

Probabilistic results summary : RESRAD Default

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RESRAD Uncertainty Analysis Results

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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<br>(j) | Peak<br>Time | Peak<br>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     | 4.68E-04     | 4.68E-04           | 4.64E-04 | 4.55E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            | 0.00E+00     | 6.34E-01     | 6.34E-01           | 6.27E-01 | 6.15E-01 | 5.72E-01 | 4.19E-01 | 2.28E-01 | 2.91E-02 | 2.34E-05 |
| Avg            | 0.00E+00     | 1.53E-02     | 1.53E-02           | 1.51E-02 | 1.47E-02 | 1.35E-02 | 9.63E-03 | 5.03E-03 | 5.10E-04 | 5.52E-07 |
| Std            | 0.00E+00     | 2.46E-02     | 2.46E-02           | 2.43E-02 | 2.38E-02 | 2.21E-02 | 1.61E-02 | 8.68E-03 | 1.08E-03 | 1.38E-06 |
| ΣALL           |              |              |                    |          |          |          |          |          |          |          |
| Min            | 0.00E+00     | 4.68E-04     | 4.68E-04           | 4.64E-04 | 4.55E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            | 0.00E+00     | 6.34E-01     | 6.34E-01           | 6.27E-01 | 6.15E-01 | 5.72E-01 | 4.19E-01 | 2.28E-01 | 2.91E-02 | 2.34E-05 |
| Avg            | 0.00E+00     | 1.53E-02     | 1.53E-02           | 1.51E-02 | 1.47E-02 | 1.35E-02 | 9.63E-03 | 5.03E-03 | 5.10E-04 | 5.52E-07 |
| Std            | 0.00E+00     | 2.46E-02     | 2.46E-02           | 2.43E-02 | 2.38E-02 | 2.21E-02 | 1.61E-02 | 8.68E-03 | 1.08E-03 | 1.38E-06 |

ΣALL is total dose summed for all nuclides.

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## Probabilistic Risk Summary

| Nuclide<br>(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            |    | 1.47E-08  | 1.12E-08 | 3.97E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 2.71E-05  | 2.69E-05 | 2.63E-05 | 2.45E-05 | 1.80E-05 | 9.77E-06 | 1.24E-06 | 1.02E-09 |
| Avg            |    | 6.39E-07  | 6.32E-07 | 6.17E-07 | 5.71E-07 | 4.08E-07 | 2.13E-07 | 2.16E-08 | 2.34E-11 |
| Std            |    | 1.05E-06  | 1.04E-06 | 1.01E-06 | 9.44E-07 | 6.88E-07 | 3.70E-07 | 4.65E-08 | 6.02E-11 |
| ΣALL           |    |           |          |          |          |          |          |          |          |
| Min            |    | 1.47E-08  | 1.12E-08 | 3.97E-09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 2.71E-05  | 2.69E-05 | 2.63E-05 | 2.45E-05 | 1.80E-05 | 9.77E-06 | 1.24E-06 | 1.02E-09 |
| Avg            |    | 6.39E-07  | 6.32E-07 | 6.17E-07 | 5.71E-07 | 4.08E-07 | 2.13E-07 | 2.16E-08 | 2.34E-11 |
| Std            |    | 1.05E-06  | 1.04E-06 | 1.01E-06 | 9.44E-07 | 6.88E-07 | 3.70E-07 | 4.65E-08 | 6.02E-11 |

ΣALL is total risk summed for all nuclides.

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## Probabilistic Dose vs Pathway(i): Ground External

| Nuclide<br>(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<br>(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            |    | 2.39E-10             | 2.37E-10 | 2.33E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 4.58E-07             | 4.54E-07 | 4.47E-07 | 4.22E-07 | 3.29E-07 | 2.02E-07 | 3.14E-08 | 6.45E-11 |
| Avg            |    | 7.02E-08             | 6.95E-08 | 6.82E-08 | 6.31E-08 | 4.64E-08 | 2.61E-08 | 3.11E-09 | 2.02E-12 |
| Std            |    | 4.63E-08             | 4.59E-08 | 4.50E-08 | 4.25E-08 | 3.23E-08 | 1.87E-08 | 3.09E-09 | 4.93E-12 |
| ΣALL           |    |                      |          |          |          |          |          |          |          |
| Min            |    | 2.39E-10             | 2.37E-10 | 2.33E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 4.58E-07             | 4.54E-07 | 4.47E-07 | 4.22E-07 | 3.29E-07 | 2.02E-07 | 3.14E-08 | 6.45E-11 |
| Avg            |    | 7.02E-08             | 6.95E-08 | 6.82E-08 | 6.31E-08 | 4.64E-08 | 2.61E-08 | 3.11E-09 | 2.02E-12 |
| Std            |    | 4.63E-08             | 4.59E-08 | 4.50E-08 | 4.25E-08 | 3.23E-08 | 1.87E-08 | 3.09E-09 | 4.93E-12 |

ΣALL is total pathway dose summed for all nuclides.

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## Probabilistic Dose vs Pathway(i): Radon (Water Ind.)

| Nuclide<br>(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<br>(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            |    | 4.47E-05             | 4.42E-05 | 4.31E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 7.42E-02             | 7.34E-02 | 7.18E-02 | 6.65E-02 | 4.64E-02 | 2.20E-02 | 2.76E-03 | 7.56E-06 |
| Avg            |    | 3.30E-03             | 3.26E-03 | 3.18E-03 | 2.91E-03 | 2.07E-03 | 1.06E-03 | 1.05E-04 | 7.41E-08 |
| Std            |    | 4.53E-03             | 4.48E-03 | 4.39E-03 | 4.08E-03 | 2.98E-03 | 1.58E-03 | 1.99E-04 | 2.81E-07 |
| ΣALL           |    |                      |          |          |          |          |          |          |          |
| Min            |    | 4.47E-05             | 4.42E-05 | 4.31E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 7.42E-02             | 7.34E-02 | 7.18E-02 | 6.65E-02 | 4.64E-02 | 2.20E-02 | 2.76E-03 | 7.56E-06 |
| Avg            |    | 3.30E-03             | 3.26E-03 | 3.18E-03 | 2.91E-03 | 2.07E-03 | 1.06E-03 | 1.05E-04 | 7.41E-08 |
| Std            |    | 4.53E-03             | 4.48E-03 | 4.39E-03 | 4.08E-03 | 2.98E-03 | 1.58E-03 | 1.99E-04 | 2.81E-07 |

ΣALL is total pathway dose summed for all nuclides.



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## Probabilistic Dose vs Pathway(i): Meat (Water Ind.)

| Nuclide<br>(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            |    | 7.86E-06             | 7.76E-06 | 7.58E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 1.07E-02             | 1.06E-02 | 1.04E-02 | 9.73E-03 | 7.30E-03 | 4.17E-03 | 6.36E-04 | 9.18E-07 |
| Avg            |    | 4.77E-04             | 4.71E-04 | 4.60E-04 | 4.22E-04 | 3.02E-04 | 1.60E-04 | 1.68E-05 | 1.12E-08 |
| Std            |    | 7.37E-04             | 7.28E-04 | 7.12E-04 | 6.62E-04 | 4.84E-04 | 2.62E-04 | 3.32E-05 | 4.18E-08 |
| ΣALL           |    |                      |          |          |          |          |          |          |          |
| Min            |    | 7.86E-06             | 7.76E-06 | 7.58E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 1.07E-02             | 1.06E-02 | 1.04E-02 | 9.73E-03 | 7.30E-03 | 4.17E-03 | 6.36E-04 | 9.18E-07 |
| Avg            |    | 4.77E-04             | 4.71E-04 | 4.60E-04 | 4.22E-04 | 3.02E-04 | 1.60E-04 | 1.68E-05 | 1.12E-08 |
| Std            |    | 7.37E-04             | 7.28E-04 | 7.12E-04 | 6.62E-04 | 4.84E-04 | 2.62E-04 | 3.32E-05 | 4.18E-08 |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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## Probabilistic Dose vs Pathway(i): Milk (Water Ind.)

| Nuclide<br>(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            |    | 2.40E-04             | 2.38E-04 | 2.34E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 6.04E-01             | 5.98E-01 | 5.86E-01 | 5.45E-01 | 4.00E-01 | 2.18E-01 | 2.77E-02 | 2.04E-05 |
| Avg            |    | 1.15E-02             | 1.13E-02 | 1.11E-02 | 1.02E-02 | 7.25E-03 | 3.80E-03 | 3.88E-04 | 2.81E-07 |
| Std            |    | 2.12E-02             | 2.10E-02 | 2.05E-02 | 1.90E-02 | 1.39E-02 | 7.47E-03 | 9.25E-04 | 1.10E-06 |
| ΣALL           |    |                      |          |          |          |          |          |          |          |
| Min            |    | 2.40E-04             | 2.38E-04 | 2.34E-04 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 6.04E-01             | 5.98E-01 | 5.86E-01 | 5.45E-01 | 4.00E-01 | 2.18E-01 | 2.77E-02 | 2.04E-05 |
| Avg            |    | 1.15E-02             | 1.13E-02 | 1.11E-02 | 1.02E-02 | 7.25E-03 | 3.80E-03 | 3.88E-04 | 2.81E-07 |
| Std            |    | 2.12E-02             | 2.10E-02 | 2.05E-02 | 1.90E-02 | 1.39E-02 | 7.47E-03 | 9.25E-04 | 1.10E-06 |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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## Probabilistic Dose vs Pathway(i): Soil Ingestion

| Nuclide<br>(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            |    | 8.11E-06             | 8.00E-06 | 6.56E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 8.13E-06             | 8.07E-06 | 7.94E-06 | 7.52E-06 | 5.92E-06 | 3.72E-06 | 7.79E-07 | 3.27E-09 |
| Avg            |    | 8.12E-06             | 8.05E-06 | 7.89E-06 | 7.29E-06 | 5.36E-06 | 3.01E-06 | 3.58E-07 | 2.42E-10 |
| Std            |    | 3.66E-09             | 1.09E-08 | 3.54E-08 | 7.87E-07 | 9.56E-07 | 6.86E-07 | 2.24E-07 | 4.82E-10 |
| ΣALL           |    |                      |          |          |          |          |          |          |          |
| Min            |    | 8.11E-06             | 8.00E-06 | 6.56E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max            |    | 8.13E-06             | 8.07E-06 | 7.94E-06 | 7.52E-06 | 5.92E-06 | 3.72E-06 | 7.79E-07 | 3.27E-09 |
| Avg            |    | 8.12E-06             | 8.05E-06 | 7.89E-06 | 7.29E-06 | 5.36E-06 | 3.01E-06 | 3.58E-07 | 2.42E-10 |
| Std            |    | 3.66E-09             | 1.09E-08 | 3.54E-08 | 7.87E-07 | 9.56E-07 | 6.86E-07 | 2.24E-07 | 4.82E-10 |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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## Probabilistic Dose vs Pathway(i): Water Ingestion

| Nuclide<br>(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 | 4.13E-06 | 1.03E-06 |
| Avg            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-09 | 6.58E-08 |
| Std            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.66E-08 | 9.95E-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 | 4.13E-06 | 1.03E-06 |
| Avg            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.43E-09 | 6.58E-08 |
| Std            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.66E-08 | 9.95E-08 |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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## Probabilistic Dose vs Pathway(i): Fish Ingestion

| Nuclide<br>(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

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## Probabilistic Dose vs Pathway(i): Radon (Water Dep.)

| Nuclide<br>(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

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## Probabilistic Dose vs Pathway(i): Plant (Water Dep.)

| Nuclide<br>(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 | 3.41E-07 | 1.99E-07 |
| Avg            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-10 | 6.22E-09 |
| Std            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.87E-09 | 1.19E-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 | 3.41E-07 | 1.99E-07 |
| Avg            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.61E-10 | 6.22E-09 |
| Std            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 8.87E-09 | 1.19E-08 |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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## Probabilistic Dose vs Pathway(i): Meat (Water Dep.)

| Nuclide<br>(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 | 1.69E-07 | 1.94E-07 |
| Avg            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.84E-11 | 5.42E-09 |
| Std            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.78E-09 | 1.25E-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 | 1.69E-07 | 1.94E-07 |
| Avg            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 9.84E-11 | 5.42E-09 |
| Std            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.78E-09 | 1.25E-08 |

ΣALL is total pathway dose summed for all nuclides.



Probabilistic results summary : RESRAD Default

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## Probabilistic Dose vs Pathway(i): Milk (Water Dep.)

| Nuclide<br>(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 | 7.43E-06 | 6.58E-06 |
| Avg            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.29E-09 | 1.08E-07 |
| Std            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-07 | 2.47E-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            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 7.43E-06 | 6.58E-06 |
| Avg            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.29E-09 | 1.08E-07 |
| Std            |    | 0.00E+00             | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.59E-07 | 2.47E-07 |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default

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## Cumulative Probability Summary for: Total Dose Over Pathways

| Cumulative<br>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                     | 1.65E-03         | 1.63E-03 | 1.58E-03 | 1.20E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.050                     | 2.09E-03         | 2.07E-03 | 1.98E-03 | 1.67E-03 | 1.02E-03 | 4.35E-04 | 0.00E+00 | 0.00E+00 |
| 0.075                     | 2.49E-03         | 2.46E-03 | 2.38E-03 | 2.07E-03 | 1.30E-03 | 6.22E-04 | 0.00E+00 | 0.00E+00 |
| 0.100                     | 2.81E-03         | 2.78E-03 | 2.70E-03 | 2.37E-03 | 1.57E-03 | 7.64E-04 | 0.00E+00 | 0.00E+00 |
| 0.125                     | 3.11E-03         | 3.08E-03 | 3.00E-03 | 2.68E-03 | 1.81E-03 | 8.87E-04 | 0.00E+00 | 0.00E+00 |
| 0.150                     | 3.44E-03         | 3.39E-03 | 3.29E-03 | 2.93E-03 | 2.02E-03 | 1.00E-03 | 0.00E+00 | 0.00E+00 |
| 0.175                     | 3.73E-03         | 3.68E-03 | 3.56E-03 | 3.23E-03 | 2.25E-03 | 1.13E-03 | 0.00E+00 | 0.00E+00 |
| 0.200                     | 3.98E-03         | 3.91E-03 | 3.81E-03 | 3.48E-03 | 2.41E-03 | 1.23E-03 | 0.00E+00 | 0.00E+00 |
| 0.225                     | 4.28E-03         | 4.24E-03 | 4.12E-03 | 3.71E-03 | 2.60E-03 | 1.34E-03 | 3.61E-05 | 0.00E+00 |
| 0.250                     | 4.59E-03         | 4.53E-03 | 4.41E-03 | 3.99E-03 | 2.79E-03 | 1.44E-03 | 6.08E-05 | 0.00E+00 |
| 0.275                     | 4.91E-03         | 4.85E-03 | 4.73E-03 | 4.30E-03 | 3.01E-03 | 1.52E-03 | 7.91E-05 | 0.00E+00 |
| 0.300                     | 5.26E-03         | 5.18E-03 | 5.05E-03 | 4.60E-03 | 3.23E-03 | 1.62E-03 | 9.85E-05 | 0.00E+00 |
| 0.325                     | 5.60E-03         | 5.53E-03 | 5.39E-03 | 4.89E-03 | 3.44E-03 | 1.76E-03 | 1.13E-04 | 1.13E-08 |
| 0.350                     | 5.95E-03         | 5.88E-03 | 5.73E-03 | 5.23E-03 | 3.66E-03 | 1.90E-03 | 1.30E-04 | 2.80E-08 |
| 0.375                     | 6.36E-03         | 6.29E-03 | 6.14E-03 | 5.58E-03 | 3.93E-03 | 2.01E-03 | 1.46E-04 | 5.86E-08 |
| 0.400                     | 6.79E-03         | 6.70E-03 | 6.53E-03 | 5.88E-03 | 4.13E-03 | 2.11E-03 | 1.60E-04 | 7.80E-08 |
| 0.425                     | 7.23E-03         | 7.14E-03 | 6.96E-03 | 6.32E-03 | 4.43E-03 | 2.27E-03 | 1.75E-04 | 1.06E-07 |
| 0.450                     | 7.59E-03         | 7.51E-03 | 7.34E-03 | 6.69E-03 | 4.75E-03 | 2.41E-03 | 1.91E-04 | 1.33E-07 |
| 0.475                     | 8.04E-03         | 7.96E-03 | 7.77E-03 | 7.10E-03 | 5.04E-03 | 2.57E-03 | 2.07E-04 | 1.54E-07 |
| 0.500                     | 8.52E-03         | 8.43E-03 | 8.22E-03 | 7.52E-03 | 5.33E-03 | 2.75E-03 | 2.26E-04 | 1.80E-07 |
| 0.525                     | 8.98E-03         | 8.86E-03 | 8.66E-03 | 7.89E-03 | 5.62E-03 | 2.94E-03 | 2.48E-04 | 2.05E-07 |
| 0.550                     | 9.55E-03         | 9.40E-03 | 9.16E-03 | 8.37E-03 | 5.95E-03 | 3.08E-03 | 2.72E-04 | 2.28E-07 |
| 0.575                     | 1.01E-02         | 9.98E-03 | 9.73E-03 | 8.95E-03 | 6.34E-03 | 3.30E-03 | 3.00E-04 | 2.55E-07 |
| 0.600                     | 1.08E-02         | 1.06E-02 | 1.03E-02 | 9.50E-03 | 6.80E-03 | 3.49E-03 | 3.22E-04 | 2.84E-07 |
| 0.625                     | 1.15E-02         | 1.13E-02 | 1.10E-02 | 1.01E-02 | 7.18E-03 | 3.77E-03 | 3.44E-04 | 3.14E-07 |
| 0.650                     | 1.22E-02         | 1.20E-02 | 1.17E-02 | 1.08E-02 | 7.70E-03 | 4.00E-03 | 3.73E-04 | 3.47E-07 |
| 0.675                     | 1.29E-02         | 1.27E-02 | 1.24E-02 | 1.14E-02 | 8.20E-03 | 4.26E-03 | 4.09E-04 | 3.92E-07 |
| 0.700                     | 1.39E-02         | 1.38E-02 | 1.34E-02 | 1.23E-02 | 8.73E-03 | 4.55E-03 | 4.47E-04 | 4.35E-07 |
| 0.725                     | 1.52E-02         | 1.50E-02 | 1.46E-02 | 1.34E-02 | 9.52E-03 | 4.91E-03 | 4.90E-04 | 4.80E-07 |
| 0.750                     | 1.64E-02         | 1.62E-02 | 1.58E-02 | 1.45E-02 | 1.03E-02 | 5.33E-03 | 5.33E-04 | 5.32E-07 |
| 0.775                     | 1.83E-02         | 1.81E-02 | 1.77E-02 | 1.62E-02 | 1.13E-02 | 5.83E-03 | 6.05E-04 | 6.12E-07 |
| 0.800                     | 1.99E-02         | 1.97E-02 | 1.91E-02 | 1.75E-02 | 1.25E-02 | 6.43E-03 | 6.73E-04 | 6.82E-07 |
| 0.825                     | 2.19E-02         | 2.17E-02 | 2.10E-02 | 1.94E-02 | 1.39E-02 | 7.15E-03 | 7.56E-04 | 7.55E-07 |
| 0.850                     | 2.45E-02         | 2.42E-02 | 2.37E-02 | 2.17E-02 | 1.54E-02 | 8.01E-03 | 8.50E-04 | 8.89E-07 |
| 0.875                     | 2.76E-02         | 2.73E-02 | 2.66E-02 | 2.44E-02 | 1.76E-02 | 9.15E-03 | 9.87E-04 | 1.05E-06 |
| 0.900                     | 3.17E-02         | 3.13E-02 | 3.06E-02 | 2.83E-02 | 2.02E-02 | 1.08E-02 | 1.15E-03 | 1.31E-06 |
| 0.925                     | 3.90E-02         | 3.84E-02 | 3.75E-02 | 3.49E-02 | 2.51E-02 | 1.31E-02 | 1.44E-03 | 1.65E-06 |
| 0.950                     | 4.80E-02         | 4.74E-02 | 4.63E-02 | 4.26E-02 | 3.08E-02 | 1.69E-02 | 1.94E-03 | 2.30E-06 |
| 0.975                     | 6.94E-02         | 6.89E-02 | 6.77E-02 | 6.16E-02 | 4.37E-02 | 2.39E-02 | 2.87E-03 | 3.28E-06 |
| 1.000                     | 6.34E-01         | 6.27E-01 | 6.15E-01 | 5.72E-01 | 4.19E-01 | 2.28E-01 | 2.91E-02 | 2.34E-05 |

Probabilistic results summary : RESRAD Default

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## Summary of dose at graphical times, reptition 1

| Time<br>Years | Dose statistics at graphical times, mrem/yr |          |          |          |          |          |          |          |
|---------------|---|----------|----------|----------|----------|----------|----------|----------|
|               | Minimum                                     | Maximum  | Mean     | Median   | 90%      | 95%      | 97.5%    | 99%      |
| 0.00E+00      | 8.86E-04                                    | 2.89E-01 | 1.52E-02 | 8.34E-03 | 3.07E-02 | 4.99E-02 | 7.31E-02 | 1.29E-01 |
| 1.00E+00      | 8.77E-04                                    | 2.87E-01 | 1.50E-02 | 8.25E-03 | 3.04E-02 | 4.95E-02 | 7.25E-02 | 1.28E-01 |
| 3.00E+00      | 8.60E-04                                    | 2.82E-01 | 1.47E-02 | 8.07E-03 | 2.98E-02 | 4.86E-02 | 7.12E-02 | 1.24E-01 |
| 1.00E+01      | 0.00E+00                                    | 2.66E-01 | 1.35E-02 | 7.36E-03 | 2.75E-02 | 4.53E-02 | 6.69E-02 | 1.12E-01 |
| 4.00E+01      | 0.00E+00                                    | 2.06E-01 | 9.67E-03 | 5.30E-03 | 1.99E-02 | 3.25E-02 | 4.66E-02 | 7.70E-02 |
| 4.05E+01      | 0.00E+00                                    | 2.05E-01 | 9.62E-03 | 5.27E-03 | 1.98E-02 | 3.23E-02 | 4.64E-02 | 7.66E-02 |
| 8.00E+01      | 0.00E+00                                    | 1.47E-01 | 6.25E-03 | 3.46E-03 | 1.26E-02 | 2.14E-02 | 3.10E-02 | 5.15E-02 |
| 1.00E+02      | 0.00E+00                                    | 1.24E-01 | 5.02E-03 | 2.77E-03 | 1.03E-02 | 1.77E-02 | 2.41E-02 | 4.06E-02 |
| 1.20E+02      | 0.00E+00                                    | 1.03E-01 | 4.02E-03 | 2.21E-03 | 8.18E-03 | 1.40E-02 | 1.97E-02 | 3.34E-02 |
| 1.60E+02      | 0.00E+00                                    | 5.38E-02 | 2.55E-03 | 1.38E-03 | 5.25E-03 | 8.64E-03 | 1.22E-02 | 2.13E-02 |
| 2.00E+02      | 0.00E+00                                    | 2.60E-02 | 1.59E-03 | 8.55E-04 | 3.39E-03 | 5.13E-03 | 7.87E-03 | 1.41E-02 |
| 2.40E+02      | 0.00E+00                                    | 1.82E-02 | 9.87E-04 | 5.04E-04 | 2.13E-03 | 3.41E-03 | 5.19E-03 | 9.52E-03 |
| 2.80E+02      | 0.00E+00                                    | 1.28E-02 | 6.20E-04 | 2.90E-04 | 1.36E-03 | 2.22E-03 | 3.40E-03 | 6.37E-03 |
| 3.00E+02      | 0.00E+00                                    | 1.07E-02 | 4.96E-04 | 2.26E-04 | 1.11E-03 | 1.81E-03 | 2.79E-03 | 5.21E-03 |
| 3.20E+02      | 0.00E+00                                    | 9.00E-03 | 3.98E-04 | 1.75E-04 | 9.00E-04 | 1.48E-03 | 2.27E-03 | 4.26E-03 |
| 3.60E+02      | 0.00E+00                                    | 6.33E-03 | 2.57E-04 | 1.04E-04 | 5.88E-04 | 9.60E-04 | 1.55E-03 | 2.94E-03 |
| 4.00E+02      | 0.00E+00                                    | 4.46E-03 | 1.67E-04 | 6.07E-05 | 3.98E-04 | 6.30E-04 | 1.03E-03 | 2.11E-03 |
| 4.40E+02      | 0.00E+00                                    | 3.13E-03 | 1.10E-04 | 3.75E-05 | 2.68E-04 | 4.29E-04 | 6.65E-04 | 1.27E-03 |
| 4.80E+02      | 0.00E+00                                    | 2.20E-03 | 7.24E-05 | 2.04E-05 | 1.85E-04 | 2.90E-04 | 4.75E-04 | 8.73E-04 |
| 5.20E+02      | 0.00E+00                                    | 1.55E-03 | 4.80E-05 | 1.16E-05 | 1.23E-04 | 1.89E-04 | 3.21E-04 | 6.23E-04 |
| 5.60E+02      | 0.00E+00                                    | 1.09E-03 | 3.19E-05 | 6.65E-06 | 7.85E-05 | 1.28E-04 | 2.14E-04 | 4.26E-04 |
| 6.00E+02      | 0.00E+00                                    | 7.67E-04 | 2.14E-05 | 3.93E-06 | 5.17E-05 | 8.56E-05 | 1.43E-04 | 3.07E-04 |
| 6.40E+02      | 0.00E+00                                    | 5.40E-04 | 1.43E-05 | 2.39E-06 | 3.40E-05 | 5.88E-05 | 9.87E-05 | 2.08E-04 |
| 6.80E+02      | 0.00E+00                                    | 3.80E-04 | 9.69E-06 | 1.66E-06 | 2.35E-05 | 3.87E-05 | 6.66E-05 | 1.36E-04 |
| 7.20E+02      | 0.00E+00                                    | 2.67E-04 | 6.62E-06 | 1.12E-06 | 1.61E-05 | 2.66E-05 | 4.50E-05 | 8.86E-05 |
| 7.60E+02      | 0.00E+00                                    | 1.88E-04 | 4.56E-06 | 8.09E-07 | 1.12E-05 | 1.85E-05 | 3.04E-05 | 6.01E-05 |
| 8.00E+02      | 0.00E+00                                    | 1.33E-04 | 3.16E-06 | 6.70E-07 | 7.56E-06 | 1.28E-05 | 2.05E-05 | 4.34E-05 |
| 8.40E+02      | 0.00E+00                                    | 9.39E-05 | 2.22E-06 | 5.12E-07 | 5.17E-06 | 9.16E-06 | 1.39E-05 | 3.03E-05 |
| 8.80E+02      | 0.00E+00                                    | 6.63E-05 | 1.56E-06 | 3.83E-07 | 3.61E-06 | 6.15E-06 | 9.63E-06 | 2.10E-05 |
| 9.20E+02      | 0.00E+00                                    | 4.68E-05 | 1.11E-06 | 2.91E-07 | 2.60E-06 | 4.34E-06 | 6.65E-06 | 1.46E-05 |
| 9.60E+02      | 0.00E+00                                    | 3.31E-05 | 7.89E-07 | 2.18E-07 | 1.84E-06 | 3.18E-06 | 4.56E-06 | 1.02E-05 |
| 1.00E+03      | 0.00E+00                                    | 2.34E-05 | 5.66E-07 | 1.68E-07 | 1.31E-06 | 2.20E-06 | 3.12E-06 | 7.10E-06 |

Probabilistic results summary : RESRAD Default

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## Summary of dose at graphical times, reptition 2

| Time<br>Years | Dose statistics at graphical times, mrem/yr |          |          |          |          |          |          |          |
|---------------|---|----------|----------|----------|----------|----------|----------|----------|
|               | Minimum                                     | Maximum  | Mean     | Median   | 90%      | 95%      | 97.5%    | 99%      |
| 0.00E+00      | 4.68E-04                                    | 6.34E-01 | 1.56E-02 | 8.63E-03 | 3.17E-02 | 4.74E-02 | 7.02E-02 | 1.35E-01 |
| 1.00E+00      | 4.64E-04                                    | 6.27E-01 | 1.55E-02 | 8.54E-03 | 3.14E-02 | 4.69E-02 | 6.94E-02 | 1.34E-01 |
| 3.00E+00      | 4.55E-04                                    | 6.15E-01 | 1.51E-02 | 8.32E-03 | 3.07E-02 | 4.59E-02 | 6.78E-02 | 1.32E-01 |
| 1.00E+01      | 0.00E+00                                    | 5.72E-01 | 1.39E-02 | 7.60E-03 | 2.80E-02 | 4.26E-02 | 6.36E-02 | 1.25E-01 |
| 4.00E+01      | 0.00E+00                                    | 4.22E-01 | 9.96E-03 | 5.36E-03 | 2.02E-02 | 3.14E-02 | 4.43E-02 | 8.93E-02 |
| 4.05E+01      | 0.00E+00                                    | 4.19E-01 | 9.91E-03 | 5.29E-03 | 2.01E-02 | 3.13E-02 | 4.40E-02 | 8.88E-02 |
| 8.00E+01      | 0.00E+00                                    | 2.80E-01 | 6.45E-03 | 3.34E-03 | 1.33E-02 | 2.04E-02 | 3.02E-02 | 5.42E-02 |
| 1.00E+02      | 0.00E+00                                    | 2.28E-01 | 5.19E-03 | 2.67E-03 | 1.09E-02 | 1.68E-02 | 2.52E-02 | 4.21E-02 |
| 1.20E+02      | 0.00E+00                                    | 1.86E-01 | 4.16E-03 | 2.15E-03 | 9.00E-03 | 1.37E-02 | 2.02E-02 | 3.27E-02 |
| 1.60E+02      | 0.00E+00                                    | 1.23E-01 | 2.66E-03 | 1.34E-03 | 5.77E-03 | 9.14E-03 | 1.36E-02 | 2.00E-02 |
| 2.00E+02      | 0.00E+00                                    | 8.18E-02 | 1.68E-03 | 8.04E-04 | 3.84E-03 | 5.71E-03 | 8.68E-03 | 1.30E-02 |
| 2.40E+02      | 0.00E+00                                    | 5.41E-02 | 1.07E-03 | 4.82E-04 | 2.42E-03 | 3.74E-03 | 5.65E-03 | 9.28E-03 |
| 2.80E+02      | 0.00E+00                                    | 3.58E-02 | 6.77E-04 | 2.86E-04 | 1.53E-03 | 2.47E-03 | 3.61E-03 | 6.64E-03 |
| 3.00E+02      | 0.00E+00                                    | 2.91E-02 | 5.42E-04 | 2.23E-04 | 1.21E-03 | 1.99E-03 | 2.97E-03 | 5.34E-03 |
| 3.20E+02      | 0.00E+00                                    | 2.36E-02 | 4.35E-04 | 1.75E-04 | 9.95E-04 | 1.64E-03 | 2.39E-03 | 4.12E-03 |
| 3.60E+02      | 0.00E+00                                    | 1.56E-02 | 2.81E-04 | 1.05E-04 | 6.31E-04 | 1.14E-03 | 1.60E-03 | 2.75E-03 |
| 4.00E+02      | 0.00E+00                                    | 1.03E-02 | 1.82E-04 | 6.12E-05 | 4.22E-04 | 7.55E-04 | 1.07E-03 | 1.83E-03 |
| 4.40E+02      | 0.00E+00                                    | 6.74E-03 | 1.19E-04 | 3.75E-05 | 2.70E-04 | 4.89E-04 | 7.02E-04 | 1.17E-03 |
| 4.80E+02      | 0.00E+00                                    | 4.42E-03 | 7.74E-05 | 2.23E-05 | 1.69E-04 | 3.29E-04 | 4.52E-04 | 8.02E-04 |
| 5.20E+02      | 0.00E+00                                    | 2.89E-03 | 5.08E-05 | 1.23E-05 | 1.15E-04 | 2.17E-04 | 3.07E-04 | 5.17E-04 |
| 5.60E+02      | 0.00E+00                                    | 1.89E-03 | 3.35E-05 | 7.38E-06 | 7.79E-05 | 1.45E-04 | 2.12E-04 | 3.49E-04 |
| 6.00E+02      | 0.00E+00                                    | 1.23E-03 | 2.23E-05 | 4.47E-06 | 5.07E-05 | 9.72E-05 | 1.40E-04 | 2.35E-04 |
| 6.40E+02      | 0.00E+00                                    | 7.99E-04 | 1.49E-05 | 2.80E-06 | 3.48E-05 | 6.57E-05 | 9.87E-05 | 1.59E-04 |
| 6.80E+02      | 0.00E+00                                    | 5.17E-04 | 1.00E-05 | 1.84E-06 | 2.31E-05 | 4.55E-05 | 6.57E-05 | 1.11E-04 |
| 7.20E+02      | 0.00E+00                                    | 3.34E-04 | 6.78E-06 | 1.39E-06 | 1.56E-05 | 3.00E-05 | 4.40E-05 | 7.79E-05 |
| 7.60E+02      | 0.00E+00                                    | 2.15E-04 | 4.63E-06 | 9.92E-07 | 1.08E-05 | 2.04E-05 | 3.10E-05 | 5.15E-05 |
| 8.00E+02      | 0.00E+00                                    | 1.38E-04 | 3.19E-06 | 7.29E-07 | 7.54E-06 | 1.39E-05 | 2.13E-05 | 3.65E-05 |
| 8.40E+02      | 0.00E+00                                    | 8.76E-05 | 2.21E-06 | 5.31E-07 | 5.20E-06 | 9.11E-06 | 1.46E-05 | 2.67E-05 |
| 8.80E+02      | 0.00E+00                                    | 5.55E-05 | 1.55E-06 | 4.27E-07 | 3.77E-06 | 6.59E-06 | 9.90E-06 | 1.84E-05 |
| 9.20E+02      | 0.00E+00                                    | 3.60E-05 | 1.09E-06 | 3.15E-07 | 2.63E-06 | 4.54E-06 | 6.84E-06 | 1.07E-05 |
| 9.60E+02      | 0.00E+00                                    | 2.59E-05 | 7.73E-07 | 2.53E-07 | 1.89E-06 | 3.24E-06 | 4.55E-06 | 7.44E-06 |
| 1.00E+03      | 0.00E+00                                    | 1.86E-05 | 5.52E-07 | 1.95E-07 | 1.28E-06 | 2.30E-06 | 3.09E-06 | 5.11E-06 |

Probabilistic results summary : RESRAD Default

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## Summary of dose at graphical times, reptition 3

| Time<br>Years | Dose statistics at graphical times, mrem/yr |          |          |          |          |          |          |          |
|---------------|---|----------|----------|----------|----------|----------|----------|----------|
|               | Minimum                                     | Maximum  | Mean     | Median   | 90%      | 95%      | 97.5%    | 99%      |
| 0.00E+00      | 8.33E-04                                    | 2.48E-01 | 1.49E-02 | 8.53E-03 | 3.36E-02 | 4.93E-02 | 6.54E-02 | 1.00E-01 |
| 1.00E+00      | 8.23E-04                                    | 2.45E-01 | 1.47E-02 | 8.43E-03 | 3.33E-02 | 4.88E-02 | 6.48E-02 | 9.92E-02 |
| 3.00E+00      | 8.05E-04                                    | 2.39E-01 | 1.44E-02 | 8.21E-03 | 3.25E-02 | 4.80E-02 | 6.37E-02 | 9.70E-02 |
| 1.00E+01      | 0.00E+00                                    | 2.20E-01 | 1.31E-02 | 7.50E-03 | 2.93E-02 | 4.26E-02 | 5.89E-02 | 8.47E-02 |
| 4.00E+01      | 0.00E+00                                    | 1.54E-01 | 9.41E-03 | 5.39E-03 | 2.11E-02 | 3.04E-02 | 4.29E-02 | 6.22E-02 |
| 4.05E+01      | 0.00E+00                                    | 1.53E-01 | 9.36E-03 | 5.37E-03 | 2.11E-02 | 3.02E-02 | 4.26E-02 | 6.19E-02 |
| 8.00E+01      | 0.00E+00                                    | 9.39E-02 | 6.08E-03 | 3.47E-03 | 1.37E-02 | 1.98E-02 | 2.86E-02 | 4.24E-02 |
| 1.00E+02      | 0.00E+00                                    | 7.29E-02 | 4.88E-03 | 2.76E-03 | 1.10E-02 | 1.58E-02 | 2.34E-02 | 3.53E-02 |
| 1.20E+02      | 0.00E+00                                    | 5.63E-02 | 3.92E-03 | 2.22E-03 | 8.96E-03 | 1.29E-02 | 1.82E-02 | 2.94E-02 |
| 1.60E+02      | 0.00E+00                                    | 3.36E-02 | 2.50E-03 | 1.37E-03 | 5.78E-03 | 8.78E-03 | 1.19E-02 | 1.89E-02 |
| 2.00E+02      | 0.00E+00                                    | 2.26E-02 | 1.56E-03 | 8.30E-04 | 3.62E-03 | 5.48E-03 | 7.81E-03 | 1.33E-02 |
| 2.40E+02      | 0.00E+00                                    | 1.55E-02 | 9.77E-04 | 5.02E-04 | 2.30E-03 | 3.56E-03 | 5.27E-03 | 8.60E-03 |
| 2.80E+02      | 0.00E+00                                    | 1.07E-02 | 6.18E-04 | 3.02E-04 | 1.45E-03 | 2.38E-03 | 3.52E-03 | 5.74E-03 |
| 3.00E+02      | 0.00E+00                                    | 8.83E-03 | 4.93E-04 | 2.32E-04 | 1.17E-03 | 1.94E-03 | 2.88E-03 | 4.74E-03 |
| 3.20E+02      | 0.00E+00                                    | 7.32E-03 | 3.94E-04 | 1.82E-04 | 9.36E-04 | 1.54E-03 | 2.31E-03 | 3.90E-03 |
| 3.60E+02      | 0.00E+00                                    | 5.03E-03 | 2.52E-04 | 1.04E-04 | 6.17E-04 | 1.01E-03 | 1.55E-03 | 2.65E-03 |
| 4.00E+02      | 0.00E+00                                    | 3.45E-03 | 1.63E-04 | 6.17E-05 | 4.00E-04 | 6.88E-04 | 1.02E-03 | 1.80E-03 |
| 4.40E+02      | 0.00E+00                                    | 2.37E-03 | 1.07E-04 | 3.90E-05 | 2.73E-04 | 4.54E-04 | 6.95E-04 | 1.24E-03 |
| 4.80E+02      | 0.00E+00                                    | 1.63E-03 | 6.97E-05 | 2.21E-05 | 1.80E-04 | 3.07E-04 | 4.87E-04 | 8.56E-04 |
| 5.20E+02      | 0.00E+00                                    | 1.12E-03 | 4.58E-05 | 1.25E-05 | 1.21E-04 | 1.99E-04 | 3.18E-04 | 5.65E-04 |
| 5.60E+02      | 0.00E+00                                    | 7.69E-04 | 3.03E-05 | 6.89E-06 | 8.04E-05 | 1.36E-04 | 2.07E-04 | 3.95E-04 |
| 6.00E+02      | 0.00E+00                                    | 5.28E-04 | 2.01E-05 | 4.04E-06 | 5.40E-05 | 9.12E-05 | 1.42E-04 | 2.72E-04 |
| 6.40E+02      | 0.00E+00                                    | 3.63E-04 | 1.35E-05 | 2.58E-06 | 3.64E-05 | 6.26E-05 | 9.47E-05 | 1.78E-04 |
| 6.80E+02      | 0.00E+00                                    | 2.49E-04 | 9.13E-06 | 1.69E-06 | 2.35E-05 | 4.37E-05 | 6.67E-05 | 1.18E-04 |
| 7.20E+02      | 0.00E+00                                    | 1.71E-04 | 6.22E-06 | 1.20E-06 | 1.52E-05 | 2.96E-05 | 4.43E-05 | 8.29E-05 |
| 7.60E+02      | 0.00E+00                                    | 1.18E-04 | 4.27E-06 | 8.43E-07 | 1.03E-05 | 2.04E-05 | 3.05E-05 | 5.92E-05 |
| 8.00E+02      | 0.00E+00                                    | 8.08E-05 | 2.96E-06 | 6.44E-07 | 7.33E-06 | 1.38E-05 | 2.05E-05 | 4.22E-05 |
| 8.40E+02      | 0.00E+00                                    | 5.55E-05 | 2.07E-06 | 5.34E-07 | 4.88E-06 | 9.72E-06 | 1.42E-05 | 3.01E-05 |
| 8.80E+02      | 0.00E+00                                    | 3.81E-05 | 1.46E-06 | 3.94E-07 | 3.54E-06 | 6.92E-06 | 1.01E-05 | 2.09E-05 |
| 9.20E+02      | 0.00E+00                                    | 2.66E-05 | 1.04E-06 | 2.94E-07 | 2.50E-06 | 4.65E-06 | 7.25E-06 | 1.38E-05 |
| 9.60E+02      | 0.00E+00                                    | 1.89E-05 | 7.44E-07 | 2.29E-07 | 1.84E-06 | 3.32E-06 | 5.21E-06 | 9.94E-06 |
| 1.00E+03      | 0.00E+00                                    | 1.37E-05 | 5.37E-07 | 1.70E-07 | 1.32E-06 | 2.39E-06 | 3.58E-06 | 6.93E-06 |

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<br>Years | Peak mean dose<br>mrem/yr |
|------------|---------------------------------|---------------------------|
| 1          | 0.000E+00                       | 1.521E-02                 |
| 2          | 0.000E+00                       | 1.564E-02                 |
| 3          | 0.000E+00                       | 1.493E-02                 |

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                                      | 17  | -0.03 | 17  | -0.02 | 23   | 0.03  | 23   | 0.01  |
| Contaminated zone erosion rate                                 | 31  | 0.01  | 31  | 0.01  | 35   | 0.01  | 35   | 0.00  |
| Contaminated zone total porosity                               | 14  | -0.04 | 14  | -0.02 | 41   | 0.00  | 41   | 0.00  |
| Contaminated zone hydraulic conductivity                       | 28  | 0.02  | 28  | 0.01  | 30   | -0.01 | 30   | 0.00  |
| Contaminated zone b parameter                                  | 34  | 0.01  | 34  | 0.01  | 18   | -0.04 | 18   | -0.01 |
| Evapotranspiration coefficient                                 | 40  | 0.00  | 40  | 0.00  | 32   | 0.01  | 32   | 0.00  |
| Wind Speed   | 30  | 0.01  | 30  | 0.01  | 13   | -0.05 | 13   | -0.01 |
| Runoff coefficient   | 9   | 0.05  | 9   | 0.03  | 37   | 0.01  | 37   | 0.00  |
| Density of saturated zone                                      | 10  | 0.05  | 10  | 0.03  | 39   | -0.01 | 39   | 0.00  |
| Saturated zone total porosity                                  | 26  | -0.02 | 26  | -0.01 | 34   | 0.01  | 34   | 0.00  |
| Saturated zone effective porosity                              | 6   | -0.07 | 6   | -0.04 | 7    | 0.07  | 7    | 0.02  |
| Saturated zone hydraulic conductivity                          | 41  | 0.00  | 41  | 0.00  | 11   | 0.05  | 11   | 0.01  |
| Saturated zone hydraulic gradient                              | 4   | 0.08  | 4   | 0.04  | 31   | 0.01  | 31   | 0.00  |
| Well pump intake depth   | 36  | -0.01 | 36  | 0.00  | 19   | 0.03  | 19   | 0.01  |
| Mass loading for inhalation                                    | 25  | 0.02  | 25  | 0.01  | 8    | -0.06 | 8    | -0.01 |
| Depth of soil mixing layer                                     | 33  | 0.01  | 33  | 0.01  | 20   | 0.03  | 20   | 0.01  |
| Depth of roots   | 3   | -0.45 | 3   | -0.26 | 3    | -0.86 | 3    | -0.40 |
| Weathering removal constant of all vegetation                  | 18  | -0.03 | 18  | -0.02 | 36   | 0.01  | 36   | 0.00  |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | 37  | 0.01  | 37  | 0.00  | 26   | 0.02  | 26   | 0.00  |
| Wet foliar interception fraction of leafy vegetables           | 7   | 0.06  | 7   | 0.03  | 29   | -0.01 | 29   | 0.00  |
| Indoor dust filtration factor                                  | 20  | 0.03  | 20  | 0.01  | 12   | -0.05 | 12   | -0.01 |
| External gamma shielding factor                                | 15  | -0.04 | 15  | -0.02 | 21   | 0.03  | 21   | 0.01  |
| Cover erosion rate   | 8   | 0.06  | 8   | 0.03  | 40   | 0.00  | 40   | 0.00  |
| Total Porosity of Unsaturated zone 1                           | 24  | -0.02 | 24  | -0.01 | 10   | 0.05  | 10   | 0.01  |
| Effective Porosity of Unsaturated zone 1                       | 19  | -0.03 | 19  | -0.02 | 27   | 0.01  | 27   | 0.00  |
| Hydraulic Conductivity of Unsaturated zone 1                   | 12  | 0.05  | 12  | 0.03  | 17   | -0.04 | 17   | -0.01 |
| b Parameter of Unsaturated zone 1                              | 5   | 0.07  | 5   | 0.04  | 5    | -0.08 | 5    | -0.02 |
| Plant transfer factor for Co                                   | 13  | -0.04 | 13  | -0.02 | 16   | 0.04  | 16   | 0.01  |
| Meat transfer factor for Co                                    | 22  | -0.03 | 22  | -0.01 | 22   | 0.03  | 22   | 0.01  |
| Milk transfer factor for Co                                    | 38  | 0.00  | 38  | 0.00  | 15   | 0.04  | 14   | 0.01  |
| Plant transfer factor for Cs                                   | 29  | 0.01  | 29  | 0.01  | 38   | 0.01  | 38   | 0.00  |
| Meat transfer factor for Cs                                    | 27  | -0.02 | 27  | -0.01 | 25   | 0.02  | 24   | 0.00  |
| Milk transfer factor for Cs                                    | 21  | 0.03  | 21  | 0.01  | 33   | -0.01 | 33   | 0.00  |
| Plant transfer factor for Ni                                   | 1   | 0.79  | 1   | 0.67  | 1    | 0.95  | 1    | 0.74  |
| Meat transfer factor for Ni                                    | 23  | 0.02  | 23  | 0.01  | 4    | 0.15  | 4    | 0.04  |
| Milk transfer factor for Ni                                    | 2   | 0.62  | 2   | 0.42  | 2    | 0.90  | 2    | 0.50  |
| Plant transfer factor for Sr                                   | 32  | 0.01  | 32  | 0.01  | 6    | -0.08 | 6    | -0.02 |
| Meat transfer factor for Sr                                    | 16  | 0.04  | 16  | 0.02  | 14   | 0.04  | 15   | 0.01  |
| Milk transfer factor for Sr                                    | 39  | 0.00  | 39  | 0.00  | 28   | 0.01  | 28   | 0.00  |
| Density of contaminated zone                                   | 11  | -0.05 | 11  | -0.03 | 24   | 0.02  | 25   | 0.00  |
| Density of Unsaturated zone 1                                  | 35  | 0.01  | 35  | 0.00  | 9    | -0.05 | 9    | -0.01 |
| R-SQUARE   |     | 0.73  |     | 0.73  |      | 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 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                                      | 7   | 0.06  | 7   | 0.04  | 32   | -0.01 | 32   | 0.00  |
| Contaminated zone erosion rate                                 | 8   | -0.05 | 8   | -0.03 | 11   | 0.05  | 11   | 0.01  |
| Contaminated zone total porosity                               | 10  | 0.05  | 10  | 0.03  | 18   | -0.03 | 18   | -0.01 |
| Contaminated zone hydraulic conductivity                       | 26  | 0.01  | 26  | 0.01  | 35   | 0.01  | 35   | 0.00  |
| Contaminated zone b parameter                                  | 30  | -0.01 | 30  | -0.01 | 28   | 0.02  | 28   | 0.00  |
| Evapotranspiration coefficient                                 | 9   | -0.05 | 9   | -0.03 | 27   | 0.02  | 27   | 0.01  |
| Wind Speed   | 14  | -0.04 | 14  | -0.02 | 34   | 0.01  | 34   | 0.00  |
| Runoff coefficient   | 5   | 0.08  | 5   | 0.05  | 10   | -0.05 | 10   | -0.01 |
| Density of saturated zone                                      | 39  | 0.00  | 39  | 0.00  | 17   | 0.03  | 17   | 0.01  |
| Saturated zone total porosity                                  | 4   | -0.09 | 4   | -0.06 | 7    | 0.06  | 7    | 0.02  |
| Saturated zone effective porosity                              | 33  | -0.01 | 33  | 0.00  | 38   | 0.01  | 38   | 0.00  |
| Saturated zone hydraulic conductivity                          | 34  | 0.01  | 34  | 0.00  | 37   | 0.01  | 37   | 0.00  |
| Saturated zone hydraulic gradient                              | 29  | -0.01 | 29  | -0.01 | 40   | 0.00  | 40   | 0.00  |
| Well pump intake depth   | 17  | -0.03 | 17  | -0.02 | 22   | 0.03  | 22   | 0.01  |
| Mass loading for inhalation                                    | 13  | 0.04  | 13  | 0.02  | 16   | -0.04 | 16   | -0.01 |
| Depth of soil mixing layer                                     | 38  | 0.00  | 38  | 0.00  | 14   | -0.04 | 14   | -0.01 |
| Depth of roots   | 3   | -0.34 | 3   | -0.23 | 3    | -0.84 | 3    | -0.38 |
| Weathering removal constant of all vegetation                  | 18  | -0.03 | 18  | -0.02 | 9    | 0.06  | 9    | 0.01  |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | 41  | 0.00  | 41  | 0.00  | 24   | 0.03  | 24   | 0.01  |
| Wet foliar interception fraction of leafy vegetables           | 27  | 0.01  | 27  | 0.01  | 36   | -0.01 | 36   | 0.00  |
| Indoor dust filtration factor                                  | 36  | -0.01 | 36  | 0.00  | 20   | 0.03  | 20   | 0.01  |
| External gamma shielding factor                                | 15  | -0.03 | 15  | -0.02 | 12   | 0.05  | 12   | 0.01  |
| Cover erosion rate   | 25  | -0.02 | 25  | -0.01 | 5    | 0.07  | 5    | 0.02  |
| Total Porosity of Unsaturated zone 1                           | 31  | -0.01 | 31  | -0.01 | 15   | -0.04 | 15   | -0.01 |
| Effective Porosity of Unsaturated zone 1                       | 22  | 0.02  | 22  | 0.01  | 21   | -0.03 | 21   | -0.01 |
| Hydraulic Conductivity of Unsaturated zone 1                   | 6   | -0.06 | 6   | -0.04 | 8    | 0.06  | 8    | 0.01  |
| b Parameter of Unsaturated zone 1                              | 16  | 0.03  | 16  | 0.02  | 39   | 0.00  | 39   | 0.00  |
| Plant transfer factor for Co                                   | 20  | 0.02  | 19  | 0.02  | 29   | -0.01 | 29   | 0.00  |
| Meat transfer factor for Co                                    | 21  | 0.02  | 21  | 0.02  | 30   | -0.01 | 30   | 0.00  |
| Milk transfer factor for Co                                    | 24  | -0.02 | 24  | -0.01 | 19   | -0.03 | 19   | -0.01 |
| Plant transfer factor for Cs                                   | 28  | -0.01 | 28  | -0.01 | 26   | -0.02 | 26   | -0.01 |
| Meat transfer factor for Cs                                    | 35  | -0.01 | 35  | 0.00  | 33   | -0.01 | 33   | 0.00  |
| Milk transfer factor for Cs                                    | 12  | 0.04  | 12  | 0.03  | 31   | 0.01  | 31   | 0.00  |
| Plant transfer factor for Ni                                   | 1   | 0.65  | 1   | 0.55  | 1    | 0.95  | 1    | 0.74  |
| Meat transfer factor for Ni                                    | 32  | 0.01  | 32  | 0.01  | 4    | 0.15  | 4    | 0.04  |
| Milk transfer factor for Ni                                    | 2   | 0.58  | 2   | 0.46  | 2    | 0.89  | 2    | 0.49  |
| Plant transfer factor for Sr                                   | 40  | 0.00  | 40  | 0.00  | 13   | 0.04  | 13   | 0.01  |
| Meat transfer factor for Sr                                    | 11  | 0.04  | 11  | 0.03  | 41   | 0.00  | 41   | 0.00  |
| Milk transfer factor for Sr                                    | 23  | -0.02 | 23  | -0.01 | 6    | -0.07 | 6    | -0.02 |
| Density of contaminated zone                                   | 19  | -0.02 | 20  | -0.02 | 25   | -0.03 | 25   | -0.01 |
| Density of Unsaturated zone 1                                  | 37  | 0.00  | 37  | 0.00  | 23   | -0.03 | 23   | -0.01 |
| R-SQUARE   |     | 0.60  |     | 0.60  |      | 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 SOIL SENSITIVITY.RAD

## Coefficients for peak All Pathways Dose

| Coefficient =  | PCC |       | SRC |       | PRCC |       | SRRC |       |
|--|-----|-------|-----|-------|------|-------|------|-------|
|  | 3   |       | 3   |       | 3    |       | 3    |       |
| Repetition =   |     |       |     |       |      |       |      |       |
| Description of Probabilistic Variable                          | Sig | Coeff | Sig | Coeff | Sig  | Coeff | Sig  | Coeff |
| Density of cover material                                      | 38  | 0.00  | 38  | 0.00  | 18   | 0.02  | 18   | 0.01  |
| Contaminated zone erosion rate                                 | 5   | 0.08  | 5   | 0.04  | 17   | -0.03 | 17   | -0.01 |
| Contaminated zone total porosity                               | 24  | 0.02  | 24  | 0.01  | 24   | 0.02  | 24   | 0.00  |
| Contaminated zone hydraulic conductivity                       | 41  | 0.00  | 41  | 0.00  | 34   | 0.01  | 34   | 0.00  |
| Contaminated zone b parameter                                  | 26  | 0.02  | 26  | 0.01  | 23   | -0.02 | 23   | 0.00  |
| Evapotranspiration coefficient                                 | 27  | 0.02  | 27  | 0.01  | 32   | 0.01  | 32   | 0.00  |
| Wind Speed   | 8   | 0.06  | 8   | 0.03  | 10   | -0.05 | 10   | -0.01 |
| Runoff coefficient   | 30  | -0.02 | 30  | -0.01 | 19   | 0.02  | 19   | 0.01  |
| Density of saturated zone                                      | 31  | -0.02 | 31  | -0.01 | 41   | 0.00  | 41   | 0.00  |
| Saturated zone total porosity                                  | 22  | -0.02 | 23  | -0.01 | 39   | 0.00  | 39   | 0.00  |
| Saturated zone effective porosity                              | 17  | -0.03 | 17  | -0.02 | 20   | 0.02  | 20   | 0.00  |
| Saturated zone hydraulic conductivity                          | 37  | 0.00  | 37  | 0.00  | 21   | -0.02 | 21   | 0.00  |
| Saturated zone hydraulic gradient                              | 35  | 0.01  | 35  | 0.00  | 13   | -0.03 | 13   | -0.01 |
| Well pump intake depth   | 23  | -0.02 | 22  | -0.01 | 31   | -0.01 | 31   | 0.00  |
| Mass loading for inhalation                                    | 32  | -0.01 | 32  | -0.01 | 27   | -0.01 | 27   | 0.00  |
| Depth of soil mixing layer                                     | 4   | -0.08 | 4   | -0.04 | 9    | 0.06  | 9    | 0.01  |
| Depth of roots   | 3   | -0.48 | 3   | -0.28 | 3    | -0.86 | 3    | -0.39 |
| Weathering removal constant of all vegetation                  | 40  | 0.00  | 40  | 0.00  | 36   | 0.01  | 36   | 0.00  |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | 29  | 0.02  | 29  | 0.01  | 40   | 0.00  | 40   | 0.00  |
| Wet foliar interception fraction of leafy vegetables           | 6   | -0.08 | 6   | -0.04 | 12   | 0.04  | 12   | 0.01  |
| Indoor dust filtration factor                                  | 20  | -0.03 | 20  | -0.01 | 6    | 0.06  | 6    | 0.01  |
| External gamma shielding factor                                | 15  | -0.03 | 15  | -0.02 | 22   | 0.02  | 22   | 0.00  |
| Cover erosion rate   | 21  | 0.02  | 21  | 0.01  | 35   | 0.01  | 35   | 0.00  |
| Total Porosity of Unsaturated zone 1                           | 39  | 0.00  | 39  | 0.00  | 15   | 0.03  | 15   | 0.01  |
| Effective Porosity of Unsaturated zone 1                       | 12  | 0.05  | 12  | 0.03  | 26   | 0.02  | 26   | 0.00  |
| Hydraulic Conductivity of Unsaturated zone 1                   | 10  | 0.05  | 11  | 0.03  | 8    | -0.06 | 8    | -0.01 |
| b Parameter of Unsaturated zone 1                              | 13  | -0.05 | 13  | -0.02 | 30   | 0.01  | 30   | 0.00  |
| Plant transfer factor for Co                                   | 7   | -0.06 | 7   | -0.03 | 7    | 0.06  | 7    | 0.01  |
| Meat transfer factor for Co                                    | 18  | 0.03  | 18  | 0.02  | 11   | 0.04  | 11   | 0.01  |
| Milk transfer factor for Co                                    | 25  | -0.02 | 25  | -0.01 | 37   | 0.01  | 37   | 0.00  |
| Plant transfer factor for Cs                                   | 34  | 0.01  | 34  | 0.00  | 25   | 0.02  | 25   | 0.00  |
| Meat transfer factor for Cs                                    | 19  | 0.03  | 19  | 0.02  | 33   | 0.01  | 33   | 0.00  |
| Milk transfer factor for Cs                                    | 16  | 0.03  | 16  | 0.02  | 14   | -0.03 | 14   | -0.01 |
| Plant transfer factor for Ni                                   | 1   | 0.78  | 1   | 0.64  | 1    | 0.96  | 1    | 0.74  |
| Meat transfer factor for Ni                                    | 11  | 0.05  | 10  | 0.03  | 4    | 0.19  | 4    | 0.04  |
| Milk transfer factor for Ni                                    | 2   | 0.67  | 2   | 0.47  | 2    | 0.91  | 2    | 0.49  |
| Plant transfer factor for Sr                                   | 33  | 0.01  | 33  | 0.01  | 28   | 0.01  | 28   | 0.00  |
| Meat transfer factor for Sr                                    | 9   | -0.06 | 9   | -0.03 | 16   | 0.03  | 16   | 0.01  |
| Milk transfer factor for Sr                                    | 36  | 0.00  | 36  | 0.00  | 38   | -0.01 | 38   | 0.00  |
| Density of contaminated zone                                   | 28  | 0.02  | 28  | 0.01  | 29   | -0.01 | 29   | 0.00  |
| Density of Unsaturated zone 1                                  | 14  | 0.04  | 14  | 0.02  | 5    | -0.07 | 5    | -0.02 |
| R-SQUARE   |     | 0.74  |     | 0.74  |      | 0.95  |      | 0.95  |

-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.