

Probabilistic results summary : RESRAD Default

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## Probabilistic Input

Number of Sample Runs: 3000

Number	Name	Distribution	Parameters								
1	VCV	CONTINUOUS LOGARITHMIC4	5.E-8	0	.0007	.22	.005	.95	.2	1	
2	DENSCZ	TRUNCATED NORMAL	1.52	.23	.001	.999					
3	VCZ	CONTINUOUS LOGARITHMIC4	5.E-8	0	.0007	.22	.005	.95	.2	1	
4	TPCZ	TRUNCATED NORMAL	.425	.0867	.001	.999					
5	HCCZ	LOGUNIFORM	786	17000							
6	BCZ	BOUNDED LOGNORMAL-N	1.06	.66	.5	30					
7	EVAPTR	UNIFORM	.5	.75							
8	WIND	BOUNDED LOGNORMAL-N	1.445	.2419	1.4	13					
9	RUNOFF	UNIFORM	.1	.8							
10	DENSAQ	TRUNCATED NORMAL	1.51	.16	.001	.999					
11	TPSZ	TRUNCATED NORMAL	.43	.06	.001	.999					
12	EPSZ	TRUNCATED NORMAL	.383	.061	.001	.999					
13	HCSZ	LOGUNIFORM	786	17000							
14	HGWT	BOUNDED LOGNORMAL-N	-5.11	1.77	.00007	.5					
15	DWIBWT	TRIANGULAR	6	10	30						
16	MLINH	CONTINUOUS LINEAR	8	0	0	.000008	.0151	.000016	.1365	.00003	.8119
17	SHF3	UNIFORM	.15	.95							
18	SHF1	BOUNDED LOGNORMAL-N	-1.3	.59	.044	1					
19	DM	TRIANGULAR	0	.15	.6						
20	DROOT	UNIFORM	.3	4							
21	YV(1)	TRUNCATED LOGNORMAL-N	.56	.48	.001	.999					
22	WLAM	TRIANGULAR	5.1	18	84						
23	RWET(2)	TRIANGULAR	.06	.67	.95						
24	BRTF(27,1)	LOGNORMAL-N	-2.53	.916291							
25	BRTF(27,2)	LOGNORMAL-N	-3.51	1.029619							
26	BRTF(27,3)	LOGNORMAL-N	-6.21	.7							
27	BRTF(55,1)	LOGNORMAL-N	-3.22	.993252							
28	BRTF(55,2)	LOGNORMAL-N	-3	.405465							
29	BRTF(55,3)	LOGNORMAL-N	-4.61	.47							
30	BRTF(63,1)	LOGNORMAL-N	-6.21	1.098612							
31	BRTF(63,2)	LOGNORMAL-N	-6.21	1.029619							
32	BRTF(63,3)	LOGNORMAL-N	-9.72	.91629							
33	BRTF(1,1)	LOGNORMAL-N	1.57	1.098612							
34	BRTF(1,2)	LOGNORMAL-N	-4.42	1							
35	BRTF(1,3)	LOGNORMAL-N	-4.6	.9							
36	BRTF(28,1)	LOGNORMAL-N	-3	.916291							
37	BRTF(28,2)	LOGNORMAL-N	-5.3	.916291							
38	BRTF(28,3)	LOGNORMAL-N	-3.91	.69315							
39	BRTF(38,1)	LOGNORMAL-N	-1.2	.993252							
40	BRTF(38,2)	LOGNORMAL-N	-4.61	.405465							
41	BRTF(38,3)	LOGNORMAL-N	-6.21	.47							

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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	5.02E-03	5.02E-03	4.98E-03	4.22E-03	1.32E-03	4.89E-06	2.60E-11	0.00E+00	0.00E+00
Max	1.55E+02	2.17E-01	7.48E-02	7.41E-02	7.28E-02	8.14E-02	1.76E-01	9.11E-02	1.48E-02	1.44E-04
Avg	1.11E+00	1.27E-02	1.23E-02	1.22E-02	1.20E-02	1.12E-02	8.60E-03	5.18E-03	1.06E-03	6.97E-06
Std	9.04E+00	7.93E-03	5.90E-03	5.85E-03	5.75E-03	5.65E-03	6.37E-03	4.20E-03	1.00E-03	1.05E-05
ΣALL										
Min	0.00E+00	5.02E-03	5.02E-03	4.98E-03	4.22E-03	1.32E-03	4.89E-06	2.60E-11	0.00E+00	0.00E+00
Max	1.55E+02	2.17E-01	7.48E-02	7.41E-02	7.28E-02	8.14E-02	1.76E-01	9.11E-02	1.48E-02	1.44E-04
Avg	1.11E+00	1.27E-02	1.23E-02	1.22E-02	1.20E-02	1.12E-02	8.60E-03	5.18E-03	1.06E-03	6.97E-06
Std	9.04E+00	7.93E-03	5.90E-03	5.85E-03	5.75E-03	5.65E-03	6.37E-03	4.20E-03	1.00E-03	1.05E-05

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		1.84E-07	1.83E-07	1.81E-07	5.83E-08	2.34E-10	1.39E-15	0.00E+00	0.00E+00
Max		3.65E-06	3.62E-06	3.55E-06	3.63E-06	8.73E-06	4.51E-06	7.30E-07	7.09E-09
Avg		5.49E-07	5.43E-07	5.32E-07	4.96E-07	3.84E-07	2.32E-07	4.79E-08	3.24E-10
Std		2.93E-07	2.91E-07	2.85E-07	2.78E-07	3.13E-07	2.05E-07	4.84E-08	5.12E-10
ΣALL									
Min		1.84E-07	1.83E-07	1.81E-07	5.83E-08	2.34E-10	1.39E-15	0.00E+00	0.00E+00
Max		3.65E-06	3.62E-06	3.55E-06	3.63E-06	8.73E-06	4.51E-06	7.30E-07	7.09E-09
Avg		5.49E-07	5.43E-07	5.32E-07	4.96E-07	3.84E-07	2.32E-07	4.79E-08	3.24E-10
Std		2.93E-07	2.91E-07	2.85E-07	2.78E-07	3.13E-07	2.05E-07	4.84E-08	5.12E-10

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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-07	1.06E-07	2.19E-08	1.38E-10	
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E-10	6.49E-10	1.91E-10	4.23E-12	
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-09	5.21E-09	1.27E-09	1.39E-11	
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	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-07	1.06E-07	2.19E-08	1.38E-10	
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.52E-10	6.49E-10	1.91E-10	4.23E-12	
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-09	5.21E-09	1.27E-09	1.39E-11	

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

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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		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		3.61E-03	3.59E-03	3.56E-03	1.12E-02	2.66E-02	1.37E-02	2.38E-03	2.91E-05
Avg		3.26E-05	3.30E-05	3.41E-05	4.76E-05	1.05E-04	9.36E-05	3.44E-05	6.75E-07
Std		1.68E-04	1.68E-04	1.70E-04	3.16E-04	8.06E-04	5.55E-04	1.45E-04	1.86E-06
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		3.61E-03	3.59E-03	3.56E-03	1.12E-02	2.66E-02	1.37E-02	2.38E-03	2.91E-05
Avg		3.26E-05	3.30E-05	3.41E-05	4.76E-05	1.05E-04	9.36E-05	3.44E-05	6.75E-07
Std		1.68E-04	1.68E-04	1.70E-04	3.16E-04	8.06E-04	5.55E-04	1.45E-04	1.86E-06

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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		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		1.28E-03	1.28E-03	1.28E-03	1.33E-03	2.91E-03	3.46E-03	8.31E-04	6.57E-06
Avg		3.63E-06	3.73E-06	3.98E-06	5.54E-06	1.21E-05	1.21E-05	4.16E-06	7.56E-08
Std		3.19E-05	3.23E-05	3.37E-05	4.88E-05	1.15E-04	1.05E-04	2.70E-05	2.93E-07
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		1.28E-03	1.28E-03	1.28E-03	1.33E-03	2.91E-03	3.46E-03	8.31E-04	6.57E-06
Avg		3.63E-06	3.73E-06	3.98E-06	5.54E-06	1.21E-05	1.21E-05	4.16E-06	7.56E-08
Std		3.19E-05	3.23E-05	3.37E-05	4.88E-05	1.15E-04	1.05E-04	2.70E-05	2.93E-07

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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		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		1.84E-02	1.83E-02	1.81E-02	5.69E-02	1.39E-01	7.19E-02	1.09E-02	1.14E-04
Avg		9.59E-05	9.72E-05	1.01E-04	1.43E-04	3.42E-04	2.86E-04	1.00E-04	2.04E-06
Std		6.44E-04	6.44E-04	6.51E-04	1.31E-03	3.66E-03	2.35E-03	5.08E-04	6.67E-06
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		1.84E-02	1.83E-02	1.81E-02	5.69E-02	1.39E-01	7.19E-02	1.09E-02	1.14E-04
Avg		9.59E-05	9.72E-05	1.01E-04	1.43E-04	3.42E-04	2.86E-04	1.00E-04	2.04E-06
Std		6.44E-04	6.44E-04	6.51E-04	1.31E-03	3.66E-03	2.35E-03	5.08E-04	6.67E-06

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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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E-06	4.02E-06	9.78E-07	7.05E-09	
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.12E-08	7.12E-08	2.23E-08	5.14E-10	
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.74E-07	4.91E-07	1.29E-07	1.43E-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	0.00E+00
Max	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E-06	4.02E-06	9.78E-07	7.05E-09	
Avg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.12E-08	7.12E-08	2.23E-08	5.14E-10	
Std	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.74E-07	4.91E-07	1.29E-07	1.43E-09	

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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		4.04E-03	3.26E-03	2.13E-03	4.83E-04	7.47E-07	2.43E-12	0.00E+00	0.00E+00
Max		4.43E-03	4.39E-03	4.33E-03	4.12E-03	3.32E-03	2.19E-03	5.36E-04	3.90E-06
Avg		4.40E-03	4.35E-03	4.26E-03	3.95E-03	2.93E-03	1.72E-03	3.33E-04	1.51E-06
Std		2.37E-05	7.12E-05	1.53E-04	3.47E-04	6.12E-04	5.68E-04	1.75E-04	1.26E-06
ΣALL									
Min		4.04E-03	3.26E-03	2.13E-03	4.83E-04	7.47E-07	2.43E-12	0.00E+00	0.00E+00
Max		4.43E-03	4.39E-03	4.33E-03	4.12E-03	3.32E-03	2.19E-03	5.36E-04	3.90E-06
Avg		4.40E-03	4.35E-03	4.26E-03	3.95E-03	2.93E-03	1.72E-03	3.33E-04	1.51E-06
Std		2.37E-05	7.12E-05	1.53E-04	3.47E-04	6.12E-04	5.68E-04	1.75E-04	1.26E-06

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM SENSITIVITY ANALYSIS\INPUT FILES\ZION BFM 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\BFM SENSITIVITY ANALYSIS\INPUT FILES\ZION BFM 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\BFM SENSITIVITY ANALYSIS\INPUT FILES\ZION BFM 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		6.98E-05	6.92E-05	6.82E-05	3.22E-05	7.26E-08	2.36E-13	0.00E+00	0.00E+00
Max		2.15E-03	2.13E-03	2.10E-03	2.00E-03	1.61E-03	1.05E-03	2.54E-04	1.74E-06
Avg		4.12E-04	4.07E-04	3.98E-04	3.70E-04	2.74E-04	1.61E-04	3.11E-05	1.41E-07
Std		2.38E-04	2.35E-04	2.31E-04	2.17E-04	1.72E-04	1.11E-04	2.59E-05	1.57E-07
ΣALL									
Min		6.98E-05	6.92E-05	6.82E-05	3.22E-05	7.26E-08	2.36E-13	0.00E+00	0.00E+00
Max		2.15E-03	2.13E-03	2.10E-03	2.00E-03	1.61E-03	1.05E-03	2.54E-04	1.74E-06
Avg		4.12E-04	4.07E-04	3.98E-04	3.70E-04	2.74E-04	1.61E-04	3.11E-05	1.41E-07
Std		2.38E-04	2.35E-04	2.31E-04	2.17E-04	1.72E-04	1.11E-04	2.59E-05	1.57E-07

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM SENSITIVITY ANALYSIS\INPUT FILES\ZION BFM 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		7.36E-06	7.29E-06	7.17E-06	6.76E-06	9.76E-08	4.70E-13	0.00E+00	0.00E+00
Max		5.71E-03	5.55E-03	5.25E-03	4.42E-03	3.56E-03	2.32E-03	5.49E-04	3.53E-06
Avg		3.66E-04	3.62E-04	3.54E-04	3.28E-04	2.43E-04	1.43E-04	2.78E-05	1.26E-07
Std		4.20E-04	4.15E-04	4.06E-04	3.77E-04	2.86E-04	1.78E-04	3.85E-05	2.13E-07
ΣALL									
Min		7.36E-06	7.29E-06	7.17E-06	6.76E-06	9.76E-08	4.70E-13	0.00E+00	0.00E+00
Max		5.71E-03	5.55E-03	5.25E-03	4.42E-03	3.56E-03	2.32E-03	5.49E-04	3.53E-06
Avg		3.66E-04	3.62E-04	3.54E-04	3.28E-04	2.43E-04	1.43E-04	2.78E-05	1.26E-07
Std		4.20E-04	4.15E-04	4.06E-04	3.77E-04	2.86E-04	1.78E-04	3.85E-05	2.13E-07

ΣALL is total pathway dose summed for all nuclides.



Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM SENSITIVITY ANALYSIS\INPUT FILES\ZION BFM 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		4.74E-04	4.71E-04	4.64E-04	4.41E-04	8.68E-07	2.82E-12	0.00E+00	0.00E+00
Max		6.88E-02	6.81E-02	6.69E-02	6.29E-02	4.80E-02	2.83E-02	5.06E-03	2.84E-05
Avg		7.03E-03	6.95E-03	6.80E-03	6.32E-03	4.69E-03	2.76E-03	5.33E-04	2.40E-06
Std		5.71E-03	5.65E-03	5.54E-03	5.19E-03	4.04E-03	2.55E-03	5.58E-04	3.09E-06
ΣALL									
Min		4.74E-04	4.71E-04	4.64E-04	4.41E-04	8.68E-07	2.82E-12	0.00E+00	0.00E+00
Max		6.88E-02	6.81E-02	6.69E-02	6.29E-02	4.80E-02	2.83E-02	5.06E-03	2.84E-05
Avg		7.03E-03	6.95E-03	6.80E-03	6.32E-03	4.69E-03	2.76E-03	5.33E-04	2.40E-06
Std		5.71E-03	5.65E-03	5.54E-03	5.19E-03	4.04E-03	2.55E-03	5.58E-04	3.09E-06

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM SENSITIVITY ANALYSIS\INPUT FILES\ZION BFM 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	6.28E-03	6.16E-03	5.98E-03	5.37E-03	2.12E-03	2.22E-04	7.76E-08	5.14E-21
0.050	6.67E-03	6.59E-03	6.46E-03	5.80E-03	3.43E-03	7.81E-04	3.38E-06	5.85E-15
0.075	7.00E-03	6.91E-03	6.74E-03	6.17E-03	4.07E-03	1.37E-03	2.19E-05	9.22E-12
0.100	7.27E-03	7.17E-03	7.00E-03	6.41E-03	4.46E-03	1.86E-03	5.36E-05	2.08E-10
0.125	7.51E-03	7.43E-03	7.24E-03	6.69E-03	4.73E-03	2.19E-03	1.17E-04	2.66E-09
0.150	7.71E-03	7.63E-03	7.47E-03	6.88E-03	4.90E-03	2.45E-03	1.80E-04	1.17E-08
0.175	7.94E-03	7.85E-03	7.68E-03	7.09E-03	5.12E-03	2.71E-03	2.53E-04	4.57E-08
0.200	8.15E-03	8.05E-03	7.87E-03	7.29E-03	5.29E-03	2.92E-03	3.42E-04	1.31E-07
0.225	8.34E-03	8.25E-03	8.05E-03	7.48E-03	5.49E-03	3.06E-03	4.19E-04	2.73E-07
0.250	8.51E-03	8.42E-03	8.24E-03	7.66E-03	5.65E-03	3.25E-03	4.96E-04	4.72E-07
0.275	8.71E-03	8.60E-03	8.41E-03	7.83E-03	5.84E-03	3.37E-03	5.62E-04	7.46E-07
0.300	8.91E-03	8.77E-03	8.59E-03	8.03E-03	6.00E-03	3.51E-03	6.12E-04	1.04E-06
0.325	9.12E-03	9.00E-03	8.81E-03	8.18E-03	6.14E-03	3.65E-03	6.61E-04	1.47E-06
0.350	9.32E-03	9.22E-03	9.03E-03	8.39E-03	6.28E-03	3.78E-03	7.13E-04	1.87E-06
0.375	9.51E-03	9.39E-03	9.21E-03	8.59E-03	6.45E-03	3.89E-03	7.53E-04	2.27E-06
0.400	9.71E-03	9.60E-03	9.41E-03	8.76E-03	6.58E-03	4.01E-03	7.86E-04	2.69E-06
0.425	9.90E-03	9.80E-03	9.60E-03	8.95E-03	6.77E-03	4.11E-03	8.28E-04	3.20E-06
0.450	1.01E-02	1.00E-02	9.81E-03	9.12E-03	6.96E-03	4.23E-03	8.64E-04	3.66E-06
0.475	1.04E-02	1.02E-02	1.00E-02	9.34E-03	7.10E-03	4.34E-03	8.93E-04	4.14E-06
0.500	1.06E-02	1.05E-02	1.03E-02	9.59E-03	7.28E-03	4.46E-03	9.23E-04	4.50E-06
0.525	1.08E-02	1.07E-02	1.05E-02	9.81E-03	7.46E-03	4.58E-03	9.57E-04	4.88E-06
0.550	1.11E-02	1.10E-02	1.08E-02	1.00E-02	7.69E-03	4.70E-03	9.93E-04	5.22E-06
0.575	1.16E-02	1.14E-02	1.11E-02	1.04E-02	7.92E-03	4.87E-03	1.03E-03	5.52E-06
0.600	1.18E-02	1.17E-02	1.15E-02	1.07E-02	8.14E-03	5.00E-03	1.06E-03	5.94E-06
0.625	1.21E-02	1.20E-02	1.18E-02	1.10E-02	8.39E-03	5.15E-03	1.10E-03	6.31E-06
0.650	1.26E-02	1.24E-02	1.22E-02	1.13E-02	8.65E-03	5.32E-03	1.14E-03	6.77E-06
0.675	1.30E-02	1.28E-02	1.25E-02	1.17E-02	8.93E-03	5.50E-03	1.17E-03	7.24E-06
0.700	1.34E-02	1.33E-02	1.30E-02	1.21E-02	9.28E-03	5.69E-03	1.22E-03	7.68E-06
0.725	1.39E-02	1.38E-02	1.34E-02	1.26E-02	9.66E-03	5.96E-03	1.28E-03	8.20E-06
0.750	1.44E-02	1.42E-02	1.39E-02	1.31E-02	1.01E-02	6.23E-03	1.35E-03	8.92E-06
0.775	1.51E-02	1.49E-02	1.46E-02	1.36E-02	1.06E-02	6.52E-03	1.44E-03	9.65E-06
0.800	1.57E-02	1.55E-02	1.51E-02	1.42E-02	1.10E-02	6.80E-03	1.52E-03	1.03E-05
0.825	1.63E-02	1.61E-02	1.58E-02	1.48E-02	1.15E-02	7.19E-03	1.61E-03	1.12E-05
0.850	1.71E-02	1.69E-02	1.65E-02	1.56E-02	1.20E-02	7.59E-03	1.74E-03	1.25E-05
0.875	1.79E-02	1.78E-02	1.74E-02	1.64E-02	1.29E-02	8.12E-03	1.86E-03	1.39E-05
0.900	1.91E-02	1.89E-02	1.86E-02	1.76E-02	1.37E-02	8.72E-03	2.00E-03	1.59E-05
0.925	2.08E-02	2.06E-02	2.02E-02	1.89E-02	1.50E-02	9.58E-03	2.23E-03	1.92E-05
0.950	2.36E-02	2.34E-02	2.29E-02	2.15E-02	1.73E-02	1.11E-02	2.61E-03	2.40E-05
0.975	2.81E-02	2.76E-02	2.69E-02	2.54E-02	2.12E-02	1.39E-02	3.37E-03	3.45E-05
1.000	7.48E-02	7.41E-02	7.28E-02	8.14E-02	1.76E-01	9.11E-02	1.48E-02	1.44E-04

Probabilistic results summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM SENSITIVITY ANALYSIS\INPUT FILES\ZION BFM 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	5.02E-03	5.61E-02	1.24E-02	1.06E-02	1.90E-02	2.44E-02	2.94E-02	3.62E-02
1.00E+00	4.98E-03	5.56E-02	1.22E-02	1.05E-02	1.89E-02	2.38E-02	2.92E-02	3.60E-02
1.30E+00	4.97E-03	5.55E-02	1.22E-02	1.05E-02	1.88E-02	2.37E-02	2.90E-02	3.60E-02
1.70E+00	4.96E-03	5.53E-02	1.21E-02	1.05E-02	1.87E-02	2.37E-02	2.88E-02	3.59E-02
2.22E+00	4.94E-03	5.51E-02	1.21E-02	1.04E-02	1.86E-02	2.36E-02	2.86E-02	3.58E-02
2.89E+00	4.92E-03	5.48E-02	1.20E-02	1.03E-02	1.85E-02	2.34E-02	2.82E-02	3.56E-02
3.00E+00	4.91E-03	5.48E-02	1.20E-02	1.03E-02	1.85E-02	2.34E-02	2.81E-02	3.55E-02
3.78E+00	4.71E-03	5.44E-02	1.19E-02	1.03E-02	1.83E-02	2.32E-02	2.77E-02	3.53E-02
4.92E+00	4.27E-03	5.40E-02	1.17E-02	1.01E-02	1.82E-02	2.28E-02	2.73E-02	3.50E-02
6.42E+00	3.75E-03	5.33E-02	1.16E-02	9.97E-03	1.81E-02	2.25E-02	2.70E-02	3.46E-02
8.38E+00	2.95E-03	5.25E-02	1.13E-02	9.76E-03	1.79E-02	2.23E-02	2.66E-02	3.41E-02
1.10E+01	2.28E-03	5.32E-02	1.12E-02	9.61E-03	1.76E-02	2.20E-02	2.71E-02	3.37E-02
1.09E+01	1.96E-03	5.41E-02	1.11E-02	9.54E-03	1.74E-02	2.18E-02	2.69E-02	3.34E-02
1.43E+01	1.13E-03	5.72E-02	1.07E-02	9.29E-03	1.68E-02	2.11E-02	2.70E-02	3.38E-02
1.86E+01	5.32E-04	6.09E-02	1.03E-02	8.95E-03	1.61E-02	2.06E-02	2.67E-02	3.35E-02
2.42E+01	1.93E-04	7.13E-02	9.83E-03	8.48E-03	1.55E-02	1.94E-02	2.58E-02	3.27E-02
3.16E+01	5.06E-05	1.26E-01	9.31E-03	7.96E-03	1.46E-02	1.87E-02	2.47E-02	3.14E-02
4.05E+01	7.94E-06	1.17E-01	8.62E-03	7.30E-03	1.37E-02	1.78E-02	2.32E-02	2.94E-02
4.12E+01	6.76E-06	1.16E-01	8.56E-03	7.25E-03	1.36E-02	1.77E-02	2.31E-02	2.93E-02
5.38E+01	4.71E-07	1.04E-01	7.67E-03	6.55E-03	1.23E-02	1.59E-02	2.04E-02	2.67E-02
7.02E+01	1.46E-08	8.99E-02	6.65E-03	5.72E-03	1.09E-02	1.41E-02	1.79E-02	2.38E-02
9.15E+01	1.57E-10	7.45E-02	5.56E-03	4.85E-03	9.21E-03	1.20E-02	1.51E-02	2.04E-02
1.00E+02	2.60E-11	6.92E-02	5.19E-03	4.51E-03	8.74E-03	1.12E-02	1.41E-02	2.02E-02
1.19E+02	4.25E-13	5.83E-02	4.43E-03	3.82E-03	7.62E-03	9.66E-03	1.29E-02	1.73E-02
1.56E+02	1.90E-16	4.24E-02	3.31E-03	2.86E-03	5.82E-03	7.93E-03	1.01E-02	1.47E-02
2.03E+02	8.16E-21	2.79E-02	2.27E-03	1.95E-03	4.11E-03	5.31E-03	7.06E-03	1.09E-02
2.65E+02	0.00E+00	1.30E-02	1.39E-03	1.20E-03	2.60E-03	3.47E-03	4.45E-03	6.61E-03
3.00E+02	0.00E+00	1.01E-02	1.06E-03	9.18E-04	2.02E-03	2.70E-03	3.42E-03	5.26E-03
3.46E+02	0.00E+00	7.28E-03	7.50E-04	6.47E-04	1.46E-03	1.94E-03	2.53E-03	3.79E-03
4.51E+02	0.00E+00	3.90E-03	3.45E-04	2.89E-04	7.04E-04	9.31E-04	1.26E-03	1.86E-03
5.88E+02	0.00E+00	1.67E-03	1.28E-04	1.03E-04	2.78E-04	3.71E-04	5.27E-04	7.43E-04
7.67E+02	0.00E+00	5.27E-04	3.70E-05	2.67E-05	8.16E-05	1.16E-04	1.77E-04	2.59E-04
1.00E+03	0.00E+00	1.19E-04	7.09E-06	4.64E-06	1.60E-05	2.55E-05	3.55E-05	5.17E-05

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	5.23E-03	5.82E-02	1.23E-02	1.05E-02	1.92E-02	2.35E-02	2.86E-02	3.51E-02
1.00E+00	5.15E-03	5.76E-02	1.22E-02	1.04E-02	1.90E-02	2.32E-02	2.84E-02	3.48E-02
1.30E+00	5.13E-03	5.74E-02	1.21E-02	1.04E-02	1.90E-02	2.31E-02	2.83E-02	3.47E-02
1.70E+00	5.10E-03	5.71E-02	1.21E-02	1.04E-02	1.89E-02	2.31E-02	2.82E-02	3.46E-02
2.22E+00	4.80E-03	5.68E-02	1.20E-02	1.03E-02	1.88E-02	2.30E-02	2.81E-02	3.44E-02
2.89E+00	4.29E-03	5.64E-02	1.19E-02	1.02E-02	1.87E-02	2.29E-02	2.80E-02	3.43E-02
3.00E+00	4.22E-03	5.63E-02	1.19E-02	1.02E-02	1.87E-02	2.29E-02	2.79E-02	3.42E-02
3.78E+00	3.71E-03	5.58E-02	1.18E-02	1.02E-02	1.86E-02	2.26E-02	2.78E-02	3.37E-02
4.92E+00	3.06E-03	5.51E-02	1.17E-02	1.01E-02	1.82E-02	2.24E-02	2.75E-02	3.33E-02
6.42E+00	2.39E-03	5.42E-02	1.15E-02	9.89E-03	1.82E-02	2.23E-02	2.72E-02	3.29E-02
8.38E+00	1.73E-03	5.90E-02	1.13E-02	9.73E-03	1.79E-02	2.20E-02	2.68E-02	3.28E-02
1.100E+01	1.32E-03	8.14E-02	1.12E-02	9.61E-03	1.75E-02	2.16E-02	2.65E-02	3.23E-02
1.109E+01	1.13E-03	9.38E-02	1.11E-02	9.54E-03	1.73E-02	2.14E-02	2.63E-02	3.21E-02
1.143E+01	6.51E-04	1.36E-01	1.08E-02	9.27E-03	1.67E-02	2.09E-02	2.56E-02	3.12E-02
1.186E+01	3.04E-04	1.87E-01	1.04E-02	8.83E-03	1.61E-02	2.05E-02	2.49E-02	3.03E-02
1.242E+01	1.05E-04	2.11E-01	9.95E-03	8.37E-03	1.53E-02	1.95E-02	2.39E-02	3.04E-02
1.316E+01	2.60E-05	1.95E-01	9.34E-03	7.88E-03	1.45E-02	1.84E-02	2.27E-02	2.86E-02
1.405E+01	4.89E-06	1.76E-01	8.70E-03	7.24E-03	1.37E-02	1.75E-02	2.14E-02	2.72E-02
1.412E+01	4.24E-06	1.75E-01	8.65E-03	7.19E-03	1.36E-02	1.74E-02	2.13E-02	2.70E-02
1.538E+01	3.98E-07	1.52E-01	7.77E-03	6.50E-03	1.24E-02	1.60E-02	1.94E-02	2.47E-02
1.702E+01	1.82E-08	1.27E-01	6.75E-03	5.67E-03	1.10E-02	1.41E-02	1.71E-02	2.22E-02
1.915E+01	3.24E-10	1.00E-01	5.64E-03	4.81E-03	9.23E-03	1.22E-02	1.47E-02	1.88E-02
2.100E+02	6.57E-11	9.11E-02	5.26E-03	4.48E-03	8.63E-03	1.14E-02	1.42E-02	1.77E-02
2.119E+02	1.70E-12	7.35E-02	4.49E-03	3.84E-03	7.42E-03	9.97E-03	1.27E-02	1.53E-02
2.156E+02	1.80E-15	4.91E-02	3.34E-03	2.86E-03	5.67E-03	7.67E-03	9.55E-03	1.18E-02
2.203E+02	2.38E-19	3.05E-02	2.30E-03	1.97E-03	4.02E-03	5.47E-03	6.63E-03	1.02E-02
2.265E+02	2.07E-24	1.93E-02	1.42E-03	1.21E-03	2.56E-03	3.44E-03	4.39E-03	6.87E-03
2.300E+02	2.77E-27	1.48E-02	1.08E-03	9.17E-04	2.00E-03	2.65E-03	3.42E-03	5.29E-03
2.346E+02	0.00E+00	1.06E-02	7.62E-04	6.41E-04	1.43E-03	1.95E-03	2.45E-03	3.78E-03
2.451E+02	0.00E+00	4.84E-03	3.44E-04	2.88E-04	6.68E-04	9.11E-04	1.25E-03	1.75E-03
2.588E+02	0.00E+00	1.74E-03	1.26E-04	9.96E-05	2.52E-04	3.46E-04	5.03E-04	7.38E-04
2.767E+02	0.00E+00	5.96E-04	3.52E-05	2.59E-05	7.52E-05	1.10E-04	1.56E-04	2.21E-04
2.100E+03	0.00E+00	1.25E-04	6.72E-06	4.28E-06	1.56E-05	2.38E-05	3.32E-05	4.89E-05

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	5.26E-03	7.48E-02	1.23E-02	1.06E-02	1.92E-02	2.30E-02	2.69E-02	3.55E-02
1.00E+00	5.22E-03	7.41E-02	1.22E-02	1.05E-02	1.91E-02	2.28E-02	2.66E-02	3.51E-02
1.30E+00	5.20E-03	7.39E-02	1.22E-02	1.05E-02	1.90E-02	2.27E-02	2.65E-02	3.50E-02
1.70E+00	5.18E-03	7.37E-02	1.21E-02	1.04E-02	1.90E-02	2.26E-02	2.65E-02	3.49E-02
2.22E+00	5.16E-03	7.33E-02	1.21E-02	1.03E-02	1.89E-02	2.24E-02	2.64E-02	3.47E-02
2.89E+00	4.76E-03	7.29E-02	1.20E-02	1.03E-02	1.88E-02	2.21E-02	2.62E-02	3.45E-02
3.00E+00	4.68E-03	7.28E-02	1.20E-02	1.03E-02	1.87E-02	2.21E-02	2.62E-02	3.44E-02
3.78E+00	4.14E-03	7.23E-02	1.19E-02	1.02E-02	1.86E-02	2.23E-02	2.61E-02	3.42E-02
4.92E+00	3.45E-03	7.16E-02	1.17E-02	1.01E-02	1.84E-02	2.21E-02	2.56E-02	3.38E-02
6.42E+00	2.71E-03	7.06E-02	1.16E-02	9.90E-03	1.82E-02	2.16E-02	2.56E-02	3.33E-02
8.38E+00	1.99E-03	6.94E-02	1.13E-02	9.67E-03	1.79E-02	2.10E-02	2.52E-02	3.26E-02
1.10E+01	1.54E-03	6.84E-02	1.12E-02	9.53E-03	1.77E-02	2.06E-02	2.47E-02	3.33E-02
1.09E+01	1.33E-03	6.79E-02	1.11E-02	9.40E-03	1.75E-02	2.05E-02	2.45E-02	3.31E-02
1.43E+01	7.81E-04	6.59E-02	1.07E-02	9.13E-03	1.71E-02	2.03E-02	2.36E-02	3.13E-02
1.86E+01	3.92E-04	6.34E-02	1.03E-02	8.79E-03	1.64E-02	1.95E-02	2.27E-02	3.00E-02
2.42E+01	1.59E-04	6.03E-02	9.79E-03	8.32E-03	1.58E-02	1.84E-02	2.22E-02	2.96E-02
3.16E+01	4.92E-05	6.06E-02	9.17E-03	7.81E-03	1.50E-02	1.78E-02	2.06E-02	2.79E-02
4.05E+01	1.20E-05	6.89E-02	8.47E-03	7.26E-03	1.40E-02	1.68E-02	1.98E-02	2.60E-02
4.12E+01	1.06E-05	6.96E-02	8.42E-03	7.22E-03	1.39E-02	1.67E-02	1.96E-02	2.59E-02
5.38E+01	1.44E-06	7.40E-02	7.54E-03	6.50E-03	1.26E-02	1.52E-02	1.79E-02	2.35E-02
7.02E+01	1.07E-07	6.49E-02	6.54E-03	5.64E-03	1.11E-02	1.34E-02	1.61E-02	2.21E-02
9.15E+01	3.57E-09	5.47E-02	5.45E-03	4.75E-03	9.32E-03	1.13E-02	1.38E-02	1.91E-02
1.00E+02	9.26E-10	5.11E-02	5.09E-03	4.42E-03	8.74E-03	1.08E-02	1.30E-02	1.79E-02
1.19E+02	4.24E-11	4.37E-02	4.36E-03	3.78E-03	7.49E-03	9.39E-03	1.13E-02	1.56E-02
1.56E+02	1.31E-13	3.72E-02	3.25E-03	2.85E-03	5.65E-03	7.18E-03	8.71E-03	1.24E-02
2.03E+02	0.00E+00	2.54E-02	2.23E-03	1.98E-03	4.01E-03	5.07E-03	6.30E-03	9.10E-03
2.65E+02	0.00E+00	1.55E-02	1.38E-03	1.22E-03	2.56E-03	3.23E-03	4.28E-03	6.72E-03
3.00E+02	0.00E+00	1.16E-02	1.05E-03	9.34E-04	1.99E-03	2.49E-03	3.37E-03	4.98E-03
3.46E+02	0.00E+00	8.08E-03	7.43E-04	6.66E-04	1.45E-03	1.81E-03	2.40E-03	3.37E-03
4.51E+02	0.00E+00	3.70E-03	3.39E-04	2.96E-04	6.82E-04	8.79E-04	1.17E-03	1.55E-03
5.88E+02	0.00E+00	1.65E-03	1.26E-04	1.02E-04	2.65E-04	3.47E-04	4.68E-04	7.12E-04
7.67E+02	0.00E+00	8.15E-04	3.67E-05	2.64E-05	7.82E-05	1.14E-04	1.59E-04	2.31E-04
1.00E+03	0.00E+00	1.44E-04	7.11E-06	4.59E-06	1.64E-05	2.52E-05	3.50E-05	4.60E-05

Probabilistic results summary : RESRAD Default

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

Repetition	Time of peak mean dose	Peak mean dose
	Years	mrem/yr
1	0.000E+00	1.237E-02
2	0.000E+00	1.232E-02
3	0.000E+00	1.235E-02

Title : RESRAD Default  
 Input File : ZION BFM 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
Cover erosion rate	2	0.59	2	0.36	8	0.09	8	0.02
Density of contaminated zone	8	-0.07	8	-0.04	18	0.04	18	0.01
Contaminated zone erosion rate	9	0.07	9	0.03	40	0.00	40	0.00
Contaminated zone total porosity	14	-0.05	14	-0.02	35	-0.01	35	0.00
Contaminated zone hydraulic conductivity	41	0.00	41	0.00	17	-0.04	17	-0.01
Contaminated zone b parameter	21	-0.02	21	-0.01	9	-0.07	9	-0.02
Evapotranspiration coefficient	6	0.08	6	0.04	31	-0.01	31	0.00
Wind Speed	24	0.02	24	0.01	39	0.00	39	0.00
Runoff coefficient	5	0.08	5	0.04	37	0.01	37	0.00
Density of saturated zone	16	-0.04	16	-0.02	32	-0.01	32	0.00
Saturated zone total porosity	11	0.06	11	0.03	10	-0.07	10	-0.02
Saturated zone effective porosity	17	-0.03	17	-0.02	11	-0.06	11	-0.01
Saturated zone hydraulic conductivity	38	0.01	38	0.00	21	-0.03	21	-0.01
Saturated zone hydraulic gradient	10	-0.06	10	-0.03	25	-0.02	25	0.00
Well pump intake depth	27	-0.02	27	-0.01	20	-0.03	20	-0.01
Mass loading for inhalation	18	0.03	18	0.01	16	0.04	16	0.01
Indoor dust filtration factor	30	-0.01	30	-0.01	23	0.02	23	0.01
External gamma shielding factor	34	-0.01	34	0.00	34	0.01	34	0.00
Depth of soil mixing layer	19	-0.03	19	-0.01	22	-0.03	22	-0.01
Depth of roots	12	0.05	12	0.03	5	0.12	5	0.03
Wet weight crop yield of fruit, grain and non-leafy vegetables	15	-0.05	15	-0.02	7	-0.09	7	-0.02
Weathering removal constant of all vegetation	3	-0.38	3	-0.20	2	-0.78	2	-0.31
Wet foliar interception fraction of leafy vegetables	13	0.05	13	0.03	6	0.09	6	0.02
Plant transfer factor for Co	32	0.01	32	0.00	38	0.01	38	0.00
Meat transfer factor for Co	33	-0.01	33	0.00	26	-0.02	26	0.00
Milk transfer factor for Co	36	0.01	36	0.00	30	-0.01	30	0.00
Plant transfer factor for Cs	20	-0.02	20	-0.01	12	-0.05	12	-0.01
Meat transfer factor for Cs	40	0.00	40	0.00	15	-0.04	15	-0.01
Milk transfer factor for Cs	23	-0.02	23	-0.01	41	0.00	41	0.00
Plant transfer factor for Eu	35	-0.01	35	0.00	29	-0.02	29	0.00
Meat transfer factor for Eu	28	0.02	28	0.01	19	0.03	19	0.01
Milk transfer factor for Eu	31	0.01	31	0.01	14	0.04	14	0.01
Plant transfer factor for H	25	0.02	25	0.01	36	-0.01	36	0.00
Meat transfer factor for H	22	-0.02	22	-0.01	33	0.01	33	0.00
Milk transfer factor for H	29	-0.02	29	-0.01	28	0.02	28	0.00
Plant transfer factor for Ni	4	0.18	4	0.09	4	0.15	4	0.04
Meat transfer factor for Ni	7	0.08	7	0.04	3	0.29	3	0.07
Milk transfer factor for Ni	1	0.83	1	0.74	1	0.97	1	0.92
Plant transfer factor for Sr	39	0.00	39	0.00	13	0.05	13	0.01
Meat transfer factor for Sr	37	-0.01	37	0.00	27	0.02	27	0.00
Milk transfer factor for Sr	26	0.02	26	0.01	24	0.02	24	0.00
R-SQUARE		0.76		0.76		0.94		0.94

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

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

Title : RESRAD Default  
 Input File : ZION BFM 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
Cover erosion rate	2	0.54	2	0.41	4	0.19	4	0.05
Density of contaminated zone	9	-0.05	9	-0.03	12	-0.04	12	-0.01
Contaminated zone erosion rate	31	-0.01	31	0.00	8	0.08	8	0.02
Contaminated zone total porosity	32	0.01	32	0.00	26	0.02	26	0.01
Contaminated zone hydraulic conductivity	8	-0.05	8	-0.03	15	-0.04	15	-0.01
Contaminated zone b parameter	26	-0.01	26	-0.01	14	-0.04	14	-0.01
Evapotranspiration coefficient	12	-0.04	12	-0.02	21	0.03	21	0.01
Wind Speed	40	0.00	40	0.00	35	0.01	35	0.00
Runoff coefficient	16	-0.03	16	-0.02	9	0.06	9	0.02
Density of saturated zone	28	-0.01	29	-0.01	28	0.02	28	0.01
Saturated zone total porosity	25	-0.02	25	-0.01	27	0.02	27	0.01
Saturated zone effective porosity	13	-0.04	13	-0.02	17	-0.03	17	-0.01
Saturated zone hydraulic conductivity	36	0.00	36	0.00	16	-0.03	16	-0.01
Saturated zone hydraulic gradient	27	-0.01	27	-0.01	40	0.00	40	0.00
Well pump intake depth	30	-0.01	30	-0.01	19	-0.03	19	-0.01
Mass loading for inhalation	18	-0.03	18	-0.02	32	-0.01	32	0.00
Indoor dust filtration factor	11	-0.04	11	-0.03	18	0.03	18	0.01
External gamma shielding factor	35	0.01	35	0.00	20	-0.03	20	-0.01
Depth of soil mixing layer	22	-0.02	22	-0.01	30	-0.02	30	0.00
Depth of roots	14	0.04	14	0.02	7	0.09	7	0.02
Wet weight crop yield of fruit, grain and non-leafy vegetables	38	0.00	38	0.00	11	-0.05	11	-0.01
Weathering removal constant of all vegetation	3	-0.22	3	-0.15	2	-0.78	2	-0.32
Wet foliar interception fraction of leafy vegetables	21	-0.02	21	-0.01	6	0.10	6	0.02
Plant transfer factor for Co	29	-0.01	28	-0.01	33	0.01	33	0.00
Meat transfer factor for Co	34	-0.01	33	0.00	24	0.03	24	0.01
Milk transfer factor for Co	39	0.00	39	0.00	31	0.01	31	0.00
Plant transfer factor for Cs	17	0.03	17	0.02	38	0.01	38	0.00
Meat transfer factor for Cs	33	0.01	34	0.00	25	0.02	25	0.01
Milk transfer factor for Cs	24	0.02	24	0.01	13	-0.04	13	-0.01
Plant transfer factor for Eu	19	-0.03	19	-0.02	39	0.00	39	0.00
Meat transfer factor for Eu	20	-0.02	20	-0.02	29	0.02	29	0.01
Milk transfer factor for Eu	37	0.00	37	0.00	23	0.03	23	0.01
Plant transfer factor for H	5	-0.06	5	-0.04	22	0.03	22	0.01
Meat transfer factor for H	15	0.03	15	0.02	36	-0.01	36	0.00
Milk transfer factor for H	6	-0.06	6	-0.04	41	0.00	41	0.00
Plant transfer factor for Ni	4	0.20	4	0.13	5	0.15	5	0.04
Meat transfer factor for Ni	10	0.05	10	0.03	3	0.30	3	0.08
Milk transfer factor for Ni	1	0.69	1	0.62	1	0.96	1	0.90
Plant transfer factor for Sr	23	0.02	23	0.01	37	0.01	37	0.00
Meat transfer factor for Sr	7	-0.06	7	-0.04	34	0.01	34	0.00
Milk transfer factor for Sr	41	0.00	41	0.00	10	0.06	10	0.01
R-SQUARE		0.59		0.59		0.94		0.94

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

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



Title : RESRAD Default  
 Input File : ZION BFM 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
Cover erosion rate	3	0.43	3	0.18	5	0.18	5	0.05
Density of contaminated zone	33	0.01	34	0.00	7	0.08	7	0.02
Contaminated zone erosion rate	34	-0.01	33	0.00	29	-0.02	29	-0.01
Contaminated zone total porosity	41	0.00	41	0.00	26	-0.03	26	-0.01
Contaminated zone hydraulic conductivity	7	0.07	7	0.03	35	0.02	35	0.00
Contaminated zone b parameter	26	-0.02	26	-0.01	19	-0.04	19	-0.01
Evapotranspiration coefficient	30	0.01	30	0.01	30	0.02	30	0.01
Wind Speed	38	0.00	38	0.00	32	-0.02	32	-0.01
Runoff coefficient	36	-0.01	36	0.00	20	0.04	20	0.01
Density of saturated zone	37	0.00	37	0.00	25	0.03	25	0.01
Saturated zone total porosity	35	-0.01	35	0.00	8	0.07	8	0.02
Saturated zone effective porosity	8	-0.06	8	-0.02	21	-0.04	21	-0.01
Saturated zone hydraulic conductivity	12	-0.05	12	-0.02	17	0.04	17	0.01
Saturated zone hydraulic gradient	13	-0.05	13	-0.02	22	-0.04	22	-0.01
Well pump intake depth	14	0.05	14	0.02	18	-0.04	18	-0.01
Mass loading for inhalation	19	-0.03	19	-0.01	39	-0.01	39	0.00
Indoor dust filtration factor	28	-0.01	28	-0.01	41	0.00	41	0.00
External gamma shielding factor	18	0.03	18	0.01	37	-0.01	37	0.00
Depth of soil mixing layer	40	0.00	40	0.00	34	-0.02	34	0.00
Depth of roots	6	0.10	6	0.04	4	0.22	4	0.06
Wet weight crop yield of fruit, grain and non-leafy vegetables	10	-0.06	10	-0.02	14	-0.06	14	-0.01
Weathering removal constant of all vegetation	2	-0.54	2	-0.24	2	-0.77	2	-0.31
Wet foliar interception fraction of leafy vegetables	23	0.02	23	0.01	9	0.07	9	0.02
Plant transfer factor for Co	20	-0.03	20	-0.01	11	-0.06	11	-0.02
Meat transfer factor for Co	21	0.03	21	0.01	10	0.07	10	0.02
Milk transfer factor for Co	27	-0.02	27	-0.01	31	-0.02	31	-0.01
Plant transfer factor for Cs	24	-0.02	24	-0.01	12	0.06	12	0.02
Meat transfer factor for Cs	17	0.03	17	0.01	15	0.05	15	0.01
Milk transfer factor for Cs	9	-0.06	9	-0.02	27	0.03	27	0.01
Plant transfer factor for Eu	11	0.05	11	0.02	38	0.01	38	0.00
Meat transfer factor for Eu	22	0.02	22	0.01	24	0.03	24	0.01
Milk transfer factor for Eu	29	0.01	29	0.01	40	0.00	40	0.00
Plant transfer factor for H	32	-0.01	32	0.00	23	-0.03	23	-0.01
Meat transfer factor for H	25	-0.02	25	-0.01	33	-0.02	33	0.00
Milk transfer factor for H	16	-0.05	16	-0.02	16	0.05	16	0.01
Plant transfer factor for Ni	5	0.14	5	0.05	6	0.15	6	0.04
Meat transfer factor for Ni	4	0.15	4	0.06	3	0.32	3	0.09
Milk transfer factor for Ni	1	0.92	1	0.87	1	0.96	1	0.90
Plant transfer factor for Sr	39	0.00	39	0.00	13	-0.06	13	-0.02
Meat transfer factor for Sr	31	0.01	31	0.01	28	0.02	28	0.01
Milk transfer factor for Sr	15	-0.05	15	-0.02	36	0.02	36	0.00
R-SQUARE		0.86		0.86		0.93		0.93

-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.