

Summary : Hematite - Uniform CSM

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Dose Conversion Factor (and Related) Parameter Summary

Dose Library: Hematite 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	Am-241 (Source: FGR 12)	4.372E-02	4.372E-02	DCF1 (4)
A-1	At-217 (Source: FGR 12)	1.773E-03	1.773E-03	DCF1 (5)
A-1	At-218 (Source: FGR 12)	5.847E-03	5.847E-03	DCF1 (6)
A-1	Bi-210 (Source: FGR 12)	3.606E-03	3.606E-03	DCF1 (7)
A-1	Bi-211 (Source: FGR 12)	2.559E-01	2.559E-01	DCF1 (8)
A-1	Bi-212 (Source: FGR 12)	1.171E+00	1.171E+00	DCF1 (9)
A-1	Bi-213 (Source: FGR 12)	7.660E-01	7.660E-01	DCF1 (10)
A-1	Bi-214 (Source: FGR 12)	9.808E+00	9.808E+00	DCF1 (11)
A-1	Fr-221 (Source: FGR 12)	1.536E-01	1.536E-01	DCF1 (12)
A-1	Fr-223 (Source: FGR 12)	1.980E-01	1.980E-01	DCF1 (13)
A-1	Np-237 (Source: FGR 12)	7.790E-02	7.790E-02	DCF1 (14)
A-1	Pa-231 (Source: FGR 12)	1.906E-01	1.906E-01	DCF1 (15)
A-1	Pa-233 (Source: FGR 12)	1.020E+00	1.020E+00	DCF1 (16)
A-1	Pa-234 (Source: FGR 12)	1.155E+01	1.155E+01	DCF1 (17)
A-1	Pa-234m (Source: FGR 12)	8.967E-02	8.967E-02	DCF1 (18)
A-1	Pb-209 (Source: FGR 12)	7.734E-04	7.734E-04	DCF1 (19)
A-1	Pb-210 (Source: FGR 12)	2.447E-03	2.447E-03	DCF1 (20)
A-1	Pb-211 (Source: FGR 12)	3.064E-01	3.064E-01	DCF1 (21)
A-1	Pb-212 (Source: FGR 12)	7.043E-01	7.043E-01	DCF1 (22)
A-1	Pb-214 (Source: FGR 12)	1.341E+00	1.341E+00	DCF1 (23)
A-1	Po-210 (Source: FGR 12)	5.231E-05	5.231E-05	DCF1 (24)
A-1	Po-211 (Source: FGR 12)	4.764E-02	4.764E-02	DCF1 (25)
A-1	Po-212 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (26)
A-1	Po-213 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (27)
A-1	Po-214 (Source: FGR 12)	5.138E-04	5.138E-04	DCF1 (28)
A-1	Po-215 (Source: FGR 12)	1.016E-03	1.016E-03	DCF1 (29)
A-1	Po-216 (Source: FGR 12)	1.042E-04	1.042E-04	DCF1 (30)
A-1	Po-218 (Source: FGR 12)	5.642E-05	5.642E-05	DCF1 (31)
A-1	Pu-239 (Source: FGR 12)	2.952E-04	2.952E-04	DCF1 (32)
A-1	Pu-240 (Source: FGR 12)	1.467E-04	1.467E-04	DCF1 (33)
A-1	Ra-223 (Source: FGR 12)	6.034E-01	6.034E-01	DCF1 (34)
A-1	Ra-224 (Source: FGR 12)	5.119E-02	5.119E-02	DCF1 (35)
A-1	Ra-225 (Source: FGR 12)	1.102E-02	1.102E-02	DCF1 (36)
A-1	Ra-226 (Source: FGR 12)	3.176E-02	3.176E-02	DCF1 (37)
A-1	Ra-228 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1 (38)
A-1	Rn-219 (Source: FGR 12)	3.083E-01	3.083E-01	DCF1 (39)
A-1	Rn-220 (Source: FGR 12)	2.298E-03	2.298E-03	DCF1 (40)
A-1	Rn-222 (Source: FGR 12)	2.354E-03	2.354E-03	DCF1 (41)
A-1	Tc-99 (Source: FGR 12)	1.255E-04	1.255E-04	DCF1 (42)
A-1	Th-227 (Source: FGR 12)	5.212E-01	5.212E-01	DCF1 (43)
A-1	Th-228 (Source: FGR 12)	7.940E-03	7.940E-03	DCF1 (44)
A-1	Th-229 (Source: FGR 12)	3.213E-01	3.213E-01	DCF1 (45)
A-1	Th-230 (Source: FGR 12)	1.209E-03	1.209E-03	DCF1 (46)
A-1	Th-231 (Source: FGR 12)	3.643E-02	3.643E-02	DCF1 (47)
A-1	Th-232 (Source: FGR 12)	5.212E-04	5.212E-04	DCF1 (48)
A-1	Th-234 (Source: FGR 12)	2.410E-02	2.410E-02	DCF1 (49)

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Dose Conversion Factor (and Related) Parameter Summary (continued)
 Dose Library: Hematite Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
A-1	Tl-207 (Source: FGR 12)	1.980E-02	1.980E-02	DCF1 (50)
A-1	Tl-208 (Source: FGR 12)	2.298E+01	2.298E+01	DCF1 (51)
A-1	Tl-209 (Source: FGR 12)	1.293E+01	1.293E+01	DCF1 (52)
A-1	Tl-210 (Source: no data)	0.000E+00	-2.000E+00	DCF1 (53)
A-1	U-233 (Source: FGR 12)	1.397E-03	1.397E-03	DCF1 (54)
A-1	U-234 (Source: FGR 12)	4.017E-04	4.017E-04	DCF1 (55)
A-1	U-235 (Source: FGR 12)	7.211E-01	7.211E-01	DCF1 (56)
A-1	U-236 (Source: FGR 12)	2.148E-04	2.148E-04	DCF1 (57)
A-1	U-238 (Source: FGR 12)	1.031E-04	1.031E-04	DCF1 (58)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Ac-227+D	6.724E+00	6.700E+00	DCF2 (1)
B-1	Am-241	4.440E-01	4.440E-01	DCF2 (2)
B-1	Np-237+D	5.400E-01	5.400E-01	DCF2 (3)
B-1	Pa-231	1.280E+00	1.280E+00	DCF2 (4)
B-1	Pb-210+D	2.320E-02	1.360E-02	DCF2 (5)
B-1	Pu-239	4.290E-01	4.290E-01	DCF2 (6)
B-1	Pu-240	4.290E-01	4.290E-01	DCF2 (7)
B-1	Ra-226+D	8.594E-03	8.580E-03	DCF2 (9)
B-1	Ra-228+D	5.078E-03	4.770E-03	DCF2 (10)
B-1	Tc-99	8.320E-06	8.320E-06	DCF2 (11)
B-1	Th-228+D	3.454E-01	3.420E-01	DCF2 (12)
B-1	Th-229+D	2.169E+00	2.150E+00	DCF2 (13)
B-1	Th-230	3.260E-01	3.260E-01	DCF2 (14)
B-1	Th-232	1.640E+00	1.640E+00	DCF2 (15)
B-1	U-233	1.350E-01	1.350E-01	DCF2 (16)
B-1	U-234	1.320E-01	1.320E-01	DCF2 (17)
B-1	U-235+D	1.230E-01	1.230E-01	DCF2 (18)
B-1	U-236	1.250E-01	1.250E-01	DCF2 (19)
B-1	U-238	1.180E-01	1.180E-01	DCF2 (20)
B-1	U-238+D	1.180E-01	1.180E-01	DCF2 (21)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Ac-227+D	1.480E-02	1.410E-02	DCF3 (1)
D-1	Am-241	3.640E-03	3.640E-03	DCF3 (2)
D-1	Np-237+D	4.444E-03	4.440E-03	DCF3 (3)
D-1	Pa-231	1.060E-02	1.060E-02	DCF3 (4)
D-1	Pb-210+D	7.276E-03	5.370E-03	DCF3 (5)
D-1	Pu-239	3.540E-03	3.540E-03	DCF3 (6)
D-1	Pu-240	3.540E-03	3.540E-03	DCF3 (7)
D-1	Ra-226+D	1.321E-03	1.320E-03	DCF3 (9)
D-1	Ra-228+D	1.442E-03	1.440E-03	DCF3 (10)
D-1	Tc-99	1.460E-06	1.460E-06	DCF3 (11)
D-1	Th-228+D	8.086E-04	3.960E-04	DCF3 (12)
D-1	Th-229+D	4.027E-03	3.530E-03	DCF3 (13)
D-1	Th-230	5.480E-04	5.480E-04	DCF3 (14)
D-1	Th-232	2.730E-03	2.730E-03	DCF3 (15)
D-1	U-233	2.890E-04	2.890E-04	DCF3 (16)
D-1	U-234	2.830E-04	2.830E-04	DCF3 (17)
D-1	U-235+D	2.673E-04	2.660E-04	DCF3 (18)

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Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-1	U-236	2.690E-04	2.690E-04	DCF3 (19)
D-1	U-238	2.550E-04	2.550E-04	DCF3 (20)
D-1	U-238+D	2.687E-04	2.550E-04	DCF3 (21)
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	Am-241 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(2,1)
D-34	Am-241 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-05	5.000E-05	RTF(2,2)
D-34	Am-241 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-06	2.000E-06	RTF(2,3)
D-34	Np-237+D , plant/soil concentration ratio, dimensionless	2.000E-02	2.000E-02	RTF(3,1)
D-34	Np-237+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(3,2)
D-34	Np-237+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-05	5.000E-06	RTF(3,3)
D-34	Pa-231 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-02	RTF(4,1)
D-34	Pa-231 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-06	5.000E-03	RTF(4,2)
D-34	Pa-231 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.900E-06	5.000E-06	RTF(4,3)
D-34	Pb-210+D , plant/soil concentration ratio, dimensionless	7.400E-03	1.000E-02	RTF(5,1)
D-34	Pb-210+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-04	8.000E-04	RTF(5,2)
D-34	Pb-210+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.570E-04	3.000E-04	RTF(5,3)
D-34	Pu-239 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(6,1)
D-34	Pu-239 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(6,2)
D-34	Pu-239 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	9.900E-07	1.000E-06	RTF(6,3)
D-34	Pu-240 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(7,1)
D-34	Pu-240 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(7,2)
D-34	Pu-240 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	9.900E-07	1.000E-06	RTF(7,3)
D-34	Ra-226+D , plant/soil concentration ratio, dimensionless	7.400E-02	4.000E-02	RTF(9,1)
D-34	Ra-226+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(9,2)
D-34	Ra-226+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-04	1.000E-03	RTF(9,3)
D-34	Ra-228+D , plant/soil concentration ratio, dimensionless	7.400E-02	4.000E-02	RTF(10,1)
D-34	Ra-228+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-03	1.000E-03	RTF(10,2)
D-34	Ra-228+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-04	1.000E-03	RTF(10,3)
D-34	Tc-99 , plant/soil concentration ratio, dimensionless	9.270E+00	5.000E+00	RTF(11,1)
D-34	Tc-99 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	9.900E-05	1.000E-04	RTF(11,2)
D-34	Tc-99 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-03	1.000E-03	RTF(11,3)
D-34	Th-228+D , plant/soil concentration ratio, dimensionless	9.930E-04	1.000E-03	RTF(12,1)
D-34	Th-228+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	9.900E-05	1.000E-04	RTF(12,2)
D-34	Th-228+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.900E-06	5.000E-06	RTF(12,3)

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Dose Conversion Factor (and Related) Parameter Summary (continued)
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Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-34	Th-229D , plant/soil concentration ratio, dimensionless	9.930E-04	1.000E-03	RTF(13,1)
D-34	Th-229D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	9.900E-05	1.000E-04	RTF(13,2)
D-34	Th-229D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.900E-06	5.000E-06	RTF(13,3)
D-34				
D-34	Th-230 , plant/soil concentration ratio, dimensionless	9.930E-04	1.000E-03	RTF(14,1)
D-34	Th-230 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	9.900E-05	1.000E-04	RTF(14,2)
D-34	Th-230 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.900E-06	5.000E-06	RTF(14,3)
D-34				
D-34	Th-232 , plant/soil concentration ratio, dimensionless	9.930E-04	1.000E-03	RTF(15,1)
D-34	Th-232 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	9.900E-05	1.000E-04	RTF(15,2)
D-34	Th-232 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	4.900E-06	5.000E-06	RTF(15,3)
D-34				
D-34	U-233 , plant/soil concentration ratio, dimensionless	3.700E-03	2.500E-03	RTF(16,1)
D-34	U-233 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.300E-03	3.400E-04	RTF(16,2)
D-34	U-233 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(16,3)
D-34				
D-34	U-234 , plant/soil concentration ratio, dimensionless	3.700E-03	2.500E-03	RTF(17,1)
D-34	U-234 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.300E-03	3.400E-04	RTF(17,2)
D-34	U-234 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(17,3)
D-34				
D-34	U-235D , plant/soil concentration ratio, dimensionless	3.700E-03	2.500E-03	RTF(18,1)
D-34	U-235D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.300E-03	3.400E-04	RTF(18,2)
D-34	U-235D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(18,3)
D-34				
D-34	U-236 , plant/soil concentration ratio, dimensionless	3.700E-03	2.500E-03	RTF(19,1)
D-34	U-236 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.300E-03	3.400E-04	RTF(19,2)
D-34	U-236 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(19,3)
D-34				
D-34	U-238 , plant/soil concentration ratio, dimensionless	3.700E-03	2.500E-03	RTF(20,1)
D-34	U-238 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.300E-03	3.400E-04	RTF(20,2)
D-34	U-238 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(20,3)
D-34				
D-34	U-238D , plant/soil concentration ratio, dimensionless	3.700E-03	2.500E-03	RTF(21,1)
D-34	U-238D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.300E-03	3.400E-04	RTF(21,2)
D-34	U-238D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(21,3)
D-34				
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Ac-227D , fish	1.480E+01	1.500E+01	BIOFAC(1,1)
D-5	Ac-227D , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(1,2)
D-5				
D-5	Am-241 , fish	2.970E+01	3.000E+01	BIOFAC(2,1)
D-5	Am-241 , crustacea and mollusks	1.000E+03	1.000E+03	BIOFAC(2,2)
D-5				
D-5	Np-237D , fish	2.940E+01	3.000E+01	BIOFAC(3,1)
D-5	Np-237D , crustacea and mollusks	4.000E+02	4.000E+02	BIOFAC(3,2)
D-5				
D-5	Pa-231 , fish	9.900E+00	1.000E+01	BIOFAC(4,1)
D-5	Pa-231 , crustacea and mollusks	1.100E+02	1.100E+02	BIOFAC(4,2)
D-5				

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Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-5	Pb-210D , fish	2.930E+02	3.000E+02	BIOFAC(5,1)
D-5	Pb-210D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(5,2)
D-5				
D-5	Pu-239 , fish	2.980E+01	3.000E+01	BIOFAC(6,1)
D-5	Pu-239 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(6,2)
D-5				
D-5	Pu-240 , fish	2.980E+01	3.000E+01	BIOFAC(7,1)
D-5	Pu-240 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(7,2)
D-5				
D-5	Ra-226D , fish	4.930E+01	5.000E+01	BIOFAC(9,1)
D-5	Ra-226D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(9,2)
D-5				
D-5	Ra-228D , fish	4.930E+01	5.000E+01	BIOFAC(10,1)
D-5	Ra-228D , crustacea and mollusks	2.500E+02	2.500E+02	BIOFAC(10,2)
D-5				
D-5	Tc-99 , fish	2.000E+01	2.000E+01	BIOFAC(11,1)
D-5	Tc-99 , crustacea and mollusks	5.000E+00	5.000E+00	BIOFAC(11,2)
D-5				
D-5	Th-228D , fish	9.030E+01	1.000E+02	BIOFAC(12,1)
D-5	Th-228D , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(12,2)
D-5				
D-5	Th-229D , fish	9.030E+01	1.000E+02	BIOFAC(13,1)
D-5	Th-229D , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(13,2)
D-5				
D-5	Th-230 , fish	9.030E+01	1.000E+02	BIOFAC(14,1)
D-5	Th-230 , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(14,2)
D-5				
D-5	Th-232 , fish	9.030E+01	1.000E+02	BIOFAC(15,1)
D-5	Th-232 , crustacea and mollusks	5.000E+02	5.000E+02	BIOFAC(15,2)
D-5				
D-5	U-233 , fish	9.900E+00	1.000E+01	BIOFAC(16,1)
D-5	U-233 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(16,2)
D-5				
D-5	U-234 , fish	9.900E+00	1.000E+01	BIOFAC(17,1)
D-5	U-234 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(17,2)
D-5				
D-5	U-235D , fish	9.900E+00	1.000E+01	BIOFAC(18,1)
D-5	U-235D , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(18,2)
D-5				
D-5	U-236 , fish	9.900E+00	1.000E+01	BIOFAC(19,1)
D-5	U-236 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(19,2)
D-5				
D-5	U-238 , fish	9.900E+00	1.000E+01	BIOFAC(20,1)
D-5	U-238 , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(20,2)
D-5				
D-5	U-238D , fish	9.900E+00	1.000E+01	BIOFAC(21,1)
D-5	U-238D , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(21,2)

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

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

Summary : Hematite - Uniform CSM

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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)	1.534E+05	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	6.700E+00	2.000E+00	---	THICKO
R011	Length parallel to aquifer flow (m)	2.910E+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): Am-241	1.000E+00	0.000E+00	---	S1(2)
R012	Initial principal radionuclide (pCi/g): Np-237	1.000E+00	0.000E+00	---	S1(3)
R012	Initial principal radionuclide (pCi/g): Pu-239	1.000E+00	0.000E+00	---	S1(6)
R012	Initial principal radionuclide (pCi/g): Pu-240	1.000E+00	0.000E+00	---	S1(7)
R012	Initial principal radionuclide (pCi/g): Tc-99	1.000E+00	0.000E+00	---	S1(11)
R012	Initial principal radionuclide (pCi/g): U-234	1.000E+00	0.000E+00	---	S1(17)
R012	Initial principal radionuclide (pCi/g): U-235	1.000E+00	0.000E+00	---	S1(18)
R012	Initial principal radionuclide (pCi/g): U-238	1.000E+00	0.000E+00	---	S1(20)
R012	Concentration in groundwater (pCi/L): Am-241	not used	0.000E+00	---	W1(2)
R012	Concentration in groundwater (pCi/L): Np-237	not used	0.000E+00	---	W1(3)
R012	Concentration in groundwater (pCi/L): Pu-239	not used	0.000E+00	---	W1(6)
R012	Concentration in groundwater (pCi/L): Pu-240	not used	0.000E+00	---	W1(7)
R012	Concentration in groundwater (pCi/L): Tc-99	not used	0.000E+00	---	W1(11)
R012	Concentration in groundwater (pCi/L): U-234	not used	0.000E+00	---	W1(17)
R012	Concentration in groundwater (pCi/L): U-235	not used	0.000E+00	---	W1(18)
R012	Concentration in groundwater (pCi/L): U-238	not used	0.000E+00	---	W1(20)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVERO
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)	1.690E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	6.000E-04	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	4.500E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	1.700E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.456E+01	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	9.900E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	4.300E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	8.000E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	1.010E+00	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	1.400E-01	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	4.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	9.989E+05	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	1.000E-03	1.000E-03	---	EPS

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R014	Density of saturated zone (g/cm**3)	1.510E+00	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	4.300E-01	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	3.800E-01	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	1.500E-01	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	2.520E+03	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	1.100E-02	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)	2.500E+00	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	ND	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	3.338E+03	2.500E+02	---	UW
R015	Number of unsaturated zone strata	1	1	---	NS
R015	Unsat. zone 1, thickness (m)	2.400E+00	4.000E+00	---	H (1)
R015	Unsat. zone 1, soil density (g/cm**3)	1.690E+00	1.500E+00	---	DENSUZ (1)
R015	Unsat. zone 1, total porosity	4.500E-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	1.700E-01	2.000E-01	---	FCUZ (1)
R015	Unsat. zone 1, soil-specific b parameter	9.900E+00	5.300E+00	---	BUZ (1)
R015	Unsat. zone 1, hydraulic conductivity (m/yr)	1.456E+01	1.000E+01	---	HCUZ (1)
R016	Distribution coefficients for Am-241				
R016	Contaminated zone (cm**3/g)	8.400E+03	2.000E+01	---	DCNUCC (2)
R016	Unsaturated zone 1 (cm**3/g)	8.400E+03	2.000E+01	---	DCNUCU (2,1)
R016	Saturated zone (cm**3/g)	1.900E+03	2.000E+01	---	DCNUCS (2)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.569E-06	ALEACH (2)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (2)
R016	Distribution coefficients for Np-237				
R016	Contaminated zone (cm**3/g)	2.500E+01	-1.000E+00	---	DCNUCC (3)
R016	Unsaturated zone 1 (cm**3/g)	2.500E+01	-1.000E+00	---	DCNUCU (3,1)
R016	Saturated zone (cm**3/g)	5.000E+00	-1.000E+00	---	DCNUCS (3)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	5.225E-04	ALEACH (3)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (3)
R016	Distribution coefficients for Pu-239				
R016	Contaminated zone (cm**3/g)	1.200E+03	2.000E+03	---	DCNUCC (6)
R016	Unsaturated zone 1 (cm**3/g)	1.200E+03	2.000E+03	---	DCNUCU (6,1)
R016	Saturated zone (cm**3/g)	5.500E+02	2.000E+03	---	DCNUCS (6)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.098E-05	ALEACH (6)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (6)
R016	Distribution coefficients for Pu-240				
R016	Contaminated zone (cm**3/g)	1.200E+03	2.000E+03	---	DCNUCC (7)
R016	Unsaturated zone 1 (cm**3/g)	1.200E+03	2.000E+03	---	DCNUCU (7,1)
R016	Saturated zone (cm**3/g)	5.500E+02	2.000E+03	---	DCNUCS (7)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.098E-05	ALEACH (7)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (7)

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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 Tc-99				
R016	Contaminated zone (cm**3/g)	1.060E+02	0.000E+00	---	DCNUCC (11)
R016	Unsaturated zone 1 (cm**3/g)	1.060E+02	0.000E+00	---	DCNUCU (11,1)
R016	Saturated zone (cm**3/g)	1.000E-01	0.000E+00	---	DCNUCS (11)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.241E-04	ALEACH (11)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (11)
R016	Distribution coefficients for U-234				
R016	Contaminated zone (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCC (17)
R016	Unsaturated zone 1 (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCU (17,1)
R016	Saturated zone (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCS (17)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	7.520E-05	ALEACH (17)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (17)
R016	Distribution coefficients for U-235				
R016	Contaminated zone (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCC (18)
R016	Unsaturated zone 1 (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCU (18,1)
R016	Saturated zone (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCS (18)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	7.520E-05	ALEACH (18)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (18)
R016	Distribution coefficients for U-238				
R016	Contaminated zone (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCC (20)
R016	Unsaturated zone 1 (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCU (20,1)
R016	Saturated zone (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCS (20)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	7.520E-05	ALEACH (20)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (20)
R016	Distribution coefficients for daughter Ac-227				
R016	Contaminated zone (cm**3/g)	1.500E+03	2.000E+01	---	DCNUCC (1)
R016	Unsaturated zone 1 (cm**3/g)	1.500E+03	2.000E+01	---	DCNUCU (1,1)
R016	Saturated zone (cm**3/g)	4.500E+02	2.000E+01	---	DCNUCS (1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	8.783E-06	ALEACH (1)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (1)
R016	Distribution coefficients for daughter Pa-231				
R016	Contaminated zone (cm**3/g)	1.800E+03	5.000E+01	---	DCNUCC (4)
R016	Unsaturated zone 1 (cm**3/g)	1.800E+03	5.000E+01	---	DCNUCU (4,1)
R016	Saturated zone (cm**3/g)	5.500E+02	5.000E+01	---	DCNUCS (4)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	7.320E-06	ALEACH (4)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (4)
R016	Distribution coefficients for daughter Pb-210				
R016	Contaminated zone (cm**3/g)	5.500E+02	1.000E+02	---	DCNUCC (5)
R016	Unsaturated zone 1 (cm**3/g)	5.500E+02	1.000E+02	---	DCNUCU (5,1)
R016	Saturated zone (cm**3/g)	2.700E+02	1.000E+02	---	DCNUCS (5)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.395E-05	ALEACH (5)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (5)

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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 Ra-226				
R016	Contaminated zone (cm**3/g)	9.100E+03	7.000E+01	---	DCNUCC (9)
R016	Unsaturated zone 1 (cm**3/g)	9.100E+03	7.000E+01	---	DCNUCU (9,1)
R016	Saturated zone (cm**3/g)	5.000E+02	7.000E+01	---	DCNUCS (9)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.448E-06	ALEACH (9)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (9)
R016	Distribution coefficients for daughter Ra-228				
R016	Contaminated zone (cm**3/g)	9.100E+03	7.000E+01	---	DCNUCC (10)
R016	Unsaturated zone 1 (cm**3/g)	9.100E+03	7.000E+01	---	DCNUCU (10,1)
R016	Saturated zone (cm**3/g)	5.000E+02	7.000E+01	---	DCNUCS (10)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.448E-06	ALEACH (10)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (10)
R016	Distribution coefficients for daughter Th-228				
R016	Contaminated zone (cm**3/g)	3.300E+03	6.000E+04	---	DCNUCC (12)
R016	Unsaturated zone 1 (cm**3/g)	3.300E+03	6.000E+04	---	DCNUCU (12,1)
R016	Saturated zone (cm**3/g)	3.200E+03	6.000E+04	---	DCNUCS (12)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.993E-06	ALEACH (12)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (12)
R016	Distribution coefficients for daughter Th-229				
R016	Contaminated zone (cm**3/g)	3.300E+03	6.000E+04	---	DCNUCC (13)
R016	Unsaturated zone 1 (cm**3/g)	3.300E+03	6.000E+04	---	DCNUCU (13,1)
R016	Saturated zone (cm**3/g)	3.200E+03	6.000E+04	---	DCNUCS (13)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.993E-06	ALEACH (13)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (13)
R016	Distribution coefficients for daughter Th-230				
R016	Contaminated zone (cm**3/g)	3.300E+03	6.000E+04	---	DCNUCC (14)
R016	Unsaturated zone 1 (cm**3/g)	3.300E+03	6.000E+04	---	DCNUCU (14,1)
R016	Saturated zone (cm**3/g)	3.200E+03	6.000E+04	---	DCNUCS (14)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.993E-06	ALEACH (14)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (14)
R016	Distribution coefficients for daughter Th-232				
R016	Contaminated zone (cm**3/g)	3.300E+03	6.000E+04	---	DCNUCC (15)
R016	Unsaturated zone 1 (cm**3/g)	3.300E+03	6.000E+04	---	DCNUCU (15,1)
R016	Saturated zone (cm**3/g)	3.200E+03	6.000E+04	---	DCNUCS (15)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.993E-06	ALEACH (15)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (15)
R016	Distribution coefficients for daughter U-233				
R016	Contaminated zone (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCC (16)
R016	Unsaturated zone 1 (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCU (16,1)
R016	Saturated zone (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCS (16)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	7.520E-05	ALEACH (16)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (16)

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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-236				
R016	Contaminated zone (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCC (19)
R016	Unsaturated zone 1 (cm**3/g)	1.750E+02	5.000E+01	---	DCNUCU (19,1)
R016	Saturated zone (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCS (19)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	7.520E-05	ALEACH (19)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK (19)
R017	Inhalation rate (m**3/yr)	8.400E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	2.300E-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	2.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	6.600E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	1.200E-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)
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)	2.100E+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)	6.500E+01	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	2.100E+01	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	9.000E-01	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	1.820E+01	3.650E+01	---	SOIL

Summary : Hematite - Uniform CSM

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R018	Drinking water intake (L/yr)	4.600E+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	1.000E+00	5.000E-01	---	FR9
R018	Contamination fraction of plant food	-1	-1	0.500E+00	FPLANT
R018	Contamination fraction of meat	-1	-1	0.100E+01	FMEAT
R018	Contamination fraction of milk	-1	-1	0.100E+01	FMILK
R019	Livestock fodder intake for meat (kg/day)	1.200E+01	6.800E+01	---	LFI5
R019	Livestock fodder intake for milk (kg/day)	9.000E+00	5.500E+01	---	LFI6
R019	Livestock water intake for meat (L/day)	3.700E+01	5.000E+01	---	LWI5
R019	Livestock water intake for milk (L/day)	1.050E+02	1.600E+02	---	LWI6
R019	Livestock soil intake (kg/day)	4.500E-01	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	2.300E-05	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	9.000E-01	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)	1.500E+00	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	1.100E+00	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	2.600E-01	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	1.700E-01	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	2.100E-01	8.000E-02	---	TE(3)
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	2.500E-01	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	2.500E-01	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	2.500E-01	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	2.500E-01	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	6.000E-01	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	2.500E-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)	not used	2.000E-05	---	C12WTR
C14	C-12 concentration in contaminated soil (g/g)	not used	3.000E-02	---	C12CZ
C14	Fraction of vegetation carbon from soil	not used	2.000E-02	---	CSOIL
C14	Fraction of vegetation carbon from air	not used	9.800E-01	---	CAIR
C14	C-14 evasion layer thickness in soil (m)	not used	3.000E-01	---	DMC
C14	C-14 evasion flux rate from soil (1/sec)	not used	7.000E-07	---	EVSN
C14	C-12 evasion flux rate from soil (1/sec)	not used	1.000E-10	---	REVSN
C14	Fraction of grain in beef cattle feed	not used	8.000E-01	---	AVFG4
C14	Fraction of grain in milk cow feed	not used	2.000E-01	---	AVFG5

Summary : Hematite - Uniform CSM

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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
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	2.000E+01	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	128	---	---	NPTS
TITL	Maximum number of integration points for dose	5	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	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	active
7 -- drinking water	active
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Summary : Hematite - Uniform CSM

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Contaminated Zone Dimensions Initial Soil Concentrations, pCi/g

Area: 153375.00 square meters	Am-241	1.000E+00
Thickness: 6.70 meters	Np-237	1.000E+00
Cover Depth: 0.00 meters	Pu-239	1.000E+00
	Pu-240	1.000E+00
	Tc-99	1.000E+00
	U-234	1.000E+00
	U-235	1.000E+00
	U-238	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):	8.836E+00	8.832E+00	8.824E+00	8.796E+00	8.716E+00	8.445E+00	7.737E+00	6.387E+01
M(t):	3.535E-01	3.533E-01	3.530E-01	3.518E-01	3.486E-01	3.378E-01	3.095E-01	2.555E+00

Maximum TDOSE(t): 8.518E+01 mrem/yr at t = 516 ± 1 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 5.156E+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.
Am-241	4.834E-03	0.0001	1.918E-03	0.0000	0.000E+00	0.0000	1.063E-01	0.0012	2.406E-03	0.0000	3.407E-04	0.0000	2.257E-02	0.0003
Np-237	2.089E-01	0.0025	4.080E-03	0.0000	0.000E+00	0.0000	4.513E+00	0.0530	1.522E-01	0.0018	5.018E-03	0.0001	4.818E-02	0.0006
Pu-239	7.233E-05	0.0000	4.156E-03	0.0000	0.000E+00	0.0000	2.306E-01	0.0027	1.041E-02	0.0001	3.672E-04	0.0000	4.923E-02	0.0006
Pu-240	3.475E-05	0.0000	3.993E-03	0.0000	0.000E+00	0.0000	2.216E-01	0.0026	1.001E-02	0.0001	3.531E-04	0.0000	4.731E-02	0.0006
Tc-99	2.946E-05	0.0000	7.704E-08	0.0000	0.000E+00	0.0000	8.428E-01	0.0099	9.826E-04	0.0000	2.672E-02	0.0003	1.941E-05	0.0000
U-234	1.412E-03	0.0000	1.268E-03	0.0000	0.000E+00	0.0000	7.166E-02	0.0008	1.151E-02	0.0001	1.859E-02	0.0002	3.947E-03	0.0000
U-235	1.876E-01	0.0022	1.969E-03	0.0000	0.000E+00	0.0000	8.061E-02	0.0009	1.085E-02	0.0001	1.747E-02	0.0002	7.350E-03	0.0001
U-238	3.623E-02	0.0004	1.125E-03	0.0000	0.000E+00	0.0000	6.370E-02	0.0007	1.082E-02	0.0001	1.749E-02	0.0002	3.675E-03	0.0000
Total	4.391E-01	0.0052	1.851E-02	0.0002	0.000E+00	0.0000	6.130E+00	0.0720	2.092E-01	0.0025	8.635E-02	0.0010	1.823E-01	0.0021

Summary : Hematite - Uniform CSM

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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 = 5.156E+02 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.
Am-241	5.803E-04	0.0000	3.021E-04	0.0000	0.000E+00	0.0000	2.685E-05	0.0000	3.975E-06	0.0000	3.341E-07	0.0000	1.393E-01	0.0016
Np-237	4.961E+01	0.5825	2.583E+01	0.3033	0.000E+00	0.0000	2.296E+00	0.0270	3.404E-01	0.0040	2.857E-02	0.0003	8.304E+01	0.9749
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	2.949E-01	0.0035
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	2.833E-01	0.0033
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	8.706E-01	0.0102
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.084E-01	0.0013
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.058E-01	0.0036
U-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	1.330E-01	0.0016
Total	4.961E+01	0.5825	2.583E+01	0.3033	0.000E+00	0.0000	2.296E+00	0.0270	3.404E-01	0.0040	2.857E-02	0.0003	8.518E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

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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.
Am-241	1.100E-02	0.0012	4.387E-03	0.0005	0.000E+00	0.0000	2.419E-01	0.0274	5.461E-03	0.0006	7.780E-04	0.0001	5.163E-02	0.0058
Np-237	2.736E-01	0.0310	5.338E-03	0.0006	0.000E+00	0.0000	5.909E+00	0.6687	1.993E-01	0.0225	6.521E-03	0.0007	6.307E-02	0.0071
Pu-239	7.373E-05	0.0000	4.242E-03	0.0005	0.000E+00	0.0000	2.354E-01	0.0266	1.063E-02	0.0012	3.748E-04	0.0000	5.025E-02	0.0057
Pu-240	3.691E-05	0.0000	4.242E-03	0.0005	0.000E+00	0.0000	2.354E-01	0.0266	1.063E-02	0.0012	3.748E-04	0.0000	5.025E-02	0.0057
Tc-99	3.146E-05	0.0000	8.226E-08	0.0000	0.000E+00	0.0000	9.000E-01	0.1018	1.049E-03	0.0001	2.853E-02	0.0032	2.072E-05	0.0000
U-234	1.008E-04	0.0000	1.305E-03	0.0001	0.000E+00	0.0000	6.963E-02	0.0079	1.182E-02	0.0013	1.912E-02	0.0022	4.017E-03	0.0005
U-235	1.892E-01	0.0214	1.216E-03	0.0001	0.000E+00	0.0000	6.579E-02	0.0074	1.117E-02	0.0013	1.806E-02	0.0020	3.797E-03	0.0004
U-238	3.766E-02	0.0043	1.167E-03	0.0001	0.000E+00	0.0000	6.611E-02	0.0075	1.123E-02	0.0013	1.815E-02	0.0021	3.814E-03	0.0004
Total	5.117E-01	0.0579	2.190E-02	0.0025	0.000E+00	0.0000	7.723E+00	0.8740	2.612E-01	0.0296	9.192E-02	0.0104	2.269E-01	0.0257

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.
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	3.151E-01	0.0357
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	6.456E+00	0.7306
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	3.010E-01	0.0341
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	3.010E-01	0.0341
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	9.296E-01	0.1052
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.060E-01	0.0120
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.893E-01	0.0327
U-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	1.381E-01	0.0156
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.836E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

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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 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.
Am-241	1.098E-02	0.0012	4.380E-03	0.0005	0.000E+00	0.0000	2.415E-01	0.0273	5.452E-03	0.0006	7.767E-04	0.0001	5.155E-02	0.0058
Np-237	2.734E-01	0.0310	5.335E-03	0.0006	0.000E+00	0.0000	5.906E+00	0.6686	1.992E-01	0.0225	6.518E-03	0.0007	6.303E-02	0.0071
Pu-239	7.373E-05	0.0000	4.242E-03	0.0005	0.000E+00	0.0000	2.354E-01	0.0267	1.063E-02	0.0012	3.748E-04	0.0000	5.025E-02	0.0057
Pu-240	3.690E-05	0.0000	4.241E-03	0.0005	0.000E+00	0.0000	2.354E-01	0.0267	1.063E-02	0.0012	3.747E-04	0.0000	5.025E-02	0.0057
Tc-99	3.145E-05	0.0000	8.225E-08	0.0000	0.000E+00	0.0000	8.999E-01	0.1019	1.049E-03	0.0001	2.853E-02	0.0032	2.072E-05	0.0000
U-234	1.008E-04	0.0000	1.305E-03	0.0001	0.000E+00	0.0000	6.963E-02	0.0079	1.182E-02	0.0013	1.912E-02	0.0022	4.017E-03	0.0005
U-235	1.892E-01	0.0214	1.217E-03	0.0001	0.000E+00	0.0000	6.580E-02	0.0074	1.117E-02	0.0013	1.806E-02	0.0020	3.800E-03	0.0004
U-238	3.766E-02	0.0043	1.167E-03	0.0001	0.000E+00	0.0000	6.611E-02	0.0075	1.122E-02	0.0013	1.815E-02	0.0021	3.814E-03	0.0004
Total	5.115E-01	0.0579	2.189E-02	0.0025	0.000E+00	0.0000	7.719E+00	0.8740	2.611E-01	0.0296	9.191E-02	0.0104	2.267E-01	0.0257

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.
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	3.146E-01	0.0356
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	6.453E+00	0.7306
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	3.010E-01	0.0341
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	3.009E-01	0.0341
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	9.295E-01	0.1052
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.060E-01	0.0120
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.893E-01	0.0328
U-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	1.381E-01	0.0156
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.832E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

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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+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.
Am-241	1.095E-02	0.0012	4.366E-03	0.0005	0.000E+00	0.0000	2.407E-01	0.0273	5.435E-03	0.0006	7.742E-04	0.0001	5.138E-02	0.0058
Np-237	2.731E-01	0.0310	5.330E-03	0.0006	0.000E+00	0.0000	5.899E+00	0.6685	1.989E-01	0.0225	6.511E-03	0.0007	6.297E-02	0.0071
Pu-239	7.372E-05	0.0000	4.241E-03	0.0005	0.000E+00	0.0000	2.354E-01	0.0267	1.063E-02	0.0012	3.748E-04	0.0000	5.025E-02	0.0057
Pu-240	3.689E-05	0.0000	4.240E-03	0.0005	0.000E+00	0.0000	2.353E-01	0.0267	1.063E-02	0.0012	3.747E-04	0.0000	5.023E-02	0.0057
Tc-99	3.144E-05	0.0000	8.223E-08	0.0000	0.000E+00	0.0000	8.996E-01	0.1019	1.049E-03	0.0001	2.852E-02	0.0032	2.072E-05	0.0000
U-234	1.009E-04	0.0000	1.305E-03	0.0001	0.000E+00	0.0000	6.962E-02	0.0079	1.182E-02	0.0013	1.912E-02	0.0022	4.017E-03	0.0005
U-235	1.892E-01	0.0214	1.217E-03	0.0001	0.000E+00	0.0000	6.582E-02	0.0075	1.117E-02	0.0013	1.806E-02	0.0020	3.806E-03	0.0004
U-238	3.766E-02	0.0043	1.167E-03	0.0001	0.000E+00	0.0000	6.610E-02	0.0075	1.122E-02	0.0013	1.815E-02	0.0021	3.814E-03	0.0004
Total	5.112E-01	0.0579	2.187E-02	0.0025	0.000E+00	0.0000	7.712E+00	0.8739	2.609E-01	0.0296	9.188E-02	0.0104	2.265E-01	0.0257

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.
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	3.136E-01	0.0355
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	6.446E+00	0.7305
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	3.010E-01	0.0341
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	3.008E-01	0.0341
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	9.293E-01	0.1053
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.060E-01	0.0120
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.893E-01	0.0328
U-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	1.381E-01	0.0157
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.824E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

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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+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.
Am-241	1.082E-02	0.0012	4.317E-03	0.0005	0.000E+00	0.0000	2.381E-01	0.0271	5.375E-03	0.0006	7.656E-04	0.0001	5.081E-02	0.0058
Np-237	2.721E-01	0.0309	5.310E-03	0.0006	0.000E+00	0.0000	5.878E+00	0.6682	1.982E-01	0.0225	6.488E-03	0.0007	6.274E-02	0.0071
Pu-239	7.370E-05	0.0000	4.240E-03	0.0005	0.000E+00	0.0000	2.353E-01	0.0268	1.063E-02	0.0012	3.747E-04	0.0000	5.023E-02	0.0057
Pu-240	3.686E-05	0.0000	4.237E-03	0.0005	0.000E+00	0.0000	2.351E-01	0.0267	1.062E-02	0.0012	3.744E-04	0.0000	5.019E-02	0.0057
Tc-99	3.142E-05	0.0000	8.216E-08	0.0000	0.000E+00	0.0000	8.988E-01	0.1022	1.048E-03	0.0001	2.850E-02	0.0032	2.070E-05	0.0000
U-234	1.014E-04	0.0000	1.304E-03	0.0001	0.000E+00	0.0000	6.958E-02	0.0079	1.181E-02	0.0013	1.911E-02	0.0022	4.015E-03	0.0005
U-235	1.891E-01	0.0215	1.220E-03	0.0001	0.000E+00	0.0000	6.592E-02	0.0075	1.116E-02	0.0013	1.805E-02	0.0021	3.833E-03	0.0004
U-238	3.764E-02	0.0043	1.166E-03	0.0001	0.000E+00	0.0000	6.607E-02	0.0075	1.122E-02	0.0013	1.814E-02	0.0021	3.812E-03	0.0004
Total	5.100E-01	0.0580	2.179E-02	0.0025	0.000E+00	0.0000	7.687E+00	0.8739	2.601E-01	0.0296	9.180E-02	0.0104	2.257E-01	0.0257

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.
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	3.101E-01	0.0353
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	6.423E+00	0.7302
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	3.009E-01	0.0342
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	3.006E-01	0.0342
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	9.284E-01	0.1056
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.059E-01	0.0120
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.893E-01	0.0329
U-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	1.380E-01	0.0157
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.796E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

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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 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.
Am-241	1.048E-02	0.0012	4.180E-03	0.0005	0.000E+00	0.0000	2.306E-01	0.0265	5.206E-03	0.0006	7.414E-04	0.0001	4.920E-02	0.0056
Np-237	2.693E-01	0.0309	5.255E-03	0.0006	0.000E+00	0.0000	5.817E+00	0.6673	1.962E-01	0.0225	6.422E-03	0.0007	6.208E-02	0.0071
Pu-239	7.365E-05	0.0000	4.237E-03	0.0005	0.000E+00	0.0000	2.351E-01	0.0270	1.062E-02	0.0012	3.744E-04	0.0000	5.019E-02	0.0058
Pu-240	3.678E-05	0.0000	4.227E-03	0.0005	0.000E+00	0.0000	2.346E-01	0.0269	1.059E-02	0.0012	3.735E-04	0.0000	5.007E-02	0.0057
Tc-99	3.134E-05	0.0000	8.195E-08	0.0000	0.000E+00	0.0000	8.965E-01	0.1029	1.045E-03	0.0001	2.842E-02	0.0033	2.065E-05	0.0000
U-234	1.057E-04	0.0000	1.303E-03	0.0001	0.000E+00	0.0000	6.949E-02	0.0080	1.180E-02	0.0014	1.908E-02	0.0022	4.010E-03	0.0005
U-235	1.890E-01	0.0217	1.237E-03	0.0001	0.000E+00	0.0000	6.632E-02	0.0076	1.115E-02	0.0013	1.803E-02	0.0021	3.932E-03	0.0005
U-238	3.758E-02	0.0043	1.165E-03	0.0001	0.000E+00	0.0000	6.597E-02	0.0076	1.120E-02	0.0013	1.812E-02	0.0021	3.806E-03	0.0004
Total	5.066E-01	0.0581	2.160E-02	0.0025	0.000E+00	0.0000	7.615E+00	0.8737	2.578E-01	0.0296	9.155E-02	0.0105	2.233E-01	0.0256

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.
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	3.004E-01	0.0345
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	6.356E+00	0.7292
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	3.006E-01	0.0345
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	2.999E-01	0.0344
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	9.261E-01	0.1062
U-234	0.000E+00	0.0000	0.000E+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	0.0121
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.896E-01	0.0332
U-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	1.378E-01	0.0158
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.716E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

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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+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.
Am-241	9.376E-03	0.0011	3.736E-03	0.0004	0.000E+00	0.0000	2.062E-01	0.0244	4.657E-03	0.0006	6.628E-04	0.0001	4.398E-02	0.0052
Np-237	2.596E-01	0.0307	5.067E-03	0.0006	0.000E+00	0.0000	5.608E+00	0.6640	1.891E-01	0.0224	6.197E-03	0.0007	5.985E-02	0.0071
Pu-239	7.346E-05	0.0000	4.225E-03	0.0005	0.000E+00	0.0000	2.345E-01	0.0278	1.059E-02	0.0013	3.733E-04	0.0000	5.005E-02	0.0059
Pu-240	3.648E-05	0.0000	4.192E-03	0.0005	0.000E+00	0.0000	2.327E-01	0.0276	1.051E-02	0.0012	3.705E-04	0.0000	4.967E-02	0.0059
Tc-99	3.106E-05	0.0000	8.122E-08	0.0000	0.000E+00	0.0000	8.886E-01	0.1052	1.036E-03	0.0001	2.817E-02	0.0033	2.046E-05	0.0000
U-234	1.539E-04	0.0000	1.298E-03	0.0002	0.000E+00	0.0000	6.929E-02	0.0082	1.174E-02	0.0014	1.898E-02	0.0022	3.995E-03	0.0005
U-235	1.887E-01	0.0223	1.332E-03	0.0002	0.000E+00	0.0000	6.824E-02	0.0081	1.110E-02	0.0013	1.794E-02	0.0021	4.396E-03	0.0005
U-238	3.738E-02	0.0044	1.159E-03	0.0001	0.000E+00	0.0000	6.564E-02	0.0078	1.114E-02	0.0013	1.802E-02	0.0021	3.787E-03	0.0004
Total	4.953E-01	0.0587	2.101E-02	0.0025	0.000E+00	0.0000	7.373E+00	0.8730	2.499E-01	0.0296	9.072E-02	0.0107	2.157E-01	0.0255

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.
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	2.686E-01	0.0318
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	6.128E+00	0.7255
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	2.998E-01	0.0355
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	2.975E-01	0.0352
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	9.178E-01	0.1087
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.054E-01	0.0125
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.917E-01	0.0345
U-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	1.371E-01	0.0162
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.445E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

File : C:\RESRAD_FAMILY\RESRAD\USERFILES\HEMATITE - UNIFORM CSM.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 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.
Am-241	6.815E-03	0.0009	2.710E-03	0.0004	0.000E+00	0.0000	1.499E-01	0.0194	3.388E-03	0.0004	4.811E-04	0.0001	3.190E-02	0.0041
Np-237	2.339E-01	0.0302	4.565E-03	0.0006	0.000E+00	0.0000	5.051E+00	0.6529	1.703E-01	0.0220	5.598E-03	0.0007	5.392E-02	0.0070
Pu-239	7.291E-05	0.0000	4.191E-03	0.0005	0.000E+00	0.0000	2.326E-01	0.0301	1.050E-02	0.0014	3.704E-04	0.0000	4.966E-02	0.0064
Pu-240	3.563E-05	0.0000	4.095E-03	0.0005	0.000E+00	0.0000	2.273E-01	0.0294	1.026E-02	0.0013	3.620E-04	0.0000	4.852E-02	0.0063
Tc-99	3.028E-05	0.0000	7.918E-08	0.0000	0.000E+00	0.0000	8.662E-01	0.1120	1.010E-03	0.0001	2.746E-02	0.0035	1.995E-05	0.0000
U-234	5.617E-04	0.0001	1.284E-03	0.0002	0.000E+00	0.0000	6.969E-02	0.0090	1.160E-02	0.0015	1.875E-02	0.0024	3.962E-03	0.0005
U-235	1.881E-01	0.0243	1.641E-03	0.0002	0.000E+00	0.0000	7.425E-02	0.0096	1.098E-02	0.0014	1.771E-02	0.0023	5.831E-03	0.0008
U-238	3.682E-02	0.0048	1.142E-03	0.0001	0.000E+00	0.0000	6.470E-02	0.0084	1.098E-02	0.0014	1.777E-02	0.0023	3.733E-03	0.0005
Total	4.663E-01	0.0603	1.963E-02	0.0025	0.000E+00	0.0000	6.736E+00	0.8706	2.291E-01	0.0296	8.850E-02	0.0114	1.975E-01	0.0255

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.
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	1.952E-01	0.0252
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	5.519E+00	0.7134
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	2.974E-01	0.0384
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	2.906E-01	0.0376
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	8.948E-01	0.1157
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.059E-01	0.0137
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.985E-01	0.0386
U-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	1.351E-01	0.0175
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.737E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

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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+03 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.
Am-241	2.241E-03	0.0000	8.816E-04	0.0000	0.000E+00	0.0000	4.927E-02	0.0008	1.120E-03	0.0000	1.570E-04	0.0000	1.038E-02	0.0002
Np-237	1.622E-01	0.0025	3.172E-03	0.0000	0.000E+00	0.0000	3.503E+00	0.0548	1.182E-01	0.0019	3.930E-03	0.0001	3.741E-02	0.0006
Pu-239	7.104E-05	0.0000	4.076E-03	0.0001	0.000E+00	0.0000	2.262E-01	0.0035	1.022E-02	0.0002	3.602E-04	0.0000	4.829E-02	0.0008
Pu-240	3.283E-05	0.0000	3.773E-03	0.0001	0.000E+00	0.0000	2.094E-01	0.0033	9.457E-03	0.0001	3.339E-04	0.0000	4.470E-02	0.0007
Tc-99	2.770E-05	0.0000	7.243E-08	0.0000	0.000E+00	0.0000	7.924E-01	0.0124	9.239E-04	0.0000	2.512E-02	0.0004	1.825E-05	0.0000
U-234	4.648E-03	0.0001	1.235E-03	0.0000	0.000E+00	0.0000	8.101E-02	0.0013	1.146E-02	0.0002	1.850E-02	0.0003	3.974E-03	0.0001
U-235	1.863E-01	0.0029	2.679E-03	0.0000	0.000E+00	0.0000	9.437E-02	0.0015	1.057E-02	0.0002	1.693E-02	0.0003	1.064E-02	0.0002
U-238	3.494E-02	0.0005	1.086E-03	0.0000	0.000E+00	0.0000	6.152E-02	0.0010	1.044E-02	0.0002	1.689E-02	0.0003	3.549E-03	0.0001
Total	3.905E-01	0.0061	1.690E-02	0.0003	0.000E+00	0.0000	5.017E+00	0.0786	1.724E-01	0.0027	8.223E-02	0.0013	1.590E-01	0.0025

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.
Am-241	4.765E-03	0.0001	2.481E-03	0.0000	0.000E+00	0.0000	2.205E-04	0.0000	3.271E-05	0.0000	2.746E-06	0.0000	7.155E-02	0.0011
Np-237	3.685E+01	0.5770	1.919E+01	0.3005	0.000E+00	0.0000	1.706E+00	0.0267	2.530E-01	0.0040	2.126E-02	0.0003	6.185E+01	0.9684
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	2.893E-01	0.0045
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	2.677E-01	0.0042
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	8.185E-01	0.0128
U-234	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.208E-01	0.0019
U-235	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.214E-01	0.0050
U-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	1.284E-01	0.0020
Total	3.686E+01	0.5771	1.919E+01	0.3005	0.000E+00	0.0000	1.706E+00	0.0267	2.530E-01	0.0040	2.126E-02	0.0003	6.387E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : Hematite - Uniform CSM

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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-241	Am-241	1.000E+00	3.151E-01	3.146E-01	3.136E-01	3.101E-01	3.003E-01	2.684E-01	1.947E-01	6.329E-02		
Am-241	Np-237+D	1.000E+00	9.851E-07	3.067E-06	7.229E-06	2.165E-05	6.170E-05	1.889E-04	4.585E-04	8.260E-03		
Am-241	U-233	1.000E+00	3.291E-14	2.027E-13	1.001E-12	8.582E-12	7.039E-11	7.226E-10	5.591E-09	1.286E-07		
Am-241	Th-229+D	1.000E+00	5.096E-18	6.879E-17	7.643E-16	1.968E-14	4.720E-13	1.617E-11	3.861E-10	1.129E-08		
Am-241	ΣDSR (j)		3.151E-01	3.146E-01	3.136E-01	3.101E-01	3.004E-01	2.686E-01	1.952E-01	7.155E-02		
Np-237+D	Np-237+D	1.000E+00	6.456E+00	6.453E+00	6.446E+00	6.423E+00	6.356E+00	6.127E+00	5.519E+00	6.185E+01		
Np-237+D	U-233	1.000E+00	2.835E-07	7.619E-07	1.709E-06	5.017E-06	1.439E-05	4.631E-05	1.304E-04	1.690E-03		
Np-237+D	Th-229+D	1.000E+00	5.984E-11	3.857E-10	1.973E-09	1.733E-08	1.446E-07	1.542E-06	1.315E-05	1.554E-04		
Np-237+D	ΣDSR (j)		6.456E+00	6.453E+00	6.446E+00	6.423E+00	6.356E+00	6.128E+00	5.519E+00	6.185E+01		
Pu-239	Pu-239	1.000E+00	3.010E-01	3.010E-01	3.010E-01	3.009E-01	3.006E-01	2.998E-01	2.974E-01	2.893E-01		
Pu-239	U-235+D	1.000E+00	1.403E-10	4.249E-10	9.946E-10	2.987E-09	8.672E-09	2.846E-08	8.414E-08	2.691E-07		
Pu-239	Pa-231	1.000E+00	4.053E-15	2.511E-14	1.249E-13	1.079E-12	8.987E-12	9.682E-11	8.563E-10	9.176E-09		
Pu-239	Ac-227+D	1.000E+00	4.951E-17	7.282E-16	8.346E-15	2.096E-13	4.435E-12	1.045E-10	1.339E-09	1.658E-08		
Pu-239	ΣDSR (j)		3.010E-01	3.010E-01	3.010E-01	3.009E-01	3.006E-01	2.998E-01	2.974E-01	2.893E-01		
Pu-240	Pu-240	4.950E-08	1.490E-08	1.490E-08	1.489E-08	1.488E-08	1.484E-08	1.472E-08	1.438E-08	1.325E-08		
Pu-240	Pu-240	1.000E+00	3.010E-01	3.009E-01	3.008E-01	3.006E-01	2.999E-01	2.975E-01	2.906E-01	2.677E-01		
Pu-240	U-236	1.000E+00	1.425E-09	4.400E-09	1.036E-08	3.120E-08	9.059E-08	2.967E-07	8.703E-07	2.709E-06		
Pu-240	Th-232	1.000E+00	7.471E-20	4.651E-19	2.319E-18	2.006E-17	1.671E-16	1.798E-15	1.585E-14	1.678E-13		
Pu-240	Ra-228+D	1.000E+00	5.604E-20	8.685E-19	9.866E-18	2.208E-16	3.546E-15	5.427E-14	5.343E-13	5.883E-12		
Pu-240	Th-228+D	1.000E+00	1.566E-21	4.108E-20	8.298E-19	3.676E-17	8.687E-16	1.550E-14	1.587E-13	1.770E-12		
Pu-240	ΣDSR (j)		3.010E-01	3.009E-01	3.008E-01	3.006E-01	2.999E-01	2.975E-01	2.906E-01	2.677E-01		
Tc-99	Tc-99	1.000E+00	9.296E-01	9.295E-01	9.293E-01	9.284E-01	9.261E-01	9.178E-01	8.948E-01	8.185E-01		
U-234	U-234	1.000E+00	1.060E-01	1.060E-01	1.060E-01	1.059E-01	1.057E-01	1.052E-01	1.035E-01	9.804E-02		
U-234	Th-230	1.000E+00	2.596E-07	7.077E-07	1.597E-06	4.709E-06	1.359E-05	4.454E-05	1.319E-04	4.253E-04		
U-234	Ra-226+D	1.000E+00	5.710E-09	4.160E-08	2.237E-07	2.017E-06	1.700E-05	1.825E-04	1.576E-03	1.552E-02		
U-234	Pb-210+D	1.000E+00	4.241E-11	4.837E-10	4.620E-09	1.024E-07	2.069E-06	4.790E-05	6.001E-04	6.842E-03		
U-234	ΣDSR (j)		1.060E-01	1.060E-01	1.060E-01	1.059E-01	1.058E-01	1.054E-01	1.059E-01	1.208E-01		
U-235+D	U-235+D	1.000E+00	2.893E-01	2.892E-01	2.892E-01	2.890E-01	2.886E-01	2.871E-01	2.828E-01	2.683E-01		
U-235+D	Pa-231	1.000E+00	1.148E-05	3.115E-05	7.019E-05	2.067E-04	5.964E-04	1.954E-03	5.778E-03	1.855E-02		
U-235+D	Ac-227+D	1.000E+00	1.991E-07	1.372E-06	7.099E-06	5.912E-05	4.118E-04	2.630E-03	9.956E-03	3.458E-02		
U-235+D	ΣDSR (j)		2.893E-01	2.893E-01	2.893E-01	2.893E-01	2.896E-01	2.917E-01	2.985E-01	3.214E-01		
U-238	U-238	5.400E-05	5.154E-06	5.153E-06	5.152E-06	5.150E-06	5.142E-06	5.115E-06	5.039E-06	4.780E-06		
U-238+D	U-238+D	9.999E-01	1.381E-01	1.381E-01	1.381E-01	1.380E-01	1.378E-01	1.371E-01	1.351E-01	1.281E-01		
U-238+D	U-234	9.999E-01	1.502E-07	4.507E-07	1.051E-06	3.153E-06	9.144E-06	2.997E-05	8.824E-05	2.785E-04		
U-238+D	Th-230	9.999E-01	2.655E-13	1.641E-12	8.174E-12	7.073E-11	5.890E-10	6.344E-09	5.603E-08	5.972E-07		
U-238+D	Ra-226+D	9.999E-01	3.959E-15	6.234E-14	7.448E-13	2.000E-11	4.899E-10	1.737E-08	4.509E-07	1.502E-05		
U-238+D	Pb-210+D	9.999E-01	2.631E-17	6.150E-16	1.241E-14	7.942E-13	4.713E-11	3.835E-09	1.571E-07	6.420E-06		
U-238+D	ΣDSR (j)		1.381E-01	1.381E-01	1.381E-01	1.380E-01	1.378E-01	1.371E-01	1.351E-01	1.284E-01		

The DSR includes contributions from associated (half-life ≤ 180 days) daughters.

Summary : Hematite - Uniform CSM

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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
Am-241	7.933E+01	7.946E+01	7.971E+01	8.061E+01	8.323E+01	9.308E+01	1.281E+02	3.494E+02
Np-237	3.872E+00	3.874E+00	3.878E+00	3.892E+00	3.933E+00	4.080E+00	4.530E+00	4.042E-01
Pu-239	8.306E+01	8.306E+01	8.307E+01	8.309E+01	8.316E+01	8.339E+01	8.405E+01	8.643E+01
Pu-240	8.307E+01	8.308E+01	8.310E+01	8.317E+01	8.336E+01	8.405E+01	8.604E+01	9.338E+01
Tc-99	2.689E+01	2.690E+01	2.690E+01	2.693E+01	2.700E+01	2.724E+01	2.794E+01	3.054E+01
U-234	2.359E+02	2.359E+02	2.359E+02	2.360E+02	2.363E+02	2.371E+02	2.362E+02	2.069E+02
U-235	8.642E+01	8.643E+01	8.642E+01	8.641E+01	8.632E+01	8.571E+01	8.374E+01	7.778E+01
U-238	1.810E+02	1.810E+02	1.810E+02	1.811E+02	1.814E+02	1.823E+02	1.850E+02	1.947E+02

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 = 516 ± 1 years

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin)	G(i,tmin) (pCi/g)	DSR(i,tmax)	G(i,tmax) (pCi/g)
Am-241	1.000E+00	0.000E+00	3.151E-01	7.933E+01	1.393E-01	1.795E+02
Np-237	1.000E+00	516 ± 1	8.304E+01	3.011E-01	8.304E+01	3.011E-01
Pu-239	1.000E+00	0.000E+00	3.010E-01	8.306E+01	2.949E-01	8.478E+01
Pu-240	1.000E+00	0.000E+00	3.010E-01	8.307E+01	2.833E-01	8.823E+01
Tc-99	1.000E+00	0.000E+00	9.296E-01	2.689E+01	8.706E-01	2.872E+01
U-234	1.000E+00	1.000E+03	1.208E-01	2.069E+02	1.084E-01	2.307E+02
U-235	1.000E+00	1.000E+03	3.214E-01	7.778E+01	3.058E-01	8.175E+01
U-238	1.000E+00	0.000E+00	1.381E-01	1.810E+02	1.330E-01	1.879E+02

Summary : Hematite - Uniform CSM

File : C:\RESRAD_FAMILY\RESRAD\USERFILES\HEMATITE - UNIFORM CSM.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
Am-241	Am-241	1.000E+00	3.151E-01	3.146E-01	3.136E-01	3.101E-01	3.003E-01	2.684E-01	1.947E-01	6.329E-02
Np-237	Am-241	1.000E+00	9.851E-07	3.067E-06	7.229E-06	2.165E-05	6.170E-05	1.889E-04	4.585E-04	8.260E-03
Np-237	Np-237	1.000E+00	6.456E+00	6.453E+00	6.446E+00	6.423E+00	6.356E+00	6.127E+00	5.519E+00	6.185E+01
Np-237	ΣDOSE (j)		6.456E+00	6.453E+00	6.446E+00	6.423E+00	6.356E+00	6.128E+00	5.520E+00	6.186E+01
U-233	Am-241	1.000E+00	3.291E-14	2.027E-13	1.001E-12	8.582E-12	7.039E-11	7.226E-10	5.591E-09	1.286E-07
U-233	Np-237	1.000E+00	2.835E-07	7.619E-07	1.709E-06	5.017E-06	1.439E-05	4.631E-05	1.304E-04	1.690E-03
U-233	ΣDOSE (j)		2.835E-07	7.619E-07	1.709E-06	5.017E-06	1.439E-05	4.632E-05	1.304E-04	1.690E-03
Th-229	Am-241	1.000E+00	5.096E-18	6.879E-17	7.643E-16	1.968E-14	4.720E-13	1.617E-11	3.861E-10	1.129E-08
Th-229	Np-237	1.000E+00	5.984E-11	3.857E-10	1.973E-09	1.733E-08	1.446E-07	1.542E-06	1.315E-05	1.554E-04
Th-229	ΣDOSE (j)		5.984E-11	3.857E-10	1.973E-09	1.733E-08	1.446E-07	1.542E-06	1.315E-05	1.554E-04
Pu-239	Pu-239	1.000E+00	3.010E-01	3.010E-01	3.010E-01	3.009E-01	3.006E-01	2.998E-01	2.974E-01	2.893E-01
U-235	Pu-239	1.000E+00	1.403E-10	4.249E-10	9.946E-10	2.987E-09	8.672E-09	2.846E-08	8.414E-08	2.691E-07
U-235	U-235	1.000E+00	2.893E-01	2.892E-01	2.892E-01	2.890E-01	2.886E-01	2.871E-01	2.828E-01	2.683E-01
U-235	ΣDOSE (j)		2.893E-01	2.892E-01	2.892E-01	2.890E-01	2.886E-01	2.871E-01	2.828E-01	2.683E-01
Pa-231	Pu-239	1.000E+00	4.053E-15	2.511E-14	1.249E-13	1.079E-12	8.987E-12	9.682E-11	8.563E-10	9.176E-09
Pa-231	U-235	1.000E+00	1.148E-05	3.115E-05	7.019E-05	2.067E-04	5.964E-04	1.954E-03	5.778E-03	1.855E-02
Pa-231	ΣDOSE (j)		1.148E-05	3.115E-05	7.019E-05	2.067E-04	5.964E-04	1.954E-03	5.778E-03	1.855E-02
Ac-227	Pu-239	1.000E+00	4.951E-17	7.282E-16	8.346E-15	2.096E-13	4.435E-12	1.045E-10	1.339E-09	1.658E-08
Ac-227	U-235	1.000E+00	1.991E-07	1.372E-06	7.099E-06	5.912E-05	4.118E-04	2.630E-03	9.956E-03	3.458E-02
Ac-227	ΣDOSE (j)		1.991E-07	1.372E-06	7.099E-06	5.912E-05	4.118E-04	2.630E-03	9.956E-03	3.458E-02
Pu-240	Pu-240	4.950E-08	1.490E-08	1.490E-08	1.489E-08	1.488E-08	1.484E-08	1.472E-08	1.438E-08	1.325E-08
Pu-240	Pu-240	1.000E+00	3.010E-01	3.009E-01	3.008E-01	3.006E-01	2.999E-01	2.975E-01	2.906E-01	2.677E-01
Pu-240	ΣDOSE (j)		3.010E-01	3.009E-01	3.008E-01	3.006E-01	2.999E-01	2.975E-01	2.906E-01	2.677E-01
U-236	Pu-240	1.000E+00	1.425E-09	4.400E-09	1.036E-08	3.120E-08	9.059E-08	2.967E-07	8.703E-07	2.709E-06
Th-232	Pu-240	1.000E+00	7.471E-20	4.651E-19	2.319E-18	2.006E-17	1.671E-16	1.798E-15	1.585E-14	1.678E-13
Ra-228	Pu-240	1.000E+00	5.604E-20	8.685E-19	9.866E-18	2.208E-16	3.546E-15	5.427E-14	5.343E-13	5.883E-12
Th-228	Pu-240	1.000E+00	1.566E-21	4.108E-20	8.298E-19	3.676E-17	8.687E-16	1.550E-14	1.587E-13	1.770E-12
Tc-99	Tc-99	1.000E+00	9.296E-01	9.295E-01	9.293E-01	9.284E-01	9.261E-01	9.178E-01	8.948E-01	8.185E-01
U-234	U-234	1.000E+00	1.060E-01	1.060E-01	1.060E-01	1.059E-01	1.057E-01	1.052E-01	1.035E-01	9.804E-02
U-234	U-238	9.999E-01	1.502E-07	4.507E-07	1.051E-06	3.153E-06	9.144E-06	2.997E-05	8.824E-05	2.785E-04
U-234	ΣDOSE (j)		1.060E-01	1.060E-01	1.060E-01	1.059E-01	1.058E-01	1.052E-01	1.036E-01	9.832E-02
Th-230	U-234	1.000E+00	2.596E-07	7.077E-07	1.597E-06	4.709E-06	1.359E-05	4.454E-05	1.319E-04	4.253E-04
Th-230	U-238	9.999E-01	2.655E-13	1.641E-12	8.174E-12	7.073E-11	5.890E-10	6.344E-09	5.603E-08	5.972E-07
Th-230	ΣDOSE (j)		2.596E-07	7.077E-07	1.597E-06	4.709E-06	1.359E-05	4.455E-05	1.319E-04	4.259E-04

Summary : Hematite - Uniform CSM

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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	U-234	1.000E+00	5.710E-09	4.160E-08	2.237E-07	2.017E-06	1.700E-05	1.825E-04	1.576E-03	1.552E-02
Ra-226	U-238	9.999E-01	3.959E-15	6.234E-14	7.448E-13	2.000E-11	4.899E-10	1.737E-08	4.509E-07	1.502E-05
Ra-226	ΣDOSE(j)		5.710E-09	4.160E-08	2.237E-07	2.017E-06	1.700E-05	1.825E-04	1.577E-03	1.553E-02
Pb-210	U-234	1.000E+00	4.241E-11	4.837E-10	4.620E-09	1.024E-07	2.069E-06	4.790E-05	6.001E-04	6.842E-03
Pb-210	U-238	9.999E-01	2.631E-17	6.150E-16	1.241E-14	7.942E-13	4.713E-11	3.835E-09	1.571E-07	6.420E-06
Pb-210	ΣDOSE(j)		4.241E-11	4.837E-10	4.620E-09	1.024E-07	2.069E-06	4.790E-05	6.002E-04	6.849E-03
U-238	U-238	5.400E-05	5.154E-06	5.153E-06	5.152E-06	5.150E-06	5.142E-06	5.115E-06	5.039E-06	4.780E-06
U-238	U-238	9.999E-01	1.381E-01	1.381E-01	1.381E-01	1.380E-01	1.378E-01	1.371E-01	1.351E-01	1.281E-01
U-238	ΣDOSE(j)		1.381E-01	1.381E-01	1.381E-01	1.380E-01	1.378E-01	1.371E-01	1.351E-01	1.281E-01

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

Summary : Hematite - Uniform CSM

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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	
Am-241	Am-241	1.000E+00	1.000E+00	9.984E-01	9.952E-01	9.841E-01	9.530E-01	8.517E-01	6.178E-01	2.008E-01	
Np-237	Am-241	1.000E+00	0.000E+00	3.236E-07	9.686E-07	3.205E-06	9.412E-06	2.913E-05	7.093E-05	1.173E-04	
Np-237	Np-237	1.000E+00	1.000E+00	9.995E-01	9.984E-01	9.948E-01	9.844E-01	9.491E-01	8.548E-01	5.928E-01	
Np-237	ΣS(j):		1.000E+00	9.995E-01	9.984E-01	9.948E-01	9.844E-01	9.491E-01	8.549E-01	5.930E-01	
U-233	Am-241	1.000E+00	0.000E+00	7.077E-13	6.360E-12	7.030E-11	6.235E-10	6.583E-09	5.135E-08	3.564E-07	
U-233	Np-237	1.000E+00	0.000E+00	4.372E-06	1.311E-05	4.360E-05	1.300E-04	4.244E-04	1.199E-03	3.262E-03	
U-233	ΣS(j):		0.000E+00	4.372E-06	1.311E-05	4.360E-05	1.300E-04	4.244E-04	1.200E-03	3.263E-03	
Th-229	Am-241	1.000E+00	0.000E+00	2.228E-17	6.009E-16	2.217E-14	5.916E-13	2.105E-11	5.081E-10	1.299E-08	
Th-229	Np-237	1.000E+00	0.000E+00	2.064E-10	1.857E-09	2.060E-08	1.845E-07	2.017E-06	1.733E-05	1.643E-04	
Th-229	ΣS(j):		0.000E+00	2.064E-10	1.857E-09	2.060E-08	1.845E-07	2.017E-06	1.733E-05	1.643E-04	
Pu-239	Pu-239	1.000E+00	1.000E+00	1.000E+00	9.999E-01	9.996E-01	9.988E-01	9.960E-01	9.881E-01	9.610E-01	
U-235	Pu-239	1.000E+00	0.000E+00	9.848E-10	2.954E-09	9.843E-09	2.950E-08	9.792E-08	2.904E-07	9.299E-07	
U-235	U-235	1.000E+00	1.000E+00	9.999E-01	9.998E-01	9.992E-01	9.977E-01	9.925E-01	9.777E-01	9.276E-01	
U-235	ΣS(j):		1.000E+00	9.999E-01	9.998E-01	9.992E-01	9.977E-01	9.925E-01	9.777E-01	9.276E-01	
Pa-231	Pu-239	1.000E+00	0.000E+00	1.042E-14	9.376E-14	1.041E-12	9.364E-12	1.037E-10	9.244E-10	9.933E-09	
Pa-231	U-235	1.000E+00	0.000E+00	2.116E-05	6.347E-05	2.115E-04	6.338E-04	2.105E-03	6.250E-03	2.009E-02	
Pa-231	ΣS(j):		0.000E+00	2.116E-05	6.347E-05	2.115E-04	6.338E-04	2.105E-03	6.250E-03	2.009E-02	
Ac-227	Pu-239	1.000E+00	0.000E+00	1.097E-16	2.915E-15	1.023E-13	2.387E-12	5.820E-11	7.518E-10	9.339E-09	
Ac-227	U-235	1.000E+00	0.000E+00	3.332E-07	2.937E-06	3.036E-05	2.256E-04	1.472E-03	5.602E-03	1.949E-02	
Ac-227	ΣS(j):		0.000E+00	3.332E-07	2.937E-06	3.036E-05	2.256E-04	1.472E-03	5.602E-03	1.949E-02	
Pu-240	Pu-240	4.950E-08	4.950E-08	4.949E-08	4.948E-08	4.944E-08	4.933E-08	4.892E-08	4.779E-08	4.403E-08	
Pu-240	Pu-240	1.000E+00	1.000E+00	9.999E-01	9.996E-01	9.988E-01	9.965E-01	9.884E-01	9.655E-01	8.896E-01	
Pu-240	ΣS(j):		1.000E+00	9.999E-01	9.996E-01	9.988E-01	9.965E-01	9.884E-01	9.655E-01	8.896E-01	
U-236	Pu-240	1.000E+00	0.000E+00	2.960E-08	8.878E-08	2.957E-07	8.855E-07	2.932E-06	8.628E-06	2.689E-05	
Th-232	Pu-240	1.000E+00	0.000E+00	7.302E-19	6.571E-18	7.297E-17	6.559E-16	7.255E-15	6.444E-14	6.842E-13	
Ra-228	Pu-240	1.000E+00	0.000E+00	2.848E-20	7.254E-19	2.226E-17	3.909E-16	6.154E-15	6.101E-14	6.733E-13	
Th-228	Pu-240	1.000E+00	0.000E+00	2.417E-21	1.634E-19	1.165E-17	3.133E-16	5.798E-15	5.988E-14	6.696E-13	
Tc-99	Tc-99	1.000E+00	1.000E+00	9.999E-01	9.996E-01	9.987E-01	9.962E-01	9.873E-01	9.625E-01	8.805E-01	
U-234	U-234	1.000E+00	1.000E+00	9.999E-01	9.998E-01	9.992E-01	9.977E-01	9.922E-01	9.769E-01	9.249E-01	
U-234	U-238	9.999E-01	0.000E+00	2.835E-06	8.502E-06	2.833E-05	8.485E-05	2.813E-04	8.311E-04	2.626E-03	
U-234	ΣS(j):		1.000E+00	9.999E-01	9.998E-01	9.992E-01	9.977E-01	9.925E-01	9.777E-01	9.276E-01	
Th-230	U-234	1.000E+00	0.000E+00	9.002E-06	2.700E-05	8.998E-05	2.697E-04	8.961E-04	2.664E-03	8.603E-03	
Th-230	U-238	9.999E-01	0.000E+00	1.276E-11	1.148E-10	1.275E-09	1.146E-08	1.269E-07	1.129E-06	1.207E-05	
Th-230	ΣS(j):		0.000E+00	9.002E-06	2.700E-05	8.998E-05	2.697E-04	8.962E-04	2.665E-03	8.615E-03	

Summary : Hematite - Uniform CSM

File : C:\RESRAD_FAMILY\RESRAD\USERFILES\HEMATITE - UNIFORM CSM.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	U-234	1.000E+00	0.000E+00	1.950E-09	1.754E-08	1.946E-07	1.746E-06	1.916E-05	1.666E-04	1.643E-03
Ra-226	U-238	9.999E-01	0.000E+00	1.842E-15	4.973E-14	1.840E-12	4.952E-11	1.815E-09	4.757E-08	1.590E-06
Ra-226	ΣS(j):		0.000E+00	1.950E-09	1.754E-08	1.946E-07	1.746E-06	1.916E-05	1.666E-04	1.645E-03
Pb-210	U-234	1.000E+00	0.000E+00	2.004E-11	5.328E-10	1.870E-08	4.369E-07	1.065E-05	1.352E-04	1.548E-03
Pb-210	U-238	9.999E-01	0.000E+00	1.423E-17	1.138E-15	1.345E-13	9.693E-12	8.455E-10	3.530E-08	1.451E-06
Pb-210	ΣS(j):		0.000E+00	2.004E-11	5.328E-10	1.870E-08	4.369E-07	1.065E-05	1.352E-04	1.549E-03
U-238	U-238	5.400E-05	5.400E-05	5.400E-05	5.399E-05	5.396E-05	5.388E-05	5.360E-05	5.280E-05	5.009E-05
U-238	U-238	9.999E-01	9.999E-01	9.999E-01	9.997E-01	9.992E-01	9.977E-01	9.925E-01	9.776E-01	9.275E-01
U-238	ΣS(j):		1.000E+00	9.999E-01	9.998E-01	9.992E-01	9.977E-01	9.925E-01	9.777E-01	9.276E-01

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

RESRAD.EXE execution time = 3.27 seconds