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Part I: Mixture Sums and Single Radionuclide Guidelines

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Dose Conversion Factor (and Related) Parameter Summary
Dose Library: Surface Soil DCGL 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	Ba-137m (Source: FGR 12)	3.606E+00	3.606E+00	DCF1(1)
A-1	Co-60 (Source: FGR 12)	1.622E+01	1.622E+01	DCF1(2)
A-1	Cs-134 (Source: FGR 12)	9.472E+00	9.472E+00	DCF1(3)
A-1	Cs-137 (Source: FGR 12)	7.510E-04	7.510E-04	DCF1(4)
A-1	Ni-63 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1(5)
A-1	Sr-90 (Source: FGR 12)	7.043E-04	7.043E-04	DCF1(6)
A-1	Y-90 (Source: FGR 12)	2.391E-02	2.391E-02	DCF1(7)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Co-60	2.190E-04	2.190E-04	DCF2(1)
B-1	Cs-134	4.620E-05	4.620E-05	DCF2(2)
B-1	Cs-137+D	3.190E-05	3.190E-05	DCF2(3)
B-1	Ni-63	6.290E-06	6.290E-06	DCF2(4)
B-1	Sr-90+D	1.308E-03	1.300E-03	DCF2(5)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Co-60	2.690E-05	2.690E-05	DCF3(1)
D-1	Cs-134	7.330E-05	7.330E-05	DCF3(2)
D-1	Cs-137+D	5.000E-05	5.000E-05	DCF3(3)
D-1	Ni-63	5.770E-07	5.770E-07	DCF3(4)
D-1	Sr-90+D	1.528E-04	1.420E-04	DCF3(5)
D-34	Food transfer factors:			
D-34	Co-60 , plant/soil concentration ratio, dimensionless	1.500E-01	8.000E-02	RTF(1,1)
D-34	Co-60 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.800E-02	2.000E-02	RTF(1,2)
D-34	Co-60 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-03	2.000E-03	RTF(1,3)
D-34				
D-34	Cs-134 , plant/soil concentration ratio, dimensionless	7.800E-02	4.000E-02	RTF(2,1)
D-34	Cs-134 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	6.500E-02	3.000E-02	RTF(2,2)
D-34	Cs-134 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.400E-02	8.000E-03	RTF(2,3)
D-34				
D-34	Cs-137+D , plant/soil concentration ratio, dimensionless	7.800E-02	4.000E-02	RTF(3,1)
D-34	Cs-137+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	6.500E-02	3.000E-02	RTF(3,2)
D-34	Cs-137+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.400E-02	8.000E-03	RTF(3,3)
D-34				
D-34	Ni-63 , plant/soil concentration ratio, dimensionless	9.200E-02	5.000E-02	RTF(4,1)
D-34	Ni-63 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-03	5.000E-03	RTF(4,2)
D-34	Ni-63 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.200E-02	2.000E-02	RTF(4,3)
D-34				
D-34	Sr-90+D , plant/soil concentration ratio, dimensionless	5.900E-01	3.000E-01	RTF(5,1)
D-34	Sr-90+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-03	8.000E-03	RTF(5,2)
D-34	Sr-90+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.700E-03	2.000E-03	RTF(5,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Co-60 , fish	3.000E+02	3.000E+02	BIOFAC(1,1)
D-5	Co-60 , crustacea and mollusks	2.000E+02	2.000E+02	BIOFAC(1,2)
D-5				
D-5	Cs-134 , fish	2.000E+03	2.000E+03	BIOFAC(2,1)
D-5	Cs-134 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(2,2)

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Dose Conversion Factor (and Related) Parameter Summary (continued)
Dose Library: Surface Soil DCGL Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-5	Cs-137+D , fish	2.000E+03	2.000E+03	BIOFAC(3,1)
D-5	Cs-137+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(3,2)
D-5				
D-5	Ni-63 , fish	1.000E+02	1.000E+02	BIOFAC(4,1)
D-5	Ni-63 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(4,2)
D-5				
D-5	Sr-90+D , fish	6.000E+01	6.000E+01	BIOFAC(5,1)
D-5	Sr-90+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(5,2)

#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 : RESRAD Default

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Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	6.450E+04	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.000E+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)	2.870E+02	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T(2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T(3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T(4)
R011	Times for calculations (yr)	3.000E+01	3.000E+01	---	T(5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T(6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T(7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T(8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(10)
R012	Initial principal radionuclide (pCi/g): Co-60	1.000E+00	0.000E+00	---	S1(1)
R012	Initial principal radionuclide (pCi/g): Cs-134	1.000E+00	0.000E+00	---	S1(2)
R012	Initial principal radionuclide (pCi/g): Cs-137	1.000E+00	0.000E+00	---	S1(3)
R012	Initial principal radionuclide (pCi/g): Ni-63	1.000E+00	0.000E+00	---	S1(4)
R012	Initial principal radionuclide (pCi/g): Sr-90	1.000E+00	0.000E+00	---	S1(5)
R012	Concentration in groundwater (pCi/L): Co-60	not used	0.000E+00	---	W1(1)
R012	Concentration in groundwater (pCi/L): Cs-134	not used	0.000E+00	---	W1(2)
R012	Concentration in groundwater (pCi/L): Cs-137	not used	0.000E+00	---	W1(3)
R012	Concentration in groundwater (pCi/L): Ni-63	not used	0.000E+00	---	W1(4)
R012	Concentration in groundwater (pCi/L): Sr-90	not used	0.000E+00	---	W1(5)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVER0
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.800E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.500E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	3.500E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	6.600E-02	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	2.880E+03	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	9.700E-01	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	4.200E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	6.250E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	8.300E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	1.900E-01	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	1.000E+06	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	1.000E-03	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	1.800E+00	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	3.500E-01	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	2.900E-01	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	6.600E-02	2.000E-01	---	FCSZ

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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	Saturated zone hydraulic conductivity (m/yr)	2.880E+03	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	3.900E-03	2.000E-02	---	HGWT
R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	0.000E+00	1.000E-03	---	VWT
R014	Well pump intake depth (m below water table)	3.300E+00	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	ND	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	2.250E+03	2.500E+02	---	UW
R015	Number of unsaturated zone strata	1	1	---	NS
R015	Unsat. zone 1, thickness (m)	2.600E+00	4.000E+00	---	H(1)
R015	Unsat. zone 1, soil density (g/cm**3)	1.800E+00	1.500E+00	---	DENSUZ(1)
R015	Unsat. zone 1, total porosity	3.500E-01	4.000E-01	---	TPUZ(1)
R015	Unsat. zone 1, effective porosity	2.900E-01	2.000E-01	---	EPUZ(1)
R015	Unsat. zone 1, field capacity	6.600E-02	2.000E-01	---	FCUZ(1)
R015	Unsat. zone 1, soil-specific b parameter	9.700E-01	5.300E+00	---	BUZ(1)
R015	Unsat. zone 1, hydraulic conductivity (m/yr)	2.880E+03	1.000E+01	---	HCUZ(1)
R016	Distribution coefficients for Co-60				
R016	Contaminated zone (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCC(1)
R016	Unsaturated zone 1 (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCU(1,1)
R016	Saturated zone (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCS(1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.532E-04	ALEACH(1)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(1)
R016	Distribution coefficients for Cs-134				
R016	Contaminated zone (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCC(2)
R016	Unsaturated zone 1 (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCU(2,1)
R016	Saturated zone (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCS(2)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.802E-04	ALEACH(2)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(2)
R016	Distribution coefficients for Cs-137				
R016	Contaminated zone (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCC(3)
R016	Unsaturated zone 1 (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCU(3,1)
R016	Saturated zone (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCS(3)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.802E-04	ALEACH(3)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(3)
R016	Distribution coefficients for Ni-63				
R016	Contaminated zone (cm**3/g)	3.310E+02	1.000E+03	---	DCNUCC(4)
R016	Unsaturated zone 1 (cm**3/g)	3.310E+02	1.000E+03	---	DCNUCU(4,1)
R016	Saturated zone (cm**3/g)	3.310E+02	1.000E+03	---	DCNUCS(4)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	5.375E-04	ALEACH(4)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(4)
R016	Distribution coefficients for Sr-90				
R016	Contaminated zone (cm**3/g)	3.400E+00	3.000E+01	---	DCNUCC(5)
R016	Unsaturated zone 1 (cm**3/g)	3.400E+00	3.000E+01	---	DCNUCU(5,1)
R016	Saturated zone (cm**3/g)	3.400E+00	3.000E+01	---	DCNUCS(5)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	5.177E-02	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
R017	Inhalation rate (m**3/yr)	8.400E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	2.350E-05	1.000E-04	---	MLINH
R017	Exposure duration	3.000E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	5.500E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	4.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	6.490E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	1.240E-01	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE(1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE(2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE(3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE(4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE(5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE(6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE(7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE(8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE(9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE(10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE(11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE(12)
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA(1)
R017	Ring 2	not used	2.732E-01	---	FRACA(2)
R017	Ring 3	not used	0.000E+00	---	FRACA(3)
R017	Ring 4	not used	0.000E+00	---	FRACA(4)
R017	Ring 5	not used	0.000E+00	---	FRACA(5)
R017	Ring 6	not used	0.000E+00	---	FRACA(6)
R017	Ring 7	not used	0.000E+00	---	FRACA(7)
R017	Ring 8	not used	0.000E+00	---	FRACA(8)
R017	Ring 9	not used	0.000E+00	---	FRACA(9)
R017	Ring 10	not used	0.000E+00	---	FRACA(10)
R017	Ring 11	not used	0.000E+00	---	FRACA(11)
R017	Ring 12	not used	0.000E+00	---	FRACA(12)
R018	Fruits, vegetables and grain consumption (kg/yr)	1.120E+02	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	2.140E+01	1.400E+01	---	DIET(2)
R018	Milk consumption (L/yr)	2.330E+02	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	6.510E+01	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	1.830E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	4.780E+02	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	1.000E+00	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	1.000E+00	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	1.000E+00	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	1.000E+00	-1	---	FPLANT

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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	Contamination fraction of meat	1.000E+00	-1	---	FMEAT
R018	Contamination fraction of milk	1.000E+00	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	2.830E+01	6.800E+01	---	LFI5
R019	Livestock fodder intake for milk (kg/day)	6.520E+01	5.500E+01	---	LFI6
R019	Livestock water intake for meat (L/day)	5.060E+01	5.000E+01	---	LWI5
R019	Livestock water intake for milk (L/day)	6.000E+01	1.600E+02	---	LWI6
R019	Livestock soil intake (kg/day)	5.000E-01	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	4.000E-04	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	1.220E+00	9.000E-01	---	DROOT
R019	Drinking water fraction from ground water	1.000E+00	1.000E+00	---	FGWDW
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Livestock water fraction from ground water	1.000E+00	1.000E+00	---	FGWLW
R019	Irrigation fraction from ground water	1.000E+00	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	1.750E+00	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	2.900E+00	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	1.900E+00	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	2.460E-01	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	1.230E-01	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	8.200E-02	8.000E-02	---	TE(3)
R19B	Translocation Factor for Non-Leafy	1.000E-01	1.000E-01	---	TIV(1)
R19B	Translocation Factor for Leafy	1.000E+00	1.000E+00	---	TIV(2)
R19B	Translocation Factor for Fodder	1.000E+00	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	3.500E-01	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	3.500E-01	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	3.500E-01	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	3.500E-01	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	5.800E-01	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	3.500E-01	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	3.300E+01	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	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	1.000E+00	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)

Summary : RESRAD Default
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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
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	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	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	suppressed
7 -- drinking water	active
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Summary : RESRAD Default
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Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	64500.00 square meters	Co-60	1.000E+00
Thickness:	1.00 meters	Cs-134	1.000E+00
Cover Depth:	0.00 meters	Cs-137	1.000E+00
		Ni-63	1.000E+00
		Sr-90	1.000E+00

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
TDOSE(t):	2.813E+01	2.479E+01	1.976E+01	1.051E+01	2.895E+00	9.570E-01	3.928E-03	0.000E+00
M(t):	1.125E+00	9.917E-01	7.902E-01	4.202E-01	1.158E-01	3.828E-02	1.571E-04	0.000E+00

Maximum TDOSE(t): 2.813E+01 mrem/yr at t = 0.000E+00 years

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	5.644E+00	0.2007	1.972E-06	0.0000	0.000E+00	0.0000	4.131E-01	0.0147	3.786E-01	0.0135	9.998E-02	0.0036	3.565E-04	0.0000
Cs-134	2.983E+00	0.1061	3.771E-07	0.0000	0.000E+00	0.0000	5.306E-01	0.0189	6.082E-01	0.0216	9.478E-01	0.0337	8.807E-04	0.0000
Cs-137	1.248E+00	0.0444	3.030E-07	0.0000	0.000E+00	0.0000	4.212E-01	0.0150	4.828E-01	0.0172	7.524E-01	0.0267	6.991E-04	0.0000
Ni-63	0.000E+00	0.0000	6.023E-08	0.0000	0.000E+00	0.0000	5.779E-03	0.0002	4.927E-04	0.0000	2.321E-02	0.0008	8.132E-06	0.0000
Sr-90	8.807E-03	0.0003	1.211E-05	0.0000	0.000E+00	0.0000	9.501E+00	0.3378	1.093E+00	0.0389	2.981E+00	0.1060	2.082E-03	0.0001
Total	9.883E+00	0.3514	1.482E-05	0.0000	0.000E+00	0.0000	1.087E+01	0.3865	2.563E+00	0.0911	4.804E+00	0.1708	4.026E-03	0.0001

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.536E+00	0.2324
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.071E+00	0.1803
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	2.905E+00	0.1033
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.949E-02	0.0010
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.359E+01	0.4830
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	2.813E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.000E+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.
Co-60	4.947E+00	0.1995	1.729E-06	0.0000	0.000E+00	0.0000	3.616E-01	0.0146	3.314E-01	0.0134	8.753E-02	0.0035	3.126E-04	0.0000
Cs-134	2.132E+00	0.0860	2.695E-07	0.0000	0.000E+00	0.0000	3.787E-01	0.0153	4.341E-01	0.0175	6.764E-01	0.0273	6.294E-04	0.0000
Cs-137	1.219E+00	0.0492	2.961E-07	0.0000	0.000E+00	0.0000	4.109E-01	0.0166	4.711E-01	0.0190	7.341E-01	0.0296	6.831E-04	0.0000
Ni-63	0.000E+00	0.0000	5.978E-08	0.0000	0.000E+00	0.0000	5.727E-03	0.0002	4.885E-04	0.0000	2.300E-02	0.0009	8.071E-06	0.0000
Sr-90	8.163E-03	0.0003	1.123E-05	0.0000	0.000E+00	0.0000	8.795E+00	0.3547	1.012E+00	0.0408	2.761E+00	0.1113	1.930E-03	0.0001
Total	8.307E+00	0.3350	1.358E-05	0.0000	0.000E+00	0.0000	9.952E+00	0.4014	2.249E+00	0.0907	4.282E+00	0.1727	3.563E-03	0.0001

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-	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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.728E+00	0.2310
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.622E+00	0.1461
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	2.836E+00	0.1144
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.923E-02	0.0012
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.258E+01	0.5073
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	2.479E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	3.802E+00	0.1925	1.329E-06	0.0000	0.000E+00	0.0000	2.771E-01	0.0140	2.540E-01	0.0129	6.708E-02	0.0034	2.402E-04	0.0000
Cs-134	1.089E+00	0.0551	1.376E-07	0.0000	0.000E+00	0.0000	1.928E-01	0.0098	2.212E-01	0.0112	3.445E-01	0.0174	3.214E-04	0.0000
Cs-137	1.164E+00	0.0589	2.826E-07	0.0000	0.000E+00	0.0000	3.911E-01	0.0198	4.487E-01	0.0227	6.988E-01	0.0354	6.520E-04	0.0000
Ni-63	0.000E+00	0.0000	5.889E-08	0.0000	0.000E+00	0.0000	5.626E-03	0.0003	4.801E-04	0.0000	2.260E-02	0.0011	7.952E-06	0.0000
Sr-90	7.014E-03	0.0004	9.645E-06	0.0000	0.000E+00	0.0000	7.535E+00	0.3814	8.671E-01	0.0439	2.365E+00	0.1197	1.658E-03	0.0001
Total	6.062E+00	0.3068	1.145E-05	0.0000	0.000E+00	0.0000	8.401E+00	0.4253	1.792E+00	0.0907	3.498E+00	0.1771	2.880E-03	0.0001

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.401E+00	0.2228
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.848E+00	0.0935
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	2.703E+00	0.1368
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.872E-02	0.0015
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.078E+01	0.5454
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	1.976E+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.
Co-60	1.513E+00	0.1440	5.287E-07	0.0000	0.000E+00	0.0000	1.091E-01	0.0104	1.002E-01	0.0095	2.642E-02	0.0025	9.558E-05	0.0000
Cs-134	1.036E-01	0.0099	1.310E-08	0.0000	0.000E+00	0.0000	1.816E-02	0.0017	2.088E-02	0.0020	3.249E-02	0.0031	3.060E-05	0.0000
Cs-137	9.890E-01	0.0941	2.402E-07	0.0000	0.000E+00	0.0000	3.288E-01	0.0313	3.781E-01	0.0360	5.883E-01	0.0560	5.541E-04	0.0001
Ni-63	0.000E+00	0.0000	5.590E-08	0.0000	0.000E+00	0.0000	5.283E-03	0.0005	4.517E-04	0.0000	2.125E-02	0.0020	7.547E-06	0.0000
Sr-90	4.125E-03	0.0004	5.672E-06	0.0000	0.000E+00	0.0000	4.384E+00	0.4173	5.047E-01	0.0480	1.376E+00	0.1310	9.750E-04	0.0001
Total	2.610E+00	0.2484	6.510E-06	0.0000	0.000E+00	0.0000	4.845E+00	0.4612	1.004E+00	0.0956	2.045E+00	0.1946	1.663E-03	0.0002

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.749E+00	0.1664
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.752E-01	0.0167
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	2.285E+00	0.2175
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.699E-02	0.0026
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.270E+00	0.5968
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	1.051E+01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	1.087E-01	0.0376	3.799E-08	0.0000	0.000E+00	0.0000	7.601E-03	0.0026	7.006E-03	0.0024	1.845E-03	0.0006	6.869E-06	0.0000
Cs-134	1.251E-04	0.0000	1.582E-11	0.0000	0.000E+00	0.0000	2.125E-05	0.0000	2.461E-05	0.0000	3.815E-05	0.0000	3.693E-08	0.0000
Cs-137	6.211E-01	0.2146	1.508E-07	0.0000	0.000E+00	0.0000	2.002E-01	0.0692	2.318E-01	0.0801	3.594E-01	0.1242	3.480E-04	0.0001
Ni-63	0.000E+00	0.0000	4.815E-08	0.0000	0.000E+00	0.0000	4.412E-03	0.0015	3.795E-04	0.0001	1.780E-02	0.0061	6.501E-06	0.0000
Sr-90	9.049E-04	0.0003	1.244E-06	0.0000	0.000E+00	0.0000	9.325E-01	0.3221	1.075E-01	0.0371	2.929E-01	0.1012	2.139E-04	0.0001
Total	7.309E-01	0.2525	1.481E-06	0.0000	0.000E+00	0.0000	1.145E+00	0.3954	3.467E-01	0.1198	6.720E-01	0.2321	5.753E-04	0.0002

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.252E-01	0.0432
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.092E-04	0.0001
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	1.413E+00	0.4881
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.259E-02	0.0078
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.334E+00	0.4608
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	2.895E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	1.082E-05	0.0000	3.780E-12	0.0000	0.000E+00	0.0000	6.731E-07	0.0000	6.305E-07	0.0000	1.646E-07	0.0000	6.835E-10	0.0000
Cs-134	7.645E-15	0.0000	9.664E-22	0.0000	0.000E+00	0.0000	1.156E-15	0.0000	1.375E-15	0.0000	2.103E-15	0.0000	2.257E-18	0.0000
Cs-137	1.219E-01	0.1274	2.961E-08	0.0000	0.000E+00	0.0000	3.498E-02	0.0366	4.163E-02	0.0435	6.367E-02	0.0665	6.832E-05	0.0001
Ni-63	0.000E+00	0.0000	2.856E-08	0.0000	0.000E+00	0.0000	2.329E-03	0.0024	2.052E-04	0.0002	9.506E-03	0.0099	3.856E-06	0.0000
Sr-90	4.476E-06	0.0000	6.154E-09	0.0000	0.000E+00	0.0000	4.104E-03	0.0043	4.752E-04	0.0005	1.292E-03	0.0013	1.058E-06	0.0000
Total	1.220E-01	0.1274	6.433E-08	0.0000	0.000E+00	0.0000	4.142E-02	0.0433	4.231E-02	0.0442	7.446E-02	0.0778	7.323E-05	0.0001

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.229E-05	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.228E-14	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.623E-01	0.2741
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.204E-02	0.0126
Sr-90	5.010E-01	0.5235	0.000E+00	0.0000	0.000E+00	0.0000	4.881E-02	0.0510	4.343E-02	0.0454	8.355E-02	0.0873	6.827E-01	0.7133
Total	5.010E-01	0.5235	0.000E+00	0.0000	0.000E+00	0.0000	4.881E-02	0.0510	4.343E-02	0.0454	8.355E-02	0.0873	9.570E-01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	3.974E-17	0.0000	1.389E-23	0.0000	0.000E+00	0.0000	1.600E-18	0.0000	1.617E-18	0.0000	4.058E-19	0.0000	2.512E-21	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	1.164E-03	0.2964	2.827E-10	0.0000	0.000E+00	0.0000	2.160E-04	0.0550	2.916E-04	0.0742	4.198E-04	0.1069	6.523E-07	0.0002
Ni-63	0.000E+00	0.0000	6.421E-09	0.0000	0.000E+00	0.0000	3.387E-04	0.0862	3.337E-05	0.0085	1.463E-03	0.3724	8.669E-07	0.0002
Sr-90	1.156E-12	0.0000	1.590E-15	0.0000	0.000E+00	0.0000	6.856E-10	0.0000	8.117E-11	0.0000	2.180E-10	0.0000	2.732E-13	0.0000
Total	1.164E-03	0.2964	6.703E-09	0.0000	0.000E+00	0.0000	5.547E-04	0.1412	3.249E-04	0.0827	1.883E-03	0.4793	1.519E-06	0.0004

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.336E-17	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.092E-03	0.5326
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.836E-03	0.4674
Sr-90	8.940E-08	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.711E-09	0.0000	7.750E-09	0.0000	1.491E-08	0.0000	1.218E-07	0.0000
Total	8.940E-08	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.711E-09	0.0000	7.750E-09	0.0000	1.491E-08	0.0000	3.928E-03	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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
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	0.000E+00	0.0000

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
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	0.000E+00	0.0000

*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

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
Co-60	Co-60	1.000E+00	6.536E+00	5.728E+00	4.401E+00	1.749E+00	1.252E-01	1.229E-05	4.336E-17	0.000E+00
Cs-134	Cs-134	1.000E+00	5.071E+00	3.622E+00	1.848E+00	1.752E-01	2.092E-04	1.228E-14	5.045E-44	0.000E+00
Cs-137+D	Cs-137+D	1.000E+00	2.905E+00	2.836E+00	2.703E+00	2.285E+00	1.413E+00	2.623E-01	2.092E-03	0.000E+00
Ni-63	Ni-63	1.000E+00	2.949E-02	2.923E-02	2.872E-02	2.699E-02	2.259E-02	1.204E-02	1.836E-03	0.000E+00
Sr-90+D	Sr-90+D	1.000E+00	1.359E+01	1.258E+01	1.078E+01	6.270E+00	1.334E+00	6.827E-01	1.218E-07	0.000E+00

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

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

Nuclide (i)	t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Co-60	3.825E+00	4.364E+00	5.681E+00	1.430E+01	1.997E+02	2.035E+06	*1.113E+15	*1.113E+15
Cs-134	4.930E+00	6.903E+00	1.353E+01	1.427E+02	1.195E+05	*1.283E+15	*1.283E+15	*1.283E+15
Cs-137	8.606E+00	8.815E+00	9.249E+00	1.094E+01	1.769E+01	9.531E+01	1.195E+04	*8.593E+13
Ni-63	8.478E+02	8.553E+02	8.706E+02	9.263E+02	1.107E+03	2.076E+03	1.362E+04	*5.586E+13
Sr-90	1.840E+00	1.988E+00	2.320E+00	3.987E+00	1.874E+01	3.662E+01	2.053E+08	*1.366E+14

*At specific activity limit

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

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin)	G(i,tmin) (pCi/g)	DSR(i,tmax)	G(i,tmax) (pCi/g)
Co-60	1.000E+00	0.000E+00	6.536E+00	3.825E+00	6.536E+00	3.825E+00
Cs-134	1.000E+00	0.000E+00	5.071E+00	4.930E+00	5.071E+00	4.930E+00
Cs-137	1.000E+00	0.000E+00	2.905E+00	8.606E+00	2.905E+00	8.606E+00
Ni-63	1.000E+00	0.000E+00	2.949E-02	8.478E+02	2.949E-02	8.478E+02
Sr-90	1.000E+00	0.000E+00	1.359E+01	1.840E+00	1.359E+01	1.840E+00

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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
Co-60	Co-60	1.000E+00	6.536E+00	5.728E+00	4.401E+00	1.749E+00	1.252E-01	1.229E-05	4.336E-17	0.000E+00
Cs-134	Cs-134	1.000E+00	5.071E+00	3.622E+00	1.848E+00	1.752E-01	2.092E-04	1.228E-14	0.000E+00	0.000E+00
Cs-137	Cs-137	1.000E+00	2.905E+00	2.836E+00	2.703E+00	2.285E+00	1.413E+00	2.623E-01	2.092E-03	0.000E+00
Ni-63	Ni-63	1.000E+00	2.949E-02	2.923E-02	2.872E-02	2.699E-02	2.259E-02	1.204E-02	1.836E-03	0.000E+00
Sr-90	Sr-90	1.000E+00	1.359E+01	1.258E+01	1.078E+01	6.270E+00	1.334E+00	6.827E-01	1.218E-07	0.000E+00

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

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
Co-60	Co-60	1.000E+00	1.000E+00	8.766E-01	6.737E-01	2.681E-01	1.927E-02	1.917E-06	7.044E-18	0.000E+00
Cs-134	Cs-134	1.000E+00	1.000E+00	7.146E-01	3.650E-01	3.474E-02	4.194E-05	2.563E-15	1.682E-44	0.000E+00
Cs-137	Cs-137	1.000E+00	1.000E+00	9.770E-01	9.326E-01	7.925E-01	4.977E-01	9.771E-02	9.330E-04	7.935E-11
Ni-63	Ni-63	1.000E+00	1.000E+00	9.926E-01	9.779E-01	9.281E-01	7.994E-01	4.742E-01	1.066E-01	5.745E-04
Sr-90	Sr-90	1.000E+00	1.000E+00	9.270E-01	7.965E-01	4.684E-01	1.028E-01	5.082E-04	1.313E-10	1.149E-33

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

RESCALC.EXE execution time = 11.60 seconds

Probabilistic results summary : RESRAD Default
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Part VI: Uncertainty Analysis

RESRAD Uncertainty Analysis Results

Probabilistic results summary : RESRAD Default
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Probabilistic Input

Number of Sample Runs: 300

Number	Name	Distribution	Parameters	
1	DCACTC(2)	UNIFORM	615	635
2	DCACTU1(2)	UNIFORM	615	635
3	DCACTS(2)	UNIFORM	615	635
4	DCACTC(3)	UNIFORM	615	635
5	DCACTU1(3)	UNIFORM	615	635
6	DCACTS(3)	UNIFORM	615	635
7	DCACTC(4)	UNIFORM	62	331
8	DCACTU1(4)	UNIFORM	62	331
9	DCACTS(4)	UNIFORM	62	331
10	DCACTC(5)	UNIFORM	2.3	3.4
11	DCACTU1(5)	UNIFORM	2.3	3.4
12	DCACTS(5)	UNIFORM	2.3	3.4

Probabilistic results summary : RESRAD Default

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Probabilistic Total Dose Summary

Nuclide (j)	Peak Time	Peak Dose	DOSE(j,t), mrem/yr t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60										
Min	0.00E+00	6.54E+00	6.54E+00	5.73E+00	4.40E+00	1.75E+00	1.25E-01	1.23E-05	4.34E-17	0.00E+00
Max	0.00E+00	6.54E+00	6.54E+00	5.73E+00	4.40E+00	1.75E+00	1.25E-01	1.23E-05	4.34E-17	0.00E+00
Avg	0.00E+00	6.54E+00	6.54E+00	5.73E+00	4.40E+00	1.75E+00	1.25E-01	1.23E-05	4.34E-17	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134										
Min	0.00E+00	5.07E+00	5.07E+00	3.62E+00	1.85E+00	1.75E-01	2.09E-04	1.23E-14	0.00E+00	0.00E+00
Max	0.00E+00	5.07E+00	5.07E+00	3.62E+00	1.85E+00	1.75E-01	2.09E-04	1.23E-14	0.00E+00	0.00E+00
Avg	0.00E+00	5.07E+00	5.07E+00	3.62E+00	1.85E+00	1.75E-01	2.09E-04	1.23E-14	0.00E+00	0.00E+00
Std	0.00E+00	5.84E-06	5.83E-06	1.37E-05	1.67E-05	4.81E-06	1.67E-08	3.24E-18	0.00E+00	0.00E+00
Cs-137										
Min	0.00E+00	2.91E+00	2.91E+00	2.84E+00	2.70E+00	2.28E+00	1.41E+00	2.62E-01	2.09E-03	0.00E+00
Max	0.00E+00	2.91E+00	2.91E+00	2.84E+00	2.70E+00	2.28E+00	1.41E+00	2.62E-01	2.09E-03	0.00E+00
Avg	0.00E+00	2.91E+00	2.91E+00	2.84E+00	2.70E+00	2.28E+00	1.41E+00	2.62E-01	2.09E-03	0.00E+00
Std	0.00E+00	3.43E-06	3.44E-06	1.08E-05	2.45E-05	6.28E-05	1.13E-04	6.93E-05	1.65E-06	0.00E+00
Ni-63										
Min	0.00E+00	2.95E-02	2.95E-02	2.91E-02	2.85E-02	2.63E-02	2.11E-02	9.54E-03	9.13E-04	0.00E+00
Max	0.00E+00	2.95E-02	2.95E-02	2.92E-02	2.87E-02	2.70E-02	2.26E-02	1.20E-02	1.84E-03	6.54E-07
Avg	0.00E+00	2.95E-02	2.95E-02	2.92E-02	2.87E-02	2.68E-02	2.22E-02	1.14E-02	1.57E-03	2.01E-08
Std	0.00E+00	6.78E-06	6.78E-06	2.30E-05	5.47E-05	1.56E-04	3.75E-04	6.20E-04	2.39E-04	8.52E-08
Sr-90										
Min	0.00E+00	1.34E+01	1.34E+01	1.21E+01	9.91E+00	4.87E+00	6.39E-01	1.18E-01	1.96E-10	0.00E+00
Max	0.00E+00	1.36E+01	1.36E+01	1.26E+01	1.08E+01	6.27E+00	1.80E+00	6.44E-01	8.33E-08	0.00E+00
Avg	0.00E+00	1.35E+01	1.35E+01	1.24E+01	1.04E+01	5.63E+00	1.05E+00	3.15E-01	1.54E-08	0.00E+00
Std	0.00E+00	4.13E-02	4.13E-02	1.23E-01	2.48E-01	4.05E-01	2.53E-01	1.07E-01	1.81E-08	0.00E+00
∑ALL										
Min	0.00E+00	2.80E+01	2.80E+01	2.44E+01	1.89E+01	9.10E+00	2.20E+00	3.92E-01	3.00E-03	0.00E+00
Max	0.00E+00	2.81E+01	2.81E+01	2.48E+01	1.98E+01	1.05E+01	3.36E+00	9.18E-01	3.93E-03	6.54E-07
Avg	0.00E+00	2.81E+01	2.81E+01	2.46E+01	1.94E+01	9.86E+00	2.61E+00	5.89E-01	3.66E-03	2.01E-08
Std	0.00E+00	4.13E-02	4.13E-02	1.23E-01	2.48E-01	4.05E-01	2.53E-01	1.07E-01	2.39E-04	8.52E-08

∑ALL is total dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Risk Summary

Nuclide		RISK(j,t)							
(j)	t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		1.62E-04	1.42E-04	1.09E-04	4.33E-05	3.10E-06	3.04E-10	1.07E-21	0.00E+00
Max		1.62E-04	1.42E-04	1.09E-04	4.33E-05	3.10E-06	3.04E-10	1.07E-21	0.00E+00
Avg		1.62E-04	1.42E-04	1.09E-04	4.33E-05	3.10E-06	3.04E-10	1.07E-21	0.00E+00
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134									
Min		1.31E-04	9.34E-05	4.76E-05	4.52E-06	5.39E-09	3.17E-19	0.00E+00	0.00E+00
Max		1.31E-04	9.34E-05	4.76E-05	4.52E-06	5.40E-09	3.17E-19	0.00E+00	0.00E+00
Avg		1.31E-04	9.34E-05	4.76E-05	4.52E-06	5.39E-09	3.17E-19	0.00E+00	0.00E+00
Std		0.00E+00	2.37E-10	3.71E-10	1.18E-10	4.25E-13	8.34E-23	0.00E+00	0.00E+00
Cs-137									
Min		6.59E-05	6.43E-05	6.13E-05	5.18E-05	3.20E-05	5.94E-06	4.73E-08	0.00E+00
Max		6.59E-05	6.43E-05	6.13E-05	5.18E-05	3.21E-05	5.95E-06	4.74E-08	0.00E+00
Avg		6.59E-05	6.43E-05	6.13E-05	5.18E-05	3.20E-05	5.95E-06	4.74E-08	0.00E+00
Std		0.00E+00	1.61E-10	4.76E-10	1.36E-09	2.52E-09	1.56E-09	3.74E-11	0.00E+00
Ni-63									
Min		1.46E-06	1.45E-06	1.42E-06	1.31E-06	1.05E-06	4.74E-07	4.54E-08	0.00E+00
Max		1.46E-06	1.45E-06	1.43E-06	1.34E-06	1.12E-06	5.98E-07	9.12E-08	2.93E-11
Avg		1.46E-06	1.45E-06	1.42E-06	1.33E-06	1.10E-06	5.66E-07	7.79E-08	8.97E-13
Std		0.00E+00	7.35E-10	2.32E-09	7.39E-09	1.83E-08	3.07E-08	1.18E-08	3.81E-12
Sr-90									
Min		2.63E-04	2.39E-04	1.95E-04	9.58E-05	1.26E-05	1.94E-06	3.22E-15	0.00E+00
Max		2.63E-04	2.45E-04	2.10E-04	1.22E-04	3.08E-05	1.05E-05	1.36E-12	0.00E+00
Avg		2.63E-04	2.42E-04	2.03E-04	1.10E-04	1.99E-05	5.15E-06	2.51E-13	0.00E+00
Std		0.00E+00	1.58E-06	4.15E-06	7.54E-06	4.19E-06	1.75E-06	2.95E-13	0.00E+00
∑ALL									
Min		6.23E-04	5.40E-04	4.14E-04	1.97E-04	4.88E-05	8.48E-06	9.27E-08	0.00E+00
Max		6.23E-04	5.46E-04	4.29E-04	2.23E-04	6.71E-05	1.70E-05	1.39E-07	2.93E-11
Avg		6.23E-04	5.43E-04	4.22E-04	2.11E-04	5.61E-05	1.17E-05	1.25E-07	8.97E-13
Std		0.00E+00	1.58E-06	4.15E-06	7.54E-06	4.19E-06	1.75E-06	1.18E-08	3.81E-12

∑ALL is total risk summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Ground External

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	5.64E+00	4.95E+00	3.80E+00	1.51E+00	1.09E-01	1.08E-05	3.97E-17	0.00E+00
Max	5.64E+00	4.95E+00	3.80E+00	1.51E+00	1.09E-01	1.08E-05	3.97E-17	0.00E+00
Avg	5.64E+00	4.95E+00	3.80E+00	1.51E+00	1.09E-01	1.08E-05	3.97E-17	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	2.98E+00	2.13E+00	1.09E+00	1.04E-01	1.25E-04	7.64E-15	0.00E+00	0.00E+00
Max	2.98E+00	2.13E+00	1.09E+00	1.04E-01	1.25E-04	7.64E-15	0.00E+00	0.00E+00
Avg	2.98E+00	2.13E+00	1.09E+00	1.04E-01	1.25E-04	7.64E-15	0.00E+00	0.00E+00
Std	3.69E-06	8.24E-06	9.94E-06	2.85E-06	1.00E-08	2.02E-18	0.00E+00	0.00E+00
Cs-137								
Min	1.25E+00	1.22E+00	1.16E+00	9.89E-01	6.21E-01	1.22E-01	1.16E-03	0.00E+00
Max	1.25E+00	1.22E+00	1.16E+00	9.89E-01	6.21E-01	1.22E-01	1.16E-03	0.00E+00
Avg	1.25E+00	1.22E+00	1.16E+00	9.89E-01	6.21E-01	1.22E-01	1.16E-03	0.00E+00
Std	1.63E-06	4.80E-06	1.07E-05	2.73E-05	4.98E-05	3.22E-05	9.19E-07	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	8.70E-03	7.87E-03	6.44E-03	3.20E-03	4.32E-04	3.91E-07	7.87E-16	0.00E+00
Max	8.81E-03	8.16E-03	7.01E-03	4.12E-03	9.04E-04	4.46E-06	1.15E-12	0.00E+00
Avg	8.76E-03	8.04E-03	6.76E-03	3.70E-03	6.69E-04	1.92E-06	2.07E-13	0.00E+00
Std	3.01E-05	8.34E-05	1.64E-04	2.68E-04	1.38E-04	1.18E-06	2.90E-13	0.00E+00
∑ALL								
Min	9.88E+00	8.31E+00	6.06E+00	2.61E+00	7.30E-01	1.22E-01	1.16E-03	0.00E+00
Max	9.88E+00	8.31E+00	6.06E+00	2.61E+00	7.31E-01	1.22E-01	1.16E-03	0.00E+00
Avg	9.88E+00	8.31E+00	6.06E+00	2.61E+00	7.31E-01	1.22E-01	1.16E-03	0.00E+00
Std	3.03E-05	8.40E-05	1.65E-04	2.69E-04	1.46E-04	3.22E-05	9.19E-07	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Inhalation (w/o Radon)

Nuclide	DOSE(i,j,t), mrem/yr							
(j)	t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	1.97E-06	1.73E-06	1.33E-06	5.29E-07	3.80E-08	3.78E-12	1.39E-23	0.00E+00
Max	1.97E-06	1.73E-06	1.33E-06	5.29E-07	3.80E-08	3.78E-12	1.39E-23	0.00E+00
Avg	1.97E-06	1.73E-06	1.33E-06	5.29E-07	3.80E-08	3.78E-12	1.39E-23	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	3.77E-07	2.69E-07	1.38E-07	1.31E-08	1.58E-11	9.66E-22	0.00E+00	0.00E+00
Max	3.77E-07	2.70E-07	1.38E-07	1.31E-08	1.58E-11	9.66E-22	0.00E+00	0.00E+00
Avg	3.77E-07	2.70E-07	1.38E-07	1.31E-08	1.58E-11	9.66E-22	0.00E+00	0.00E+00
Std	4.67E-13	1.04E-12	1.26E-12	3.61E-13	1.27E-15	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	3.03E-07	2.96E-07	2.83E-07	2.40E-07	1.51E-07	2.96E-08	2.82E-10	0.00E+00
Max	3.03E-07	2.96E-07	2.83E-07	2.40E-07	1.51E-07	2.96E-08	2.83E-10	0.00E+00
Avg	3.03E-07	2.96E-07	2.83E-07	2.40E-07	1.51E-07	2.96E-08	2.82E-10	0.00E+00
Std	3.96E-13	1.17E-12	2.60E-12	6.63E-12	1.21E-11	7.82E-12	2.23E-13	0.00E+00
Ni-63								
Min	6.02E-08	5.96E-08	5.84E-08	5.45E-08	4.48E-08	2.26E-08	3.19E-09	0.00E+00
Max	6.02E-08	5.98E-08	5.89E-08	5.59E-08	4.81E-08	2.86E-08	6.42E-09	0.00E+00
Avg	6.02E-08	5.97E-08	5.88E-08	5.56E-08	4.73E-08	2.70E-08	5.48E-09	0.00E+00
Std	1.69E-11	5.03E-11	1.15E-10	3.27E-10	8.02E-10	1.47E-09	8.35E-10	0.00E+00
Sr-90								
Min	1.20E-05	1.08E-05	8.86E-06	4.40E-06	5.94E-07	5.37E-10	1.08E-18	0.00E+00
Max	1.21E-05	1.12E-05	9.64E-06	5.67E-06	1.24E-06	6.14E-09	1.58E-15	0.00E+00
Avg	1.20E-05	1.10E-05	9.30E-06	5.09E-06	9.20E-07	2.64E-09	2.85E-16	0.00E+00
Std	4.13E-08	1.15E-07	2.25E-07	3.68E-07	1.89E-07	1.63E-09	3.99E-16	0.00E+00
∑ALL								
Min	1.47E-05	1.32E-05	1.07E-05	5.23E-06	8.29E-07	5.35E-08	3.47E-09	0.00E+00
Max	1.48E-05	1.36E-05	1.15E-05	6.51E-06	1.48E-06	6.41E-08	6.70E-09	0.00E+00
Avg	1.48E-05	1.34E-05	1.11E-05	5.92E-06	1.16E-06	5.93E-08	5.76E-09	0.00E+00
Std	4.13E-08	1.15E-07	2.25E-07	3.68E-07	1.89E-07	2.19E-09	8.35E-10	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Radon (Water Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Plant (Water Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	4.13E-01	3.62E-01	2.77E-01	1.09E-01	7.60E-03	6.73E-07	1.60E-18	0.00E+00
Max	4.13E-01	3.62E-01	2.77E-01	1.09E-01	7.60E-03	6.73E-07	1.60E-18	0.00E+00
Avg	4.13E-01	3.62E-01	2.77E-01	1.09E-01	7.60E-03	6.73E-07	1.60E-18	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	5.31E-01	3.79E-01	1.93E-01	1.82E-02	2.12E-05	1.15E-15	0.00E+00	0.00E+00
Max	5.31E-01	3.79E-01	1.93E-01	1.82E-02	2.13E-05	1.16E-15	0.00E+00	0.00E+00
Avg	5.31E-01	3.79E-01	1.93E-01	1.82E-02	2.12E-05	1.16E-15	0.00E+00	0.00E+00
Std	6.14E-07	1.44E-06	1.74E-06	4.99E-07	1.70E-09	3.05E-19	0.00E+00	0.00E+00
Cs-137								
Min	4.21E-01	4.11E-01	3.91E-01	3.29E-01	2.00E-01	3.50E-02	2.15E-04	0.00E+00
Max	4.21E-01	4.11E-01	3.91E-01	3.29E-01	2.00E-01	3.50E-02	2.16E-04	0.00E+00
Avg	4.21E-01	4.11E-01	3.91E-01	3.29E-01	2.00E-01	3.50E-02	2.16E-04	0.00E+00
Std	5.14E-07	1.59E-06	3.56E-06	9.05E-06	1.60E-05	9.24E-06	1.70E-07	0.00E+00
Ni-63								
Min	5.77E-03	5.71E-03	5.58E-03	5.16E-03	4.11E-03	1.84E-03	1.68E-04	0.00E+00
Max	5.78E-03	5.73E-03	5.63E-03	5.28E-03	4.41E-03	2.33E-03	3.39E-04	0.00E+00
Avg	5.78E-03	5.72E-03	5.61E-03	5.25E-03	4.34E-03	2.20E-03	2.89E-04	0.00E+00
Std	1.52E-06	4.71E-06	1.09E-05	3.08E-05	7.34E-05	1.20E-04	4.40E-05	0.00E+00
Sr-90								
Min	9.40E+00	8.49E+00	6.93E+00	3.40E+00	4.45E-01	3.59E-04	4.67E-13	0.00E+00
Max	9.50E+00	8.79E+00	7.53E+00	4.38E+00	9.32E-01	4.09E-03	6.80E-10	0.00E+00
Avg	9.45E+00	8.66E+00	7.26E+00	3.93E+00	6.90E-01	1.76E-03	1.23E-10	0.00E+00
Std	3.05E-02	8.80E-02	1.75E-01	2.84E-01	1.42E-01	1.09E-03	1.72E-10	0.00E+00
∑ALL								
Min	1.08E+01	9.65E+00	7.79E+00	3.86E+00	6.57E-01	3.74E-02	3.84E-04	0.00E+00
Max	1.09E+01	9.95E+00	8.40E+00	4.84E+00	1.14E+00	4.14E-02	5.55E-04	0.00E+00
Avg	1.08E+01	9.82E+00	8.13E+00	4.39E+00	9.02E-01	3.89E-02	5.05E-04	0.00E+00
Std	3.05E-02	8.80E-02	1.75E-01	2.84E-01	1.42E-01	1.09E-03	4.40E-05	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Meat (Water Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j)	t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	3.79E-01	3.31E-01	2.54E-01	1.00E-01	7.01E-03	6.30E-07	1.62E-18	0.00E+00
Max	3.79E-01	3.31E-01	2.54E-01	1.00E-01	7.01E-03	6.30E-07	1.62E-18	0.00E+00
Avg	3.79E-01	3.31E-01	2.54E-01	1.00E-01	7.01E-03	6.30E-07	1.62E-18	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	6.08E-01	4.34E-01	2.21E-01	2.09E-02	2.46E-05	1.37E-15	0.00E+00	0.00E+00
Max	6.08E-01	4.34E-01	2.21E-01	2.09E-02	2.46E-05	1.38E-15	0.00E+00	0.00E+00
Avg	6.08E-01	4.34E-01	2.21E-01	2.09E-02	2.46E-05	1.37E-15	0.00E+00	0.00E+00
Std	6.09E-07	1.57E-06	1.96E-06	5.69E-07	1.97E-09	3.63E-19	0.00E+00	0.00E+00
Cs-137								
Min	4.83E-01	4.71E-01	4.49E-01	3.78E-01	2.32E-01	4.16E-02	2.91E-04	0.00E+00
Max	4.83E-01	4.71E-01	4.49E-01	3.78E-01	2.32E-01	4.16E-02	2.92E-04	0.00E+00
Avg	4.83E-01	4.71E-01	4.49E-01	3.78E-01	2.32E-01	4.16E-02	2.91E-04	0.00E+00
Std	5.12E-07	1.74E-06	4.01E-06	1.03E-05	1.85E-05	1.10E-05	2.30E-07	0.00E+00
Ni-63								
Min	4.92E-04	4.87E-04	4.76E-04	4.41E-04	3.54E-04	1.62E-04	1.66E-05	0.00E+00
Max	4.93E-04	4.88E-04	4.80E-04	4.52E-04	3.80E-04	2.05E-04	3.34E-05	0.00E+00
Avg	4.93E-04	4.88E-04	4.79E-04	4.49E-04	3.73E-04	1.94E-04	2.85E-05	0.00E+00
Std	1.12E-07	3.83E-07	9.13E-07	2.61E-06	6.30E-06	1.06E-05	4.34E-06	0.00E+00
Sr-90								
Min	1.08E+00	9.79E-01	7.99E-01	3.92E-01	5.14E-02	4.16E-05	5.54E-14	0.00E+00
Max	1.09E+00	1.01E+00	8.67E-01	5.05E-01	1.07E-01	4.74E-04	8.05E-11	0.00E+00
Avg	1.09E+00	9.98E-01	8.37E-01	4.53E-01	7.96E-02	2.04E-04	1.46E-11	0.00E+00
Std	2.89E-03	9.51E-03	1.96E-02	3.24E-02	1.63E-02	1.26E-04	2.04E-11	0.00E+00
∑ALL								
Min	2.55E+00	2.22E+00	1.72E+00	8.92E-01	2.91E-01	4.18E-02	3.07E-04	0.00E+00
Max	2.56E+00	2.25E+00	1.79E+00	1.00E+00	3.47E-01	4.23E-02	3.25E-04	0.00E+00
Avg	2.56E+00	2.23E+00	1.76E+00	9.53E-01	3.19E-01	4.20E-02	3.20E-04	0.00E+00
Std	2.89E-03	9.51E-03	1.96E-02	3.24E-02	1.63E-02	1.27E-04	4.34E-06	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Milk (Water Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	1.00E-01	8.75E-02	6.71E-02	2.64E-02	1.84E-03	1.65E-07	4.06E-19	0.00E+00
Max	1.00E-01	8.75E-02	6.71E-02	2.64E-02	1.84E-03	1.65E-07	4.06E-19	0.00E+00
Avg	1.00E-01	8.75E-02	6.71E-02	2.64E-02	1.84E-03	1.65E-07	4.06E-19	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	9.48E-01	6.76E-01	3.45E-01	3.25E-02	3.81E-05	2.10E-15	0.00E+00	0.00E+00
Max	9.48E-01	6.76E-01	3.45E-01	3.25E-02	3.82E-05	2.10E-15	0.00E+00	0.00E+00
Avg	9.48E-01	6.76E-01	3.45E-01	3.25E-02	3.81E-05	2.10E-15	0.00E+00	0.00E+00
Std	9.20E-07	2.42E-06	3.04E-06	8.85E-07	3.05E-09	5.55E-19	0.00E+00	0.00E+00
Cs-137								
Min	7.52E-01	7.34E-01	6.99E-01	5.88E-01	3.59E-01	6.36E-02	4.19E-04	0.00E+00
Max	7.52E-01	7.34E-01	6.99E-01	5.88E-01	3.59E-01	6.37E-02	4.20E-04	0.00E+00
Avg	7.52E-01	7.34E-01	6.99E-01	5.88E-01	3.59E-01	6.36E-02	4.19E-04	0.00E+00
Std	7.80E-07	2.67E-06	6.22E-06	1.61E-05	2.87E-05	1.68E-05	3.31E-07	0.00E+00
Ni-63								
Min	2.32E-02	2.29E-02	2.24E-02	2.07E-02	1.66E-02	7.53E-03	7.28E-04	0.00E+00
Max	2.32E-02	2.30E-02	2.26E-02	2.12E-02	1.78E-02	9.50E-03	1.46E-03	0.00E+00
Avg	2.32E-02	2.30E-02	2.26E-02	2.11E-02	1.75E-02	8.99E-03	1.25E-03	0.00E+00
Std	5.14E-06	1.79E-05	4.28E-05	1.23E-04	2.95E-04	4.90E-04	1.90E-04	0.00E+00
Sr-90								
Min	2.95E+00	2.67E+00	2.18E+00	1.07E+00	1.40E-01	1.13E-04	1.49E-13	0.00E+00
Max	2.98E+00	2.76E+00	2.36E+00	1.38E+00	2.93E-01	1.29E-03	2.16E-10	0.00E+00
Avg	2.97E+00	2.72E+00	2.28E+00	1.24E+00	2.17E-01	5.55E-04	3.91E-11	0.00E+00
Std	7.85E-03	2.59E-02	5.34E-02	8.84E-02	4.44E-02	3.42E-04	5.47E-11	0.00E+00
∑ALL								
Min	4.78E+00	4.19E+00	3.31E+00	1.74E+00	5.19E-01	7.15E-02	1.15E-03	0.00E+00
Max	4.80E+00	4.28E+00	3.50E+00	2.04E+00	6.71E-01	7.44E-02	1.88E-03	0.00E+00
Avg	4.79E+00	4.24E+00	3.42E+00	1.90E+00	5.96E-01	7.32E-02	1.67E-03	0.00E+00
Std	7.85E-03	2.59E-02	5.34E-02	8.84E-02	4.44E-02	5.95E-04	1.90E-04	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Soil Ingestion

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	3.57E-04	3.13E-04	2.40E-04	9.56E-05	6.87E-06	6.83E-10	2.51E-21	0.00E+00
Max	3.57E-04	3.13E-04	2.40E-04	9.56E-05	6.87E-06	6.83E-10	2.51E-21	0.00E+00
Avg	3.57E-04	3.13E-04	2.40E-04	9.56E-05	6.87E-06	6.83E-10	2.51E-21	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	8.81E-04	6.29E-04	3.21E-04	3.06E-05	3.69E-08	2.25E-18	0.00E+00	0.00E+00
Max	8.81E-04	6.29E-04	3.21E-04	3.06E-05	3.69E-08	2.26E-18	0.00E+00	0.00E+00
Avg	8.81E-04	6.29E-04	3.21E-04	3.06E-05	3.69E-08	2.26E-18	0.00E+00	0.00E+00
Std	1.09E-09	2.44E-09	2.93E-09	8.42E-10	2.96E-12	5.96E-22	0.00E+00	0.00E+00
Cs-137								
Min	6.99E-04	6.83E-04	6.52E-04	5.54E-04	3.48E-04	6.83E-05	6.50E-07	0.00E+00
Max	6.99E-04	6.83E-04	6.52E-04	5.54E-04	3.48E-04	6.83E-05	6.52E-07	0.00E+00
Avg	6.99E-04	6.83E-04	6.52E-04	5.54E-04	3.48E-04	6.83E-05	6.51E-07	0.00E+00
Std	9.16E-10	2.69E-09	6.00E-09	1.53E-08	2.79E-08	1.80E-08	5.15E-10	0.00E+00
Ni-63								
Min	8.12E-06	8.04E-06	7.89E-06	7.37E-06	6.06E-06	3.05E-06	4.31E-07	0.00E+00
Max	8.13E-06	8.07E-06	7.95E-06	7.55E-06	6.50E-06	3.86E-06	8.67E-07	0.00E+00
Avg	8.13E-06	8.06E-06	7.94E-06	7.50E-06	6.39E-06	3.65E-06	7.40E-07	0.00E+00
Std	2.28E-09	6.79E-09	1.56E-08	4.41E-08	1.08E-07	1.99E-07	1.13E-07	0.00E+00
Sr-90								
Min	2.06E-03	1.86E-03	1.52E-03	7.56E-04	1.02E-04	9.23E-08	1.86E-16	0.00E+00
Max	2.08E-03	1.93E-03	1.66E-03	9.75E-04	2.14E-04	1.05E-06	2.71E-13	0.00E+00
Avg	2.07E-03	1.90E-03	1.60E-03	8.74E-04	1.58E-04	4.54E-07	4.90E-14	0.00E+00
Std	7.10E-06	1.97E-05	3.88E-05	6.33E-05	3.25E-05	2.80E-07	6.85E-14	0.00E+00
∑ALL								
Min	4.00E-03	3.49E-03	2.74E-03	1.44E-03	4.63E-04	7.15E-05	1.08E-06	0.00E+00
Max	4.03E-03	3.56E-03	2.88E-03	1.66E-03	5.75E-04	7.32E-05	1.52E-06	0.00E+00
Avg	4.02E-03	3.53E-03	2.82E-03	1.56E-03	5.19E-04	7.24E-05	1.39E-06	0.00E+00
Std	7.10E-06	1.97E-05	3.88E-05	6.33E-05	3.25E-05	3.43E-07	1.13E-07	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Water Ingestion

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-07
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.52E-09
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-08
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-02	1.44E-10	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.48E-01	4.73E-01	6.12E-08	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-02	2.32E-01	1.13E-08	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-01	7.92E-02	1.33E-08	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-02	1.44E-10	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.48E-01	4.73E-01	6.12E-08	2.12E-07
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-02	2.32E-01	1.13E-08	6.52E-09
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-01	7.92E-02	1.33E-08	2.77E-08

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Fish Ingestion

Nuclide (j)	DOSE(i,j,t), mrem/yr t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Radon (Water Dep.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Plant (Water Dep.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E-08
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-10
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-09
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.49E-03	1.41E-11	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-02	4.61E-02	5.97E-09	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-03	2.26E-02	1.10E-09	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	7.72E-03	1.29E-09	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.49E-03	1.41E-11	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.25E-02	4.61E-02	5.97E-09	1.71E-08
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E-03	2.26E-02	1.10E-09	5.26E-10
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-02	7.72E-03	1.29E-09	2.23E-09

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Meat (Water Dep.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-08
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-10
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-09
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-03	1.25E-11	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-02	4.10E-02	5.31E-09	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-03	2.01E-02	9.78E-10	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	6.87E-03	1.15E-09	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-03	1.25E-11	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.49E-02	4.10E-02	5.31E-09	1.14E-08
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-03	2.01E-02	9.78E-10	3.49E-10
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-02	6.87E-03	1.15E-09	1.48E-09

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Milk (Water Dep.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.13E-07
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-08
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-08
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-02	2.41E-11	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	7.89E-02	1.02E-08	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.53E-03	3.86E-02	1.88E-09	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-02	1.32E-02	2.21E-09	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-02	2.41E-11	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-01	7.89E-02	1.02E-08	4.13E-07
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.53E-03	3.86E-02	1.88E-09	1.27E-08
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-02	1.32E-02	2.21E-09	5.38E-08

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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Cumulative Probability Summary for: Total Dose Over Pathways

Cumulative Probability	Dose(t), mrem/yr t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
0.025	2.80E+01	2.44E+01	1.89E+01	9.15E+00	2.23E+00	4.18E-01	3.08E-03	0.00E+00
0.050	2.80E+01	2.44E+01	1.90E+01	9.19E+00	2.24E+00	4.25E-01	3.14E-03	0.00E+00
0.075	2.80E+01	2.44E+01	1.90E+01	9.23E+00	2.26E+00	4.40E-01	3.22E-03	0.00E+00
0.100	2.80E+01	2.44E+01	1.90E+01	9.27E+00	2.28E+00	4.52E-01	3.27E-03	0.00E+00
0.125	2.80E+01	2.44E+01	1.90E+01	9.32E+00	2.30E+00	4.65E-01	3.32E-03	0.00E+00
0.150	2.80E+01	2.44E+01	1.91E+01	9.35E+00	2.32E+00	4.76E-01	3.36E-03	0.00E+00
0.175	2.80E+01	2.45E+01	1.91E+01	9.40E+00	2.34E+00	4.84E-01	3.41E-03	0.00E+00
0.200	2.80E+01	2.45E+01	1.91E+01	9.44E+00	2.35E+00	4.99E-01	3.45E-03	0.00E+00
0.225	2.80E+01	2.45E+01	1.91E+01	9.49E+00	2.38E+00	5.06E-01	3.49E-03	0.00E+00
0.250	2.80E+01	2.45E+01	1.92E+01	9.53E+00	2.40E+00	5.16E-01	3.53E-03	0.00E+00
0.275	2.80E+01	2.45E+01	1.92E+01	9.57E+00	2.42E+00	5.24E-01	3.54E-03	0.00E+00
0.300	2.80E+01	2.45E+01	1.92E+01	9.60E+00	2.44E+00	5.27E-01	3.57E-03	0.00E+00
0.325	2.80E+01	2.45E+01	1.92E+01	9.64E+00	2.47E+00	5.31E-01	3.60E-03	0.00E+00
0.350	2.80E+01	2.46E+01	1.93E+01	9.68E+00	2.50E+00	5.39E-01	3.62E-03	0.00E+00
0.375	2.80E+01	2.46E+01	1.93E+01	9.71E+00	2.52E+00	5.46E-01	3.64E-03	0.00E+00
0.400	2.81E+01	2.46E+01	1.93E+01	9.75E+00	2.53E+00	5.50E-01	3.66E-03	0.00E+00
0.425	2.81E+01	2.46E+01	1.93E+01	9.79E+00	2.55E+00	5.55E-01	3.68E-03	0.00E+00
0.450	2.81E+01	2.46E+01	1.94E+01	9.83E+00	2.56E+00	5.59E-01	3.70E-03	0.00E+00
0.475	2.81E+01	2.46E+01	1.94E+01	9.86E+00	2.58E+00	5.65E-01	3.72E-03	0.00E+00
0.500	2.81E+01	2.46E+01	1.94E+01	9.90E+00	2.61E+00	5.72E-01	3.73E-03	0.00E+00
0.525	2.81E+01	2.46E+01	1.94E+01	9.93E+00	2.63E+00	5.79E-01	3.75E-03	0.00E+00
0.550	2.81E+01	2.46E+01	1.94E+01	9.96E+00	2.65E+00	5.87E-01	3.76E-03	0.00E+00
0.575	2.81E+01	2.46E+01	1.95E+01	9.99E+00	2.67E+00	5.98E-01	3.78E-03	0.00E+00
0.600	2.81E+01	2.47E+01	1.95E+01	1.00E+01	2.68E+00	6.05E-01	3.79E-03	0.00E+00
0.625	2.81E+01	2.47E+01	1.95E+01	1.01E+01	2.71E+00	6.17E-01	3.80E-03	0.00E+00
0.650	2.81E+01	2.47E+01	1.95E+01	1.01E+01	2.72E+00	6.21E-01	3.81E-03	0.00E+00
0.675	2.81E+01	2.47E+01	1.95E+01	1.01E+01	2.73E+00	6.27E-01	3.82E-03	0.00E+00
0.700	2.81E+01	2.47E+01	1.96E+01	1.02E+01	2.74E+00	6.37E-01	3.83E-03	0.00E+00
0.725	2.81E+01	2.47E+01	1.96E+01	1.02E+01	2.75E+00	6.49E-01	3.84E-03	0.00E+00
0.750	2.81E+01	2.47E+01	1.96E+01	1.02E+01	2.78E+00	6.61E-01	3.85E-03	0.00E+00
0.775	2.81E+01	2.47E+01	1.96E+01	1.02E+01	2.80E+00	6.73E-01	3.86E-03	0.00E+00
0.800	2.81E+01	2.47E+01	1.96E+01	1.03E+01	2.82E+00	6.82E-01	3.87E-03	0.00E+00
0.825	2.81E+01	2.47E+01	1.96E+01	1.03E+01	2.84E+00	6.91E-01	3.88E-03	0.00E+00
0.850	2.81E+01	2.47E+01	1.97E+01	1.03E+01	2.86E+00	7.02E-01	3.88E-03	0.00E+00
0.875	2.81E+01	2.48E+01	1.97E+01	1.04E+01	2.88E+00	7.25E-01	3.89E-03	0.00E+00
0.900	2.81E+01	2.48E+01	1.97E+01	1.04E+01	2.89E+00	7.41E-01	3.90E-03	0.00E+00
0.925	2.81E+01	2.48E+01	1.97E+01	1.04E+01	2.99E+00	7.58E-01	3.91E-03	4.07E-08
0.950	2.81E+01	2.48E+01	1.97E+01	1.05E+01	3.09E+00	7.74E-01	3.92E-03	1.62E-07
0.975	2.81E+01	2.48E+01	1.97E+01	1.05E+01	3.20E+00	8.33E-01	3.92E-03	3.73E-07
1.000	2.81E+01	2.48E+01	1.98E+01	1.05E+01	3.36E+00	9.18E-01	3.93E-03	6.54E-07

Probabilistic results summary : RESRAD Default

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Summary of dose at graphical times, reptition 1

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	2.80E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01
1.00E+00	2.44E+01	2.48E+01	2.46E+01	2.46E+01	2.48E+01	2.48E+01	2.48E+01	2.48E+01
1.30E+00	2.34E+01	2.39E+01	2.37E+01	2.37E+01	2.39E+01	2.39E+01	2.39E+01	2.39E+01
1.70E+00	2.22E+01	2.28E+01	2.25E+01	2.26E+01	2.28E+01	2.28E+01	2.28E+01	2.28E+01
2.22E+00	2.08E+01	2.15E+01	2.12E+01	2.12E+01	2.15E+01	2.15E+01	2.15E+01	2.15E+01
2.89E+00	1.91E+01	2.00E+01	1.96E+01	1.96E+01	1.99E+01	2.00E+01	2.00E+01	2.00E+01
3.00E+00	1.89E+01	1.98E+01	1.94E+01	1.94E+01	1.97E+01	1.97E+01	1.97E+01	1.98E+01
3.78E+00	1.72E+01	1.82E+01	1.78E+01	1.78E+01	1.82E+01	1.82E+01	1.82E+01	1.82E+01
4.92E+00	1.51E+01	1.63E+01	1.58E+01	1.58E+01	1.62E+01	1.62E+01	1.63E+01	1.63E+01
6.42E+00	1.29E+01	1.42E+01	1.36E+01	1.36E+01	1.41E+01	1.41E+01	1.42E+01	1.42E+01
8.38E+00	1.06E+01	1.20E+01	1.14E+01	1.14E+01	1.19E+01	1.19E+01	1.20E+01	1.20E+01
1.00E+01	9.10E+00	1.05E+01	9.86E+00	9.89E+00	1.04E+01	1.05E+01	1.05E+01	1.05E+01
1.09E+01	8.37E+00	9.77E+00	9.13E+00	9.15E+00	9.67E+00	9.72E+00	9.75E+00	9.77E+00
1.43E+01	6.29E+00	7.64E+00	7.01E+00	7.03E+00	7.54E+00	7.59E+00	7.62E+00	7.64E+00
1.86E+01	4.49E+00	5.68E+00	5.12E+00	5.13E+00	5.59E+00	5.64E+00	5.66E+00	5.68E+00
2.42E+01	3.06E+00	4.00E+00	3.54E+00	3.54E+00	3.92E+00	3.96E+00	3.98E+00	4.00E+00
3.00E+01	2.22E+00	3.36E+00	2.61E+00	2.62E+00	2.88E+00	3.13E+00	3.25E+00	3.36E+00
3.16E+01	2.04E+00	3.57E+00	2.52E+00	2.48E+00	3.08E+00	3.36E+00	3.50E+00	3.56E+00
4.12E+01	1.43E+00	4.30E+00	2.91E+00	2.97E+00	3.93E+00	4.12E+00	4.15E+00	4.30E+00
5.38E+01	2.49E+00	3.95E+00	3.15E+00	3.14E+00	3.65E+00	3.81E+00	3.89E+00	3.95E+00
7.02E+01	2.09E+00	2.92E+00	2.48E+00	2.47E+00	2.77E+00	2.85E+00	2.90E+00	2.92E+00
9.15E+01	6.12E-01	1.42E+00	9.93E-01	9.68E-01	1.31E+00	1.39E+00	1.41E+00	1.42E+00
1.00E+02	3.92E-01	8.80E-01	5.89E-01	5.75E-01	7.34E-01	7.68E-01	8.52E-01	8.80E-01
1.19E+02	1.91E-01	2.96E-01	2.32E-01	2.29E-01	2.58E-01	2.74E-01	2.88E-01	2.96E-01
1.56E+02	7.50E-02	8.20E-02	7.77E-02	7.76E-02	7.97E-02	8.01E-02	8.10E-02	8.20E-02
2.03E+02	2.48E-02	2.66E-02	2.60E-02	2.62E-02	2.65E-02	2.65E-02	2.65E-02	2.66E-02
2.65E+02	6.30E-03	7.47E-03	7.14E-03	7.24E-03	7.45E-03	7.47E-03	7.47E-03	7.47E-03
3.00E+02	3.01E-03	3.92E-03	3.66E-03	3.73E-03	3.90E-03	3.92E-03	3.92E-03	3.92E-03
3.46E+02	1.22E-03	1.86E-03	1.67E-03	1.72E-03	1.84E-03	1.85E-03	1.86E-03	1.86E-03
4.51E+02	1.90E-04	4.36E-04	3.59E-04	3.78E-04	4.29E-04	4.33E-04	4.36E-04	4.36E-04
5.88E+02	1.77E-05	6.34E-05	4.81E-05	5.15E-05	6.19E-05	6.28E-05	6.33E-05	6.34E-05
7.67E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	6.54E-07	2.19E-08	0.00E+00	0.00E+00	2.70E-07	3.96E-07	6.51E-07

Probabilistic results summary : RESRAD Default

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Summary of dose at graphical times, reptition 2

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	2.80E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01
1.00E+00	2.44E+01	2.48E+01	2.46E+01	2.46E+01	2.48E+01	2.48E+01	2.48E+01	2.48E+01
1.30E+00	2.34E+01	2.39E+01	2.37E+01	2.37E+01	2.39E+01	2.39E+01	2.39E+01	2.39E+01
1.70E+00	2.22E+01	2.28E+01	2.25E+01	2.26E+01	2.28E+01	2.28E+01	2.28E+01	2.28E+01
2.22E+00	2.08E+01	2.15E+01	2.12E+01	2.12E+01	2.15E+01	2.15E+01	2.15E+01	2.15E+01
2.89E+00	1.91E+01	2.00E+01	1.96E+01	1.96E+01	1.99E+01	2.00E+01	2.00E+01	2.00E+01
3.00E+00	1.89E+01	1.98E+01	1.94E+01	1.94E+01	1.97E+01	1.97E+01	1.97E+01	1.98E+01
3.78E+00	1.72E+01	1.82E+01	1.78E+01	1.78E+01	1.82E+01	1.82E+01	1.82E+01	1.82E+01
4.92E+00	1.51E+01	1.63E+01	1.58E+01	1.58E+01	1.62E+01	1.62E+01	1.63E+01	1.63E+01
6.42E+00	1.29E+01	1.42E+01	1.36E+01	1.36E+01	1.41E+01	1.41E+01	1.42E+01	1.42E+01
8.38E+00	1.06E+01	1.20E+01	1.14E+01	1.14E+01	1.19E+01	1.19E+01	1.20E+01	1.20E+01
1.00E+01	9.11E+00	1.05E+01	9.86E+00	9.89E+00	1.04E+01	1.05E+01	1.05E+01	1.05E+01
1.09E+01	8.37E+00	9.77E+00	9.13E+00	9.15E+00	9.66E+00	9.72E+00	9.75E+00	9.77E+00
1.43E+01	6.29E+00	7.64E+00	7.01E+00	7.03E+00	7.53E+00	7.59E+00	7.62E+00	7.64E+00
1.86E+01	4.49E+00	5.68E+00	5.12E+00	5.13E+00	5.58E+00	5.64E+00	5.66E+00	5.68E+00
2.42E+01	3.06E+00	3.99E+00	3.54E+00	3.55E+00	3.91E+00	3.96E+00	3.98E+00	3.99E+00
3.00E+01	2.20E+00	3.30E+00	2.61E+00	2.61E+00	2.89E+00	3.14E+00	3.27E+00	3.30E+00
3.16E+01	2.02E+00	3.55E+00	2.51E+00	2.46E+00	3.05E+00	3.41E+00	3.48E+00	3.55E+00
4.12E+01	1.47E+00	4.24E+00	2.92E+00	2.98E+00	3.88E+00	3.98E+00	4.14E+00	4.24E+00
5.38E+01	2.42E+00	3.92E+00	3.16E+00	3.16E+00	3.61E+00	3.79E+00	3.85E+00	3.92E+00
7.02E+01	2.10E+00	2.97E+00	2.48E+00	2.46E+00	2.76E+00	2.82E+00	2.90E+00	2.97E+00
9.15E+01	6.43E-01	1.41E+00	9.92E-01	9.52E-01	1.33E+00	1.38E+00	1.40E+00	1.41E+00
1.00E+02	4.11E-01	8.89E-01	5.89E-01	5.61E-01	7.54E-01	7.70E-01	8.48E-01	8.89E-01
1.19E+02	1.93E-01	3.00E-01	2.32E-01	2.27E-01	2.68E-01	2.81E-01	2.90E-01	2.99E-01
1.56E+02	7.51E-02	8.20E-02	7.77E-02	7.74E-02	8.01E-02	8.10E-02	8.14E-02	8.20E-02
2.03E+02	2.47E-02	2.66E-02	2.60E-02	2.62E-02	2.65E-02	2.65E-02	2.65E-02	2.66E-02
2.65E+02	6.28E-03	7.48E-03	7.14E-03	7.23E-03	7.45E-03	7.46E-03	7.47E-03	7.48E-03
3.00E+02	3.00E-03	3.93E-03	3.66E-03	3.73E-03	3.90E-03	3.92E-03	3.92E-03	3.93E-03
3.46E+02	1.21E-03	1.86E-03	1.67E-03	1.72E-03	1.84E-03	1.85E-03	1.85E-03	1.86E-03
4.51E+02	1.88E-04	4.37E-04	3.59E-04	3.78E-04	4.29E-04	4.34E-04	4.35E-04	4.37E-04
5.88E+02	1.74E-05	6.35E-05	4.80E-05	5.14E-05	6.18E-05	6.28E-05	6.32E-05	6.35E-05
7.67E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	4.01E-07	1.51E-08	0.00E+00	0.00E+00	1.62E-07	2.58E-07	4.00E-07

Probabilistic results summary : RESRAD Default

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Summary of dose at graphical times, reptition 3

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	2.80E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01	2.81E+01
1.00E+00	2.44E+01	2.48E+01	2.46E+01	2.46E+01	2.48E+01	2.48E+01	2.48E+01	2.48E+01
1.30E+00	2.34E+01	2.39E+01	2.37E+01	2.37E+01	2.39E+01	2.39E+01	2.39E+01	2.39E+01
1.70E+00	2.22E+01	2.28E+01	2.25E+01	2.26E+01	2.28E+01	2.28E+01	2.28E+01	2.28E+01
2.22E+00	2.08E+01	2.15E+01	2.12E+01	2.12E+01	2.15E+01	2.15E+01	2.15E+01	2.15E+01
2.89E+00	1.91E+01	2.00E+01	1.96E+01	1.96E+01	1.99E+01	2.00E+01	2.00E+01	2.00E+01
3.00E+00	1.89E+01	1.98E+01	1.94E+01	1.94E+01	1.97E+01	1.97E+01	1.97E+01	1.98E+01
3.78E+00	1.72E+01	1.82E+01	1.78E+01	1.78E+01	1.82E+01	1.82E+01	1.82E+01	1.82E+01
4.92E+00	1.52E+01	1.63E+01	1.58E+01	1.58E+01	1.62E+01	1.62E+01	1.63E+01	1.63E+01
6.42E+00	1.29E+01	1.42E+01	1.36E+01	1.36E+01	1.41E+01	1.41E+01	1.42E+01	1.42E+01
8.38E+00	1.06E+01	1.20E+01	1.14E+01	1.14E+01	1.19E+01	1.19E+01	1.20E+01	1.20E+01
1.00E+01	9.11E+00	1.05E+01	9.86E+00	9.89E+00	1.04E+01	1.05E+01	1.05E+01	1.05E+01
1.09E+01	8.37E+00	9.77E+00	9.13E+00	9.16E+00	9.67E+00	9.72E+00	9.76E+00	9.77E+00
1.43E+01	6.29E+00	7.64E+00	7.01E+00	7.03E+00	7.54E+00	7.59E+00	7.62E+00	7.64E+00
1.86E+01	4.50E+00	5.68E+00	5.12E+00	5.13E+00	5.59E+00	5.64E+00	5.67E+00	5.68E+00
2.42E+01	3.06E+00	3.99E+00	3.54E+00	3.55E+00	3.92E+00	3.96E+00	3.98E+00	3.99E+00
3.00E+01	2.21E+00	3.21E+00	2.61E+00	2.59E+00	2.99E+00	3.08E+00	3.16E+00	3.21E+00
3.16E+01	2.03E+00	3.48E+00	2.52E+00	2.45E+00	3.17E+00	3.32E+00	3.45E+00	3.48E+00
4.12E+01	1.50E+00	4.16E+00	2.91E+00	2.94E+00	3.85E+00	4.04E+00	4.14E+00	4.16E+00
5.38E+01	2.38E+00	3.86E+00	3.15E+00	3.13E+00	3.69E+00	3.78E+00	3.80E+00	3.86E+00
7.02E+01	2.06E+00	2.92E+00	2.48E+00	2.45E+00	2.77E+00	2.83E+00	2.88E+00	2.92E+00
9.15E+01	6.25E-01	1.46E+00	9.87E-01	9.67E-01	1.31E+00	1.37E+00	1.41E+00	1.46E+00
1.00E+02	3.98E-01	9.18E-01	5.89E-01	5.76E-01	7.44E-01	7.81E-01	8.68E-01	9.18E-01
1.19E+02	1.91E-01	3.14E-01	2.32E-01	2.30E-01	2.63E-01	2.69E-01	2.90E-01	3.13E-01
1.56E+02	7.50E-02	8.34E-02	7.77E-02	7.76E-02	7.96E-02	8.07E-02	8.17E-02	8.34E-02
2.03E+02	2.48E-02	2.65E-02	2.60E-02	2.62E-02	2.65E-02	2.65E-02	2.65E-02	2.65E-02
2.65E+02	6.32E-03	7.48E-03	7.14E-03	7.24E-03	7.45E-03	7.46E-03	7.47E-03	7.48E-03
3.00E+02	3.03E-03	3.93E-03	3.66E-03	3.73E-03	3.90E-03	3.92E-03	3.92E-03	3.93E-03
3.46E+02	1.23E-03	1.86E-03	1.67E-03	1.72E-03	1.84E-03	1.85E-03	1.85E-03	1.86E-03
4.51E+02	1.93E-04	4.37E-04	3.59E-04	3.78E-04	4.29E-04	4.34E-04	4.35E-04	4.37E-04
5.88E+02	1.82E-05	6.35E-05	4.80E-05	5.14E-05	6.19E-05	6.28E-05	6.32E-05	6.35E-05
7.67E+02	0.00E+00	9.52E-08	9.52E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.42E-08
1.00E+03	0.00E+00	6.27E-07	2.32E-08	0.00E+00	0.00E+00	1.61E-07	4.33E-07	6.25E-07

Probabilistic results summary : RESRAD Default

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Peak of the mean dose (averaged over observations) at graphical times

Repetition	Time of peak mean dose	Peak mean dose
	Years	mrem/yr
1	0.000E+00	2.806E+01
2	0.000E+00	2.806E+01
3	0.000E+00	2.806E+01

Title : RESRAD Default

Input File : ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Coefficients for peak All Pathways Dose

Coefficient =	PCC		SRC		PRCC		SRRC	
Repetition =	1		1		1		1	
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Kd of Cs-134 in Contaminated Zone	3	-0.19	3	-0.02	10	-0.03	10	0.00
Kd of Cs-134 in Unsaturated Zone 1	10	-0.03	10	0.00	12	0.02	12	0.00
Kd of Cs-134 in Saturated Zone	9	0.03	9	0.00	7	0.04	7	0.00
Kd of Cs-137 in Contaminated Zone	6	0.08	6	0.01	11	-0.02	11	0.00
Kd of Cs-137 in Unsaturated Zone 1	5	0.08	5	0.01	8	0.03	8	0.00
Kd of Cs-137 in Saturated Zone	12	0.02	12	0.00	9	-0.03	9	0.00
Kd of Ni-63 in Contaminated Zone	8	-0.06	8	-0.01	3	-0.14	3	-0.01
Kd of Ni-63 in Unsaturated Zone 1	4	0.12	4	0.01	2	0.16	2	0.01
Kd of Ni-63 in Saturated Zone	2	0.21	2	0.02	5	0.09	5	0.01
Kd of Sr-90 in Contaminated Zone	1	0.99	1	0.99	1	1.00	1	1.00
Kd of Sr-90 in Unsaturated Zone 1	11	-0.03	11	0.00	6	-0.05	6	0.00
Kd of Sr-90 in Saturated Zone	7	0.06	7	0.01	4	0.12	4	0.01
R-SQUARE		0.99		0.99		1.00		1.00

-Rank is set to zero if the dose is zero or the correlation matrix is singular.

-R-SQUARE varies between 0 and 1 and is called the coefficient of determination; it provides a measure of the variation in the dependent variable (Dose) explained by regression on the independent variables.

Title : RESRAD Default
Input File : ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Coefficients for peak All Pathways Dose

Coefficient =	PCC		SRC		PRCC		SRRC	
Repetition =	2		2		2		2	
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Kd of Cs-134 in Contaminated Zone	12	-0.03	12	0.00	9	0.04	9	0.00
Kd of Cs-134 in Unsaturated Zone 1	6	-0.08	6	-0.01	7	-0.07	7	0.00
Kd of Cs-134 in Saturated Zone	3	0.15	3	0.02	10	-0.02	10	0.00
Kd of Cs-137 in Contaminated Zone	11	0.03	11	0.00	11	0.01	11	0.00
Kd of Cs-137 in Unsaturated Zone 1	2	-0.22	2	-0.03	8	-0.06	8	0.00
Kd of Cs-137 in Saturated Zone	5	0.11	5	0.01	2	0.12	2	0.01
Kd of Ni-63 in Contaminated Zone	8	-0.07	8	-0.01	12	0.00	12	0.00
Kd of Ni-63 in Unsaturated Zone 1	7	-0.07	7	-0.01	5	0.08	5	0.01
Kd of Ni-63 in Saturated Zone	9	0.06	9	0.01	6	0.08	6	0.01
Kd of Sr-90 in Contaminated Zone	1	0.99	1	0.99	1	1.00	1	1.00
Kd of Sr-90 in Unsaturated Zone 1	4	-0.13	4	-0.02	3	-0.11	3	-0.01
Kd of Sr-90 in Saturated Zone	10	0.04	10	0.01	4	-0.09	4	-0.01
R-SQUARE		0.99		0.99		1.00		1.00

-Rank is set to zero if the dose is zero or the correlation matrix is singular.
-R-SQUARE varies between 0 and 1 and is called the coefficient of determination; it provides a measure of the variation in the dependent variable (Dose) explained by regression on the independent variables.

Title : RESRAD Default
Input File : ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Coefficients for peak All Pathways Dose

Coefficient =	PCC		SRC		PRCC		SRRC	
Repetition =	3		3		3		3	
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Kd of Cs-134 in Contaminated Zone	9	-0.08	9	-0.01	3	-0.13	3	-0.01
Kd of Cs-134 in Unsaturated Zone 1	11	-0.06	11	-0.01	8	-0.04	8	0.00
Kd of Cs-134 in Saturated Zone	3	-0.20	3	-0.02	11	-0.02	11	0.00
Kd of Cs-137 in Contaminated Zone	5	-0.12	5	-0.01	7	-0.05	7	0.00
Kd of Cs-137 in Unsaturated Zone 1	2	0.26	2	0.03	2	0.21	2	0.02
Kd of Cs-137 in Saturated Zone	6	-0.11	6	-0.01	10	-0.02	10	0.00
Kd of Ni-63 in Contaminated Zone	12	0.01	12	0.00	12	-0.01	12	0.00
Kd of Ni-63 in Unsaturated Zone 1	10	0.07	10	0.01	5	-0.08	5	-0.01
Kd of Ni-63 in Saturated Zone	8	-0.09	8	-0.01	6	-0.07	6	0.00
Kd of Sr-90 in Contaminated Zone	1	0.99	1	0.99	1	1.00	1	1.00
Kd of Sr-90 in Unsaturated Zone 1	4	0.13	4	0.01	9	0.04	9	0.00
Kd of Sr-90 in Saturated Zone	7	0.10	7	0.01	4	0.09	4	0.01
R-SQUARE		0.99		0.99		1.00		1.00

-Rank is set to zero if the dose is zero or the correlation matrix is singular.
-R-SQUARE varies between 0 and 1 and is called the coefficient of determination; it provides a measure of the variation in the dependent variable (Dose) explained by regression on the independent variables.

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

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Dose Conversion Factor (and Related) Parameter Summary
Dose Library: Surface Soil DCGL 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	Ba-137m (Source: FGR 12)	3.606E+00	3.606E+00	DCF1(1)
A-1	Co-60 (Source: FGR 12)	1.622E+01	1.622E+01	DCF1(2)
A-1	Cs-134 (Source: FGR 12)	9.472E+00	9.472E+00	DCF1(3)
A-1	Cs-137 (Source: FGR 12)	7.510E-04	7.510E-04	DCF1(4)
A-1	Ni-63 (Source: FGR 12)	0.000E+00	0.000E+00	DCF1(5)
A-1	Sr-90 (Source: FGR 12)	7.043E-04	7.043E-04	DCF1(6)
A-1	Y-90 (Source: FGR 12)	2.391E-02	2.391E-02	DCF1(7)
B-1	Dose conversion factors for inhalation, mrem/pCi:			
B-1	Co-60	2.190E-04	2.190E-04	DCF2(1)
B-1	Cs-134	4.620E-05	4.620E-05	DCF2(2)
B-1	Cs-137+D	3.190E-05	3.190E-05	DCF2(3)
B-1	Ni-63	6.290E-06	6.290E-06	DCF2(4)
B-1	Sr-90+D	1.308E-03	1.300E-03	DCF2(5)
D-1	Dose conversion factors for ingestion, mrem/pCi:			
D-1	Co-60	2.690E-05	2.690E-05	DCF3(1)
D-1	Cs-134	7.330E-05	7.330E-05	DCF3(2)
D-1	Cs-137+D	5.000E-05	5.000E-05	DCF3(3)
D-1	Ni-63	5.770E-07	5.770E-07	DCF3(4)
D-1	Sr-90+D	1.528E-04	1.420E-04	DCF3(5)
D-34	Food transfer factors:			
D-34	Co-60 , plant/soil concentration ratio, dimensionless	1.500E-01	8.000E-02	RTF(1,1)
D-34	Co-60 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.800E-02	2.000E-02	RTF(1,2)
D-34	Co-60 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.000E-03	2.000E-03	RTF(1,3)
D-34				
D-34	Cs-134 , plant/soil concentration ratio, dimensionless	7.800E-02	4.000E-02	RTF(2,1)
D-34	Cs-134 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	6.500E-02	3.000E-02	RTF(2,2)
D-34	Cs-134 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.400E-02	8.000E-03	RTF(2,3)
D-34				
D-34	Cs-137+D , plant/soil concentration ratio, dimensionless	7.800E-02	4.000E-02	RTF(3,1)
D-34	Cs-137+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	6.500E-02	3.000E-02	RTF(3,2)
D-34	Cs-137+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	1.400E-02	8.000E-03	RTF(3,3)
D-34				
D-34	Ni-63 , plant/soil concentration ratio, dimensionless	9.200E-02	5.000E-02	RTF(4,1)
D-34	Ni-63 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	5.000E-03	5.000E-03	RTF(4,2)
D-34	Ni-63 , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	3.200E-02	2.000E-02	RTF(4,3)
D-34				
D-34	Sr-90+D , plant/soil concentration ratio, dimensionless	5.900E-01	3.000E-01	RTF(5,1)
D-34	Sr-90+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d)	8.000E-03	8.000E-03	RTF(5,2)
D-34	Sr-90+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d)	2.700E-03	2.000E-03	RTF(5,3)
D-5	Bioaccumulation factors, fresh water, L/kg:			
D-5	Co-60 , fish	3.000E+02	3.000E+02	BIOFAC(1,1)
D-5	Co-60 , crustacea and mollusks	2.000E+02	2.000E+02	BIOFAC(1,2)
D-5				
D-5	Cs-134 , fish	2.000E+03	2.000E+03	BIOFAC(2,1)
D-5	Cs-134 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(2,2)

Summary : RESRAD Default
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Dose Conversion Factor (and Related) Parameter Summary (continued)
Dose Library: Surface Soil DCGL Plus FGR 11

Menu	Parameter	Current Value#	Base Case*	Parameter Name
D-5	Cs-137+D , fish	2.000E+03	2.000E+03	BIOFAC(3,1)
D-5	Cs-137+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(3,2)
D-5				
D-5	Ni-63 , fish	1.000E+02	1.000E+02	BIOFAC(4,1)
D-5	Ni-63 , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(4,2)
D-5				
D-5	Sr-90+D , fish	6.000E+01	6.000E+01	BIOFAC(5,1)
D-5	Sr-90+D , crustacea and mollusks	1.000E+02	1.000E+02	BIOFAC(5,2)

#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 : RESRAD Default

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Site-Specific Parameter Summary

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R011	Area of contaminated zone (m**2)	6.450E+04	1.000E+04	---	AREA
R011	Thickness of contaminated zone (m)	1.500E-01	2.000E+00	---	THICK0
R011	Fraction of contamination that is submerged	0.000E+00	0.000E+00	---	SUBMFRACT
R011	Length parallel to aquifer flow (m)	2.870E+02	1.000E+02	---	LCZPAQ
R011	Basic radiation dose limit (mrem/yr)	2.500E+01	3.000E+01	---	BRDL
R011	Time since placement of material (yr)	0.000E+00	0.000E+00	---	TI
R011	Times for calculations (yr)	1.000E+00	1.000E+00	---	T(2)
R011	Times for calculations (yr)	3.000E+00	3.000E+00	---	T(3)
R011	Times for calculations (yr)	1.000E+01	1.000E+01	---	T(4)
R011	Times for calculations (yr)	3.000E+01	3.000E+01	---	T(5)
R011	Times for calculations (yr)	1.000E+02	1.000E+02	---	T(6)
R011	Times for calculations (yr)	3.000E+02	3.000E+02	---	T(7)
R011	Times for calculations (yr)	1.000E+03	1.000E+03	---	T(8)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(9)
R011	Times for calculations (yr)	not used	0.000E+00	---	T(10)
R012	Initial principal radionuclide (pCi/g): Co-60	1.000E+00	0.000E+00	---	S1(1)
R012	Initial principal radionuclide (pCi/g): Cs-134	1.000E+00	0.000E+00	---	S1(2)
R012	Initial principal radionuclide (pCi/g): Cs-137	1.000E+00	0.000E+00	---	S1(3)
R012	Initial principal radionuclide (pCi/g): Ni-63	1.000E+00	0.000E+00	---	S1(4)
R012	Initial principal radionuclide (pCi/g): Sr-90	1.000E+00	0.000E+00	---	S1(5)
R012	Concentration in groundwater (pCi/L): Co-60	not used	0.000E+00	---	W1(1)
R012	Concentration in groundwater (pCi/L): Cs-134	not used	0.000E+00	---	W1(2)
R012	Concentration in groundwater (pCi/L): Cs-137	not used	0.000E+00	---	W1(3)
R012	Concentration in groundwater (pCi/L): Ni-63	not used	0.000E+00	---	W1(4)
R012	Concentration in groundwater (pCi/L): Sr-90	not used	0.000E+00	---	W1(5)
R013	Cover depth (m)	0.000E+00	0.000E+00	---	COVER0
R013	Density of cover material (g/cm**3)	not used	1.500E+00	---	DENSCV
R013	Cover depth erosion rate (m/yr)	not used	1.000E-03	---	VCV
R013	Density of contaminated zone (g/cm**3)	1.800E+00	1.500E+00	---	DENSCZ
R013	Contaminated zone erosion rate (m/yr)	1.500E-03	1.000E-03	---	VCZ
R013	Contaminated zone total porosity	3.500E-01	4.000E-01	---	TPCZ
R013	Contaminated zone field capacity	6.600E-02	2.000E-01	---	FCCZ
R013	Contaminated zone hydraulic conductivity (m/yr)	2.880E+03	1.000E+01	---	HCCZ
R013	Contaminated zone b parameter	9.700E-01	5.300E+00	---	BCZ
R013	Average annual wind speed (m/sec)	4.200E+00	2.000E+00	---	WIND
R013	Humidity in air (g/m**3)	not used	8.000E+00	---	HUMID
R013	Evapotranspiration coefficient	6.250E-01	5.000E-01	---	EVAPTR
R013	Precipitation (m/yr)	8.300E-01	1.000E+00	---	PRECIP
R013	Irrigation (m/yr)	1.900E-01	2.000E-01	---	RI
R013	Irrigation mode	overhead	overhead	---	IDITCH
R013	Runoff coefficient	2.000E-01	2.000E-01	---	RUNOFF
R013	Watershed area for nearby stream or pond (m**2)	1.000E+06	1.000E+06	---	WAREA
R013	Accuracy for water/soil computations	1.000E-03	1.000E-03	---	EPS
R014	Density of saturated zone (g/cm**3)	1.800E+00	1.500E+00	---	DENSAQ
R014	Saturated zone total porosity	3.500E-01	4.000E-01	---	TPSZ
R014	Saturated zone effective porosity	2.900E-01	2.000E-01	---	EPSZ
R014	Saturated zone field capacity	6.600E-02	2.000E-01	---	FCSZ

Summary : RESRAD Default
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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R014	Saturated zone hydraulic conductivity (m/yr)	2.880E+03	1.000E+02	---	HCSZ
R014	Saturated zone hydraulic gradient	3.900E-03	2.000E-02	---	HGWT
R014	Saturated zone b parameter	not used	5.300E+00	---	BSZ
R014	Water table drop rate (m/yr)	0.000E+00	1.000E-03	---	VWT
R014	Well pump intake depth (m below water table)	3.300E+00	1.000E+01	---	DWIBWT
R014	Model: Nondispersion (ND) or Mass-Balance (MB)	ND	ND	---	MODEL
R014	Well pumping rate (m**3/yr)	2.250E+03	2.500E+02	---	UW
R015	Number of unsaturated zone strata	1	1	---	NS
R015	Unsat. zone 1, thickness (m)	3.450E+00	4.000E+00	---	H(1)
R015	Unsat. zone 1, soil density (g/cm**3)	1.800E+00	1.500E+00	---	DENSUZ(1)
R015	Unsat. zone 1, total porosity	3.500E-01	4.000E-01	---	TPUZ(1)
R015	Unsat. zone 1, effective porosity	2.900E-01	2.000E-01	---	EPUZ(1)
R015	Unsat. zone 1, field capacity	6.600E-02	2.000E-01	---	FCUZ(1)
R015	Unsat. zone 1, soil-specific b parameter	9.700E-01	5.300E+00	---	BUZ(1)
R015	Unsat. zone 1, hydraulic conductivity (m/yr)	2.880E+03	1.000E+01	---	HCUZ(1)
R016	Distribution coefficients for Co-60				
R016	Contaminated zone (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCC(1)
R016	Unsaturated zone 1 (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCU(1,1)
R016	Saturated zone (cm**3/g)	1.161E+03	1.000E+03	---	DCNUCS(1)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.022E-03	ALEACH(1)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(1)
R016	Distribution coefficients for Cs-134				
R016	Contaminated zone (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCC(2)
R016	Unsaturated zone 1 (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCU(2,1)
R016	Saturated zone (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCS(2)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.868E-03	ALEACH(2)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(2)
R016	Distribution coefficients for Cs-137				
R016	Contaminated zone (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCC(3)
R016	Unsaturated zone 1 (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCU(3,1)
R016	Saturated zone (cm**3/g)	6.350E+02	4.600E+03	---	DCNUCS(3)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.868E-03	ALEACH(3)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(3)
R016	Distribution coefficients for Ni-63				
R016	Contaminated zone (cm**3/g)	3.310E+02	1.000E+03	---	DCNUCC(4)
R016	Unsaturated zone 1 (cm**3/g)	3.310E+02	1.000E+03	---	DCNUCU(4,1)
R016	Saturated zone (cm**3/g)	3.310E+02	1.000E+03	---	DCNUCS(4)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.583E-03	ALEACH(4)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(4)
R016	Distribution coefficients for Sr-90				
R016	Contaminated zone (cm**3/g)	3.400E+00	3.000E+01	---	DCNUCC(5)
R016	Unsaturated zone 1 (cm**3/g)	3.400E+00	3.000E+01	---	DCNUCU(5,1)
R016	Saturated zone (cm**3/g)	3.400E+00	3.000E+01	---	DCNUCS(5)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	3.451E-01	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
R017	Inhalation rate (m**3/yr)	8.400E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	2.350E-05	1.000E-04	---	MLINH
R017	Exposure duration	3.000E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	5.500E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	4.000E-01	7.000E-01	---	SHF1
R017	Fraction of time spent indoors	6.490E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	1.240E-01	2.500E-01	---	FOTD
R017	Shape factor flag, external gamma	1.000E+00	1.000E+00	>0 shows circular AREA.	FS
R017	Radii of shape factor array (used if FS = -1):				
R017	Outer annular radius (m), ring 1:	not used	5.000E+01	---	RAD_SHAPE(1)
R017	Outer annular radius (m), ring 2:	not used	7.071E+01	---	RAD_SHAPE(2)
R017	Outer annular radius (m), ring 3:	not used	0.000E+00	---	RAD_SHAPE(3)
R017	Outer annular radius (m), ring 4:	not used	0.000E+00	---	RAD_SHAPE(4)
R017	Outer annular radius (m), ring 5:	not used	0.000E+00	---	RAD_SHAPE(5)
R017	Outer annular radius (m), ring 6:	not used	0.000E+00	---	RAD_SHAPE(6)
R017	Outer annular radius (m), ring 7:	not used	0.000E+00	---	RAD_SHAPE(7)
R017	Outer annular radius (m), ring 8:	not used	0.000E+00	---	RAD_SHAPE(8)
R017	Outer annular radius (m), ring 9:	not used	0.000E+00	---	RAD_SHAPE(9)
R017	Outer annular radius (m), ring 10:	not used	0.000E+00	---	RAD_SHAPE(10)
R017	Outer annular radius (m), ring 11:	not used	0.000E+00	---	RAD_SHAPE(11)
R017	Outer annular radius (m), ring 12:	not used	0.000E+00	---	RAD_SHAPE(12)
R017	Fractions of annular areas within AREA:				
R017	Ring 1	not used	1.000E+00	---	FRACA(1)
R017	Ring 2	not used	2.732E-01	---	FRACA(2)
R017	Ring 3	not used	0.000E+00	---	FRACA(3)
R017	Ring 4	not used	0.000E+00	---	FRACA(4)
R017	Ring 5	not used	0.000E+00	---	FRACA(5)
R017	Ring 6	not used	0.000E+00	---	FRACA(6)
R017	Ring 7	not used	0.000E+00	---	FRACA(7)
R017	Ring 8	not used	0.000E+00	---	FRACA(8)
R017	Ring 9	not used	0.000E+00	---	FRACA(9)
R017	Ring 10	not used	0.000E+00	---	FRACA(10)
R017	Ring 11	not used	0.000E+00	---	FRACA(11)
R017	Ring 12	not used	0.000E+00	---	FRACA(12)
R018	Fruits, vegetables and grain consumption (kg/yr)	1.120E+02	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	2.140E+01	1.400E+01	---	DIET(2)
R018	Milk consumption (L/yr)	2.330E+02	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	6.510E+01	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	not used	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	not used	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	1.830E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	4.780E+02	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	1.000E+00	1.000E+00	---	FDW
R018	Contamination fraction of household water	not used	1.000E+00	---	FHHW
R018	Contamination fraction of livestock water	1.000E+00	1.000E+00	---	FLW
R018	Contamination fraction of irrigation water	1.000E+00	1.000E+00	---	FIRW
R018	Contamination fraction of aquatic food	not used	5.000E-01	---	FR9
R018	Contamination fraction of plant food	1.000E+00	-1	---	FPLANT

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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	Contamination fraction of meat	1.000E+00	-1	---	FMEAT
R018	Contamination fraction of milk	1.000E+00	-1	---	FMILK
R019	Livestock fodder intake for meat (kg/day)	2.830E+01	6.800E+01	---	LFI5
R019	Livestock fodder intake for milk (kg/day)	6.520E+01	5.500E+01	---	LFI6
R019	Livestock water intake for meat (L/day)	5.060E+01	5.000E+01	---	LWI5
R019	Livestock water intake for milk (L/day)	6.000E+01	1.600E+02	---	LWI6
R019	Livestock soil intake (kg/day)	5.000E-01	5.000E-01	---	LSI
R019	Mass loading for foliar deposition (g/m**3)	4.000E-04	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	1.220E+00	9.000E-01	---	DROOT
R019	Drinking water fraction from ground water	1.000E+00	1.000E+00	---	FGWDW
R019	Household water fraction from ground water	not used	1.000E+00	---	FGWHH
R019	Livestock water fraction from ground water	1.000E+00	1.000E+00	---	FGWLW
R019	Irrigation fraction from ground water	1.000E+00	1.000E+00	---	FGWIR
R19B	Wet weight crop yield for Non-Leafy (kg/m**2)	1.750E+00	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	2.900E+00	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	1.900E+00	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	2.460E-01	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	1.230E-01	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	8.200E-02	8.000E-02	---	TE(3)
R19B	Translocation Factor for Non-Leafy	1.000E-01	1.000E-01	---	TIV(1)
R19B	Translocation Factor for Leafy	1.000E+00	1.000E+00	---	TIV(2)
R19B	Translocation Factor for Fodder	1.000E+00	1.000E+00	---	TIV(3)
R19B	Dry Foliar Interception Fraction for Non-Leafy	3.500E-01	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	3.500E-01	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	3.500E-01	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	3.500E-01	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	5.800E-01	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	3.500E-01	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	3.300E+01	2.000E+01	---	WLAM
C14	C-12 concentration in water (g/cm**3)	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	1.000E+00	2.000E+01	---	STOR_T(4)
STOR	Fish	7.000E+00	7.000E+00	---	STOR_T(5)
STOR	Crustacea and mollusks	7.000E+00	7.000E+00	---	STOR_T(6)

Summary : RESRAD Default
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Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
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	32	---	---	NPTS
TITL	Maximum number of integration points for dose	17	---	---	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	suppressed
7 -- drinking water	active
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Summary : RESRAD Default
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Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	64500.00 square meters	Co-60	1.000E+00
Thickness:	0.15 meters	Cs-134	1.000E+00
Cover Depth:	0.00 meters	Cs-137	1.000E+00
		Ni-63	1.000E+00
		Sr-90	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):	1.206E+01	9.799E+00	6.770E+00	2.700E+00	7.361E-01	1.300E-01	0.000E+00	0.000E+00
M(t):	4.823E-01	3.920E-01	2.708E-01	1.080E-01	2.944E-02	5.201E-03	0.000E+00	0.000E+00

Maximum TDOSE(t): 1.206E+01 mrem/yr at t = 0.000E+00 years

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	5.102E+00	0.4231	1.962E-06	0.0000	0.000E+00	0.0000	6.170E-02	0.0051	9.682E-02	0.0080	1.991E-02	0.0017	3.546E-04	0.0000
Cs-134	2.813E+00	0.2333	3.751E-07	0.0000	0.000E+00	0.0000	7.925E-02	0.0066	2.023E-01	0.0168	2.275E-01	0.0189	8.759E-04	0.0001
Cs-137	1.182E+00	0.0980	3.013E-07	0.0000	0.000E+00	0.0000	6.290E-02	0.0052	1.605E-01	0.0133	1.806E-01	0.0150	6.951E-04	0.0001
Ni-63	0.000E+00	0.0000	5.983E-08	0.0000	0.000E+00	0.0000	8.622E-04	0.0001	1.526E-04	0.0000	5.276E-03	0.0004	8.079E-06	0.0000
Sr-90	7.513E-03	0.0006	1.047E-05	0.0000	0.000E+00	0.0000	1.244E+00	0.1031	1.747E-01	0.0145	4.340E-01	0.0360	1.799E-03	0.0001
Total	9.104E+00	0.7550	1.316E-05	0.0000	0.000E+00	0.0000	1.448E+00	0.1201	6.345E-01	0.0526	8.673E-01	0.0719	3.733E-03	0.0003

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.280E+00	0.4379
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.323E+00	0.2756
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.586E+00	0.1316
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.299E-03	0.0005
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.862E+00	0.1544
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	1.206E+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-	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.
Co-60	4.457E+00	0.4548	1.701E-06	0.0000	0.000E+00	0.0000	5.351E-02	0.0055	8.396E-02	0.0086	1.727E-02	0.0018	3.075E-04	0.0000
Cs-134	2.003E+00	0.2044	2.649E-07	0.0000	0.000E+00	0.0000	5.598E-02	0.0057	1.429E-01	0.0146	1.607E-01	0.0164	6.187E-04	0.0001
Cs-137	1.150E+00	0.1174	2.909E-07	0.0000	0.000E+00	0.0000	6.074E-02	0.0062	1.550E-01	0.0158	1.744E-01	0.0178	6.712E-04	0.0001
Ni-63	0.000E+00	0.0000	5.861E-08	0.0000	0.000E+00	0.0000	8.447E-04	0.0001	1.495E-04	0.0000	5.169E-03	0.0005	7.914E-06	0.0000
Sr-90	5.188E-03	0.0005	7.162E-06	0.0000	0.000E+00	0.0000	8.520E-01	0.0869	1.200E-01	0.0122	2.982E-01	0.0304	1.231E-03	0.0001
Total	7.615E+00	0.7772	9.477E-06	0.0000	0.000E+00	0.0000	1.023E+00	0.1044	5.020E-01	0.0512	6.558E-01	0.0669	2.836E-03	0.0003

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-	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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.612E+00	0.4706
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.363E+00	0.2412
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.541E+00	0.1573
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.171E-03	0.0006
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.277E+00	0.1303
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	9.799E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	3.400E+00	0.5022	1.278E-06	0.0000	0.000E+00	0.0000	4.022E-02	0.0059	6.310E-02	0.0093	1.298E-02	0.0019	2.311E-04	0.0000
Cs-134	1.015E+00	0.1500	1.321E-07	0.0000	0.000E+00	0.0000	2.792E-02	0.0041	7.126E-02	0.0105	8.017E-02	0.0118	3.086E-04	0.0000
Cs-137	1.090E+00	0.1610	2.712E-07	0.0000	0.000E+00	0.0000	5.662E-02	0.0084	1.445E-01	0.0213	1.626E-01	0.0240	6.257E-04	0.0001
Ni-63	0.000E+00	0.0000	5.623E-08	0.0000	0.000E+00	0.0000	8.103E-04	0.0001	1.434E-04	0.0000	4.959E-03	0.0007	7.592E-06	0.0000
Sr-90	2.473E-03	0.0004	3.353E-06	0.0000	0.000E+00	0.0000	3.989E-01	0.0589	5.618E-02	0.0083	1.396E-01	0.0206	5.763E-04	0.0001
Total	5.508E+00	0.8136	5.091E-06	0.0000	0.000E+00	0.0000	5.244E-01	0.0775	3.352E-01	0.0495	4.003E-01	0.0591	1.749E-03	0.0003

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.517E+00	0.5194
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.195E+00	0.1765
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	1.455E+00	0.2149
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.921E-03	0.0009
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.977E-01	0.0883
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	6.770E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	1.316E+00	0.4872	4.689E-07	0.0000	0.000E+00	0.0000	1.475E-02	0.0055	2.315E-02	0.0086	4.761E-03	0.0018	8.478E-05	0.0000
Cs-134	9.399E-02	0.0348	1.154E-08	0.0000	0.000E+00	0.0000	2.438E-03	0.0009	6.222E-03	0.0023	7.000E-03	0.0026	2.694E-05	0.0000
Cs-137	9.013E-01	0.3338	2.114E-07	0.0000	0.000E+00	0.0000	4.413E-02	0.0163	1.126E-01	0.0417	1.267E-01	0.0469	4.877E-04	0.0002
Ni-63	0.000E+00	0.0000	4.845E-08	0.0000	0.000E+00	0.0000	6.983E-04	0.0003	1.236E-04	0.0000	4.274E-03	0.0016	6.542E-06	0.0000
Sr-90	1.846E-04	0.0001	2.346E-07	0.0000	0.000E+00	0.0000	2.791E-02	0.0103	3.931E-03	0.0015	9.769E-03	0.0036	4.032E-05	0.0000
Total	2.311E+00	0.8559	9.749E-07	0.0000	0.000E+00	0.0000	8.993E-02	0.0333	1.461E-01	0.0541	1.525E-01	0.0565	6.463E-04	0.0002

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.358E+00	0.5031
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.097E-01	0.0406
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.185E+00	0.4389
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.102E-03	0.0019
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.183E-02	0.0155
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	2.700E+00	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	8.508E-02	0.1156	2.572E-08	0.0000	0.000E+00	0.0000	8.092E-04	0.0011	1.270E-03	0.0017	2.612E-04	0.0004	4.650E-06	0.0000
Cs-134	1.023E-04	0.0001	1.048E-11	0.0000	0.000E+00	0.0000	2.214E-06	0.0000	5.651E-06	0.0000	6.359E-06	0.0000	2.447E-08	0.0000
Cs-137	5.112E-01	0.6944	9.987E-08	0.0000	0.000E+00	0.0000	2.085E-02	0.0283	5.322E-02	0.0723	5.988E-02	0.0813	2.304E-04	0.0003
Ni-63	0.000E+00	0.0000	3.049E-08	0.0000	0.000E+00	0.0000	4.395E-04	0.0006	7.779E-05	0.0001	2.690E-03	0.0037	4.117E-06	0.0000
Sr-90	1.092E-07	0.0000	1.131E-10	0.0000	0.000E+00	0.0000	1.346E-05	0.0000	1.896E-06	0.0000	4.713E-06	0.0000	1.945E-08	0.0000
Total	5.963E-01	0.8101	1.562E-07	0.0000	0.000E+00	0.0000	2.212E-02	0.0300	5.458E-02	0.0741	6.285E-02	0.0854	2.392E-04	0.0003

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.742E-02	0.1188
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.165E-04	0.0002
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.454E-01	0.8767
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.212E-03	0.0044
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.020E-05	0.0000
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	7.361E-01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	2.834E-14	0.0000	2.392E-21	0.0000	0.000E+00	0.0000	7.569E-13	0.0000	7.405E-12	0.0000	2.100E-12	0.0000	4.325E-19	0.0000
Cs-134	2.091E-23	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.335E-21	0.0000	1.458E-20	0.0000	2.575E-20	0.0000	1.466E-27	0.0000
Cs-137	2.936E-10	0.0000	1.653E-17	0.0000	0.000E+00	0.0000	3.470E-08	0.0000	3.840E-07	0.0000	6.785E-07	0.0000	3.814E-14	0.0000
Ni-63	0.000E+00	0.0000	1.367E-17	0.0000	0.000E+00	0.0000	1.981E-09	0.0000	1.685E-09	0.0000	8.855E-08	0.0000	1.846E-15	0.0000
Sr-90	3.989E-27	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.006E-22	0.0000	1.235E-21	0.0000	3.434E-21	0.0000	1.291E-28	0.0000
Total	2.936E-10	0.0000	3.020E-17	0.0000	0.000E+00	0.0000	3.668E-08	0.0000	3.857E-07	0.0000	7.671E-07	0.0000	3.998E-14	0.0000

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.029E-11	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.168E-20	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.098E-06	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.222E-08	0.0000
Sr-90	9.636E-02	0.7411	0.000E+00	0.0000	0.000E+00	0.0000	9.314E-03	0.0716	8.331E-03	0.0641	1.601E-02	0.1231	1.300E-01	1.0000
Total	9.636E-02	0.7411	0.000E+00	0.0000	0.000E+00	0.0000	9.314E-03	0.0716	8.331E-03	0.0641	1.601E-02	0.1231	1.300E-01	1.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
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	0.000E+00	0.0000

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
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	0.000E+00	0.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
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	0.000E+00	0.0000

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.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-134	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
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	0.000E+00	0.0000

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default
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Dose/Source Ratios Summed Over All Pathways
Parent and Progeny Principal Radionuclide Contributions Indicated

Parent (i)	Product (j)	Thread Fraction	DSR(j,t) At Time in Years (mrem/yr)/(pCi/g) 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Co-60	Co-60	1.000E+00	5.280E+00	4.612E+00	3.517E+00	1.358E+00	8.742E-02	1.029E-11	0.000E+00	0.000E+00
Cs-134	Cs-134	1.000E+00	3.323E+00	2.363E+00	1.195E+00	1.097E-01	1.165E-04	4.168E-20	0.000E+00	0.000E+00
Cs-137+D	Cs-137+D	1.000E+00	1.586E+00	1.541E+00	1.455E+00	1.185E+00	6.454E-01	1.098E-06	0.000E+00	0.000E+00
Ni-63	Ni-63	1.000E+00	6.299E-03	6.171E-03	5.921E-03	5.102E-03	3.212E-03	9.222E-08	0.000E+00	0.000E+00
Sr-90+D	Sr-90+D	1.000E+00	1.862E+00	1.277E+00	5.977E-01	4.183E-02	2.020E-05	1.300E-01	0.000E+00	0.000E+00

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

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

Nuclide (i)	t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
Co-60	4.734E+00	5.421E+00	7.109E+00	1.840E+01	2.860E+02	2.430E+12	*1.113E+15	*1.113E+15
Cs-134	7.523E+00	1.058E+01	2.092E+01	2.279E+02	2.146E+05	*1.283E+15	*1.283E+15	*1.283E+15
Cs-137	1.576E+01	1.622E+01	1.719E+01	2.109E+01	3.874E+01	2.278E+07	*8.593E+13	*8.593E+13
Ni-63	3.969E+03	4.051E+03	4.223E+03	4.900E+03	7.784E+03	2.711E+08	*5.586E+13	*5.586E+13
Sr-90	1.343E+01	1.958E+01	4.183E+01	5.976E+02	1.238E+06	1.923E+02	*1.366E+14	*1.366E+14

*At specific activity limit

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

Nuclide (i)	Initial (pCi/g)	tmin (years)	DSR(i,tmin)	G(i,tmin) (pCi/g)	DSR(i,tmax)	G(i,tmax) (pCi/g)
Co-60	1.000E+00	0.000E+00	5.280E+00	4.734E+00	5.280E+00	4.734E+00
Cs-134	1.000E+00	0.000E+00	3.323E+00	7.523E+00	3.323E+00	7.523E+00
Cs-137	1.000E+00	0.000E+00	1.586E+00	1.576E+01	1.586E+00	1.576E+01
Ni-63	1.000E+00	0.000E+00	6.299E-03	3.969E+03	6.299E-03	3.969E+03
Sr-90	1.000E+00	0.000E+00	1.862E+00	1.343E+01	1.862E+00	1.343E+01

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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
Co-60	Co-60	1.000E+00	5.280E+00	4.612E+00	3.517E+00	1.358E+00	8.742E-02	1.029E-11	0.000E+00	0.000E+00
Cs-134	Cs-134	1.000E+00	3.323E+00	2.363E+00	1.195E+00	1.097E-01	1.165E-04	4.168E-20	0.000E+00	0.000E+00
Cs-137	Cs-137	1.000E+00	1.586E+00	1.541E+00	1.455E+00	1.185E+00	6.454E-01	1.098E-06	0.000E+00	0.000E+00
Ni-63	Ni-63	1.000E+00	6.299E-03	6.171E-03	5.921E-03	5.102E-03	3.212E-03	9.222E-08	0.000E+00	0.000E+00
Sr-90	Sr-90	1.000E+00	1.862E+00	1.277E+00	5.977E-01	4.183E-02	2.020E-05	1.300E-01	0.000E+00	0.000E+00

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

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
Co-60	Co-60	1.000E+00	1.000E+00	8.759E-01	6.720E-01	2.658E-01	1.877E-02	1.758E-06	5.429E-18	0.000E+00
Cs-134	Cs-134	1.000E+00	1.000E+00	7.135E-01	3.632E-01	3.420E-02	3.999E-05	2.186E-15	9.809E-45	0.000E+00
Cs-137	Cs-137	1.000E+00	1.000E+00	9.755E-01	9.282E-01	7.800E-01	4.746E-01	8.337E-02	5.795E-04	1.622E-11
Ni-63	Ni-63	1.000E+00	1.000E+00	9.895E-01	9.690E-01	9.003E-01	7.296E-01	3.497E-01	4.275E-02	2.733E-05
Sr-90	Sr-90	1.000E+00	1.000E+00	6.913E-01	3.303E-01	2.492E-02	1.547E-05	9.234E-17	0.000E+00	0.000E+00

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

RESCALC.EXE execution time = 15.44 seconds

Probabilistic results summary : RESRAD Default
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Part VI: Uncertainty Analysis

RESRAD Uncertainty Analysis Results

Probabilistic results summary : RESRAD Default
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Probabilistic Input

Number of Sample Runs: 300

Number	Name	Distribution	Parameters	
1	DCACTC(2)	UNIFORM	615	635
2	DCACTU1(2)	UNIFORM	615	635
3	DCACTS(2)	UNIFORM	615	635
4	DCACTC(3)	UNIFORM	615	635
5	DCACTU1(3)	UNIFORM	615	635
6	DCACTS(3)	UNIFORM	615	635
7	DCACTC(4)	UNIFORM	62	331
8	DCACTU1(4)	UNIFORM	62	331
9	DCACTS(4)	UNIFORM	62	331
10	DCACTC(5)	UNIFORM	2.3	3.4
11	DCACTU1(5)	UNIFORM	2.3	3.4
12	DCACTS(5)	UNIFORM	2.3	3.4

Probabilistic results summary : RESRAD Default

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Probabilistic Total Dose Summary

Nuclide (j)	Peak Time	Peak Dose	DOSE(j,t), mrem/yr t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60										
Min	0.00E+00	5.28E+00	5.28E+00	4.61E+00	3.52E+00	1.36E+00	8.74E-02	1.03E-11	0.00E+00	0.00E+00
Max	0.00E+00	5.28E+00	5.28E+00	4.61E+00	3.52E+00	1.36E+00	8.74E-02	1.03E-11	0.00E+00	0.00E+00
Avg	0.00E+00	5.28E+00	5.28E+00	4.61E+00	3.52E+00	1.36E+00	8.74E-02	1.03E-11	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134										
Min	0.00E+00	3.32E+00	3.32E+00	2.36E+00	1.19E+00	1.10E-01	1.16E-04	4.14E-20	0.00E+00	0.00E+00
Max	0.00E+00	3.32E+00	3.32E+00	2.36E+00	1.20E+00	1.10E-01	1.17E-04	4.17E-20	0.00E+00	0.00E+00
Avg	0.00E+00	3.32E+00	3.32E+00	2.36E+00	1.19E+00	1.10E-01	1.16E-04	4.16E-20	0.00E+00	0.00E+00
Std	0.00E+00	2.70E-05	2.70E-05	6.06E-05	7.25E-05	2.01E-05	6.22E-08	7.28E-23	0.00E+00	0.00E+00
Cs-137										
Min	0.00E+00	1.59E+00	1.59E+00	1.54E+00	1.45E+00	1.18E+00	6.44E-01	1.09E-06	0.00E+00	0.00E+00
Max	0.00E+00	1.59E+00	1.59E+00	1.54E+00	1.45E+00	1.19E+00	6.45E-01	1.10E-06	0.00E+00	0.00E+00
Avg	0.00E+00	1.59E+00	1.59E+00	1.54E+00	1.45E+00	1.18E+00	6.45E-01	1.09E-06	0.00E+00	0.00E+00
Std	0.00E+00	1.35E-05	1.35E-05	4.01E-05	8.88E-05	2.18E-04	3.45E-04	1.92E-09	0.00E+00	0.00E+00
Ni-63										
Min	0.00E+00	6.26E-03	6.26E-03	6.04E-03	5.61E-03	4.34E-03	2.00E-03	1.96E-08	0.00E+00	0.00E+00
Max	0.00E+00	6.30E-03	6.30E-03	6.17E-03	5.92E-03	5.10E-03	3.21E-03	9.22E-08	0.00E+00	0.00E+00
Avg	0.00E+00	6.29E-03	6.29E-03	6.14E-03	5.84E-03	4.91E-03	2.88E-03	6.70E-08	0.00E+00	0.00E+00
Std	0.00E+00	1.02E-05	1.02E-05	3.27E-05	7.44E-05	1.87E-04	3.06E-04	2.01E-08	0.00E+00	0.00E+00
Sr-90										
Min	0.00E+00	1.74E+00	1.74E+00	1.02E+00	3.45E-01	7.77E-03	1.48E-07	7.61E-06	0.00E+00	0.00E+00
Max	0.00E+00	1.86E+00	1.86E+00	1.28E+00	5.97E-01	4.18E-02	2.01E-05	1.58E-01	0.00E+00	0.00E+00
Avg	0.00E+00	1.81E+00	1.81E+00	1.16E+00	4.75E-01	2.23E-02	5.10E-06	3.87E-02	0.00E+00	0.00E+00
Std	0.00E+00	3.44E-02	3.44E-02	7.48E-02	7.34E-02	9.94E-03	5.46E-06	5.38E-02	0.00E+00	0.00E+00
∑ALL										
Min	0.00E+00	1.19E+01	1.19E+01	9.54E+00	6.52E+00	2.67E+00	7.34E-01	8.79E-06	0.00E+00	0.00E+00
Max	0.00E+00	1.21E+01	1.21E+01	9.80E+00	6.77E+00	2.70E+00	7.36E-01	1.58E-01	0.00E+00	0.00E+00
Avg	0.00E+00	1.20E+01	1.20E+01	9.68E+00	6.65E+00	2.68E+00	7.35E-01	3.87E-02	0.00E+00	0.00E+00
Std	0.00E+00	3.44E-02	3.44E-02	7.48E-02	7.34E-02	9.95E-03	4.57E-04	5.38E-02	0.00E+00	0.00E+00

∑ALL is total dose summed for all nuclides.

Probabilistic results summary : RESRAD Default
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Probabilistic Risk Summary

Nuclide		RISK(j,t)							
(j)	t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		1.30E-04	1.13E-04	8.65E-05	3.34E-05	2.15E-06	4.79E-15	0.00E+00	0.00E+00
Max		1.30E-04	1.13E-04	8.65E-05	3.34E-05	2.15E-06	4.79E-15	0.00E+00	0.00E+00
Avg		1.30E-04	1.13E-04	8.65E-05	3.34E-05	2.15E-06	4.79E-15	0.00E+00	0.00E+00
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134									
Min		8.73E-05	6.21E-05	3.14E-05	2.88E-06	3.07E-09	1.52E-23	0.00E+00	0.00E+00
Max		8.73E-05	6.21E-05	3.14E-05	2.88E-06	3.07E-09	1.53E-23	0.00E+00	0.00E+00
Avg		8.73E-05	6.21E-05	3.14E-05	2.88E-06	3.07E-09	1.53E-23	0.00E+00	0.00E+00
Std		0.00E+00	1.08E-09	1.65E-09	5.05E-10	1.61E-12	0.00E+00	0.00E+00	0.00E+00
Cs-137									
Min		3.60E-05	3.50E-05	3.30E-05	2.69E-05	1.47E-05	4.22E-10	0.00E+00	0.00E+00
Max		3.60E-05	3.50E-05	3.30E-05	2.69E-05	1.47E-05	4.25E-10	0.00E+00	0.00E+00
Avg		3.60E-05	3.50E-05	3.30E-05	2.69E-05	1.47E-05	4.24E-10	0.00E+00	0.00E+00
Std		0.00E+00	6.05E-10	1.73E-09	4.72E-09	7.71E-09	7.42E-13	0.00E+00	0.00E+00
Ni-63									
Min		3.14E-07	3.04E-07	2.83E-07	2.19E-07	1.01E-07	1.62E-11	0.00E+00	0.00E+00
Max		3.14E-07	3.08E-07	2.96E-07	2.55E-07	1.61E-07	7.64E-11	0.00E+00	0.00E+00
Avg		3.14E-07	3.07E-07	2.93E-07	2.46E-07	1.44E-07	5.55E-11	0.00E+00	0.00E+00
Std		0.00E+00	1.07E-09	3.19E-09	8.93E-09	1.51E-08	1.67E-11	0.00E+00	0.00E+00
Sr-90									
Min		4.11E-05	2.47E-05	8.36E-06	1.89E-07	3.59E-12	1.54E-10	0.00E+00	0.00E+00
Max		4.11E-05	2.87E-05	1.34E-05	9.40E-07	4.53E-10	2.51E-06	0.00E+00	0.00E+00
Avg		4.11E-05	2.69E-05	1.10E-05	5.15E-07	1.16E-10	6.62E-07	0.00E+00	0.00E+00
Std		0.00E+00	1.17E-06	1.48E-06	2.20E-07	1.23E-10	8.82E-07	0.00E+00	0.00E+00
∑ALL									
Min		2.95E-04	2.36E-04	1.60E-04	6.37E-05	1.69E-05	6.47E-10	0.00E+00	0.00E+00
Max		2.95E-04	2.40E-04	1.65E-04	6.44E-05	1.70E-05	2.51E-06	0.00E+00	0.00E+00
Avg		2.95E-04	2.38E-04	1.62E-04	6.40E-05	1.70E-05	6.62E-07	0.00E+00	0.00E+00
Std		0.00E+00	1.17E-06	1.48E-06	2.20E-07	1.68E-08	8.82E-07	0.00E+00	0.00E+00

∑ALL is total risk summed for all nuclides.

Probabilistic results summary : RESRAD Default

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Probabilistic Dose vs Pathway(i): Ground External

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	5.10E+00	4.46E+00	3.40E+00	1.32E+00	8.51E-02	2.83E-14	0.00E+00	0.00E+00
Max	5.10E+00	4.46E+00	3.40E+00	1.32E+00	8.51E-02	2.83E-14	0.00E+00	0.00E+00
Avg	5.10E+00	4.46E+00	3.40E+00	1.32E+00	8.51E-02	2.83E-14	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	2.81E+00	2.00E+00	1.02E+00	9.39E-02	1.02E-04	2.08E-23	0.00E+00	0.00E+00
Max	2.81E+00	2.00E+00	1.02E+00	9.40E-02	1.02E-04	2.09E-23	0.00E+00	0.00E+00
Avg	2.81E+00	2.00E+00	1.02E+00	9.40E-02	1.02E-04	2.08E-23	0.00E+00	0.00E+00
Std	2.33E-05	5.17E-05	6.18E-05	1.72E-05	5.46E-08	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	1.18E+00	1.15E+00	1.09E+00	9.01E-01	5.10E-01	2.92E-10	0.00E+00	0.00E+00
Max	1.18E+00	1.15E+00	1.09E+00	9.01E-01	5.11E-01	2.94E-10	0.00E+00	0.00E+00
Avg	1.18E+00	1.15E+00	1.09E+00	9.01E-01	5.11E-01	2.93E-10	0.00E+00	0.00E+00
Std	1.03E-05	3.02E-05	6.69E-05	1.66E-04	2.73E-04	5.13E-13	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	6.97E-03	4.09E-03	1.41E-03	3.40E-05	7.90E-10	0.00E+00	0.00E+00	0.00E+00
Max	7.51E-03	5.19E-03	2.47E-03	1.84E-04	1.09E-07	3.91E-27	0.00E+00	0.00E+00
Avg	7.27E-03	4.69E-03	1.96E-03	9.83E-05	2.75E-08	3.44E-28	0.00E+00	0.00E+00
Std	1.56E-04	3.15E-04	3.08E-04	4.40E-05	2.95E-08	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	9.10E+00	7.61E+00	5.51E+00	2.31E+00	5.95E-01	2.92E-10	0.00E+00	0.00E+00
Max	9.10E+00	7.62E+00	5.51E+00	2.31E+00	5.96E-01	2.94E-10	0.00E+00	0.00E+00
Avg	9.10E+00	7.61E+00	5.51E+00	2.31E+00	5.96E-01	2.93E-10	0.00E+00	0.00E+00
Std	1.58E-04	3.22E-04	3.22E-04	1.73E-04	2.73E-04	5.13E-13	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Inhalation (w/o Radon)

Nuclide	DOSE(i,j,t), mrem/yr							
(j)	t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	1.96E-06	1.70E-06	1.28E-06	4.69E-07	2.57E-08	2.39E-21	0.00E+00	0.00E+00
Max	1.96E-06	1.70E-06	1.28E-06	4.69E-07	2.57E-08	2.39E-21	0.00E+00	0.00E+00
Avg	1.96E-06	1.70E-06	1.28E-06	4.69E-07	2.57E-08	2.39E-21	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	6.56E-15	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	3.75E-07	2.65E-07	1.32E-07	1.15E-08	1.05E-11	0.00E+00	0.00E+00	0.00E+00
Max	3.75E-07	2.65E-07	1.32E-07	1.15E-08	1.05E-11	0.00E+00	0.00E+00	0.00E+00
Avg	3.75E-07	2.65E-07	1.32E-07	1.15E-08	1.05E-11	0.00E+00	0.00E+00	0.00E+00
Std	3.10E-12	6.83E-12	8.04E-12	2.12E-12	5.59E-15	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	3.01E-07	2.91E-07	2.71E-07	2.11E-07	9.97E-08	1.64E-17	0.00E+00	0.00E+00
Max	3.01E-07	2.91E-07	2.71E-07	2.11E-07	9.99E-08	1.65E-17	0.00E+00	0.00E+00
Avg	3.01E-07	2.91E-07	2.71E-07	2.11E-07	9.98E-08	1.65E-17	0.00E+00	0.00E+00
Std	2.63E-12	7.64E-12	1.66E-11	3.89E-11	5.34E-11	2.89E-20	0.00E+00	0.00E+00
Ni-63								
Min	5.94E-08	5.73E-08	5.33E-08	4.12E-08	1.90E-08	2.90E-18	0.00E+00	0.00E+00
Max	5.98E-08	5.86E-08	5.62E-08	4.84E-08	3.05E-08	1.37E-17	0.00E+00	0.00E+00
Avg	5.97E-08	5.83E-08	5.55E-08	4.66E-08	2.73E-08	9.93E-18	0.00E+00	0.00E+00
Std	1.11E-10	3.26E-10	7.21E-10	1.79E-09	2.91E-09	2.99E-18	0.00E+00	0.00E+00
Sr-90								
Min	9.71E-06	5.65E-06	1.92E-06	4.32E-08	8.19E-13	0.00E+00	0.00E+00	0.00E+00
Max	1.05E-05	7.16E-06	3.35E-06	2.34E-07	1.12E-10	0.00E+00	0.00E+00	0.00E+00
Avg	1.01E-05	6.47E-06	2.66E-06	1.25E-07	2.85E-11	0.00E+00	0.00E+00	0.00E+00
Std	2.17E-07	4.35E-07	4.17E-07	5.59E-08	3.06E-11	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	1.24E-05	7.97E-06	3.65E-06	7.80E-07	1.44E-07	1.93E-17	0.00E+00	0.00E+00
Max	1.32E-05	9.47E-06	5.09E-06	9.74E-07	1.56E-07	3.02E-17	0.00E+00	0.00E+00
Avg	1.28E-05	8.79E-06	4.39E-06	8.63E-07	1.53E-07	2.64E-17	0.00E+00	0.00E+00
Std	2.17E-07	4.35E-07	4.17E-07	5.59E-08	2.91E-09	2.98E-18	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Radon (Water Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Plant (Water Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j)	t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	6.17E-02	5.35E-02	4.02E-02	1.48E-02	8.09E-04	7.57E-13	0.00E+00	0.00E+00
Max	6.17E-02	5.35E-02	4.02E-02	1.48E-02	8.09E-04	7.57E-13	0.00E+00	0.00E+00
Avg	6.17E-02	5.35E-02	4.02E-02	1.48E-02	8.09E-04	7.57E-13	0.00E+00	0.00E+00
Std	1.22E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	7.92E-02	5.60E-02	2.79E-02	2.44E-03	2.21E-06	1.33E-21	0.00E+00	0.00E+00
Max	7.93E-02	5.60E-02	2.79E-02	2.44E-03	2.21E-06	1.33E-21	0.00E+00	0.00E+00
Avg	7.93E-02	5.60E-02	2.79E-02	2.44E-03	2.21E-06	1.33E-21	0.00E+00	0.00E+00
Std	6.14E-07	1.41E-06	1.68E-06	4.46E-07	1.18E-09	2.16E-24	0.00E+00	0.00E+00
Cs-137								
Min	6.29E-02	6.07E-02	5.66E-02	4.41E-02	2.08E-02	3.45E-08	0.00E+00	0.00E+00
Max	6.29E-02	6.07E-02	5.66E-02	4.41E-02	2.09E-02	3.47E-08	0.00E+00	0.00E+00
Avg	6.29E-02	6.07E-02	5.66E-02	4.41E-02	2.08E-02	3.46E-08	0.00E+00	0.00E+00
Std	5.15E-07	1.56E-06	3.44E-06	8.09E-06	1.11E-05	6.06E-11	0.00E+00	0.00E+00
Ni-63								
Min	8.56E-04	8.26E-04	7.68E-04	5.94E-04	2.74E-04	4.21E-10	0.00E+00	0.00E+00
Max	8.62E-04	8.45E-04	8.10E-04	6.98E-04	4.39E-04	1.98E-09	0.00E+00	0.00E+00
Avg	8.61E-04	8.40E-04	8.00E-04	6.72E-04	3.94E-04	1.44E-09	0.00E+00	0.00E+00
Std	1.51E-06	4.59E-06	1.03E-05	2.57E-05	4.19E-05	4.32E-10	0.00E+00	0.00E+00
Sr-90								
Min	1.16E+00	6.76E-01	2.29E-01	5.16E-03	9.80E-08	8.54E-29	0.00E+00	0.00E+00
Max	1.24E+00	8.52E-01	3.99E-01	2.79E-02	1.34E-05	8.84E-22	0.00E+00	0.00E+00
Avg	1.21E+00	7.72E-01	3.17E-01	1.49E-02	3.39E-06	7.77E-23	0.00E+00	0.00E+00
Std	2.42E-02	5.07E-02	4.93E-02	6.64E-03	3.64E-06	1.74E-22	0.00E+00	0.00E+00
∑ALL								
Min	1.36E+00	8.47E-01	3.55E-01	6.71E-02	2.19E-02	3.49E-08	0.00E+00	0.00E+00
Max	1.45E+00	1.02E+00	5.24E-01	8.98E-02	2.21E-02	3.66E-08	0.00E+00	0.00E+00
Avg	1.41E+00	9.43E-01	4.42E-01	7.69E-02	2.20E-02	3.60E-08	0.00E+00	0.00E+00
Std	2.42E-02	5.07E-02	4.93E-02	6.64E-03	4.33E-05	4.36E-10	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Meat (Water Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j)	t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	9.68E-02	8.40E-02	6.31E-02	2.31E-02	1.27E-03	7.40E-12	0.00E+00	0.00E+00
Max	9.68E-02	8.40E-02	6.31E-02	2.31E-02	1.27E-03	7.40E-12	0.00E+00	0.00E+00
Avg	9.68E-02	8.40E-02	6.31E-02	2.31E-02	1.27E-03	7.40E-12	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	2.02E-01	1.43E-01	7.12E-02	6.22E-03	5.64E-06	1.45E-20	0.00E+00	0.00E+00
Max	2.02E-01	1.43E-01	7.13E-02	6.22E-03	5.65E-06	1.46E-20	0.00E+00	0.00E+00
Avg	2.02E-01	1.43E-01	7.13E-02	6.22E-03	5.65E-06	1.45E-20	0.00E+00	0.00E+00
Std	1.52E-06	3.57E-06	4.28E-06	1.14E-06	3.01E-09	2.55E-23	0.00E+00	0.00E+00
Cs-137								
Min	1.61E-01	1.55E-01	1.44E-01	1.13E-01	5.31E-02	3.82E-07	0.00E+00	0.00E+00
Max	1.61E-01	1.55E-01	1.45E-01	1.13E-01	5.32E-02	3.84E-07	0.00E+00	0.00E+00
Avg	1.61E-01	1.55E-01	1.44E-01	1.13E-01	5.32E-02	3.83E-07	0.00E+00	0.00E+00
Std	1.28E-06	3.94E-06	8.74E-06	2.06E-05	2.84E-05	6.71E-10	0.00E+00	0.00E+00
Ni-63								
Min	1.52E-04	1.46E-04	1.36E-04	1.05E-04	4.85E-05	3.58E-10	0.00E+00	0.00E+00
Max	1.53E-04	1.49E-04	1.43E-04	1.24E-04	7.78E-05	1.68E-09	0.00E+00	0.00E+00
Avg	1.52E-04	1.49E-04	1.42E-04	1.19E-04	6.97E-05	1.22E-09	0.00E+00	0.00E+00
Std	2.57E-07	8.03E-07	1.81E-06	4.54E-06	7.41E-06	3.68E-10	0.00E+00	0.00E+00
Sr-90								
Min	1.65E-01	9.63E-02	3.26E-02	7.36E-04	1.40E-08	1.18E-28	0.00E+00	0.00E+00
Max	1.75E-01	1.20E-01	5.61E-02	3.92E-03	1.89E-06	1.21E-21	0.00E+00	0.00E+00
Avg	1.70E-01	1.09E-01	4.48E-02	2.10E-03	4.79E-07	1.07E-22	0.00E+00	0.00E+00
Std	2.93E-03	6.83E-03	6.83E-03	9.33E-04	5.13E-07	2.39E-22	0.00E+00	0.00E+00
∑ALL								
Min	6.24E-01	4.78E-01	3.12E-01	1.43E-01	5.44E-02	3.82E-07	0.00E+00	0.00E+00
Max	6.34E-01	5.02E-01	3.35E-01	1.46E-01	5.46E-02	3.86E-07	0.00E+00	0.00E+00
Avg	6.30E-01	4.91E-01	3.24E-01	1.44E-01	5.45E-02	3.84E-07	0.00E+00	0.00E+00
Std	2.93E-03	6.83E-03	6.83E-03	9.33E-04	2.92E-05	7.59E-10	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Milk (Water Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	1.99E-02	1.73E-02	1.30E-02	4.76E-03	2.61E-04	2.10E-12	0.00E+00	0.00E+00
Max	1.99E-02	1.73E-02	1.30E-02	4.76E-03	2.61E-04	2.10E-12	0.00E+00	0.00E+00
Avg	1.99E-02	1.73E-02	1.30E-02	4.76E-03	2.61E-04	2.10E-12	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	2.28E-01	1.61E-01	8.02E-02	7.00E-03	6.35E-06	2.56E-20	0.00E+00	0.00E+00
Max	2.28E-01	1.61E-01	8.02E-02	7.00E-03	6.36E-06	2.58E-20	0.00E+00	0.00E+00
Avg	2.28E-01	1.61E-01	8.02E-02	7.00E-03	6.35E-06	2.57E-20	0.00E+00	0.00E+00
Std	1.62E-06	3.94E-06	4.78E-06	1.28E-06	3.39E-09	4.50E-23	0.00E+00	0.00E+00
Cs-137								
Min	1.81E-01	1.74E-01	1.63E-01	1.27E-01	5.98E-02	6.74E-07	0.00E+00	0.00E+00
Max	1.81E-01	1.74E-01	1.63E-01	1.27E-01	5.99E-02	6.79E-07	0.00E+00	0.00E+00
Avg	1.81E-01	1.74E-01	1.63E-01	1.27E-01	5.98E-02	6.77E-07	0.00E+00	0.00E+00
Std	1.37E-06	4.36E-06	9.76E-06	2.32E-05	3.19E-05	1.19E-09	0.00E+00	0.00E+00
Ni-63								
Min	5.24E-03	5.06E-03	4.70E-03	3.64E-03	1.68E-03	1.88E-08	0.00E+00	0.00E+00
Max	5.28E-03	5.17E-03	4.96E-03	4.27E-03	2.69E-03	8.85E-08	0.00E+00	0.00E+00
Avg	5.27E-03	5.14E-03	4.90E-03	4.11E-03	2.41E-03	6.43E-08	0.00E+00	0.00E+00
Std	8.44E-06	2.73E-05	6.22E-05	1.57E-04	2.56E-04	1.93E-08	0.00E+00	0.00E+00
Sr-90								
Min	4.09E-01	2.40E-01	8.12E-02	1.83E-03	3.48E-08	3.28E-28	0.00E+00	0.00E+00
Max	4.34E-01	2.98E-01	1.40E-01	9.75E-03	4.69E-06	3.37E-21	0.00E+00	0.00E+00
Avg	4.23E-01	2.72E-01	1.11E-01	5.23E-03	1.19E-06	2.97E-22	0.00E+00	0.00E+00
Std	7.08E-03	1.68E-02	1.69E-02	2.32E-03	1.28E-06	6.65E-22	0.00E+00	0.00E+00
∑ALL								
Min	8.43E-01	5.97E-01	3.42E-01	1.44E-01	6.17E-02	6.93E-07	0.00E+00	0.00E+00
Max	8.67E-01	6.56E-01	4.00E-01	1.52E-01	6.28E-02	7.66E-07	0.00E+00	0.00E+00
Avg	8.56E-01	6.29E-01	3.72E-01	1.48E-01	6.25E-02	7.41E-07	0.00E+00	0.00E+00
Std	7.08E-03	1.68E-02	1.69E-02	2.32E-03	2.58E-04	1.93E-08	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Soil Ingestion

Nuclide	DOSE(i,j,t), mrem/yr							
(j)	t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	3.55E-04	3.08E-04	2.31E-04	8.48E-05	4.65E-06	4.33E-19	0.00E+00	0.00E+00
Max	3.55E-04	3.08E-04	2.31E-04	8.48E-05	4.65E-06	4.33E-19	0.00E+00	0.00E+00
Avg	3.55E-04	3.08E-04	2.31E-04	8.48E-05	4.65E-06	4.33E-19	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	8.76E-04	6.19E-04	3.08E-04	2.69E-05	2.44E-08	1.46E-27	0.00E+00	0.00E+00
Max	8.76E-04	6.19E-04	3.09E-04	2.69E-05	2.45E-08	1.47E-27	0.00E+00	0.00E+00
Avg	8.76E-04	6.19E-04	3.09E-04	2.69E-05	2.44E-08	1.46E-27	0.00E+00	0.00E+00
Std	7.23E-09	1.60E-08	1.88E-08	4.94E-09	1.31E-11	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	6.95E-04	6.71E-04	6.26E-04	4.87E-04	2.30E-04	3.79E-14	0.00E+00	0.00E+00
Max	6.95E-04	6.71E-04	6.26E-04	4.88E-04	2.30E-04	3.81E-14	0.00E+00	0.00E+00
Avg	6.95E-04	6.71E-04	6.26E-04	4.88E-04	2.30E-04	3.80E-14	0.00E+00	0.00E+00
Std	6.06E-09	1.76E-08	3.84E-08	8.97E-08	1.23E-07	6.67E-17	0.00E+00	0.00E+00
Ni-63								
Min	8.02E-06	7.73E-06	7.19E-06	5.56E-06	2.57E-06	3.92E-16	0.00E+00	0.00E+00
Max	8.08E-06	7.91E-06	7.59E-06	6.54E-06	4.12E-06	1.84E-15	0.00E+00	0.00E+00
Avg	8.06E-06	7.87E-06	7.49E-06	6.29E-06	3.69E-06	1.34E-15	0.00E+00	0.00E+00
Std	1.50E-08	4.40E-08	9.74E-08	2.41E-07	3.93E-07	4.03E-16	0.00E+00	0.00E+00
Sr-90								
Min	1.67E-03	9.72E-04	3.29E-04	7.42E-06	1.41E-10	0.00E+00	0.00E+00	0.00E+00
Max	1.80E-03	1.23E-03	5.76E-04	4.02E-05	1.93E-08	1.27E-28	0.00E+00	0.00E+00
Avg	1.74E-03	1.11E-03	4.57E-04	2.15E-05	4.90E-09	1.11E-29	0.00E+00	0.00E+00
Std	3.73E-05	7.48E-05	7.17E-05	9.61E-06	5.26E-09	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	3.60E-03	2.58E-03	1.50E-03	6.13E-04	2.37E-04	3.83E-14	0.00E+00	0.00E+00
Max	3.73E-03	2.84E-03	1.75E-03	6.46E-04	2.39E-04	4.00E-14	0.00E+00	0.00E+00
Avg	3.67E-03	2.72E-03	1.63E-03	6.27E-04	2.39E-04	3.94E-14	0.00E+00	0.00E+00
Std	3.73E-05	7.48E-05	7.17E-05	9.61E-06	4.10E-07	4.07E-16	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Water Ingestion

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-06	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-02	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-02	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-06	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-02	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-02	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Fish Ingestion

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Radon (Water Dep.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Plant (Water Dep.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-07	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-02	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-03	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-03	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-07	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-02	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-03	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-03	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Meat (Water Dep.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-07	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-03	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-03	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-07	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-03	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E-03	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Probabilistic Dose vs Pathway(i): Milk (Water Dep.)

Nuclide	DOSE(i,j,t), mrem/yr							
(j) t=	0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
Co-60								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-134								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cs-137								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ni-63								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sr-90								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.64E-07	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-02	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-03	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.66E-03	0.00E+00	0.00E+00
∑ALL								
Min	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.64E-07	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-02	0.00E+00	0.00E+00
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.81E-03	0.00E+00	0.00E+00
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.66E-03	0.00E+00	0.00E+00

∑ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Cumulative Probability Summary for: Total Dose Over Pathways

Cumulative Probability	Dose(t), mrem/yr t= 0.00E+00	1.00E+00	3.00E+00	1.00E+01	3.00E+01	1.00E+02	3.00E+02	1.00E+03
0.025	1.19E+01	9.55E+00	6.52E+00	2.67E+00	7.34E-01	2.43E-05	0.00E+00	0.00E+00
0.050	1.19E+01	9.56E+00	6.53E+00	2.67E+00	7.34E-01	3.19E-05	0.00E+00	0.00E+00
0.075	1.19E+01	9.56E+00	6.54E+00	2.67E+00	7.34E-01	5.13E-05	0.00E+00	0.00E+00
0.100	1.20E+01	9.57E+00	6.54E+00	2.67E+00	7.35E-01	9.59E-05	0.00E+00	0.00E+00
0.125	1.20E+01	9.58E+00	6.55E+00	2.67E+00	7.35E-01	1.53E-04	0.00E+00	0.00E+00
0.150	1.20E+01	9.59E+00	6.56E+00	2.67E+00	7.35E-01	2.37E-04	0.00E+00	0.00E+00
0.175	1.20E+01	9.59E+00	6.56E+00	2.67E+00	7.35E-01	3.38E-04	0.00E+00	0.00E+00
0.200	1.20E+01	9.60E+00	6.57E+00	2.67E+00	7.35E-01	5.32E-04	0.00E+00	0.00E+00
0.225	1.20E+01	9.61E+00	6.58E+00	2.67E+00	7.35E-01	6.87E-04	0.00E+00	0.00E+00
0.250	1.20E+01	9.62E+00	6.59E+00	2.67E+00	7.35E-01	9.01E-04	0.00E+00	0.00E+00
0.275	1.20E+01	9.63E+00	6.59E+00	2.67E+00	7.35E-01	1.18E-03	0.00E+00	0.00E+00
0.300	1.20E+01	9.63E+00	6.60E+00	2.67E+00	7.35E-01	1.39E-03	0.00E+00	0.00E+00
0.325	1.20E+01	9.64E+00	6.60E+00	2.67E+00	7.35E-01	1.73E-03	0.00E+00	0.00E+00
0.350	1.20E+01	9.65E+00	6.61E+00	2.67E+00	7.35E-01	2.29E-03	0.00E+00	0.00E+00
0.375	1.20E+01	9.65E+00	6.62E+00	2.68E+00	7.35E-01	2.86E-03	0.00E+00	0.00E+00
0.400	1.20E+01	9.66E+00	6.62E+00	2.68E+00	7.35E-01	3.89E-03	0.00E+00	0.00E+00
0.425	1.20E+01	9.67E+00	6.63E+00	2.68E+00	7.35E-01	4.86E-03	0.00E+00	0.00E+00
0.450	1.20E+01	9.67E+00	6.64E+00	2.68E+00	7.35E-01	5.42E-03	0.00E+00	0.00E+00
0.475	1.20E+01	9.68E+00	6.64E+00	2.68E+00	7.35E-01	6.55E-03	0.00E+00	0.00E+00
0.500	1.20E+01	9.69E+00	6.65E+00	2.68E+00	7.35E-01	7.62E-03	0.00E+00	0.00E+00
0.525	1.20E+01	9.69E+00	6.66E+00	2.68E+00	7.35E-01	9.05E-03	0.00E+00	0.00E+00
0.550	1.20E+01	9.70E+00	6.66E+00	2.68E+00	7.35E-01	1.03E-02	0.00E+00	0.00E+00
0.575	1.20E+01	9.70E+00	6.67E+00	2.68E+00	7.35E-01	1.26E-02	0.00E+00	0.00E+00
0.600	1.20E+01	9.71E+00	6.67E+00	2.68E+00	7.35E-01	1.46E-02	0.00E+00	0.00E+00
0.625	1.20E+01	9.72E+00	6.68E+00	2.68E+00	7.35E-01	1.81E-02	0.00E+00	0.00E+00
0.650	1.20E+01	9.72E+00	6.69E+00	2.68E+00	7.35E-01	2.39E-02	0.00E+00	0.00E+00
0.675	1.20E+01	9.73E+00	6.69E+00	2.69E+00	7.35E-01	3.12E-02	0.00E+00	0.00E+00
0.700	1.20E+01	9.73E+00	6.70E+00	2.69E+00	7.35E-01	3.95E-02	0.00E+00	0.00E+00
0.725	1.20E+01	9.74E+00	6.71E+00	2.69E+00	7.36E-01	5.15E-02	0.00E+00	0.00E+00
0.750	1.20E+01	9.75E+00	6.71E+00	2.69E+00	7.36E-01	6.28E-02	0.00E+00	0.00E+00
0.775	1.20E+01	9.75E+00	6.72E+00	2.69E+00	7.36E-01	7.62E-02	0.00E+00	0.00E+00
0.800	1.20E+01	9.76E+00	6.72E+00	2.69E+00	7.36E-01	1.13E-01	0.00E+00	0.00E+00
0.825	1.20E+01	9.76E+00	6.73E+00	2.69E+00	7.36E-01	1.32E-01	0.00E+00	0.00E+00
0.850	1.20E+01	9.77E+00	6.73E+00	2.69E+00	7.36E-01	1.33E-01	0.00E+00	0.00E+00
0.875	1.20E+01	9.77E+00	6.74E+00	2.69E+00	7.36E-01	1.35E-01	0.00E+00	0.00E+00
0.900	1.20E+01	9.78E+00	6.75E+00	2.70E+00	7.36E-01	1.38E-01	0.00E+00	0.00E+00
0.925	1.21E+01	9.78E+00	6.75E+00	2.70E+00	7.36E-01	1.41E-01	0.00E+00	0.00E+00
0.950	1.21E+01	9.79E+00	6.76E+00	2.70E+00	7.36E-01	1.43E-01	0.00E+00	0.00E+00
0.975	1.21E+01	9.79E+00	6.76E+00	2.70E+00	7.36E-01	1.50E-01	0.00E+00	0.00E+00
1.000	1.21E+01	9.80E+00	6.77E+00	2.70E+00	7.36E-01	1.58E-01	0.00E+00	0.00E+00

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\RESRAD INPUT FILE\ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Summary of dose at graphical times, reptition 1

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	1.19E+01	1.21E+01	1.20E+01	1.20E+01	1.20E+01	1.21E+01	1.21E+01	1.21E+01
1.00E+00	9.54E+00	9.80E+00	9.68E+00	9.68E+00	9.78E+00	9.79E+00	9.79E+00	9.80E+00
1.30E+00	8.95E+00	9.23E+00	9.10E+00	9.10E+00	9.21E+00	9.22E+00	9.22E+00	9.23E+00
1.70E+00	8.27E+00	8.55E+00	8.42E+00	8.42E+00	8.53E+00	8.54E+00	8.54E+00	8.55E+00
2.22E+00	7.49E+00	7.77E+00	7.64E+00	7.64E+00	7.74E+00	7.76E+00	7.76E+00	7.77E+00
2.89E+00	6.64E+00	6.89E+00	6.77E+00	6.77E+00	6.87E+00	6.88E+00	6.89E+00	6.89E+00
3.00E+00	6.52E+00	6.77E+00	6.65E+00	6.65E+00	6.75E+00	6.76E+00	6.77E+00	6.77E+00
3.78E+00	5.74E+00	5.96E+00	5.85E+00	5.85E+00	5.94E+00	5.95E+00	5.95E+00	5.96E+00
4.92E+00	4.83E+00	5.00E+00	4.91E+00	4.91E+00	4.98E+00	4.99E+00	4.99E+00	5.00E+00
6.42E+00	3.96E+00	4.07E+00	4.01E+00	4.01E+00	4.06E+00	4.06E+00	4.06E+00	4.07E+00
8.38E+00	3.15E+00	3.21E+00	3.18E+00	3.18E+00	3.20E+00	3.21E+00	3.21E+00	3.21E+00
1.00E+01	2.67E+00	2.70E+00	2.68E+00	2.68E+00	2.70E+00	2.70E+00	2.70E+00	2.70E+00
1.09E+01	2.44E+00	2.46E+00	2.45E+00	2.45E+00	2.46E+00	2.46E+00	2.46E+00	2.46E+00
1.43E+01	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00
1.86E+01	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00
2.42E+01	9.68E-01	9.70E-01	9.69E-01	9.69E-01	9.70E-01	9.70E-01	9.70E-01	9.70E-01
3.00E+01	7.34E-01	7.36E-01	7.35E-01	7.35E-01	7.36E-01	7.36E-01	7.36E-01	7.36E-01
3.16E+01	6.84E-01	6.86E-01	6.85E-01	6.85E-01	6.86E-01	6.86E-01	6.86E-01	6.86E-01
4.12E+01	4.67E-01	1.04E+00	5.51E-01	4.68E-01	8.79E-01	9.49E-01	1.03E+00	1.04E+00
5.38E+01	2.92E-01	8.56E-01	6.77E-01	7.07E-01	8.05E-01	8.33E-01	8.46E-01	8.56E-01
7.02E+01	4.16E-01	5.32E-01	4.67E-01	4.63E-01	5.17E-01	5.26E-01	5.29E-01	5.32E-01
9.15E+01	3.52E-02	2.53E-01	1.58E-01	2.01E-01	2.34E-01	2.49E-01	2.51E-01	2.53E-01
1.00E+02	8.79E-06	1.58E-01	4.03E-02	8.01E-03	1.39E-01	1.44E-01	1.51E-01	1.58E-01
1.19E+02	2.20E-10	7.19E-04	2.92E-05	1.05E-06	5.78E-05	1.32E-04	4.93E-04	7.17E-04
1.56E+02	4.44E-19	3.06E-10	8.01E-12	1.07E-13	7.07E-12	1.74E-11	1.50E-10	3.05E-10
2.03E+02	0.00E+00	6.04E-20	1.10E-21	0.00E+00	0.00E+00	2.40E-24	2.35E-20	6.03E-20
2.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.46E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.51E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.88E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.67E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Probabilistic results summary : RESRAD Default

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Summary of dose at graphical times, reptition 2

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	1.19E+01	1.21E+01	1.20E+01	1.20E+01	1.20E+01	1.21E+01	1.21E+01	1.21E+01
1.00E+00	9.54E+00	9.80E+00	9.68E+00	9.69E+00	9.78E+00	9.79E+00	9.79E+00	9.80E+00
1.30E+00	8.95E+00	9.23E+00	9.10E+00	9.11E+00	9.21E+00	9.22E+00	9.22E+00	9.23E+00
1.70E+00	8.27E+00	8.55E+00	8.42E+00	8.42E+00	8.53E+00	8.54E+00	8.54E+00	8.55E+00
2.22E+00	7.49E+00	7.77E+00	7.64E+00	7.64E+00	7.74E+00	7.76E+00	7.76E+00	7.77E+00
2.89E+00	6.64E+00	6.89E+00	6.77E+00	6.77E+00	6.87E+00	6.88E+00	6.89E+00	6.89E+00
3.00E+00	6.52E+00	6.77E+00	6.65E+00	6.65E+00	6.75E+00	6.76E+00	6.77E+00	6.77E+00
3.78E+00	5.74E+00	5.96E+00	5.85E+00	5.85E+00	5.94E+00	5.95E+00	5.95E+00	5.96E+00
4.92E+00	4.83E+00	5.00E+00	4.91E+00	4.91E+00	4.98E+00	4.99E+00	4.99E+00	5.00E+00
6.42E+00	3.96E+00	4.07E+00	4.01E+00	4.01E+00	4.05E+00	4.06E+00	4.06E+00	4.07E+00
8.38E+00	3.15E+00	3.21E+00	3.18E+00	3.18E+00	3.20E+00	3.21E+00	3.21E+00	3.21E+00
1.00E+01	2.67E+00	2.70E+00	2.68E+00	2.68E+00	2.70E+00	2.70E+00	2.70E+00	2.70E+00
1.09E+01	2.44E+00	2.46E+00	2.45E+00	2.45E+00	2.46E+00	2.46E+00	2.46E+00	2.46E+00
1.43E+01	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00
1.86E+01	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00
2.42E+01	9.68E-01	9.70E-01	9.69E-01	9.69E-01	9.70E-01	9.70E-01	9.70E-01	9.70E-01
3.00E+01	7.34E-01	7.36E-01	7.35E-01	7.35E-01	7.36E-01	7.36E-01	7.36E-01	7.36E-01
3.16E+01	6.84E-01	6.86E-01	6.85E-01	6.85E-01	6.86E-01	6.86E-01	6.86E-01	6.86E-01
4.12E+01	4.67E-01	1.06E+00	5.49E-01	4.68E-01	8.89E-01	9.54E-01	9.76E-01	1.06E+00
5.38E+01	2.92E-01	8.59E-01	6.80E-01	7.25E-01	8.10E-01	8.36E-01	8.56E-01	8.59E-01
7.02E+01	4.16E-01	5.31E-01	4.67E-01	4.64E-01	5.17E-01	5.25E-01	5.30E-01	5.31E-01
9.15E+01	3.55E-02	2.56E-01	1.57E-01	1.99E-01	2.29E-01	2.35E-01	2.40E-01	2.56E-01
1.00E+02	1.53E-05	1.55E-01	3.93E-02	6.70E-03	1.40E-01	1.48E-01	1.51E-01	1.55E-01
1.19E+02	8.59E-10	8.93E-04	3.53E-05	8.30E-07	7.59E-05	1.43E-04	5.56E-04	8.93E-04
1.56E+02	1.82E-18	2.95E-10	9.85E-12	4.93E-14	1.90E-11	9.24E-11	1.26E-10	2.94E-10
2.03E+02	0.00E+00	9.61E-20	1.28E-21	0.00E+00	3.42E-29	1.11E-24	1.55E-20	9.54E-20
2.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.46E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.51E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.88E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.67E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Probabilistic results summary : RESRAD Default

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Summary of dose at graphical times, reptition 3

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	1.19E+01	1.21E+01	1.20E+01	1.20E+01	1.20E+01	1.21E+01	1.21E+01	1.21E+01
1.00E+00	9.54E+00	9.80E+00	9.68E+00	9.69E+00	9.78E+00	9.79E+00	9.80E+00	9.80E+00
1.30E+00	8.95E+00	9.23E+00	9.10E+00	9.11E+00	9.21E+00	9.22E+00	9.22E+00	9.23E+00
1.70E+00	8.27E+00	8.55E+00	8.42E+00	8.42E+00	8.53E+00	8.54E+00	8.55E+00	8.55E+00
2.22E+00	7.49E+00	7.77E+00	7.64E+00	7.64E+00	7.74E+00	7.76E+00	7.76E+00	7.77E+00
2.89E+00	6.64E+00	6.89E+00	6.77E+00	6.77E+00	6.87E+00	6.88E+00	6.89E+00	6.89E+00
3.00E+00	6.52E+00	6.77E+00	6.65E+00	6.65E+00	6.75E+00	6.76E+00	6.77E+00	6.77E+00
3.78E+00	5.74E+00	5.95E+00	5.85E+00	5.85E+00	5.94E+00	5.95E+00	5.95E+00	5.95E+00
4.92E+00	4.83E+00	5.00E+00	4.91E+00	4.91E+00	4.98E+00	4.99E+00	4.99E+00	5.00E+00
6.42E+00	3.96E+00	4.07E+00	4.01E+00	4.01E+00	4.06E+00	4.06E+00	4.06E+00	4.07E+00
8.38E+00	3.15E+00	3.21E+00	3.18E+00	3.18E+00	3.20E+00	3.21E+00	3.21E+00	3.21E+00
1.00E+01	2.67E+00	2.70E+00	2.68E+00	2.68E+00	2.70E+00	2.70E+00	2.70E+00	2.70E+00
1.09E+01	2.44E+00	2.46E+00	2.45E+00	2.45E+00	2.46E+00	2.46E+00	2.46E+00	2.46E+00
1.43E+01	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00	1.84E+00
1.86E+01	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00	1.35E+00
2.42E+01	9.68E-01	9.70E-01	9.69E-01	9.69E-01	9.70E-01	9.70E-01	9.70E-01	9.70E-01
3.00E+01	7.34E-01	7.36E-01	7.35E-01	7.35E-01	7.36E-01	7.36E-01	7.36E-01	7.36E-01
3.16E+01	6.84E-01	6.86E-01	6.85E-01	6.85E-01	6.86E-01	6.86E-01	6.86E-01	6.86E-01
4.12E+01	4.67E-01	1.05E+00	5.49E-01	4.68E-01	8.62E-01	9.70E-01	1.01E+00	1.05E+00
5.38E+01	2.93E-01	8.54E-01	6.77E-01	7.16E-01	8.14E-01	8.32E-01	8.45E-01	8.54E-01
7.02E+01	4.16E-01	5.31E-01	4.67E-01	4.64E-01	5.16E-01	5.24E-01	5.30E-01	5.31E-01
9.15E+01	3.56E-02	2.59E-01	1.62E-01	2.00E-01	2.34E-01	2.44E-01	2.54E-01	2.59E-01
1.00E+02	1.25E-05	1.55E-01	3.64E-02	7.97E-03	1.33E-01	1.42E-01	1.45E-01	1.55E-01
1.19E+02	3.37E-10	1.57E-03	4.05E-05	1.47E-06	7.51E-05	1.58E-04	5.49E-04	1.57E-03
1.56E+02	7.25E-19	9.26E-10	1.47E-11	6.77E-14	9.21E-12	1.81E-11	1.78E-10	9.20E-10
2.03E+02	0.00E+00	8.60E-19	9.56E-21	0.00E+00	0.00E+00	3.87E-24	4.57E-20	8.52E-19
2.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.46E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.51E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.88E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.67E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Probabilistic results summary : RESRAD Default

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Peak of the mean dose (averaged over observations) at graphical times

Repetition	Time of peak mean dose	Peak mean dose
	Years	mrem/yr
1	0.000E+00	1.200E+01
2	0.000E+00	1.200E+01
3	0.000E+00	1.200E+01

Title : RESRAD Default

Input File : ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Coefficients for peak All Pathways Dose

Coefficient =	PCC		SRC		PRCC		SRRC	
Repetition =	1		1		1		1	
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Kd of Cs-134 in Contaminated Zone	5	-0.12	5	-0.01	9	0.03	9	0.00
Kd of Cs-134 in Unsaturated Zone 1	4	-0.13	4	-0.01	3	-0.17	3	-0.01
Kd of Cs-134 in Saturated Zone	11	-0.04	11	0.00	7	-0.09	7	-0.01
Kd of Cs-137 in Contaminated Zone	6	0.11	6	0.01	8	0.07	8	0.01
Kd of Cs-137 in Unsaturated Zone 1	2	0.19	2	0.02	2	0.21	2	0.02
Kd of Cs-137 in Saturated Zone	9	0.08	9	0.01	11	0.01	11	0.00
Kd of Ni-63 in Contaminated Zone	8	0.09	8	0.01	5	0.14	5	0.01
Kd of Ni-63 in Unsaturated Zone 1	10	-0.07	10	-0.01	6	-0.10	6	-0.01
Kd of Ni-63 in Saturated Zone	3	0.15	3	0.02	12	0.00	12	0.00
Kd of Sr-90 in Contaminated Zone	1	0.99	1	0.99	1	1.00	1	0.99
Kd of Sr-90 in Unsaturated Zone 1	12	0.00	12	0.00	10	-0.02	10	0.00
Kd of Sr-90 in Saturated Zone	7	-0.10	7	-0.01	4	-0.15	4	-0.01
R-SQUARE		0.99		0.99		0.99		0.99

-Rank is set to zero if the dose is zero or the correlation matrix is singular.

-R-SQUARE varies between 0 and 1 and is called the coefficient of determination; it provides a measure of the variation in the dependent variable (Dose) explained by regression on the independent variables.

Title : RESRAD Default
Input File : ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Coefficients for peak All Pathways Dose

Coefficient =	PCC		SRC		PRCC		SRRC	
Repetition =	2		2		2		2	
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Kd of Cs-134 in Contaminated Zone	6	-0.08	6	-0.01	12	0.00	12	0.00
Kd of Cs-134 in Unsaturated Zone 1	12	0.00	12	0.00	8	0.09	8	0.01
Kd of Cs-134 in Saturated Zone	2	0.25	2	0.03	4	0.17	4	0.01
Kd of Cs-137 in Contaminated Zone	5	0.13	5	0.02	3	0.18	3	0.01
Kd of Cs-137 in Unsaturated Zone 1	7	-0.07	7	-0.01	5	0.13	5	0.01
Kd of Cs-137 in Saturated Zone	3	0.17	3	0.02	2	0.20	2	0.02
Kd of Ni-63 in Contaminated Zone	11	0.01	11	0.00	7	0.09	7	0.01
Kd of Ni-63 in Unsaturated Zone 1	4	-0.15	4	-0.02	9	-0.06	9	0.00
Kd of Ni-63 in Saturated Zone	10	-0.02	10	0.00	6	-0.11	6	-0.01
Kd of Sr-90 in Contaminated Zone	1	0.99	1	0.99	1	1.00	1	1.00
Kd of Sr-90 in Unsaturated Zone 1	8	-0.07	8	-0.01	10	-0.04	10	0.00
Kd of Sr-90 in Saturated Zone	9	0.05	9	0.01	11	-0.03	11	0.00
R-SQUARE		0.99		0.99		0.99		0.99

-Rank is set to zero if the dose is zero or the correlation matrix is singular.
-R-SQUARE varies between 0 and 1 and is called the coefficient of determination; it provides a measure of the variation in the dependent variable (Dose) explained by regression on the independent variables.

Title : RESRAD Default
Input File : ZION SURFACE SOIL DCGL KD SENSITIVITY.RAD

Coefficients for peak All Pathways Dose

Coefficient =	PCC		SRC		PRCC		SRRC	
Repetition =	3		3		3		3	
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Kd of Cs-134 in Contaminated Zone	6	0.09	6	0.01	5	0.12	5	0.01
Kd of Cs-134 in Unsaturated Zone 1	10	-0.05	10	-0.01	9	-0.04	9	0.00
Kd of Cs-134 in Saturated Zone	2	-0.16	2	-0.02	10	-0.02	10	0.00
Kd of Cs-137 in Contaminated Zone	5	-0.09	5	-0.01	8	-0.05	8	0.00
Kd of Cs-137 in Unsaturated Zone 1	8	0.07	8	0.01	6	-0.10	6	-0.01
Kd of Cs-137 in Saturated Zone	9	0.07	9	0.01	2	0.24	2	0.02
Kd of Ni-63 in Contaminated Zone	7	0.07	7	0.01	7	0.05	7	0.00
Kd of Ni-63 in Unsaturated Zone 1	11	0.02	11	0.00	4	-0.14	4	-0.01
Kd of Ni-63 in Saturated Zone	3	0.12	3	0.01	3	0.21	3	0.02
Kd of Sr-90 in Contaminated Zone	1	0.99	1	0.99	1	1.00	1	1.00
Kd of Sr-90 in Unsaturated Zone 1	4	0.10	4	0.01	11	0.02	11	0.00
Kd of Sr-90 in Saturated Zone	12	0.01	12	0.00	12	-0.01	12	0.00
R-SQUARE		0.99		0.99		0.99		0.99

-Rank is set to zero if the dose is zero or the correlation matrix is singular.
-R-SQUARE varies between 0 and 1 and is called the coefficient of determination; it provides a measure of the variation in the dependent variable (Dose) explained by regression on the independent variables.