

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.RAD

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| Number | Name | Distribution | Parameters | | | | | | | | | | | | | | | | |
|--------|-------------|-------------------------|------------|-------|-------|---------|-------|---------|-------|--------|-------|--------|-------|--------|-------|---------|-------|-------|---|
| 1 | VCZ | CONTINUOUS LOGARITHMIC4 | 5.E-8 | 0 | .0007 | .22 | .005 | .95 | .2 | 1 | | | | | | | | | |
| 2 | BCZ | BOUNDED LOGNORMAL-N | 1.28 | .334 | 1.28 | 10.1 | | | | | | | | | | | | | |
| 3 | EVAPTR | UNIFORM | .5 | .99 | | | | | | | | | | | | | | | |
| 4 | WIND | UNIFORM | 2.8 | 4.7 | | | | | | | | | | | | | | | |
| 5 | RUNOFF | UNIFORM | .1 | .8 | | | | | | | | | | | | | | | |
| 6 | DWIBWT | CONTINUOUS LINEAR | 6 | 5 | 0 | 24 | .29 | 43 | .66 | 53 | .68 | 76 | .95 | 89 | 1 | | | | |
| 7 | BUZ (1) | BOUNDED LOGNORMAL-N | 1.28 | .334 | 1.28 | 10.1 | | | | | | | | | | | | | |
| 8 | MLINH | CONTINUOUS LINEAR | 8 | 0 | 0 | .000008 | .0151 | .000016 | .1365 | .00003 | .8119 | .00004 | .9495 | .00006 | .9937 | .000076 | .9983 | .0001 | 1 |
| 9 | SHF3 | UNIFORM | .15 | .95 | | | | | | | | | | | | | | | |
| 10 | DM | TRIANGULAR | 0 | .15 | .6 | | | | | | | | | | | | | | |
| 11 | DROOT | UNIFORM | .3 | 4 | | | | | | | | | | | | | | | |
| 12 | YV (1) | TRUNCATED LOGNORMAL-N | .56 | .48 | .001 | .999 | | | | | | | | | | | | | |
| 13 | WLAM | TRIANGULAR | 5.1 | 18 | 84 | | | | | | | | | | | | | | |
| 14 | RWET (2) | TRIANGULAR | .06 | .67 | .95 | | | | | | | | | | | | | | |
| 15 | HUMID | TRUNCATED LOGNORMAL-N | 1.98 | .334 | .001 | .999 | | | | | | | | | | | | | |
| 16 | DCACTC (1) | LOGNORMAL-N | 8.01 | 1.1 | | | | | | | | | | | | | | | |
| 17 | DCACTU1 (1) | LOGNORMAL-N | 8.01 | 1.1 | | | | | | | | | | | | | | | |
| 18 | DCACTS (1) | LOGNORMAL-N | 5.99 | .0001 | | | | | | | | | | | | | | | |

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Probabilistic Total Dose Summary

| Nuclide (j) | Peak Time | Peak Dose | DOSE(j,t), mrem/yr | | | | | | | |
|----------------|--------------|--------------|--------------------|----------|----------|----------|----------|----------|----------|----------|
| | | t= | 0.00E+00 | 1.00E+00 | 3.00E+00 | 1.00E+01 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| Ce-144 | | | | | | | | | | |
| Min | 0.00E+00 | 1.04E-01 | 1.04E-01 | 4.25E-02 | 7.06E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | 0.00E+00 | 1.09E-01 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.73E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | 0.00E+00 | 1.06E-01 | 1.06E-01 | 4.35E-02 | 7.32E-03 | 1.42E-05 | 2.57E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | 0.00E+00 | 2.01E-03 | 2.01E-03 | 8.26E-04 | 1.40E-04 | 1.49E-06 | 4.13E-14 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ALL | | | | | | | | | | |
| Min | 0.00E+00 | 1.04E-01 | 1.04E-01 | 4.25E-02 | 7.06E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | 0.00E+00 | 1.09E-01 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.73E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | 0.00E+00 | 1.06E-01 | 1.06E-01 | 4.35E-02 | 7.32E-03 | 1.42E-05 | 2.57E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | 0.00E+00 | 2.01E-03 | 2.01E-03 | 8.26E-04 | 1.40E-04 | 1.49E-06 | 4.13E-14 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

ALL is total dose summed for all nuclides.

Probabilistic Risk Summary

| Nuclide | | RISK(j,t) | | | | | | | |
|---------|----|-----------|----------|----------|----------|----------|----------|----------|----------|
| (j) | t= | 0.00E+00 | 1.00E+00 | 3.00E+00 | 1.00E+01 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| Ce-144 | | | | | | | | | |
| Min | | 3.71E-06 | 1.52E-06 | 2.52E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 4.33E-06 | 1.78E-06 | 2.99E-07 | 5.87E-10 | 1.08E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 3.97E-06 | 1.63E-06 | 2.74E-07 | 5.31E-10 | 9.60E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 2.24E-07 | 9.20E-08 | 1.56E-08 | 6.15E-11 | 1.62E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ALL | | | | | | | | | |
| Min | | 3.71E-06 | 1.52E-06 | 2.52E-07 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 4.33E-06 | 1.78E-06 | 2.99E-07 | 5.87E-10 | 1.08E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 3.97E-06 | 1.63E-06 | 2.74E-07 | 5.31E-10 | 9.60E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 2.24E-07 | 9.20E-08 | 1.56E-08 | 6.15E-11 | 1.62E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

ALL is total risk summed for all nuclides.

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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| Ce-144 | | | | | | | | | |
| Min | | 1.01E-01 | 4.13E-02 | 6.88E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 1.01E-01 | 4.16E-02 | 7.02E-03 | 1.38E-05 | 2.54E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 1.01E-01 | 4.16E-02 | 7.01E-03 | 1.36E-05 | 2.47E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 7.62E-06 | 1.04E-05 | 4.69E-06 | 1.40E-06 | 3.93E-14 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ΣALL | | | | | | | | | |
| Min | | 1.01E-01 | 4.13E-02 | 6.88E-03 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 1.01E-01 | 4.16E-02 | 7.02E-03 | 1.38E-05 | 2.54E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 1.01E-01 | 4.16E-02 | 7.01E-03 | 1.36E-05 | 2.47E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 7.62E-06 | 1.04E-05 | 4.69E-06 | 1.40E-06 | 3.93E-14 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

ΣALL is total pathway dose summed for all nuclides.

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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| Min | | 9.43E-09 | 3.87E-09 | 6.52E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 2.09E-05 | 8.58E-06 | 1.45E-06 | 2.84E-09 | 5.22E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 3.37E-06 | 1.38E-06 | 2.33E-07 | 4.52E-10 | 8.19E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 2.05E-06 | 8.41E-07 | 1.42E-07 | 2.80E-10 | 5.20E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ΣALL | | | | | | | | | |
| Min | | 9.43E-09 | 3.87E-09 | 6.52E-10 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 2.09E-05 | 8.58E-06 | 1.45E-06 | 2.84E-09 | 5.22E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 3.37E-06 | 1.38E-06 | 2.33E-07 | 4.52E-10 | 8.19E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 2.05E-06 | 8.41E-07 | 1.42E-07 | 2.80E-10 | 5.20E-18 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |

ΣALL is total pathway dose summed for all nuclides.

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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| 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 |
| <hr/> | | | | | | | | | |

ALL is total pathway dose summed for all nuclides.

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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| Min | | 1.84E-03 | 7.03E-04 | 7.63E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 7.36E-03 | 3.02E-03 | 5.09E-04 | 9.99E-07 | 1.84E-14 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 4.14E-03 | 1.69E-03 | 2.84E-04 | 5.46E-07 | 9.67E-15 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 2.00E-03 | 8.21E-04 | 1.39E-04 | 2.79E-07 | 5.22E-15 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |
| ALL | | | | | | | | | |
| Min | | 1.84E-03 | 7.03E-04 | 7.63E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 7.36E-03 | 3.02E-03 | 5.09E-04 | 9.99E-07 | 1.84E-14 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 4.14E-03 | 1.69E-03 | 2.84E-04 | 5.46E-07 | 9.67E-15 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 2.00E-03 | 8.21E-04 | 1.39E-04 | 2.79E-07 | 5.22E-15 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |

ALL is total pathway dose summed for all nuclides.

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

| Nuclide | DOSE(i,j,t), mrem/yr | | | | | | | |
|---------|----------------------|----------|----------|----------|----------|----------|----------|----------|
| | t= 0.00E+00 | 1.00E+00 | 3.00E+00 | 1.00E+01 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| Ce-144 | | | | | | | | |
| Min | 2.51E-05 | 1.03E-05 | 1.64E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | 2.79E-05 | 1.14E-05 | 1.93E-06 | 3.78E-09 | 6.96E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | 2.62E-05 | 1.08E-05 | 1.81E-06 | 3.51E-09 | 6.35E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | 1.00E-06 | 4.12E-07 | 6.98E-08 | 3.99E-10 | 1.06E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ALL | | | | | | | | |
| Min | 2.51E-05 | 1.03E-05 | 1.64E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | 2.79E-05 | 1.14E-05 | 1.93E-06 | 3.78E-09 | 6.96E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | 2.62E-05 | 1.08E-05 | 1.81E-06 | 3.51E-09 | 6.35E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | 1.00E-06 | 4.12E-07 | 6.98E-08 | 3.99E-10 | 1.06E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

ALL is total pathway dose summed for all nuclides.

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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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| Min | | 1.20E-04 | 4.91E-05 | 7.67E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 1.50E-04 | 6.15E-05 | 1.04E-05 | 2.03E-08 | 3.75E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 1.33E-04 | 5.44E-05 | 9.15E-06 | 1.77E-08 | 3.20E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 1.07E-05 | 4.39E-06 | 7.43E-07 | 2.40E-09 | 5.84E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ΣALL | | | | | | | | | |
| Min | | 1.20E-04 | 4.91E-05 | 7.67E-06 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 1.50E-04 | 6.15E-05 | 1.04E-05 | 2.03E-08 | 3.75E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 1.33E-04 | 5.44E-05 | 9.15E-06 | 1.77E-08 | 3.20E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 1.07E-05 | 4.39E-06 | 7.43E-07 | 2.40E-09 | 5.84E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |

ΣALL is total pathway dose summed for all nuclides.

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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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| Min | | 1.99E-04 | 8.13E-05 | 1.31E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 2.00E-04 | 8.19E-05 | 1.38E-05 | 2.71E-08 | 4.99E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 2.00E-04 | 8.19E-05 | 1.38E-05 | 2.67E-08 | 4.85E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 1.50E-08 | 2.05E-08 | 2.04E-08 | 2.86E-09 | 7.87E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| ΣALL | | | | | | | | | |
| Min | | 1.99E-04 | 8.13E-05 | 1.31E-05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Max | | 2.00E-04 | 8.19E-05 | 1.38E-05 | 2.71E-08 | 4.99E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 2.00E-04 | 8.19E-05 | 1.38E-05 | 2.67E-08 | 4.85E-16 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 1.50E-08 | 2.05E-08 | 2.04E-08 | 2.86E-09 | 7.87E-17 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |

ΣALL is total pathway dose summed for all nuclides.

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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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| 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 | 9.90E-19 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-21 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.58E-20 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |
| 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 | 9.90E-19 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.53E-21 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 3.58E-20 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| 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 |
| <hr/> | | | | | | | | | |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| 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 |
| <hr/> | | | | | | | | | |

ALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| 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 | 1.02E-19 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.10E-22 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.92E-21 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |
| 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 | 1.02E-19 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.10E-22 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 2.92E-21 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| 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 | 4.60E-22 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.09E-25 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-23 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |
| 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 | 4.60E-22 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 6.09E-25 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.46E-23 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| <hr/> | | | | | | | | | |
| Ce-144 | | | | | | | | | |
| 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 | 3.59E-21 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.47E-24 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E-22 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |
| 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 | 3.59E-21 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Avg | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 4.47E-24 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| Std | | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.09E-22 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| <hr/> | | | | | | | | | |

ΣALL is total pathway dose summed for all nuclides.

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 | 3.00E+01 | 1.00E+02 | 3.00E+02 | 1.00E+03 |
| 0.025 | 1.04E-01 | 4.26E-02 | 7.17E-03 | 1.40E-05 | 1.11E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.050 | 1.04E-01 | 4.26E-02 | 7.17E-03 | 1.41E-05 | 2.57E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.075 | 1.04E-01 | 4.26E-02 | 7.17E-03 | 1.41E-05 | 2.58E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.100 | 1.04E-01 | 4.26E-02 | 7.18E-03 | 1.41E-05 | 2.58E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.125 | 1.04E-01 | 4.26E-02 | 7.18E-03 | 1.41E-05 | 2.59E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.150 | 1.04E-01 | 4.27E-02 | 7.18E-03 | 1.41E-05 | 2.59E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.175 | 1.04E-01 | 4.27E-02 | 7.19E-03 | 1.41E-05 | 2.59E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.200 | 1.04E-01 | 4.27E-02 | 7.19E-03 | 1.41E-05 | 2.59E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.225 | 1.04E-01 | 4.27E-02 | 7.20E-03 | 1.41E-05 | 2.59E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.250 | 1.04E-01 | 4.28E-02 | 7.20E-03 | 1.41E-05 | 2.59E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.275 | 1.04E-01 | 4.28E-02 | 7.21E-03 | 1.41E-05 | 2.60E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.300 | 1.04E-01 | 4.28E-02 | 7.21E-03 | 1.41E-05 | 2.60E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.325 | 1.04E-01 | 4.29E-02 | 7.22E-03 | 1.42E-05 | 2.60E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.350 | 1.05E-01 | 4.29E-02 | 7.22E-03 | 1.42E-05 | 2.60E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.375 | 1.05E-01 | 4.29E-02 | 7.23E-03 | 1.42E-05 | 2.60E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.400 | 1.05E-01 | 4.30E-02 | 7.24E-03 | 1.42E-05 | 2.61E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.425 | 1.05E-01 | 4.30E-02 | 7.25E-03 | 1.42E-05 | 2.61E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.450 | 1.05E-01 | 4.31E-02 | 7.25E-03 | 1.42E-05 | 2.61E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.475 | 1.05E-01 | 4.31E-02 | 7.26E-03 | 1.42E-05 | 2.62E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.500 | 1.05E-01 | 4.32E-02 | 7.27E-03 | 1.43E-05 | 2.62E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.525 | 1.05E-01 | 4.32E-02 | 7.28E-03 | 1.43E-05 | 2.62E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.550 | 1.06E-01 | 4.33E-02 | 7.29E-03 | 1.43E-05 | 2.63E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.575 | 1.06E-01 | 4.34E-02 | 7.31E-03 | 1.43E-05 | 2.63E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.600 | 1.06E-01 | 4.35E-02 | 7.32E-03 | 1.44E-05 | 2.64E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.625 | 1.06E-01 | 4.36E-02 | 7.34E-03 | 1.44E-05 | 2.64E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.650 | 1.06E-01 | 4.37E-02 | 7.36E-03 | 1.44E-05 | 2.65E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.675 | 1.07E-01 | 4.38E-02 | 7.38E-03 | 1.45E-05 | 2.66E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.700 | 1.07E-01 | 4.39E-02 | 7.40E-03 | 1.45E-05 | 2.66E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.725 | 1.07E-01 | 4.41E-02 | 7.42E-03 | 1.45E-05 | 2.67E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.750 | 1.08E-01 | 4.43E-02 | 7.45E-03 | 1.46E-05 | 2.68E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.775 | 1.08E-01 | 4.45E-02 | 7.48E-03 | 1.47E-05 | 2.69E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.800 | 1.09E-01 | 4.47E-02 | 7.52E-03 | 1.47E-05 | 2.70E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.825 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.71E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.850 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.72E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.875 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.72E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.900 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.72E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.925 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.73E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.950 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.73E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 0.975 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.73E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| 1.000 | 1.09E-01 | 4.48E-02 | 7.55E-03 | 1.48E-05 | 2.73E-13 | 0.00E+00 | 0.00E+00 | 0.00E+00 |

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.RAD

| Summary of dose at graphical times, reptition 1 | | | | | | | | |
|---|---|----------|----------|----------|----------|----------|----------|----------|
| Time | Dose statistics at graphical times, mrem/yr | | | | | | | |
| Years | Minimum | Maximum | Mean | Median | 90% | 95% | 97.5% | 99% |
| 0.00E+00 | 1.04E-01 | 1.09E-01 | 1.06E-01 | 1.05E-01 | 1.09E-01 | 1.09E-01 | 1.09E-01 | 1.09E-01 |
| 1.00E+00 | 4.25E-02 | 4.48E-02 | 4.35E-02 | 4.32E-02 | 4.48E-02 | 4.48E-02 | 4.48E-02 | 4.48E-02 |
| 1.06E+00 | 4.04E-02 | 4.26E-02 | 4.13E-02 | 4.10E-02 | 4.26E-02 | 4.26E-02 | 4.26E-02 | 4.26E-02 |
| 1.12E+00 | 3.82E-02 | 4.03E-02 | 3.91E-02 | 3.88E-02 | 4.03E-02 | 4.03E-02 | 4.03E-02 | 4.03E-02 |
| 1.19E+00 | 3.61E-02 | 3.80E-02 | 3.69E-02 | 3.66E-02 | 3.80E-02 | 3.80E-02 | 3.80E-02 | 3.80E-02 |
| 1.25E+00 | 3.39E-02 | 3.57E-02 | 3.47E-02 | 3.44E-02 | 3.57E-02 | 3.57E-02 | 3.57E-02 | 3.57E-02 |
| 1.33E+00 | 3.18E-02 | 3.35E-02 | 3.25E-02 | 3.23E-02 | 3.35E-02 | 3.35E-02 | 3.35E-02 | 3.35E-02 |
| 1.40E+00 | 2.97E-02 | 3.13E-02 | 3.03E-02 | 3.01E-02 | 3.13E-02 | 3.13E-02 | 3.13E-02 | 3.13E-02 |
| 1.49E+00 | 2.76E-02 | 2.91E-02 | 2.82E-02 | 2.80E-02 | 2.91E-02 | 2.91E-02 | 2.91E-02 | 2.91E-02 |
| 1.57E+00 | 2.55E-02 | 2.69E-02 | 2.61E-02 | 2.59E-02 | 2.69E-02 | 2.69E-02 | 2.69E-02 | 2.69E-02 |
| 1.66E+00 | 2.35E-02 | 2.48E-02 | 2.41E-02 | 2.39E-02 | 2.48E-02 | 2.48E-02 | 2.48E-02 | 2.48E-02 |
| 1.76E+00 | 2.16E-02 | 2.27E-02 | 2.21E-02 | 2.19E-02 | 2.27E-02 | 2.27E-02 | 2.27E-02 | 2.27E-02 |
| 1.86E+00 | 1.97E-02 | 2.08E-02 | 2.01E-02 | 2.00E-02 | 2.08E-02 | 2.08E-02 | 2.08E-02 | 2.08E-02 |
| 1.97E+00 | 1.79E-02 | 1.88E-02 | 1.83E-02 | 1.82E-02 | 1.88E-02 | 1.88E-02 | 1.88E-02 | 1.88E-02 |
| 2.09E+00 | 1.61E-02 | 1.70E-02 | 1.65E-02 | 1.64E-02 | 1.70E-02 | 1.70E-02 | 1.70E-02 | 1.70E-02 |
| 2.21E+00 | 1.45E-02 | 1.53E-02 | 1.48E-02 | 1.47E-02 | 1.53E-02 | 1.53E-02 | 1.53E-02 | 1.53E-02 |
| 2.34E+00 | 1.29E-02 | 1.36E-02 | 1.32E-02 | 1.31E-02 | 1.36E-02 | 1.36E-02 | 1.36E-02 | 1.36E-02 |
| 2.47E+00 | 1.14E-02 | 1.21E-02 | 1.17E-02 | 1.16E-02 | 1.21E-02 | 1.21E-02 | 1.21E-02 | 1.21E-02 |
| 2.62E+00 | 1.00E-02 | 1.06E-02 | 1.03E-02 | 1.02E-02 | 1.06E-02 | 1.06E-02 | 1.06E-02 | 1.06E-02 |
| 2.77E+00 | 8.75E-03 | 9.26E-03 | 8.98E-03 | 8.92E-03 | 9.26E-03 | 9.26E-03 | 9.26E-03 | 9.26E-03 |
| 2.93E+00 | 7.56E-03 | 8.02E-03 | 7.78E-03 | 7.72E-03 | 8.02E-03 | 8.02E-03 | 8.02E-03 | 8.02E-03 |
| 3.00E+00 | 7.12E-03 | 7.55E-03 | 7.32E-03 | 7.27E-03 | 7.55E-03 | 7.55E-03 | 7.55E-03 | 7.55E-03 |
| 3.10E+00 | 6.48E-03 | 6.89E-03 | 6.68E-03 | 6.63E-03 | 6.89E-03 | 6.89E-03 | 6.89E-03 | 6.89E-03 |
| 3.28E+00 | 5.49E-03 | 5.86E-03 | 5.69E-03 | 5.65E-03 | 5.86E-03 | 5.86E-03 | 5.86E-03 | 5.86E-03 |
| 3.48E+00 | 4.60E-03 | 4.95E-03 | 4.80E-03 | 4.76E-03 | 4.95E-03 | 4.95E-03 | 4.95E-03 | 4.95E-03 |
| 3.68E+00 | 3.80E-03 | 4.13E-03 | 4.00E-03 | 3.98E-03 | 4.13E-03 | 4.13E-03 | 4.13E-03 | 4.13E-03 |
| 3.89E+00 | 3.08E-03 | 3.41E-03 | 3.31E-03 | 3.29E-03 | 3.41E-03 | 3.41E-03 | 3.41E-03 | 3.41E-03 |
| 4.12E+00 | 2.43E-03 | 2.79E-03 | 2.70E-03 | 2.68E-03 | 2.79E-03 | 2.79E-03 | 2.79E-03 | 2.79E-03 |
| 4.36E+00 | 1.84E-03 | 2.25E-03 | 2.18E-03 | 2.17E-03 | 2.25E-03 | 2.25E-03 | 2.25E-03 | 2.25E-03 |
| 4.61E+00 | 1.28E-03 | 1.80E-03 | 1.74E-03 | 1.73E-03 | 1.80E-03 | 1.80E-03 | 1.80E-03 | 1.80E-03 |
| 4.88E+00 | 7.38E-04 | 1.41E-03 | 1.37E-03 | 1.36E-03 | 1.41E-03 | 1.41E-03 | 1.41E-03 | 1.41E-03 |
| 5.17E+00 | 3.25E-04 | 1.10E-03 | 1.06E-03 | 1.06E-03 | 1.10E-03 | 1.10E-03 | 1.10E-03 | 1.10E-03 |
| 5.47E+00 | 6.76E-05 | 8.40E-04 | 8.12E-04 | 8.08E-04 | 8.40E-04 | 8.40E-04 | 8.40E-04 | 8.40E-04 |
| 5.78E+00 | 1.21E-10 | 6.32E-04 | 6.11E-04 | 6.09E-04 | 6.32E-04 | 6.32E-04 | 6.32E-04 | 6.32E-04 |
| 6.12E+00 | 0.00E+00 | 4.68E-04 | 4.52E-04 | 4.51E-04 | 4.68E-04 | 4.68E-04 | 4.68E-04 | 4.68E-04 |
| 6.48E+00 | 0.00E+00 | 3.41E-04 | 3.29E-04 | 3.28E-04 | 3.41E-04 | 3.41E-04 | 3.41E-04 | 3.41E-04 |
| 6.86E+00 | 0.00E+00 | 2.44E-04 | 2.35E-04 | 2.35E-04 | 2.44E-04 | 2.44E-04 | 2.44E-04 | 2.44E-04 |
| 7.26E+00 | 0.00E+00 | 1.71E-04 | 1.64E-04 | 1.64E-04 | 1.71E-04 | 1.71E-04 | 1.71E-04 | 1.71E-04 |
| 7.68E+00 | 0.00E+00 | 1.17E-04 | 1.13E-04 | 1.13E-04 | 1.17E-04 | 1.17E-04 | 1.17E-04 | 1.17E-04 |
| 8.13E+00 | 0.00E+00 | 7.87E-05 | 7.56E-05 | 7.57E-05 | 7.87E-05 | 7.87E-05 | 7.87E-05 | 7.87E-05 |
| 8.60E+00 | 0.00E+00 | 5.16E-05 | 4.95E-05 | 4.97E-05 | 5.16E-05 | 5.16E-05 | 5.16E-05 | 5.16E-05 |
| 9.10E+00 | 0.00E+00 | 3.30E-05 | 3.17E-05 | 3.18E-05 | 3.30E-05 | 3.30E-05 | 3.30E-05 | 3.30E-05 |
| 9.63E+00 | 0.00E+00 | 2.06E-05 | 1.98E-05 | 1.98E-05 | 2.06E-05 | 2.06E-05 | 2.06E-05 | 2.06E-05 |
| 1.00E+01 | 0.00E+00 | 1.48E-05 | 1.42E-05 | 1.43E-05 | 1.48E-05 | 1.48E-05 | 1.48E-05 | 1.48E-05 |
| 1.02E+01 | 0.00E+00 | 1.25E-05 | 1.20E-05 | 1.20E-05 | 1.25E-05 | 1.25E-05 | 1.25E-05 | 1.25E-05 |
| 1.08E+01 | 0.00E+00 | 7.37E-06 | 7.05E-06 | 7.09E-06 | 7.37E-06 | 7.37E-06 | 7.37E-06 | 7.37E-06 |
| 1.14E+01 | 0.00E+00 | 4.21E-06 | 4.03E-06 | 4.05E-06 | 4.21E-06 | 4.21E-06 | 4.21E-06 | 4.21E-06 |
| 1.21E+01 | 0.00E+00 | 2.33E-06 | 2.23E-06 | 2.24E-06 | 2.33E-06 | 2.33E-06 | 2.33E-06 | 2.33E-06 |
| 1.28E+01 | 0.00E+00 | 1.25E-06 | 1.19E-06 | 1.20E-06 | 1.24E-06 | 1.25E-06 | 1.25E-06 | 1.25E-06 |
| 1.35E+01 | 0.00E+00 | 6.42E-07 | 6.13E-07 | 6.17E-07 | 6.41E-07 | 6.42E-07 | 6.42E-07 | 6.42E-07 |
| 1.43E+01 | 0.00E+00 | 3.18E-07 | 3.03E-07 | 3.06E-07 | 3.18E-07 | 3.18E-07 | 3.18E-07 | 3.18E-07 |
| 1.51E+01 | 0.00E+00 | 1.51E-07 | 1.44E-07 | 1.46E-07 | 1.51E-07 | 1.51E-07 | 1.51E-07 | 1.51E-07 |
| 1.60E+01 | 0.00E+00 | 6.90E-08 | 6.57E-08 | 6.63E-08 | 6.90E-08 | 6.90E-08 | 6.90E-08 | 6.90E-08 |
| 1.70E+01 | 0.00E+00 | 3.00E-08 | 2.86E-08 | 2.89E-08 | 3.00E-08 | 3.00E-08 | 3.00E-08 | 3.00E-08 |
| 1.80E+01 | 0.00E+00 | 1.25E-08 | 1.18E-08 | 1.20E-08 | 1.25E-08 | 1.25E-08 | 1.25E-08 | 1.25E-08 |
| 1.90E+01 | 0.00E+00 | 4.91E-09 | 4.67E-09 | 4.72E-09 | 4.91E-09 | 4.91E-09 | 4.91E-09 | 4.91E-09 |

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.01E+01 | 0.00E+00 | 1.83E-09 | 1.74E-09 | 1.76E-09 | 1.83E-09 | 1.83E-09 | 1.83E-09 | 1.83E-09 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

2.13E+01 0.00E+00 6.46E-10 6.13E-10 6.21E-10 6.46E-10 6.46E-10 6.46E-10 6.46E-10

2.25E+01 0.00E+00 2.14E-10 2.03E-10 2.06E-10 2.14E-10 2.14E-10 2.14E-10 2.14E-10

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.38E+01 | 0.00E+00 | 6.66E-11 | 6.31E-11 | 6.40E-11 | 6.66E-11 | 6.66E-11 | 6.66E-11 | 6.66E-11 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.52E+01 | 0.00E+00 | 1.94E-11 | 1.83E-11 | 1.86E-11 | 1.93E-11 | 1.94E-11 | 1.94E-11 | 1.94E-11 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.67E+01 | 0.00E+00 | 5.23E-12 | 4.95E-12 | 5.03E-12 | 5.23E-12 | 5.23E-12 | 5.23E-12 | 5.23E-12 |
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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.82E+01 | 0.00E+00 | 1.31E-12 | 1.24E-12 | 1.26E-12 | 1.31E-12 | 1.31E-12 | 1.31E-12 | 1.31E-12 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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| 2.99E+01 | 0.00E+00 | 3.03E-13 | 2.86E-13 | 2.91E-13 | 3.03E-13 | 3.03E-13 | 3.03E-13 | 3.03E-13 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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| 3.00E+01 | 0.00E+00 | 2.73E-13 | 2.57E-13 | 2.62E-13 | 2.73E-13 | 2.73E-13 | 2.73E-13 | 2.73E-13 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.16E+01 | 0.00E+00 | 6.43E-14 | 6.06E-14 | 6.17E-14 | 6.42E-14 | 6.43E-14 | 6.43E-14 | 6.43E-14 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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| 3.35E+01 | 0.00E+00 | 1.25E-14 | 1.17E-14 | 1.20E-14 | 1.25E-14 | 1.25E-14 | 1.25E-14 | 1.25E-14 |
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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.54E+01 | 0.00E+00 | 2.20E-15 | 2.07E-15 | 2.11E-15 | 2.19E-15 | 2.20E-15 | 2.20E-15 | 2.20E-15 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

3.75E+01 0.00E+00 3.50E-16 3.29E-16 3.36E-16 3.49E-16 3.50E-16 3.50E-16 3.50E-16

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.97E+01 | 0.00E+00 | 5.01E-17 | 4.70E-17 | 4.80E-17 | 5.00E-17 | 5.01E-17 | 5.01E-17 | 5.01E-17 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

4.20E+01 0.00E+00 6.40E-18 6.00E-18 6.14E-18 6.39E-18 6.40E-18 6.40E-18 6.40E-18

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| 4.44E+01 | 0.00E+00 | 7.25E-19 | 6.79E-19 | 6.95E-19 | 7.24E-19 | 7.25E-19 | 7.25E-19 | 7.25E-19 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

4.70E+01 0.00E+00 7.24E-20 6.77E-20 6.94E-20 7.23E-20 7.24E-20 7.24E-20 7.24E-20

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| 4.97E+01 | 0.00E+00 | 6.32E-21 | 5.90E-21 | 6.06E-21 | 6.31E-21 | 6.32E-21 | 6.32E-21 | 6.32E-21 |
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| 5.26E+01 | 0.00E+00 | 4.79E-22 | 4.47E-22 | 4.59E-22 | 4.78E-22 | 4.79E-22 | 4.79E-22 | 4.79E-22 |
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| 5.57E+01 | 0.00E+00 | 3.12E-23 | 2.91E-23 | 2.99E-23 | 3.11E-23 | 3.12E-23 | 3.12E-23 | 3.12E-23 |
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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 5.90E+01 | 0.00E+00 | 1.73E-24 | 1.62E-24 | 1.66E-24 | 1.73E-24 | 1.73E-24 | 1.73E-24 | 1.73E-24 |
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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 6.24E+01 | 0.00E+00 | 8.15E-26 | 7.58E-26 | 7.80E-26 | 8.12E-26 | 8.14E-26 | 8.15E-26 | 8.15E-26 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 6.60E+01 | 0.00E+00 | 3.20E-27 | 2.98E-27 | 3.06E-27 | 3.19E-27 | 3.20E-27 | 3.20E-27 | 3.20E-27 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 6.99E+01 | 0.00E+00 | 1.04E-28 | 9.64E-29 | 9.94E-29 | 1.04E-28 | 1.04E-28 | 1.04E-28 | 1.04E-28 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

7.39E+01 0.00E+00 2.58E-30 2.48E-30 2.58E-30 2.58E-30 2.58E-30 2.58E-30 2.58E-30

```
7.82E+01      0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00
```

[illegible]

[illegible]

[illegible]


```
9.81E+01      0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00
```

[illegible]

[illegible]

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

```
1.73E+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
```

[illegible]

[illegible]

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[illegible]

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[illegible]

[illegible]

[illegible]

[illegible]

```

3.05E+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

```

[illegible]


```
3.41E+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
```

```
3.61E+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
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Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.RAD

| Summary of dose at graphical times, reptition 2 | | | | | | | | |
|---|---|----------|----------|----------|----------|----------|----------|----------|
| Time | Dose statistics at graphical times, mrem/yr | | | | | | | |
| Years | Minimum | Maximum | Mean | Median | 90% | 95% | 97.5% | 99% |
| 0.00E+00 | 1.04E-01 | 1.09E-01 | 1.06E-01 | 1.05E-01 | 1.09E-01 | 1.09E-01 | 1.09E-01 | 1.09E-01 |
| 1.00E+00 | 4.25E-02 | 4.48E-02 | 4.35E-02 | 4.32E-02 | 4.48E-02 | 4.48E-02 | 4.48E-02 | 4.48E-02 |
| 1.06E+00 | 4.04E-02 | 4.26E-02 | 4.13E-02 | 4.10E-02 | 4.26E-02 | 4.26E-02 | 4.26E-02 | 4.26E-02 |
| 1.12E+00 | 3.82E-02 | 4.03E-02 | 3.91E-02 | 3.88E-02 | 4.03E-02 | 4.03E-02 | 4.03E-02 | 4.03E-02 |
| 1.19E+00 | 3.60E-02 | 3.80E-02 | 3.69E-02 | 3.66E-02 | 3.80E-02 | 3.80E-02 | 3.80E-02 | 3.80E-02 |
| 1.25E+00 | 3.39E-02 | 3.57E-02 | 3.47E-02 | 3.44E-02 | 3.57E-02 | 3.57E-02 | 3.57E-02 | 3.57E-02 |
| 1.33E+00 | 3.18E-02 | 3.35E-02 | 3.25E-02 | 3.23E-02 | 3.35E-02 | 3.35E-02 | 3.35E-02 | 3.35E-02 |
| 1.40E+00 | 2.96E-02 | 3.13E-02 | 3.03E-02 | 3.01E-02 | 3.13E-02 | 3.13E-02 | 3.13E-02 | 3.13E-02 |
| 1.49E+00 | 2.76E-02 | 2.91E-02 | 2.82E-02 | 2.80E-02 | 2.91E-02 | 2.91E-02 | 2.91E-02 | 2.91E-02 |
| 1.57E+00 | 2.55E-02 | 2.69E-02 | 2.61E-02 | 2.59E-02 | 2.69E-02 | 2.69E-02 | 2.69E-02 | 2.69E-02 |
| 1.66E+00 | 2.35E-02 | 2.48E-02 | 2.41E-02 | 2.39E-02 | 2.48E-02 | 2.48E-02 | 2.48E-02 | 2.48E-02 |
| 1.76E+00 | 2.16E-02 | 2.28E-02 | 2.21E-02 | 2.19E-02 | 2.27E-02 | 2.27E-02 | 2.27E-02 | 2.27E-02 |
| 1.86E+00 | 1.97E-02 | 2.08E-02 | 2.01E-02 | 2.00E-02 | 2.08E-02 | 2.08E-02 | 2.08E-02 | 2.08E-02 |
| 1.97E+00 | 1.78E-02 | 1.89E-02 | 1.83E-02 | 1.82E-02 | 1.88E-02 | 1.88E-02 | 1.88E-02 | 1.88E-02 |
| 2.09E+00 | 1.61E-02 | 1.70E-02 | 1.65E-02 | 1.64E-02 | 1.70E-02 | 1.70E-02 | 1.70E-02 | 1.70E-02 |
| 2.21E+00 | 1.44E-02 | 1.53E-02 | 1.48E-02 | 1.47E-02 | 1.53E-02 | 1.53E-02 | 1.53E-02 | 1.53E-02 |
| 2.34E+00 | 1.29E-02 | 1.36E-02 | 1.32E-02 | 1.31E-02 | 1.36E-02 | 1.36E-02 | 1.36E-02 | 1.36E-02 |
| 2.47E+00 | 1.14E-02 | 1.21E-02 | 1.17E-02 | 1.16E-02 | 1.21E-02 | 1.21E-02 | 1.21E-02 | 1.21E-02 |
| 2.62E+00 | 9.99E-03 | 1.06E-02 | 1.03E-02 | 1.02E-02 | 1.06E-02 | 1.06E-02 | 1.06E-02 | 1.06E-02 |
| 2.77E+00 | 8.70E-03 | 9.26E-03 | 8.98E-03 | 8.92E-03 | 9.26E-03 | 9.26E-03 | 9.26E-03 | 9.26E-03 |
| 2.93E+00 | 7.51E-03 | 8.02E-03 | 7.78E-03 | 7.72E-03 | 8.02E-03 | 8.02E-03 | 8.02E-03 | 8.02E-03 |
| 3.00E+00 | 7.06E-03 | 7.55E-03 | 7.32E-03 | 7.27E-03 | 7.55E-03 | 7.55E-03 | 7.55E-03 | 7.55E-03 |
| 3.10E+00 | 6.42E-03 | 6.89E-03 | 6.68E-03 | 6.63E-03 | 6.89E-03 | 6.89E-03 | 6.89E-03 | 6.89E-03 |
| 3.28E+00 | 5.42E-03 | 5.86E-03 | 5.69E-03 | 5.65E-03 | 5.86E-03 | 5.86E-03 | 5.86E-03 | 5.86E-03 |
| 3.48E+00 | 4.50E-03 | 4.95E-03 | 4.80E-03 | 4.76E-03 | 4.94E-03 | 4.95E-03 | 4.95E-03 | 4.95E-03 |
| 3.68E+00 | 3.67E-03 | 4.13E-03 | 4.00E-03 | 3.98E-03 | 4.13E-03 | 4.13E-03 | 4.13E-03 | 4.13E-03 |
| 3.89E+00 | 2.90E-03 | 3.41E-03 | 3.31E-03 | 3.29E-03 | 3.41E-03 | 3.41E-03 | 3.41E-03 | 3.41E-03 |
| 4.12E+00 | 2.18E-03 | 2.79E-03 | 2.70E-03 | 2.68E-03 | 2.79E-03 | 2.79E-03 | 2.79E-03 | 2.79E-03 |
| 4.36E+00 | 1.46E-03 | 2.25E-03 | 2.18E-03 | 2.17E-03 | 2.25E-03 | 2.25E-03 | 2.25E-03 | 2.25E-03 |
| 4.61E+00 | 7.99E-04 | 1.80E-03 | 1.74E-03 | 1.73E-03 | 1.80E-03 | 1.80E-03 | 1.80E-03 | 1.80E-03 |
| 4.88E+00 | 3.26E-04 | 1.41E-03 | 1.37E-03 | 1.36E-03 | 1.41E-03 | 1.41E-03 | 1.41E-03 | 1.41E-03 |
| 5.17E+00 | 4.48E-05 | 1.10E-03 | 1.06E-03 | 1.06E-03 | 1.10E-03 | 1.10E-03 | 1.10E-03 | 1.10E-03 |
| 5.50E+11 | 8.40E-04 | 8.11E-04 | 8.08E-04 | 8.40E-04 | 8.40E-04 | 8.40E-04 | 8.40E-04 | 8.40E-04 |
| 5.57E+00 | 0.00E+00 | 6.32E-04 | 6.10E-04 | 6.09E-04 | 6.32E-04 | 6.32E-04 | 6.32E-04 | 6.32E-04 |
| 6.12E+00 | 0.00E+00 | 4.68E-04 | 4.52E-04 | 4.51E-04 | 4.68E-04 | 4.68E-04 | 4.68E-04 | 4.68E-04 |
| 6.48E+00 | 0.00E+00 | 3.41E-04 | 3.29E-04 | 3.28E-04 | 3.41E-04 | 3.41E-04 | 3.41E-04 | 3.41E-04 |
| 6.86E+00 | 0.00E+00 | 2.44E-04 | 2.35E-04 | 2.34E-04 | 2.44E-04 | 2.44E-04 | 2.44E-04 | 2.44E-04 |
| 7.26E+00 | 0.00E+00 | 1.71E-04 | 1.64E-04 | 1.64E-04 | 1.71E-04 | 1.71E-04 | 1.71E-04 | 1.71E-04 |
| 7.68E+00 | 0.00E+00 | 1.17E-04 | 1.13E-04 | 1.13E-04 | 1.17E-04 | 1.17E-04 | 1.17E-04 | 1.17E-04 |
| 8.13E+00 | 0.00E+00 | 7.87E-05 | 7.56E-05 | 7.57E-05 | 7.86E-05 | 7.87E-05 | 7.87E-05 | 7.87E-05 |
| 8.60E+00 | 0.00E+00 | 5.16E-05 | 4.96E-05 | 4.97E-05 | 5.16E-05 | 5.16E-05 | 5.16E-05 | 5.16E-05 |
| 9.10E+00 | 0.00E+00 | 3.30E-05 | 3.17E-05 | 3.18E-05 | 3.30E-05 | 3.30E-05 | 3.30E-05 | 3.30E-05 |
| 9.63E+00 | 0.00E+00 | 2.06E-05 | 1.98E-05 | 1.98E-05 | 2.06E-05 | 2.06E-05 | 2.06E-05 | 2.06E-05 |
| 1.00E+01 | 0.00E+00 | 1.48E-05 | 1.42E-05 | 1.43E-05 | 1.48E-05 | 1.48E-05 | 1.48E-05 | 1.48E-05 |
| 1.02E+01 | 0.00E+00 | 1.25E-05 | 1.20E-05 | 1.20E-05 | 1.25E-05 | 1.25E-05 | 1.25E-05 | 1.25E-05 |
| 1.08E+01 | 0.00E+00 | 7.37E-06 | 7.06E-06 | 7.09E-06 | 7.37E-06 | 7.37E-06 | 7.37E-06 | 7.37E-06 |
| 1.14E+01 | 0.00E+00 | 4.21E-06 | 4.03E-06 | 4.05E-06 | 4.21E-06 | 4.21E-06 | 4.21E-06 | 4.21E-06 |
| 1.21E+01 | 0.00E+00 | 2.33E-06 | 2.23E-06 | 2.24E-06 | 2.33E-06 | 2.33E-06 | 2.33E-06 | 2.33E-06 |
| 1.28E+01 | 0.00E+00 | 1.25E-06 | 1.19E-06 | 1.20E-06 | 1.24E-06 | 1.25E-06 | 1.25E-06 | 1.25E-06 |
| 1.35E+01 | 0.00E+00 | 6.42E-07 | 6.13E-07 | 6.17E-07 | 6.41E-07 | 6.42E-07 | 6.42E-07 | 6.42E-07 |
| 1.43E+01 | 0.00E+00 | 3.18E-07 | 3.03E-07 | 3.06E-07 | 3.18E-07 | 3.18E-07 | 3.18E-07 | 3.18E-07 |
| 1.51E+01 | 0.00E+00 | 1.51E-07 | 1.44E-07 | 1.46E-07 | 1.51E-07 | 1.51E-07 | 1.51E-07 | 1.51E-07 |
| 1.60E+01 | 0.00E+00 | 6.90E-08 | 6.57E-08 | 6.63E-08 | 6.90E-08 | 6.90E-08 | 6.90E-08 | 6.90E-08 |
| 1.70E+01 | 0.00E+00 | 3.00E-08 | 2.86E-08 | 2.89E-08 | 3.00E-08 | 3.00E-08 | 3.00E-08 | 3.00E-08 |
| 1.80E+01 | 0.00E+00 | 1.25E-08 | 1.18E-08 | 1.20E-08 | 1.25E-08 | 1.25E-08 | 1.25E-08 | 1.25E-08 |
| 1.90E+01 | 0.00E+00 | 4.91E-09 | 4.66E-09 | 4.72E-09 | 4.91E-09 | 4.91E-09 | 4.91E-09 | 4.91E-09 |

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.01E+01 | 0.00E+00 | 1.83E-09 | 1.74E-09 | 1.76E-09 | 1.83E-09 | 1.83E-09 | 1.83E-09 | 1.83E-09 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

2.13E+01 0.00E+00 6.46E-10 6.12E-10 6.21E-10 6.45E-10 6.46E-10 6.46E-10 6.46E-10

2.25E+01 0.00E+00 2.14E-10 2.03E-10 2.06E-10 2.14E-10 2.14E-10 2.14E-10 2.14E-10

2.38E+01 0.00E+00 6.66E-11 6.30E-11 6.40E-11 6.66E-11 6.66E-11 6.66E-11 6.66E-11

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.52E+01 | 0.00E+00 | 1.94E-11 | 1.83E-11 | 1.86E-11 | 1.93E-11 | 1.94E-11 | 1.94E-11 | 1.94E-11 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

2.67E+01 0.00E+00 5.23E-12 4.94E-12 5.02E-12 5.23E-12 5.23E-12 5.23E-12 5.23E-12

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.82E+01 | 0.00E+00 | 1.31E-12 | 1.24E-12 | 1.26E-12 | 1.31E-12 | 1.31E-12 | 1.31E-12 | 1.31E-12 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.99E+01 | 0.00E+00 | 3.03E-13 | 2.86E-13 | 2.91E-13 | 3.03E-13 | 3.03E-13 | 3.03E-13 | 3.03E-13 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.00E+01 | 0.00E+00 | 2.73E-13 | 2.57E-13 | 2.62E-13 | 2.72E-13 | 2.73E-13 | 2.73E-13 | 2.73E-13 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.16E+01 | 0.00E+00 | 6.43E-14 | 6.05E-14 | 6.17E-14 | 6.42E-14 | 6.43E-14 | 6.43E-14 | 6.43E-14 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.35E+01 | 0.00E+00 | 1.25E-14 | 1.17E-14 | 1.20E-14 | 1.25E-14 | 1.25E-14 | 1.25E-14 | 1.25E-14 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.54E+01 | 0.00E+00 | 2.20E-15 | 2.07E-15 | 2.11E-15 | 2.19E-15 | 2.20E-15 | 2.20E-15 | 2.20E-15 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.75E+01 | 0.00E+00 | 3.50E-16 | 3.28E-16 | 3.36E-16 | 3.49E-16 | 3.50E-16 | 3.50E-16 | 3.50E-16 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.97E+01 | 0.00E+00 | 5.01E-17 | 4.70E-17 | 4.80E-17 | 5.00E-17 | 5.00E-17 | 5.01E-17 | 5.01E-17 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

4.20E+01 0.00E+00 6.40E-18 5.99E-18 6.13E-18 6.39E-18 6.39E-18 6.40E-18 6.40E-18

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 4.44E+01 | 0.00E+00 | 7.25E-19 | 6.79E-19 | 6.95E-19 | 7.24E-19 | 7.25E-19 | 7.25E-19 | 7.25E-19 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

4.70E+01 0.00E+00 7.24E-20 6.77E-20 6.94E-20 7.22E-20 7.23E-20 7.24E-20 7.24E-20

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 4.97E+01 | 0.00E+00 | 6.32E-21 | 5.91E-21 | 6.06E-21 | 6.31E-21 | 6.32E-21 | 6.32E-21 | 6.32E-21 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 5.26E+01 | 0.00E+00 | 4.79E-22 | 4.47E-22 | 4.58E-22 | 4.78E-22 | 4.78E-22 | 4.79E-22 | 4.79E-22 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

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|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 5.57E+01 | 0.00E+00 | 3.12E-23 | 2.91E-23 | 2.99E-23 | 3.11E-23 | 3.12E-23 | 3.12E-23 | 3.12E-23 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 5.90E+01 | 0.00E+00 | 1.73E-24 | 1.61E-24 | 1.66E-24 | 1.73E-24 | 1.73E-24 | 1.73E-24 | 1.73E-24 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 6.24E+01 | 0.00E+00 | 8.15E-26 | 7.57E-26 | 7.79E-26 | 8.12E-26 | 8.14E-26 | 8.15E-26 | 8.15E-26 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 6.60E+01 | 0.00E+00 | 3.20E-27 | 2.97E-27 | 3.06E-27 | 3.19E-27 | 3.20E-27 | 3.20E-27 | 3.20E-27 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

6.99E+01 0.00E+00 1.04E-28 9.63E-29 9.93E-29 1.04E-28 1.04E-28 1.04E-28 1.04E-28

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 7.39E+01 | 0.00E+00 | 2.58E-30 | 2.47E-30 | 2.58E-30 | 2.58E-30 | 2.58E-30 | 2.58E-30 | 2.58E-30 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

[illegible]

[illegible]

```
8.76E+01      0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00
```

[illegible]

```
9.81E+01      0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00
```

[illegible]

[illegible]

[illegible]


```
1.16E+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
```

[illegible]

[illegible]

[illegible]

```
1.46E+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
```

[illegible]

[illegible]

```
1.73E+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
```


[illegible]

[illegible]

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[illegible]

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[illegible]

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[illegible]

[illegible]

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

```

5.36E+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

```

[illegible]

[illegible]

```
6.36E+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
```


[illegible]

[illegible]

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[illegible]

[illegible]

[illegible]

Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.RAD

| Summary of dose at graphical times, reptition 3 | | | | | | | | |
|---|---|----------|----------|----------|----------|----------|----------|----------|
| Time | Dose statistics at graphical times, mrem/yr | | | | | | | |
| Years | Minimum | Maximum | Mean | Median | 90% | 95% | 97.5% | 99% |
| 0.00E+00 | 1.04E-01 | 1.09E-01 | 1.06E-01 | 1.05E-01 | 1.09E-01 | 1.09E-01 | 1.09E-01 | 1.09E-01 |
| 1.00E+00 | 4.25E-02 | 4.48E-02 | 4.35E-02 | 4.32E-02 | 4.48E-02 | 4.48E-02 | 4.48E-02 | 4.48E-02 |
| 1.06E+00 | 4.03E-02 | 4.26E-02 | 4.13E-02 | 4.10E-02 | 4.26E-02 | 4.26E-02 | 4.26E-02 | 4.26E-02 |
| 1.12E+00 | 3.82E-02 | 4.03E-02 | 3.91E-02 | 3.88E-02 | 4.03E-02 | 4.03E-02 | 4.03E-02 | 4.03E-02 |
| 1.19E+00 | 3.60E-02 | 3.80E-02 | 3.69E-02 | 3.66E-02 | 3.80E-02 | 3.80E-02 | 3.80E-02 | 3.80E-02 |
| 1.25E+00 | 3.39E-02 | 3.57E-02 | 3.47E-02 | 3.44E-02 | 3.57E-02 | 3.57E-02 | 3.57E-02 | 3.57E-02 |
| 1.33E+00 | 3.17E-02 | 3.35E-02 | 3.25E-02 | 3.23E-02 | 3.35E-02 | 3.35E-02 | 3.35E-02 | 3.35E-02 |
| 1.40E+00 | 2.96E-02 | 3.13E-02 | 3.03E-02 | 3.01E-02 | 3.13E-02 | 3.13E-02 | 3.13E-02 | 3.13E-02 |
| 1.49E+00 | 2.75E-02 | 2.91E-02 | 2.82E-02 | 2.80E-02 | 2.91E-02 | 2.91E-02 | 2.91E-02 | 2.91E-02 |
| 1.57E+00 | 2.55E-02 | 2.69E-02 | 2.61E-02 | 2.59E-02 | 2.69E-02 | 2.69E-02 | 2.69E-02 | 2.69E-02 |
| 1.66E+00 | 2.35E-02 | 2.48E-02 | 2.41E-02 | 2.39E-02 | 2.48E-02 | 2.48E-02 | 2.48E-02 | 2.48E-02 |
| 1.76E+00 | 2.15E-02 | 2.28E-02 | 2.21E-02 | 2.19E-02 | 2.27E-02 | 2.27E-02 | 2.27E-02 | 2.27E-02 |
| 1.86E+00 | 1.96E-02 | 2.08E-02 | 2.01E-02 | 2.00E-02 | 2.08E-02 | 2.08E-02 | 2.08E-02 | 2.08E-02 |
| 1.97E+00 | 1.78E-02 | 1.88E-02 | 1.83E-02 | 1.82E-02 | 1.88E-02 | 1.88E-02 | 1.88E-02 | 1.88E-02 |
| 2.09E+00 | 1.61E-02 | 1.70E-02 | 1.65E-02 | 1.64E-02 | 1.70E-02 | 1.70E-02 | 1.70E-02 | 1.70E-02 |
| 2.21E+00 | 1.44E-02 | 1.53E-02 | 1.48E-02 | 1.47E-02 | 1.53E-02 | 1.53E-02 | 1.53E-02 | 1.53E-02 |
| 2.34E+00 | 1.29E-02 | 1.36E-02 | 1.32E-02 | 1.31E-02 | 1.36E-02 | 1.36E-02 | 1.36E-02 | 1.36E-02 |
| 2.47E+00 | 1.14E-02 | 1.21E-02 | 1.17E-02 | 1.16E-02 | 1.21E-02 | 1.21E-02 | 1.21E-02 | 1.21E-02 |
| 2.62E+00 | 1.00E-02 | 1.06E-02 | 1.03E-02 | 1.02E-02 | 1.06E-02 | 1.06E-02 | 1.06E-02 | 1.06E-02 |
| 2.77E+00 | 8.75E-03 | 9.26E-03 | 8.98E-03 | 8.92E-03 | 9.26E-03 | 9.26E-03 | 9.26E-03 | 9.26E-03 |
| 2.93E+00 | 7.57E-03 | 8.02E-03 | 7.78E-03 | 7.72E-03 | 8.02E-03 | 8.02E-03 | 8.02E-03 | 8.02E-03 |
| 3.00E+00 | 7.13E-03 | 7.55E-03 | 7.32E-03 | 7.27E-03 | 7.55E-03 | 7.55E-03 | 7.55E-03 | 7.55E-03 |
| 3.10E+00 | 6.50E-03 | 6.89E-03 | 6.68E-03 | 6.63E-03 | 6.89E-03 | 6.89E-03 | 6.89E-03 | 6.89E-03 |
| 3.28E+00 | 5.49E-03 | 5.86E-03 | 5.69E-03 | 5.65E-03 | 5.86E-03 | 5.86E-03 | 5.86E-03 | 5.86E-03 |
| 3.48E+00 | 4.57E-03 | 4.95E-03 | 4.80E-03 | 4.76E-03 | 4.95E-03 | 4.95E-03 | 4.95E-03 | 4.95E-03 |
| 3.68E+00 | 3.74E-03 | 4.13E-03 | 4.00E-03 | 3.97E-03 | 4.13E-03 | 4.13E-03 | 4.13E-03 | 4.13E-03 |
| 3.89E+00 | 2.98E-03 | 3.41E-03 | 3.31E-03 | 3.28E-03 | 3.41E-03 | 3.41E-03 | 3.41E-03 | 3.41E-03 |
| 4.12E+00 | 2.28E-03 | 2.79E-03 | 2.70E-03 | 2.68E-03 | 2.79E-03 | 2.79E-03 | 2.79E-03 | 2.79E-03 |
| 4.36E+00 | 1.60E-03 | 2.25E-03 | 2.18E-03 | 2.17E-03 | 2.25E-03 | 2.25E-03 | 2.25E-03 | 2.25E-03 |
| 4.61E+00 | 9.39E-04 | 1.80E-03 | 1.74E-03 | 1.73E-03 | 1.80E-03 | 1.80E-03 | 1.80E-03 | 1.80E-03 |
| 4.88E+00 | 4.34E-04 | 1.41E-03 | 1.37E-03 | 1.36E-03 | 1.41E-03 | 1.41E-03 | 1.41E-03 | 1.41E-03 |
| 5.17E+00 | 1.05E-04 | 1.10E-03 | 1.06E-03 | 1.06E-03 | 1.10E-03 | 1.10E-03 | 1.10E-03 | 1.10E-03 |
| 5.47E+00 | 4.22E-10 | 8.40E-04 | 8.11E-04 | 8.08E-04 | 8.40E-04 | 8.40E-04 | 8.40E-04 | 8.40E-04 |
| 5.78E+00 | 0.00E+00 | 6.32E-04 | 6.10E-04 | 6.09E-04 | 6.32E-04 | 6.32E-04 | 6.32E-04 | 6.32E-04 |
| 6.12E+00 | 0.00E+00 | 4.68E-04 | 4.52E-04 | 4.51E-04 | 4.68E-04 | 4.68E-04 | 4.68E-04 | 4.68E-04 |
| 6.48E+00 | 0.00E+00 | 3.41E-04 | 3.29E-04 | 3.28E-04 | 3.41E-04 | 3.41E-04 | 3.41E-04 | 3.41E-04 |
| 6.86E+00 | 0.00E+00 | 2.44E-04 | 2.35E-04 | 2.34E-04 | 2.44E-04 | 2.44E-04 | 2.44E-04 | 2.44E-04 |
| 7.26E+00 | 0.00E+00 | 1.71E-04 | 1.64E-04 | 1.64E-04 | 1.71E-04 | 1.71E-04 | 1.71E-04 | 1.71E-04 |
| 7.68E+00 | 0.00E+00 | 1.17E-04 | 1.13E-04 | 1.13E-04 | 1.17E-04 | 1.17E-04 | 1.17E-04 | 1.17E-04 |
| 8.13E+00 | 0.00E+00 | 7.87E-05 | 7.56E-05 | 7.57E-05 | 7.87E-05 | 7.87E-05 | 7.87E-05 | 7.87E-05 |
| 8.60E+00 | 0.00E+00 | 5.16E-05 | 4.96E-05 | 4.97E-05 | 5.16E-05 | 5.16E-05 | 5.16E-05 | 5.16E-05 |
| 9.10E+00 | 0.00E+00 | 3.30E-05 | 3.17E-05 | 3.18E-05 | 3.30E-05 | 3.30E-05 | 3.30E-05 | 3.30E-05 |
| 9.63E+00 | 0.00E+00 | 2.06E-05 | 1.98E-05 | 1.98E-05 | 2.06E-05 | 2.06E-05 | 2.06E-05 | 2.06E-05 |
| 1.00E+01 | 0.00E+00 | 1.48E-05 | 1.42E-05 | 1.43E-05 | 1.48E-05 | 1.48E-05 | 1.48E-05 | 1.48E-05 |
| 1.02E+01 | 0.00E+00 | 1.25E-05 | 1.20E-05 | 1.20E-05 | 1.25E-05 | 1.25E-05 | 1.25E-05 | 1.25E-05 |
| 1.08E+01 | 0.00E+00 | 7.37E-06 | 7.06E-06 | 7.09E-06 | 7.37E-06 | 7.37E-06 | 7.37E-06 | 7.37E-06 |
| 1.14E+01 | 0.00E+00 | 4.21E-06 | 4.03E-06 | 4.05E-06 | 4.21E-06 | 4.21E-06 | 4.21E-06 | 4.21E-06 |
| 1.21E+01 | 0.00E+00 | 2.33E-06 | 2.23E-06 | 2.24E-06 | 2.33E-06 | 2.33E-06 | 2.33E-06 | 2.33E-06 |
| 1.28E+01 | 0.00E+00 | 1.25E-06 | 1.19E-06 | 1.20E-06 | 1.24E-06 | 1.25E-06 | 1.25E-06 | 1.25E-06 |
| 1.35E+01 | 0.00E+00 | 6.42E-07 | 6.13E-07 | 6.17E-07 | 6.41E-07 | 6.42E-07 | 6.42E-07 | 6.42E-07 |
| 1.43E+01 | 0.00E+00 | 3.18E-07 | 3.03E-07 | 3.06E-07 | 3.18E-07 | 3.18E-07 | 3.18E-07 | 3.18E-07 |
| 1.51E+01 | 0.00E+00 | 1.51E-07 | 1.44E-07 | 1.46E-07 | 1.51E-07 | 1.51E-07 | 1.51E-07 | 1.51E-07 |
| 1.60E+01 | 0.00E+00 | 6.90E-08 | 6.57E-08 | 6.63E-08 | 6.90E-08 | 6.90E-08 | 6.90E-08 | 6.90E-08 |
| 1.70E+01 | 0.00E+00 | 3.00E-08 | 2.86E-08 | 2.89E-08 | 3.00E-08 | 3.00E-08 | 3.00E-08 | 3.00E-08 |
| 1.80E+01 | 0.00E+00 | 1.25E-08 | 1.18E-08 | 1.20E-08 | 1.25E-08 | 1.25E-08 | 1.25E-08 | 1.25E-08 |
| 1.90E+01 | 0.00E+00 | 4.91E-09 | 4.67E-09 | 4.72E-09 | 4.91E-09 | 4.91E-09 | 4.91E-09 | 4.91E-09 |

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.01E+01 | 0.00E+00 | 1.83E-09 | 1.74E-09 | 1.76E-09 | 1.83E-09 | 1.83E-09 | 1.83E-09 | 1.83E-09 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

2.13E+01 0.00E+00 6.46E-10 6.12E-10 6.21E-10 6.45E-10 6.46E-10 6.46E-10 6.46E-10

2.25E+01 0.00E+00 2.14E-10 2.03E-10 2.06E-10 2.14E-10 2.14E-10 2.14E-10 2.14E-10

2.38E+01 0.00E+00 6.66E-11 6.30E-11 6.40E-11 6.66E-11 6.66E-11 6.66E-11 6.66E-11

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.52E+01 | 0.00E+00 | 1.94E-11 | 1.83E-11 | 1.86E-11 | 1.93E-11 | 1.94E-11 | 1.94E-11 | 1.94E-11 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.67E+01 | 0.00E+00 | 5.23E-12 | 4.94E-12 | 5.02E-12 | 5.23E-12 | 5.23E-12 | 5.23E-12 | 5.23E-12 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.82E+01 | 0.00E+00 | 1.31E-12 | 1.24E-12 | 1.26E-12 | 1.31E-12 | 1.31E-12 | 1.31E-12 | 1.31E-12 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.99E+01 | 0.00E+00 | 3.03E-13 | 2.86E-13 | 2.91E-13 | 3.03E-13 | 3.03E-13 | 3.03E-13 | 3.03E-13 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.00E+01 | 0.00E+00 | 2.73E-13 | 2.57E-13 | 2.62E-13 | 2.72E-13 | 2.73E-13 | 2.73E-13 | 2.73E-13 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.16E+01 | 0.00E+00 | 6.43E-14 | 6.06E-14 | 6.17E-14 | 6.42E-14 | 6.43E-14 | 6.43E-14 | 6.43E-14 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.35E+01 | 0.00E+00 | 1.25E-14 | 1.17E-14 | 1.20E-14 | 1.24E-14 | 1.25E-14 | 1.25E-14 | 1.25E-14 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.54E+01 | 0.00E+00 | 2.20E-15 | 2.07E-15 | 2.11E-15 | 2.19E-15 | 2.20E-15 | 2.20E-15 | 2.20E-15 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

3.75E+01 0.00E+00 3.50E-16 3.29E-16 3.36E-16 3.49E-16 3.50E-16 3.50E-16 3.50E-16

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.97E+01 | 0.00E+00 | 5.01E-17 | 4.69E-17 | 4.80E-17 | 5.00E-17 | 5.01E-17 | 5.01E-17 | 5.01E-17 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

4.20E+01 0.00E+00 6.40E-18 5.99E-18 6.13E-18 6.39E-18 6.40E-18 6.40E-18 6.40E-18

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 4.44E+01 | 0.00E+00 | 7.25E-19 | 6.79E-19 | 6.95E-19 | 7.24E-19 | 7.25E-19 | 7.25E-19 | 7.25E-19 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

4.70E+01 0.00E+00 7.24E-20 6.77E-20 6.94E-20 7.22E-20 7.24E-20 7.24E-20 7.24E-20

4.97E+01 0.00E+00 6.32E-21 5.90E-21 6.06E-21 6.31E-21 6.32E-21 6.32E-21 6.32E-21

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 5.26E+01 | 0.00E+00 | 4.79E-22 | 4.46E-22 | 4.59E-22 | 4.78E-22 | 4.79E-22 | 4.79E-22 | 4.79E-22 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 5.57E+01 | 0.00E+00 | 3.12E-23 | 2.91E-23 | 2.99E-23 | 3.11E-23 | 3.12E-23 | 3.12E-23 | 3.12E-23 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 5.90E+01 | 0.00E+00 | 1.73E-24 | 1.61E-24 | 1.66E-24 | 1.73E-24 | 1.73E-24 | 1.73E-24 | 1.73E-24 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 6.24E+01 | 0.00E+00 | 8.15E-26 | 7.57E-26 | 7.80E-26 | 8.12E-26 | 8.14E-26 | 8.15E-26 | 8.15E-26 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 6.60E+01 | 0.00E+00 | 3.20E-27 | 2.97E-27 | 3.06E-27 | 3.19E-27 | 3.20E-27 | 3.20E-27 | 3.20E-27 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

| | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 6.99E+01 | 0.00E+00 | 1.04E-28 | 9.64E-29 | 9.94E-29 | 1.04E-28 | 1.04E-28 | 1.04E-28 | 1.04E-28 |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|

7.39E+01 0.00E+00 2.58E-30 2.48E-30 2.58E-30 2.58E-30 2.58E-30 2.58E-30 2.58E-30

[illegible]

[illegible]

```
9.27E+01      0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00
```



```
9.81E+01      0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00
```

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

```
1.73E+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
```

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]


```
3.61E+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
```

[illegible]

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Probabilistic results summary : RESRAD Default Parameters

File : C:\USERS\DNF\DOCUMENTS\FT CALHOUN\RESRAD INPUT FILES\SOIL UNCERTAINTY ANALYSIS\FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 | 1.060E-01 |
| 2 | 0.000E+00 | 1.060E-01 |
| 3 | 0.000E+00 | 1.060E-01 |

Title : RESRAD Default Parameters
Input File : FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 |
|---------------------------------------|-----------|-----------|-----------|-----------|

| | | | | | | | | |
|--|----|-------|----|-------|----|-------|----|-------|
| Contaminated zone erosion rate | 2 | -0.13 | 2 | -0.04 | 18 | 0.00 | 18 | 0.00 |
| Contaminated zone b parameter | 15 | -0.01 | 15 | 0.00 | 3 | 0.06 | 3 | 0.00 |
| Evapotranspiration coefficient | 10 | -0.02 | 10 | -0.01 | 8 | 0.04 | 8 | 0.00 |
| Wind Speed | 12 | -0.01 | 12 | 0.00 | 10 | -0.03 | 10 | 0.00 |
| Runoff coefficient | 4 | -0.06 | 4 | -0.02 | 4 | 0.06 | 4 | 0.00 |
| Well pump intake depth | 7 | -0.04 | 7 | -0.01 | 16 | 0.01 | 16 | 0.00 |
| b Parameter of Unsaturated zone 1 | 3 | -0.08 | 3 | -0.02 | 17 | 0.00 | 17 | 0.00 |
| Mass loading for inhalation | 5 | 0.06 | 5 | 0.02 | 11 | 0.02 | 11 | 0.00 |
| Indoor dust filtration factor | 11 | 0.02 | 11 | 0.00 | 2 | 0.10 | 2 | 0.01 |
| Depth of soil mixing layer | 9 | 0.02 | 9 | 0.01 | 12 | -0.02 | 12 | 0.00 |
| Depth of roots | 1 | -0.96 | 1 | -0.96 | 1 | -1.00 | 1 | -1.00 |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | 16 | -0.01 | 16 | 0.00 | 15 | -0.01 | 15 | 0.00 |
| Weathering removal constant of all vegetation | 18 | 0.00 | 18 | 0.00 | 13 | -0.01 | 13 | 0.00 |
| Wet foliar interception fraction of leafy vegetables | 14 | -0.01 | 14 | 0.00 | 14 | -0.01 | 14 | 0.00 |
| Humidity in air | 13 | 0.01 | 13 | 0.00 | 6 | 0.04 | 6 | 0.00 |
| Kd of Ce-144 in Contaminated Zone | 8 | 0.03 | 8 | 0.01 | 9 | 0.03 | 9 | 0.00 |
| Kd of Ce-144 in Unsaturated Zone 1 | 6 | 0.05 | 6 | 0.01 | 5 | 0.06 | 5 | 0.00 |
| Kd of Ce-144 in Saturated Zone | 17 | -0.01 | 17 | 0.00 | 7 | 0.04 | 7 | 0.00 |

| | | | | |
|----------|------|------|------|------|
| R-SQUARE | 0.92 | 0.92 | 0.99 | 0.99 |
|----------|------|------|------|------|

-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 Parameters

Input File : FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 |
|---------------------------------------|-----------|-----------|-----------|-----------|
|---------------------------------------|-----------|-----------|-----------|-----------|

| | | | | | | | | |
|--|----|-------|----|-------|----|-------|----|-------|
| Contaminated zone erosion rate | 3 | -0.12 | 3 | -0.03 | 17 | -0.01 | 17 | 0.00 |
| Contaminated zone b parameter | 13 | -0.03 | 13 | -0.01 | 16 | 0.01 | 16 | 0.00 |
| Evapotranspiration coefficient | 15 | 0.02 | 15 | 0.01 | 13 | 0.02 | 13 | 0.00 |
| Wind Speed | 16 | -0.02 | 16 | 0.00 | 6 | 0.06 | 6 | 0.00 |
| Runoff coefficient | 10 | 0.05 | 10 | 0.01 | 15 | 0.01 | 15 | 0.00 |
| Well pump intake depth | 4 | -0.11 | 4 | -0.03 | 14 | -0.02 | 14 | 0.00 |
| b Parameter of Unsaturated zone 1 | 6 | -0.09 | 6 | -0.02 | 7 | 0.04 | 7 | 0.00 |
| Mass loading for inhalation | 2 | 0.13 | 2 | 0.04 | 2 | 0.11 | 2 | 0.01 |
| Indoor dust filtration factor | 5 | 0.09 | 5 | 0.03 | 8 | 0.04 | 8 | 0.00 |
| Depth of soil mixing layer | 17 | -0.02 | 17 | 0.00 | 5 | -0.09 | 5 | -0.01 |
| Depth of roots | 1 | -0.96 | 1 | -0.96 | 1 | -1.00 | 1 | -1.00 |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | 18 | 0.00 | 18 | 0.00 | 3 | 0.10 | 3 | 0.01 |
| Weathering removal constant of all vegetation | 8 | 0.07 | 8 | 0.02 | 12 | 0.02 | 12 | 0.00 |
| Wet foliar interception fraction of leafy vegetables | 11 | 0.03 | 11 | 0.01 | 4 | 0.09 | 4 | 0.01 |
| Humidity in air | 14 | 0.02 | 14 | 0.01 | 10 | -0.03 | 10 | 0.00 |
| Kd of Ce-144 in Contaminated Zone | 9 | -0.06 | 9 | -0.02 | 9 | 0.03 | 9 | 0.00 |
| Kd of Ce-144 in Unsaturated Zone 1 | 12 | -0.03 | 12 | -0.01 | 18 | -0.01 | 18 | 0.00 |
| Kd of Ce-144 in Saturated Zone | 7 | 0.08 | 7 | 0.02 | 11 | 0.03 | 11 | 0.00 |

| | | | | |
|----------|------|------|------|------|
| R-SQUARE | 0.92 | 0.92 | 0.99 | 0.99 |
|----------|------|------|------|------|

-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 Parameters
Input File : FCS SOIL UNCERTAINTY ANALYSIS CE-144.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 |
|---------------------------------------|-----------|-----------|-----------|-----------|

| | | | | | | | | |
|--|----|-------|----|-------|----|-------|----|-------|
| Contaminated zone erosion rate | 9 | -0.04 | 9 | -0.01 | 14 | 0.02 | 14 | 0.00 |
| Contaminated zone b parameter | 5 | -0.06 | 5 | -0.02 | 8 | -0.04 | 8 | 0.00 |
| Evapotranspiration coefficient | 17 | -0.01 | 17 | 0.00 | 9 | -0.03 | 9 | 0.00 |
| Wind Speed | 8 | -0.05 | 8 | -0.01 | 3 | -0.07 | 3 | -0.01 |
| Runoff coefficient | 2 | -0.09 | 2 | -0.03 | 5 | -0.04 | 5 | 0.00 |
| Well pump intake depth | 3 | 0.07 | 3 | 0.02 | 2 | 0.10 | 2 | 0.01 |
| b Parameter of Unsaturated zone 1 | 14 | 0.03 | 14 | 0.01 | 12 | -0.02 | 12 | 0.00 |
| Mass loading for inhalation | 15 | 0.02 | 15 | 0.01 | 16 | 0.01 | 16 | 0.00 |
| Indoor dust filtration factor | 13 | 0.03 | 13 | 0.01 | 10 | 0.03 | 10 | 0.00 |
| Depth of soil mixing layer | 11 | -0.03 | 11 | -0.01 | 13 | -0.02 | 13 | 0.00 |
| Depth of roots | 1 | -0.96 | 1 | -0.96 | 1 | -1.00 | 1 | -1.00 |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | 18 | 0.01 | 18 | 0.00 | 15 | -0.01 | 15 | 0.00 |
| Weathering removal constant of all vegetation | 6 | -0.06 | 6 | -0.02 | 11 | -0.03 | 11 | 0.00 |
| Wet foliar interception fraction of leafy vegetables | 12 | -0.03 | 12 | -0.01 | 4 | 0.04 | 4 | 0.00 |
| Humidity in air | 16 | 0.01 | 16 | 0.00 | 17 | 0.00 | 17 | 0.00 |
| Kd of Ce-144 in Contaminated Zone | 4 | 0.07 | 4 | 0.02 | 6 | 0.04 | 6 | 0.00 |
| Kd of Ce-144 in Unsaturated Zone 1 | 7 | -0.05 | 7 | -0.02 | 7 | 0.04 | 7 | 0.00 |
| Kd of Ce-144 in Saturated Zone | 10 | 0.04 | 10 | 0.01 | 18 | 0.00 | 18 | 0.00 |

| | | | | |
|----------|------|------|------|------|
| R-SQUARE | 0.92 | 0.92 | 0.99 | 0.99 |
|----------|------|------|------|------|

-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.