# Site-Specific
## Resident Equation Inputs for Soil

| Variable | Value |
|---|---|
| TR (target cancer risk) unitless | 0.000001 |
| $t_{res}$ (time - resident) yr | 33 |
| $ED_{res}$ (exposure duration - resident) yr | 33 |
| $ET_{res}$ (exposure time - resident) hr/day | 24 |
| $ET_{res-c}$ (exposure time - resident child) hr/day | 24 |
| $ET_{res-a}$ (exposure time - resident adult) hr/day | 24 |
| $ET_{res-i}$ (exposure time - indoor resident) hr/day | 20.5833 |
| $ET_{res-o}$ (exposure time - outdoor resident) hr/day | 3.5 |
| $ED_{res-c}$ (exposure duration - resident child) yr | 7 |
| $ED_{res-a}$ (exposure duration - resident adult) yr | 26 |
| $EF_{res}$ (exposure frequency - resident) day/yr | 234 |
| $EF_{res-c}$ (exposure frequency - resident child) day/yr | 234 |
| $EF_{res-a}$ (exposure frequency - resident adult) day/yr | 234 |
| $IRS_{res-a}$ (soil intake rate - resident adult) mg/day | 130 |
| $IRS_{res-c}$ (soil intake rate - resident child) mg/day | 177 |
| $IRA_{res-a}$ (inhalation rate - resident adult) $m^3$/day | 16.2 |
| $IRA_{res-c}$ (inhalation rate - resident child) $m^3$/day | 9.3 |
| $IFS_{res-adj}$ (age-adjusted soil ingestion factor - resident) mg | 1080846 |
| $IFA_{res-adj}$ (age-adjusted soil inhalation factor - resident) $m^3$ | 113794.2 |
| $GSF_i$ (gamma shielding factor - indoor) unitless | 0.8 |
| Site area for ACF (area correction factor) $m^2$ | 1 |
| Cover thickness for $GSF_o$ (gamma shielding factor) cm | 0 |
| Cover thickness for $GSF_h$ (gamma shielding factor) cm | 0 |
| $IRAP_{res-a}$ (apple ingestion rate - resident adult) g/day | 73.7 |
| $IRAP_{res-c}$ (apple ingestion rate - resident child) g/day | 72.2 |
| $IFAP_{res-adj}$ (age-adjusted apple ingestion factor) g | 566654.4 |
| $IRCI_{res-a}$ (citrus ingestion rate - resident adult) g/day | 309.4 |
| $IRCI_{res-c}$ (citrus ingestion rate - resident child) g/day | 194.1 |
| $IFCI_{res-adj}$ (age-adjusted citrus ingestion factor) g | 2200325.4 |
| $IRBE_{res-a}$ (berry ingestion rate - resident adult) g/day | 35.4 |
| $IRBE_{res-c}$ (berry ingestion rate - resident child) g/day | 23.9 |
| $IFBE_{res-adj}$ (age-adjusted berry ingestion factor) g | 254521.8 |
| $IRPC_{res-a}$ (peach ingestion rate - resident adult) g/day | 115.7 |
| $IRPC_{res-c}$ (peach ingestion rate - resident child) g/day | 111.4 |

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## Resident Equation Inputs for Soil

| Variable | Value |
|---|---|
| $IFPC_{rec,adj}$ (age-adjusted peach ingestion factor) g | 886392 |
| $IRPR_{rec,a}$ (pear ingestion rate - resident adult) g/day | 51.9 |
| $IRPR_{rec,c}$ (pear ingestion rate - resident child) g/day | 66.7 |
| $IFPR_{rec,adj}$ (age-adjusted pear ingestion factor) g | 425014.19999999 |
| $IRST_{rec,a}$ (strawberry ingestion rate - resident adult) g/day | 40.5 |
| $IRST_{rec,c}$ (strawberry ingestion rate - resident child) g/day | 25.3 |
| $IFST_{rec,adj}$ (age-adjusted strawberry ingestion factor) g | 287843.4 |
| $IRAS_{rec,a}$ (asparagus ingestion rate - resident adult) g/day | 39.3 |
| $IRAS_{rec,c}$ (asparagus ingestion rate - resident child) g/day | 12.0 |
| $IFAS_{rec,adj}$ (age-adjusted asparagus ingestion factor) g | 258757.19999999 |
| $IRBT_{rec,a}$ (beet ingestion rate - resident adult) g/day | 33.9 |
| $IRBT_{rec,c}$ (beet ingestion rate - resident child) g/day | 3.9 |
| $IFBT_{rec,adj}$ (age-adjusted beet ingestion factor) g | 212635.80000000 |
| $IRBR_{rec,a}$ (broccoli ingestion rate - resident adult) g/day | 32.0 |
| $IRBR_{rec,c}$ (broccoli ingestion rate - resident child) g/day | 13.1 |
| $IFBR_{rec,adj}$ (age-adjusted broccoli ingestion factor) g | 216145.8 |
| $IRCB_{rec,a}$ (cabbage ingestion rate - resident adult) g/day | 92.1 |
| $IRCB_{rec,c}$ (cabbage ingestion rate - resident child) g/day | 12.3 |
| $IFCB_{rec,adj}$ (age-adjusted cabbage ingestion factor) g | 580483.8 |
| $IRCR_{rec,a}$ (carrot ingestion rate - resident adult) g/day | 27.3 |
| $IRCR_{rec,c}$ (carrot ingestion rate - resident child) g/day | 14.9 |
| $IFCR_{rec,adj}$ (age-adjusted carrot ingestion factor) g | 190499.40000000 |
| $IRCO_{rec,a}$ (corn ingestion rate - resident adult) g/day | 59.8 |
| $IRCO_{rec,c}$ (corn ingestion rate - resident child) g/day | 23.8 |
| $IFCO_{rec,adj}$ (age-adjusted corn ingestion factor) g | 402807.60000000 |
| $IRCU_{rec,a}$ (cucumber ingestion rate - resident adult) g/day | 82.4 |
| $IRCU_{rec,c}$ (cucumber ingestion rate - resident child) g/day | 25.4 |
| $IFCU_{rec,adj}$ (age-adjusted cucumber ingestion factor) g | 542926.8 |
| $IRLE_{rec,a}$ (lettuce ingestion rate - resident adult) g/day | 37.5 |
| $IRLE_{rec,c}$ (lettuce ingestion rate - resident child) g/day | 4.2 |
| $IFLE_{rec,adj}$ (age-adjusted lettuce ingestion factor) g | 235029.6 |
| $IRLI_{rec,a}$ (lima bean ingestion rate - resident adult) g/day | 33.8 |
| $IRLI_{rec,c}$ (lima bean ingestion rate - resident child) g/day | 6.5 |
| $IFLI_{res\text{-}adj}$ (age-adjusted lima bean ingestion factor) g | 216286.19999999 |

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# Site-Specific
## Resident Equation Inputs for Soil

| Variable | Value |
|---|---|
| $IROK_{res,a}$ (okra ingestion rate - resident adult) g/day | 30.2 |
| $IROK_{res,c}$ (okra ingestion rate - resident child) g/day | 5.3 |
| $IFOK_{res,adj}$ (age-adjusted okra ingestion factor) g | 192418.19999999 |
| $IRON_{res,a}$ (onion ingestion rate - resident adult) g/day | 21.8 |
| $IRON_{res,c}$ (onion ingestion rate - resident child) g/day | 5.8 |
| $IFON_{res,adj}$ (age-adjusted onion ingestion factor) g | 142131.6 |
| $IRPE_{res,a}$ (pea ingestion rate - resident adult) g/day | 35.4 |
| $IRPE_{res,c}$ (pea ingestion rate - resident child) g/day | 32.1 |
| $IFPE_{res,adj}$ (age-adjusted pea ingestion factor) g | 267953.4 |
| $IRPU_{res,a}$ (pumpkin ingestion rate - resident adult) g/day | 64.8 |
| $IRPU_{res,c}$ (pumpkin ingestion rate - resident child) g/day | 45.2 |
| $IFPU_{res,adj}$ (age-adjusted pumpkin ingestion factor) g | 468280.80000000 |
| $IRSN_{res,a}$ (snap bean ingestion rate - resident adult) g/day | 53.9 |
| $IRSN_{res,c}$ (snap bean ingestion rate - resident child) g/day | 27.3 |
| $IFSN_{res,adj}$ (age-adjusted snap bean ingestion factor) g | 372645 |
| $IRTO_{res,a}$ (tomato ingestion rate - resident adult) g/day | 80.3 |
| $IRTO_{res,c}$ (tomato ingestion rate - resident child) g/day | 29.7 |
| $IFTO_{res,adj}$ (age-adjusted tomato ingestion factor) g | 537193.79999999 |
| $IRPT_{res,a}$ (potato ingestion rate - resident adult) g/day | 127.8 |
| $IRPT_{res,c}$ (potato ingestion rate - resident child) g/day | 51.7 |
| $IFPT_{res,adj}$ (age-adjusted potato ingestion factor) g | 862219.79999999 |
| $IRRI_{res,a}$ (rice ingestion rate - resident adult) g/day | 73.2 |
| $IRRI_{res,c}$ (rice ingestion rate - resident child) g/day | 28.8 |
| $IFRI_{res,adj}$ (age-adjusted rice ingestion factor) g | 492523.2 |
| $IRCG_{res,a}$ (cereal grain ingestion rate - resident adult) g/day | 76.0 |
| $IRCG_{res,c}$ (cereal grain ingestion rate - resident child) g/day | 38.0 |
| $IFCG_{res,adj}$ (age-adjusted cereal grain ingestion factor) g | 611800 |
| $CF_{res,produce}$ (contaminated plant fraction) unitless | 1 |
| $CF_{res,apple}$ (contaminated apple fraction) unitless | 1 |
| $CF_{res,citrus}$ (contaminated citrus fraction) unitless | 1 |
| $CF_{res,berry}$ (contaminated berry fraction) unitless | 1 |
| $CF_{res,peach}$ (contaminated peach fraction) unitless | 1 |
| $CF_{res,pear}$ (contaminated pear fraction) unitless | 1 |
| $CF_{res,strawberry}$ (contaminated strawberry fraction) unitless | 1 |

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| Variable | Value |
|---|---|
| $CF_{res\text{-}asparagus}$ (contaminated asparagus fraction) unitless | 1 |
| $CF_{res\text{-}beet}$ (contaminated beet fraction) unitless | 1 |
| $CF_{res\text{-}broccoli}$ (contaminated broccoli fraction) unitless | 1 |
| $CF_{res\text{-}cabbage}$ (contaminated cabbage fraction) unitless | 1 |
| $CF_{res\text{-}carrot}$ (contaminated carrot fraction) unitless | 1 |
| $CF_{res\text{-}corn}$ (contaminated corn fraction) unitless | 1 |
| $CF_{res\text{-}cucumber}$ (contaminated cucumber fraction) unitless | 1 |
| $CF_{res\text{-}lettuce}$ (contaminated lettuce fraction) unitless | 1 |
| $CF_{res\text{-}lima\ bean}$ (contaminated lima bean fraction) unitless | 1 |
| $CF_{res\text{-}okra}$ (contaminated okra fraction) unitless | 1 |
| $CF_{res\text{-}onion}$ (contaminated onion fraction) unitless | 1 |
| $CF_{res\text{-}pea}$ (contaminated pea fraction) unitless | 1 |
| $CF_{res\text{-}pumpkin}$ (contaminated pumpkin fraction) unitless | 1 |
| $CF_{res\text{-}snap\ bean}$ (contaminated snap bean fraction) unitless | 1 |
| $CF_{res\text{-}tomato}$ (contaminated tomato fraction) unitless | 1 |
| $CF_{res\text{-}potato}$ (contaminated potato fraction) unitless | 1 |
| $CF_{res\text{-}rice}$ (contaminated rice fraction) unitless | 1 |
| $CF_{res\text{-}cereal\ grain}$ (contaminated cereal grain fraction) unitless | 1 |
| $MLF_{apple}$ (apple mass loading factor) unitless | .000160 |
| $MLF_{citrus}$ (citrus mass loading factor) unitless | .000157 |
| $MLF_{berry}$ (berry mass loading factor) unitless | .000166 |
| $MLF_{peach}$ (peach mass loading factor) unitless | .000150 |
| $MLF_{pear}$ (pear mass loading factor) unitless | .000160 |
| $MLF_{strawberry}$ (strawberry mass loading factor) unitless | .0000800 |
| $MLF_{asparagus}$ (asparagus mass loading factor) unitless | .0000790 |
| $MLF_{beet}$ (beet mass loading factor) unitless | .000138 |
| $MLF_{broccoli}$ (broccoli mass loading factor) unitless | .00101 |
| $MLF_{cabbage}$ (cabbage mass loading factor) unitless | .000105 |
| $MLF_{carrot}$ (carrot mass loading factor) unitless | .0000970 |
| $MLF_{corn}$ (corn mass loading factor) unitless | .000145 |
| $MLF_{cucumber}$ (cucumber mass loading factor) unitless | .0000400 |
| $MLF_{lettuce}$ (lettuce mass loading factor) unitless | .0135 |
| $MLF_{lima\ bean}$ (lima bean mass loading factor) unitless | .00383 |
| $MLF_{okra}$ (okra mass loading factor) unitless | .0000800 |

# Site-Specific
## Resident Equation Inputs for Soil

| Variable | Value |
|---|---|
| $MLF_{onion}$ (onion mass loading factor) unitless | .0000970 |
| $MLF_{pea}$ (pea mass loading factor) unitless | .000178 |
| $MLF_{pumpkin}$ (pumpkin mass loading factor) unitless | .0000580 |
| $MLF_{snap\ bean}$ (snap bean mass loading factor) unitless | .00500 |
| $MLF_{tomato}$ (tomato mass loading factor) unitless | .00159 |
| $MLF_{potato}$ (potato mass loading factor) unitless | .000210 |
| $MLF_{rice}$ (rice mass loading factor) unitless | .250 |
| $MLF_{cereal\ grain}$ (cereal grain mass loading factor) unitless | .250 |
| TR (target cancer risk) unitless | 0.000001 |
| $ED_{res-c}$ (exposure duration - resident child) yr | 7 |
| $ED_{res-a}$ (exposure duration - resident adult) yr | 26 |
| $EF_{res-c}$ (exposure frequency - resident child) day/yr | 234 |
| $EF_{res-a}$ (exposure frequency - resident adult) day/yr | 234 |
| City (Climate Zone) | 4 |
| $A_c$ (acres) | .5 |
| $Q/C_{wp}$ ($g/m^2$-s per $kg/m^3$) | 101.59575604259 |
| PEF (particulate emission factor) $m^3/kg$ | 14926256.930852 |
| A (PEF Dispersion Constant) | 7.1414 |
| B (PEF Dispersion Constant) | 31.1794 |
| C (PEF Dispersion Constant) | 382.6078 |
| V (fraction of vegetative cover) unitless | 0.2765 |
| $U_m$ (mean annual wind speed) m/s | 6.77 |
| $U_t$ (equivalent threshold value) | 8 |
| F(x) (function dependant on $U_m/U_t$) unitless | 1.5523515262958 |

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| Isotope | ICRP Lung Absorption Type | Inhalation Slope Factor (risk/pCi) | External Exposure Slope Factor (risk/yr per pCi/g) | Food Ingestion Slope Factor (risk/pCi) | Soil Ingestion Slope Factor (risk/pCi) | Particulate Emission Factor ($m^3$/kg) | Lambda (1/yr) | Halflife (yr) | 1 $m^2$ Soil Volume Area Correction Factor | 0 cm Soil Volume Gamma Shielding Factor | Total Indoor GSF Soil Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ac-225 | S | 2.86E-08 | 4.12E-08 | 2.72E-10 | 4.88E-10 | 1.49E+07 | 2.53E+01 | 2.74E-02 | 9.31E-02 | 1.00E+00 | 8.00E-01 |
| Ac-227 | S | 1.49E-07 | 1.98E-10 | 2.45E-10 | 2.90E-10 | 1.49E+07 | 3.18E-02 | 2.18E+01 | 1.68E-01 | 1.00E+00 | 8.00E-01 |
| Ac-228 | S | 4.92E-11 | 4.04E-06 | 2.73E-12 | 4.92E-12 | 1.49E+07 | 9.87E+02 | 7.02E-04 | 9.55E-02 | 1.00E+00 | 8.00E-01 |
| Am-241 | F | 3.77E-08 | 2.77E-08 | 1.34E-10 | 1.84E-10 | 1.49E+07 | 1.60E-03 | 4.32E+02 | 1.08E-01 | 1.00E+00 | 8.00E-01 |
| At-217 | - | 0.00E+00 | 9.36E-10 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 6.77E+08 | 1.02E-09 | 7.59E-02 | 1.00E+00 | 8.00E-01 |
| At-218 | - | 0.00E+00 | 2.74E-11 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 1.46E+07 | 4.76E-08 | 9.00E-01 | 1.00E+00 | 8.00E-01 |
| At-219 | - | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 3.90E+05 | 1.78E-06 | 9.00E-01 | 1.00E+00 | 8.00E-01 |
| Bi-210 | S | 4.55E-10 | 2.77E-09 | 1.30E-11 | 2.40E-11 | 1.49E+07 | 5.05E+01 | 1.37E-02 | 7.47E-02 | 1.00E+00 | 8.00E-01 |
| Bi-211 | - | 0.00E+00 | 1.90E-07 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 1.70E+05 | 4.07E-06 | 8.27E-02 | 1.00E+00 | 8.00E-01 |
| Bi-212 | S | 1.13E-10 | 4.96E-07 | 1.01E-12 | 1.68E-12 | 1.49E+07 | 6.02E+03 | 1.15E-04 | 9.36E-02 | 1.00E+00 | 8.00E-01 |
| Bi-213 | S | 7.40E-11 | 5.43E-07 | 7.18E-13 | 1.19E-12 | 1.49E+07 | 7.99E+03 | 8.67E-05 | 8.82E-02 | 1.00E+00 | 8.00E-01 |
| Bi-214 | S | 6.18E-11 | 7.34E-06 | 2.65E-13 | 4.03E-13 | 1.49E+07 | 1.83E+04 | 3.79E-05 | 9.37E-02 | 1.00E+00 | 8.00E-01 |
| Bi-215 | - | 0.00E+00 | 1.08E-06 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 4.79E+04 | 1.45E-05 | 8.52E-02 | 1.00E+00 | 8.00E-01 |
| Fr-221 | - | 0.00E+00 | 1.05E-07 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 7.43E+04 | 9.32E-06 | 7.39E-02 | 1.00E+00 | 8.00E-01 |
| Fr-223 | S | 4.07E-11 | 1.35E-07 | 1.01E-11 | 1.69E-11 | 1.49E+07 | 1.66E+04 | 4.19E-05 | 9.03E-02 | 1.00E+00 | 8.00E-01 |
| Hg-206 | - | 0.00E+00 | 4.83E-07 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 4.47E+04 | 1.55E-05 | 7.89E-02 | 1.00E+00 | 8.00E-01 |
| Np-237 | S | 2.87E-08 | 5.17E-08 | 8.29E-11 | 1.25E-10 | 1.49E+07 | 3.23E-07 | 2.14E+06 | 1.04E-01 | 1.00E+00 | 8.00E-01 |
| Pa-231 | F | 7.62E-08 | 1.27E-07 | 2.26E-10 | 2.98E-10 | 1.49E+07 | 2.12E-05 | 3.28E+04 | 9.23E-02 | 1.00E+00 | 8.00E-01 |
| Pa-233 | S | 1.53E-11 | 8.03E-07 | 8.95E-12 | 1.65E-11 | 1.49E+07 | 9.38E+00 | 7.39E-02 | 8.10E-02 | 1.00E+00 | 8.00E-01 |
| Pa-234 | S | 1.20E-12 | 6.62E-06 | 3.00E-12 | 5.37E-12 | 1.49E+07 | 9.06E+02 | 7.65E-04 | 9.37E-02 | 1.00E+00 | 8.00E-01 |
| Pa-234m | - | 0.00E+00 | 9.06E-08 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 3.11E+05 | 2.23E-06 | 9.68E-02 | 1.00E+00 | 8.00E-01 |
| Pb-209 | S | 2.08E-13 | 5.37E-10 | 3.49E-13 | 6.25E-13 | 1.49E+07 | 1.87E+03 | 3.71E-04 | 9.00E-01 | 1.00E+00 | 8.00E-01 |
| Pb-210 | S | 1.59E-08 | 1.48E-09 | 1.18E-09 | 1.72E-09 | 1.49E+07 | 3.12E-02 | 2.22E+01 | 1.32E-01 | 1.00E+00 | 8.00E-01 |
| Pb-211 | S | 4.03E-11 | 2.91E-07 | 5.81E-13 | 9.55E-13 | 1.49E+07 | 1.01E+04 | 6.87E-05 | 9.21E-02 | 1.00E+00 | 8.00E-01 |
| Pb-212 | S | 6.29E-10 | 4.96E-07 | 3.57E-11 | 6.33E-11 | 1.49E+07 | 5.71E+02 | 1.21E-03 | 7.35E-02 | 1.00E+00 | 8.00E-01 |
| Pb-214 | S | 7.77E-11 | 9.94E-07 | 4.85E-13 | 7.92E-13 | 1.49E+07 | 1.36E+04 | 5.10E-05 | 8.13E-02 | 1.00E+00 | 8.00E-01 |
| Po-210 | S | 1.45E-08 | 4.51E-11 | 2.25E-09 | 3.27E-09 | 1.49E+07 | 1.83E+00 | 3.79E-01 | 9.41E-02 | 1.00E+00 | 8.00E-01 |
| Po-211 | - | 0.00E+00 | 3.76E-08 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 4.24E+07 | 1.64E-08 | 9.31E-02 | 1.00E+00 | 8.00E-01 |
| Po-212 | - | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 7.31E+13 | 9.48E-15 | 9.00E-01 | 1.00E+00 | 8.00E-01 |
| Po-213 | - | 0.00E+00 | 1.73E-10 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 5.20E+12 | 1.33E-13 | 9.31E-02 | 1.00E+00 | 8.00E-01 |

# Site-Specific
## Resident PRGs for Soil

| Isotope | Ingestion PRG TR=0.000001 (pCi/g) | Inhalation PRG TR=0.000001 (pCi/g) | External Exposure PRG TR=0.000001 (pCi/g) | Produce Consumption PRG TR=0.000001 (pCi/g) | Total PRG TR=0.000001 (pCi/g) | Total PRG TR=0.000001 (mg/kg) |
|---|---|---|---|---|---|---|
| Ac-225 | 1.58E+03 | 3.83E+03 | 1.24E+04 | 1.67E+02 | 1.43E+02 | 2.47E-09 |
| Ac-227 | 5.15E+00 | 1.42E+00 | 2.76E+03 | 3.57E-01 | 2.70E-01 | 3.74E-09 |
| Ac-228 | 6.12E+06 | 8.68E+07 | 4.80E+03 | 6.46E+05 | 4.76E+03 | 2.13E-09 |
| Am-241 | 5.16E+00 | 3.57E+00 | 1.96E+01 | 7.44E-01 | 5.35E-01 | 1.56E-07 |
| At-217 | - | - | 1.79E+13 | - | 1.79E+13 | 1.11E-05 |
| At-218 | - | - | 1.11E+12 | - | 1.11E+12 | 3.21E-05 |
| At-219 | - | - | - | - | - | - |
| Bi-210 | 6.42E+04 | 4.80E+05 | 4.58E+05 | 1.23E+02 | 1.23E+02 | 9.90E-10 |
| Bi-211 | - | - | 2.03E+07 | - | 2.03E+07 | 4.88E-08 |
| Bi-212 | 1.09E+08 | 2.30E+08 | 2.43E+05 | 1.89E+05 | 1.06E+05 | 7.26E-09 |
| Bi-213 | 2.05E+08 | 4.67E+08 | 3.13E+05 | 3.53E+05 | 1.66E+05 | 8.57E-09 |
| Bi-214 | 1.39E+09 | 1.28E+09 | 4.99E+04 | 2.19E+06 | 4.88E+04 | 1.11E-09 |
| Bi-215 | - | - | 9.73E+05 | - | 9.73E+05 | 8.47E-09 |
| Fr-221 | - | - | 1.80E+07 | - | 1.80E+07 | 1.04E-07 |
| Fr-223 | 2.99E+07 | 1.76E+09 | 2.54E+06 | 1.70E+05 | 1.59E+05 | 4.15E-09 |
| Hg-206 | - | - | 2.20E+06 | - | 2.20E+06 | 1.96E-08 |
| Np-237 | 7.42E+00 | 4.57E+00 | 1.05E+01 | 1.13E-01 | 1.08E-01 | 1.53E-04 |
| Pa-231 | 3.11E+00 | 1.72E+00 | 4.84E+00 | 3.98E-02 | 3.81E-02 | 8.08E-07 |
| Pa-233 | 1.74E+04 | 2.66E+06 | 2.70E+02 | 3.11E+02 | 1.43E+02 | 6.91E-09 |
| Pa-234 | 5.16E+06 | 3.27E+09 | 2.74E+03 | 8.95E+04 | 2.66E+03 | 1.33E-09 |
| Pa-234m | - | - | 6.65E+07 | - | 6.65E+07 | 9.71E-08 |
| Pb-209 | 9.11E+07 | 3.88E+10 | 7.24E+06 | 9.60E+05 | 8.39E+05 | 1.82E-07 |
| Pb-210 | 8.63E-01 | 1.32E+01 | 4.67E+02 | 7.39E-03 | 7.33E-03 | 9.56E-11 |
| Pb-211 | 3.23E+08 | 1.08E+09 | 7.07E+05 | 3.11E+06 | 5.74E+05 | 2.33E-08 |
| Pb-212 | 2.75E+05 | 3.93E+06 | 2.93E+04 | 2.87E+03 | 2.59E+03 | 1.86E-09 |
| Pb-214 | 5.24E+08 | 7.57E+08 | 3.16E+05 | 5.03E+06 | 2.97E+05 | 9.06E-09 |
| Po-210 | 1.70E+01 | 5.46E+02 | 8.09E+05 | 1.19E+00 | 1.11E+00 | 2.48E-10 |
| Po-211 | - | - | 2.27E+10 | - | 2.27E+10 | 2.19E-07 |
| Po-212 | - | - | - | - | - | - |
| Po-213 | - | - | 6.06E+17 | - | 6.06E+17 | 4.81E-05 |

| Isotope | ICRP Lung Absorption Type | Inhalation Slope Factor (risk/pCi) | External Exposure Slope Factor (risk/yr per pCi/g) | Food Ingestion Slope Factor (risk/pCi) | Soil Ingestion Slope Factor (risk/pCi) | Particulate Emission Factor ($m^3$/kg) | Lambda (1/yr) | Halflife (yr) | 1 $m^2$ Soil Volume Area Correction Factor | 0 cm Soil Volume Gamma Shielding Factor | Total Indoor GSF Soil Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Po-214 | - | 0.00E+00 | 3.85E-10 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 1.33E+11 | 5.21E-12 | 9.38E-02 | 1.00E+00 | 8.00E-01 |
| Po-215 | - | 0.00E+00 | 7.48E-10 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 1.23E+10 | 5.65E-11 | 8.77E-02 | 1.00E+00 | 8.00E-01 |
| Po-216 | - | 0.00E+00 | 7.10E-11 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 1.51E+08 | 4.60E-09 | 9.43E-02 | 1.00E+00 | 8.00E-01 |
| Po-218 | - | 1.39E-11 | 6.84E-15 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 1.17E+05 | 5.90E-06 | 9.00E-01 | 1.00E+00 | 8.00E-01 |
| Pu-239 | F | 5.55E-08 | 2.09E-10 | 1.74E-10 | 2.28E-10 | 1.49E+07 | 2.87E-05 | 2.41E+04 | 1.69E-01 | 1.00E+00 | 8.00E-01 |
| Pu-240 | F | 5.55E-08 | 7.12E-11 | 1.74E-10 | 2.28E-10 | 1.49E+07 | 1.06E-04 | 6.56E+03 | 1.78E-01 | 1.00E+00 | 8.00E-01 |
| Ra-223 | S | 2.92E-08 | 4.55E-07 | 3.39E-10 | 5.99E-10 | 1.49E+07 | 2.21E+01 | 3.13E-02 | 8.09E-02 | 1.00E+00 | 8.00E-01 |
| Ra-224 | S | 1.13E-08 | 3.91E-08 | 2.38E-10 | 4.26E-10 | 1.49E+07 | 6.91E+01 | 1.00E-02 | 7.02E-02 | 1.00E+00 | 8.00E-01 |
| Ra-225 | S | 2.62E-08 | 6.11E-09 | 1.54E-10 | 2.42E-10 | 1.49E+07 | 1.70E+01 | 4.08E-02 | 9.89E-02 | 1.00E+00 | 8.00E-01 |
| Ra-226 | S | 2.82E-08 | 2.50E-08 | 5.14E-10 | 6.77E-10 | 1.49E+07 | 4.33E-04 | 1.60E+03 | 7.91E-02 | 1.00E+00 | 8.00E-01 |
| Ra-228 | S | 4.37E-08 | 3.43E-11 | 1.42E-09 | 1.98E-09 | 1.49E+07 | 1.21E-01 | 5.75E+00 | 1.96E-01 | 1.00E+00 | 8.00E-01 |
| Rn-218 | - | 0.00E+00 | 3.39E-09 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 6.24E+08 | 1.11E-09 | 8.60E-02 | 1.00E+00 | 8.00E-01 |
| Rn-219 | - | 0.00E+00 | 2.35E-07 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 5.52E+06 | 1.26E-07 | 7.90E-02 | 1.00E+00 | 8.00E-01 |
| Rn-220 | - | 1.15E-12 | 2.77E-09 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 3.93E+05 | 1.76E-06 | 8.66E-02 | 1.00E+00 | 8.00E-01 |
| Rn-222 | - | 2.28E-12 | 1.69E-09 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 6.62E+01 | 1.05E-02 | 8.69E-02 | 1.00E+00 | 8.00E-01 |
| Th-227 | S | 3.50E-08 | 4.45E-07 | 7.03E-11 | 1.29E-10 | 1.49E+07 | 1.35E+01 | 5.12E-02 | 7.85E-02 | 1.00E+00 | 8.00E-01 |
| Th-228 | S | 1.32E-07 | 5.64E-09 | 1.48E-10 | 2.43E-10 | 1.49E+07 | 3.63E-01 | 1.91E+00 | 1.11E-01 | 1.00E+00 | 8.00E-01 |
| Th-229 | S | 1.75E-07 | 2.24E-07 | 2.90E-10 | 3.85E-10 | 1.49E+07 | 9.44E-05 | 7.34E+03 | 8.93E-02 | 1.00E+00 | 8.00E-01 |
| Th-230 | F | 3.41E-08 | 8.45E-10 | 1.19E-10 | 1.66E-10 | 1.49E+07 | 9.19E-06 | 7.54E+04 | 1.56E-01 | 1.00E+00 | 8.00E-01 |
| Th-231 | S | 1.50E-12 | 2.49E-08 | 3.22E-12 | 5.96E-12 | 1.49E+07 | 2.38E+02 | 2.91E-03 | 1.23E-01 | 1.00E+00 | 8.00E-01 |
| Th-232 | S | 4.33E-08 | 3.58E-10 | 1.33E-10 | 1.84E-10 | 1.49E+07 | 4.93E-11 | 1.41E+10 | 1.70E-01 | 1.00E+00 | 8.00E-01 |
| Th-234 | S | 3.08E-11 | 1.77E-08 | 3.39E-11 | 6.25E-11 | 1.49E+07 | 1.05E+01 | 6.60E-02 | 9.65E-02 | 1.00E+00 | 8.00E-01 |
| Tl-206 | - | 0.00E+00 | 6.11E-09 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 8.67E+04 | 7.99E-06 | 9.16E-02 | 1.00E+00 | 8.00E-01 |
| Tl-207 | - | 0.00E+00 | 1.59E-08 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 7.64E+04 | 9.08E-06 | 9.72E-02 | 1.00E+00 | 8.00E-01 |
| Tl-208 | - | 0.00E+00 | 1.75E-05 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 1.19E+05 | 5.81E-06 | 8.90E-02 | 1.00E+00 | 8.00E-01 |
| Tl-209 | - | 0.00E+00 | 1.03E-05 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 1.69E+05 | 4.11E-06 | 9.42E-02 | 1.00E+00 | 8.00E-01 |
| Tl-210 | - | 0.00E+00 | 1.34E-05 | 0.00E+00 | 0.00E+00 | 1.49E+07 | 2.80E+05 | 2.47E-06 | 9.23E-02 | 1.00E+00 | 8.00E-01 |
| U-233 | S | 2.83E-08 | 7.11E-10 | 9.69E-11 | 1.50E-10 | 1.49E+07 | 4.35E-06 | 1.59E+05 | 1.54E-01 | 1.00E+00 | 8.00E-01 |
| U-234 | S | 2.78E-08 | 2.53E-10 | 9.55E-11 | 1.48E-10 | 1.49E+07 | 2.82E-06 | 2.46E+05 | 1.78E-01 | 1.00E+00 | 8.00E-01 |
| U-235 | S | 2.50E-08 | 5.51E-07 | 9.44E-11 | 1.48E-10 | 1.49E+07 | 9.84E-10 | 7.04E+08 | 8.04E-02 | 1.00E+00 | 8.00E-01 |

| Isotope | Ingestion PRG TR=0.000001 (pCi/g) | Inhalation PRG TR=0.000001 (pCi/g) | External Exposure PRG TR=0.000001 (pCi/g) | Produce Consumption PRG TR=0.000001 (pCi/g) | Total PRG TR=0.000001 (pCi/g) | Total PRG TR=0.000001 (mg/kg) |
|---|---|---|---|---|---|---|
| Po-214 | - | - | 6.90E+15 | - | 6.90E+15 | 2.15E-05 |
| Po-215 | - | - | 3.50E+14 | - | 3.50E+14 | 1.19E-05 |
| Po-216 | - | - | 4.22E+13 | - | 4.22E+13 | 1.17E-04 |
| Po-218 | - | 3.66E+10 | 3.58E+13 | - | 3.66E+10 | 1.32E-04 |
| Pu-239 | 4.06E+00 | 2.36E+00 | 1.61E+03 | 6.14E-01 | 4.35E-01 | 7.02E-06 |
| Pu-240 | 4.06E+00 | 2.37E+00 | 4.49E+03 | 6.15E-01 | 4.36E-01 | 1.92E-06 |
| Ra-223 | 1.13E+03 | 3.28E+03 | 1.13E+03 | 9.05E+00 | 8.88E+00 | 1.74E-10 |
| Ra-224 | 4.96E+03 | 2.64E+04 | 4.72E+04 | 4.01E+01 | 3.97E+01 | 2.50E-10 |
| Ra-225 | 2.14E+03 | 2.81E+03 | 5.27E+04 | 1.53E+01 | 1.51E+01 | 3.88E-10 |
| Ra-226 | 1.38E+00 | 4.69E+00 | 2.89E+01 | 8.21E-03 | 8.15E-03 | 8.25E-09 |
| Ra-228 | 1.89E+00 | 1.22E+01 | 3.43E+04 | 1.19E-02 | 1.18E-02 | 4.35E-11 |
| Rn-218 | - | - | 4.02E+12 | - | 4.02E+12 | 2.72E-06 |
| Rn-219 | - | - | 5.58E+08 | - | 5.58E+08 | 4.30E-08 |
| Rn-220 | - | 1.48E+12 | 3.08E+09 | - | 3.07E+09 | 3.33E-06 |
| Rn-222 | - | 1.26E+08 | 8.43E+05 | - | 8.37E+05 | 5.45E-06 |
| Th-227 | 3.21E+03 | 1.67E+03 | 7.27E+02 | 4.36E+02 | 2.18E+02 | 7.11E-09 |
| Th-228 | 4.55E+01 | 1.18E+01 | 1.08E+03 | 5.55E+00 | 3.48E+00 | 4.24E-09 |
| Th-229 | 2.41E+00 | 7.52E-01 | 2.84E+00 | 2.37E-01 | 1.58E-01 | 7.44E-07 |
| Th-230 | 5.57E+00 | 3.85E+00 | 4.31E+02 | 5.76E-01 | 4.59E-01 | 2.23E-05 |
| Th-231 | 1.22E+06 | 6.85E+08 | 1.46E+05 | 1.67E+05 | 7.33E+04 | 1.38E-07 |
| Th-232 | 5.03E+00 | 3.03E+00 | 9.31E+02 | 5.15E-01 | 4.05E-01 | 3.69E+00 |
| Th-234 | 5.12E+03 | 1.48E+06 | 1.15E+04 | 7.00E+02 | 5.85E+02 | 2.53E-08 |
| Tl-206 | - | - | 2.91E+08 | - | 2.91E+08 | 1.34E-06 |
| Tl-207 | - | - | 9.27E+07 | - | 9.27E+07 | 4.88E-07 |
| Tl-208 | - | - | 1.43E+05 | - | 1.43E+05 | 4.85E-10 |
| Tl-209 | - | - | 3.25E+05 | - | 3.25E+05 | 7.82E-10 |
| Tl-210 | - | - | 4.24E+05 | - | 4.24E+05 | 6.16E-10 |
| U-233 | 6.16E+00 | 4.63E+00 | 5.19E+02 | 1.27E-01 | 1.21E-01 | 1.26E-05 |
| U-234 | 6.24E+00 | 4.71E+00 | 1.26E+03 | 1.29E-01 | 1.23E-01 | 1.98E-05 |
| U-235 | 6.27E+00 | 5.24E+00 | 1.28E+00 | 1.30E-01 | 1.14E-01 | 5.26E-02 |

| Isotope | ICRP Lung Absorption Type | Inhalation Slope Factor (risk/pCi) | External Exposure Slope Factor (risk/yr per pCi/g) | Food Ingestion Slope Factor (risk/pCi) | Soil Ingestion Slope Factor (risk/pCi) | Particulate Emission Factor ($m^3$/kg) | Lambda (1/yr) | Halflife (yr) | 1 $m^2$ Soil Volume Area Correction Factor | 0 cm Soil Volume Gamma Shielding Factor | Total Indoor GSF Soil Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|
| U-235m | M | 1.87E-18 | 0.00E+00 | 1.06E-17 | 1.65E-17 | 1.49E+07 | 1.40E+04 | 4.95E-05 | 1.74E-01 | 1.00E+00 | 8.00E-01 |
| U-236 | S | 2.57E-08 | 1.24E-10 | 8.99E-11 | 1.39E-10 | 1.49E+07 | 2.96E-08 | 2.34E+07 | 1.82E-01 | 1.00E+00 | 8.00E-01 |
| U-238 | S | 2.36E-08 | 1.24E-10 | 8.66E-11 | 1.34E-10 | 1.49E+07 | 1.55E-10 | 4.47E+09 | 1.82E-01 | 1.00E+00 | 8.00E-01 |

# Site-Specific
## Resident PRGs for Soil

| Isotope | Ingestion PRG TR=0.000001 (pCi/g) | Inhalation PRG TR=0.000001 (pCi/g) | External Exposure PRG TR=0.000001 (pCi/g) | Produce Consumption PRG TR=0.000001 (pCi/g) | Total PRG TR=0.000001 (pCi/g) | Total PRG TR=0.000001 (mg/kg) |
|---|---|---|---|---|---|---|
| U-235m | 2.59E+13 | 3.25E+16 | - | 5.35E+11 | 5.24E+11 | 1.71E-02 |
| U-236 | 6.63E+00 | 5.11E+00 | 2.52E+03 | 1.37E-01 | 1.31E-01 | 2.02E-03 |
| U-238 | 6.89E+00 | 5.55E+00 | 2.53E+03 | 1.42E-01 | 1.36E-01 | 4.04E-01 |

Output generated 22MAY2017:17:07:59