E-01	2.790E-01	2.618E-01	2.305E-01	1.476E-01	4.129E-02	4.784E-04	1.407E-09	6.135E-29	
Eu-152	ΣS(j):		1.000E+00	9.383E-01	8.261E-01	5.290E-01	1.480E-01	1.715E-03	5.043E-09	2.199E-28	
Gd-152	Eu-152	2.790E-01	0.000E+00	1.734E-15	4.879E-15	1.314E-14	2.329E-14	2.487E-14	1.869E-14	6.832E-15	
Sm-148	Eu-152	2.790E-01	0.000E+00	8.672E-32	7.472E-31	7.176E-30	4.479E-29	2.072E-28	5.254E-28	6.656E-28	
Nd-144	Eu-152	2.790E-01	0.000E+00	0.000E+00	0.000E+00	7.006E-45	1.471E-43	2.297E-42	1.373E-41	2.766E-41	
Eu-154	Eu-154	1.000E+00	1.000E+00	9.111E-01	7.562E-01	3.940E-01	6.116E-02	9.011E-05	7.317E-13	3.530E-41	
Eu-155	Eu-155	1.000E+00	1.000E+00	8.538E-01	6.224E-01	2.058E-01	8.721E-03	1.365E-07	2.546E-21	0.000E+00	
Fe-55	Fe-55	1.000E+00	1.000E+00	7.760E-01	4.672E-01	7.913E-02	4.955E-04	9.626E-12	8.919E-34	0.000E+00	
H-3	H-3	1.000E+00	1.000E+00	4.444E-13	8.779E-38	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
Nb-94	Nb-94	1.000E+00	1.000E+00	9.737E-01	9.233E-01	7.664E-01	4.501E-01	6.990E-02	3.416E-04	2.785E-12	
Ni-59	Ni-59	1.000E+00	1.000E+00	9.811E-01	9.442E-01	8.259E-01	5.634E-01	1.477E-01	3.221E-03	4.938E-09	
Ni-63	Ni-63	1.000E+00	1.000E+00	9.743E-01	9.248E-01	7.707E-01	4.578E-01	7.395E-02	4.044E-04	4.889E-12	
Pm-147	Pm-147	1.000E+00	1.000E+00	7.583E-01	4.360E-01	6.284E-02	2.481E-04	9.595E-13	8.833E-37	0.000E+00	
Sm-147	Pm-147	1.000E+00	0.000E+00	5.708E-12	1.330E-11	2.192E-11	2.275E-11	2.057E-11	1.543E-11	5.641E-12	
Pu-238	Pu-238	1.850E-09	1.850E-09	1.827E-09	1.783E-09	1.635E-09	1.278E-09	5.392E-10	4.580E-11	8.182E-15	
Pu-238	Pu-238	9.996E-01	9.996E-01	9.873E-01	9.633E-01	8.836E-01	6.905E-01	2.913E-01	2.475E-02	4.421E-06	
Pu-238	ΣS(j):		9.996E-01	9.873E-01	9.633E-01	8.836E-01	6.905E-01	2.913E-01	2.475E-02	4.421E-06	
U-234	Pu-238	9.996E-01	0.000E+00	2.792E-06	8.195E-06	2.532E-05	6.112E-05	9.550E-05	3.350E-05	7.472E-08	
U-234	Pu-238	1.899E-08	0.000E+00	5.304E-14	1.557E-13	4.810E-13	1.161E-12	1.814E-12	6.365E-13	1.420E-15	
U-234	Pu-238	2.100E-04	0.000E+00	5.864E-10	1.721E-09	5.318E-09	1.284E-08	2.006E-08	7.037E-09	1.569E-11	
U-234	Pu-238	2.771E-10	0.000E+00	7.740E-16	2.272E-15	7.019E-15	1.695E-14	2.648E-14	9.289E-15	2.072E-17	
U-234	Pu-238	3.989E-12	0.000E+00	1.114E-17	3.271E-17	1.010E-16	2.439E-16	3.811E-16	1.337E-16	2.982E-19	
U-234	Pu-238	1.998E-04	0.000E+00	5.579E-10	1.638E-09	5.059E-09	1.222E-08	1.908E-08	6.695E-09	1.493E-11	
U-234	Pu-238	2.637E-10	0.000E+00	7.364E-16	2.162E-15	6.678E-15	1.612E-14	2.519E-14	8.838E-15	1.971E-17	
U-234	Pu-238	3.795E-12	0.000E+00	1.060E-17	3.112E-17	9.612E-17	2.321E-16	3.626E-16	1.272E-16	2.837E-19	
U-234	Pu-238	4.196E-08	0.000E+00	1.172E-13	3.440E-13	1.063E-12	2.566E-12	4.009E-12	1.406E-12	3.136E-15	
U-234	Pu-238	5.538E-14	0.000E+00	1.547E-19	4.541E-19	1.403E-18	3.387E-18	5.291E-18	1.856E-18	4.140E-21	
U-234	Pu-238	7.972E-16	0.000E+00	2.226E-21	6.536E-21	2.019E-20	4.875E-20	7.616E-20	2.672E-20	5.959E-23	
U-234	Pu-238	2.000E-07	0.000E+00	5.586E-13	1.640E-12	5.065E-12	1.223E-11	1.911E-11	6.703E-12	1.495E-14	
U-234	Pu-238	2.640E-13	0.000E+00	7.373E-19	2.164E-18	6.686E-18	1.614E-17	2.522E-17	8.848E-18	1.973E-20	
U-234	Pu-238	3.800E-15	0.000E+00	1.061E-20	3.115E-20	9.624E-20	2.324E-19	3.630E-19	1.274E-19	2.841E-22	
U-234	ΣS(j):		0.000E+00	2.793E-06	8.198E-06	2.533E-05	6.115E-05	9.554E-05	3.352E-05	7.475E-08	
Th-230	Pu-238	9.996E-01	0.000E+00	1.288E-11	1.142E-10	1.206E-09	9.405E-09	6.461E-08	1.792E-07	1.884E-07	

Summary : RESRAD Default

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Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Th-230	Pu-238	1.899E-08	0.000E+00	2.447E-19	2.171E-18	2.292E-17	1.787E-16	1.228E-15	3.405E-15	3.580E-15
Th-230	Pu-238	2.100E-04	0.000E+00	2.706E-15	2.400E-14	2.534E-13	1.975E-12	1.357E-11	3.764E-11	3.957E-11
Th-230	Pu-238	2.771E-10	0.000E+00	3.571E-21	3.168E-20	3.345E-19	2.608E-18	1.791E-17	4.969E-17	5.224E-17
Th-230	Pu-238	3.989E-12	0.000E+00	5.141E-23	4.560E-22	4.815E-21	3.753E-20	2.578E-19	7.152E-19	7.519E-19
Th-230	Pu-238	1.998E-04	0.000E+00	2.574E-15	2.283E-14	2.411E-13	1.879E-12	1.291E-11	3.581E-11	3.765E-11
Th-230	Pu-238	2.637E-10	0.000E+00	3.398E-21	3.014E-20	3.182E-19	2.481E-18	1.704E-17	4.727E-17	4.970E-17
Th-230	Pu-238	3.795E-12	0.000E+00	4.891E-23	4.338E-22	4.581E-21	3.571E-20	2.453E-19	6.805E-19	7.154E-19
Th-230	Pu-238	4.196E-08	0.000E+00	5.407E-19	4.796E-18	5.064E-17	3.948E-16	2.712E-15	7.522E-15	7.908E-15
Th-230	Pu-238	5.538E-14	0.000E+00	7.137E-25	6.330E-24	6.684E-23	5.211E-22	3.580E-21	9.930E-21	1.044E-20
Th-230	Pu-238	7.972E-16	0.000E+00	1.027E-26	9.112E-26	9.622E-25	7.501E-24	5.153E-23	1.429E-22	1.503E-22
Th-230	Pu-238	2.000E-07	0.000E+00	2.577E-18	2.286E-17	2.414E-16	1.882E-15	1.293E-14	3.586E-14	3.770E-14
Th-230	Pu-238	2.640E-13	0.000E+00	3.402E-24	3.017E-23	3.186E-22	2.484E-21	1.706E-20	4.733E-20	4.976E-20
Th-230	Pu-238	3.800E-15	0.000E+00	4.897E-26	4.343E-25	4.586E-24	3.575E-23	2.456E-22	6.813E-22	7.162E-22
Th-230	ΣS(j):		0.000E+00	1.289E-11	1.143E-10	1.207E-09	9.409E-09	6.464E-08	1.793E-07	1.885E-07
Ra-226	Pu-238	9.996E-01	0.000E+00	1.863E-15	4.974E-14	1.771E-12	4.277E-11	1.092E-09	1.171E-08	5.287E-08
Ra-226	Pu-238	1.899E-08	0.000E+00	3.540E-23	9.450E-22	3.365E-20	8.127E-19	2.074E-17	2.224E-16	1.005E-15
Ra-226	ΣS(j):		0.000E+00	1.863E-15	4.974E-14	1.771E-12	4.277E-11	1.092E-09	1.171E-08	5.287E-08
Pb-210	Pu-238	9.996E-01	0.000E+00	1.447E-17	1.147E-15	1.313E-13	8.628E-12	5.435E-10	9.495E-09	5.072E-08
Pb-210	Pu-238	1.319E-06	0.000E+00	1.910E-23	1.514E-21	1.733E-19	1.139E-17	7.174E-16	1.253E-14	6.695E-14
Pb-210	Pu-238	2.100E-04	0.000E+00	3.039E-21	2.409E-19	2.758E-17	1.812E-15	1.142E-13	1.994E-12	1.065E-11
Pb-210	Pu-238	1.998E-04	0.000E+00	2.891E-21	2.292E-19	2.624E-17	1.724E-15	1.086E-13	1.897E-12	1.014E-11
Pb-210	Pu-238	4.196E-08	0.000E+00	6.073E-25	4.814E-23	5.512E-21	3.621E-19	2.281E-17	3.985E-16	2.129E-15
Pb-210	Pu-238	2.000E-07	0.000E+00	2.895E-24	2.294E-22	2.627E-20	1.726E-18	1.087E-16	1.900E-15	1.015E-14
Pb-210	ΣS(j):		0.000E+00	1.447E-17	1.147E-15	1.314E-13	8.631E-12	5.437E-10	9.499E-09	5.074E-08
Po-210	Pu-238	9.996E-01	0.000E+00	4.024E-18	6.324E-16	1.070E-13	8.047E-12	5.325E-10	9.426E-09	5.052E-08
Po-210	Pu-238	2.100E-04	0.000E+00	8.452E-22	1.328E-19	2.248E-17	1.690E-15	1.119E-13	1.980E-12	1.061E-11
Po-210	Pu-238	1.998E-04	0.000E+00	8.042E-22	1.264E-19	2.139E-17	1.608E-15	1.064E-13	1.884E-12	1.010E-11
Po-210	Pu-238	4.196E-08	0.000E+00	1.689E-25	2.654E-23	4.492E-21	3.378E-19	2.235E-17	3.957E-16	2.121E-15
Po-210	Pu-238	2.000E-07	0.000E+00	8.051E-25	1.265E-22	2.141E-20	1.610E-18	1.065E-16	1.886E-15	1.011E-14
Po-210	ΣS(j):		0.000E+00	4.026E-18	6.326E-16	1.071E-13	8.051E-12	5.327E-10	9.430E-09	5.054E-08
Pu-238	Pu-238	1.319E-06	1.319E-06	1.303E-06	1.272E-06	1.166E-06	9.115E-07	3.846E-07	3.267E-08	5.835E-12
Pu-238	Pu-238	1.899E-08	1.899E-08	1.876E-08	1.830E-08	1.679E-08	1.312E-08	5.535E-09	4.702E-10	8.399E-14
Pu-238	ΣS(j):		1.338E-06	1.322E-06	1.290E-06	1.183E-06	9.246E-07	3.901E-07	3.314E-08	5.919E-12
U-234	Pu-238	1.319E-06	0.000E+00	3.685E-12	1.082E-11	3.342E-11	8.068E-11	1.261E-10	4.422E-11	9.863E-14
Th-230	Pu-238	1.319E-06	0.000E+00	1.700E-17	1.508E-16	1.592E-15	1.241E-14	8.528E-14	2.366E-13	2.487E-13
Ra-226	Pu-238	1.319E-06	0.000E+00	2.459E-21	6.565E-20	2.337E-18	5.646E-17	1.441E-15	1.545E-14	6.979E-14
Pb-210	Pu-238	1.899E-08	0.000E+00	2.749E-25	2.179E-23	2.495E-21	1.639E-19	1.033E-17	1.804E-16	9.637E-16
Pb-210	Pu-238	3.989E-12	0.000E+00	5.774E-29	4.577E-27	5.241E-25	3.443E-23	2.169E-21	3.789E-20	2.024E-19
Pb-210	Pu-238	3.795E-12	0.000E+00	5.493E-29	4.354E-27	4.986E-25	3.276E-23	2.064E-21	3.605E-20	1.926E-19
Pb-210	Pu-238	7.972E-16	0.000E+00	1.154E-32	9.146E-31	1.047E-28	6.881E-27	4.335E-25	7.572E-24	4.045E-23
Pb-210	Pu-238	3.800E-15	0.000E+00	5.500E-32	4.359E-30	4.992E-28	3.280E-26	2.066E-24	3.609E-23	1.928E-22
Pb-210	ΣS(j):		0.000E+00	2.750E-25	2.180E-23	2.496E-21	1.640E-19	1.033E-17	1.805E-16	9.641E-16

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g							
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Pu-238	Pu-238	2.100E-04	2.100E-04	2.074E-04	2.023E-04	1.856E-04	1.450E-04	6.119E-05	5.198E-06	9.285E-10
Pu-238	Pu-238	2.771E-10	2.771E-10	2.737E-10	2.671E-10	2.450E-10	1.915E-10	8.077E-11	6.861E-12	1.226E-15
Pu-238	ΣS(j):		2.100E-04	2.074E-04	2.023E-04	1.856E-04	1.450E-04	6.119E-05	5.198E-06	9.285E-10
Ra-226	Pu-238	2.100E-04	0.000E+00	3.913E-19	1.045E-17	3.719E-16	8.984E-15	2.293E-13	2.459E-12	1.110E-11
Ra-226	Pu-238	2.771E-10	0.000E+00	5.166E-25	1.379E-23	4.910E-22	1.186E-20	3.027E-19	3.246E-18	1.466E-17
Ra-226	Pu-238	3.989E-12	0.000E+00	7.436E-27	1.985E-25	7.067E-24	1.707E-22	4.357E-21	4.672E-20	2.110E-19
Ra-226	ΣS(j):		0.000E+00	3.913E-19	1.045E-17	3.719E-16	8.984E-15	2.293E-13	2.459E-12	1.110E-11
Pb-210	Pu-238	2.771E-10	0.000E+00	4.011E-27	3.179E-25	3.641E-23	2.392E-21	1.507E-19	2.633E-18	1.406E-17
Pb-210	Pu-238	2.637E-10	0.000E+00	3.816E-27	3.025E-25	3.464E-23	2.276E-21	1.434E-19	2.505E-18	1.338E-17
Pb-210	Pu-238	5.538E-14	0.000E+00	8.016E-31	6.354E-29	7.276E-27	4.780E-25	3.011E-23	5.261E-22	2.810E-21
Pb-210	Pu-238	2.640E-13	0.000E+00	3.821E-30	3.029E-28	3.468E-26	2.279E-24	1.435E-22	2.508E-21	1.340E-20
Pb-210	ΣS(j):		0.000E+00	7.832E-27	6.208E-25	7.109E-23	4.671E-21	2.942E-19	5.140E-18	2.746E-17
Pu-238	Pu-238	3.989E-12	3.989E-12	3.940E-12	3.844E-12	3.526E-12	2.756E-12	1.163E-12	9.876E-14	1.764E-17
Pu-238	Pu-238	1.998E-04	1.998E-04	1.973E-04	1.925E-04	1.766E-04	1.380E-04	5.822E-05	4.945E-06	8.834E-10
Pu-238	ΣS(j):		1.998E-04	1.973E-04	1.925E-04	1.766E-04	1.380E-04	5.822E-05	4.945E-06	8.834E-10
Ra-226	Pu-238	1.998E-04	0.000E+00	3.723E-19	9.940E-18	3.539E-16	8.548E-15	2.182E-13	2.339E-12	1.057E-11
Ra-226	Pu-238	3.795E-12	0.000E+00	7.074E-27	1.889E-25	6.724E-24	1.624E-22	4.145E-21	4.445E-20	2.007E-19
Ra-226	ΣS(j):		0.000E+00	3.723E-19	9.940E-18	3.539E-16	8.548E-15	2.182E-13	2.339E-12	1.057E-11
Pu-238	Pu-238	2.637E-10	2.637E-10	2.604E-10	2.541E-10	2.331E-10	1.822E-10	7.685E-11	6.528E-12	1.166E-15
Pu-238	Pu-238	3.795E-12	3.795E-12	3.749E-12	3.658E-12	3.355E-12	2.622E-12	1.106E-12	9.396E-14	1.679E-17
Pu-238	ΣS(j):		2.675E-10	2.642E-10	2.578E-10	2.365E-10	1.848E-10	7.796E-11	6.622E-12	1.183E-15
Ra-226	Pu-238	2.637E-10	0.000E+00	4.915E-25	1.312E-23	4.671E-22	1.128E-20	2.880E-19	3.088E-18	1.395E-17
Pu-238	Pu-238	4.196E-08	4.196E-08	4.144E-08	4.043E-08	3.709E-08	2.899E-08	1.223E-08	1.039E-09	1.856E-13
Pu-238	Pu-238	5.538E-14	5.538E-14	5.471E-14	5.337E-14	4.896E-14	3.826E-14	1.614E-14	1.371E-15	2.449E-19
Pu-238	ΣS(j):		4.196E-08	4.144E-08	4.043E-08	3.709E-08	2.899E-08	1.223E-08	1.039E-09	1.856E-13
Ra-226	Pu-238	4.196E-08	0.000E+00	7.821E-23	2.088E-21	7.433E-20	1.795E-18	4.582E-17	4.914E-16	2.219E-15
Ra-226	Pu-238	5.538E-14	0.000E+00	1.032E-28	2.756E-27	9.812E-26	2.370E-24	6.048E-23	6.486E-22	2.929E-21
Ra-226	Pu-238	7.972E-16	0.000E+00	1.486E-30	3.967E-29	1.412E-27	3.411E-26	8.706E-25	9.336E-24	4.217E-23
Ra-226	ΣS(j):		0.000E+00	7.821E-23	2.088E-21	7.433E-20	1.795E-18	4.582E-17	4.914E-16	2.219E-15
Pu-238	Pu-238	7.972E-16	7.972E-16	7.874E-16	7.683E-16	7.047E-16	5.507E-16	2.323E-16	1.974E-17	3.526E-21
Pu-238	Pu-238	2.000E-07	2.000E-07	1.975E-07	1.927E-07	1.768E-07	1.382E-07	5.829E-08	4.951E-09	8.845E-13
Pu-238	ΣS(j):		2.000E-07	1.975E-07	1.927E-07	1.768E-07	1.382E-07	5.829E-08	4.951E-09	8.845E-13
Ra-226	Pu-238	2.000E-07	0.000E+00	3.728E-22	9.952E-21	3.543E-19	8.558E-18	2.184E-16	2.342E-15	1.058E-14
Ra-226	Pu-238	3.800E-15	0.000E+00	7.083E-30	1.891E-28	6.732E-27	1.626E-25	4.150E-24	4.450E-23	2.010E-22
Ra-226	ΣS(j):		0.000E+00	3.728E-22	9.952E-21	3.543E-19	8.558E-18	2.184E-16	2.342E-15	1.058E-14
Pu-238	Pu-238	2.640E-13	2.640E-13	2.608E-13	2.544E-13	2.334E-13	1.824E-13	7.694E-14	6.536E-15	1.168E-18
Pu-238	Pu-238	3.800E-15	3.800E-15	3.753E-15	3.662E-15	3.359E-15	2.625E-15	1.108E-15	9.408E-17	1.681E-20
Pu-238	ΣS(j):		2.678E-13	2.645E-13	2.581E-13	2.367E-13	1.850E-13	7.805E-14	6.630E-15	1.184E-18

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SOIL ROC SCREENING AF.RAD

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	THF(i)	S(j,t), pCi/g								
			t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03	
Ra-226	Pu-238	2.640E-13	0.000E+00	4.921E-28	1.314E-26	4.677E-25	1.130E-23	2.883E-22	3.092E-21	1.396E-20	
Pu-239	Pu-239	1.633E-06	1.633E-06	1.626E-06	1.611E-06	1.562E-06	1.429E-06	1.046E-06	4.293E-07	1.900E-08	
Pu-239	Pu-239	8.257E-06	8.257E-06	8.220E-06	8.147E-06	7.897E-06	7.224E-06	5.289E-06	2.170E-06	9.605E-08	
Pu-239	ΣS(j):		9.890E-06	9.846E-06	9.759E-06	9.459E-06	8.653E-06	6.335E-06	2.600E-06	1.150E-07	
Pu-239	Pu-239	2.285E-08	2.285E-08	2.275E-08	2.255E-08	2.186E-08	1.999E-08	1.464E-08	6.006E-09	2.658E-10	
Pu-239	Pu-239	4.954E-10	4.954E-10	4.932E-10	4.889E-10	4.738E-10	4.335E-10	3.174E-10	1.302E-10	5.763E-12	
Pu-239	ΣS(j):		2.335E-08	2.324E-08	2.304E-08	2.233E-08	2.043E-08	1.496E-08	6.137E-09	2.716E-10	
Pu-239	Pu-239	1.371E-12	1.371E-12	1.365E-12	1.353E-12	1.311E-12	1.200E-12	8.783E-13	3.604E-13	1.595E-14	
Pu-239	Pu-239	2.720E-03	2.720E-03	2.708E-03	2.684E-03	2.602E-03	2.380E-03	1.743E-03	7.150E-04	3.164E-05	
Pu-239	Pu-239	1.375E-02	1.375E-02	1.369E-02	1.357E-02	1.315E-02	1.203E-02	8.810E-03	3.615E-03	1.600E-04	
Pu-239	ΣS(j):		1.647E-02	1.640E-02	1.625E-02	1.576E-02	1.441E-02	1.055E-02	4.330E-03	1.916E-04	
Pu-239	Pu-239	3.806E-05	3.806E-05	3.789E-05	3.756E-05	3.640E-05	3.330E-05	2.438E-05	1.000E-05	4.428E-07	
Pu-239	Pu-239	8.252E-07	8.252E-07	8.216E-07	8.143E-07	7.893E-07	7.220E-07	5.286E-07	2.169E-07	9.600E-09	
Pu-239	ΣS(j):		3.889E-05	3.872E-05	3.837E-05	3.719E-05	3.402E-05	2.491E-05	1.022E-05	4.524E-07	
Pu-239	Pu-239	2.284E-09	2.284E-09	2.274E-09	2.254E-09	2.184E-09	1.998E-09	1.463E-09	6.003E-10	2.657E-11	
Pu-240	Pu-240	1.000E+00	1.000E+00	9.955E-01	9.865E-01	9.557E-01	8.729E-01	6.357E-01	2.569E-01	1.077E-02	
Pu-241	Pu-241	1.000E+00	1.000E+00	9.486E-01	8.537E-01	5.902E-01	2.056E-01	5.129E-03	1.349E-07	1.260E-23	
Pu-241	Pu-241	2.450E-05	2.450E-05	2.324E-05	2.092E-05	1.446E-05	5.037E-06	1.257E-07	3.306E-12	3.088E-28	
Pu-241	ΣS(j):		1.000E+00	9.486E-01	8.537E-01	5.902E-01	2.056E-01	5.129E-03	1.349E-07	1.260E-23	
Sb-125	Sb-125	7.686E-01	7.686E-01	5.576E-01	2.935E-01	3.105E-02	5.068E-05	8.903E-15	1.194E-42	0.000E+00	
Sb-125	Sb-125	2.314E-01	2.314E-01	1.679E-01	8.835E-02	9.347E-03	1.526E-05	2.680E-15	3.601E-43	0.000E+00	
Sb-125	ΣS(j):		1.000E+00	7.255E-01	3.819E-01	4.040E-02	6.594E-05	1.158E-14	1.554E-42	0.000E+00	
Te-125m	Sb-125	2.314E-01	0.000E+00	2.032E-02	1.069E-02	1.131E-03	1.847E-06	3.244E-16	4.344E-44	0.000E+00	
Sr-90	Sr-90	1.000E+00	1.000E+00	5.876E-01	2.029E-01	4.908E-03	1.182E-07	8.114E-24	0.000E+00	0.000E+00	
Tc-99	Tc-99	1.000E+00	1.000E+00	4.690E-06	1.031E-16	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	

THF(i) is the thread fraction of the parent nuclide.

RESRAD.EXE execution time = 232.10 seconds