Summary : RESRAD Default Parameters
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Part I: Mixture Sums and Single Radionuclide Guidelines

Summary : RESRAD Default Parameters
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Dose Conversion Factor (and Related) Parameter Summary
Dose Library: 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-227 (Source: FGR 12)	4.951E-04	4.951E-04	DCF1(1)
A-1	At-219 (Source: no data)	0.000E+00	-2.000E+00	DCF1(2)
A-1	Ba-137m (Source: FGR 12)	3.606E+00	3.606E+00	DCF1(3)
A-1	Bi-211 (Source: FGR 12)	2.559E-01	2.559E-01	DCF1(4)
A-1	Bi-215 (Source: no data)	0.000E+00	-2.000E+00	DCF1(5)
A-1	Cs-137 (Source: FGR 12)	7.510E-04	7.510E-04	DCF1(6)
A-1	Fr-223 (Source: FGR 12)	1.980E-01	1.980E-01	DCF1(7)
A-1	Pa-231 (Source: FGR 12)	1.906E-01	1.906E-01	DCF1(8)
A-1	Pb-211 (Source: FGR 12)	3.064E-01	3.064E-01	DCF1(9)
A-1	Po-211 (Source: FGR 12)	4.764E-02	4.764E-02	DCF1(10)
A-1	Po-215 (Source: FGR 12)	1.016E-03	1.016E-03	DCF1(11)
A-1	Pu-239 (Source: FGR 12)	2.952E-04	2.952E-04	DCF1(12)
A-1	Ra-223 (Source: FGR 12)	6.034E-01	6.034E-01	DCF1(13)
A-1	Rn-219 (Source: FGR 12)	3.083E-01	3.083E-01	DCF1(14)
A-1	Th-227 (Source: FGR 12)	5.212E-01	5.212E-01	DCF1(15)
A-1	Th-231 (Source: FGR 12)	3.643E-02	3.643E-02	DCF1(16)
A-1	Tl-207 (Source: FGR 12)	1.980E-02	1.980E-02	DCF1(17)
A-1	U-235 (Source: FGR 12)	7.211E-01	7.211E-01	DCF1(18)
A-1	U-235m (Source: no data)	0.000E+00	-1.000E+00	DCF1(19)
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)
B-1	Cs-137+D	3.190E-05	3.190E-05	DCF2(7)
B-1	Pa-231	1.280E+00	1.280E+00	DCF2(8)
B-1	Pu-239	4.290E-01	4.290E-01	DCF2(14)
B-1	Pu-239+D	4.290E-01	4.290E-01	DCF2(20)
B-1	U-235+D	1.230E-01	1.230E-01	DCF2(26)
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	Cs-137+D	5.000E-05	5.000E-05	DCF3(7)
D-1	Pa-231	1.060E-02	1.060E-02	DCF3(8)
D-1	Pu-239	3.540E-03	3.540E-03	DCF3(14)
D-1	Pu-239+D	3.540E-03	3.540E-03	DCF3(20)
D-1	U-235+D	2.673E-04	2.660E-04	DCF3(26)

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

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-34	Food transfer factors:			
D-34	Ac-227+D , plant/soil concentration ratio, dimensionless	2.500E-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-05	2.000E-05	RTF(1,3)
D-34				
D-34	Ac-227+D1 , plant/soil concentration ratio, dimensionless	2.500E-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-05	2.000E-05	RTF(2,3)
D-34				
D-34	Ac-227+D2 , plant/soil concentration ratio, dimensionless	2.500E-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-05	2.000E-05	RTF(3,3)
D-34				
D-34	Ac-227+D3 , plant/soil concentration ratio, dimensionless	2.500E-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-05	2.000E-05	RTF(4,3)
D-34				
D-34	Ac-227+D4 , plant/soil concentration ratio, dimensionless	2.500E-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-05	2.000E-05	RTF(5,3)
D-34				
D-34	Ac-227+D5 , plant/soil concentration ratio, dimensionless	2.500E-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-05	2.000E-05	RTF(6,3)
D-34				
D-34	Cs-137+D , plant/soil concentration ratio, dimensionless	4.000E-02	4.000E-02	RTF(7,1)
D-34	Cs-137+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.000E-02	3.000E-02	RTF(7,2)
D-34	Cs-137+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	8.000E-03	8.000E-03	RTF(7,3)
D-34				
D-34	Pa-231 , plant/soil concentration ratio, dimensionless	1.000E-02	1.000E-02	RTF(8,1)
D-34	Pa-231 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-03	5.000E-03	RTF(8,2)
D-34	Pa-231 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	5.000E-06	5.000E-06	RTF(8,3)
D-34				
D-34	Pu-239 , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(14,1)
D-34	Pu-239 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(14,2)
D-34	Pu-239 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-06	1.000E-06	RTF(14,3)
D-34				
D-34	Pu-239+D , plant/soil concentration ratio, dimensionless	1.000E-03	1.000E-03	RTF(20,1)
D-34	Pu-239+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	1.000E-04	1.000E-04	RTF(20,2)
D-34	Pu-239+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.000E-06	1.000E-06	RTF(20,3)
D-34				
D-34	U-235+D , plant/soil concentration ratio, dimensionless	2.500E-03	2.500E-03	RTF(26,1)
D-34	U-235+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	3.400E-04	3.400E-04	RTF(26,2)
D-34	U-235+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	6.000E-04	6.000E-04	RTF(26,3)
D-34				
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				

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

Menu	Parameter	Current Value#	Base Case*	Parameter Name
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	Cs-137+D , fish	2.000E+03	2.000E+03	BIOFAC(7,1)
D-5	Cs-137+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(7,2)
D-5				
D-5	Pa-231 , fish	1.000E+01	1.000E+01	BIOFAC(8,1)
D-5	Pa-231 , crustacea and mollusks	1.100E+02	1.100E+02	BIOFAC(8,2)
D-5				
D-5	Pu-239 , fish	3.000E+01	3.000E+01	BIOFAC(14,1)
D-5	Pu-239 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(14,2)
D-5				
D-5	Pu-239+D , fish	3.000E+01	3.000E+01	BIOFAC(20,1)
D-5	Pu-239+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(20,2)
D-5				
D-5	U-235+D , fish	1.000E+01	1.000E+01	BIOFAC(26,1)
D-5	U-235+D , crustacea and mollusks	6.000E+01	6.000E+01	BIOFAC(26,2)
D-5				

#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.

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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)	1.000E+03	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.000E+00	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)	1.650E+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): Cs-137	1.110E-01	0.000E+00	---	S1(7)
R012	Initial principal radionuclide (pCi/g): Pu-239	1.890E-01	0.000E+00	---	S1(14)
R012	Concentration in groundwater (pCi/L): Cs-137	not used	0.000E+00	---	W1(7)
R012	Concentration in groundwater (pCi/L): Pu-239	not used	0.000E+00	---	W1(14)
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)	1.700E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	0.000E+00	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	3.600E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	2.000E-01	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	1.400E+02	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	1.400E+00	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	2.600E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	7.800E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	1.160E+00	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	4.700E-01	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	4.100E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	1.370E+07	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	1.000E-03	1.000E-03	Romberg failures occurred	EPS
R014	Density of saturated zone (g/cm**3)	1.700E+00	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	3.600E-01	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	2.500E-01	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	2.000E-01	2.000E-01	---	FCSZ
R014	Saturated zone hydraulic conductivity (m/yr)	1.400E+03	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	3.000E-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)	5.000E+00	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	MB	ND	---	MODEL

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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	Well pumping rate (m**3/yr)	5.720E+03	2.500E+02	---	UW
R015	Number of unsaturated zone strata	1	1	---	NS
R015	Unsat. zone 1, thickness (m)	2.000E+00	4.000E+00	---	H(1)
R015	Unsat. zone 1, soil density (g/cm**3)	1.700E+00	1.500E+00	---	DENSUZ(1)
R015	Unsat. zone 1, total porosity	3.600E-01	4.000E-01	---	TPUZ(1)
R015	Unsat. zone 1, effective porosity	2.500E-01	2.000E-01	---	EPUZ(1)
R015	Unsat. zone 1, field capacity	2.000E-01	2.000E-01	---	FCUZ(1)
R015	Unsat. zone 1, soil-specific b parameter	1.400E+00	5.300E+00	---	BUZ(1)
R015	Unsat. zone 1, hydraulic conductivity (m/yr)	1.400E+02	1.000E+01	---	HCUZ(1)
R016	Distribution coefficients for Cs-137				
R016	Contaminated zone (cm**3/g)	2.800E+02	4.600E+03	---	DCNUCC(7)
R016	Unsaturated zone 1 (cm**3/g)	2.800E+02	4.600E+03	---	DCNUCU(7,1)
R016	Saturated zone (cm**3/g)	2.800E+02	4.600E+03	---	DCNUCS(7)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	5.333E-04	ALEACH(7)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(7)
R016	Distribution coefficients for Pu-239				
R016	Contaminated zone (cm**3/g)	2.600E+03	2.000E+03	---	DCNUCC(14)
R016	Unsaturated zone 1 (cm**3/g)	2.600E+03	2.000E+03	---	DCNUCU(14,1)
R016	Saturated zone (cm**3/g)	2.600E+03	2.000E+03	---	DCNUCS(14)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	5.746E-05	ALEACH(14)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(14)
R016	Distribution coefficients for daughter Ac-227				
R016	Contaminated zone (cm**3/g)	1.740E+03	2.000E+01	---	DCNUCC(1)
R016	Unsaturated zone 1 (cm**3/g)	1.740E+03	2.000E+01	---	DCNUCU(1,1)
R016	Saturated zone (cm**3/g)	1.740E+03	2.000E+01	---	DCNUCS(1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	8.585E-05	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)	2.040E+03	5.000E+01	---	DCNUCC(8)
R016	Unsaturated zone 1 (cm**3/g)	2.040E+03	5.000E+01	---	DCNUCU(8,1)
R016	Saturated zone (cm**3/g)	2.040E+03	5.000E+01	---	DCNUCS(8)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	7.323E-05	ALEACH(8)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(8)
R016	Distribution coefficients for daughter U-235				
R016	Contaminated zone (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCC(26)
R016	Unsaturated zone 1 (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCU(26,1)
R016	Saturated zone (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCS(26)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	4.254E-03	ALEACH(26)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(26)
R017	Inhalation rate (m**3/yr)	8.400E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	1.480E-05	1.000E-04	---	MLINH
R017	Exposure duration	1.000E+00	3.000E+01	---	ED
R017	Shielding factor, inhalation	1.000E+00	4.000E-01	---	SHF3

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R017	Shielding factor, external gamma	2.730E-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)	2.500E-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)	9.000E+00	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	0.000E+00	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	1.830E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	7.300E+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	1.000E+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)	2.730E+01	6.800E+01	---	LFI5

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R019	Livestock fodder intake for milk (kg/day)	6.420E+01	5.500E+01	---	LFI6
R019	Livestock water intake for meat (L/day)	5.000E+01	5.000E+01	---	LWI5
R019	Livestock water intake for milk (L/day)	1.600E+02	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)	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)	1.700E-01	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	2.500E-01	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	8.000E-02	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	6.700E-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	1.800E+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
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)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
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	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	LYMAX
TITL	Maximum number of integration points for risk	257	---	---	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	suppressed

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Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	1000.00 square meters	Cs-137	1.110E-01
Thickness:	1.00 meters	Pu-239	1.890E-01
Cover Depth:	0.00 meters		

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):	3.242E-01	3.191E-01	3.092E-01	2.780E-01	2.125E-01	1.241E-01	1.015E-01	9.541E-02
M(t):	1.297E-02	1.276E-02	1.237E-02	1.112E-02	8.500E-03	4.963E-03	4.061E-03	3.816E-03

Maximum TDOSE(t): 3.242E-01 mrem/yr at t = 0.000E+00 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 = 0.000E+00 years
Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	1.425E-01	0.4396	5.044E-08	0.0000	0.000E+00	0.0000	2.918E-02	0.0900	1.703E-02	0.0525	3.138E-02	0.0968	9.135E-05	0.0003
Pu-239	2.195E-05	0.0001	1.169E-03	0.0036	0.000E+00	0.0000	8.928E-02	0.2754	2.295E-03	0.0071	8.811E-05	0.0003	1.114E-02	0.0344
Total	1.426E-01	0.4397	1.169E-03	0.0036	0.000E+00	0.0000	1.185E-01	0.3654	1.933E-02	0.0596	3.147E-02	0.0971	1.123E-02	0.0346

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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
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	2.202E-01	0.6792
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	1.040E-01	0.3208
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	3.242E-01	1.0000

*Sum of all water independent and dependent pathways.

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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.
Cs-137	1.392E-01	0.4363	4.927E-08	0.0000	0.000E+00	0.0000	2.851E-02	0.0893	1.664E-02	0.0521	3.065E-02	0.0961	8.922E-05	0.0003
Pu-239	2.195E-05	0.0001	1.168E-03	0.0037	0.000E+00	0.0000	8.927E-02	0.2798	2.295E-03	0.0072	8.810E-05	0.0003	1.114E-02	0.0349
Total	1.392E-01	0.4364	1.169E-03	0.0037	0.000E+00	0.0000	1.178E-01	0.3691	1.893E-02	0.0593	3.074E-02	0.0963	1.123E-02	0.0352

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.
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	2.151E-01	0.6741
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	1.040E-01	0.3259
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	3.191E-01	1.0000

*Sum of all water independent and dependent pathways.

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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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	1.328E-01	0.4296	4.700E-08	0.0000	0.000E+00	0.0000	2.720E-02	0.0880	1.587E-02	0.0513	2.924E-02	0.0946	8.513E-05	0.0003
Pu-239	2.194E-05	0.0001	1.168E-03	0.0038	0.000E+00	0.0000	8.926E-02	0.2887	2.294E-03	0.0074	8.808E-05	0.0003	1.114E-02	0.0360
Total	1.328E-01	0.4297	1.168E-03	0.0038	0.000E+00	0.0000	1.165E-01	0.3766	1.817E-02	0.0588	2.933E-02	0.0949	1.122E-02	0.0363

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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
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	2.052E-01	0.6637
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	1.040E-01	0.3363
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	3.092E-01	1.0000

*Sum of all water independent and dependent pathways.

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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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	1.127E-01	0.4053	3.987E-08	0.0000	0.000E+00	0.0000	2.307E-02	0.0830	1.347E-02	0.0484	2.481E-02	0.0892	7.221E-05	0.0003
Pu-239	2.193E-05	0.0001	1.168E-03	0.0042	0.000E+00	0.0000	8.920E-02	0.3209	2.293E-03	0.0082	8.803E-05	0.0003	1.113E-02	0.0400
Total	1.127E-01	0.4054	1.168E-03	0.0042	0.000E+00	0.0000	1.123E-01	0.4039	1.576E-02	0.0567	2.489E-02	0.0896	1.120E-02	0.0403

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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
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	1.741E-01	0.6262
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	1.039E-01	0.3738
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	2.780E-01	1.0000

*Sum of all water independent and dependent pathways.

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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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	7.040E-02	0.3313	2.492E-08	0.0000	0.000E+00	0.0000	1.442E-02	0.0678	8.414E-03	0.0396	1.550E-02	0.0729	4.512E-05	0.0002
Pu-239	2.189E-05	0.0001	1.166E-03	0.0055	0.000E+00	0.0000	8.905E-02	0.4190	2.289E-03	0.0108	8.788E-05	0.0004	1.111E-02	0.0523
Total	7.043E-02	0.3314	1.166E-03	0.0055	0.000E+00	0.0000	1.035E-01	0.4869	1.070E-02	0.0504	1.559E-02	0.0734	1.116E-02	0.0525

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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
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	1.088E-01	0.5119
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	1.037E-01	0.4881
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	2.125E-01	1.0000

*Sum of all water independent and dependent pathways.

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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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	1.358E-02	0.1094	4.805E-09	0.0000	0.000E+00	0.0000	2.780E-03	0.0224	1.623E-03	0.0131	2.990E-03	0.0241	8.703E-06	0.0001
Pu-239	2.176E-05	0.0002	1.159E-03	0.0093	0.000E+00	0.0000	8.851E-02	0.7133	2.275E-03	0.0183	8.735E-05	0.0007	1.105E-02	0.0890
Total	1.360E-02	0.1096	1.159E-03	0.0093	0.000E+00	0.0000	9.129E-02	0.7357	3.898E-03	0.0314	3.077E-03	0.0248	1.105E-02	0.0891

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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
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	2.098E-02	0.1691
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	1.031E-01	0.8309
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	1.241E-01	1.0000

*Sum of all water independent and dependent pathways.

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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+02 years
Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	1.233E-04	0.0012	4.362E-11	0.0000	0.000E+00	0.0000	2.524E-05	0.0002	1.473E-05	0.0001	2.714E-05	0.0003	7.899E-08	0.0000
Pu-239	2.140E-05	0.0002	1.139E-03	0.0112	0.000E+00	0.0000	8.700E-02	0.8569	2.236E-03	0.0220	8.586E-05	0.0008	1.086E-02	0.1069
Total	1.446E-04	0.0014	1.139E-03	0.0112	0.000E+00	0.0000	8.703E-02	0.8571	2.251E-03	0.0222	1.130E-04	0.0011	1.086E-02	0.1069

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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
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	1.904E-04	0.0019
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	1.013E-01	0.9981
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	1.015E-01	1.0000

*Sum of all water independent and dependent pathways.

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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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	8.781E-12	0.0000	3.107E-18	0.0000	0.000E+00	0.0000	1.798E-12	0.0000	1.049E-12	0.0000	1.933E-12	0.0000	5.628E-15	0.0000
Pu-239	2.015E-05	0.0002	1.072E-03	0.0112	0.000E+00	0.0000	8.191E-02	0.8585	2.105E-03	0.0221	8.083E-05	0.0008	1.022E-02	0.1071
Total	2.015E-05	0.0002	1.072E-03	0.0112	0.000E+00	0.0000	8.191E-02	0.8585	2.105E-03	0.0221	8.083E-05	0.0008	1.022E-02	0.1071

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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
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	1.357E-11	0.0000
Pu-239	1.035E-08	0.0000	2.108E-12	0.0000	0.000E+00	0.0000	3.999E-09	0.0000	5.879E-11	0.0000	8.781E-10	0.0000	9.541E-02	1.0000
Total	1.035E-08	0.0000	2.108E-12	0.0000	0.000E+00	0.0000	3.999E-09	0.0000	5.879E-11	0.0000	8.781E-10	0.0000	9.541E-02	1.0000

*Sum of all water independent and dependent pathways.

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

0 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
Cs-137+D	Cs-137+D	1.000E+00	1.984E+00	1.938E+00	1.849E+00	1.568E+00	9.800E-01	1.890E-01	1.716E-03	1.222E-10
0Pu-239	Pu-239	5.901E-04	3.247E-04	3.247E-04	3.246E-04	3.244E-04	3.238E-04	3.219E-04	3.164E-04	2.979E-04
Pu-239	U-235+D	5.901E-04	1.210E-13	3.648E-13	8.494E-13	2.513E-12	6.995E-12	1.994E-11	4.090E-11	1.000E-10
Pu-239	Pa-231	5.901E-04	3.162E-17	2.337E-16	1.262E-15	1.131E-14	9.304E-14	9.162E-13	6.321E-12	3.545E-11
Pu-239	Ac-227+D	5.901E-04	1.374E-19	1.766E-18	1.849E-17	4.356E-16	8.828E-15	1.899E-13	1.905E-12	1.260E-11
Pu-239	ΣDSR(j)		3.247E-04	3.247E-04	3.246E-04	3.244E-04	3.238E-04	3.219E-04	3.164E-04	2.979E-04
0Pu-239	Pu-239	1.633E-06	8.986E-07	8.985E-07	8.984E-07	8.978E-07	8.963E-07	8.909E-07	8.757E-07	8.244E-07
Pu-239	U-235+D	1.633E-06	3.349E-16	1.010E-15	2.351E-15	6.954E-15	1.936E-14	5.518E-14	1.132E-13	2.768E-13
Pu-239	Pa-231	1.633E-06	8.751E-20	6.469E-19	3.492E-18	3.131E-17	2.575E-16	2.536E-15	1.750E-14	9.810E-14
Pu-239	Ac-227+D1	1.633E-06	2.468E-22	3.883E-21	4.575E-20	1.158E-18	2.406E-17	5.224E-16	5.252E-15	3.476E-14
Pu-239	ΣDSR(j)		8.986E-07	8.985E-07	8.984E-07	8.978E-07	8.963E-07	8.909E-07	8.757E-07	8.244E-07
0Pu-239	Pu-239	8.257E-06	4.543E-06	4.543E-06	4.542E-06	4.539E-06	4.531E-06	4.504E-06	4.427E-06	4.168E-06
Pu-239	U-235+D	8.257E-06	1.693E-15	5.104E-15	1.188E-14	3.516E-14	9.788E-14	2.790E-13	5.722E-13	1.400E-12
Pu-239	Pa-231	8.257E-06	4.424E-19	3.270E-18	1.765E-17	1.583E-16	1.302E-15	1.282E-14	8.845E-14	4.960E-13
Pu-239	Ac-227+D2	8.257E-06	1.215E-21	1.913E-20	2.256E-19	5.711E-18	1.187E-16	2.577E-15	2.591E-14	1.716E-13
Pu-239	ΣDSR(j)		4.543E-06	4.543E-06	4.542E-06	4.539E-06	4.531E-06	4.504E-06	4.427E-06	4.168E-06
0Pu-239	Pu-239	2.285E-08	1.257E-08	1.257E-08	1.257E-08	1.256E-08	1.254E-08	1.247E-08	1.225E-08	1.154E-08
Pu-239	U-235+D	2.285E-08	4.686E-18	1.413E-17	3.289E-17	9.730E-17	2.709E-16	7.720E-16	1.584E-15	3.874E-15
Pu-239	Pa-231	2.285E-08	1.224E-21	9.051E-21	4.886E-20	4.381E-19	3.603E-18	3.548E-17	2.448E-16	1.373E-15
Pu-239	Ac-227+D3	2.285E-08	3.368E-24	5.305E-23	6.254E-22	1.584E-20	3.291E-19	7.145E-18	7.184E-17	4.758E-16
Pu-239	ΣDSR(j)		1.257E-08	1.257E-08	1.257E-08	1.256E-08	1.254E-08	1.247E-08	1.225E-08	1.154E-08
0Pu-239	Pu-239	4.954E-10	2.726E-10	2.726E-10	2.725E-10	2.724E-10	2.719E-10	2.703E-10	2.656E-10	2.501E-10
Pu-239	U-235+D	4.954E-10	1.016E-19	3.063E-19	7.131E-19	2.110E-18	5.873E-18	1.674E-17	3.434E-17	8.398E-17
Pu-239	Pa-231	4.954E-10	2.655E-23	1.962E-22	1.059E-21	9.498E-21	7.811E-20	7.692E-19	5.307E-18	2.976E-17
Pu-239	Ac-227+D4	4.954E-10	6.526E-26	1.032E-24	1.218E-23	3.088E-22	6.420E-21	1.394E-19	1.402E-18	9.305E-18
Pu-239	ΣDSR(j)		2.726E-10	2.726E-10	2.725E-10	2.724E-10	2.719E-10	2.703E-10	2.656E-10	2.501E-10
0Pu-239	Pu-239	1.371E-12	7.545E-13	7.544E-13	7.543E-13	7.538E-13	7.525E-13	7.480E-13	7.352E-13	6.922E-13
Pu-239	U-235+D	1.371E-12	2.812E-22	8.476E-22	1.974E-21	5.839E-21	1.626E-20	4.633E-20	9.503E-20	2.324E-19
Pu-239	Pa-231	1.371E-12	7.347E-26	5.431E-25	2.932E-24	2.629E-23	2.162E-22	2.129E-21	1.469E-20	8.237E-20
Pu-239	Ac-227+D5	1.371E-12	1.810E-28	2.861E-27	3.379E-26	8.564E-25	1.780E-23	3.866E-22	3.887E-21	2.580E-20
Pu-239	ΣDSR(j)		7.545E-13	7.544E-13	7.543E-13	7.538E-13	7.525E-13	7.480E-13	7.352E-13	6.922E-13
0Pu-239+D	Pu-239+D	9.829E-01	5.408E-01	5.408E-01	5.407E-01	5.404E-01	5.394E-01	5.362E-01	5.270E-01	4.962E-01
Pu-239+D	U-235+D	9.829E-01	2.016E-10	6.076E-10	1.415E-09	4.185E-09	1.165E-08	3.321E-08	6.812E-08	1.666E-07
Pu-239+D	Pa-231	9.829E-01	5.267E-14	3.893E-13	2.102E-12	1.884E-11	1.550E-10	1.526E-09	1.053E-08	5.904E-08
Pu-239+D	Ac-227+D	9.829E-01	2.289E-16	2.942E-15	3.081E-14	7.256E-13	1.470E-11	3.163E-10	3.172E-09	2.098E-08
Pu-239+D	ΣDSR(j)		5.408E-01	5.408E-01	5.407E-01	5.404E-01	5.394E-01	5.362E-01	5.270E-01	4.962E-01

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

0 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	2.720E-03	1.497E-03	1.497E-03	1.496E-03	1.496E-03	1.493E-03	1.484E-03	1.459E-03	1.373E-03
Pu-239+D	U-235+D	2.720E-03	5.578E-13	1.682E-12	3.916E-12	1.158E-11	3.225E-11	9.191E-11	1.885E-10	4.611E-10
Pu-239+D	Pa-231	2.720E-03	1.458E-16	1.077E-15	5.816E-15	5.215E-14	4.289E-13	4.223E-12	2.914E-11	1.634E-10
Pu-239+D	Ac-227+D1	2.720E-03	4.111E-19	6.468E-18	7.620E-17	1.929E-15	4.008E-14	8.702E-13	8.749E-12	5.790E-11
Pu-239+D	ΣDSR(j)		1.497E-03	1.497E-03	1.496E-03	1.496E-03	1.493E-03	1.484E-03	1.459E-03	1.373E-03
0Pu-239+D	Pu-239+D	1.375E-02	7.567E-03	7.567E-03	7.565E-03	7.561E-03	7.548E-03	7.502E-03	7.374E-03	6.942E-03
Pu-239+D	U-235+D	1.375E-02	2.820E-12	8.501E-12	1.980E-11	5.856E-11	1.630E-10	4.646E-10	9.532E-10	2.331E-09
Pu-239+D	Pa-231	1.375E-02	7.369E-16	5.447E-15	2.941E-14	2.637E-13	2.168E-12	2.135E-11	1.473E-10	8.261E-10
Pu-239+D	Ac-227+D2	1.375E-02	2.023E-18	3.187E-17	3.757E-16	9.513E-15	1.977E-13	4.293E-12	4.316E-11	2.859E-10
Pu-239+D	ΣDSR(j)		7.567E-03	7.567E-03	7.565E-03	7.561E-03	7.548E-03	7.502E-03	7.374E-03	6.942E-03
0Pu-239+D	Pu-239+D	3.806E-05	2.094E-05	2.094E-05	2.094E-05	2.093E-05	2.089E-05	2.076E-05	2.041E-05	1.921E-05
Pu-239+D	U-235+D	3.806E-05	7.805E-15	2.353E-14	5.479E-14	1.621E-13	4.512E-13	1.286E-12	2.638E-12	6.452E-12
Pu-239+D	Pa-231	3.806E-05	2.039E-18	1.508E-17	8.138E-17	7.298E-16	6.001E-15	5.910E-14	4.078E-13	2.286E-12
Pu-239+D	Ac-227+D3	3.806E-05	5.610E-21	8.836E-20	1.042E-18	2.638E-17	5.482E-16	1.190E-14	1.197E-13	7.926E-13
Pu-239+D	ΣDSR(j)		2.094E-05	2.094E-05	2.094E-05	2.093E-05	2.089E-05	2.076E-05	2.041E-05	1.921E-05
0Pu-239+D	Pu-239+D	8.252E-07	4.541E-07	4.540E-07	4.539E-07	4.537E-07	4.529E-07	4.502E-07	4.425E-07	4.166E-07
Pu-239+D	U-235+D	8.252E-07	1.692E-16	5.101E-16	1.188E-15	3.514E-15	9.783E-15	2.788E-14	5.719E-14	1.399E-13
Pu-239+D	Pa-231	8.252E-07	4.422E-20	3.269E-19	1.764E-18	1.582E-17	1.301E-16	1.281E-15	8.840E-15	4.957E-14
Pu-239+D	Ac-227+D4	8.252E-07	1.087E-22	1.719E-21	2.029E-20	5.144E-19	1.069E-17	2.322E-16	2.335E-15	1.550E-14
Pu-239+D	ΣDSR(j)		4.541E-07	4.540E-07	4.539E-07	4.537E-07	4.529E-07	4.502E-07	4.425E-07	4.166E-07
0Pu-239+D	Pu-239+D	2.284E-09	1.257E-09	1.257E-09	1.256E-09	1.256E-09	1.253E-09	1.246E-09	1.225E-09	1.153E-09
Pu-239+D	U-235+D	2.284E-09	4.683E-19	1.412E-18	3.287E-18	9.725E-18	2.708E-17	7.716E-17	1.583E-16	3.872E-16
Pu-239+D	Pa-231	2.284E-09	1.224E-22	9.046E-22	4.883E-21	4.379E-20	3.601E-19	3.546E-18	2.447E-17	1.372E-16
Pu-239+D	Ac-227+D5	2.284E-09	3.015E-25	4.766E-24	5.628E-23	1.426E-21	2.966E-20	6.439E-19	6.474E-18	4.298E-17
Pu-239+D	ΣDSR(j)		1.257E-09	1.257E-09	1.256E-09	1.256E-09	1.253E-09	1.246E-09	1.225E-09	1.153E-09

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

Single Radionuclide Soil Guidelines G(i,t) in pCi/g
Basic Radiation Dose Limit = 2.500E+01 mrem/yr

0Nuclide (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
Cs-137	1.260E+01	1.290E+01	1.352E+01	1.594E+01	2.551E+01	1.323E+02	1.457E+04	2.045E+11
Pu-239	4.544E+01	4.544E+01	4.545E+01	4.547E+01	4.555E+01	4.583E+01	4.663E+01	4.953E+01

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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 = 0.000E+00 years

0Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin)	G(i,tmin) (pCi/g)	DSR(i,tmax)	G(i,tmax) (pCi/g)
Cs-137	1.110E-01	0.000E+00	1.984E+00	1.260E+01	1.984E+00	1.260E+01
Pu-239	1.890E-01	0.000E+00	5.502E-01	4.544E+01	5.502E-01	4.544E+01

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Summary : RESRAD Default Parameters
File : C:\RESRAD_FAMILY\RESRAD\7.0\USERFILES\AREA 3.2 PU.RAD

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

0Nuclide (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
Cs-137	Cs-137	1.000E+00	2.202E-01	2.151E-01	2.052E-01	1.741E-01	1.088E-01	2.098E-02	1.904E-04	1.357E-11
0Pu-239	Pu-239	5.901E-04	6.137E-05	6.136E-05	6.135E-05	6.131E-05	6.121E-05	6.084E-05	5.980E-05	5.630E-05
Pu-239	Pu-239	1.633E-06	1.698E-07	1.698E-07	1.698E-07	1.697E-07	1.694E-07	1.684E-07	1.655E-07	1.558E-07
Pu-239	ΣDOSE(j)		6.154E-05	6.153E-05	6.152E-05	6.148E-05	6.138E-05	6.101E-05	5.996E-05	5.645E-05
0U-235	Pu-239	5.901E-04	2.287E-14	6.894E-14	1.605E-13	4.749E-13	1.322E-12	3.768E-12	7.730E-12	1.891E-11
U-235	Pu-239	1.633E-06	6.330E-17	1.908E-16	4.443E-16	1.314E-15	3.659E-15	1.043E-14	2.139E-14	5.232E-14
U-235	Pu-239	8.257E-06	3.200E-16	9.646E-16	2.246E-15	6.645E-15	1.850E-14	5.272E-14	1.082E-13	2.645E-13
U-235	Pu-239	2.285E-08	8.856E-19	2.670E-18	6.217E-18	1.839E-17	5.120E-17	1.459E-16	2.993E-16	7.321E-16
U-235	Pu-239	4.954E-10	1.920E-20	5.788E-20	1.348E-19	3.987E-19	1.110E-18	3.164E-18	6.490E-18	1.587E-17
U-235	Pu-239	1.371E-12	5.314E-23	1.602E-22	3.730E-22	1.104E-21	3.072E-21	8.756E-21	1.796E-20	4.393E-20
U-235	Pu-239	9.829E-01	3.809E-11	1.148E-10	2.674E-10	7.910E-10	2.202E-09	6.276E-09	1.287E-08	3.149E-08
U-235	Pu-239	2.720E-03	1.054E-13	3.178E-13	7.400E-13	2.189E-12	6.095E-12	1.737E-11	3.563E-11	8.715E-11
U-235	Pu-239	1.375E-02	5.330E-13	1.607E-12	3.741E-12	1.107E-11	3.081E-11	8.782E-11	1.802E-10	4.406E-10
U-235	Pu-239	3.806E-05	1.475E-15	4.447E-15	1.035E-14	3.063E-14	8.528E-14	2.430E-13	4.986E-13	1.219E-12
U-235	Pu-239	8.252E-07	3.198E-17	9.641E-17	2.245E-16	6.641E-16	1.849E-15	5.269E-15	1.081E-14	2.644E-14
U-235	Pu-239	2.284E-09	8.852E-20	2.668E-19	6.213E-19	1.838E-18	5.117E-18	1.458E-17	2.992E-17	7.317E-17
U-235	ΣDOSE(j)		3.876E-11	1.168E-10	2.720E-10	8.048E-10	2.241E-09	6.385E-09	1.310E-08	3.204E-08
0Pa-231	Pu-239	5.901E-04	5.976E-18	4.417E-17	2.385E-16	2.138E-15	1.758E-14	1.732E-13	1.195E-12	6.700E-12
Pa-231	Pu-239	1.633E-06	1.654E-20	1.223E-19	6.600E-19	5.918E-18	4.867E-17	4.792E-16	3.307E-15	1.854E-14
Pa-231	Pu-239	8.257E-06	8.362E-20	6.181E-19	3.337E-18	2.992E-17	2.460E-16	2.423E-15	1.672E-14	9.374E-14
Pa-231	Pu-239	2.285E-08	2.314E-22	1.711E-21	9.234E-21	8.280E-20	6.810E-19	6.705E-18	4.627E-17	2.594E-16
Pa-231	Pu-239	4.954E-10	5.017E-24	3.709E-23	2.002E-22	1.795E-21	1.476E-20	1.454E-19	1.003E-18	5.625E-18
Pa-231	Pu-239	1.371E-12	1.389E-26	1.026E-25	5.541E-25	4.969E-24	4.086E-23	4.024E-22	2.776E-21	1.557E-20
Pa-231	Pu-239	9.829E-01	9.954E-15	7.358E-14	3.972E-13	3.562E-12	2.929E-11	2.884E-10	1.990E-09	1.116E-08
Pa-231	Pu-239	2.720E-03	2.755E-17	2.036E-16	1.099E-15	9.857E-15	8.106E-14	7.982E-13	5.508E-12	3.088E-11
Pa-231	Pu-239	1.375E-02	1.393E-16	1.030E-15	5.558E-15	4.983E-14	4.098E-13	4.036E-12	2.785E-11	1.561E-10
Pa-231	Pu-239	3.806E-05	3.855E-19	2.849E-18	1.538E-17	1.379E-16	1.134E-15	1.117E-14	7.707E-14	4.321E-13
Pa-231	Pu-239	8.252E-07	8.357E-21	6.178E-20	3.335E-19	2.990E-18	2.459E-17	2.421E-16	1.671E-15	9.369E-15
Pa-231	Pu-239	2.284E-09	2.313E-23	1.710E-22	9.229E-22	8.276E-21	6.806E-20	6.702E-19	4.624E-18	2.593E-17
Pa-231	ΣDOSE(j)		1.013E-14	7.486E-14	4.041E-13	3.624E-12	2.980E-11	2.934E-10	2.025E-09	1.135E-08
0Ac-227	Pu-239	5.901E-04	2.597E-20	3.339E-19	3.496E-18	8.234E-17	1.669E-15	3.589E-14	3.600E-13	2.381E-12
Ac-227	Pu-239	9.829E-01	4.325E-17	5.561E-16	5.822E-15	1.371E-13	2.779E-12	5.978E-11	5.996E-10	3.965E-09
Ac-227	ΣDOSE(j)		4.328E-17	5.564E-16	5.826E-15	1.372E-13	2.781E-12	5.982E-11	5.999E-10	3.968E-09
0Ac-227	Pu-239	1.633E-06	4.665E-23	7.339E-22	8.646E-21	2.189E-19	4.548E-18	9.874E-17	9.927E-16	6.570E-15
Ac-227	Pu-239	8.257E-06	2.296E-22	3.616E-21	4.263E-20	1.079E-18	2.244E-17	4.871E-16	4.897E-15	3.244E-14
Ac-227	Pu-239	2.720E-03	7.771E-20	1.222E-18	1.440E-17	3.645E-16	7.576E-15	1.645E-13	1.654E-12	1.094E-11
Ac-227	ΣDOSE(j)		7.798E-20	1.227E-18	1.445E-17	3.658E-16	7.603E-15	1.651E-13	1.659E-12	1.098E-11
0Pu-239	Pu-239	8.257E-06	8.586E-07	8.586E-07	8.584E-07	8.579E-07	8.564E-07	8.513E-07	8.367E-07	7.877E-07
Pu-239	Pu-239	2.285E-08	2.376E-09	2.376E-09	2.376E-09	2.374E-09	2.370E-09	2.356E-09	2.316E-09	2.180E-09
Pu-239	ΣDOSE(j)		8.610E-07	8.609E-07	8.608E-07	8.603E-07	8.588E-07	8.536E-07	8.390E-07	7.899E-07
0Ac-227	Pu-239	2.285E-08	6.366E-25	1.003E-23	1.182E-22	2.993E-21	6.220E-20	1.350E-18	1.358E-17	8.993E-17
Ac-227	Pu-239	4.954E-10	1.233E-26	1.950E-25	2.303E-24	5.836E-23	1.213E-21	2.635E-20	2.649E-19	1.759E-18

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Summary : RESRAD Default Parameters
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Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

0Nuclide (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	3.806E-05	1.060E-21	1.670E-20	1.969E-19	4.985E-18	1.036E-16	2.249E-15	2.262E-14	1.498E-13
Ac-227	ΣDOSE(j)		1.061E-21	1.671E-20	1.970E-19	4.988E-18	1.037E-16	2.251E-15	2.263E-14	1.499E-13
0Pu-239	Pu-239	4.954E-10	5.152E-11	5.152E-11	5.151E-11	5.148E-11	5.139E-11	5.108E-11	5.021E-11	4.727E-11
Pu-239	Pu-239	1.371E-12	1.426E-13	1.426E-13	1.426E-13	1.425E-13	1.422E-13	1.414E-13	1.390E-13	1.308E-13
Pu-239	ΣDOSE(j)		5.166E-11	5.166E-11	5.165E-11	5.162E-11	5.153E-11	5.122E-11	5.035E-11	4.740E-11
0Ac-227	Pu-239	1.371E-12	3.415E-29	5.408E-28	6.386E-27	1.619E-25	3.365E-24	7.306E-23	7.346E-22	4.877E-21
Ac-227	Pu-239	2.284E-09	5.698E-26	9.008E-25	1.064E-23	2.696E-22	5.605E-21	1.217E-19	1.224E-18	8.123E-18
Ac-227	ΣDOSE(j)		5.702E-26	9.014E-25	1.064E-23	2.698E-22	5.608E-21	1.218E-19	1.224E-18	8.128E-18
0Pu-239	Pu-239	9.829E-01	1.022E-01	1.022E-01	1.022E-01	1.021E-01	1.020E-01	1.013E-01	9.961E-02	9.377E-02
Pu-239	Pu-239	2.720E-03	2.829E-04	2.829E-04	2.828E-04	2.827E-04	2.822E-04	2.805E-04	2.757E-04	2.595E-04
Pu-239	ΣDOSE(j)		1.025E-01	1.025E-01	1.025E-01	1.024E-01	1.022E-01	1.016E-01	9.988E-02	9.403E-02
0Pu-239	Pu-239	1.375E-02	1.430E-03	1.430E-03	1.430E-03	1.429E-03	1.427E-03	1.418E-03	1.394E-03	1.312E-03
Pu-239	Pu-239	3.806E-05	3.958E-06	3.958E-06	3.957E-06	3.955E-06	3.948E-06	3.924E-06	3.857E-06	3.631E-06
Pu-239	ΣDOSE(j)		1.434E-03	1.434E-03	1.434E-03	1.433E-03	1.430E-03	1.422E-03	1.398E-03	1.316E-03
0Ac-227	Pu-239	1.375E-02	3.824E-19	6.023E-18	7.101E-17	1.798E-15	3.737E-14	8.113E-13	8.157E-12	5.403E-11
0Pu-239	Pu-239	8.252E-07	8.582E-08	8.581E-08	8.580E-08	8.574E-08	8.560E-08	8.508E-08	8.363E-08	7.873E-08
Pu-239	Pu-239	2.284E-09	2.375E-10	2.375E-10	2.375E-10	2.373E-10	2.369E-10	2.355E-10	2.315E-10	2.179E-10
Pu-239	ΣDOSE(j)		8.606E-08	8.605E-08	8.603E-08	8.598E-08	8.583E-08	8.532E-08	8.386E-08	7.895E-08
0Ac-227	Pu-239	8.252E-07	2.054E-23	3.248E-22	3.836E-21	9.722E-20	2.021E-18	4.389E-17	4.412E-16	2.929E-15

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

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Summary : RESRAD Default Parameters
File : C:\RESRAD_FAMILY\RESRAD\7.0\USERFILES\AREA 3.2 PU.RAD

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

0Nuclide (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
Cs-137	Cs-137	1.000E+00	1.110E-01	1.084E-01	1.034E-01	8.774E-02	5.483E-02	1.058E-02	9.599E-05	6.838E-12
0Pu-239	Pu-239	5.901E-04	1.115E-04	1.115E-04	1.115E-04	1.114E-04	1.112E-04	1.106E-04	1.087E-04	1.023E-04
Pu-239	Pu-239	1.633E-06	3.087E-07	3.086E-07	3.086E-07	3.084E-07	3.079E-07	3.060E-07	3.008E-07	2.832E-07
Pu-239	ΣS(j):		1.118E-04	1.118E-04	1.118E-04	1.117E-04	1.115E-04	1.109E-04	1.090E-04	1.026E-04
0U-235	Pu-239	5.901E-04	0.000E+00	1.096E-13	3.273E-13	1.075E-12	3.089E-12	8.903E-12	1.832E-11	2.380E-11
U-235	Pu-239	1.633E-06	0.000E+00	3.032E-16	9.058E-16	2.974E-15	8.548E-15	2.464E-14	5.070E-14	6.586E-14
U-235	Pu-239	8.257E-06	0.000E+00	1.533E-15	4.579E-15	1.504E-14	4.322E-14	1.246E-13	2.563E-13	3.330E-13
U-235	Pu-239	2.285E-08	0.000E+00	4.243E-18	1.267E-17	4.161E-17	1.196E-16	3.448E-16	7.095E-16	9.215E-16
U-235	Pu-239	4.954E-10	0.000E+00	9.199E-20	2.748E-19	9.022E-19	2.593E-18	7.475E-18	1.538E-17	1.998E-17
U-235	Pu-239	1.371E-12	0.000E+00	2.546E-22	7.605E-22	2.497E-21	7.177E-21	2.069E-20	4.257E-20	5.529E-20
U-235	Pu-239	9.829E-01	0.000E+00	1.825E-10	5.451E-10	1.790E-09	5.145E-09	1.483E-08	3.052E-08	3.964E-08
U-235	Pu-239	2.720E-03	0.000E+00	5.051E-13	1.509E-12	4.954E-12	1.424E-11	4.104E-11	8.446E-11	1.097E-10
U-235	Pu-239	1.375E-02	0.000E+00	2.554E-12	7.628E-12	2.504E-11	7.198E-11	2.075E-10	4.270E-10	5.546E-10
U-235	Pu-239	3.806E-05	0.000E+00	7.068E-15	2.111E-14	6.931E-14	1.992E-13	5.743E-13	1.182E-12	1.535E-12
U-235	Pu-239	8.252E-07	0.000E+00	1.532E-16	4.577E-16	1.503E-15	4.319E-15	1.245E-14	2.562E-14	3.328E-14
U-235	Pu-239	2.284E-09	0.000E+00	4.241E-19	1.267E-18	4.159E-18	1.195E-17	3.446E-17	7.091E-17	9.210E-17
U-235	ΣS(j):		0.000E+00	1.857E-10	5.546E-10	1.821E-09	5.234E-09	1.509E-08	3.105E-08	4.033E-08
0Pa-231	Pu-239	5.901E-04	0.000E+00	1.160E-18	1.041E-17	1.145E-16	1.001E-15	1.007E-14	6.989E-14	3.893E-13
Pa-231	Pu-239	1.633E-06	0.000E+00	3.210E-21	2.881E-20	3.168E-19	2.769E-18	2.786E-17	1.934E-16	1.077E-15
Pa-231	Pu-239	8.257E-06	0.000E+00	1.623E-20	1.456E-19	1.602E-18	1.400E-17	1.409E-16	9.780E-16	5.447E-15
Pa-231	Pu-239	2.285E-08	0.000E+00	4.492E-23	4.031E-22	4.433E-21	3.875E-20	3.899E-19	2.707E-18	1.507E-17
Pa-231	Pu-239	4.954E-10	0.000E+00	9.739E-25	8.739E-24	9.611E-23	8.401E-22	8.453E-21	5.868E-20	3.268E-19
Pa-231	Pu-239	1.371E-12	0.000E+00	2.695E-27	2.419E-26	2.660E-25	2.325E-24	2.339E-23	1.624E-22	9.046E-22
Pa-231	Pu-239	9.829E-01	0.000E+00	1.932E-15	1.734E-14	1.907E-13	1.667E-12	1.677E-11	1.164E-10	6.484E-10
Pa-231	Pu-239	2.720E-03	0.000E+00	5.347E-18	4.798E-17	5.277E-16	4.613E-15	4.641E-14	3.222E-13	1.795E-12
Pa-231	Pu-239	1.375E-02	0.000E+00	2.703E-17	2.426E-16	2.668E-15	2.332E-14	2.346E-13	1.629E-12	9.073E-12
Pa-231	Pu-239	3.806E-05	0.000E+00	7.482E-20	6.714E-19	7.384E-18	6.454E-17	6.494E-16	4.508E-15	2.511E-14
Pa-231	Pu-239	8.252E-07	0.000E+00	1.622E-21	1.456E-20	1.601E-19	1.399E-18	1.408E-17	9.775E-17	5.444E-16
Pa-231	Pu-239	2.284E-09	0.000E+00	4.490E-24	4.029E-23	4.430E-22	3.873E-21	3.897E-20	2.705E-19	1.507E-18
Pa-231	ΣS(j):		0.000E+00	1.966E-15	1.764E-14	1.940E-13	1.696E-12	1.706E-11	1.184E-10	6.597E-10
0Ac-227	Pu-239	5.901E-04	0.000E+00	1.222E-20	3.240E-19	1.128E-17	2.573E-16	5.768E-15	5.847E-14	3.736E-13
Ac-227	Pu-239	9.829E-01	0.000E+00	2.035E-17	5.396E-16	1.878E-14	4.285E-13	9.608E-12	9.739E-11	6.223E-10
Ac-227	ΣS(j):		0.000E+00	2.036E-17	5.399E-16	1.879E-14	4.288E-13	9.613E-12	9.745E-11	6.227E-10
0Ac-227	Pu-239	1.633E-06	0.000E+00	3.381E-23	8.966E-22	3.121E-20	7.120E-19	1.596E-17	1.618E-16	1.034E-15
Ac-227	Pu-239	8.257E-06	0.000E+00	1.709E-22	4.533E-21	1.578E-19	3.600E-18	8.071E-17	8.181E-16	5.228E-15
Ac-227	Pu-239	2.720E-03	0.000E+00	5.632E-20	1.493E-18	5.198E-17	1.186E-15	2.659E-14	2.695E-13	1.722E-12
Ac-227	ΣS(j):		0.000E+00	5.652E-20	1.499E-18	5.217E-17	1.190E-15	2.669E-14	2.705E-13	1.729E-12
0Pu-239	Pu-239	8.257E-06	1.561E-06	1.560E-06	1.560E-06	1.559E-06	1.556E-06	1.547E-06	1.521E-06	1.432E-06
Pu-239	Pu-239	2.285E-08	4.319E-09	4.319E-09	4.318E-09	4.315E-09	4.308E-09	4.282E-09	4.209E-09	3.962E-09
Pu-239	ΣS(j):		1.565E-06	1.565E-06	1.564E-06	1.563E-06	1.561E-06	1.551E-06	1.525E-06	1.436E-06
0Ac-227	Pu-239	2.285E-08	0.000E+00	4.731E-25	1.255E-23	4.367E-22	9.963E-21	2.234E-19	2.264E-18	1.447E-17
Ac-227	Pu-239	4.954E-10	0.000E+00	1.026E-26	2.720E-25	9.467E-24	2.160E-22	4.843E-21	4.909E-20	3.137E-19

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Summary : RESRAD Default Parameters
File : C:\RESRAD_FAMILY\RESRAD\7.0\USERFILES\AREA 3.2 PU.RAD

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

0Nuclide (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	3.806E-05	0.000E+00	7.880E-22	2.090E-20	7.274E-19	1.660E-17	3.721E-16	3.772E-15	2.410E-14
Ac-227	ΣS(j):		0.000E+00	7.885E-22	2.091E-20	7.278E-19	1.661E-17	3.723E-16	3.774E-15	2.411E-14
0Pu-239	Pu-239	4.954E-10	9.364E-11	9.363E-11	9.361E-11	9.356E-11	9.339E-11	9.283E-11	9.125E-11	8.590E-11
Pu-239	Pu-239	1.371E-12	2.592E-13	2.591E-13	2.591E-13	2.589E-13	2.585E-13	2.569E-13	2.525E-13	2.377E-13
Pu-239	ΣS(j):		9.390E-11	9.389E-11	9.387E-11	9.381E-11	9.365E-11	9.309E-11	9.150E-11	8.614E-11
0Ac-227	Pu-239	1.371E-12	0.000E+00	2.839E-29	7.528E-28	2.620E-26	5.978E-25	1.340E-23	1.359E-22	8.681E-22
Ac-227	Pu-239	2.284E-09	0.000E+00	4.728E-26	1.254E-24	4.364E-23	9.958E-22	2.232E-20	2.263E-19	1.446E-18
Ac-227	ΣS(j):		0.000E+00	4.731E-26	1.255E-24	4.367E-23	9.964E-22	2.234E-20	2.264E-19	1.447E-18
0Pu-239	Pu-239	9.829E-01	1.858E-01	1.857E-01	1.857E-01	1.856E-01	1.853E-01	1.842E-01	1.810E-01	1.704E-01
Pu-239	Pu-239	2.720E-03	5.141E-04	5.141E-04	5.140E-04	5.137E-04	5.128E-04	5.097E-04	5.010E-04	4.717E-04
Pu-239	ΣS(j):		1.863E-01	1.863E-01	1.862E-01	1.861E-01	1.858E-01	1.847E-01	1.815E-01	1.709E-01
0Pu-239	Pu-239	1.375E-02	2.599E-03	2.599E-03	2.599E-03	2.597E-03	2.593E-03	2.577E-03	2.533E-03	2.385E-03
Pu-239	Pu-239	3.806E-05	7.194E-06	7.193E-06	7.192E-06	7.188E-06	7.175E-06	7.132E-06	7.010E-06	6.600E-06
Pu-239	ΣS(j):		2.606E-03	2.606E-03	2.606E-03	2.604E-03	2.600E-03	2.584E-03	2.540E-03	2.391E-03
0Ac-227	Pu-239	1.375E-02	0.000E+00	2.847E-19	7.550E-18	2.628E-16	5.996E-15	1.344E-13	1.363E-12	8.707E-12
0Pu-239	Pu-239	8.252E-07	1.560E-07	1.560E-07	1.559E-07	1.558E-07	1.556E-07	1.546E-07	1.520E-07	1.431E-07
Pu-239	Pu-239	2.284E-09	4.317E-10	4.316E-10	4.315E-10	4.313E-10	4.305E-10	4.280E-10	4.206E-10	3.960E-10
Pu-239	ΣS(j):		1.564E-07	1.564E-07	1.564E-07	1.563E-07	1.560E-07	1.551E-07	1.524E-07	1.435E-07
0Ac-227	Pu-239	8.252E-07	0.000E+00	1.708E-23	4.530E-22	1.577E-20	3.598E-19	8.066E-18	8.177E-17	5.225E-16

THF(i) is the thread fraction of the parent nuclide.
0RESCALC.EXE execution time = 16.51 seconds
Total water/soil iteration failures = 1.320E+02.