

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	1.52E+00	1.52E+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	1.00E+01	1.00E+01	8.76E+00	6.69E+00	2.65E+00	4.76E-02	1.86E-05	6.59E-17	0.00E+00
Avg	0.00E+00	4.20E+00	4.20E+00	3.62E+00	2.72E+00	1.03E+00	1.28E-02	2.70E-06	4.78E-18	0.00E+00
Std	0.00E+00	1.46E+00	1.46E+00	1.32E+00	1.04E+00	4.19E-01	8.80E-03	3.42E-06	1.02E-17	0.00E+00
ΣALL										
Min	0.00E+00	1.52E+00	1.52E+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	1.00E+01	1.00E+01	8.76E+00	6.69E+00	2.65E+00	4.76E-02	1.86E-05	6.59E-17	0.00E+00
Avg	0.00E+00	4.20E+00	4.20E+00	3.62E+00	2.72E+00	1.03E+00	1.28E-02	2.70E-06	4.78E-18	0.00E+00
Std	0.00E+00	1.46E+00	1.46E+00	1.32E+00	1.04E+00	4.19E-01	8.80E-03	3.42E-06	1.02E-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		1.23E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		6.03E-05	5.28E-05	4.06E-05	1.61E-05	2.89E-07	1.13E-10	4.00E-22	1.19E-39
Avg		2.40E-05	2.08E-05	1.57E-05	5.90E-06	7.22E-08	1.56E-11	2.89E-23	4.40E-43
Std		9.13E-06	8.10E-06	6.30E-06	2.52E-06	5.41E-08	2.06E-11	6.19E-23	0.00E+00
ΣALL									
Min		1.23E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		6.03E-05	5.28E-05	4.06E-05	1.61E-05	2.89E-07	1.13E-10	4.00E-22	1.19E-39
Avg		2.40E-05	2.08E-05	1.57E-05	5.90E-06	7.22E-08	1.56E-11	2.89E-23	4.40E-43
Std		9.13E-06	8.10E-06	6.30E-06	2.52E-06	5.41E-08	2.06E-11	6.19E-23	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		1.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		9.98E+00	8.72E+00	6.65E+00	2.62E+00	4.70E-02	1.84E-05	6.50E-17	0.00E+00
Avg		4.08E+00	3.52E+00	2.65E+00	9.99E-01	1.25E-02	2.64E-06	4.66E-18	0.00E+00
Std		1.45E+00	1.31E+00	1.03E+00	4.15E-01	8.64E-03	3.35E-06	9.99E-18	0.00E+00
ΣALL									
Min		1.46E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		9.98E+00	8.72E+00	6.65E+00	2.62E+00	4.70E-02	1.84E-05	6.50E-17	0.00E+00
Avg		4.08E+00	3.52E+00	2.65E+00	9.99E-01	1.25E-02	2.64E-06	4.66E-18	0.00E+00
Std		1.45E+00	1.31E+00	1.03E+00	4.15E-01	8.64E-03	3.35E-06	9.99E-18	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		5.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.46E-05	1.28E-05	9.81E-06	3.89E-06	6.31E-08	1.38E-11	3.93E-23	0.00E+00
Avg		1.54E-06	1.32E-06	9.90E-07	3.63E-07	4.18E-09	8.39E-13	1.65E-24	0.00E+00
Std		1.25E-06	1.10E-06	8.39E-07	3.23E-07	4.99E-09	1.51E-12	4.32E-24	0.00E+00
ΣALL									
Min		5.11E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.46E-05	1.28E-05	9.81E-06	3.89E-06	6.31E-08	1.38E-11	3.93E-23	0.00E+00
Avg		1.54E-06	1.32E-06	9.90E-07	3.63E-07	4.18E-09	8.39E-13	1.65E-24	0.00E+00
Std		1.25E-06	1.10E-06	8.39E-07	3.23E-07	4.99E-09	1.51E-12	4.32E-24	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

ΣALL is total pathway dose summed for all nuclides.

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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		5.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		7.58E-01	6.61E-01	5.03E-01	1.93E-01	2.90E-03	1.04E-06	3.20E-18	0.00E+00
Avg		4.15E-02	3.55E-02	2.63E-02	9.47E-03	1.05E-04	2.23E-08	4.58E-20	0.00E+00
Std		6.16E-02	5.32E-02	3.99E-02	1.46E-02	2.03E-04	6.32E-08	1.80E-19	0.00E+00
ΣALL									
Min		5.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		7.58E-01	6.61E-01	5.03E-01	1.93E-01	2.90E-03	1.04E-06	3.20E-18	0.00E+00
Avg		4.15E-02	3.55E-02	2.63E-02	9.47E-03	1.05E-04	2.23E-08	4.58E-20	0.00E+00
Std		6.16E-02	5.32E-02	3.99E-02	1.46E-02	2.03E-04	6.32E-08	1.80E-19	0.00E+00

ΣALL is total pathway dose summed for all nuclides.



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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		4.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.84E+00	1.61E+00	1.24E+00	4.90E-01	8.62E-03	3.24E-06	1.00E-17	0.00E+00
Avg		5.68E-02	4.87E-02	3.63E-02	1.31E-02	1.49E-04	3.16E-08	6.23E-20	0.00E+00
Std		1.00E-01	8.68E-02	6.53E-02	2.42E-02	3.37E-04	1.05E-07	2.91E-19	0.00E+00
ΣALL									
Min		4.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.84E+00	1.61E+00	1.24E+00	4.90E-01	8.62E-03	3.24E-06	1.00E-17	0.00E+00
Avg		5.68E-02	4.87E-02	3.63E-02	1.31E-02	1.49E-04	3.16E-08	6.23E-20	0.00E+00
Std		1.00E-01	8.68E-02	6.53E-02	2.42E-02	3.37E-04	1.05E-07	2.91E-19	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		4.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		4.33E-01	3.71E-01	2.71E-01	8.83E-02	9.98E-04	3.31E-07	1.01E-18	0.00E+00
Avg		1.73E-02	1.49E-02	1.11E-02	3.99E-03	4.39E-05	9.08E-09	1.82E-20	0.00E+00
Std		2.60E-02	2.25E-02	1.68E-02	6.08E-03	7.96E-05	2.30E-08	6.46E-20	0.00E+00
ΣALL									
Min		4.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		4.33E-01	3.71E-01	2.71E-01	8.83E-02	9.98E-04	3.31E-07	1.01E-18	0.00E+00
Avg		1.73E-02	1.49E-02	1.11E-02	3.99E-03	4.39E-05	9.08E-09	1.82E-20	0.00E+00
Std		2.60E-02	2.25E-02	1.68E-02	6.08E-03	7.96E-05	2.30E-08	6.46E-20	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		4.88E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		3.57E-04	3.12E-04	2.40E-04	9.54E-05	1.71E-06	6.72E-10	2.39E-21	0.00E+00
Avg		2.38E-04	2.04E-04	1.53E-04	5.60E-05	6.47E-07	1.34E-10	2.63E-22	0.00E+00
Std		9.12E-05	8.26E-05	6.53E-05	2.69E-05	5.38E-07	1.94E-10	5.75E-22	0.00E+00
ΣALL									
Min		4.88E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		3.57E-04	3.12E-04	2.40E-04	9.54E-05	1.71E-06	6.72E-10	2.39E-21	0.00E+00
Avg		2.38E-04	2.04E-04	1.53E-04	5.60E-05	6.47E-07	1.34E-10	2.63E-22	0.00E+00
Std		9.12E-05	8.26E-05	6.53E-05	2.69E-05	5.38E-07	1.94E-10	5.75E-22	0.00E+00

ΣALL is total pathway dose summed for all nuclides.

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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	2.32E+00	1.91E+00	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.050	2.47E+00	2.09E+00	1.53E+00	5.58E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.075	2.59E+00	2.19E+00	1.64E+00	6.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.100	2.67E+00	2.29E+00	1.71E+00	6.39E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.125	2.76E+00	2.37E+00	1.78E+00	6.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.150	2.83E+00	2.44E+00	1.84E+00	6.91E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.175	2.92E+00	2.51E+00	1.89E+00	7.11E-01	1.60E-03	0.00E+00	0.00E+00	0.00E+00
0.200	2.99E+00	2.59E+00	1.95E+00	7.31E-01	4.00E-03	0.00E+00	0.00E+00	0.00E+00
0.225	3.08E+00	2.66E+00	2.00E+00	7.53E-01	5.69E-03	0.00E+00	0.00E+00	0.00E+00
0.250	3.14E+00	2.72E+00	2.06E+00	7.73E-01	7.09E-03	0.00E+00	0.00E+00	0.00E+00
0.275	3.21E+00	2.78E+00	2.10E+00	7.92E-01	8.36E-03	0.00E+00	0.00E+00	0.00E+00
0.300	3.28E+00	2.84E+00	2.15E+00	8.12E-01	8.97E-03	0.00E+00	0.00E+00	0.00E+00
0.325	3.34E+00	2.90E+00	2.19E+00	8.29E-01	9.64E-03	0.00E+00	0.00E+00	0.00E+00
0.350	3.41E+00	2.96E+00	2.23E+00	8.45E-01	1.02E-02	0.00E+00	0.00E+00	0.00E+00
0.375	3.49E+00	3.03E+00	2.29E+00	8.64E-01	1.06E-02	0.00E+00	0.00E+00	0.00E+00
0.400	3.56E+00	3.09E+00	2.34E+00	8.85E-01	1.12E-02	0.00E+00	0.00E+00	0.00E+00
0.425	3.63E+00	3.14E+00	2.38E+00	9.05E-01	1.16E-02	0.00E+00	0.00E+00	0.00E+00
0.450	3.70E+00	3.22E+00	2.44E+00	9.26E-01	1.21E-02	0.00E+00	0.00E+00	0.00E+00
0.475	3.78E+00	3.29E+00	2.49E+00	9.45E-01	1.26E-02	0.00E+00	0.00E+00	0.00E+00
0.500	3.87E+00	3.35E+00	2.54E+00	9.64E-01	1.30E-02	9.79E-08	0.00E+00	0.00E+00
0.525	3.95E+00	3.43E+00	2.59E+00	9.82E-01	1.34E-02	1.23E-06	0.00E+00	0.00E+00
0.550	4.03E+00	3.51E+00	2.65E+00	1.00E+00	1.38E-02	1.99E-06	0.00E+00	0.00E+00
0.575	4.13E+00	3.58E+00	2.70E+00	1.03E+00	1.43E-02	2.56E-06	0.00E+00	0.00E+00
0.600	4.21E+00	3.66E+00	2.77E+00	1.05E+00	1.47E-02	2.95E-06	0.00E+00	0.00E+00
0.625	4.33E+00	3.75E+00	2.84E+00	1.08E+00	1.52E-02	3.36E-06	0.00E+00	0.00E+00
0.650	4.43E+00	3.84E+00	2.92E+00	1.10E+00	1.57E-02	3.68E-06	0.00E+00	0.00E+00
0.675	4.52E+00	3.93E+00	2.98E+00	1.14E+00	1.61E-02	4.01E-06	0.00E+00	0.00E+00
0.700	4.64E+00	4.03E+00	3.06E+00	1.17E+00	1.67E-02	4.32E-06	0.00E+00	0.00E+00
0.725	4.76E+00	4.13E+00	3.14E+00	1.20E+00	1.73E-02	4.62E-06	0.00E+00	0.00E+00
0.750	4.91E+00	4.27E+00	3.24E+00	1.23E+00	1.79E-02	4.94E-06	0.00E+00	0.00E+00
0.775	5.04E+00	4.39E+00	3.33E+00	1.27E+00	1.85E-02	5.28E-06	0.00E+00	0.00E+00
0.800	5.22E+00	4.55E+00	3.44E+00	1.31E+00	1.92E-02	5.74E-06	1.09E-17	0.00E+00
0.825	5.41E+00	4.72E+00	3.59E+00	1.37E+00	2.03E-02	6.07E-06	1.47E-17	0.00E+00
0.850	5.65E+00	4.91E+00	3.73E+00	1.41E+00	2.12E-02	6.50E-06	1.71E-17	0.00E+00
0.875	5.88E+00	5.11E+00	3.89E+00	1.49E+00	2.24E-02	6.94E-06	1.91E-17	0.00E+00
0.900	6.21E+00	5.40E+00	4.10E+00	1.57E+00	2.38E-02	7.61E-06	2.13E-17	0.00E+00
0.925	6.63E+00	5.78E+00	4.40E+00	1.68E+00	2.56E-02	8.27E-06	2.37E-17	0.00E+00
0.950	7.20E+00	6.29E+00	4.78E+00	1.82E+00	2.81E-02	9.28E-06	2.77E-17	0.00E+00
0.975	8.00E+00	6.96E+00	5.27E+00	2.01E+00	3.22E-02	1.11E-05	3.35E-17	0.00E+00
1.000	1.00E+01	8.76E+00	6.69E+00	2.65E+00	4.76E-02	1.86E-05	6.59E-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	4.199E+00
2	0.000E+00	4.201E+00
3	0.000E+00	4.199E+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	23	-0.03	23	0.00	20	-0.03	20	-0.01
Contaminated zone erosion rate	2	-0.76	2	-0.10	6	-0.20	6	-0.04
Contaminated zone total porosity	19	-0.03	19	0.00	12	0.04	12	0.01
Contaminated zone hydraulic conductivity	37	0.00	37	0.00	24	-0.02	24	0.00
Contaminated zone b parameter	18	0.03	18	0.00	36	0.01	36	0.00
Evapotranspiration coefficient	17	0.03	17	0.00	22	0.03	22	0.00
Wind Speed	32	-0.01	33	0.00	11	0.05	11	0.01
Runoff coefficient	10	-0.05	10	0.00	41	0.00	41	0.00
Density of saturated zone	39	0.00	39	0.00	39	0.00	39	0.00
Saturated zone total porosity	30	0.01	30	0.00	32	0.01	32	0.00
Saturated zone effective porosity	9	-0.06	9	-0.01	31	0.01	31	0.00
Saturated zone hydraulic conductivity	40	0.00	40	0.00	25	0.02	25	0.00
Saturated zone hydraulic gradient	22	0.03	21	0.00	10	0.06	10	0.01
Well pump intake depth	28	0.01	28	0.00	14	-0.03	14	-0.01
Mass loading for inhalation	36	0.01	36	0.00	21	0.03	21	0.01
Depth of soil mixing layer	7	-0.12	7	-0.01	9	-0.06	9	-0.01
Depth of roots	6	-0.44	6	-0.04	4	-0.27	4	-0.05
Weathering removal constant of all vegetation	34	0.01	34	0.00	15	0.03	15	0.01
Wet weight crop yield of fruit, grain and non-leafy vegetables	31	0.01	31	0.00	30	0.01	30	0.00
Wet foliar interception fraction of leafy vegetables	14	-0.04	14	0.00	37	0.00	37	0.00
Indoor dust filtration factor	26	0.02	26	0.00	26	0.02	26	0.00
External gamma shielding factor	1	1.00	1	0.98	1	0.98	1	0.97
Cover erosion rate	29	0.01	29	0.00	27	-0.02	27	0.00
Total Porosity of Unsaturated zone 1	38	0.00	38	0.00	38	0.00	38	0.00
Effective Porosity of Unsaturated zone 1	21	0.03	22	0.00	16	0.03	16	0.01
Hydraulic Conductivity of Unsaturated zone 1	27	-0.01	27	0.00	17	0.03	17	0.01
b Parameter of Unsaturated zone 1	11	-0.05	11	0.00	34	0.01	34	0.00
Plant transfer factor for Co	4	0.53	4	0.05	3	0.31	3	0.06
Meat transfer factor for Co	5	0.52	5	0.05	5	0.26	5	0.05
Milk transfer factor for Co	8	0.10	8	0.01	7	0.07	7	0.01
Plant transfer factor for Cs	12	0.05	12	0.00	18	-0.03	18	-0.01
Meat transfer factor for Cs	24	-0.02	24	0.00	33	-0.01	33	0.00
Milk transfer factor for Cs	16	0.03	16	0.00	28	-0.02	28	0.00
Plant transfer factor for Ni	13	-0.04	13	0.00	29	0.02	29	0.00
Meat transfer factor for Ni	35	0.01	35	0.00	23	-0.02	23	0.00
Milk transfer factor for Ni	20	0.03	20	0.00	13	0.04	13	0.01
Plant transfer factor for Sr	33	-0.01	32	0.00	35	-0.01	35	0.00
Meat transfer factor for Sr	15	-0.04	15	0.00	8	-0.06	8	-0.01
Milk transfer factor for Sr	41	0.00	41	0.00	40	0.00	40	0.00
Density of contaminated zone	3	0.74	3	0.09	2	0.50	2	0.10
Density of Unsaturated zone 1	25	-0.02	25	0.00	19	-0.03	19	-0.01
R-SQUARE		0.99		0.99		0.97		0.97

-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	41	0.00	41	0.00	35	-0.01	35	0.00
Contaminated zone erosion rate	3	-0.74	3	-0.08	6	-0.20	6	-0.03
Contaminated zone total porosity	28	0.02	28	0.00	40	0.00	40	0.00
Contaminated zone hydraulic conductivity	36	0.00	36	0.00	26	-0.02	26	0.00
Contaminated zone b parameter	17	0.03	17	0.00	25	-0.02	25	0.00
Evapotranspiration coefficient	9	0.07	9	0.01	9	0.06	9	0.01
Wind Speed	33	-0.01	33	0.00	32	0.02	32	0.00
Runoff coefficient	20	0.03	20	0.00	31	0.02	31	0.00
Density of saturated zone	18	-0.03	19	0.00	27	-0.02	27	0.00
Saturated zone total porosity	23	0.03	23	0.00	12	0.05	12	0.01
Saturated zone effective porosity	24	-0.02	24	0.00	15	0.05	15	0.01
Saturated zone hydraulic conductivity	16	0.03	16	0.00	16	0.05	16	0.01
Saturated zone hydraulic gradient	19	0.03	18	0.00	10	0.06	10	0.01
Well pump intake depth	34	-0.01	34	0.00	14	-0.05	14	-0.01
Mass loading for inhalation	39	0.00	39	0.00	17	0.04	17	0.01
Depth of soil mixing layer	7	-0.15	7	-0.01	13	-0.05	13	-0.01
Depth of roots	6	-0.47	6	-0.04	4	-0.30	4	-0.05
Weathering removal constant of all vegetation	22	-0.03	22	0.00	11	-0.06	11	-0.01
Wet weight crop yield of fruit, grain and non-leafy vegetables	38	0.00	38	0.00	38	0.00	38	0.00
Wet foliar interception fraction of leafy vegetables	30	-0.01	30	0.00	39	0.00	39	0.00
Indoor dust filtration factor	40	0.00	40	0.00	8	-0.09	8	-0.01
External gamma shielding factor	1	1.00	1	0.98	1	0.99	1	0.98
Cover erosion rate	12	-0.04	12	0.00	22	-0.03	22	0.00
Total Porosity of Unsaturated zone 1	35	-0.01	35	0.00	36	-0.01	36	0.00
Effective Porosity of Unsaturated zone 1	27	-0.02	27	0.00	33	-0.01	33	0.00
Hydraulic Conductivity of Unsaturated zone 1	26	-0.02	26	0.00	28	-0.02	28	0.00
b Parameter of Unsaturated zone 1	11	0.04	11	0.00	21	0.04	21	0.01
Plant transfer factor for Co	4	0.62	4	0.06	3	0.33	3	0.05
Meat transfer factor for Co	5	0.52	5	0.04	5	0.26	5	0.04
Milk transfer factor for Co	8	0.12	8	0.01	7	0.09	7	0.01
Plant transfer factor for Cs	32	0.01	32	0.00	29	-0.02	29	0.00
Meat transfer factor for Cs	21	-0.03	21	0.00	37	-0.01	37	0.00
Milk transfer factor for Cs	25	-0.02	25	0.00	41	0.00	41	0.00
Plant transfer factor for Ni	15	-0.04	14	0.00	23	-0.03	23	0.00
Meat transfer factor for Ni	10	-0.06	10	0.00	34	-0.01	34	0.00
Milk transfer factor for Ni	29	-0.02	29	0.00	30	-0.02	30	0.00
Plant transfer factor for Sr	37	0.00	37	0.00	19	-0.04	19	-0.01
Meat transfer factor for Sr	31	0.01	31	0.00	20	-0.04	20	-0.01
Milk transfer factor for Sr	13	0.04	13	0.00	18	0.04	18	0.01
Density of contaminated zone	2	0.83	2	0.10	2	0.59	2	0.11
Density of Unsaturated zone 1	14	-0.04	15	0.00	24	-0.03	24	0.00
R-SQUARE		0.99		0.99		0.98		0.98

-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	10	0.06	10	0.00	30	0.02	30	0.00
Contaminated zone erosion rate	3	-0.75	3	-0.09	6	-0.19	6	-0.03
Contaminated zone total porosity	40	0.00	40	0.00	20	-0.03	20	-0.01
Contaminated zone hydraulic conductivity	33	-0.01	33	0.00	40	0.00	40	0.00
Contaminated zone b parameter	15	0.04	15	0.00	22	0.03	22	0.00
Evapotranspiration coefficient	34	-0.01	34	0.00	36	-0.01	36	0.00
Wind Speed	13	0.05	13	0.00	23	-0.03	23	0.00
Runoff coefficient	9	0.07	9	0.01	14	0.05	14	0.01
Density of saturated zone	24	0.02	24	0.00	10	0.07	10	0.01
Saturated zone total porosity	20	-0.02	20	0.00	26	-0.02	26	0.00
Saturated zone effective porosity	14	0.04	14	0.00	11	0.06	11	0.01
Saturated zone hydraulic conductivity	23	0.02	23	0.00	12	0.06	12	0.01
Saturated zone hydraulic gradient	32	-0.01	32	0.00	19	0.04	19	0.01
Well pump intake depth	29	-0.02	29	0.00	16	-0.05	16	-0.01
Mass loading for inhalation	21	0.02	21	0.00	21	0.03	21	0.01
Depth of soil mixing layer	7	-0.12	7	-0.01	8	-0.08	8	-0.01
Depth of roots	6	-0.46	6	-0.04	4	-0.30	4	-0.05
Weathering removal constant of all vegetation	36	0.00	36	0.00	37	0.01	37	0.00
Wet weight crop yield of fruit, grain and non-leafy vegetables	31	0.01	31	0.00	31	0.02	31	0.00
Wet foliar interception fraction of leafy vegetables	19	-0.03	19	0.00	18	-0.04	18	-0.01
Indoor dust filtration factor	30	0.01	30	0.00	9	-0.07	9	-0.01
External gamma shielding factor	1	1.00	1	0.98	1	0.99	1	0.98
Cover erosion rate	39	0.00	39	0.00	29	-0.02	29	0.00
Total Porosity of Unsaturated zone 1	18	-0.03	18	0.00	39	0.00	39	0.00
Effective Porosity of Unsaturated zone 1	38	0.00	38	0.00	17	0.04	17	0.01
Hydraulic Conductivity of Unsaturated zone 1	37	0.00	37	0.00	25	0.02	25	0.00
b Parameter of Unsaturated zone 1	27	0.02	27	0.00	33	0.02	33	0.00
Plant transfer factor for Co	4	0.59	4	0.06	3	0.34	3	0.06
Meat transfer factor for Co	5	0.54	5	0.05	5	0.24	5	0.04
Milk transfer factor for Co	8	0.10	8	0.01	7	0.10	7	0.02
Plant transfer factor for Cs	17	0.03	17	0.00	13	0.05	13	0.01
Meat transfer factor for Cs	11	-0.05	11	0.00	27	0.02	27	0.00
Milk transfer factor for Cs	35	0.00	35	0.00	35	0.01	35	0.00
Plant transfer factor for Ni	41	0.00	41	0.00	28	0.02	28	0.00
Meat transfer factor for Ni	25	-0.02	25	0.00	32	-0.02	32	0.00
Milk transfer factor for Ni	28	0.02	28	0.00	41	0.00	41	0.00
Plant transfer factor for Sr	22	-0.02	22	0.00	15	0.05	15	0.01
Meat transfer factor for Sr	16	-0.03	16	0.00	38	0.00	38	0.00
Milk transfer factor for Sr	26	-0.02	26	0.00	24	0.03	24	0.00
Density of contaminated zone	2	0.80	2	0.10	2	0.55	2	0.10
Density of Unsaturated zone 1	12	0.05	12	0.00	34	0.02	34	0.00
R-SQUARE		0.99		0.99		0.98		0.98

-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.