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

Table of Contents

Part VI: Uncertainty Analysis

RESRAD Uncertainty Analysis Results

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 Input

Number of Sample Runs: 3000

Number	Name	Distribution	Parameters								
1	DENSCV	TRUNCATED NORMAL	1.51	.159	.001	.999					
2	VCZ	CONTINUOUS LOGARITHMIC	4	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 LOGARITHMIC	4	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					

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 Total Dose Summary

Nuclide	Peak	Peak	DOSE(j,t), mrem/yr							
(j)	Time	Dose	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
Cs-134										
Min	0.00E+00	1.05E+00	1.05E+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	7.60E+00	7.60E+00	5.38E+00	2.70E+00	2.40E-01	7.06E-06	1.35E-14	0.00E+00	0.00E+00
Avg	0.00E+00	2.58E+00	2.58E+00	1.81E+00	9.03E-01	8.11E-02	1.96E-06	2.08E-15	0.00E+00	0.00E+00
Std	0.00E+00	8.65E-01	8.65E-01	6.38E-01	3.36E-01	3.22E-02	1.33E-06	2.61E-15	0.00E+00	0.00E+00
∑ALL										
Min	0.00E+00	1.05E+00	1.05E+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	7.60E+00	7.60E+00	5.38E+00	2.70E+00	2.40E-01	7.06E-06	1.35E-14	0.00E+00	0.00E+00
Avg	0.00E+00	2.58E+00	2.58E+00	1.81E+00	9.03E-01	8.11E-02	1.96E-06	2.08E-15	0.00E+00	0.00E+00
Std	0.00E+00	8.65E-01	8.65E-01	6.38E-01	3.36E-01	3.22E-02	1.33E-06	2.61E-15	0.00E+00	0.00E+00

∑ALL is total 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 Risk Summary

Nuclide	RISK(j,t)							
(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
Cs-134								
Min	7.65E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	1.88E-05	1.33E-05	6.68E-06	5.94E-07	1.77E-11	3.55E-20	3.12E-39	1.19E-39
Avg	6.52E-06	4.61E-06	2.31E-06	2.07E-07	4.96E-12	5.30E-21	1.48E-42	4.40E-43
Std	2.30E-06	1.68E-06	8.76E-07	8.35E-08	3.48E-12	6.78E-21	0.00E+00	0.00E+00
∑ALL								
Min	7.65E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	1.88E-05	1.33E-05	6.68E-06	5.94E-07	1.77E-11	3.55E-20	3.12E-39	1.19E-39
Avg	6.52E-06	4.61E-06	2.31E-06	2.07E-07	4.96E-12	5.30E-21	1.48E-42	4.40E-43
Std	2.30E-06	1.68E-06	8.76E-07	8.35E-08	3.48E-12	6.78E-21	0.00E+00	0.00E+00

∑ALL is total risk 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): Ground External

Nuclide	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
Min	8.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	5.53E+00	3.94E+00	2.00E+00	1.87E-01	6.59E-06	1.34E-14	0.00E+00	0.00E+00
Avg	2.28E+00	1.60E+00	8.01E-01	7.23E-02	1.77E-06	1.88E-15	0.00E+00	0.00E+00
Std	8.07E-01	5.94E-01	3.12E-01	2.99E-02	1.21E-06	2.37E-15	0.00E+00	0.00E+00
∑ALL								
Min	8.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	5.53E+00	3.94E+00	2.00E+00	1.87E-01	6.59E-06	1.34E-14	0.00E+00	0.00E+00
Avg	2.28E+00	1.60E+00	8.01E-01	7.23E-02	1.77E-06	1.88E-15	0.00E+00	0.00E+00
Std	8.07E-01	5.94E-01	3.12E-01	2.99E-02	1.21E-06	2.37E-15	0.00E+00	0.00E+00

∑ALL 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): Inhalation (w/o Radon)

Nuclide	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
Min	9.77E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	2.79E-06	1.99E-06	1.01E-06	9.59E-08	3.02E-12	3.35E-21	0.00E+00	0.00E+00
Avg	2.95E-07	2.06E-07	1.02E-07	8.94E-09	1.98E-13	2.00E-22	0.00E+00	0.00E+00
Std	2.40E-07	1.71E-07	8.67E-08	7.94E-09	2.37E-13	3.61E-22	0.00E+00	0.00E+00
∑ALL								
Min	9.77E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	2.79E-06	1.99E-06	1.01E-06	9.59E-08	3.02E-12	3.35E-21	0.00E+00	0.00E+00
Avg	2.95E-07	2.06E-07	1.02E-07	8.94E-09	1.98E-13	2.00E-22	0.00E+00	0.00E+00
Std	2.40E-07	1.71E-07	8.67E-08	7.94E-09	2.37E-13	3.61E-22	0.00E+00	0.00E+00

∑ALL 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 Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
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
∑ALL								
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

∑ALL 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 Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
Min	4.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	1.56E+00	1.11E+00	5.66E-01	5.34E-02	1.82E-06	3.49E-15	0.00E+00	0.00E+00
Avg	5.62E-02	3.91E-02	1.91E-02	1.63E-03	3.49E-08	3.68E-17	0.00E+00	0.00E+00
Std	1.00E-01	6.99E-02	3.46E-02	3.00E-03	7.88E-08	1.24E-16	0.00E+00	0.00E+00
∑ALL								
Min	4.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	1.56E+00	1.11E+00	5.66E-01	5.34E-02	1.82E-06	3.49E-15	0.00E+00	0.00E+00
Avg	5.62E-02	3.91E-02	1.91E-02	1.63E-03	3.49E-08	3.68E-17	0.00E+00	0.00E+00
Std	1.00E-01	6.99E-02	3.46E-02	3.00E-03	7.88E-08	1.24E-16	0.00E+00	0.00E+00

∑ALL 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 Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
Min	1.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	1.94E+00	1.37E+00	6.80E-01	5.88E-02	1.57E-06	3.01E-15	0.00E+00	0.00E+00
Avg	1.15E-01	8.06E-02	3.98E-02	3.44E-03	7.55E-08	7.82E-17	0.00E+00	0.00E+00
Std	1.00E-01	7.07E-02	3.54E-02	3.14E-03	9.09E-08	1.49E-16	0.00E+00	0.00E+00
∑ALL								
Min	1.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	1.94E+00	1.37E+00	6.80E-01	5.88E-02	1.57E-06	3.01E-15	0.00E+00	0.00E+00
Avg	1.15E-01	8.06E-02	3.98E-02	3.44E-03	7.55E-08	7.82E-17	0.00E+00	0.00E+00
Std	1.00E-01	7.07E-02	3.54E-02	3.14E-03	9.09E-08	1.49E-16	0.00E+00	0.00E+00

∑ALL 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 Ind.)

Nuclide	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
Min	1.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	2.30E+00	1.60E+00	7.93E-01	7.04E-02	1.90E-06	3.67E-15	0.00E+00	0.00E+00
Avg	1.25E-01	8.74E-02	4.30E-02	3.70E-03	8.04E-08	8.50E-17	0.00E+00	0.00E+00
Std	1.52E-01	1.07E-01	5.31E-02	4.59E-03	1.22E-07	1.96E-16	0.00E+00	0.00E+00
∑ALL								
Min	1.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	2.30E+00	1.60E+00	7.93E-01	7.04E-02	1.90E-06	3.67E-15	0.00E+00	0.00E+00
Avg	1.25E-01	8.74E-02	4.30E-02	3.70E-03	8.04E-08	8.50E-17	0.00E+00	0.00E+00
Std	1.52E-01	1.07E-01	5.31E-02	4.59E-03	1.22E-07	1.96E-16	0.00E+00	0.00E+00

∑ALL 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): Soil Ingestion

Nuclide	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
Min	1.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	8.81E-04	6.29E-04	3.21E-04	3.05E-05	1.07E-09	2.19E-18	0.00E+00	0.00E+00
Avg	5.88E-04	4.11E-04	2.04E-04	1.78E-05	3.96E-10	4.13E-19	0.00E+00	0.00E+00
Std	2.25E-04	1.66E-04	8.72E-05	8.54E-06	3.30E-10	5.99E-19	0.00E+00	0.00E+00
∑ALL								
Min	1.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Max	8.81E-04	6.29E-04	3.21E-04	3.05E-05	1.07E-09	2.19E-18	0.00E+00	0.00E+00
Avg	5.88E-04	4.11E-04	2.04E-04	1.78E-05	3.96E-10	4.13E-19	0.00E+00	0.00E+00
Std	2.25E-04	1.66E-04	8.72E-05	8.54E-06	3.30E-10	5.99E-19	0.00E+00	0.00E+00

∑ALL 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): Water Ingestion

Nuclide	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
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
∑ALL								
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

∑ALL 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	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
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
∑ALL								
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

∑ALL 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	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
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
∑ALL								
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

∑ALL 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	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
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
∑ALL								
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

∑ALL 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	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
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
∑ALL								
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

∑ALL 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	DOSE(i,j,t), mrem/yr							
(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
Cs-134								
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
∑ALL								
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

∑ALL 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	1.44E+00	9.81E-01	4.20E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.050	1.54E+00	1.06E+00	5.20E-01	4.44E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.075	1.61E+00	1.12E+00	5.54E-01	4.91E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.100	1.67E+00	1.17E+00	5.80E-01	5.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.125	1.73E+00	1.21E+00	6.02E-01	5.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.150	1.77E+00	1.24E+00	6.21E-01	5.55E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.175	1.81E+00	1.27E+00	6.37E-01	5.74E-02	2.41E-07	0.00E+00	0.00E+00	0.00E+00
0.200	1.85E+00	1.30E+00	6.54E-01	5.90E-02	6.15E-07	0.00E+00	0.00E+00	0.00E+00
0.225	1.90E+00	1.34E+00	6.71E-01	6.03E-02	8.72E-07	0.00E+00	0.00E+00	0.00E+00
0.250	1.95E+00	1.37E+00	6.86E-01	6.16E-02	1.11E-06	0.00E+00	0.00E+00	0.00E+00
0.275	1.98E+00	1.40E+00	7.01E-01	6.32E-02	1.29E-06	0.00E+00	0.00E+00	0.00E+00
0.300	2.03E+00	1.43E+00	7.18E-01	6.48E-02	1.40E-06	0.00E+00	0.00E+00	0.00E+00
0.325	2.06E+00	1.46E+00	7.32E-01	6.61E-02	1.51E-06	0.00E+00	0.00E+00	0.00E+00
0.350	2.11E+00	1.49E+00	7.47E-01	6.74E-02	1.58E-06	0.00E+00	0.00E+00	0.00E+00
0.375	2.15E+00	1.52E+00	7.63E-01	6.86E-02	1.67E-06	0.00E+00	0.00E+00	0.00E+00
0.400	2.20E+00	1.55E+00	7.77E-01	7.03E-02	1.73E-06	0.00E+00	0.00E+00	0.00E+00
0.425	2.24E+00	1.58E+00	7.95E-01	7.16E-02	1.81E-06	0.00E+00	0.00E+00	0.00E+00
0.450	2.29E+00	1.62E+00	8.11E-01	7.35E-02	1.88E-06	0.00E+00	0.00E+00	0.00E+00
0.475	2.33E+00	1.65E+00	8.27E-01	7.49E-02	1.94E-06	0.00E+00	0.00E+00	0.00E+00
0.500	2.38E+00	1.68E+00	8.45E-01	7.63E-02	1.99E-06	7.38E-17	0.00E+00	0.00E+00
0.525	2.43E+00	1.72E+00	8.63E-01	7.80E-02	2.05E-06	9.37E-16	0.00E+00	0.00E+00
0.550	2.50E+00	1.76E+00	8.83E-01	7.98E-02	2.13E-06	1.55E-15	0.00E+00	0.00E+00
0.575	2.55E+00	1.80E+00	9.06E-01	8.18E-02	2.20E-06	2.00E-15	0.00E+00	0.00E+00
0.600	2.61E+00	1.84E+00	9.26E-01	8.38E-02	2.27E-06	2.30E-15	0.00E+00	0.00E+00
0.625	2.66E+00	1.88E+00	9.48E-01	8.59E-02	2.33E-06	2.60E-15	0.00E+00	0.00E+00
0.650	2.72E+00	1.92E+00	9.66E-01	8.79E-02	2.40E-06	2.87E-15	0.00E+00	0.00E+00
0.675	2.78E+00	1.97E+00	9.90E-01	9.00E-02	2.47E-06	3.06E-15	0.00E+00	0.00E+00
0.700	2.84E+00	2.02E+00	1.02E+00	9.21E-02	2.56E-06	3.35E-15	0.00E+00	0.00E+00
0.725	2.91E+00	2.06E+00	1.04E+00	9.47E-02	2.65E-06	3.58E-15	0.00E+00	0.00E+00
0.750	2.99E+00	2.12E+00	1.07E+00	9.68E-02	2.76E-06	3.84E-15	0.00E+00	0.00E+00
0.775	3.09E+00	2.19E+00	1.10E+00	9.98E-02	2.87E-06	4.08E-15	0.00E+00	0.00E+00
0.800	3.20E+00	2.26E+00	1.14E+00	1.03E-01	2.99E-06	4.36E-15	0.00E+00	0.00E+00
0.825	3.30E+00	2.33E+00	1.18E+00	1.07E-01	3.09E-06	4.69E-15	0.00E+00	0.00E+00
0.850	3.42E+00	2.43E+00	1.22E+00	1.11E-01	3.23E-06	5.00E-15	0.00E+00	0.00E+00
0.875	3.59E+00	2.54E+00	1.28E+00	1.16E-01	3.37E-06	5.39E-15	0.00E+00	0.00E+00
0.900	3.79E+00	2.69E+00	1.36E+00	1.24E-01	3.57E-06	5.86E-15	0.00E+00	0.00E+00
0.925	4.04E+00	2.86E+00	1.44E+00	1.31E-01	3.86E-06	6.25E-15	0.00E+00	0.00E+00
0.950	4.29E+00	3.04E+00	1.53E+00	1.41E-01	4.28E-06	6.99E-15	0.00E+00	0.00E+00
0.975	4.79E+00	3.39E+00	1.71E+00	1.57E-01	4.77E-06	8.31E-15	0.00E+00	0.00E+00
1.000	7.60E+00	5.38E+00	2.70E+00	2.40E-01	7.06E-06	1.35E-14	0.00E+00	0.00E+00

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

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	1.06E+00	7.60E+00	2.58E+00	2.39E+00	3.80E+00	4.31E+00	4.81E+00	5.46E+00
1.00E+00	0.00E+00	5.38E+00	1.81E+00	1.67E+00	2.70E+00	3.05E+00	3.43E+00	3.87E+00
3.00E+00	0.00E+00	2.70E+00	9.06E-01	8.40E-01	1.36E+00	1.54E+00	1.73E+00	1.95E+00
1.00E+01	0.00E+00	2.40E-01	8.14E-02	7.62E-02	1.25E-01	1.41E-01	1.60E-01	1.81E-01
4.00E+01	0.00E+00	8.33E-06	2.34E-06	2.36E-06	4.29E-06	5.18E-06	5.90E-06	6.84E-06
4.05E+01	0.00E+00	7.06E-06	1.97E-06	1.99E-06	3.62E-06	4.39E-06	4.99E-06	5.80E-06
8.00E+01	0.00E+00	1.15E-11	2.10E-12	1.78E-12	5.25E-12	6.19E-12	7.52E-12	9.01E-12
1.00E+02	0.00E+00	1.35E-14	2.09E-15	8.20E-17	5.93E-15	6.99E-15	8.64E-15	1.07E-14
1.20E+02	0.00E+00	1.62E-17	2.12E-18	0.00E+00	6.68E-18	8.17E-18	9.90E-18	1.25E-17
1.60E+02	0.00E+00	2.30E-23	2.30E-24	0.00E+00	8.65E-24	1.11E-23	1.36E-23	1.72E-23
2.00E+02	0.00E+00	3.22E-29	2.57E-30	0.00E+00	1.11E-29	1.44E-29	1.78E-29	2.27E-29
2.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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 2

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	1.07E+00	6.07E+00	2.57E+00	2.39E+00	3.75E+00	4.27E+00	4.82E+00	5.30E+00
1.00E+00	0.00E+00	4.31E+00	1.81E+00	1.68E+00	2.67E+00	3.01E+00	3.39E+00	3.77E+00
3.00E+00	0.00E+00	2.18E+00	9.02E-01	8.48E-01	1.35E+00	1.52E+00	1.70E+00	1.90E+00
1.00E+01	0.00E+00	1.99E-01	8.09E-02	7.65E-02	1.23E-01	1.39E-01	1.57E-01	1.72E-01
4.00E+01	0.00E+00	7.89E-06	2.32E-06	2.38E-06	4.15E-06	5.04E-06	5.62E-06	6.53E-06
4.05E+01	0.00E+00	6.69E-06	1.96E-06	2.01E-06	3.52E-06	4.27E-06	4.77E-06	5.51E-06
8.00E+01	0.00E+00	1.13E-11	2.10E-12	1.77E-12	5.11E-12	6.09E-12	7.36E-12	8.54E-12
1.00E+02	0.00E+00	1.35E-14	2.08E-15	7.21E-17	5.76E-15	6.92E-15	8.46E-15	9.93E-15
1.20E+02	0.00E+00	1.62E-17	2.09E-18	0.00E+00	6.47E-18	8.01E-18	9.81E-18	1.16E-17
1.60E+02	0.00E+00	2.32E-23	2.27E-24	0.00E+00	8.53E-24	1.06E-23	1.37E-23	1.62E-23
2.00E+02	0.00E+00	3.30E-29	2.51E-30	0.00E+00	1.06E-29	1.38E-29	1.81E-29	2.10E-29
2.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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 3

Dose statistics at graphical times, mrem/yr

Time Years	Minimum	Maximum	Mean	Median	90%	95%	97.5%	99%
0.00E+00	1.05E+00	6.51E+00	2.58E+00	2.38E+00	3.80E+00	4.31E+00	4.73E+00	5.27E+00
1.00E+00	0.00E+00	4.56E+00	1.81E+00	1.68E+00	2.68E+00	3.05E+00	3.35E+00	3.76E+00
3.00E+00	0.00E+00	2.23E+00	9.01E-01	8.43E-01	1.35E+00	1.53E+00	1.69E+00	1.92E+00
1.00E+01	0.00E+00	2.01E-01	8.09E-02	7.60E-02	1.22E-01	1.41E-01	1.56E-01	1.73E-01
4.00E+01	0.00E+00	8.02E-06	2.33E-06	2.36E-06	4.24E-06	4.92E-06	5.50E-06	6.48E-06
4.05E+01	0.00E+00	6.80E-06	1.96E-06	1.98E-06	3.59E-06	4.17E-06	4.66E-06	5.48E-06
8.00E+01	0.00E+00	1.10E-11	2.08E-12	1.79E-12	5.18E-12	6.17E-12	7.08E-12	8.67E-12
1.00E+02	0.00E+00	1.29E-14	2.06E-15	7.87E-17	5.86E-15	7.13E-15	7.87E-15	9.65E-15
1.20E+02	0.00E+00	1.52E-17	2.08E-18	0.00E+00	6.62E-18	7.98E-18	9.29E-18	1.14E-17
1.60E+02	0.00E+00	2.08E-23	2.25E-24	0.00E+00	8.50E-24	1.10E-23	1.28E-23	1.62E-23
2.00E+02	0.00E+00	2.66E-29	2.49E-30	0.00E+00	1.10E-29	1.42E-29	1.60E-29	2.22E-29
2.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.00E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.60E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.00E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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

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	2.582E+00
2	0.000E+00	2.571E+00
3	0.000E+00	2.575E+00

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	34	-0.01	34	0.00	35	-0.01	35	0.00
Contaminated zone erosion rate	4	-0.38	4	-0.11	8	-0.13	8	-0.04
Contaminated zone total porosity	13	0.04	13	0.01	40	0.00	40	0.00
Contaminated zone hydraulic conductivity	14	-0.04	14	-0.01	18	-0.03	18	-0.01
Contaminated zone b parameter	28	0.02	28	0.00	24	0.03	24	0.01
Evapotranspiration coefficient	38	-0.01	38	0.00	41	0.00	41	0.00
Wind Speed	16	-0.04	16	-0.01	21	0.03	21	0.01
Runoff coefficient	41	0.00	41	0.00	33	0.02	33	0.00
Density of saturated zone	40	0.00	40	0.00	28	-0.02	28	-0.01
Saturated zone total porosity	26	0.02	26	0.01	11	0.05	11	0.02
Saturated zone effective porosity	12	-0.05	12	-0.01	39	0.00	39	0.00
Saturated zone hydraulic conductivity	24	-0.02	24	-0.01	25	0.03	25	0.01
Saturated zone hydraulic gradient	18	0.03	18	0.01	13	0.05	13	0.01
Well pump intake depth	19	0.03	19	0.01	34	-0.01	34	0.00
Mass loading for inhalation	9	0.07	9	0.02	26	0.02	26	0.01
Depth of soil mixing layer	8	-0.13	8	-0.04	6	-0.21	6	-0.06
Depth of roots	3	-0.49	3	-0.15	3	-0.45	3	-0.14
Weathering removal constant of all vegetation	37	0.01	37	0.00	22	0.03	22	0.01
Wet weight crop yield of fruit, grain and non-leafy vegetables	30	0.02	30	0.00	15	0.04	15	0.01
Wet foliar interception fraction of leafy vegetables	17	0.03	17	0.01	32	-0.02	32	0.00
Indoor dust filtration factor	29	0.02	29	0.00	27	-0.02	27	-0.01
External gamma shielding factor	1	0.96	1	0.91	1	0.96	1	0.92
Cover erosion rate	15	0.04	15	0.01	19	0.03	19	0.01
Total Porosity of Unsaturated zone 1	20	0.02	20	0.01	36	-0.01	36	0.00
Effective Porosity of Unsaturated zone 1	31	-0.02	31	0.00	12	0.05	12	0.01
Hydraulic Conductivity of Unsaturated zone 1	35	-0.01	35	0.00	16	0.04	16	0.01
b Parameter of Unsaturated zone 1	25	-0.02	25	-0.01	37	-0.01	37	0.00
Plant transfer factor for Co	27	0.02	27	0.01	31	0.02	31	0.01
Meat transfer factor for Co	10	0.05	10	0.01	10	0.06	10	0.02
Milk transfer factor for Co	33	0.02	33	0.00	30	0.02	30	0.01
Plant transfer factor for Cs	2	0.68	2	0.25	2	0.52	2	0.17
Meat transfer factor for Cs	7	0.24	7	0.07	7	0.21	7	0.06
Milk transfer factor for Cs	6	0.27	6	0.07	5	0.24	5	0.07
Plant transfer factor for Ni	23	-0.02	23	-0.01	20	0.03	20	0.01
Meat transfer factor for Ni	11	0.05	11	0.01	17	-0.03	17	-0.01
Milk transfer factor for Ni	32	0.02	32	0.00	9	0.07	9	0.02
Plant transfer factor for Sr	22	-0.02	22	-0.01	38	0.01	38	0.00
Meat transfer factor for Sr	39	0.00	39	0.00	29	0.02	29	0.01
Milk transfer factor for Sr	36	0.01	36	0.00	14	-0.04	14	-0.01
Density of contaminated zone	5	0.28	5	0.08	4	0.26	4	0.08
Density of Unsaturated zone 1	21	0.02	21	0.01	23	-0.03	23	-0.01
R-SQUARE		0.93		0.93		0.92		0.92

-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	12	0.05	12	0.01	15	0.04	15	0.01
Contaminated zone erosion rate	4	-0.36	4	-0.08	8	-0.11	8	-0.03
Contaminated zone total porosity	32	-0.01	32	0.00	22	-0.03	22	-0.01
Contaminated zone hydraulic conductivity	15	-0.04	15	-0.01	27	-0.02	27	-0.01
Contaminated zone b parameter	10	0.06	10	0.01	9	0.08	9	0.02
Evapotranspiration coefficient	14	0.04	14	0.01	19	0.03	19	0.01
Wind Speed	19	-0.03	20	-0.01	23	0.03	23	0.01
Runoff coefficient	33	-0.01	33	0.00	35	-0.01	35	0.00
Density of saturated zone	29	-0.02	29	0.00	20	-0.03	20	-0.01
Saturated zone total porosity	40	0.00	40	0.00	40	0.00	40	0.00
Saturated zone effective porosity	20	0.03	19	0.01	34	0.01	34	0.00
Saturated zone hydraulic conductivity	30	0.02	30	0.00	24	0.03	24	0.01
Saturated zone hydraulic gradient	9	0.07	9	0.01	18	0.04	18	0.01
Well pump intake depth	13	0.05	13	0.01	39	0.00	39	0.00
Mass loading for inhalation	31	-0.02	31	0.00	25	0.02	25	0.01
Depth of soil mixing layer	7	-0.27	7	-0.06	5	-0.29	5	-0.08
Depth of roots	3	-0.51	3	-0.12	3	-0.43	3	-0.13
Weathering removal constant of all vegetation	11	-0.06	11	-0.01	10	-0.08	10	-0.02
Wet weight crop yield of fruit, grain and non-leafy vegetables	25	0.02	25	0.00	17	-0.04	17	-0.01
Wet foliar interception fraction of leafy vegetables	37	0.00	37	0.00	38	0.00	38	0.00
Indoor dust filtration factor	24	0.03	24	0.01	21	-0.03	21	-0.01
External gamma shielding factor	1	0.98	1	0.93	1	0.96	1	0.92
Cover erosion rate	18	-0.03	18	-0.01	29	-0.01	29	0.00
Total Porosity of Unsaturated zone 1	26	0.02	27	0.00	33	0.01	33	0.00
Effective Porosity of Unsaturated zone 1	23	0.03	23	0.01	16	0.04	16	0.01
Hydraulic Conductivity of Unsaturated zone 1	17	-0.03	17	-0.01	32	-0.01	32	0.00
b Parameter of Unsaturated zone 1	41	0.00	41	0.00	12	0.05	12	0.01
Plant transfer factor for Co	39	0.00	39	0.00	36	0.01	36	0.00
Meat transfer factor for Co	27	-0.02	26	0.00	28	-0.02	28	0.00
Milk transfer factor for Co	16	-0.03	16	-0.01	41	0.00	41	0.00
Plant transfer factor for Cs	2	0.73	2	0.22	2	0.55	2	0.17
Meat transfer factor for Cs	8	0.24	8	0.05	7	0.14	7	0.04
Milk transfer factor for Cs	6	0.29	6	0.06	6	0.21	6	0.06
Plant transfer factor for Ni	21	-0.03	21	-0.01	14	-0.04	14	-0.01
Meat transfer factor for Ni	36	0.00	36	0.00	31	0.01	31	0.00
Milk transfer factor for Ni	38	0.00	38	0.00	26	0.02	26	0.01
Plant transfer factor for Sr	28	-0.02	28	0.00	13	-0.05	13	-0.01
Meat transfer factor for Sr	35	-0.01	35	0.00	11	-0.05	11	-0.01
Milk transfer factor for Sr	34	0.01	34	0.00	37	-0.01	37	0.00
Density of contaminated zone	5	0.34	5	0.08	4	0.32	4	0.09
Density of Unsaturated zone 1	22	-0.03	22	-0.01	30	-0.01	30	0.00
R-SQUARE		0.96		0.96		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.

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	36	-0.01	36	0.00	13	0.05	13	0.01
Contaminated zone erosion rate	5	-0.33	5	-0.08	12	-0.05	12	-0.01
Contaminated zone total porosity	26	0.02	26	0.00	22	0.03	22	0.01
Contaminated zone hydraulic conductivity	12	-0.04	12	-0.01	18	-0.03	18	-0.01
Contaminated zone b parameter	35	-0.01	35	0.00	40	0.00	40	0.00
Evapotranspiration coefficient	11	-0.04	11	-0.01	27	-0.02	27	0.00
Wind Speed	21	-0.03	21	-0.01	19	-0.03	19	-0.01
Runoff coefficient	17	0.03	17	0.01	15	0.05	15	0.01
Density of saturated zone	10	0.05	10	0.01	21	0.03	21	0.01
Saturated zone total porosity	34	-0.01	34	0.00	8	0.06	8	0.02
Saturated zone effective porosity	24	0.02	24	0.00	25	0.02	25	0.01
Saturated zone hydraulic conductivity	40	0.00	40	0.00	36	0.01	36	0.00
Saturated zone hydraulic gradient	39	0.00	39	0.00	33	0.01	33	0.00
Well pump intake depth	20	-0.03	20	-0.01	20	-0.03	20	-0.01
Mass loading for inhalation	29	-0.02	29	0.00	38	0.00	38	0.00
Depth of soil mixing layer	7	-0.27	7	-0.06	4	-0.30	4	-0.08
Depth of roots	3	-0.54	3	-0.13	3	-0.47	3	-0.14
Weathering removal constant of all vegetation	27	0.02	27	0.00	41	0.00	41	0.00
Wet weight crop yield of fruit, grain and non-leafy vegetables	31	-0.01	31	0.00	28	0.01	28	0.00
Wet foliar interception fraction of leafy vegetables	14	0.03	14	0.01	39	0.00	39	0.00
Indoor dust filtration factor	18	-0.03	19	-0.01	35	-0.01	35	0.00
External gamma shielding factor	1	0.97	1	0.92	1	0.96	1	0.92
Cover erosion rate	19	-0.03	18	-0.01	32	0.01	32	0.00
Total Porosity of Unsaturated zone 1	25	-0.02	25	0.00	30	0.01	30	0.00
Effective Porosity of Unsaturated zone 1	37	0.01	37	0.00	9	0.05	9	0.01
Hydraulic Conductivity of Unsaturated zone 1	9	0.06	9	0.01	26	-0.02	26	0.00
b Parameter of Unsaturated zone 1	13	0.04	13	0.01	14	0.05	14	0.01
Plant transfer factor for Co	30	-0.01	30	0.00	34	0.01	34	0.00
Meat transfer factor for Co	15	-0.03	15	-0.01	37	0.00	37	0.00
Milk transfer factor for Co	16	0.03	16	0.01	16	0.04	16	0.01
Plant transfer factor for Cs	2	0.76	2	0.25	2	0.57	2	0.19
Meat transfer factor for Cs	8	0.22	8	0.05	7	0.25	7	0.07
Milk transfer factor for Cs	6	0.29	6	0.07	6	0.25	6	0.07
Plant transfer factor for Ni	22	0.03	22	0.01	11	0.05	11	0.01
Meat transfer factor for Ni	32	0.01	32	0.00	24	-0.03	24	-0.01
Milk transfer factor for Ni	41	0.00	41	0.00	29	-0.01	29	0.00
Plant transfer factor for Sr	28	-0.02	28	0.00	31	0.01	31	0.00
Meat transfer factor for Sr	33	0.01	33	0.00	10	0.05	10	0.01
Milk transfer factor for Sr	23	-0.02	23	-0.01	17	0.04	17	0.01
Density of contaminated zone	4	0.36	4	0.08	5	0.27	5	0.07
Density of Unsaturated zone 1	38	0.00	38	0.00	23	0.03	23	0.01
R-SQUARE		0.96		0.96		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.