Site-Specific
Resident Equation Inputs for Soil

Variable	Value
TR (target cancer risk) unitless	1.0E-6
t_{res} (time - resident) yr	26
ED_{res} (exposure duration - resident) yr	26
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	16.416
ET_{res-o} (exposure time - outdoor resident) hr/day	1.752
ED_{res-c} (exposure duration - resident child) yr	6
ED_{res-a} (exposure duration - resident adult) yr	20
EF_{res} (exposure frequency - resident) day/yr	350
EF_{res-c} (exposure frequency - resident child) day/yr	350
EF_{res-a} (exposure frequency - resident adult) day/yr	350
IRS_{res-a} (soil intake rate - resident adult) mg/day	0
IRS_{res-c} (soil intake rate - resident child) mg/day	0
IRA_{res-a} (inhalation rate - resident adult) m^3/day	0
IRA_{res-c} (inhalation rate - resident child) m^3/day	0
$IFS_{res-adj}$ (age-adjusted soil ingestion factor - resident) mg	0
$IFA_{res-adj}$ (age-adjusted soil inhalation factor - resident) m^3	0
GSF_i (gamma shielding factor - indoor) unitless	0.4
Site area for ACF (area correction factor) m^2	1000029
Cover thickness for GSF_o (gamma shielding factor) cm	20
Cover thickness for GSF_h (gamma shielding factor) cm	20
$IRAP_{res-a}$ (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	667520
$IRCI_{res-a}$ (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	2573410
$IRBE_{res-a}$ (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	297990
$IRPC_{res-a}$ (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
$IFPC_{res\text{-}adj}$ (age-adjusted peach ingestion factor) g	1043840
$IRPR_{res\text{-}a}$ (pear ingestion rate - resident adult) g/day	51.9
$IRPR_{res\text{-}c}$ (pear ingestion rate - resident child) g/day	66.7
$IFPR_{res\text{-}adj}$ (age-adjusted pear ingestion factor) g	503370
$IRST_{res\text{-}a}$ (strawberry ingestion rate - resident adult) g/day	40.5
$IRST_{res\text{-}c}$ (strawberry ingestion rate - resident child) g/day	25.3
$IFST_{res\text{-}adj}$ (age-adjusted strawberry ingestion factor) g	336630
$IRAS_{res\text{-}a}$ (asparagus ingestion rate - resident adult) g/day	39.3
$IRAS_{res\text{-}c}$ (asparagus ingestion rate - resident child) g/day	12.0
$IFAS_{res\text{-}adj}$ (age-adjusted asparagus ingestion factor) g	300300
$IRBT_{res\text{-}a}$ (beet ingestion rate - resident adult) g/day	33.9
$IRBT_{res\text{-}c}$ (beet ingestion rate - resident child) g/day	3.9
$IFBT_{res\text{-}adj}$ (age-adjusted beet ingestion factor) g	245490
$IRBR_{res\text{-}a}$ (broccoli ingestion rate - resident adult) g/day	32.0
$IRBR_{res\text{-}c}$ (broccoli ingestion rate - resident child) g/day	13.1
$IFBR_{res\text{-}adj}$ (age-adjusted broccoli ingestion factor) g	251510
$IRCB_{res\text{-}a}$ (cabbage ingestion rate - resident adult) g/day	92.1
$IRCB_{res\text{-}c}$ (cabbage ingestion rate - resident child) g/day	12.3
$IFCB_{res\text{-}adj}$ (age-adjusted cabbage ingestion factor) g	670530
$IRCR_{res\text{-}a}$ (carrot ingestion rate - resident adult) g/day	27.3
$IRCR_{res\text{-}c}$ (carrot ingestion rate - resident child) g/day	14.9
$IFCR_{res\text{-}adj}$ (age-adjusted carrot ingestion factor) g	222390
$IRCO_{res\text{-}a}$ (corn ingestion rate - resident adult) g/day	59.8
$IRCO_{res\text{-}c}$ (corn ingestion rate - resident child) g/day	23.8
$IFCO_{res\text{-}adj}$ (age-adjusted corn ingestion factor) g	468580
$IRCU_{res\text{-}a}$ (cucumber ingestion rate - resident adult) g/day	82.4
$IRCU_{res\text{-}c}$ (cucumber ingestion rate - resident child) g/day	25.4
$IFCU_{res\text{-}adj}$ (age-adjusted cucumber ingestion factor) g	630140
$IRLE_{res\text{-}a}$ (lettuce ingestion rate - resident adult) g/day	37.5
$IRLE_{res\text{-}c}$ (lettuce ingestion rate - resident child) g/day	4.2
$IFLE_{res\text{-}adj}$ (age-adjusted lettuce ingestion factor) g	271320
$IRLI_{res\text{-}a}$ (lima bean ingestion rate - resident adult) g/day	33.8
$IRLI_{res\text{-}c}$ (lima bean ingestion rate - resident child) g/day	6.5
$IFLI_{res\text{-}adj}$ (age-adjusted lima bean ingestion factor) g	250250

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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	222530
$IRON_{res_a}$ (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	164780
$IRPE_{res_a}$ (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	315210
$IRPU_{res_a}$ (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	548520
$IRSN_{res_a}$ (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	434630
$IRTO_{res_a}$ (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	624470
$IRPT_{res_a}$ (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	1003170
$IRRI_{res_a}$ (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	572880
$IRCG_{res_a}$ (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_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
$CF_{res_asparagus}$ (contaminated asparagus fraction) unitless	1

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Site-Specific
Resident Equation Inputs for Soil

Variable	Value
$CF_{res\text{-}beet}$ (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
MLF_{onion} (onion mass loading factor) unitless	.0000970

Site-Specific
Resident Equation Inputs for Soil

Variable	Value
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	1.0E-6
ED_{resc} (exposure duration - resident child) yr	6
ED_{resa} (exposure duration - resident adult) yr	20
EF_{resc} (exposure frequency - resident child) day/yr	350
EF_{resa} (exposure frequency - resident adult) day/yr	350
City (Climate Zone)	29
A_s (acres)	.5
Q/C_{wp} (g/m^2-s per kg/m^3)	93.77
PEF (particulate emission factor) m^3/kg	1359344438
A (PEF Dispersion Constant)	16.2302
B (PEF Dispersion Constant)	18.7762
C (PEF Dispersion Constant)	216.108
V (fraction of vegetative cover) unitless	0.5
U_m (mean annual wind speed) m/s	4.69
U_t (equivalent threshold value)	11.32
F(x) (function dependant on U_m/U_t) unitless	0.194

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Site-Specific
Resident PRGs for Soil

Isotope	Ingestion PRG (pCi/g)	Inhalation PRG (pCi/g)	External Exposure PRG (pCi/g)	Produce Consumption PRG (pCi/g)	Total PRG (pCi/g)
**Secular Equilibrium PRG for Ra-226*	-	-	*1.11E-01*	-	*1.11E-01*

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Site-Specific
Resident Equation Inputs for 2-D Direct External Exposure

Variable	Value
Site area for ACF (area correction factor) m^2	1000029
Cover thickness for GSF_n (gamma shielding factor) cm	20
Cover thickness for GSF_h (gamma shielding factor) cm	20
TR (target cancer risk) unitless	1.0E-6
t_{res} (time - resident) yr	26
ED_{res} (exposure duration - resident) yr	26
EF_{res} (exposure frequency - resident) day/yr	350
ET_{res_i} (exposure time - indoor resident) hr/day	16.416
ET_{res_o} (exposure time - outdoor resident) hr/day	1.752
GSF_i (gamma shielding factor - indoor) unitless	0.4

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Site-Specific
Resident PRGs for 2-D Direct External Exposure

Isotope	Soil Volume PRG (pCi/g)	Soil Volume @ 1cm PRG (pCi/g)	Soil Volume @ 5cm PRG (pCi/g)	Soil Volume @ 15cm PRG (pCi/g)	Ground Plane PRG (pCi/cm²)
**Secular Equilibrium PRG for Ra-226*	*1.11E-01*	*1.27E+00*	*3.75E-01*	*1.60E-01*	*2.16E+00*

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