

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
Sr-90										
Min	0.00E+00	1.88E-01	1.87E-01	1.67E-01	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	7.86E+01	2.89E+02	2.89E+02	2.71E+02	2.38E+02	1.52E+02	2.11E+01	7.55E-01	3.50E-03	3.18E-13
Avg	9.43E-01	7.83E+00	7.82E+00	7.11E+00	5.88E+00	3.08E+00	5.81E-01	1.23E-01	1.39E-04	1.24E-16
Std	6.43E+00	1.28E+01	1.28E+01	1.17E+01	9.79E+00	5.46E+00	6.91E-01	1.36E-01	4.49E-04	5.86E-15
ΣALL										
Min	0.00E+00	1.88E-01	1.87E-01	1.67E-01	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	7.86E+01	2.89E+02	2.89E+02	2.71E+02	2.38E+02	1.52E+02	2.11E+01	7.55E-01	3.50E-03	3.18E-13
Avg	9.43E-01	7.83E+00	7.82E+00	7.11E+00	5.88E+00	3.08E+00	5.81E-01	1.23E-01	1.39E-04	1.24E-16
Std	6.43E+00	1.28E+01	1.28E+01	1.17E+01	9.79E+00	5.46E+00	6.91E-01	1.36E-01	4.49E-04	5.86E-15

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
Sr-90									
Min		6.86E-07	5.32E-07	1.68E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		2.47E-03	2.31E-03	2.03E-03	1.29E-03	1.82E-04	8.46E-06	3.65E-08	2.55E-18
Avg		5.27E-05	4.83E-05	4.07E-05	2.35E-05	7.09E-06	1.26E-06	1.38E-09	9.79E-22
Std		9.03E-05	8.33E-05	7.10E-05	4.15E-05	6.85E-06	1.48E-06	4.69E-09	4.68E-20
ΣALL									
Min		6.86E-07	5.32E-07	1.68E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		2.47E-03	2.31E-03	2.03E-03	1.29E-03	1.82E-04	8.46E-06	3.65E-08	2.55E-18
Avg		5.27E-05	4.83E-05	4.07E-05	2.35E-05	7.09E-06	1.26E-06	1.38E-09	9.79E-22
Std		9.03E-05	8.33E-05	7.10E-05	4.15E-05	6.85E-06	1.48E-06	4.69E-09	4.68E-20

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
Sr-90									
Min		3.48E-03	3.06E-03	2.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.76E-02	1.65E-02	1.49E-02	1.05E-02	2.30E-03	1.18E-04	6.91E-09	1.54E-23
Avg		7.43E-03	6.77E-03	5.63E-03	2.98E-03	2.46E-04	3.97E-06	3.18E-11	9.28E-27
Std		2.60E-03	2.39E-03	2.04E-03	1.33E-03	2.42E-04	8.25E-06	2.49E-10	0.00E+00
ΣALL									
Min		3.48E-03	3.06E-03	2.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.76E-02	1.65E-02	1.49E-02	1.05E-02	2.30E-03	1.18E-04	6.91E-09	1.54E-23
Avg		7.43E-03	6.77E-03	5.63E-03	2.98E-03	2.46E-04	3.97E-06	3.18E-11	9.28E-27
Std		2.60E-03	2.39E-03	2.04E-03	1.33E-03	2.42E-04	8.25E-06	2.49E-10	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
Sr-90									
Min		4.84E-08	4.53E-08	3.96E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		9.30E-05	8.79E-05	7.84E-05	5.26E-05	9.25E-06	3.11E-07	1.55E-11	4.14E-26
Avg		1.40E-05	1.28E-05	1.06E-05	5.63E-06	4.66E-07	7.43E-09	5.48E-14	1.98E-29
Std		9.25E-06	8.46E-06	7.11E-06	4.14E-06	5.66E-07	1.75E-08	5.14E-13	0.00E+00
ΣALL									
Min		4.84E-08	4.53E-08	3.96E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		9.30E-05	8.79E-05	7.84E-05	5.26E-05	9.25E-06	3.11E-07	1.55E-11	4.14E-26
Avg		1.40E-05	1.28E-05	1.06E-05	5.63E-06	4.66E-07	7.43E-09	5.48E-14	1.98E-29
Std		9.25E-06	8.46E-06	7.11E-06	4.14E-06	5.66E-07	1.75E-08	5.14E-13	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
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
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
Sr-90									
Min		7.52E-02	6.65E-02	5.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.82E+02	1.70E+02	1.50E+02	9.52E+01	1.32E+01	2.61E-01	4.02E-06	2.48E-21
Avg		5.46E+00	4.96E+00	4.10E+00	2.15E+00	1.71E-01	2.46E-03	1.23E-08	1.75E-24
Std		8.73E+00	7.97E+00	6.67E+00	3.72E+00	4.14E-01	9.17E-03	1.14E-07	5.42E-23
ΣALL									
Min		7.52E-02	6.65E-02	5.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.82E+02	1.70E+02	1.50E+02	9.52E+01	1.32E+01	2.61E-01	4.02E-06	2.48E-21
Avg		5.46E+00	4.96E+00	4.10E+00	2.15E+00	1.71E-01	2.46E-03	1.23E-08	1.75E-24
Std		8.73E+00	7.97E+00	6.67E+00	3.72E+00	4.14E-01	9.17E-03	1.14E-07	5.42E-23

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
Sr-90									
Min		3.07E-02	2.78E-02	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		4.00E+01	3.75E+01	3.30E+01	2.09E+01	2.91E+00	5.74E-02	4.81E-07	2.92E-22
Avg		8.86E-01	8.06E-01	6.67E-01	3.50E-01	2.79E-02	4.04E-04	2.00E-09	2.33E-25
Std		1.64E+00	1.50E+00	1.26E+00	7.03E-01	7.86E-02	1.65E-03	1.55E-08	6.66E-24
ΣALL									
Min		3.07E-02	2.78E-02	1.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		4.00E+01	3.75E+01	3.30E+01	2.09E+01	2.91E+00	5.74E-02	4.81E-07	2.92E-22
Avg		8.86E-01	8.06E-01	6.67E-01	3.50E-01	2.79E-02	4.04E-04	2.00E-09	2.33E-25
Std		1.64E+00	1.50E+00	1.26E+00	7.03E-01	7.86E-02	1.65E-03	1.55E-08	6.66E-24

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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
Sr-90									
Min		2.54E-02	2.35E-02	2.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		6.76E+01	6.34E+01	5.57E+01	3.54E+01	4.92E+00	9.70E-02	5.95E-07	1.14E-21
Avg		1.46E+00	1.33E+00	1.10E+00	5.78E-01	4.56E-02	6.46E-04	2.98E-09	5.86E-25
Std		2.99E+00	2.72E+00	2.26E+00	1.24E+00	1.31E-01	2.61E-03	2.15E-08	2.18E-23
ΣALL									
Min		2.54E-02	2.35E-02	2.02E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		6.76E+01	6.34E+01	5.57E+01	3.54E+01	4.92E+00	9.70E-02	5.95E-07	1.14E-21
Avg		1.46E+00	1.33E+00	1.10E+00	5.78E-01	4.56E-02	6.46E-04	2.98E-09	5.86E-25
Std		2.99E+00	2.72E+00	2.26E+00	1.24E+00	1.31E-01	2.61E-03	2.15E-08	2.18E-23

ΣALL is total pathway dose summed for all nuclides.

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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
Sr-90									
Min		1.97E-03	1.62E-03	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		2.11E-03	2.01E-03	1.83E-03	1.31E-03	3.04E-04	1.77E-05	1.24E-09	3.56E-24
Avg		2.06E-03	1.88E-03	1.57E-03	8.27E-04	6.83E-05	1.10E-06	8.24E-12	2.23E-27
Std		2.40E-05	6.60E-05	1.27E-04	2.15E-04	5.83E-05	2.10E-06	5.94E-11	0.00E+00
ΣALL									
Min		1.97E-03	1.62E-03	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		2.11E-03	2.01E-03	1.83E-03	1.31E-03	3.04E-04	1.77E-05	1.24E-09	3.56E-24
Avg		2.06E-03	1.88E-03	1.57E-03	8.27E-04	6.83E-05	1.10E-06	8.24E-12	2.23E-27
Std		2.40E-05	6.60E-05	1.27E-04	2.15E-04	5.83E-05	2.10E-06	5.94E-11	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
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	5.63E-03	2.48E+00	5.77E-01	2.54E-03	2.63E-13
Avg		0.00E+00	0.00E+00	0.00E+00	1.88E-06	2.46E-01	8.75E-02	1.01E-04	1.01E-16
Std		0.00E+00	0.00E+00	0.00E+00	1.03E-04	3.16E-01	9.80E-02	3.26E-04	4.83E-15
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	5.63E-03	2.48E+00	5.77E-01	2.54E-03	2.63E-13
Avg		0.00E+00	0.00E+00	0.00E+00	1.88E-06	2.46E-01	8.75E-02	1.01E-04	1.01E-16
Std		0.00E+00	0.00E+00	0.00E+00	1.03E-04	3.16E-01	9.80E-02	3.26E-04	4.83E-15

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
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
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
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
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
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	5.72E-04	6.53E-01	2.15E-01	5.18E-04	1.77E-14
Avg		0.00E+00	0.00E+00	0.00E+00	1.91E-07	2.65E-02	9.46E-03	1.09E-05	7.05E-18
Std		0.00E+00	0.00E+00	0.00E+00	1.04E-05	4.22E-02	1.33E-02	4.00E-05	3.25E-16
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	5.72E-04	6.53E-01	2.15E-01	5.18E-04	1.77E-14
Avg		0.00E+00	0.00E+00	0.00E+00	1.91E-07	2.65E-02	9.46E-03	1.09E-05	7.05E-18
Std		0.00E+00	0.00E+00	0.00E+00	1.04E-05	4.22E-02	1.33E-02	4.00E-05	3.25E-16

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): 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
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	5.23E-04	4.18E-01	1.59E-01	6.37E-04	1.39E-14
Avg		0.00E+00	0.00E+00	0.00E+00	1.74E-07	2.89E-02	1.05E-02	1.21E-05	6.45E-18
Std		0.00E+00	0.00E+00	0.00E+00	9.55E-06	4.16E-02	1.36E-02	4.26E-05	2.64E-16
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	5.23E-04	4.18E-01	1.59E-01	6.37E-04	1.39E-14
Avg		0.00E+00	0.00E+00	0.00E+00	1.74E-07	2.89E-02	1.05E-02	1.21E-05	6.45E-18
Std		0.00E+00	0.00E+00	0.00E+00	9.55E-06	4.16E-02	1.36E-02	4.26E-05	2.64E-16

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): 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
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	5.19E-04	6.17E-01	1.37E-01	6.70E-04	2.38E-14
Avg		0.00E+00	0.00E+00	0.00E+00	1.73E-07	3.54E-02	1.24E-02	1.43E-05	9.73E-18
Std		0.00E+00	0.00E+00	0.00E+00	9.48E-06	5.66E-02	1.67E-02	5.25E-05	4.39E-16
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	5.19E-04	6.17E-01	1.37E-01	6.70E-04	2.38E-14
Avg		0.00E+00	0.00E+00	0.00E+00	1.73E-07	3.54E-02	1.24E-02	1.43E-05	9.73E-18
Std		0.00E+00	0.00E+00	0.00E+00	9.48E-06	5.66E-02	1.67E-02	5.25E-05	4.39E-16

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	5.80E-01	5.23E-01	4.30E-01	1.50E-01	2.09E-02	1.74E-05	0.00E+00	0.00E+00
0.050	7.69E-01	7.07E-01	5.74E-01	2.50E-01	3.85E-02	7.88E-05	0.00E+00	0.00E+00
0.075	9.33E-01	8.48E-01	6.83E-01	3.18E-01	5.37E-02	2.13E-04	0.00E+00	0.00E+00
0.100	1.09E+00	9.90E-01	8.15E-01	3.74E-01	6.49E-02	3.95E-04	3.81E-17	0.00E+00
0.125	1.27E+00	1.16E+00	9.35E-01	4.39E-01	8.26E-02	7.08E-04	9.58E-16	0.00E+00
0.150	1.44E+00	1.31E+00	1.06E+00	5.00E-01	9.89E-02	1.08E-03	7.18E-15	0.00E+00
0.175	1.59E+00	1.44E+00	1.17E+00	5.68E-01	1.19E-01	1.81E-03	3.70E-14	0.00E+00
0.200	1.78E+00	1.62E+00	1.32E+00	6.22E-01	1.39E-01	2.53E-03	1.45E-13	0.00E+00
0.225	1.94E+00	1.76E+00	1.45E+00	7.01E-01	1.57E-01	3.44E-03	4.58E-13	0.00E+00
0.250	2.08E+00	1.89E+00	1.55E+00	7.70E-01	1.79E-01	4.96E-03	1.37E-12	0.00E+00
0.275	2.25E+00	2.04E+00	1.67E+00	8.37E-01	1.98E-01	6.68E-03	3.41E-12	0.00E+00
0.300	2.39E+00	2.17E+00	1.80E+00	8.95E-01	2.17E-01	9.05E-03	8.15E-12	0.00E+00
0.325	2.56E+00	2.34E+00	1.92E+00	9.69E-01	2.40E-01	1.23E-02	1.74E-11	0.00E+00
0.350	2.75E+00	2.50E+00	2.08E+00	1.04E+00	2.65E-01	1.54E-02	3.92E-11	0.00E+00
0.375	2.97E+00	2.68E+00	2.20E+00	1.11E+00	2.92E-01	2.13E-02	7.63E-11	0.00E+00
0.400	3.17E+00	2.89E+00	2.36E+00	1.19E+00	3.18E-01	2.72E-02	1.79E-10	0.00E+00
0.425	3.39E+00	3.08E+00	2.56E+00	1.28E+00	3.48E-01	3.48E-02	3.15E-10	0.00E+00
0.450	3.64E+00	3.32E+00	2.71E+00	1.37E+00	3.78E-01	4.34E-02	6.16E-10	0.00E+00
0.475	3.87E+00	3.52E+00	2.92E+00	1.46E+00	4.07E-01	5.78E-02	1.09E-09	0.00E+00
0.500	4.20E+00	3.81E+00	3.11E+00	1.58E+00	4.38E-01	7.42E-02	2.19E-09	0.00E+00
0.525	4.49E+00	4.09E+00	3.36E+00	1.69E+00	4.66E-01	9.10E-02	3.97E-09	0.00E+00
0.550	4.80E+00	4.35E+00	3.63E+00	1.84E+00	4.95E-01	1.07E-01	7.12E-09	0.00E+00
0.575	5.20E+00	4.71E+00	3.85E+00	1.98E+00	5.27E-01	1.22E-01	1.28E-08	0.00E+00
0.600	5.57E+00	5.05E+00	4.20E+00	2.13E+00	5.57E-01	1.34E-01	2.11E-08	0.00E+00
0.625	6.02E+00	5.49E+00	4.52E+00	2.29E+00	5.88E-01	1.46E-01	3.45E-08	0.00E+00
0.650	6.40E+00	5.83E+00	4.86E+00	2.53E+00	6.26E-01	1.58E-01	6.37E-08	0.00E+00
0.675	6.83E+00	6.24E+00	5.19E+00	2.69E+00	6.58E-01	1.69E-01	1.09E-07	0.00E+00
0.700	7.50E+00	6.77E+00	5.54E+00	2.89E+00	6.96E-01	1.85E-01	1.88E-07	0.00E+00
0.725	8.02E+00	7.36E+00	6.08E+00	3.17E+00	7.41E-01	1.97E-01	3.62E-07	0.00E+00
0.750	8.77E+00	7.95E+00	6.58E+00	3.41E+00	7.78E-01	2.13E-01	7.40E-07	0.00E+00
0.775	9.40E+00	8.55E+00	7.13E+00	3.79E+00	8.32E-01	2.26E-01	1.68E-06	0.00E+00
0.800	1.05E+01	9.48E+00	7.78E+00	4.08E+00	8.94E-01	2.40E-01	3.40E-06	0.00E+00
0.825	1.14E+01	1.04E+01	8.65E+00	4.53E+00	9.51E-01	2.58E-01	8.23E-06	0.00E+00
0.850	1.28E+01	1.16E+01	9.69E+00	5.07E+00	1.02E+00	2.76E-01	2.03E-05	0.00E+00
0.875	1.47E+01	1.35E+01	1.11E+01	5.75E+00	1.11E+00	3.01E-01	7.35E-05	0.00E+00
0.900	1.73E+01	1.59E+01	1.31E+01	6.81E+00	1.22E+00	3.21E-01	2.83E-04	1.74E-29
0.925	2.06E+01	1.87E+01	1.52E+01	8.15E+00	1.36E+00	3.52E-01	8.91E-04	3.78E-28
0.950	2.55E+01	2.33E+01	1.96E+01	1.03E+01	1.58E+00	3.86E-01	1.26E-03	4.43E-26
0.975	3.54E+01	3.20E+01	2.63E+01	1.44E+01	1.98E+00	4.42E-01	1.69E-03	3.75E-23
1.000	2.89E+02	2.71E+02	2.38E+02	1.52E+02	2.11E+01	7.55E-01	3.50E-03	3.18E-13

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

## Summary of dose at graphical times, reptition 1

Time Years	Dose statistics at graphical times, mrem/yr							
	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	1.87E-01	1.45E+02	7.70E+00	4.22E+00	1.75E+01	2.40E+01	3.47E+01	5.55E+01
1.00E+00	1.67E-01	1.31E+02	6.99E+00	3.85E+00	1.60E+01	2.20E+01	3.18E+01	4.79E+01
3.00E+00	1.33E-01	1.07E+02	5.78E+00	3.11E+00	1.33E+01	1.80E+01	2.58E+01	4.08E+01
1.00E+01	0.00E+00	5.31E+01	3.02E+00	1.59E+00	7.24E+00	1.02E+01	1.45E+01	2.43E+01
4.00E+01	0.00E+00	6.87E+00	5.77E-01	4.39E-01	1.25E+00	1.61E+00	1.97E+00	2.61E+00
4.05E+01	0.00E+00	6.68E+00	5.71E-01	4.38E-01	1.22E+00	1.59E+00	1.98E+00	2.55E+00
8.00E+01	0.00E+00	1.19E+00	2.24E-01	1.78E-01	5.18E-01	6.33E-01	7.18E-01	8.43E-01
1.00E+02	0.00E+00	7.55E-01	1.21E-01	6.77E-02	3.14E-01	3.67E-01	4.37E-01	5.17E-01
1.20E+02	0.00E+00	3.98E-01	6.32E-02	1.64E-02	1.86E-01	2.18E-01	2.42E-01	3.02E-01
1.60E+02	0.00E+00	1.69E-01	1.76E-02	5.80E-04	6.18E-02	7.57E-02	8.82E-02	1.11E-01
2.00E+02	0.00E+00	6.57E-02	4.79E-03	1.73E-05	1.93E-02	2.44E-02	2.95E-02	3.40E-02
2.40E+02	0.00E+00	1.76E-02	1.14E-03	5.68E-07	5.71E-03	7.60E-03	8.93E-03	1.01E-02
2.80E+02	0.00E+00	4.74E-03	2.85E-04	1.63E-08	1.44E-03	2.35E-03	2.89E-03	3.49E-03
3.00E+02	0.00E+00	2.93E-03	1.46E-04	2.26E-09	5.22E-04	1.31E-03	1.69E-03	2.04E-03
3.20E+02	0.00E+00	1.81E-03	7.34E-05	3.55E-10	1.36E-04	7.12E-04	9.44E-04	1.19E-03
3.60E+02	0.00E+00	5.59E-04	1.56E-05	6.41E-12	3.76E-06	9.35E-05	2.82E-04	3.98E-04
4.00E+02	0.00E+00	2.08E-04	4.09E-06	5.89E-14	9.82E-08	3.13E-06	8.27E-05	1.35E-04
4.40E+02	0.00E+00	7.95E-05	1.17E-06	5.77E-16	3.74E-09	1.35E-07	2.31E-05	4.61E-05
4.80E+02	0.00E+00	2.68E-05	3.58E-07	4.99E-18	1.48E-10	7.59E-09	1.14E-06	1.73E-05
5.20E+02	0.00E+00	8.84E-06	9.09E-08	1.39E-20	5.67E-12	4.15E-10	6.11E-08	4.41E-06
5.60E+02	0.00E+00	3.06E-06	2.53E-08	2.24E-23	2.84E-13	2.74E-11	2.85E-09	1.30E-06
6.00E+02	0.00E+00	1.10E-06	5.72E-09	6.28E-26	1.57E-14	1.10E-12	1.62E-10	2.73E-07
6.40E+02	0.00E+00	4.19E-07	1.17E-09	6.99E-29	3.98E-16	5.92E-14	1.18E-11	1.03E-08
6.80E+02	0.00E+00	9.10E-08	2.68E-10	0.00E+00	2.00E-17	3.49E-15	1.04E-12	6.67E-10
7.20E+02	0.00E+00	3.47E-08	7.28E-11	0.00E+00	8.33E-19	2.54E-16	6.36E-14	2.72E-11
7.60E+02	0.00E+00	1.33E-08	2.49E-11	0.00E+00	2.59E-20	8.29E-18	2.29E-15	2.11E-12
8.00E+02	0.00E+00	5.07E-09	9.20E-12	0.00E+00	5.32E-22	4.34E-19	1.03E-16	2.13E-13
8.40E+02	0.00E+00	9.10E-10	1.24E-12	0.00E+00	1.98E-23	2.53E-20	4.81E-18	2.15E-14
8.80E+02	0.00E+00	7.61E-11	9.43E-14	0.00E+00	7.33E-25	1.87E-21	2.69E-19	2.14E-15
9.20E+02	0.00E+00	6.25E-12	7.27E-15	0.00E+00	2.79E-26	8.04E-23	1.16E-20	1.94E-16
9.60E+02	0.00E+00	5.01E-13	5.60E-16	0.00E+00	1.06E-27	1.77E-24	4.83E-22	1.90E-18
1.00E+03	0.00E+00	3.88E-14	4.25E-17	0.00E+00	3.16E-29	4.40E-26	3.23E-23	1.17E-19

Probabilistic results summary : RESRAD Default

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## Summary of dose at graphical times, reptition 2

Time Years	Dose statistics at graphical times, mrem/yr							
	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	2.47E-01	2.89E+02	7.92E+00	4.14E+00	1.76E+01	2.64E+01	3.43E+01	6.70E+01
1.00E+00	2.19E-01	2.71E+02	7.20E+00	3.78E+00	1.61E+01	2.40E+01	3.10E+01	5.93E+01
3.00E+00	1.72E-01	2.38E+02	5.96E+00	3.07E+00	1.31E+01	2.00E+01	2.58E+01	4.64E+01
1.00E+01	0.00E+00	1.52E+02	3.14E+00	1.53E+00	6.82E+00	1.00E+01	1.43E+01	2.43E+01
4.00E+01	0.00E+00	2.17E+01	6.13E-01	4.57E-01	1.28E+00	1.61E+00	1.93E+00	2.50E+00
4.05E+01	0.00E+00	2.11E+01	6.06E-01	4.51E-01	1.27E+00	1.60E+00	1.92E+00	2.49E+00
8.00E+01	0.00E+00	1.82E+00	2.22E-01	1.70E-01	5.34E-01	6.65E-01	7.62E-01	8.35E-01
1.00E+02	0.00E+00	7.25E-01	1.22E-01	6.66E-02	3.39E-01	4.10E-01	4.59E-01	5.16E-01
1.20E+02	0.00E+00	3.49E-01	6.38E-02	1.63E-02	1.96E-01	2.39E-01	2.73E-01	3.15E-01
1.60E+02	0.00E+00	1.47E-01	1.73E-02	4.45E-04	5.95E-02	8.01E-02	9.14E-02	1.06E-01
2.00E+02	0.00E+00	5.83E-02	4.53E-03	1.74E-05	1.80E-02	2.44E-02	3.12E-02	3.54E-02
2.40E+02	0.00E+00	2.25E-02	1.13E-03	4.29E-07	5.41E-03	7.28E-03	9.73E-03	1.27E-02
2.80E+02	0.00E+00	6.29E-03	2.96E-04	1.11E-08	1.23E-03	2.33E-03	3.12E-03	4.13E-03
3.00E+02	0.00E+00	3.27E-03	1.50E-04	1.85E-09	3.97E-04	1.29E-03	1.75E-03	2.35E-03
3.20E+02	0.00E+00	2.01E-03	7.67E-05	2.14E-10	1.02E-04	7.17E-04	9.77E-04	1.43E-03
3.60E+02	0.00E+00	6.69E-04	1.74E-05	3.86E-12	4.15E-06	1.46E-04	2.89E-04	3.97E-04
4.00E+02	0.00E+00	2.31E-04	4.29E-06	6.14E-14	1.40E-07	6.51E-06	8.15E-05	1.37E-04
4.40E+02	0.00E+00	6.03E-05	1.07E-06	6.53E-16	8.34E-09	3.72E-07	2.03E-05	4.49E-05
4.80E+02	0.00E+00	2.30E-05	2.50E-07	4.80E-18	3.13E-10	2.12E-08	1.49E-06	1.21E-05
5.20E+02	0.00E+00	8.78E-06	7.38E-08	1.45E-20	1.41E-11	8.84E-10	7.04E-08	3.06E-06
5.60E+02	0.00E+00	3.35E-06	2.31E-08	4.64E-23	4.89E-13	5.01E-11	5.05E-09	1.13E-06
6.00E+02	0.00E+00	1.28E-06	5.00E-09	1.54E-25	1.71E-14	3.50E-12	3.36E-10	1.12E-07
6.40E+02	0.00E+00	4.89E-07	1.39E-09	8.31E-29	8.40E-16	2.02E-13	1.81E-11	3.62E-09
6.80E+02	0.00E+00	1.87E-07	4.60E-10	0.00E+00	4.01E-17	6.17E-15	1.23E-12	1.66E-10
7.20E+02	0.00E+00	6.12E-08	1.15E-10	0.00E+00	1.67E-18	3.43E-16	6.04E-14	5.61E-12
7.60E+02	0.00E+00	2.34E-08	2.90E-11	0.00E+00	6.18E-20	1.53E-17	4.51E-15	2.09E-13
8.00E+02	0.00E+00	7.64E-09	8.20E-12	0.00E+00	9.22E-22	7.23E-19	2.71E-16	9.18E-15
8.40E+02	0.00E+00	1.03E-09	1.09E-12	0.00E+00	2.16E-23	3.55E-20	1.76E-17	6.25E-16
8.80E+02	0.00E+00	1.38E-10	1.44E-13	0.00E+00	6.99E-25	2.76E-21	1.28E-18	3.53E-17
9.20E+02	0.00E+00	1.84E-11	1.90E-14	0.00E+00	2.05E-26	1.47E-22	5.86E-20	2.54E-18
9.60E+02	0.00E+00	2.43E-12	2.50E-15	0.00E+00	4.06E-28	1.00E-23	4.23E-21	2.57E-19
1.00E+03	0.00E+00	3.18E-13	3.26E-16	0.00E+00	1.42E-29	5.93E-25	3.36E-22	3.43E-20

Probabilistic results summary : RESRAD Default

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## Summary of dose at graphical times, reptition 3

Time Years	Dose statistics at graphical times, mrem/yr							
	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	2.02E-01	1.60E+02	7.84E+00	4.19E+00	1.68E+01	2.64E+01	3.85E+01	7.37E+01
1.00E+00	1.84E-01	1.47E+02	7.13E+00	3.82E+00	1.49E+01	2.37E+01	3.45E+01	6.81E+01
3.00E+00	1.53E-01	1.25E+02	5.90E+00	3.11E+00	1.23E+01	1.99E+01	2.80E+01	5.30E+01
1.00E+01	0.00E+00	7.01E+01	3.09E+00	1.60E+00	6.52E+00	1.07E+01	1.59E+01	2.49E+01
4.00E+01	0.00E+00	6.24E+00	5.72E-01	4.19E-01	1.20E+00	1.55E+00	2.22E+00	3.11E+00
4.05E+01	0.00E+00	6.05E+00	5.66E-01	4.21E-01	1.18E+00	1.55E+00	2.15E+00	3.03E+00
8.00E+01	0.00E+00	1.20E+00	2.30E-01	1.93E-01	5.25E-01	6.33E-01	7.53E-01	9.24E-01
1.00E+02	0.00E+00	7.46E-01	1.28E-01	9.16E-02	3.20E-01	3.84E-01	4.41E-01	5.41E-01
1.20E+02	0.00E+00	4.73E-01	6.74E-02	2.17E-02	1.90E-01	2.24E-01	2.64E-01	2.98E-01
1.60E+02	0.00E+00	1.80E-01	1.74E-02	6.49E-04	6.20E-02	7.65E-02	8.73E-02	1.01E-01
2.00E+02	0.00E+00	4.23E-02	4.29E-03	2.00E-05	1.84E-02	2.48E-02	2.92E-02	3.39E-02
2.40E+02	0.00E+00	1.48E-02	1.01E-03	5.70E-07	4.75E-03	7.40E-03	9.49E-03	1.18E-02
2.80E+02	0.00E+00	5.66E-03	2.50E-04	1.58E-08	6.12E-04	2.21E-03	3.10E-03	3.81E-03
3.00E+02	0.00E+00	3.50E-03	1.19E-04	2.38E-09	1.31E-04	1.10E-03	1.71E-03	2.13E-03
3.20E+02	0.00E+00	1.90E-03	5.86E-05	3.22E-10	2.07E-05	5.67E-04	9.12E-04	1.23E-03
3.60E+02	0.00E+00	6.94E-04	1.47E-05	5.91E-12	7.35E-07	6.94E-05	2.58E-04	4.17E-04
4.00E+02	0.00E+00	2.57E-04	3.38E-06	6.10E-14	4.04E-08	4.57E-06	4.72E-05	1.15E-04
4.40E+02	0.00E+00	8.14E-05	8.30E-07	6.05E-16	2.27E-09	1.61E-07	5.97E-06	3.81E-05
4.80E+02	0.00E+00	2.01E-05	2.43E-07	3.45E-18	1.11E-10	3.94E-09	3.15E-07	1.34E-05
5.20E+02	0.00E+00	6.42E-06	5.69E-08	1.75E-20	4.55E-12	1.08E-10	2.52E-08	2.09E-06
5.60E+02	0.00E+00	2.45E-06	1.46E-08	4.81E-23	1.59E-13	6.93E-12	1.54E-09	3.32E-07
6.00E+02	0.00E+00	9.37E-07	4.33E-09	8.82E-26	6.98E-15	2.09E-13	6.78E-11	1.74E-08
6.40E+02	0.00E+00	3.58E-07	1.48E-09	6.22E-29	3.41E-16	1.55E-14	4.99E-12	1.85E-09
6.80E+02	0.00E+00	1.37E-07	3.32E-10	0.00E+00	1.34E-17	6.40E-16	2.91E-13	1.18E-10
7.20E+02	0.00E+00	5.24E-08	9.89E-11	0.00E+00	6.25E-19	2.72E-17	2.06E-14	6.04E-12
7.60E+02	0.00E+00	1.55E-08	2.24E-11	0.00E+00	1.01E-20	1.65E-18	1.14E-15	3.12E-13
8.00E+02	0.00E+00	2.07E-09	2.65E-12	0.00E+00	3.37E-22	1.26E-19	2.92E-17	2.05E-14
8.40E+02	0.00E+00	1.19E-10	1.69E-13	0.00E+00	8.67E-24	4.10E-21	1.41E-18	1.94E-15
8.80E+02	0.00E+00	6.63E-12	1.09E-14	0.00E+00	3.66E-25	3.28E-22	6.62E-20	1.15E-16
9.20E+02	0.00E+00	3.60E-13	7.17E-16	0.00E+00	9.20E-27	1.09E-23	2.63E-21	5.15E-18
9.60E+02	0.00E+00	3.09E-14	4.81E-17	0.00E+00	3.73E-28	2.55E-25	6.82E-23	1.32E-19
1.00E+03	0.00E+00	2.65E-15	3.33E-18	0.00E+00	5.40E-30	1.07E-26	3.55E-24	1.89E-20

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	7.698E+00
2	0.000E+00	7.923E+00
3	0.000E+00	7.845E+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	11	0.03	11	0.01	33	-0.01	33	0.00
Contaminated zone erosion rate	41	0.00	41	0.00	36	0.00	36	0.00
Contaminated zone total porosity	35	-0.01	35	0.00	16	-0.03	16	0.00
Contaminated zone hydraulic conductivity	10	-0.03	10	-0.01	32	0.01	32	0.00
Contaminated zone b parameter	9	0.04	8	0.02	14	-0.04	14	-0.01
Evapotranspiration coefficient	17	0.02	17	0.01	27	-0.01	27	0.00
Wind Speed	40	0.00	40	0.00	7	0.05	7	0.01
Runoff coefficient	16	0.03	16	0.01	15	0.03	15	0.01
Density of saturated zone	8	0.04	9	0.01	18	0.02	18	0.00
Saturated zone total porosity	19	0.02	19	0.01	22	-0.02	22	0.00
Saturated zone effective porosity	21	-0.02	21	-0.01	26	-0.01	26	0.00
Saturated zone hydraulic conductivity	29	0.02	29	0.01	39	0.00	39	0.00
Saturated zone hydraulic gradient	28	-0.02	28	-0.01	21	0.02	21	0.00
Well pump intake depth	27	-0.02	27	-0.01	31	-0.01	31	0.00
Mass loading for inhalation	14	-0.03	14	-0.01	40	0.00	40	0.00
Depth of soil mixing layer	12	-0.03	12	-0.01	24	0.02	24	0.00
Depth of roots	2	-0.59	2	-0.29	2	-0.93	2	-0.43
Weathering removal constant of all vegetation	31	-0.01	31	0.00	35	0.00	35	0.00
Wet weight crop yield of fruit, grain and non-leafy vegetables	33	-0.01	33	0.00	11	-0.04	11	-0.01
Wet foliar interception fraction of leafy vegetables	20	-0.02	20	-0.01	23	-0.02	23	0.00
Indoor dust filtration factor	13	0.03	13	0.01	37	0.00	37	0.00
External gamma shielding factor	39	0.00	39	0.00	6	0.05	6	0.01
Cover erosion rate	24	0.02	24	0.01	38	0.00	38	0.00
Total Porosity of Unsaturated zone 1	15	0.03	15	0.01	20	-0.02	20	0.00
Effective Porosity of Unsaturated zone 1	22	0.02	22	0.01	12	0.04	12	0.01
Hydraulic Conductivity of Unsaturated zone 1	23	-0.02	23	-0.01	25	-0.01	25	0.00
b Parameter of Unsaturated zone 1	18	0.02	18	0.01	8	0.05	8	0.01
Plant transfer factor for Co	36	0.00	36	0.00	13	0.04	13	0.01
Meat transfer factor for Co	6	0.04	6	0.02	41	0.00	41	0.00
Milk transfer factor for Co	30	-0.01	30	-0.01	29	-0.01	29	0.00
Plant transfer factor for Cs	37	0.00	37	0.00	17	-0.03	17	0.00
Meat transfer factor for Cs	32	0.01	32	0.00	9	-0.05	9	-0.01
Milk transfer factor for Cs	25	0.02	26	0.01	19	-0.02	19	0.00
Plant transfer factor for Ni	34	-0.01	34	0.00	5	0.11	5	0.02
Meat transfer factor for Ni	26	-0.02	25	-0.01	30	-0.01	30	0.00
Milk transfer factor for Ni	38	0.00	38	0.00	28	-0.01	28	0.00
Plant transfer factor for Sr	1	0.91	1	0.87	1	0.98	1	0.88
Meat transfer factor for Sr	4	0.12	4	0.05	4	0.18	4	0.03
Milk transfer factor for Sr	3	0.19	3	0.08	3	0.39	3	0.07
Density of contaminated zone	5	-0.06	5	-0.02	10	0.04	10	0.01
Density of Unsaturated zone 1	7	-0.04	7	-0.02	34	0.00	34	0.00
R-SQUARE		0.85		0.85		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	24	-0.01	24	-0.01	13	-0.04	13	-0.01
Contaminated zone erosion rate	15	-0.03	15	-0.01	8	0.05	8	0.01
Contaminated zone total porosity	7	-0.05	7	-0.02	6	0.07	6	0.01
Contaminated zone hydraulic conductivity	12	-0.03	12	-0.01	32	-0.01	32	0.00
Contaminated zone b parameter	29	-0.01	29	0.00	30	-0.01	30	0.00
Evapotranspiration coefficient	14	0.03	14	0.01	15	0.04	15	0.01
Wind Speed	40	0.00	40	0.00	20	-0.03	20	0.00
Runoff coefficient	38	0.00	38	0.00	19	0.03	19	0.00
Density of saturated zone	19	0.02	19	0.01	21	-0.03	21	0.00
Saturated zone total porosity	18	-0.02	18	-0.01	18	0.03	18	0.01
Saturated zone effective porosity	21	0.02	21	0.01	28	0.02	28	0.00
Saturated zone hydraulic conductivity	11	-0.03	11	-0.01	35	0.01	35	0.00
Saturated zone hydraulic gradient	10	0.04	10	0.02	29	0.01	29	0.00
Well pump intake depth	9	0.04	9	0.02	11	-0.04	11	-0.01
Mass loading for inhalation	17	-0.03	17	-0.01	33	-0.01	33	0.00
Depth of soil mixing layer	41	0.00	41	0.00	23	0.02	23	0.00
Depth of roots	2	-0.51	2	-0.25	2	-0.93	2	-0.43
Weathering removal constant of all vegetation	6	-0.06	6	-0.03	31	0.01	31	0.00
Wet weight crop yield of fruit, grain and non-leafy vegetables	25	0.01	25	0.01	27	0.02	27	0.00
Wet foliar interception fraction of leafy vegetables	37	0.00	37	0.00	34	-0.01	34	0.00
Indoor dust filtration factor	23	-0.01	23	-0.01	9	-0.05	9	-0.01
External gamma shielding factor	22	-0.02	22	-0.01	12	0.04	12	0.01
Cover erosion rate	28	-0.01	28	0.00	41	0.00	41	0.00
Total Porosity of Unsaturated zone 1	32	0.01	32	0.00	10	-0.04	10	-0.01
Effective Porosity of Unsaturated zone 1	34	0.00	34	0.00	17	-0.03	17	-0.01
Hydraulic Conductivity of Unsaturated zone 1	20	-0.02	20	-0.01	16	0.03	16	0.01
b Parameter of Unsaturated zone 1	35	0.00	35	0.00	22	0.02	22	0.00
Plant transfer factor for Co	36	0.00	36	0.00	37	0.01	37	0.00
Meat transfer factor for Co	30	0.01	30	0.00	26	-0.02	26	0.00
Milk transfer factor for Co	16	0.03	16	0.01	39	0.00	39	0.00
Plant transfer factor for Cs	5	-0.08	5	-0.03	36	0.01	36	0.00
Meat transfer factor for Cs	13	-0.03	13	-0.01	25	0.02	25	0.00
Milk transfer factor for Cs	26	0.01	26	0.00	24	-0.02	24	0.00
Plant transfer factor for Ni	27	-0.01	27	0.00	7	0.05	7	0.01
Meat transfer factor for Ni	33	0.01	33	0.00	5	-0.07	5	-0.01
Milk transfer factor for Ni	31	0.01	31	0.00	38	0.01	38	0.00
Plant transfer factor for Sr	1	0.90	1	0.86	1	0.98	1	0.89
Meat transfer factor for Sr	3	0.12	3	0.05	4	0.20	4	0.04
Milk transfer factor for Sr	4	0.09	4	0.04	3	0.44	3	0.08
Density of contaminated zone	8	0.05	8	0.02	40	0.00	40	0.00
Density of Unsaturated zone 1	39	0.00	39	0.00	14	0.04	14	0.01
R-SQUARE		0.83		0.83		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 =	3		3		3		3	
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Density of cover material	11	-0.04	11	-0.02	29	0.02	29	0.00
Contaminated zone erosion rate	17	0.02	16	0.01	17	-0.04	17	-0.01
Contaminated zone total porosity	12	0.04	12	0.01	26	-0.02	26	0.00
Contaminated zone hydraulic conductivity	29	0.01	29	0.00	11	0.05	11	0.01
Contaminated zone b parameter	37	0.00	37	0.00	30	0.02	30	0.00
Evapotranspiration coefficient	38	0.00	38	0.00	41	0.00	41	0.00
Wind Speed	25	-0.02	25	-0.01	40	0.00	40	0.00
Runoff coefficient	9	-0.05	9	-0.02	13	0.05	13	0.01
Density of saturated zone	34	-0.01	34	0.00	19	-0.03	19	-0.01
Saturated zone total porosity	18	0.02	18	0.01	10	-0.05	10	-0.01
Saturated zone effective porosity	39	0.00	39	0.00	25	-0.02	25	0.00
Saturated zone hydraulic conductivity	8	-0.05	8	-0.02	34	-0.01	34	0.00
Saturated zone hydraulic gradient	22	-0.02	22	-0.01	31	-0.01	31	0.00
Well pump intake depth	6	-0.06	6	-0.02	16	0.04	16	0.01
Mass loading for inhalation	24	-0.02	24	-0.01	15	-0.04	15	-0.01
Depth of soil mixing layer	31	0.01	31	0.00	5	-0.08	5	-0.01
Depth of roots	2	-0.60	2	-0.28	2	-0.93	2	-0.43
Weathering removal constant of all vegetation	14	-0.03	14	-0.01	35	-0.01	35	0.00
Wet weight crop yield of fruit, grain and non-leafy vegetables	40	0.00	40	0.00	36	0.01	36	0.00
Wet foliar interception fraction of leafy vegetables	35	-0.01	35	0.00	22	-0.03	22	0.00
Indoor dust filtration factor	19	0.02	19	0.01	23	0.03	23	0.00
External gamma shielding factor	32	0.01	32	0.00	20	0.03	20	0.00
Cover erosion rate	23	0.02	23	0.01	12	-0.05	12	-0.01
Total Porosity of Unsaturated zone 1	26	-0.02	26	-0.01	32	0.01	32	0.00
Effective Porosity of Unsaturated zone 1	15	-0.03	15	-0.01	7	0.06	7	0.01
Hydraulic Conductivity of Unsaturated zone 1	28	0.02	28	0.01	6	-0.07	6	-0.01
b Parameter of Unsaturated zone 1	41	0.00	41	0.00	39	0.00	39	0.00
Plant transfer factor for Co	10	0.04	10	0.02	21	-0.03	21	0.00
Meat transfer factor for Co	20	-0.02	20	-0.01	8	0.05	8	0.01
Milk transfer factor for Co	30	-0.01	30	0.00	38	0.01	38	0.00
Plant transfer factor for Cs	27	-0.02	27	-0.01	18	-0.03	18	-0.01
Meat transfer factor for Cs	33	0.01	33	0.00	28	0.02	28	0.00
Milk transfer factor for Cs	13	0.03	13	0.01	14	-0.05	14	-0.01
Plant transfer factor for Ni	5	0.06	5	0.02	33	-0.01	33	0.00
Meat transfer factor for Ni	36	0.00	36	0.00	24	-0.02	24	0.00
Milk transfer factor for Ni	7	-0.05	7	-0.02	27	0.02	27	0.00
Plant transfer factor for Sr	1	0.92	1	0.87	1	0.98	1	0.89
Meat transfer factor for Sr	4	0.13	4	0.05	4	0.22	4	0.04
Milk transfer factor for Sr	3	0.19	3	0.07	3	0.38	3	0.07
Density of contaminated zone	21	0.02	21	0.01	9	0.05	9	0.01
Density of Unsaturated zone 1	16	-0.02	17	-0.01	37	0.01	37	0.00
R-SQUARE		0.86		0.86		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.