

Probabilistic results summary : RESRAD Default

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Probabilistic Input

Number of Sample Runs: 3000

Number	Name	Distribution	Parameters							
1	DENSCV	TRUNCATED NORMAL	1.51	.159	.001	.999				
2	VCZ	CONTINUOUS LOGARITHMIC4	5.E-8	0	.0007	.22	.005	.95	.2	1
3	TPCZ	TRUNCATED NORMAL	.43	.06	.001	.999				
4	HCCZ	LOGUNIFORM	786	17000						
5	BCZ	TRUNCATED LOGNORMAL-N	-.0235	.216	.001	.999				
6	EVAPTR	UNIFORM	.5	.75						
7	WIND	BOUNDED LOGNORMAL-N	1.445	.2419	1.4	13				
8	RUNOFF	UNIFORM	.1	.8						
9	DENSAQ	TRUNCATED NORMAL	1.51	.16	.001	.999				
10	TPSZ	TRUNCATED NORMAL	.43	.06	.001	.999				
11	EPSZ	TRUNCATED NORMAL	.383	.061	.001	.999				
12	HCSZ	LOGUNIFORM	786	17000						
13	HGWT	BOUNDED LOGNORMAL-N	-5.11	1.77	.00007	.5				
14	DWIBWT	TRIANGULAR	6	10	30					
15	MLINH	CONTINUOUS LINEAR	8	0	0	.000008	.0151	.000016	.1365	.00003 .8119
16	DM	TRIANGULAR	0	.15	.6					
17	DROOT	UNIFORM	.3	4						
18	WLAM	TRIANGULAR	5.1	18	84					
19	YV(1)	TRUNCATED LOGNORMAL-N	.56	.48	.001	.999				
20	RWET(2)	TRIANGULAR	.06	.67	.95					
21	SHF3	UNIFORM	.15	.95						
22	SHF1	BOUNDED LOGNORMAL-N	-1.3	.59	.044	1				
23	VCV	CONTINUOUS LOGARITHMIC4	5.E-8	0	.0007	.22	.005	.95	.2	1
24	TPUZ(1)	TRUNCATED NORMAL	.43	.06	.001	.999				
25	EPUZ(1)	TRUNCATED NORMAL	.383	.061	.001	.999				
26	HCUZ(1)	LOGUNIFORM	786	17000						
27	BUZ(1)	TRUNCATED LOGNORMAL-N	-.0253	.216	.001	.999				
28	BRTF(27,1)	LOGNORMAL-N	-2.53	.916291						
29	BRTF(27,2)	LOGNORMAL-N	-3.51	1.029619						
30	BRTF(27,3)	LOGNORMAL-N	-6.21	.7						
31	BRTF(55,1)	LOGNORMAL-N	-3.22	.993252						
32	BRTF(55,2)	LOGNORMAL-N	-3	.405465						
33	BRTF(55,3)	LOGNORMAL-N	-4.61	.47						
34	BRTF(28,1)	LOGNORMAL-N	-3	.916291						
35	BRTF(28,2)	LOGNORMAL-N	-5.3	.916291						
36	BRTF(28,3)	LOGNORMAL-N	-3.91	.69315						
37	BRTF(38,1)	LOGNORMAL-N	-1.2	.993252						
38	BRTF(38,2)	LOGNORMAL-N	-4.61	.405465						
39	BRTF(38,3)	LOGNORMAL-N	-6.21	.47						
40	DENSCZ	TRUNCATED NORMAL	1.51	.16	.001	.999				
41	DENSUZ(1)	TRUNCATED NORMAL	1.51	.16	.001	.999				

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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	4.05E+01	1.00E+02	3.00E+02	1.00E+03
Co-60										
Min	0.00E+00	2.41E+00	2.41E+00	2.12E+00	1.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	1.59E+01	1.59E+01	1.39E+01	1.07E+01	4.26E+00	7.70E-02	2.83E-05	9.50E-17	0.00E+00
Avg	0.00E+00	5.30E+00	5.30E+00	4.65E+00	3.57E+00	1.40E+00	2.48E-02	9.64E-06	2.81E-17	0.00E+00
Std	0.00E+00	1.81E+00	1.81E+00	1.59E+00	1.22E+00	5.04E-01	9.61E-03	3.89E-06	1.83E-17	0.00E+00
ΣALL										
Min	0.00E+00	2.41E+00	2.41E+00	2.12E+00	1.63E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	1.59E+01	1.59E+01	1.39E+01	1.07E+01	4.26E+00	7.70E-02	2.83E-05	9.50E-17	0.00E+00
Avg	0.00E+00	5.30E+00	5.30E+00	4.65E+00	3.57E+00	1.40E+00	2.48E-02	9.64E-06	2.81E-17	0.00E+00
Std	0.00E+00	1.81E+00	1.81E+00	1.59E+00	1.22E+00	5.04E-01	9.61E-03	3.89E-06	1.83E-17	0.00E+00

ΣALL is total dose summed for all nuclides.

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Probabilistic Risk Summary

Nuclide (j)	t=	RISK(j,t)							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		9.11E-06	7.65E-06	3.39E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.02E-04	8.91E-05	6.85E-05	2.72E-05	4.89E-07	1.79E-10	5.92E-22	1.19E-39
Avg		3.23E-05	2.83E-05	2.17E-05	8.55E-06	1.52E-07	5.89E-11	1.70E-22	4.40E-43
Std		1.12E-05	9.83E-06	7.60E-06	3.13E-06	5.92E-08	2.39E-11	1.12E-22	0.00E+00
ΣALL									
Min		9.11E-06	7.65E-06	3.39E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.02E-04	8.91E-05	6.85E-05	2.72E-05	4.89E-07	1.79E-10	5.92E-22	1.19E-39
Avg		3.23E-05	2.83E-05	2.17E-05	8.55E-06	1.52E-07	5.89E-11	1.70E-22	4.40E-43
Std		1.12E-05	9.83E-06	7.60E-06	3.13E-06	5.92E-08	2.39E-11	1.12E-22	0.00E+00

ΣALL is total risk summed for all nuclides.

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Probabilistic Dose vs Pathway(i): Ground External

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		2.25E+00	1.97E+00	1.52E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.14E+01	9.96E+00	7.65E+00	3.05E+00	5.50E-02	2.18E-05	8.05E-17	0.00E+00
Avg		4.80E+00	4.21E+00	3.23E+00	1.27E+00	2.25E-02	8.82E-06	2.61E-17	0.00E+00
Std		1.68E+00	1.47E+00	1.13E+00	4.67E-01	8.92E-03	3.64E-06	1.71E-17	0.00E+00
ΣALL									
Min		2.25E+00	1.97E+00	1.52E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.14E+01	9.96E+00	7.65E+00	3.05E+00	5.50E-02	2.18E-05	8.05E-17	0.00E+00
Avg		4.80E+00	4.21E+00	3.23E+00	1.27E+00	2.25E-02	8.82E-06	2.61E-17	0.00E+00
Std		1.68E+00	1.47E+00	1.13E+00	4.67E-01	8.92E-03	3.64E-06	1.71E-17	0.00E+00

ΣALL is total pathway dose summed for all nuclides.

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		7.84E-09	6.88E-09	5.29E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.50E-05	1.32E-05	1.01E-05	4.03E-06	7.29E-08	2.90E-11	1.04E-22	0.00E+00
Avg		2.30E-06	2.02E-06	1.55E-06	6.10E-07	1.08E-08	4.24E-12	1.22E-23	0.00E+00
Std		1.52E-06	1.33E-06	1.02E-06	4.11E-07	7.52E-09	3.00E-12	1.15E-23	0.00E+00
ΣALL									
Min		7.84E-09	6.88E-09	5.29E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.50E-05	1.32E-05	1.01E-05	4.03E-06	7.29E-08	2.90E-11	1.04E-22	0.00E+00
Avg		2.30E-06	2.02E-06	1.55E-06	6.10E-07	1.08E-08	4.24E-12	1.22E-23	0.00E+00
Std		1.52E-06	1.33E-06	1.02E-06	4.11E-07	7.52E-09	3.00E-12	1.15E-23	0.00E+00

ΣALL is total pathway dose summed for all nuclides.

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+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
ΣALL									
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

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		3.74E-03	3.27E-03	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		3.33E+00	2.91E+00	2.22E+00	8.73E-01	1.53E-02	5.68E-06	1.87E-17	0.00E+00
Avg		2.28E-01	1.99E-01	1.52E-01	5.94E-02	1.02E-03	3.65E-07	8.62E-19	0.00E+00
Std		2.90E-01	2.54E-01	1.95E-01	7.69E-02	1.35E-03	4.98E-07	1.45E-18	0.00E+00
ΣALL									
Min		3.74E-03	3.27E-03	2.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		3.33E+00	2.91E+00	2.22E+00	8.73E-01	1.53E-02	5.68E-06	1.87E-17	0.00E+00
Avg		2.28E-01	1.99E-01	1.52E-01	5.94E-02	1.02E-03	3.65E-07	8.62E-19	0.00E+00
Std		2.90E-01	2.54E-01	1.95E-01	7.69E-02	1.35E-03	4.98E-07	1.45E-18	0.00E+00

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		1.43E-03	1.25E-03	9.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		8.28E+00	7.26E+00	5.58E+00	2.22E+00	4.01E-02	1.40E-05	2.91E-17	0.00E+00
Avg		2.01E-01	1.76E-01	1.34E-01	5.26E-02	9.06E-04	3.31E-07	8.09E-19	0.00E+00
Std		4.00E-01	3.50E-01	2.68E-01	1.06E-01	1.85E-03	6.77E-07	1.83E-18	0.00E+00
ΣALL									
Min		1.43E-03	1.25E-03	9.62E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		8.28E+00	7.26E+00	5.58E+00	2.22E+00	4.01E-02	1.40E-05	2.91E-17	0.00E+00
Avg		2.01E-01	1.76E-01	1.34E-01	5.26E-02	9.06E-04	3.31E-07	8.09E-19	0.00E+00
Std		4.00E-01	3.50E-01	2.68E-01	1.06E-01	1.85E-03	6.77E-07	1.83E-18	0.00E+00

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		1.89E-03	1.64E-03	1.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		2.79E+00	2.44E+00	1.86E+00	7.21E-01	1.16E-02	3.46E-06	9.27E-18	0.00E+00
Avg		7.50E-02	6.56E-02	5.02E-02	1.97E-02	3.38E-04	1.22E-07	2.90E-19	0.00E+00
Std		1.26E-01	1.11E-01	8.48E-02	3.34E-02	5.75E-04	2.06E-07	5.67E-19	0.00E+00
ΣALL									
Min		1.89E-03	1.64E-03	1.23E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		2.79E+00	2.44E+00	1.86E+00	7.21E-01	1.16E-02	3.46E-06	9.27E-18	0.00E+00
Avg		7.50E-02	6.56E-02	5.02E-02	1.97E-02	3.38E-04	1.22E-07	2.90E-19	0.00E+00
Std		1.26E-01	1.11E-01	8.48E-02	3.34E-02	5.75E-04	2.06E-07	5.67E-19	0.00E+00

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Probabilistic Dose vs Pathway(i): Soil Ingestion

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+01	1.00E+02	3.00E+02	1.00E+03
Co-60									
Min		3.57E-04	3.12E-04	2.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		3.57E-04	3.13E-04	2.40E-04	9.57E-05	1.73E-06	6.91E-10	2.59E-21	0.00E+00
Avg		3.57E-04	3.13E-04	2.40E-04	9.44E-05	1.68E-06	6.55E-10	1.88E-21	0.00E+00
Std		8.41E-09	2.24E-08	7.38E-07	1.01E-05	2.92E-07	1.37E-10	1.04E-21	0.00E+00
ΣALL									
Min		3.57E-04	3.12E-04	2.01E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		3.57E-04	3.13E-04	2.40E-04	9.57E-05	1.73E-06	6.91E-10	2.59E-21	0.00E+00
Avg		3.57E-04	3.13E-04	2.40E-04	9.44E-05	1.68E-06	6.55E-10	1.88E-21	0.00E+00
Std		8.41E-09	2.24E-08	7.38E-07	1.01E-05	2.92E-07	1.37E-10	1.04E-21	0.00E+00

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Probabilistic Dose vs Pathway(i): Water Ingestion

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+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
ΣALL									
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

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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

Probabilistic Dose vs Pathway(i): Fish Ingestion

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+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
ΣALL									
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

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+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
ΣALL									
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

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+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
ΣALL									
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

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+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
ΣALL									
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

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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

Nuclide (j)	t=	DOSE(i,j,t), mrem/yr							
		0.00E+00	1.00E+00	3.00E+00	1.00E+01	4.05E+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
ΣALL									
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

ΣALL 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	4.05E+01	1.00E+02	3.00E+02	1.00E+03
0.025	2.92E+00	2.56E+00	1.97E+00	7.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.050	3.10E+00	2.72E+00	2.09E+00	8.10E-01	1.39E-02	5.15E-06	0.00E+00	0.00E+00
0.075	3.26E+00	2.86E+00	2.20E+00	8.55E-01	1.48E-02	5.71E-06	0.00E+00	0.00E+00
0.100	3.38E+00	2.96E+00	2.28E+00	8.90E-01	1.57E-02	6.02E-06	0.00E+00	0.00E+00
0.125	3.50E+00	3.07E+00	2.35E+00	9.20E-01	1.62E-02	6.31E-06	0.00E+00	0.00E+00
0.150	3.60E+00	3.15E+00	2.42E+00	9.52E-01	1.67E-02	6.53E-06	0.00E+00	0.00E+00
0.175	3.70E+00	3.24E+00	2.49E+00	9.79E-01	1.73E-02	6.73E-06	0.00E+00	0.00E+00
0.200	3.78E+00	3.31E+00	2.54E+00	1.00E+00	1.78E-02	6.94E-06	0.00E+00	0.00E+00
0.225	3.89E+00	3.41E+00	2.62E+00	1.03E+00	1.83E-02	7.10E-06	1.67E-17	0.00E+00
0.250	3.97E+00	3.48E+00	2.68E+00	1.06E+00	1.88E-02	7.32E-06	1.99E-17	0.00E+00
0.275	4.07E+00	3.57E+00	2.74E+00	1.08E+00	1.92E-02	7.52E-06	2.14E-17	0.00E+00
0.300	4.16E+00	3.64E+00	2.80E+00	1.10E+00	1.97E-02	7.69E-06	2.26E-17	0.00E+00
0.325	4.26E+00	3.74E+00	2.87E+00	1.13E+00	2.02E-02	7.88E-06	2.36E-17	0.00E+00
0.350	4.34E+00	3.81E+00	2.92E+00	1.16E+00	2.07E-02	8.11E-06	2.47E-17	0.00E+00
0.375	4.44E+00	3.89E+00	2.99E+00	1.18E+00	2.11E-02	8.25E-06	2.54E-17	0.00E+00
0.400	4.54E+00	3.98E+00	3.06E+00	1.21E+00	2.15E-02	8.40E-06	2.63E-17	0.00E+00
0.425	4.62E+00	4.05E+00	3.11E+00	1.23E+00	2.20E-02	8.59E-06	2.70E-17	0.00E+00
0.450	4.72E+00	4.13E+00	3.18E+00	1.26E+00	2.24E-02	8.77E-06	2.77E-17	0.00E+00
0.475	4.81E+00	4.22E+00	3.24E+00	1.28E+00	2.29E-02	8.96E-06	2.86E-17	0.00E+00
0.500	4.91E+00	4.30E+00	3.31E+00	1.31E+00	2.34E-02	9.17E-06	2.95E-17	0.00E+00
0.525	5.02E+00	4.40E+00	3.38E+00	1.34E+00	2.38E-02	9.36E-06	3.03E-17	0.00E+00
0.550	5.13E+00	4.50E+00	3.45E+00	1.36E+00	2.44E-02	9.53E-06	3.10E-17	0.00E+00
0.575	5.23E+00	4.59E+00	3.53E+00	1.40E+00	2.49E-02	9.78E-06	3.18E-17	0.00E+00
0.600	5.34E+00	4.68E+00	3.60E+00	1.43E+00	2.55E-02	1.00E-05	3.27E-17	0.00E+00
0.625	5.47E+00	4.79E+00	3.68E+00	1.46E+00	2.61E-02	1.02E-05	3.37E-17	0.00E+00
0.650	5.60E+00	4.91E+00	3.77E+00	1.50E+00	2.68E-02	1.05E-05	3.45E-17	0.00E+00
0.675	5.74E+00	5.03E+00	3.87E+00	1.53E+00	2.74E-02	1.07E-05	3.53E-17	0.00E+00
0.700	5.90E+00	5.17E+00	3.97E+00	1.57E+00	2.81E-02	1.10E-05	3.65E-17	0.00E+00
0.725	6.03E+00	5.29E+00	4.06E+00	1.61E+00	2.88E-02	1.13E-05	3.75E-17	0.00E+00
0.750	6.19E+00	5.42E+00	4.17E+00	1.65E+00	2.96E-02	1.16E-05	3.91E-17	0.00E+00
0.775	6.40E+00	5.61E+00	4.31E+00	1.70E+00	3.05E-02	1.19E-05	4.04E-17	0.00E+00
0.800	6.57E+00	5.76E+00	4.42E+00	1.75E+00	3.14E-02	1.23E-05	4.17E-17	0.00E+00
0.825	6.82E+00	5.98E+00	4.59E+00	1.82E+00	3.26E-02	1.28E-05	4.33E-17	0.00E+00
0.850	7.06E+00	6.19E+00	4.75E+00	1.89E+00	3.39E-02	1.33E-05	4.52E-17	0.00E+00
0.875	7.45E+00	6.52E+00	4.99E+00	1.98E+00	3.55E-02	1.39E-05	4.74E-17	0.00E+00
0.900	7.87E+00	6.89E+00	5.30E+00	2.10E+00	3.78E-02	1.47E-05	5.01E-17	0.00E+00
0.925	8.36E+00	7.33E+00	5.63E+00	2.23E+00	3.98E-02	1.57E-05	5.35E-17	0.00E+00
0.950	8.99E+00	7.87E+00	6.02E+00	2.39E+00	4.29E-02	1.68E-05	5.82E-17	0.00E+00
0.975	9.81E+00	8.60E+00	6.61E+00	2.62E+00	4.72E-02	1.86E-05	6.58E-17	0.00E+00
1.000	1.59E+01	1.39E+01	1.07E+01	4.26E+00	7.70E-02	2.83E-05	9.50E-17	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	5.301E+00
2	0.000E+00	5.300E+00
3	0.000E+00	5.310E+00

Title : RESRAD Default

Input File : ZION SOIL SENSITIVITY.RAD

Coefficients for peak All Pathways Dose

Coefficient =	PCC		SRC		PRCC		SRRC	
	1		1		1		1	
Repetition =								
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Density of cover material	36	-0.01	36	0.00	31	0.01	31	0.00
Contaminated zone erosion rate	26	0.02	26	0.00	24	0.02	24	0.00
Contaminated zone total porosity	22	-0.02	22	0.00	14	0.04	14	0.01
Contaminated zone hydraulic conductivity	15	0.03	15	0.01	40	0.00	40	0.00
Contaminated zone b parameter	19	0.03	19	0.01	8	0.06	8	0.01
Evapotranspiration coefficient	8	0.06	8	0.01	35	-0.01	35	0.00
Wind Speed	21	0.03	21	0.01	9	0.05	9	0.01
Runoff coefficient	13	-0.05	13	-0.01	30	-0.01	30	0.00
Density of saturated zone	32	0.01	32	0.00	18	0.03	17	0.01
Saturated zone total porosity	39	0.00	39	0.00	16	0.03	16	0.01
Saturated zone effective porosity	11	-0.05	11	-0.01	19	0.03	19	0.01
Saturated zone hydraulic conductivity	27	0.01	27	0.00	38	0.00	38	0.00
Saturated zone hydraulic gradient	41	0.00	41	0.00	36	-0.01	36	0.00
Well pump intake depth	30	-0.01	30	0.00	11	-0.05	11	-0.01
Mass loading for inhalation	18	-0.03	18	-0.01	39	0.00	39	0.00
Depth of soil mixing layer	34	-0.01	34	0.00	27	0.02	27	0.00
Depth of roots	4	-0.55	4	-0.12	3	-0.39	3	-0.11
Weathering removal constant of all vegetation	38	0.00	38	0.00	21	0.03	21	0.01
Wet weight crop yield of fruit, grain and non-leafy vegetables	10	0.05	10	0.01	7	0.06	7	0.01
Wet foliar interception fraction of leafy vegetables	16	-0.03	16	-0.01	15	0.04	15	0.01
Indoor dust filtration factor	24	0.02	24	0.00	20	-0.03	20	-0.01
External gamma shielding factor	1	0.98	1	0.94	1	0.97	1	0.93
Cover erosion rate	40	0.00	40	0.00	13	-0.04	13	-0.01
Total Porosity of Unsaturated zone 1	9	-0.05	9	-0.01	12	0.04	12	0.01
Effective Porosity of Unsaturated zone 1	7	0.06	7	0.01	25	-0.02	25	0.00
Hydraulic Conductivity of Unsaturated zone 1	33	-0.01	33	0.00	37	0.01	37	0.00
b Parameter of Unsaturated zone 1	6	-0.06	6	-0.01	41	0.00	41	0.00
Plant transfer factor for Co	2	0.81	2	0.26	2	0.66	2	0.22
Meat transfer factor for Co	3	0.60	3	0.14	4	0.37	4	0.10
Milk transfer factor for Co	5	0.14	5	0.03	5	0.10	5	0.03
Plant transfer factor for Cs	35	0.01	35	0.00	28	0.01	28	0.00
Meat transfer factor for Cs	17	-0.03	17	-0.01	26	-0.02	26	0.00
Milk transfer factor for Cs	29	-0.01	29	0.00	23	-0.02	23	0.00
Plant transfer factor for Ni	14	-0.04	14	-0.01	34	0.01	34	0.00
Meat transfer factor for Ni	37	-0.01	37	0.00	17	0.03	18	0.01
Milk transfer factor for Ni	12	-0.05	12	-0.01	32	0.01	32	0.00
Plant transfer factor for Sr	25	0.02	25	0.00	10	-0.05	10	-0.01
Meat transfer factor for Sr	31	-0.01	31	0.00	6	-0.07	6	-0.02
Milk transfer factor for Sr	23	0.02	23	0.00	29	0.01	29	0.00
Density of contaminated zone	20	-0.03	20	-0.01	22	-0.03	22	-0.01
Density of Unsaturated zone 1	28	-0.01	28	0.00	33	0.01	33	0.00
R-SQUARE		0.97		0.97		0.94		0.94

-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 SOIL 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
Density of cover material	7	-0.05	7	-0.01	20	-0.03	20	-0.01
Contaminated zone erosion rate	32	-0.01	32	0.00	31	-0.01	31	0.00
Contaminated zone total porosity	41	0.00	41	0.00	26	-0.02	26	0.00
Contaminated zone hydraulic conductivity	38	0.00	38	0.00	41	0.00	41	0.00
Contaminated zone b parameter	34	0.01	34	0.00	27	-0.02	27	0.00
Evapotranspiration coefficient	11	0.04	11	0.01	23	0.02	23	0.01
Wind Speed	35	0.01	35	0.00	28	-0.01	28	0.00
Runoff coefficient	19	0.03	19	0.01	12	0.04	12	0.01
Density of saturated zone	17	-0.04	17	-0.01	40	0.00	40	0.00
Saturated zone total porosity	22	0.03	22	0.00	7	0.07	7	0.02
Saturated zone effective porosity	23	-0.03	23	0.00	13	0.04	13	0.01
Saturated zone hydraulic conductivity	25	0.02	25	0.00	36	0.00	36	0.00
Saturated zone hydraulic gradient	36	-0.01	36	0.00	14	0.03	14	0.01
Well pump intake depth	28	0.01	28	0.00	8	-0.06	8	-0.01
Mass loading for inhalation	26	-0.02	26	0.00	39	0.00	39	0.00
Depth of soil mixing layer	10	-0.04	10	-0.01	17	0.03	17	0.01
Depth of roots	4	-0.53	4	-0.11	3	-0.43	3	-0.12
Weathering removal constant of all vegetation	15	-0.04	15	-0.01	21	-0.02	21	-0.01
Wet weight crop yield of fruit, grain and non-leafy vegetables	9	0.04	9	0.01	15	-0.03	15	-0.01
Wet foliar interception fraction of leafy vegetables	14	0.04	14	0.01	35	0.00	35	0.00
Indoor dust filtration factor	18	-0.03	18	-0.01	6	-0.09	6	-0.02
External gamma shielding factor	1	0.98	1	0.92	1	0.97	1	0.93
Cover erosion rate	20	-0.03	20	-0.01	32	-0.01	32	0.00
Total Porosity of Unsaturated zone 1	39	0.00	39	0.00	19	-0.03	19	-0.01
Effective Porosity of Unsaturated zone 1	31	-0.01	31	0.00	29	0.01	29	0.00
Hydraulic Conductivity of Unsaturated zone 1	16	0.04	16	0.01	30	-0.01	30	0.00
b Parameter of Unsaturated zone 1	13	0.04	13	0.01	22	0.02	22	0.01
Plant transfer factor for Co	2	0.83	2	0.27	2	0.64	2	0.21
Meat transfer factor for Co	3	0.57	3	0.13	4	0.40	4	0.11
Milk transfer factor for Co	5	0.15	5	0.03	5	0.13	5	0.03
Plant transfer factor for Cs	30	0.01	30	0.00	24	-0.02	24	0.00
Meat transfer factor for Cs	37	0.01	37	0.00	34	0.00	34	0.00
Milk transfer factor for Cs	12	0.04	12	0.01	25	-0.02	25	0.00
Plant transfer factor for Ni	29	0.01	29	0.00	33	0.01	33	0.00
Meat transfer factor for Ni	27	-0.02	27	0.00	38	0.00	38	0.00
Milk transfer factor for Ni	40	0.00	40	0.00	16	-0.03	16	-0.01
Plant transfer factor for Sr	33	-0.01	33	0.00	37	0.00	37	0.00
Meat transfer factor for Sr	24	-0.02	24	0.00	11	-0.04	11	-0.01
Milk transfer factor for Sr	6	0.06	6	0.01	9	0.05	9	0.01
Density of contaminated zone	8	0.05	8	0.01	18	0.03	18	0.01
Density of Unsaturated zone 1	21	-0.03	21	-0.01	10	-0.05	10	-0.01
R-SQUARE		0.97		0.97		0.94		0.94

-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 SOIL 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
Density of cover material	8	0.05	8	0.01	41	0.00	41	0.00
Contaminated zone erosion rate	32	-0.01	32	0.00	24	-0.04	24	-0.01
Contaminated zone total porosity	29	-0.01	29	0.00	22	-0.04	22	-0.01
Contaminated zone hydraulic conductivity	21	0.02	21	0.00	23	0.04	23	0.01
Contaminated zone b parameter	7	0.06	7	0.01	6	0.08	6	0.02
Evapotranspiration coefficient	33	0.01	33	0.00	31	0.02	31	0.00
Wind Speed	6	0.06	6	0.01	28	-0.02	28	-0.01
Runoff coefficient	12	0.03	12	0.01	18	0.04	18	0.01
Density of saturated zone	25	-0.02	25	0.00	13	0.05	13	0.01
Saturated zone total porosity	10	-0.04	10	-0.01	16	-0.05	16	-0.01
Saturated zone effective porosity	28	0.02	28	0.00	15	0.05	15	0.01
Saturated zone hydraulic conductivity	26	-0.02	26	0.00	40	0.00	40	0.00
Saturated zone hydraulic gradient	36	0.00	36	0.00	37	-0.01	37	0.00
Well pump intake depth	40	0.00	40	0.00	25	-0.03	25	-0.01
Mass loading for inhalation	27	-0.02	27	0.00	20	0.04	20	0.01
Depth of soil mixing layer	20	-0.02	20	0.00	39	0.00	39	0.00
Depth of roots	4	-0.52	4	-0.12	3	-0.45	3	-0.12
Weathering removal constant of all vegetation	24	-0.02	24	0.00	27	-0.02	27	-0.01
Wet weight crop yield of fruit, grain and non-leafy vegetables	11	0.04	11	0.01	32	0.01	32	0.00
Wet foliar interception fraction of leafy vegetables	23	-0.02	23	0.00	29	-0.02	29	-0.01
Indoor dust filtration factor	9	-0.04	9	-0.01	7	-0.08	7	-0.02
External gamma shielding factor	1	0.98	1	0.92	1	0.97	1	0.93
Cover erosion rate	41	0.00	41	0.00	12	-0.05	12	-0.01
Total Porosity of Unsaturated zone 1	35	0.00	35	0.00	34	-0.01	34	0.00
Effective Porosity of Unsaturated zone 1	30	-0.01	30	0.00	35	0.01	35	0.00
Hydraulic Conductivity of Unsaturated zone 1	39	0.00	39	0.00	19	0.04	19	0.01
b Parameter of Unsaturated zone 1	22	-0.02	22	0.00	10	-0.06	10	-0.01
Plant transfer factor for Co	2	0.81	2	0.27	2	0.67	2	0.22
Meat transfer factor for Co	3	0.62	3	0.15	4	0.37	4	0.10
Milk transfer factor for Co	5	0.13	5	0.03	5	0.13	5	0.03
Plant transfer factor for Cs	14	0.03	14	0.01	9	0.06	9	0.02
Meat transfer factor for Cs	19	-0.03	19	0.00	38	0.00	38	0.00
Milk transfer factor for Cs	15	0.03	15	0.01	14	0.05	14	0.01
Plant transfer factor for Ni	37	0.00	37	0.00	26	0.03	26	0.01
Meat transfer factor for Ni	38	0.00	38	0.00	17	-0.04	17	-0.01
Milk transfer factor for Ni	34	0.01	34	0.00	33	0.01	33	0.00
Plant transfer factor for Sr	17	0.03	16	0.01	11	0.05	11	0.01
Meat transfer factor for Sr	16	-0.03	17	-0.01	8	-0.08	8	-0.02
Milk transfer factor for Sr	31	0.01	31	0.00	30	0.02	30	0.01
Density of contaminated zone	13	-0.03	13	-0.01	21	0.04	21	0.01
Density of Unsaturated zone 1	18	0.03	18	0.01	36	0.01	36	0.00
R-SQUARE		0.96		0.96		0.94		0.94

-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.