

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
Ni-63										
Min	0.00E+00	1.67E-04	1.67E-04	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	1.06E-01	1.06E-01	1.03E-01	9.70E-02	7.92E-02	3.23E-02	4.94E-03	1.51E-04	1.20E-06
Avg	0.00E+00	3.66E-03	3.66E-03	3.50E-03	3.23E-03	2.49E-03	7.74E-04	1.15E-04	1.43E-06	2.23E-08
Std	0.00E+00	5.22E-03	5.22E-03	5.04E-03	4.70E-03	3.69E-03	1.44E-03	3.19E-04	7.66E-06	5.66E-08
ΣALL										
Min	0.00E+00	1.67E-04	1.67E-04	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	1.06E-01	1.06E-01	1.03E-01	9.70E-02	7.92E-02	3.23E-02	4.94E-03	1.51E-04	1.20E-06
Avg	0.00E+00	3.66E-03	3.66E-03	3.50E-03	3.23E-03	2.49E-03	7.74E-04	1.15E-04	1.43E-06	2.23E-08
Std	0.00E+00	5.22E-03	5.22E-03	5.04E-03	4.70E-03	3.69E-03	1.44E-03	3.19E-04	7.66E-06	5.66E-08

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
Ni-63									
Min		4.28E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		3.54E-06	3.44E-06	3.25E-06	2.65E-06	1.06E-06	1.59E-07	5.98E-09	5.24E-11
Avg		1.10E-07	1.06E-07	9.78E-08	7.50E-08	2.42E-08	3.91E-09	5.48E-11	9.31E-13
Std		1.62E-07	1.57E-07	1.46E-07	1.16E-07	4.93E-08	1.15E-08	3.02E-10	2.38E-12
ΣALL									
Min		4.28E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		3.54E-06	3.44E-06	3.25E-06	2.65E-06	1.06E-06	1.59E-07	5.98E-09	5.24E-11
Avg		1.10E-07	1.06E-07	9.78E-08	7.50E-08	2.42E-08	3.91E-09	5.48E-11	9.31E-13
Std		1.62E-07	1.57E-07	1.46E-07	1.16E-07	4.93E-08	1.15E-08	3.02E-10	2.38E-12

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
Ni-63									
Min		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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): 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
Ni-63									
Min		1.55E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		4.43E-07	4.34E-07	4.17E-07	3.64E-07	1.82E-07	3.31E-08	2.52E-09	3.04E-13
Avg		4.67E-08	4.47E-08	4.15E-08	3.25E-08	1.03E-08	1.48E-09	1.85E-11	3.21E-16
Std		3.80E-08	3.71E-08	3.52E-08	2.90E-08	1.30E-08	3.15E-09	9.32E-11	6.51E-15
ΣALL									
Min		1.55E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		4.43E-07	4.34E-07	4.17E-07	3.64E-07	1.82E-07	3.31E-08	2.52E-09	3.04E-13
Avg		4.67E-08	4.47E-08	4.15E-08	3.25E-08	1.03E-08	1.48E-09	1.85E-11	3.21E-16
Std		3.80E-08	3.71E-08	3.52E-08	2.90E-08	1.30E-08	3.15E-09	9.32E-11	6.51E-15

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
Ni-63									
Min		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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
Ni-63									
Min		6.72E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.49E-02	1.44E-02	1.34E-02	1.04E-02	4.63E-03	1.73E-03	6.24E-05	9.34E-10
Avg		5.97E-04	5.70E-04	5.25E-04	4.02E-04	1.23E-04	1.82E-05	2.21E-07	2.40E-12
Std		9.67E-04	9.32E-04	8.68E-04	6.77E-04	2.62E-04	6.07E-05	1.54E-06	3.05E-11
ΣALL									
Min		6.72E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.49E-02	1.44E-02	1.34E-02	1.04E-02	4.63E-03	1.73E-03	6.24E-05	9.34E-10
Avg		5.97E-04	5.70E-04	5.25E-04	4.02E-04	1.23E-04	1.82E-05	2.21E-07	2.40E-12
Std		9.67E-04	9.32E-04	8.68E-04	6.77E-04	2.62E-04	6.07E-05	1.54E-06	3.05E-11

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
Ni-63									
Min		1.65E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		2.75E-03	2.65E-03	2.46E-03	1.87E-03	6.65E-04	1.77E-04	7.50E-06	2.40E-10
Avg		1.54E-04	1.47E-04	1.36E-04	1.05E-04	3.29E-05	4.74E-06	5.54E-08	5.86E-13
Std		2.05E-04	1.96E-04	1.83E-04	1.43E-04	5.50E-05	1.23E-05	2.95E-07	7.30E-12
ΣALL									
Min		1.65E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		2.75E-03	2.65E-03	2.46E-03	1.87E-03	6.65E-04	1.77E-04	7.50E-06	2.40E-10
Avg		1.54E-04	1.47E-04	1.36E-04	1.05E-04	3.29E-05	4.74E-06	5.54E-08	5.86E-13
Std		2.05E-04	1.96E-04	1.83E-04	1.43E-04	5.50E-05	1.23E-05	2.95E-07	7.30E-12

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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
Ni-63									
Min		8.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.01E-01	9.82E-02	9.28E-02	7.58E-02	3.09E-02	4.73E-03	1.40E-04	1.20E-08
Avg		2.90E-03	2.77E-03	2.57E-03	1.98E-03	6.17E-04	9.23E-05	1.15E-06	1.63E-11
Std		4.49E-03	4.33E-03	4.04E-03	3.17E-03	1.23E-03	2.68E-04	6.39E-06	2.55E-10
ΣALL									
Min		8.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		1.01E-01	9.82E-02	9.28E-02	7.58E-02	3.09E-02	4.73E-03	1.40E-04	1.20E-08
Avg		2.90E-03	2.77E-03	2.57E-03	1.98E-03	6.17E-04	9.23E-05	1.15E-06	1.63E-11
Std		4.49E-03	4.33E-03	4.04E-03	3.17E-03	1.23E-03	2.68E-04	6.39E-06	2.55E-10

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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
Ni-63									
Min		1.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		8.11E-06	8.01E-06	7.80E-06	7.13E-06	4.81E-06	2.24E-06	1.70E-07	2.06E-11
Avg		5.38E-06	5.15E-06	4.78E-06	3.74E-06	1.20E-06	1.75E-07	2.23E-09	3.68E-14
Std		2.06E-06	2.08E-06	2.05E-06	1.81E-06	1.06E-06	3.02E-07	9.63E-09	5.57E-13
ΣALL									
Min		1.08E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		8.11E-06	8.01E-06	7.80E-06	7.13E-06	4.81E-06	2.24E-06	1.70E-07	2.06E-11
Avg		5.38E-06	5.15E-06	4.78E-06	3.74E-06	1.20E-06	1.75E-07	2.23E-09	3.68E-14
Std		2.06E-06	2.08E-06	2.05E-06	1.81E-06	1.06E-06	3.02E-07	9.63E-09	5.57E-13

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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
Ni-63									
Min		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-07
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.94E-09
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-08
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	1.65E-07
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.94E-09
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-08

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
Ni-63									
Min		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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
Ni-63									
Min		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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
Ni-63									
Min		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-08
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-10
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-09
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	3.70E-08
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.56E-10
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-09

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
Ni-63									
Min		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E-08
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-10
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-09
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	3.44E-08
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.73E-10
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-09

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
Ni-63									
Min		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-06
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-08
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-08
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	1.06E-06
Avg		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E-08
Std		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-08

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

## 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	4.88E-04	4.08E-04	2.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.050	6.26E-04	5.58E-04	4.57E-04	2.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.075	7.39E-04	6.60E-04	5.72E-04	3.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.100	8.30E-04	7.64E-04	6.70E-04	4.80E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.125	9.16E-04	8.46E-04	7.55E-04	5.50E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.150	9.98E-04	9.31E-04	8.38E-04	6.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.175	1.08E-03	1.02E-03	9.18E-04	6.78E-04	1.83E-05	0.00E+00	0.00E+00	0.00E+00
0.200	1.17E-03	1.10E-03	9.89E-04	7.46E-04	5.64E-05	0.00E+00	0.00E+00	0.00E+00
0.225	1.24E-03	1.17E-03	1.08E-03	8.05E-04	8.86E-05	0.00E+00	0.00E+00	0.00E+00
0.250	1.33E-03	1.25E-03	1.15E-03	8.70E-04	1.18E-04	0.00E+00	0.00E+00	0.00E+00
0.275	1.41E-03	1.32E-03	1.22E-03	9.23E-04	1.43E-04	0.00E+00	0.00E+00	0.00E+00
0.300	1.47E-03	1.40E-03	1.28E-03	9.75E-04	1.74E-04	0.00E+00	0.00E+00	0.00E+00
0.325	1.56E-03	1.48E-03	1.36E-03	1.05E-03	2.03E-04	0.00E+00	0.00E+00	0.00E+00
0.350	1.65E-03	1.57E-03	1.45E-03	1.10E-03	2.23E-04	0.00E+00	0.00E+00	0.00E+00
0.375	1.74E-03	1.65E-03	1.52E-03	1.16E-03	2.55E-04	0.00E+00	0.00E+00	0.00E+00
0.400	1.84E-03	1.74E-03	1.62E-03	1.23E-03	2.79E-04	0.00E+00	0.00E+00	0.00E+00
0.425	1.94E-03	1.85E-03	1.70E-03	1.31E-03	3.06E-04	0.00E+00	0.00E+00	0.00E+00
0.450	2.07E-03	1.96E-03	1.81E-03	1.38E-03	3.36E-04	0.00E+00	0.00E+00	0.00E+00
0.475	2.16E-03	2.07E-03	1.91E-03	1.47E-03	3.66E-04	0.00E+00	0.00E+00	0.00E+00
0.500	2.26E-03	2.17E-03	2.00E-03	1.55E-03	3.98E-04	6.49E-07	0.00E+00	0.00E+00
0.525	2.37E-03	2.26E-03	2.10E-03	1.63E-03	4.33E-04	9.44E-06	0.00E+00	0.00E+00
0.550	2.49E-03	2.38E-03	2.20E-03	1.71E-03	4.71E-04	1.67E-05	0.00E+00	0.00E+00
0.575	2.62E-03	2.51E-03	2.32E-03	1.78E-03	5.09E-04	2.51E-05	0.00E+00	0.00E+00
0.600	2.76E-03	2.64E-03	2.45E-03	1.90E-03	5.42E-04	3.36E-05	0.00E+00	6.08E-16
0.625	2.92E-03	2.80E-03	2.57E-03	2.01E-03	5.91E-04	4.18E-05	0.00E+00	4.65E-14
0.650	3.09E-03	2.94E-03	2.71E-03	2.11E-03	6.34E-04	4.99E-05	0.00E+00	6.91E-13
0.675	3.27E-03	3.13E-03	2.90E-03	2.24E-03	6.94E-04	6.10E-05	0.00E+00	5.91E-12
0.700	3.47E-03	3.33E-03	3.08E-03	2.41E-03	7.49E-04	7.16E-05	0.00E+00	7.60E-11
0.725	3.66E-03	3.50E-03	3.29E-03	2.57E-03	8.13E-04	8.53E-05	0.00E+00	1.36E-09
0.750	3.89E-03	3.74E-03	3.47E-03	2.73E-03	8.77E-04	1.00E-04	0.00E+00	1.32E-08
0.775	4.20E-03	4.05E-03	3.78E-03	2.90E-03	9.58E-04	1.19E-04	0.00E+00	2.52E-08
0.800	4.60E-03	4.42E-03	4.09E-03	3.13E-03	1.06E-03	1.41E-04	4.57E-08	3.36E-08
0.825	5.18E-03	4.98E-03	4.61E-03	3.43E-03	1.19E-03	1.70E-04	1.84E-07	4.26E-08
0.850	5.71E-03	5.47E-03	5.11E-03	3.91E-03	1.31E-03	2.04E-04	4.79E-07	5.24E-08
0.875	6.42E-03	6.12E-03	5.64E-03	4.36E-03	1.44E-03	2.43E-04	9.80E-07	6.63E-08
0.900	7.20E-03	6.90E-03	6.42E-03	5.03E-03	1.71E-03	3.05E-04	1.86E-06	7.98E-08
0.925	8.65E-03	8.25E-03	7.74E-03	6.06E-03	2.07E-03	3.90E-04	3.54E-06	9.93E-08
0.950	1.08E-02	1.04E-02	9.76E-03	7.59E-03	2.77E-03	5.25E-04	6.27E-06	1.28E-07
0.975	1.60E-02	1.53E-02	1.44E-02	1.13E-02	3.90E-03	8.19E-04	1.39E-05	1.77E-07
1.000	1.06E-01	1.03E-01	9.70E-02	7.92E-02	3.23E-02	4.94E-03	1.51E-04	1.20E-06

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	1.85E-04	7.62E-02	3.68E-03	2.25E-03	7.15E-03	1.06E-02	1.81E-02	2.53E-02
1.00E+00	0.00E+00	7.31E-02	3.52E-03	2.16E-03	6.87E-03	1.02E-02	1.76E-02	2.48E-02
3.00E+00	0.00E+00	6.70E-02	3.26E-03	2.00E-03	6.27E-03	9.66E-03	1.66E-02	2.32E-02
1.00E+01	0.00E+00	4.81E-02	2.50E-03	1.57E-03	4.74E-03	7.70E-03	1.23E-02	1.80E-02
4.00E+01	0.00E+00	1.55E-02	7.79E-04	3.92E-04	1.68E-03	2.66E-03	3.90E-03	7.79E-03
4.05E+01	0.00E+00	1.53E-02	7.66E-04	3.85E-04	1.67E-03	2.62E-03	3.82E-03	7.66E-03
8.00E+01	0.00E+00	5.79E-03	2.13E-04	4.31E-05	5.56E-04	8.15E-04	1.53E-03	2.40E-03
1.00E+02	0.00E+00	4.04E-03	1.18E-04	6.01E-07	3.12E-04	4.99E-04	9.13E-04	1.47E-03
1.20E+02	0.00E+00	2.90E-03	6.83E-05	0.00E+00	1.80E-04	3.11E-04	5.14E-04	8.83E-04
1.60E+02	0.00E+00	1.49E-03	2.50E-05	0.00E+00	6.20E-05	1.12E-04	2.08E-04	4.75E-04
2.00E+02	0.00E+00	7.68E-04	1.05E-05	0.00E+00	2.24E-05	5.27E-05	9.29E-05	2.58E-04
2.40E+02	0.00E+00	3.96E-04	4.76E-06	0.00E+00	7.87E-06	2.21E-05	4.49E-05	1.06E-04
2.80E+02	0.00E+00	2.08E-04	2.22E-06	0.00E+00	3.07E-06	9.52E-06	2.08E-05	4.29E-05
3.00E+02	0.00E+00	1.51E-04	1.53E-06	0.00E+00	1.90E-06	6.53E-06	1.30E-05	3.23E-05
3.20E+02	0.00E+00	1.10E-04	1.06E-06	0.00E+00	1.18E-06	4.25E-06	8.93E-06	2.44E-05
3.30E+02	0.00E+00	5.79E-05	5.16E-07	0.00E+00	4.77E-07	1.99E-06	4.27E-06	1.39E-05
4.00E+02	0.00E+00	3.06E-05	2.61E-07	0.00E+00	2.06E-07	8.75E-07	1.93E-06	7.41E-06
4.40E+02	0.00E+00	1.61E-05	1.42E-07	0.00E+00	7.68E-08	4.14E-07	9.90E-07	4.35E-06
4.80E+02	0.00E+00	9.18E-06	8.71E-08	0.00E+00	3.35E-08	2.28E-07	7.35E-07	2.56E-06
5.20E+02	0.00E+00	7.33E-06	6.01E-08	0.00E+00	1.42E-08	1.20E-07	4.62E-07	2.01E-06
5.60E+02	0.00E+00	5.65E-06	6.15E-08	0.00E+00	1.00E-08	1.01E-07	8.16E-07	1.98E-06
6.00E+02	0.00E+00	5.70E-06	5.80E-08	0.00E+00	6.74E-09	1.06E-07	6.31E-07	1.53E-06
6.40E+02	0.00E+00	5.01E-06	5.50E-08	0.00E+00	5.78E-09	1.14E-07	6.67E-07	1.65E-06
6.80E+02	0.00E+00	3.89E-06	4.88E-08	0.00E+00	5.57E-09	2.45E-07	6.03E-07	1.40E-06
7.20E+02	0.00E+00	2.96E-06	4.62E-08	0.00E+00	1.01E-08	2.86E-07	6.39E-07	1.14E-06
7.60E+02	0.00E+00	2.02E-06	4.09E-08	0.00E+00	4.11E-08	3.19E-07	5.49E-07	8.43E-07
8.00E+02	0.00E+00	1.62E-06	3.83E-08	0.00E+00	9.96E-08	2.84E-07	4.49E-07	6.72E-07
8.40E+02	0.00E+00	1.16E-06	3.51E-08	0.00E+00	1.28E-07	2.73E-07	3.78E-07	6.07E-07
8.80E+02	0.00E+00	8.80E-07	3.21E-08	0.00E+00	1.22E-07	2.33E-07	3.26E-07	4.67E-07
9.20E+02	0.00E+00	6.67E-07	2.85E-08	0.00E+00	1.16E-07	1.88E-07	2.64E-07	3.55E-07
9.60E+02	0.00E+00	5.06E-07	2.48E-08	0.00E+00	9.89E-08	1.51E-07	2.21E-07	2.90E-07
1.00E+03	0.00E+00	5.35E-07	2.19E-08	0.00E+00	8.74E-08	1.27E-07	1.85E-07	2.42E-07

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	1.67E-04	1.06E-01	3.67E-03	2.29E-03	7.16E-03	1.14E-02	1.55E-02	2.50E-02
1.00E+00	0.00E+00	1.03E-01	3.51E-03	2.15E-03	6.90E-03	1.11E-02	1.52E-02	2.39E-02
3.00E+00	0.00E+00	9.70E-02	3.25E-03	1.99E-03	6.46E-03	1.03E-02	1.43E-02	2.18E-02
1.00E+01	0.00E+00	7.92E-02	2.51E-03	1.53E-03	5.19E-03	7.76E-03	1.14E-02	1.74E-02
4.00E+01	0.00E+00	3.28E-02	8.09E-04	3.93E-04	1.77E-03	3.03E-03	4.16E-03	6.15E-03
4.05E+01	0.00E+00	3.23E-02	7.94E-04	3.86E-04	1.75E-03	2.99E-03	4.11E-03	6.01E-03
8.00E+01	0.00E+00	9.52E-03	2.12E-04	4.29E-05	5.38E-04	9.49E-04	1.33E-03	2.14E-03
1.00E+02	0.00E+00	4.94E-03	1.16E-04	4.58E-07	3.05E-04	5.69E-04	7.77E-04	1.48E-03
1.20E+02	0.00E+00	2.46E-03	6.52E-05	0.00E+00	1.81E-04	3.27E-04	4.80E-04	9.84E-04
1.60E+02	0.00E+00	1.05E-03	2.25E-05	0.00E+00	5.96E-05	1.29E-04	2.02E-04	4.34E-04
2.00E+02	0.00E+00	5.57E-04	9.07E-06	0.00E+00	1.91E-05	5.40E-05	8.22E-05	1.68E-04
2.40E+02	0.00E+00	2.95E-04	4.13E-06	0.00E+00	7.04E-06	2.11E-05	3.83E-05	8.50E-05
2.80E+02	0.00E+00	1.57E-04	1.95E-06	0.00E+00	2.98E-06	8.60E-06	1.91E-05	4.24E-05
3.00E+02	0.00E+00	1.14E-04	1.35E-06	0.00E+00	1.80E-06	5.66E-06	1.36E-05	2.85E-05
3.20E+02	0.00E+00	8.65E-05	9.44E-07	0.00E+00	1.07E-06	3.79E-06	8.58E-06	2.09E-05
3.60E+02	0.00E+00	5.16E-05	4.69E-07	0.00E+00	3.67E-07	1.58E-06	4.20E-06	1.17E-05
4.00E+02	0.00E+00	3.07E-05	2.44E-07	0.00E+00	1.48E-07	7.38E-07	2.35E-06	6.51E-06
4.40E+02	0.00E+00	1.83E-05	1.30E-07	0.00E+00	5.41E-08	3.30E-07	1.20E-06	3.98E-06
4.80E+02	0.00E+00	1.09E-05	7.63E-08	0.00E+00	2.16E-08	1.42E-07	6.28E-07	2.40E-06
5.20E+02	0.00E+00	6.52E-06	4.96E-08	0.00E+00	9.39E-09	6.48E-08	3.45E-07	1.44E-06
5.60E+02	0.00E+00	5.15E-06	3.74E-08	0.00E+00	5.15E-09	3.49E-08	3.45E-07	1.32E-06
6.00E+02	0.00E+00	4.21E-06	4.01E-08	0.00E+00	2.25E-09	2.16E-08	4.56E-07	1.57E-06
6.40E+02	0.00E+00	4.01E-06	4.34E-08	0.00E+00	2.28E-09	6.67E-08	5.73E-07	1.19E-06
6.80E+02	0.00E+00	3.39E-06	4.98E-08	0.00E+00	2.37E-09	2.75E-07	7.20E-07	1.26E-06
7.20E+02	0.00E+00	2.85E-06	5.13E-08	0.00E+00	2.64E-08	3.13E-07	6.32E-07	1.24E-06
7.60E+02	0.00E+00	1.82E-06	4.93E-08	0.00E+00	9.15E-08	3.99E-07	6.16E-07	1.12E-06
8.00E+02	0.00E+00	1.38E-06	4.69E-08	0.00E+00	1.67E-07	3.59E-07	4.97E-07	9.14E-07
8.40E+02	0.00E+00	1.08E-06	4.62E-08	0.00E+00	1.58E-07	3.19E-07	4.60E-07	7.35E-07
8.80E+02	0.00E+00	9.41E-07	4.05E-08	0.00E+00	1.36E-07	2.67E-07	3.88E-07	6.11E-07
9.20E+02	0.00E+00	7.66E-07	3.41E-08	0.00E+00	1.16E-07	2.17E-07	2.97E-07	4.63E-07
9.60E+02	0.00E+00	5.93E-07	2.83E-08	0.00E+00	9.78E-08	1.69E-07	2.46E-07	3.51E-07
1.00E+03	0.00E+00	4.52E-07	2.36E-08	0.00E+00	8.23E-08	1.30E-07	1.94E-07	3.09E-07

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	2.34E-04	6.39E-02	3.62E-03	2.27E-03	7.25E-03	1.06E-02	1.51E-02	2.48E-02
1.00E+00	0.00E+00	6.16E-02	3.46E-03	2.18E-03	6.97E-03	1.02E-02	1.41E-02	2.39E-02
3.00E+00	0.00E+00	5.73E-02	3.19E-03	2.01E-03	6.51E-03	9.61E-03	1.28E-02	2.24E-02
1.00E+01	0.00E+00	4.45E-02	2.46E-03	1.59E-03	5.13E-03	7.36E-03	1.01E-02	1.91E-02
4.00E+01	0.00E+00	1.47E-02	7.77E-04	4.30E-04	1.79E-03	2.77E-03	3.94E-03	6.89E-03
4.05E+01	0.00E+00	1.45E-02	7.63E-04	4.20E-04	1.75E-03	2.74E-03	3.90E-03	6.83E-03
8.00E+01	0.00E+00	5.22E-03	2.02E-04	4.59E-05	5.13E-04	8.28E-04	1.35E-03	2.86E-03
1.00E+02	0.00E+00	3.28E-03	1.12E-04	6.76E-07	3.01E-04	5.16E-04	8.20E-04	1.48E-03
1.20E+02	0.00E+00	2.06E-03	6.41E-05	0.00E+00	1.60E-04	3.14E-04	5.35E-04	9.24E-04
1.60E+02	0.00E+00	9.46E-04	2.36E-05	0.00E+00	6.01E-05	1.31E-04	2.09E-04	4.09E-04
2.00E+02	0.00E+00	4.95E-04	9.81E-06	0.00E+00	2.07E-05	5.52E-05	1.01E-04	1.89E-04
2.40E+02	0.00E+00	2.60E-04	4.44E-06	0.00E+00	7.83E-06	2.44E-05	5.30E-05	9.33E-05
2.80E+02	0.00E+00	1.36E-04	2.05E-06	0.00E+00	3.10E-06	1.08E-05	2.72E-05	4.48E-05
3.00E+02	0.00E+00	9.84E-05	1.40E-06	0.00E+00	1.85E-06	7.20E-06	1.84E-05	3.10E-05
3.20E+02	0.00E+00	7.13E-05	9.64E-07	0.00E+00	1.15E-06	5.03E-06	1.25E-05	2.14E-05
3.30E+02	0.00E+00	3.73E-05	4.59E-07	0.00E+00	4.51E-07	2.32E-06	5.71E-06	1.12E-05
4.00E+02	0.00E+00	1.96E-05	2.21E-07	0.00E+00	1.73E-07	1.04E-06	2.63E-06	6.14E-06
4.40E+02	0.00E+00	1.02E-05	1.13E-07	0.00E+00	6.81E-08	5.36E-07	1.23E-06	3.08E-06
4.80E+02	0.00E+00	5.37E-06	6.88E-08	0.00E+00	3.69E-08	2.97E-07	1.08E-06	1.71E-06
5.20E+02	0.00E+00	3.87E-06	5.81E-08	0.00E+00	2.30E-08	1.91E-07	8.77E-07	1.59E-06
5.60E+02	0.00E+00	1.21E-05	6.68E-08	0.00E+00	1.32E-08	1.21E-07	6.72E-07	1.96E-06
6.00E+02	0.00E+00	1.61E-05	6.50E-08	0.00E+00	7.81E-09	1.44E-07	7.67E-07	1.72E-06
6.40E+02	0.00E+00	1.38E-05	6.20E-08	0.00E+00	7.10E-09	1.72E-07	6.55E-07	1.51E-06
6.80E+02	0.00E+00	1.09E-05	5.32E-08	0.00E+00	8.73E-09	2.87E-07	5.52E-07	1.12E-06
7.20E+02	0.00E+00	8.33E-06	5.02E-08	0.00E+00	1.48E-08	3.22E-07	5.35E-07	1.02E-06
7.60E+02	0.00E+00	6.33E-06	4.33E-08	0.00E+00	2.09E-08	2.71E-07	5.11E-07	9.78E-07
8.00E+02	0.00E+00	4.81E-06	4.03E-08	0.00E+00	8.52E-08	2.38E-07	4.39E-07	8.04E-07
8.40E+02	0.00E+00	3.64E-06	3.71E-08	0.00E+00	1.18E-07	2.48E-07	3.57E-07	6.52E-07
8.80E+02	0.00E+00	2.76E-06	3.43E-08	0.00E+00	1.14E-07	2.09E-07	3.36E-07	5.09E-07
9.20E+02	0.00E+00	2.09E-06	2.99E-08	0.00E+00	1.04E-07	1.85E-07	2.80E-07	3.90E-07
9.60E+02	0.00E+00	1.59E-06	2.57E-08	0.00E+00	9.02E-08	1.47E-07	2.21E-07	3.06E-07
1.00E+03	0.00E+00	1.20E-06	2.15E-08	0.00E+00	7.52E-08	1.23E-07	1.67E-07	2.33E-07

Probabilistic results summary : RESRAD Default

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

Repetition	Time of peak mean dose	Peak mean dose
	Years	mrem/yr
1	0.000E+00	3.682E-03
2	0.000E+00	3.671E-03
3	0.000E+00	3.625E-03

Title : RESRAD Default  
 Input File : ZION SOIL SENSITIVITY.RAD

Coefficients for peak All Pathways Dose

Coefficient =	PCC		SRC		PRCC		SRRC	
Repetition =	1		1		1		1	
Description of Probabilistic Variable	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff
Density of cover material	23	-0.03	23	-0.02	12	0.05	12	0.02
Contaminated zone erosion rate	21	-0.03	21	-0.02	7	-0.08	7	-0.03
Contaminated zone total porosity	16	-0.04	16	-0.02	23	-0.04	23	-0.01
Contaminated zone hydraulic conductivity	27	0.02	27	0.01	39	0.00	39	0.00
Contaminated zone b parameter	30	0.02	30	0.01	29	0.02	29	0.01
Evapotranspiration coefficient	29	0.02	29	0.01	34	-0.01	34	0.00
Wind Speed	40	0.00	40	0.00	41	0.00	41	0.00
Runoff coefficient	17	0.04	17	0.02	37	0.01	37	0.00
Density of saturated zone	8	0.06	8	0.04	25	0.03	25	0.01
Saturated zone total porosity	28	-0.02	28	-0.01	14	0.05	14	0.02
Saturated zone effective porosity	7	-0.07	7	-0.04	8	0.07	8	0.02
Saturated zone hydraulic conductivity	38	-0.01	38	-0.01	17	0.04	17	0.01
Saturated zone hydraulic gradient	5	0.08	5	0.05	9	0.06	9	0.02
Well pump intake depth	19	-0.03	19	-0.02	18	0.04	18	0.01
Mass loading for inhalation	26	0.02	26	0.01	21	-0.04	21	-0.01
Depth of soil mixing layer	4	-0.11	4	-0.07	4	-0.54	4	-0.21
Depth of roots	3	-0.45	3	-0.31	3	-0.78	3	-0.41
Weathering removal constant of all vegetation	25	-0.02	25	-0.01	31	-0.02	31	-0.01
Wet weight crop yield of fruit, grain and non-leafy vegetables	32	0.02	32	0.01	19	0.04	19	0.01
Wet foliar interception fraction of leafy vegetables	6	0.07	6	0.04	24	-0.04	24	-0.01
Indoor dust filtration factor	20	0.03	20	0.02	11	-0.06	11	-0.02
External gamma shielding factor	9	-0.06	9	-0.03	26	0.03	26	0.01
Cover erosion rate	15	0.04	15	0.02	30	0.02	30	0.01
Total Porosity of Unsaturated zone 1	33	-0.01	33	-0.01	40	0.00	40	0.00
Effective Porosity of Unsaturated zone 1	22	-0.03	22	-0.02	10	0.06	10	0.02
Hydraulic Conductivity of Unsaturated zone 1	12	0.04	12	0.03	32	0.01	32	0.00
b Parameter of Unsaturated zone 1	11	0.05	11	0.03	35	-0.01	35	0.00
Plant transfer factor for Co	13	-0.04	13	-0.03	38	0.00	38	0.00
Meat transfer factor for Co	34	-0.01	34	-0.01	27	0.03	27	0.01
Milk transfer factor for Co	31	0.02	31	0.01	16	0.04	16	0.01
Plant transfer factor for Cs	41	0.00	41	0.00	20	0.04	20	0.01
Meat transfer factor for Cs	39	0.01	39	0.00	13	0.05	13	0.02
Milk transfer factor for Cs	14	0.04	14	0.02	33	0.01	33	0.00
Plant transfer factor for Ni	1	0.65	1	0.53	2	0.86	2	0.54
Meat transfer factor for Ni	24	0.02	24	0.02	5	0.13	5	0.04
Milk transfer factor for Ni	2	0.60	2	0.46	1	0.88	1	0.63
Plant transfer factor for Sr	35	-0.01	35	-0.01	6	-0.09	6	-0.03
Meat transfer factor for Sr	36	0.01	36	0.01	36	0.01	36	0.00
Milk transfer factor for Sr	37	-0.01	37	-0.01	15	0.05	15	0.02
Density of contaminated zone	10	-0.05	10	-0.03	28	0.02	28	0.01
Density of Unsaturated zone 1	18	0.04	18	0.02	22	-0.04	22	-0.01
R-SQUARE		0.63		0.63		0.89		0.89

-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	8	0.07	8	0.04	34	-0.01	34	0.00
Contaminated zone erosion rate	6	-0.09	6	-0.06	27	-0.01	27	0.00
Contaminated zone total porosity	17	0.04	17	0.02	22	-0.02	22	-0.01
Contaminated zone hydraulic conductivity	25	0.02	25	0.01	38	0.00	38	0.00
Contaminated zone b parameter	40	0.00	40	0.00	19	-0.03	19	-0.01
Evapotranspiration coefficient	10	-0.05	10	-0.03	8	0.06	8	0.02
Wind Speed	24	-0.02	24	-0.01	23	0.02	23	0.01
Runoff coefficient	7	0.07	7	0.04	9	-0.05	9	-0.02
Density of saturated zone	37	0.00	37	0.00	31	0.01	31	0.00
Saturated zone total porosity	5	-0.09	5	-0.06	14	0.04	14	0.02
Saturated zone effective porosity	41	0.00	41	0.00	21	0.02	21	0.01
Saturated zone hydraulic conductivity	31	0.01	31	0.01	24	0.02	24	0.01
Saturated zone hydraulic gradient	29	-0.01	29	-0.01	30	0.01	30	0.00
Well pump intake depth	11	-0.05	11	-0.03	36	0.00	36	0.00
Mass loading for inhalation	30	0.01	30	0.01	41	0.00	41	0.00
Depth of soil mixing layer	4	-0.13	4	-0.08	4	-0.56	4	-0.24
Depth of roots	3	-0.43	3	-0.29	3	-0.75	3	-0.39
Weathering removal constant of all vegetation	22	-0.03	22	-0.02	32	0.01	32	0.00
Wet weight crop yield of fruit, grain and non-leafy vegetables	35	0.01	35	0.00	16	0.04	16	0.01
Wet foliar interception fraction of leafy vegetables	23	0.02	23	0.01	17	0.03	17	0.01
Indoor dust filtration factor	27	0.01	27	0.01	10	0.05	10	0.02
External gamma shielding factor	14	-0.04	14	-0.02	13	0.05	13	0.02
Cover erosion rate	18	-0.03	18	-0.02	12	0.05	12	0.02
Total Porosity of Unsaturated zone 1	36	0.00	36	0.00	7	-0.06	7	-0.02
Effective Porosity of Unsaturated zone 1	15	0.04	15	0.02	33	-0.01	33	0.00
Hydraulic Conductivity of Unsaturated zone 1	9	-0.06	9	-0.04	6	0.07	6	0.02
b Parameter of Unsaturated zone 1	28	0.01	28	0.01	40	0.00	40	0.00
Plant transfer factor for Co	12	0.04	12	0.02	20	0.03	20	0.01
Meat transfer factor for Co	26	0.02	26	0.01	39	0.00	39	0.00
Milk transfer factor for Co	16	-0.04	16	-0.02	37	0.00	37	0.00
Plant transfer factor for Cs	39	0.00	39	0.00	15	-0.04	15	-0.01
Meat transfer factor for Cs	38	0.00	38	0.00	28	0.01	28	0.00
Milk transfer factor for Cs	21	0.03	21	0.02	25	-0.02	25	-0.01
Plant transfer factor for Ni	2	0.62	2	0.48	2	0.84	2	0.54
Meat transfer factor for Ni	19	0.03	19	0.02	5	0.14	5	0.05
Milk transfer factor for Ni	1	0.66	1	0.54	1	0.87	1	0.61
Plant transfer factor for Sr	34	0.01	34	0.01	29	0.01	29	0.00
Meat transfer factor for Sr	13	0.04	13	0.02	11	0.05	11	0.02
Milk transfer factor for Sr	20	-0.03	20	-0.02	18	-0.03	18	-0.01
Density of contaminated zone	32	-0.01	32	-0.01	26	0.02	26	0.01
Density of Unsaturated zone 1	33	-0.01	33	-0.01	35	-0.01	35	0.00
R-SQUARE		0.64		0.64		0.88		0.88

-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	35	-0.01	35	0.00	9	0.05	9	0.02
Contaminated zone erosion rate	41	0.00	41	0.00	12	-0.05	12	-0.02
Contaminated zone total porosity	17	0.04	17	0.02	34	-0.01	34	0.00
Contaminated zone hydraulic conductivity	19	-0.03	19	-0.02	25	0.02	25	0.01
Contaminated zone b parameter	33	-0.01	34	-0.01	10	-0.05	10	-0.02
Evapotranspiration coefficient	36	0.00	36	0.00	29	0.02	29	0.01
Wind Speed	18	0.04	18	0.02	21	-0.03	21	-0.01
Runoff coefficient	39	0.00	39	0.00	30	0.02	30	0.01
Density of saturated zone	29	-0.01	29	-0.01	23	0.03	23	0.01
Saturated zone total porosity	21	-0.03	21	-0.02	37	0.00	37	0.00
Saturated zone effective porosity	20	-0.03	20	-0.02	16	0.04	16	0.01
Saturated zone hydraulic conductivity	23	0.02	23	0.02	27	0.02	27	0.01
Saturated zone hydraulic gradient	22	-0.03	22	-0.02	40	0.00	40	0.00
Well pump intake depth	27	-0.02	27	-0.01	31	-0.02	31	-0.01
Mass loading for inhalation	38	0.00	38	0.00	35	0.01	35	0.00
Depth of soil mixing layer	4	-0.20	4	-0.12	4	-0.53	4	-0.22
Depth of roots	3	-0.46	3	-0.32	3	-0.76	3	-0.40
Weathering removal constant of all vegetation	24	-0.02	24	-0.01	13	0.04	13	0.01
Wet weight crop yield of fruit, grain and non-leafy vegetables	8	0.06	8	0.04	14	0.04	14	0.01
Wet foliar interception fraction of leafy vegetables	5	-0.09	5	-0.06	17	0.04	17	0.01
Indoor dust filtration factor	26	-0.02	26	-0.01	8	0.06	8	0.02
External gamma shielding factor	11	-0.06	11	-0.04	38	0.00	38	0.00
Cover erosion rate	32	0.01	32	0.01	39	0.00	39	0.00
Total Porosity of Unsaturated zone 1	28	0.01	28	0.01	36	0.01	36	0.00
Effective Porosity of Unsaturated zone 1	14	0.05	14	0.03	7	0.06	7	0.02
Hydraulic Conductivity of Unsaturated zone 1	6	0.08	6	0.05	28	-0.02	28	-0.01
b Parameter of Unsaturated zone 1	10	-0.06	10	-0.04	22	0.03	22	0.01
Plant transfer factor for Co	9	-0.06	9	-0.04	18	0.03	19	0.01
Meat transfer factor for Co	31	0.01	31	0.01	11	0.05	11	0.02
Milk transfer factor for Co	37	0.00	37	0.00	32	0.01	32	0.00
Plant transfer factor for Cs	30	0.01	30	0.01	20	0.03	20	0.01
Meat transfer factor for Cs	40	0.00	40	0.00	41	0.00	41	0.00
Milk transfer factor for Cs	15	0.04	15	0.03	24	0.02	24	0.01
Plant transfer factor for Ni	1	0.64	1	0.51	2	0.85	2	0.55
Meat transfer factor for Ni	7	0.07	7	0.05	5	0.20	5	0.07
Milk transfer factor for Ni	2	0.60	2	0.47	1	0.87	1	0.61
Plant transfer factor for Sr	34	0.01	33	0.01	26	0.02	26	0.01
Meat transfer factor for Sr	13	-0.05	13	-0.03	15	0.04	15	0.01
Milk transfer factor for Sr	25	0.02	25	0.01	33	0.01	33	0.00
Density of contaminated zone	16	0.04	16	0.02	19	0.03	18	0.01
Density of Unsaturated zone 1	12	0.06	12	0.03	6	-0.08	6	-0.03
R-SQUARE		0.62		0.62		0.88		0.88

-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.