

Summary : RESRAD Default

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Dose Conversion Factor (and Related) Parameter Summary

Dose Library: Surface Soil DCGL Plus FGR 11

| Menu | Parameter | Current Value# | Base Case* | Parameter Name |
|------|--|----------------|------------|----------------|
| A-1 | DCF's for external ground radiation, (mrem/yr)/(pCi/g) | | | |
| A-1 | Ba-137m (Source: FGR 12) | 3.606E+00 | 3.606E+00 | DCF1(1) |
| A-1 | Co-60 (Source: FGR 12) | 1.622E+01 | 1.622E+01 | DCF1(2) |
| A-1 | Cs-134 (Source: FGR 12) | 9.472E+00 | 9.472E+00 | DCF1(3) |
| A-1 | Cs-137 (Source: FGR 12) | 7.510E-04 | 7.510E-04 | DCF1(4) |
| A-1 | Ni-63 (Source: FGR 12) | 0.000E+00 | 0.000E+00 | DCF1(5) |
| A-1 | Sr-90 (Source: FGR 12) | 7.043E-04 | 7.043E-04 | DCF1(6) |
| A-1 | Y-90 (Source: FGR 12) | 2.391E-02 | 2.391E-02 | DCF1(7) |
| B-1 | Dose conversion factors for inhalation, mrem/pCi: | | | |
| B-1 | Co-60 | 2.190E-04 | 2.190E-04 | DCF2(1) |
| B-1 | Cs-134 | 4.620E-05 | 4.620E-05 | DCF2(2) |
| B-1 | Cs-137+D | 3.190E-05 | 3.190E-05 | DCF2(3) |
| B-1 | Ni-63 | 6.290E-06 | 6.290E-06 | DCF2(4) |
| B-1 | Sr-90+D | 1.308E-03 | 1.300E-03 | DCF2(5) |
| D-1 | Dose conversion factors for ingestion, mrem/pCi: | | | |
| D-1 | Co-60 | 2.690E-05 | 2.690E-05 | DCF3(1) |
| D-1 | Cs-134 | 7.330E-05 | 7.330E-05 | DCF3(2) |
| D-1 | Cs-137+D | 5.000E-05 | 5.000E-05 | DCF3(3) |
| D-1 | Ni-63 | 5.770E-07 | 5.770E-07 | DCF3(4) |
| D-1 | Sr-90+D | 1.528E-04 | 1.420E-04 | DCF3(5) |
| D-34 | Food transfer factors: | | | |
| D-34 | Co-60 , plant/soil concentration ratio, dimensionless | 1.500E-01 | 8.000E-02 | RTF(1,1) |
| D-34 | Co-60 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d) | 5.800E-02 | 2.000E-02 | RTF(1,2) |
| D-34 | Co-60 , milk/livestock-intake ratio, (pCi/L)/(pCi/d) | 2.000E-03 | 2.000E-03 | RTF(1,3) |
| D-34 | Cs-134 , plant/soil concentration ratio, dimensionless | 7.800E-02 | 4.000E-02 | RTF(2,1) |
| D-34 | Cs-134 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d) | 6.500E-02 | 3.000E-02 | RTF(2,2) |
| D-34 | Cs-134 , milk/livestock-intake ratio, (pCi/L)/(pCi/d) | 1.400E-02 | 8.000E-03 | RTF(2,3) |
| D-34 | Cs-137+D , plant/soil concentration ratio, dimensionless | 7.800E-02 | 4.000E-02 | RTF(3,1) |
| D-34 | Cs-137+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d) | 6.500E-02 | 3.000E-02 | RTF(3,2) |
| D-34 | Cs-137+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d) | 1.400E-02 | 8.000E-03 | RTF(3,3) |
| D-34 | Ni-63 , plant/soil concentration ratio, dimensionless | 9.200E-02 | 5.000E-02 | RTF(4,1) |
| D-34 | Ni-63 , beef/livestock-intake ratio, (pCi/kg)/(pCi/d) | 5.000E-03 | 5.000E-03 | RTF(4,2) |
| D-34 | Ni-63 , milk/livestock-intake ratio, (pCi/L)/(pCi/d) | 3.200E-02 | 2.000E-02 | RTF(4,3) |
| D-34 | Sr-90+D , plant/soil concentration ratio, dimensionless | 5.900E-01 | 3.000E-01 | RTF(5,1) |
| D-34 | Sr-90+D , beef/livestock-intake ratio, (pCi/kg)/(pCi/d) | 8.000E-03 | 8.000E-03 | RTF(5,2) |
| D-34 | Sr-90+D , milk/livestock-intake ratio, (pCi/L)/(pCi/d) | 2.700E-03 | 2.000E-03 | RTF(5,3) |
| D-5 | Bioaccumulation factors, fresh water, L/kg: | | | |
| D-5 | Co-60 , fish | 3.000E+02 | 3.000E+02 | BIOFAC(1,1) |
| D-5 | Co-60 , crustacea and mollusks | 2.000E+02 | 2.000E+02 | BIOFAC(1,2) |
| D-5 | Cs-134 , fish | 2.000E+03 | 2.000E+03 | BIOFAC(2,1) |
| D-5 | Cs-134 , crustacea and mollusks | 1.000E+02 | 1.000E+02 | BIOFAC(2,2) |

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Dose Conversion Factor (and Related) Parameter Summary (continued)

Dose Library: Surface Soil DCGL Plus FGR 11

| Menu | Parameter | Current Value# | Base Case* | Parameter Name |
|------|-----------------------------------|----------------|------------|----------------|
| D-5 | Cs-137+D , fish | 2.000E+03 | 2.000E+03 | BIOFAC(3,1) |
| D-5 | Cs-137+D , crustacea and mollusks | 1.000E+02 | 1.000E+02 | BIOFAC(3,2) |
| D-5 | | | | |
| D-5 | Ni-63 , fish | 1.000E+02 | 1.000E+02 | BIOFAC(4,1) |
| D-5 | Ni-63 , crustacea and mollusks | 1.000E+02 | 1.000E+02 | BIOFAC(4,2) |
| D-5 | | | | |
| D-5 | Sr-90+D , fish | 6.000E+01 | 6.000E+01 | BIOFAC(5,1) |
| D-5 | Sr-90+D , crustacea and mollusks | 1.000E+02 | 1.000E+02 | BIOFAC(5,2) |

#For DCF1(xxx) only, factors are for infinite depth & area. See ETFG table in Ground Pathway of Detailed Report.

*Base Case means Default.Lib w/o Associate Nuclide contributions.

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Site-Specific Parameter Summary

| Menu | Parameter | User Input | Default | Used by RESRAD (If different from user input) | Parameter Name |
|------|---|------------|-----------|--|----------------|
| R011 | Area of contaminated zone (m**2) | 2.153E+03 | 1.000E+04 | --- | AREA |
| R011 | Thickness of contaminated zone (m) | 1.500E-01 | 2.000E+00 | --- | THICK0 |
| R011 | Fraction of contamination that is submerged | 0.000E+00 | 0.000E+00 | --- | SUBMFRACT |
| R011 | Length parallel to aquifer flow (m) | 4.600E+01 | 1.000E+02 | --- | LCZPAQ |
| R011 | Basic radiation dose limit (mrem/yr) | 2.500E+01 | 3.000E+01 | --- | BRDL |
| R011 | Time since placement of material (yr) | 0.000E+00 | 0.000E+00 | --- | TI |
| R011 | Times for calculations (yr) | 1.000E+00 | 1.000E+00 | --- | T(2) |
| R011 | Times for calculations (yr) | 3.000E+00 | 3.000E+00 | --- | T(3) |
| R011 | Times for calculations (yr) | 1.000E+01 | 1.000E+01 | --- | T(4) |
| R011 | Times for calculations (yr) | 4.049E+01 | 3.000E+01 | --- | T(5) |
| R011 | Times for calculations (yr) | 1.000E+02 | 1.000E+02 | --- | T(6) |
| R011 | Times for calculations (yr) | 3.000E+02 | 3.000E+02 | --- | T(7) |
| R011 | Times for calculations (yr) | 1.000E+03 | 1.000E+03 | --- | T(8) |
| R011 | Times for calculations (yr) | not used | 0.000E+00 | --- | T(9) |
| R011 | Times for calculations (yr) | not used | 0.000E+00 | --- | T(10) |
| R012 | Initial principal radionuclide (pCi/g): Co-60 | 1.000E+00 | 0.000E+00 | --- | S1(1) |
| R012 | Initial principal radionuclide (pCi/g): Cs-134 | 1.000E+00 | 0.000E+00 | --- | S1(2) |
| R012 | Initial principal radionuclide (pCi/g): Cs-137 | 1.000E+00 | 0.000E+00 | --- | S1(3) |
| R012 | Initial principal radionuclide (pCi/g): Ni-63 | 1.000E+00 | 0.000E+00 | --- | S1(4) |
| R012 | Initial principal radionuclide (pCi/g): Sr-90 | 1.000E+00 | 0.000E+00 | --- | S1(5) |
| R012 | Concentration in groundwater (pCi/L): Co-60 | not used | 0.000E+00 | --- | W1(1) |
| R012 | Concentration in groundwater (pCi/L): Cs-134 | not used | 0.000E+00 | --- | W1(2) |
| R012 | Concentration in groundwater (pCi/L): Cs-137 | not used | 0.000E+00 | --- | W1(3) |
| R012 | Concentration in groundwater (pCi/L): Ni-63 | not used | 0.000E+00 | --- | W1(4) |
| R012 | Concentration in groundwater (pCi/L): Sr-90 | not used | 0.000E+00 | --- | W1(5) |
| R013 | Cover depth (m) | 1.000E+00 | 0.000E+00 | --- | COVER0 |
| R013 | Density of cover material (g/cm**3) | 1.500E+00 | 1.500E+00 | --- | DENSCV |
| R013 | Cover depth erosion rate (m/yr) | 1.500E-03 | 1.000E-03 | --- | VCV |
| R013 | Density of contaminated zone (g/cm**3) | 1.800E+00 | 1.500E+00 | --- | DENSCZ |
| R013 | Contaminated zone erosion rate (m/yr) | 1.500E-03 | 1.000E-03 | --- | VCZ |
| R013 | Contaminated zone total porosity | 3.500E-01 | 4.000E-01 | --- | TPCZ |
| R013 | Contaminated zone field capacity | 6.600E-02 | 2.000E-01 | --- | FCCZ |
| R013 | Contaminated zone hydraulic conductivity (m/yr) | 2.880E+03 | 1.000E+01 | --- | HCCZ |
| R013 | Contaminated zone b parameter | 9.700E-01 | 5.300E+00 | --- | BCZ |
| R013 | Average annual wind speed (m/sec) | 4.200E+00 | 2.000E+00 | --- | WIND |
| R013 | Humidity in air (g/m**3) | not used | 8.000E+00 | --- | HUMID |
| R013 | Evapotranspiration coefficient | 6.250E-01 | 5.000E-01 | --- | EVAPTR |
| R013 | Precipitation (m/yr) | 8.300E-01 | 1.000E+00 | --- | PRECIP |
| R013 | Irrigation (m/yr) | 1.900E-01 | 2.000E-01 | --- | RI |
| R013 | Irrigation mode | overhead | overhead | --- | IDITCH |
| R013 | Runoff coefficient | 2.000E-01 | 2.000E-01 | --- | RUNOFF |
| R013 | Watershed area for nearby stream or pond (m**2) | 1.000E+06 | 1.000E+06 | --- | WAREA |
| R013 | Accuracy for water/soil computations | 1.000E-03 | 1.000E-03 | --- | EPS |
| R014 | Density of saturated zone (g/cm**3) | 1.800E+00 | 1.500E+00 | --- | DENSAQ |
| R014 | Saturated zone total porosity | 3.500E-01 | 4.000E-01 | --- | TPSZ |
| R014 | Saturated zone effective porosity | 2.900E-01 | 2.000E-01 | --- | EPSZ |
| R014 | Saturated zone field capacity | 6.600E-02 | 2.000E-01 | --- | FCSZ |

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Site-Specific Parameter Summary (continued)

| Menu | Parameter | User Input | Default | Used by RESRAD (If different from user input) | Parameter Name |
|------|--|------------|-----------|--|----------------|
| R014 | Saturated zone hydraulic conductivity (m/yr) | 2.880E+03 | 1.000E+02 | --- | HCSZ |
| R014 | Saturated zone hydraulic gradient | 3.900E-03 | 2.000E-02 | --- | HGWT |
| R014 | Saturated zone b parameter | not used | 5.300E+00 | --- | BSZ |
| R014 | Water table drop rate (m/yr) | 0.000E+00 | 1.000E-03 | --- | VWT |
| R014 | Well pump intake depth (m below water table) | 3.300E+00 | 1.000E+01 | --- | DWIBWT |
| R014 | Model: Nondispersion (ND) or Mass-Balance (MB) | ND | ND | --- | MODEL |
| R014 | Well pumping rate (m**3/yr) | 2.250E+03 | 2.500E+02 | --- | UW |
| R015 | Number of unsaturated zone strata | 1 | 1 | --- | NS |
| R015 | Unsat. zone 1, thickness (m) | 2.450E+00 | 4.000E+00 | --- | H(1) |
| R015 | Unsat. zone 1, soil density (g/cm**3) | 1.800E+00 | 1.500E+00 | --- | DENSUZ(1) |
| R015 | Unsat. zone 1, total porosity | 3.500E-01 | 4.000E-01 | --- | TPUZ(1) |
| R015 | Unsat. zone 1, effective porosity | 2.900E-01 | 2.000E-01 | --- | EPUZ(1) |
| R015 | Unsat. zone 1, field capacity | 6.600E-02 | 2.000E-01 | --- | FCUZ(1) |
| R015 | Unsat. zone 1, soil-specific b parameter | 9.700E-01 | 5.300E+00 | --- | BUZ(1) |
| R015 | Unsat. zone 1, hydraulic conductivity (m/yr) | 2.880E+03 | 1.000E+01 | --- | HCUZ(1) |
| R016 | Distribution coefficients for Co-60 | | | | |
| R016 | Contaminated zone (cm**3/g) | 1.161E+03 | 1.000E+03 | --- | DCNUCC(1) |
| R016 | Unsat. zone 1 (cm**3/g) | 1.161E+03 | 1.000E+03 | --- | DCNUCU(1,1) |
| R016 | Saturated zone (cm**3/g) | 1.161E+03 | 1.000E+03 | --- | DCNUCS(1) |
| R016 | Leach rate (/yr) | 0.000E+00 | 0.000E+00 | 1.022E-03 | ALEACH(1) |
| R016 | Solubility constant | 0.000E+00 | 0.000E+00 | not used | SOLUBK(1) |
| R016 | Distribution coefficients for Cs-134 | | | | |
| R016 | Contaminated zone (cm**3/g) | 6.150E+02 | 4.600E+03 | --- | DCNUCC(2) |
| R016 | Unsat. zone 1 (cm**3/g) | 6.150E+02 | 4.600E+03 | --- | DCNUCU(2,1) |
| R016 | Saturated zone (cm**3/g) | 6.150E+02 | 4.600E+03 | --- | DCNUCS(2) |
| R016 | Leach rate (/yr) | 0.000E+00 | 0.000E+00 | 1.929E-03 | ALEACH(2) |
| R016 | Solubility constant | 0.000E+00 | 0.000E+00 | not used | SOLUBK(2) |
| R016 | Distribution coefficients for Cs-137 | | | | |
| R016 | Contaminated zone (cm**3/g) | 6.150E+02 | 4.600E+03 | --- | DCNUCC(3) |
| R016 | Unsat. zone 1 (cm**3/g) | 6.150E+02 | 4.600E+03 | --- | DCNUCU(3,1) |
| R016 | Saturated zone (cm**3/g) | 6.150E+02 | 4.600E+03 | --- | DCNUCS(3) |
| R016 | Leach rate (/yr) | 0.000E+00 | 0.000E+00 | 1.929E-03 | ALEACH(3) |
| R016 | Solubility constant | 0.000E+00 | 0.000E+00 | not used | SOLUBK(3) |
| R016 | Distribution coefficients for Ni-63 | | | | |
| R016 | Contaminated zone (cm**3/g) | 3.310E+02 | 1.000E+03 | --- | DCNUCC(4) |
| R016 | Unsat. zone 1 (cm**3/g) | 3.310E+02 | 1.000E+03 | --- | DCNUCU(4,1) |
| R016 | Saturated zone (cm**3/g) | 3.310E+02 | 1.000E+03 | --- | DCNUCS(4) |
| R016 | Leach rate (/yr) | 0.000E+00 | 0.000E+00 | 3.583E-03 | ALEACH(4) |
| R016 | Solubility constant | 0.000E+00 | 0.000E+00 | not used | SOLUBK(4) |
| R016 | Distribution coefficients for Sr-90 | | | | |
| R016 | Contaminated zone (cm**3/g) | 3.400E+00 | 3.000E+01 | --- | DCNUCC(5) |
| R016 | Unsat. zone 1 (cm**3/g) | 3.400E+00 | 3.000E+01 | --- | DCNUCU(5,1) |
| R016 | Saturated zone (cm**3/g) | 3.400E+00 | 3.000E+01 | --- | DCNUCS(5) |
| R016 | Leach rate (/yr) | 0.000E+00 | 0.000E+00 | 3.451E-01 | ALEACH(5) |
| R016 | Solubility constant | 0.000E+00 | 0.000E+00 | not used | SOLUBK(5) |

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Site-Specific Parameter Summary (continued)

| Menu | Parameter | User Input | Default | Used by RESRAD (If different from user input) | Parameter Name |
|------|--|------------|-----------|--|----------------|
| R017 | Inhalation rate (m**3/yr) | 8.400E+03 | 8.400E+03 | --- | INHALR |
| R017 | Mass loading for inhalation (g/m**3) | 2.350E-05 | 1.000E-04 | --- | MLINH |
| R017 | Exposure duration | 3.000E+01 | 3.000E+01 | --- | ED |
| R017 | Shielding factor, inhalation | 5.500E-01 | 4.000E-01 | --- | SHF3 |
| R017 | Shielding factor, external gamma | 4.000E-01 | 7.000E-01 | --- | SHF1 |
| R017 | Fraction of time spent indoors | 6.490E-01 | 5.000E-01 | --- | FIND |
| R017 | Fraction of time spent outdoors (on site) | 1.240E-01 | 2.500E-01 | --- | FOTD |
| R017 | Shape factor flag, external gamma | 1.000E+00 | 1.000E+00 | >0 shows circular AREA. | FS |
| R017 | Radii of shape factor array (used if FS = -1): | | | | |
| R017 | Outer annular radius (m), ring 1: | not used | 5.000E+01 | --- | RAD_SHAPE (1) |
| R017 | Outer annular radius (m), ring 2: | not used | 7.071E+01 | --- | RAD_SHAPE (2) |
| R017 | Outer annular radius (m), ring 3: | not used | 0.000E+00 | --- | RAD_SHAPE (3) |
| R017 | Outer annular radius (m), ring 4: | not used | 0.000E+00 | --- | RAD_SHAPE (4) |
| R017 | Outer annular radius (m), ring 5: | not used | 0.000E+00 | --- | RAD_SHAPE (5) |
| R017 | Outer annular radius (m), ring 6: | not used | 0.000E+00 | --- | RAD_SHAPE (6) |
| R017 | Outer annular radius (m), ring 7: | not used | 0.000E+00 | --- | RAD_SHAPE (7) |
| R017 | Outer annular radius (m), ring 8: | not used | 0.000E+00 | --- | RAD_SHAPE (8) |
| R017 | Outer annular radius (m), ring 9: | not used | 0.000E+00 | --- | RAD_SHAPE (9) |
| R017 | Outer annular radius (m), ring 10: | not used | 0.000E+00 | --- | RAD_SHAPE(10) |
| R017 | Outer annular radius (m), ring 11: | not used | 0.000E+00 | --- | RAD_SHAPE(11) |
| R017 | Outer annular radius (m), ring 12: | not used | 0.000E+00 | --- | RAD_SHAPE(12) |
| R017 | Fractions of annular areas within AREA: | | | | |
| R017 | Ring 1 | not used | 1.000E+00 | --- | FRACA (1) |
| R017 | Ring 2 | not used | 2.732E-01 | --- | FRACA (2) |
| R017 | Ring 3 | not used | 0.000E+00 | --- | FRACA (3) |
| R017 | Ring 4 | not used | 0.000E+00 | --- | FRACA (4) |
| R017 | Ring 5 | not used | 0.000E+00 | --- | FRACA (5) |
| R017 | Ring 6 | not used | 0.000E+00 | --- | FRACA (6) |
| R017 | Ring 7 | not used | 0.000E+00 | --- | FRACA (7) |
| R017 | Ring 8 | not used | 0.000E+00 | --- | FRACA (8) |
| R017 | Ring 9 | not used | 0.000E+00 | --- | FRACA (9) |
| R017 | Ring 10 | not used | 0.000E+00 | --- | FRACA(10) |
| R017 | Ring 11 | not used | 0.000E+00 | --- | FRACA(11) |
| R017 | Ring 12 | not used | 0.000E+00 | --- | FRACA(12) |
| R018 | Fruits, vegetables and grain consumption (kg/yr) | 2.240E+02 | 1.600E+02 | --- | DIET(1) |
| R018 | Leafy vegetable consumption (kg/yr) | 4.240E+01 | 1.400E+01 | --- | DIET(2) |
| R018 | Milk consumption (L/yr) | 2.330E+02 | 9.200E+01 | --- | DIET(3) |
| R018 | Meat and poultry consumption (kg/yr) | 6.510E+01 | 6.300E+01 | --- | DIET(4) |
| R018 | Fish consumption (kg/yr) | not used | 5.400E+00 | --- | DIET(5) |
| R018 | Other seafood consumption (kg/yr) | not used | 9.000E-01 | --- | DIET(6) |
| R018 | Soil ingestion rate (g/yr) | 1.830E+01 | 3.650E+01 | --- | SOIL |
| R018 | Drinking water intake (L/yr) | 4.780E+02 | 5.100E+02 | --- | DWI |
| R018 | Contamination fraction of drinking water | 1.000E+00 | 1.000E+00 | --- | FDW |
| R018 | Contamination fraction of household water | not used | 1.000E+00 | --- | FHHW |
| R018 | Contamination fraction of livestock water | 1.000E+00 | 1.000E+00 | --- | FLW |
| R018 | Contamination fraction of irrigation water | 1.000E+00 | 1.000E+00 | --- | FIRW |
| R018 | Contamination fraction of aquatic food | not used | 5.000E-01 | --- | FR9 |
| R018 | Contamination fraction of plant food | -1 | -1 | 0.500E+00 | FPLANT |

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Site-Specific Parameter Summary (continued)

| Menu | Parameter | User Input | Default | Used by RESRAD (If different from user input) | Parameter Name |
|------|--|------------|-----------|--|----------------|
| R018 | Contamination fraction of meat | -1 | -1 | 0.108E+00 | FMEAT |
| R018 | Contamination fraction of milk | -1 | -1 | 0.108E+00 | FMILK |
| R019 | Livestock fodder intake for meat (kg/day) | 2.830E+01 | 6.800E+01 | --- | LFI5 |
| R019 | Livestock fodder intake for milk (kg/day) | 6.520E+01 | 5.500E+01 | --- | LFI6 |
| R019 | Livestock water intake for meat (L/day) | 5.060E+01 | 5.000E+01 | --- | LWI5 |
| R019 | Livestock water intake for milk (L/day) | 6.000E+01 | 1.600E+02 | --- | LWI6 |
| R019 | Livestock soil intake (kg/day) | 5.000E-01 | 5.000E-01 | --- | LSI |
| R019 | Mass loading for foliar deposition (g/m**3) | 4.000E-04 | 1.000E-04 | --- | MLFD |
| R019 | Depth of soil mixing layer (m) | 1.500E-01 | 1.500E-01 | --- | DM |
| R019 | Depth of roots (m) | 1.150E+00 | 9.000E-01 | --- | DROOT |
| R019 | Drinking water fraction from ground water | 1.000E+00 | 1.000E+00 | --- | FGWDW |
| R019 | Household water fraction from ground water | not used | 1.000E+00 | --- | FGWHH |
| R019 | Livestock water fraction from ground water | 1.000E+00 | 1.000E+00 | --- | FGWLW |
| R019 | Irrigation fraction from ground water | 1.000E+00 | 1.000E+00 | --- | FGWIR |
| R19B | Wet weight crop yield for Non-Leafy (kg/m**2) | 1.750E+00 | 7.000E-01 | --- | YV(1) |
| R19B | Wet weight crop yield for Leafy (kg/m**2) | 2.900E+00 | 1.500E+00 | --- | YV(2) |
| R19B | Wet weight crop yield for Fodder (kg/m**2) | 1.900E+00 | 1.100E+00 | --- | YV(3) |
| R19B | Growing Season for Non-Leafy (years) | 2.460E-01 | 1.700E-01 | --- | TE(1) |
| R19B | Growing Season for Leafy (years) | 1.230E-01 | 2.500E-01 | --- | TE(2) |
| R19B | Growing Season for Fodder (years) | 8.200E-02 | 8.000E-02 | --- | TE(3) |
| R19B | Translocation Factor for Non-Leafy | 1.000E-01 | 1.000E-01 | --- | TIV(1) |
| R19B | Translocation Factor for Leafy | 1.000E+00 | 1.000E+00 | --- | TIV(2) |
| R19B | Translocation Factor for Fodder | 1.000E+00 | 1.000E+00 | --- | TIV(3) |
| R19B | Dry Foliar Interception Fraction for Non-Leafy | 3.500E-01 | 2.500E-01 | --- | RDRY(1) |
| R19B | Dry Foliar Interception Fraction for Leafy | 3.500E-01 | 2.500E-01 | --- | RDRY(2) |
| R19B | Dry Foliar Interception Fraction for Fodder | 3.500E-01 | 2.500E-01 | --- | RDRY(3) |
| R19B | Wet Foliar Interception Fraction for Non-Leafy | 3.500E-01 | 2.500E-01 | --- | RWET(1) |
| R19B | Wet Foliar Interception Fraction for Leafy | 5.800E-01 | 2.500E-01 | --- | RWET(2) |
| R19B | Wet Foliar Interception Fraction for Fodder | 3.500E-01 | 2.500E-01 | --- | RWET(3) |
| R19B | Weathering Removal Constant for Vegetation | 3.300E+01 | 2.000E+01 | --- | WLAM |
| C14 | C-12 concentration in water (g/cm**3) | not used | 2.000E-05 | --- | C12WTR |
| C14 | C-12 concentration in contaminated soil (g/g) | not used | 3.000E-02 | --- | C12CZ |
| C14 | Fraction of vegetation carbon from soil | not used | 2.000E-02 | --- | CSOIL |
| C14 | Fraction of vegetation carbon from air | not used | 9.800E-01 | --- | CAIR |
| C14 | C-14 evasion layer thickness in soil (m) | not used | 3.000E-01 | --- | DMC |
| C14 | C-14 evasion flux rate from soil (1/sec) | not used | 7.000E-07 | --- | EVSN |
| C14 | C-12 evasion flux rate from soil (1/sec) | not used | 1.000E-10 | --- | REVSN |
| C14 | Fraction of grain in beef cattle feed | not used | 8.000E-01 | --- | AVFG4 |
| C14 | Fraction of grain in milk cow feed | not used | 2.000E-01 | --- | AVFG5 |
| STOR | Storage times of contaminated foodstuffs (days): | | | | |
| STOR | Fruits, non-leafy vegetables, and grain | 1.400E+01 | 1.400E+01 | --- | STOR_T(1) |
| STOR | Leafy vegetables | 1.000E+00 | 1.000E+00 | --- | STOR_T(2) |
| STOR | Milk | 1.000E+00 | 1.000E+00 | --- | STOR_T(3) |
| STOR | Meat and poultry | 1.000E+00 | 2.000E+01 | --- | STOR_T(4) |
| STOR | Fish | 7.000E+00 | 7.000E+00 | --- | STOR_T(5) |
| STOR | Crustacea and mollusks | 7.000E+00 | 7.000E+00 | --- | STOR_T(6) |

Summary : RESRAD Default

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Site-Specific Parameter Summary (continued)

| Menu | Parameter | User Input | Default | Used by RESRAD (If different from user input) | Parameter Name |
|------|--|------------|------------|--|----------------|
| STOR | Well water | 1.000E+00 | 1.000E+00 | --- | STOR_T(7) |
| STOR | Surface water | 1.000E+00 | 1.000E+00 | --- | STOR_T(8) |
| STOR | Livestock fodder | 4.500E+01 | 4.500E+01 | --- | STOR_T(9) |
| R021 | Thickness of building foundation (m) | not used | 1.500E-01 | --- | FLOOR1 |
| R021 | Bulk density of building foundation (g/cm**3) | not used | 2.400E+00 | --- | DENSFL |
| R021 | Total porosity of the cover material | not used | 4.000E-01 | --- | TPCV |
| R021 | Total porosity of the building foundation | not used | 1.000E-01 | --- | TPFL |
| R021 | Volumetric water content of the cover material | not used | 5.000E-02 | --- | PH2OCV |
| R021 | Volumetric water content of the foundation | not used | 3.000E-02 | --- | PH2OFL |
| R021 | Diffusion coefficient for radon gas (m/sec): | | | | |
| R021 | in cover material | not used | 2.000E-06 | --- | DIFCV |
| R021 | in foundation material | not used | 3.000E-07 | --- | DIFFL |
| R021 | in contaminated zone soil | not used | 2.000E-06 | --- | DIFCZ |
| R021 | Radon vertical dimension of mixing (m) | not used | 2.000E+00 | --- | HMIX |
| R021 | Average building air exchange rate (1/hr) | not used | 5.000E-01 | --- | REXG |
| R021 | Height of the building (room) (m) | not used | 2.500E+00 | --- | HRM |
| R021 | Building interior area factor | not used | 0.000E+00 | --- | FAI |
| R021 | Building depth below ground surface (m) | not used | -1.000E+00 | --- | DMFL |
| R021 | Emanating power of Rn-222 gas | not used | 2.500E-01 | --- | EMANA(1) |
| R021 | Emanating power of Rn-220 gas | not used | 1.500E-01 | --- | EMANA(2) |
| TITL | Number of graphical time points | 32 | --- | --- | NPTS |
| TITL | Maximum number of integration points for dose | 17 | --- | --- | LYMAX |
| TITL | Maximum number of integration points for risk | 1 | --- | --- | KYMAX |

Summary of Pathway Selections

| Pathway | User Selection |
|-----------------------------|----------------|
| 1 -- external gamma | active |
| 2 -- inhalation (w/o radon) | active |
| 3 -- plant ingestion | active |
| 4 -- meat ingestion | active |
| 5 -- milk ingestion | active |
| 6 -- aquatic foods | suppressed |
| 7 -- drinking water | active |
| 8 -- soil ingestion | active |
| 9 -- radon | suppressed |
| Find peak pathway doses | suppressed |

Summary : RESRAD Default

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| Contaminated Zone Dimensions | | Initial Soil Concentrations, pCi/g | |
|------------------------------|-----------------------|------------------------------------|-----------|
| Area: | 2153.00 square meters | Co-60 | 1.000E+00 |
| Thickness: | 0.15 meters | Cs-134 | 1.000E+00 |
| Cover Depth: | 1.00 meters | Cs-137 | 1.000E+00 |
| | | Ni-63 | 1.000E+00 |
| | | Sr-90 | 1.000E+00 |

Total Dose TDOSE(t), mrem/yr

Basic Radiation Dose Limit = 2.500E+01 mrem/yr

Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

| | | | | | | | | |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| t (years): | 0.000E+00 | 1.000E+00 | 3.000E+00 | 1.000E+01 | 4.049E+01 | 1.000E+02 | 3.000E+02 | 1.000E+03 |
| TDOSE(t): | 1.651E+00 | 1.183E+00 | 6.258E-01 | 1.249E-01 | 1.957E-01 | 7.486E-03 | 1.035E-04 | 0.000E+00 |
| M(t): | 6.602E-02 | 4.730E-02 | 2.503E-02 | 4.998E-03 | 7.829E-03 | 2.994E-04 | 4.140E-06 | 0.000E+00 |

Maximum TDOSE(t): 1.651E+00 mrem/yr at t = 0.000E+00 years

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

| Radio- Nuclide | Ground | | Inhalation | | Radon | | Plant | | Meat | | Milk | | Soil | |
|-------------------|-----------|--------|------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 3.956E-05 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 6.566E-02 | 0.0398 | 5.671E-03 | 0.0034 | 1.612E-03 | 0.0010 | 0.000E+00 | 0.0000 |
| Cs-134 | 2.319E-06 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 8.431E-02 | 0.0511 | 8.161E-03 | 0.0049 | 1.449E-02 | 0.0088 | 0.000E+00 | 0.0000 |
| Cs-137 | 7.231E-07 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 6.693E-02 | 0.0405 | 6.478E-03 | 0.0039 | 1.151E-02 | 0.0070 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 9.175E-04 | 0.0006 | 6.833E-06 | 0.0000 | 3.606E-04 | 0.0002 | 0.000E+00 | 0.0000 |
| Sr-90 | 1.388E-10 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.323E+00 | 0.8016 | 1.622E-02 | 0.0098 | 4.515E-02 | 0.0274 | 0.000E+00 | 0.0000 |
| Total | 4.260E-05 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.541E+00 | 0.9335 | 3.654E-02 | 0.0221 | 7.312E-02 | 0.0443 | 0.000E+00 | 0.0000 |

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

Water Dependent Pathways

| Radio- Nuclide | Water | | Fish | | Radon | | Plant | | Meat | | Milk | | All Pathways* | |
|-------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|---------------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 7.298E-02 | 0.0442 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.070E-01 | 0.0648 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 8.491E-02 | 0.0514 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.285E-03 | 0.0008 |
| Sr-90 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.384E+00 | 0.8388 |
| Total | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.651E+00 | 1.0000 |

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

| Radio- Nuclide | Ground | | Inhalation | | Radon | | Plant | | Meat | | Milk | | Soil | |
|-------------------|-----------|--------|------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 3.526E-05 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 5.751E-02 | 0.0486 | 4.967E-03 | 0.0042 | 1.412E-03 | 0.0012 | 0.000E+00 | 0.0000 |
| Cs-134 | 1.689E-06 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 6.015E-02 | 0.0509 | 5.823E-03 | 0.0049 | 1.034E-02 | 0.0087 | 0.000E+00 | 0.0000 |
| Cs-137 | 7.206E-07 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 6.528E-02 | 0.0552 | 6.319E-03 | 0.0053 | 1.122E-02 | 0.0095 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 9.080E-04 | 0.0008 | 6.762E-06 | 0.0000 | 3.568E-04 | 0.0003 | 0.000E+00 | 0.0000 |
| Sr-90 | 9.854E-11 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 9.156E-01 | 0.7743 | 1.126E-02 | 0.0095 | 3.135E-02 | 0.0265 | 0.000E+00 | 0.0000 |
| Total | 3.767E-05 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.099E+00 | 0.9297 | 2.838E-02 | 0.0240 | 5.468E-02 | 0.0462 | 0.000E+00 | 0.0000 |

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+00 years

Water Dependent Pathways

| Radio- Nuclide | Water | | Fish | | Radon | | Plant | | Meat | | Milk | | All Pathways* | |
|-------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|---------------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 6.393E-02 | 0.0541 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 7.632E-02 | 0.0645 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 8.282E-02 | 0.0700 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.272E-03 | 0.0011 |
| Sr-90 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 9.582E-01 | 0.8103 |
| Total | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.183E+00 | 1.0000 |

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Independent Pathways (Inhalation excludes radon)

| Radio- Nuclide | Ground | | Inhalation | | Radon | | Plant | | Meat | | Milk | | Soil | |
|-------------------|-----------|--------|------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 2.802E-05 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 4.412E-02 | 0.0705 | 3.811E-03 | 0.0061 | 1.084E-03 | 0.0017 | 0.000E+00 | 0.0000 |
| Cs-134 | 8.967E-07 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.062E-02 | 0.0489 | 2.964E-03 | 0.0047 | 5.264E-03 | 0.0084 | 0.000E+00 | 0.0000 |
| Cs-137 | 7.155E-07 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 6.211E-02 | 0.0992 | 6.012E-03 | 0.0096 | 1.068E-02 | 0.0171 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 8.891E-04 | 0.0014 | 6.621E-06 | 0.0000 | 3.494E-04 | 0.0006 | 0.000E+00 | 0.0000 |
| Sr-90 | 4.966E-11 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 4.376E-01 | 0.6991 | 5.382E-03 | 0.0086 | 1.498E-02 | 0.0239 | 0.000E+00 | 0.0000 |
| Total | 2.963E-05 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 5.753E-01 | 0.9192 | 1.818E-02 | 0.0290 | 3.235E-02 | 0.0517 | 0.000E+00 | 0.0000 |

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+00 years

Water Dependent Pathways

| Radio- Nuclide | Water | | Fish | | Radon | | Plant | | Meat | | Milk | | All Pathways* | |
|-------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|---------------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 4.904E-02 | 0.0784 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.885E-02 | 0.0621 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 7.880E-02 | 0.1259 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.245E-03 | 0.0020 |
| Sr-90 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 4.579E-01 | 0.7317 |
| Total | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 6.258E-01 | 1.0000 |

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Independent Pathways (Inhalation excludes radon)

| Radio- Nuclide | Ground | | Inhalation | | Radon | | Plant | | Meat | | Milk | | Soil | |
|-------------------|-----------|--------|------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 1.253E-05 | 0.0001 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.745E-02 | 0.1397 | 1.507E-03 | 0.0121 | 4.285E-04 | 0.0034 | 0.000E+00 | 0.0000 |
| Cs-134 | 9.769E-08 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 2.881E-03 | 0.0231 | 2.789E-04 | 0.0022 | 4.953E-04 | 0.0040 | 0.000E+00 | 0.0000 |
| Cs-137 | 6.980E-07 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 5.217E-02 | 0.4176 | 5.050E-03 | 0.0404 | 8.969E-03 | 0.0718 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 8.260E-04 | 0.0066 | 6.152E-06 | 0.0000 | 3.246E-04 | 0.0026 | 0.000E+00 | 0.0000 |
| Sr-90 | 4.511E-12 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.301E-02 | 0.2642 | 4.060E-04 | 0.0032 | 1.130E-03 | 0.0090 | 0.000E+00 | 0.0000 |
| Total | 1.333E-05 | 0.0001 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.063E-01 | 0.8511 | 7.248E-03 | 0.0580 | 1.135E-02 | 0.0908 | 0.000E+00 | 0.0000 |

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+01 years

Water Dependent Pathways

| Radio- Nuclide | Water | | Fish | | Radon | | Plant | | Meat | | Milk | | All Pathways* | |
|-------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|---------------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.940E-02 | 0.1553 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.656E-03 | 0.0293 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 6.619E-02 | 0.5298 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.157E-03 | 0.0093 |
| Sr-90 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.454E-02 | 0.2765 |
| Total | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.249E-01 | 1.0000 |

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 4.049E+01 years

Water Independent Pathways (Inhalation excludes radon)

| Radio- Nuclide | Ground | | Inhalation | | Radon | | Plant | | Meat | | Milk | | Soil | |
|-------------------|-----------|--------|------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 3.764E-07 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.069E-04 | 0.0016 | 2.651E-05 | 0.0001 | 7.538E-06 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-134 | 6.255E-12 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 9.747E-08 | 0.0000 | 9.435E-09 | 0.0000 | 1.676E-08 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-137 | 6.268E-07 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 2.441E-02 | 0.1247 | 2.363E-03 | 0.0121 | 4.197E-03 | 0.0214 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 5.996E-04 | 0.0031 | 4.465E-06 | 0.0000 | 2.357E-04 | 0.0012 | 0.000E+00 | 0.0000 |
| Sr-90 | 1.309E-16 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 4.262E-07 | 0.0000 | 5.243E-09 | 0.0000 | 1.459E-08 | 0.0000 | 0.000E+00 | 0.0000 |
| Total | 1.003E-06 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 2.532E-02 | 0.1294 | 2.394E-03 | 0.0122 | 4.440E-03 | 0.0227 | 0.000E+00 | 0.0000 |

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 4.049E+01 years

Water Dependent Pathways

| Radio- Nuclide | Water | | Fish | | Radon | | Plant | | Meat | | Milk | | All Pathways* | |
|-------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|---------------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.414E-04 | 0.0017 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.237E-07 | 0.0000 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.098E-02 | 0.1583 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 8.397E-04 | 0.0043 |
| Sr-90 | 1.458E-01 | 0.7449 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.391E-02 | 0.0711 | 1.330E-03 | 0.0068 | 2.533E-03 | 0.0129 | 1.636E-01 | 0.8357 |
| Total | 1.458E-01 | 0.7449 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.391E-02 | 0.0711 | 1.330E-03 | 0.0068 | 2.533E-03 | 0.0129 | 1.957E-01 | 1.0000 |

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

| Radio- Nuclide | Ground | | Inhalation | | Radon | | Plant | | Meat | | Milk | | Soil | |
|-------------------|-----------|--------|------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 4.021E-10 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.154E-07 | 0.0000 | 9.966E-09 | 0.0000 | 2.834E-09 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-134 | 4.084E-20 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.832E-16 | 0.0000 | 1.774E-17 | 0.0000 | 3.150E-17 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-137 | 5.080E-07 | 0.0001 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 5.546E-03 | 0.7408 | 5.368E-04 | 0.0717 | 9.534E-04 | 0.1274 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.208E-04 | 0.0429 | 2.389E-06 | 0.0003 | 1.261E-04 | 0.0168 | 0.000E+00 | 0.0000 |
| Sr-90 | 1.824E-25 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.223E-16 | 0.0000 | 1.505E-18 | 0.0000 | 4.187E-18 | 0.0000 | 0.000E+00 | 0.0000 |
| Total | 5.084E-07 | 0.0001 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 5.867E-03 | 0.7837 | 5.392E-04 | 0.0720 | 1.080E-03 | 0.1442 | 0.000E+00 | 0.0000 |

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)

As mrem/yr and Fraction of Total Dose At t = 1.000E+02 years

Water Dependent Pathways

| Radio- Nuclide | Water | | Fish | | Radon | | Plant | | Meat | | Milk | | All Pathways* | |
|-------------------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|---------------|--------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.286E-07 | 0.0000 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 2.325E-16 | 0.0000 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 7.037E-03 | 0.9399 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 4.493E-04 | 0.0600 |
| Sr-90 | 9.782E-08 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 9.471E-09 | 0.0000 | 9.256E-10 | 0.0000 | 1.791E-09 | 0.0000 | 1.100E-07 | 0.0000 |
| Total | 9.782E-08 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 9.471E-09 | 0.0000 | 9.256E-10 | 0.0000 | 1.791E-09 | 0.0000 | 7.486E-03 | 1.0000 |

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

| Radio- Nuclide | Ground | | Inhalation | | Radon | | Plant | | Meat | | Milk | | Soil | |
|-------------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 4.154E-20 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.564E-19 | 0.0000 | 3.078E-20 | 0.0000 | 8.753E-21 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-137 | 2.507E-07 | 0.0024 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.808E-05 | 0.3679 | 3.686E-06 | 0.0356 | 6.547E-06 | 0.0633 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 3.923E-05 | 0.3790 | 2.922E-07 | 0.0028 | 1.542E-05 | 0.1490 | 0.000E+00 | 0.0000 |
| Sr-90 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Total | 2.507E-07 | 0.0024 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 7.731E-05 | 0.7469 | 3.978E-06 | 0.0384 | 2.196E-05 | 0.2122 | 0.000E+00 | 0.0000 |

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.000E+02 years

Water Dependent Pathways

| Radio- Nuclide | Water | | Fish | | Radon | | Plant | | Meat | | Milk | | All Pathways* | |
|-------------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 4.375E-19 | 0.0000 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 4.856E-05 | 0.4692 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 5.494E-05 | 0.5308 |
| Sr-90 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Total | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 1.035E-04 | 1.0000 |

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Independent Pathways (Inhalation excludes radon)

| Radio- Nuclide | Ground | | Inhalation | | Radon | | Plant | | Meat | | Milk | | Soil | |
|-------------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Sr-90 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Total | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
 As mrem/yr and Fraction of Total Dose At t = 1.000E+03 years

Water Dependent Pathways

| Radio- Nuclide | Water | | Fish | | Radon | | Plant | | Meat | | Milk | | All Pathways* | |
|-------------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|
| | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. | mrem/yr | fract. |
| Co-60 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-134 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Cs-137 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Ni-63 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Sr-90 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |
| Total | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 | 0.000E+00 | 0.0000 |

*Sum of all water independent and dependent pathways.

Summary : RESRAD Default

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Dose/Source Ratios Summed Over All Pathways
 Parent and Progeny Principal Radionuclide Contributions Indicated

| Parent (i) | Product (j) | Thread Fraction | DSR(j,t) At Time in Years (mrem/yr)/(pCi/g) | | | | | | | |
|---------------|----------------|--------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | | 0.000E+00 | 1.000E+00 | 3.000E+00 | 1.000E+01 | 4.049E+01 | 1.000E+02 | 3.000E+02 | 1.000E+03 |
| Co-60 | Co-60 | 1.000E+00 | 7.298E-02 | 6.393E-02 | 4.904E-02 | 1.940E-02 | 3.414E-04 | 1.286E-07 | 4.375E-19 | 0.000E+00 |
| Cs-134 | Cs-134 | 1.000E+00 | 1.070E-01 | 7.632E-02 | 3.885E-02 | 3.656E-03 | 1.237E-07 | 2.325E-16 | 0.000E+00 | 0.000E+00 |
| Cs-137+D | Cs-137+D | 1.000E+00 | 8.491E-02 | 8.282E-02 | 7.880E-02 | 6.619E-02 | 3.098E-02 | 7.037E-03 | 4.856E-05 | 0.000E+00 |
| Ni-63 | Ni-63 | 1.000E+00 | 1.285E-03 | 1.272E-03 | 1.245E-03 | 1.157E-03 | 8.397E-04 | 4.493E-04 | 5.494E-05 | 0.000E+00 |
| Sr-90+D | Sr-90+D | 1.000E+00 | 1.384E+00 | 9.582E-01 | 4.579E-01 | 3.454E-02 | 1.636E-01 | 1.100E-07 | 9.381E-40 | 0.000E+00 |

The DSR includes contributions from associated (half-life ≤ 30 days) daughters.

Single Radionuclide Soil Guidelines G(i,t) in pCi/g
 Basic Radiation Dose Limit = 2.500E+01 mrem/yr

| Nuclide (i) | t = | 0.000E+00 | 1.000E+00 | 3.000E+00 | 1.000E+01 | 4.049E+01 | 1.000E+02 | 3.000E+02 | 1.000E+03 |
|----------------|-----|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|
| Co-60 | | 3.425E+02 | 3.911E+02 | 5.098E+02 | 1.289E+03 | 7.324E+04 | 1.944E+08 | *1.113E+15 | *1.113E+15 |
| Cs-134 | | 2.337E+02 | 3.276E+02 | 6.435E+02 | 6.839E+03 | 2.022E+08 | *1.283E+15 | *1.283E+15 | *1.283E+15 |
| Cs-137 | | 2.944E+02 | 3.019E+02 | 3.173E+02 | 3.777E+02 | 8.071E+02 | 3.553E+03 | 5.148E+05 | *8.593E+13 |
| Ni-63 | | 1.946E+04 | 1.966E+04 | 2.008E+04 | 2.161E+04 | 2.977E+04 | 5.564E+04 | 4.550E+05 | *5.586E+13 |
| Sr-90 | | 1.806E+01 | 2.609E+01 | 5.460E+01 | 7.237E+02 | 1.528E+02 | 2.273E+08 | *1.366E+14 | *1.366E+14 |

*At specific activity limit

Summed Dose/Source Ratios DSR(i,t) in (mrem/yr)/(pCi/g)
 and Single Radionuclide Soil Guidelines G(i,t) in pCi/g
 at tmin = time of minimum single radionuclide soil guideline
 and at tmax = time of maximum total dose = 0.000E+00 years

| Nuclide (i) | Initial (pCi/g) | tmin (years) | DSR(i,tmin) | G(i,tmin) (pCi/g) | DSR(i,tmax) | G(i,tmax) (pCi/g) |
|----------------|--------------------|-----------------|-------------|----------------------|-------------|----------------------|
| Co-60 | 1.000E+00 | 0.000E+00 | 7.298E-02 | 3.425E+02 | 7.298E-02 | 3.425E+02 |
| Cs-134 | 1.000E+00 | 0.000E+00 | 1.070E-01 | 2.337E+02 | 1.070E-01 | 2.337E+02 |
| Cs-137 | 1.000E+00 | 0.000E+00 | 8.491E-02 | 2.944E+02 | 8.491E-02 | 2.944E+02 |
| Ni-63 | 1.000E+00 | 0.000E+00 | 1.285E-03 | 1.946E+04 | 1.285E-03 | 1.946E+04 |
| Sr-90 | 1.000E+00 | 0.000E+00 | 1.384E+00 | 1.806E+01 | 1.384E+00 | 1.806E+01 |

Summary : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\SOIL DCGL\SOIL DCGL\RESRAD INPUT SUBSURFACE\BP INSITU UNSAT DCGL 5_23.RAD

Individual Nuclide Dose Summed Over All Pathways
Parent Nuclide and Branch Fraction Indicated

| Nuclide (j) | Parent (i) | THF(i) | DOSE (j,t), mrem/yr | | | | | | | | |
|----------------|---------------|-----------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| | | | t= 0.000E+00 | 1.000E+00 | 3.000E+00 | 1.000E+01 | 4.049E+01 | 1.000E+02 | 3.000E+02 | 1.000E+03 | |
| Co-60 | Co-60 | 1.000E+00 | 7.298E-02 | 6.393E-02 | 4.904E-02 | 1.940E-02 | 3.414E-04 | 1.286E-07 | 4.375E-19 | 0.000E+00 | |
| Cs-134 | Cs-134 | 1.000E+00 | 1.070E-01 | 7.632E-02 | 3.885E-02 | 3.656E-03 | 1.237E-07 | 2.325E-16 | 0.000E+00 | 0.000E+00 | |
| Cs-137 | Cs-137 | 1.000E+00 | 8.491E-02 | 8.282E-02 | 7.880E-02 | 6.619E-02 | 3.098E-02 | 7.037E-03 | 4.856E-05 | 0.000E+00 | |
| Ni-63 | Ni-63 | 1.000E+00 | 1.285E-03 | 1.272E-03 | 1.245E-03 | 1.157E-03 | 8.397E-04 | 4.493E-04 | 5.494E-05 | 0.000E+00 | |
| Sr-90 | Sr-90 | 1.000E+00 | 1.384E+00 | 9.582E-01 | 4.579E-01 | 3.454E-02 | 1.636E-01 | 1.100E-07 | 0.000E+00 | 0.000E+00 | |

THF(i) is the thread fraction of the parent nuclide.

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

| Nuclide (j) | Parent (i) | THF(i) | S(j,t), pCi/g | | | | | | | | |
|----------------|---------------|-----------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| | | | t= 0.000E+00 | 1.000E+00 | 3.000E+00 | 1.000E+01 | 4.049E+01 | 1.000E+02 | 3.000E+02 | 1.000E+03 | |
| Co-60 | Co-60 | 1.000E+00 | 1.000E+00 | 8.759E-01 | 6.720E-01 | 2.658E-01 | 4.675E-03 | 1.758E-06 | 5.429E-18 | 0.000E+00 | |
| Cs-134 | Cs-134 | 1.000E+00 | 1.000E+00 | 7.135E-01 | 3.632E-01 | 3.418E-02 | 1.156E-06 | 2.173E-15 | 9.809E-45 | 0.000E+00 | |
| Cs-137 | Cs-137 | 1.000E+00 | 1.000E+00 | 9.754E-01 | 9.280E-01 | 7.795E-01 | 3.648E-01 | 8.286E-02 | 5.690E-04 | 1.527E-11 | |
| Ni-63 | Ni-63 | 1.000E+00 | 1.000E+00 | 9.895E-01 | 9.690E-01 | 9.003E-01 | 6.535E-01 | 3.497E-01 | 4.275E-02 | 2.733E-05 | |
| Sr-90 | Sr-90 | 1.000E+00 | 1.000E+00 | 6.913E-01 | 3.303E-01 | 2.492E-02 | 3.218E-07 | 9.234E-17 | 0.000E+00 | 0.000E+00 | |

THF(i) is the thread fraction of the parent nuclide.

RESRAD.EXE execution time = 0.39 seconds