Site-Specific

Resident Equation Inputs for Settled Dust - Progeny Included (with decay)

* Inputted values different from Resident defaults are highlighted.

Variable	Resident Settled Dust Default Value	Form-input Value
ED_{res} (exposure duration - resident) yr	26	26
ED_{res-a} (exposure duration - resident adult) yr	20	20
ED_{res-c} (exposure duration - resident child) yr	6	6
EF_{res} (exposure frequency - resident) day/yr	350	350
EF_{res-a} (exposure frequency - resident adult) day/yr	350	350
EF_{res-c} (exposure frequency - resident child) day/yr	350	350
ET_{res} (exposure time) hr/day	24	24
$ET_{res-a\,h}$ (exposure time - resident adult hard surface) hr/day	6	6
$ET_{res-c\,h}$ (exposure time - resident child hard surface) hr/day	6	6
$ET_{res-a\,s}$ (exposure time - resident adult soft surface) hr/day	10	10
$ET_{res-c\,s}$ (exposure time - resident child soft surface) hr/day	10	10
F_{AM} (area and material factor) unitless	1	1
F_i (fraction of time spent in compartment) unitless	1	1
F_{in} (fraction time spent indoors) unitless	1	1
$F_{OFF-SET}$ (off-set factor) unitless	1	1
FQ_a (frequency of hand to mouth - adult) event/hr	3	1.64
FQ_c (frequency of hand to mouth - child) event/hr	17	17
$FTSS_h$ (fraction transferred surface to skin - hard surface) unitless	0.5	0.5
$FTSS_s$ (fraction transferred surface to skin - soft surface) unitless	0.1	0.1
$IFD_{res-adj}$ (age-adjusted dust ingestion rate - resident) cm^2	3200400	528220
k (dissipation rate constant) yr^{-1}	0.0	0.0
SA_{res-a} (surface area of fingers - resident adult) cm^2	49	11.5
SA_{res-c} (surface area of fingers - resident child) cm^2	16	3.7
SE (saliva extraction factor) unitless	0.5	0.5
t_{res} (time - resident) yr	26	26
TR (target cancer risk) unitless	1.0E-06	1.0E-06

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Resident Building PRGs for Settled Dust - Progeny Included (with decay)

Radionuclide	Soil Ingestion Slope Factor (risk/pCi)	Ground Plane External Exposure Slope Factor (risk/yr per pCi/cm²)	Lambda (1/yr)	Halflife (yr)	Ingestion BPRG TR=1E-06 (pCi/cm²)	External Exposure BPRG TR=1E-06 (pCi/cm²)	Dust BPRG TR=1E-06 (pCi/cm²)	Dust BPRG TR=1E-06 (mg/cm²)
Ba-137m	-	5.36E-07	2.29E-02	3.02E+01	-	9.94E-02	**9.94E-02**	1.15E-12
Co-60	3.81E-11	2.18E-06	1.31E-01	5.27E+00	1.76E-01	6.50E-02	**4.75E-02**	4.20E-14
Cs-137	4.25E-11	5.53E-10	2.29E-02	3.02E+01	5.91E-02	9.63E+01	**5.91E-02**	6.85E-13
Eu-152	1.46E-11	1.03E-06	5.13E-02	1.35E+01	2.35E-01	7.05E-02	**5.43E-02**	3.12E-13
Eu-154	2.54E-11	1.10E-06	8.07E-02	8.59E+00	1.78E-01	8.72E-02	**5.85E-02**	2.17E-13
Gd-152	5.48E-11	-	6.42E-15	1.08E+14	3.45E-02	-	**3.45E-02**	1.59E+00
H-3	8.99E-14	-	5.63E-02	1.23E+01	4.01E+01	-	**4.01E+01**	4.15E-12
Nd-144	5.36E-11	-	3.03E-16	2.29E+15	3.53E-02	-	**3.53E-02**	3.26E+01
Sm-148	5.59E-11	-	9.90E-17	7.00E+15	3.41E-02	-	**3.41E-02**	9.90E+01
Sr-90	8.62E-11	3.74E-10	2.41E-02	2.88E+01	2.95E-02	1.44E+02	**2.95E-02**	2.14E-13
Y-90	4.92E-11	1.67E-08	2.41E-02	2.88E+01	5.18E-02	3.23E+00	**5.09E-02**	3.70E-13

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Site-Specific
Resident Risk for Settled Dust - Progeny Included (with decay)

Radionuclide	Soil Ingestion Slope Factor (risk/pCi)	Ground Plane External Exposure Slope Factor (risk/yr per pCi/cm²)	Concentration (pCi/cm²)	Lambda (1/yr)	Halflife (yr)	Ingestion Risk	External Exposure Risk	Total Risk
Ba-137m	-	5.36E-07	4.25E-01	2.29E-02	3.02E+01	-	4.28E-06	**4.28E-06**
Co-60	3.81E-11	2.18E-06	4.51E+00	1.31E-01	5.27E+00	2.56E-05	6.93E-05	**9.49E-05**
Cs-137	4.25E-11	5.53E-10	4.51E+00	2.29E-02	3.02E+01	7.62E-05	4.68E-08	**7.62E-05**
Eu-152	1.46E-11	1.03E-06	4.51E+00	5.13E-02	1.35E+01	1.92E-05	6.39E-05	**8.30E-05**
Eu-154	2.54E-11	1.10E-06	4.51E+00	8.07E-02	8.59E+00	2.53E-05	5.17E-05	**7.69E-05**
Gd-152	5.48E-11	-	-	6.42E-15	1.08E+14	-	-	**-**
H-3	8.99E-14	-	4.51E+00	5.63E-02	1.23E+01	1.12E-07	-	**1.12E-07**
Nd-144	5.36E-11	-	-	3.03E-16	2.29E+15	-	-	**-**
Sm-148	5.59E-11	-	-	9.90E-17	7.00E+15	-	-	**-**
Sr-90	8.62E-11	3.74E-10	9.01E-02	2.41E-02	2.88E+01	3.05E-06	6.25E-10	**3.05E-06**
Y-90	4.92E-11	1.67E-08	8.99E-01	2.41E-02	2.88E+01	1.74E-05	2.78E-07	**1.76E-05**
**Total Risk*	-	-	-	-	-	*1.67E-04*	*1.89E-04*	***3.56E-04***

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