Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R016	Distribution coefficients for daughter Co-57				
R016	Contaminated zone (cm**3/g)	1.000E+03	1.000E+03	---	DCNUCC(3)
R016	Unsaturated zone 1 (cm**3/g)	6.000E+01	1.000E+03	---	DCNUCU(3,1)
R016	Unsaturated zone 2 (cm**3/g)	5.500E+02	1.000E+03	---	DCNUCU(3,2)
R016	Unsaturated zone 3 (cm**3/g)	1.000E+03	1.000E+03	---	DCNUCU(3,3)
R016	Saturated zone (cm**3/g)	1.000E+03	1.000E+03	---	DCNUCS(3)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.366E-04	ALEACH(3)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(3)
R016	Distribution coefficients for daughter Cs-134				
R016	Contaminated zone (cm**3/g)	1.000E+03	1.000E+03	---	DCNUCC(5)
R016	Unsaturated zone 1 (cm**3/g)	2.800E+02	1.000E+03	---	DCNUCU(5,1)
R016	Unsaturated zone 2 (cm**3/g)	1.900E+03	1.000E+03	---	DCNUCU(5,2)
R016	Unsaturated zone 3 (cm**3/g)	1.000E+03	1.000E+03	---	DCNUCU(5,3)
R016	Saturated zone (cm**3/g)	1.000E+03	1.000E+03	---	DCNUCS(5)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.366E-04	ALEACH(5)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(5)
R016	Distribution coefficients for daughter Pb-210				
R016	Contaminated zone (cm**3/g)	1.000E+02	1.000E+02	---	DCNUCC(8)
R016	Unsaturated zone 1 (cm**3/g)	2.700E+02	1.000E+02	---	DCNUCU(8,1)
R016	Unsaturated zone 2 (cm**3/g)	5.500E+02	1.000E+02	---	DCNUCU(8,2)
R016	Unsaturated zone 3 (cm**3/g)	1.000E+02	1.000E+02	---	DCNUCU(8,3)
R016	Saturated zone (cm**3/g)	1.000E+02	1.000E+02	---	DCNUCS(8)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.363E-03	ALEACH(8)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(8)
R016	Distribution coefficients for daughter Ra-226				
R016	Contaminated zone (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCC(9)
R016	Unsaturated zone 1 (cm**3/g)	5.000E+02	7.000E+01	---	DCNUCU(9,1)
R016	Unsaturated zone 2 (cm**3/g)	9.100E+03	7.000E+01	---	DCNUCU(9,2)
R016	Unsaturated zone 3 (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCU(9,3)
R016	Saturated zone (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCS(9)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.946E-03	ALEACH(9)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(9)
R016	Distribution coefficients for daughter Ra-228				
R016	Contaminated zone (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCC(10)
R016	Unsaturated zone 1 (cm**3/g)	5.000E+02	7.000E+01	---	DCNUCU(10,1)
R016	Unsaturated zone 2 (cm**3/g)	9.100E+03	7.000E+01	---	DCNUCU(10,2)
R016	Unsaturated zone 3 (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCU(10,3)
R016	Saturated zone (cm**3/g)	7.000E+01	7.000E+01	---	DCNUCS(10)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	1.946E-03	ALEACH(10)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(10)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R016	Distribution coefficients for daughter Th-228				
R016	Contaminated zone (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCC(12)
R016	Unsaturated zone 1 (cm**3/g)	3.200E+03	6.000E+04	---	DCNUCU(12,1)
R016	Unsaturated zone 2 (cm**3/g)	5.800E+03	6.000E+04	---	DCNUCU(12,2)
R016	Unsaturated zone 3 (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCU(12,3)
R016	Saturated zone (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCS(12)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.277E-06	ALEACH(12)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(12)
R016	Distribution coefficients for daughter Th-230				
R016	Contaminated zone (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCC(13)
R016	Unsaturated zone 1 (cm**3/g)	3.200E+03	6.000E+04	---	DCNUCU(13,1)
R016	Unsaturated zone 2 (cm**3/g)	5.800E+03	6.000E+04	---	DCNUCU(13,2)
R016	Unsaturated zone 3 (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCU(13,3)
R016	Saturated zone (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCS(13)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.277E-06	ALEACH(13)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(13)
R016	Distribution coefficients for daughter Th-232				
R016	Contaminated zone (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCC(14)
R016	Unsaturated zone 1 (cm**3/g)	3.200E+03	6.000E+04	---	DCNUCU(14,1)
R016	Unsaturated zone 2 (cm**3/g)	5.800E+03	6.000E+04	---	DCNUCU(14,2)
R016	Unsaturated zone 3 (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCU(14,3)
R016	Saturated zone (cm**3/g)	6.000E+04	6.000E+04	---	DCNUCS(14)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.277E-06	ALEACH(14)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(14)
R016	Distribution coefficients for daughter U-234				
R016	Contaminated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCC(15)
R016	Unsaturated zone 1 (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCU(15,1)
R016	Unsaturated zone 2 (cm**3/g)	1.600E+03	5.000E+01	---	DCNUCU(15,2)
R016	Unsaturated zone 3 (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCU(15,3)
R016	Saturated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCS(15)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.721E-03	ALEACH(15)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(15)
R016	Distribution coefficients for daughter U-238				
R016	Contaminated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCC(16)
R016	Unsaturated zone 1 (cm**3/g)	3.500E+01	5.000E+01	---	DCNUCU(16,1)
R016	Unsaturated zone 2 (cm**3/g)	1.600E+03	5.000E+01	---	DCNUCU(16,2)
R016	Unsaturated zone 3 (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCU(16,3)
R016	Saturated zone (cm**3/g)	5.000E+01	5.000E+01	---	DCNUCS(16)
R016	Leach rate (/yr)	0.000E+00	0.000E+00	2.721E-03	ALEACH(16)
R016	Solubility constant	0.000E+00	0.000E+00	not used	SOLUBK(16)
R017	Inhalation rate (m**3/yr)	8.400E+03	8.400E+03	---	INHALR
R017	Mass loading for inhalation (g/m**3)	1.000E-04	1.000E-04	---	MLINH
R017	Exposure duration	3.000E+01	3.000E+01	---	ED
R017	Shielding factor, inhalation	4.000E-01	4.000E-01	---	SHF3
R017	Shielding factor, external gamma	7.000E-01	7.000E-01	---	SHF1

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R017	Fraction of time spent indoors	5.000E-01	5.000E-01	---	FIND
R017	Fraction of time spent outdoors (on site)	2.500E-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)	1.600E+02	1.600E+02	---	DIET(1)
R018	Leafy vegetable consumption (kg/yr)	1.400E+01	1.400E+01	---	DIET(2)
R018	Milk consumption (L/yr)	9.200E+01	9.200E+01	---	DIET(3)
R018	Meat and poultry consumption (kg/yr)	6.300E+01	6.300E+01	---	DIET(4)
R018	Fish consumption (kg/yr)	5.400E+00	5.400E+00	---	DIET(5)
R018	Other seafood consumption (kg/yr)	9.000E-01	9.000E-01	---	DIET(6)
R018	Soil ingestion rate (g/yr)	3.650E+01	3.650E+01	---	SOIL
R018	Drinking water intake (L/yr)	5.100E+02	5.100E+02	---	DWI
R018	Contamination fraction of drinking water	1.000E+00	1.000E+00	---	FDW
R018	Contamination fraction of household water	1.000E+00	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	5.000E-01	5.000E-01	---	FR9
R018	Contamination fraction of plant food	-1	-1	0.500E+00	FPLANT
R018	Contamination fraction of meat	-1	-1	0.186E+00	FMEAT
R018	Contamination fraction of milk	-1	-1	0.186E+00	FMILK
R019	Livestock fodder intake for meat (kg/day)	6.800E+01	6.800E+01	---	LFI5
R019	Livestock fodder intake for milk (kg/day)	5.500E+01	5.500E+01	---	LFI6

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R019	Livestock water intake for meat (L/day)	5.000E+01	5.000E+01	---	LWI5
R019	Livestock water intake for milk (L/day)	1.600E+02	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)	1.000E-04	1.000E-04	---	MLFD
R019	Depth of soil mixing layer (m)	1.500E-01	1.500E-01	---	DM
R019	Depth of roots (m)	9.000E-01	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	1.000E+00	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)	7.000E-01	7.000E-01	---	YV(1)
R19B	Wet weight crop yield for Leafy (kg/m**2)	1.500E+00	1.500E+00	---	YV(2)
R19B	Wet weight crop yield for Fodder (kg/m**2)	1.100E+00	1.100E+00	---	YV(3)
R19B	Growing Season for Non-Leafy (years)	1.700E-01	1.700E-01	---	TE(1)
R19B	Growing Season for Leafy (years)	2.500E-01	2.500E-01	---	TE(2)
R19B	Growing Season for Fodder (years)	8.000E-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	2.500E-01	2.500E-01	---	RDRY(1)
R19B	Dry Foliar Interception Fraction for Leafy	2.500E-01	2.500E-01	---	RDRY(2)
R19B	Dry Foliar Interception Fraction for Fodder	2.500E-01	2.500E-01	---	RDRY(3)
R19B	Wet Foliar Interception Fraction for Non-Leafy	2.500E-01	2.500E-01	---	RWET(1)
R19B	Wet Foliar Interception Fraction for Leafy	2.500E-01	2.500E-01	---	RWET(2)
R19B	Wet Foliar Interception Fraction for Fodder	2.500E-01	2.500E-01	---	RWET(3)
R19B	Weathering Removal Constant for Vegetation	2.000E+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
C14	DCF correction factor for gaseous forms of C14	not used	8.894E+01	---	CO2F
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	2.000E+01	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)
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)

Site-Specific Parameter Summary (continued)

Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R021	Thickness of building foundation (m)	1.500E-01	1.500E-01	---	FLOOR1
R021	Bulk density of building foundation (g/cm**3)	2.400E+00	2.400E+00	---	DENSFL
R021	Total porosity of the cover material	4.000E-01	4.000E-01	---	TPCV
R021	Total porosity of the building foundation	1.000E-01	1.000E-01	---	TPFL
R021	Volumetric water content of the cover material	5.000E-02	5.000E-02	---	PH2OCV
R021	Volumetric water content of the foundation	3.000E-02	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	2.000E-06	2.000E-06	---	DIFCV
R021	in foundation material	3.000E-07	3.000E-07	---	DIFFL
R021	in contaminated zone soil	2.000E-06	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	2.000E+00	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	5.000E-01	5.000E-01	---	REXG
R021	Height of the building (room) (m)	2.500E+00	2.500E+00	---	HRM
R021	Building interior area factor	0.000E+00	0.000E+00	code computed (time dependent)	FAI
R021	Building depth below ground surface (m)	2.000E+00	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	2.500E-01	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	1.500E-01	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	257	---	---	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	active
7 -- drinking water	active
8 -- soil ingestion	active
9 -- radon	active
Find peak pathway doses	active

Contaminated Zone Dimensions	
Area:	3716.10 square meters
Thickness:	2.44 meters
Cover Depth:	0.61 meters

Initial Soil Concentrations, pCi/g	
Co-60	1.080E+01
Cs-137	6.660E-01
Mn-54	2.520E+00
Sb-125	1.390E-01
Zn-65	5.230E-01

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	2.500E+01	1.500E+02	1.000E+03
TDOSE(t):	9.875E-01	7.957E-01	6.026E-01	6.403E-02	2.391E-03	1.124E-10
M(t):	3.950E-02	3.183E-02	2.410E-02	2.561E-03	9.562E-05	4.494E-12

Maximum TDOSE(t): 9.875E-01 mrem/yr at t = 0.000E+00 years

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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Co-60	7.071E-02	0.0716	0.000E+00	0.0000	0.000E+00	0.0000	6.114E-01	0.6192	1.118E-01	0.1133	1.321E-02	0.0134	0.000E+00	0.0000
Cs-137	2.113E-04	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	3.697E-02	0.0374	1.014E-02	0.0103	3.195E-03	0.0032	0.000E+00	0.0000
Mn-54	1.567E-03	0.0016	0.000E+00	0.0000	0.000E+00	0.0000	4.028E-02	0.0408	1.842E-04	0.0002	1.306E-04	0.0001	0.000E+00	0.0000
Sb-125	1.226E-05	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.600E-05	0.0001	9.446E-07	0.0000	1.086E-07	0.0000	0.000E+00	0.0000
Zn-65	2.408E-04	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	4.170E-02	0.0422	4.081E-02	0.0413	4.702E-03	0.0048	0.000E+00	0.0000
Total	7.275E-02	0.0737	0.000E+00	0.0000	0.000E+00	0.0000	7.305E-01	0.7398	1.630E-01	0.1650	2.124E-02	0.0215	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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	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	8.072E-01	0.8175
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	5.052E-02	0.0512
Mn-54	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	4.216E-02	0.0427
Sb-125	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	1.093E-04	0.0001
Zn-65	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	8.745E-02	0.0886
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	9.875E-01	1.0000

*Sum of all water independent and dependent pathways.

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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Co-60	6.272E-02	0.0788	0.000E+00	0.0000	0.000E+00	0.0000	5.379E-01	0.6760	9.838E-02	0.1236	1.162E-02	0.0146	0.000E+00	0.0000
Cs-137	2.094E-04	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	3.624E-02	0.0456	9.944E-03	0.0125	3.132E-03	0.0039	0.000E+00	0.0000
Mn-54	7.056E-04	0.0009	0.000E+00	0.0000	0.000E+00	0.0000	1.797E-02	0.0226	8.215E-05	0.0001	5.823E-05	0.0001	0.000E+00	0.0000
Sb-125	5.116E-06	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.979E-05	0.0001	3.985E-07	0.0000	4.554E-08	0.0000	0.000E+00	0.0000
Zn-65	4.561E-05	0.0001	0.000E+00	0.0000	0.000E+00	0.0000	7.875E-03	0.0099	7.885E-03	0.0099	9.010E-04	0.0011	0.000E+00	0.0000
Total	6.369E-02	0.0800	0.000E+00	0.0000	0.000E+00	0.0000	6.000E-01	0.7541	1.163E-01	0.1461	1.571E-02	0.0197	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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	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	7.106E-01	0.8931
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	4.953E-02	0.0622
Mn-54	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	1.881E-02	0.0236
Sb-125	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	4.535E-05	0.0001
Zn-65	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	1.671E-02	0.0210
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	7.957E-01	1.0000

*Sum of all water independent and dependent pathways.

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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Co-60	4.935E-02	0.0819	0.000E+00	0.0000	0.000E+00	0.0000	4.162E-01	0.6907	7.612E-02	0.1263	8.993E-03	0.0149	0.000E+00	0.0000
Cs-137	2.057E-04	0.0003	0.000E+00	0.0000	0.000E+00	0.0000	3.484E-02	0.0578	9.557E-03	0.0159	3.011E-03	0.0050	0.000E+00	0.0000
Mn-54	1.431E-04	0.0002	0.000E+00	0.0000	0.000E+00	0.0000	3.574E-03	0.0059	1.634E-05	0.0000	1.158E-05	0.0000	0.000E+00	0.0000
Sb-125	8.916E-07	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.773E-06	0.0000	6.783E-08	0.0000	7.751E-09	0.0000	0.000E+00	0.0000
Zn-65	1.636E-06	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.773E-04	0.0005	2.777E-04	0.0005	3.173E-05	0.0001	0.000E+00	0.0000
Total	4.970E-02	0.0825	0.000E+00	0.0000	0.000E+00	0.0000	4.549E-01	0.7549	8.597E-02	0.1427	1.205E-02	0.0200	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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	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	5.507E-01	0.9138
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	4.761E-02	0.0790
Mn-54	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	3.745E-03	0.0062
Sb-125	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	7.740E-06	0.0000
Zn-65	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	5.884E-04	0.0010
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	6.026E-01	1.0000

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.500E+01 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Co-60	3.530E-03	0.0551	0.000E+00	0.0000	0.000E+00	0.0000	2.472E-02	0.3860	4.521E-03	0.0706	5.340E-04	0.0083	0.000E+00	0.0000
Cs-137	1.688E-04	0.0026	0.000E+00	0.0000	0.000E+00	0.0000	2.246E-02	0.3507	6.161E-03	0.0962	1.941E-03	0.0303	0.000E+00	0.0000
Mn-54	3.427E-12	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.881E-11	0.0000	3.147E-13	0.0000	2.230E-13	0.0000	0.000E+00	0.0000
Sb-125	4.010E-15	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.347E-14	0.0000	2.350E-16	0.0000	2.686E-17	0.0000	0.000E+00	0.0000
Zn-65	2.071E-22	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.860E-20	0.0000	2.864E-20	0.0000	3.273E-21	0.0000	0.000E+00	0.0000
Total	3.699E-03	0.0578	0.000E+00	0.0000	0.000E+00	0.0000	4.717E-02	0.7367	1.068E-02	0.1668	2.475E-03	0.0387	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 = 2.500E+01 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	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	3.330E-02	0.5201
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	3.073E-02	0.4799
Mn-54	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	7.278E-11	0.0000
Sb-125	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	2.774E-14	0.0000
Zn-65	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	6.073E-20	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	6.403E-02	1.0000

*Sum of all water independent and dependent pathways.

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.500E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Co-60	1.094E-09	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.464E-09	0.0000	4.508E-10	0.0000	5.325E-11	0.0000	0.000E+00	0.0000
Cs-137	5.484E-05	0.0229	0.000E+00	0.0000	0.000E+00	0.0000	1.716E-03	0.7180	4.710E-04	0.1970	1.484E-04	0.0621	0.000E+00	0.0000
Mn-54	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
Sb-125	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
Zn-65	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	5.485E-05	0.0229	0.000E+00	0.0000	0.000E+00	0.0000	1.716E-03	0.7180	4.710E-04	0.1970	1.484E-04	0.0621	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 = 1.500E+02 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	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	4.063E-09	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	2.391E-03	1.0000
Mn-54	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
Sb-125	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
Zn-65	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	2.391E-03	1.0000

*Sum of all water independent and dependent pathways.

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-	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	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-137	9.907E-11	0.8818	9.782E-17	0.0000	0.000E+00	0.0000	9.233E-12	0.0822	3.000E-12	0.0267	9.797E-13	0.0087	7.263E-14	0.0006
Mn-54	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
Sb-125	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
Zn-65	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	9.907E-11	0.8818	9.782E-17	0.0000	0.000E+00	0.0000	9.233E-12	0.0822	3.000E-12	0.0267	9.797E-13	0.0087	7.263E-14	0.0006

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-	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	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-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	1.124E-10	1.0000
Mn-54	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
Sb-125	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
Zn-65	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	1.124E-10	1.0000

*Sum of all water independent and dependent pathways.

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

Parent (i)	Product (j)	Branch Fraction*	DSR(j,t) (mrem/yr)/(pCi/g) t= 0.000E+00	1.000E+00	3.000E+00	2.500E+01	1.500E+02	1.000E+03
Co-60	Co-60	1.000E+00	7.474E-02	6.580E-02	5.099E-02	3.083E-03	3.762E-10	0.000E+00
Cs-137	Cs-137	1.000E+00	7.585E-02	7.437E-02	7.148E-02	4.614E-02	3.589E-03	1.687E-10
Mn-54	Mn-54	1.000E+00	1.673E-02	7.465E-03	1.486E-03	2.888E-11	0.000E+00	0.000E+00
Sb-125	Sb-125	1.000E+00	7.864E-04	3.263E-04	5.568E-05	1.996E-13	2.102E-44	0.000E+00
Zn-65	Zn-65	1.000E+00	1.672E-01	3.194E-02	1.125E-03	1.161E-19	0.000E+00	0.000E+00

*Branch Fraction is the cumulative factor for the j't principal radionuclide daughter: CUMBRF(j) = BRF(1)*BRF(2)* ... BRF(j).
The DSR includes contributions from associated (half-life ≤ 0.5 yr) 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	2.500E+01	1.500E+02	1.000E+03
Co-60	3.345E+02	3.800E+02	4.903E+02	8.108E+03	6.646E+10	*1.131E+15
Cs-137	3.296E+02	3.362E+02	3.497E+02	5.419E+02	6.965E+03	1.482E+11
Mn-54	1.494E+03	3.349E+03	1.682E+04	8.656E+11	*7.744E+15	*7.744E+15
Sb-125	3.179E+04	7.662E+04	4.490E+05	1.253E+14	*1.033E+15	*1.033E+15
Zn-65	1.495E+02	7.826E+02	2.222E+04	*8.241E+15	*8.241E+15	*8.241E+15

*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	1.080E+01	0.000E+00	7.474E-02	3.345E+02	7.474E-02	3.345E+02
Cs-137	6.660E-01	0.000E+00	7.585E-02	3.296E+02	7.585E-02	3.296E+02
Mn-54	2.520E+00	0.000E+00	1.673E-02	1.494E+03	1.673E-02	1.494E+03
Sb-125	1.390E-01	0.000E+00	7.864E-04	3.179E+04	7.864E-04	3.179E+04
Zn-65	5.230E-01	0.000E+00	1.672E-01	1.495E+02	1.672E-01	1.495E+02

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

Nuclide (j)	Parent (i)	BRF(i)	DOSE(j,t), mrem/yr t= 0.000E+00	1.000E+00	3.000E+00	2.500E+01	1.500E+02	1.000E+03
Co-60	Co-60	1.000E+00	8.072E-01	7.106E-01	5.507E-01	3.330E-02	4.063E-09	0.000E+00
Cs-137	Cs-137	1.000E+00	5.052E-02	4.953E-02	4.761E-02	3.073E-02	2.391E-03	1.124E-10
Mn-54	Mn-54	1.000E+00	4.216E-02	1.881E-02	3.745E-03	7.278E-11	0.000E+00	0.000E+00
Sb-125	Sb-125	1.000E+00	1.093E-04	4.535E-05	7.740E-06	2.774E-14	0.000E+00	0.000E+00
Zn-65	Zn-65	1.000E+00	8.745E-02	1.671E-02	5.884E-04	6.073E-20	0.000E+00	0.000E+00

BRF(i) is the branch fraction of the parent nuclide.

Individual Nuclide Soil Concentration
Parent Nuclide and Branch Fraction Indicated

Nuclide (j)	Parent (i)	BRF(i)	S(j,t), pCi/g t= 0.000E+00	1.000E+00	3.000E+00	2.500E+01	1.500E+02	1.000E+03
Co-60	Co-60	1.000E+00	1.080E+01	9.468E+00	7.276E+00	4.020E-01	2.870E-08	0.000E+00
Cs-137	Cs-137	1.000E+00	6.660E-01	6.507E-01	6.211E-01	3.725E-01	2.039E-02	5.368E-11
Mn-54	Mn-54	1.000E+00	2.520E+00	1.120E+00	2.213E-01	3.964E-09	0.000E+00	0.000E+00
Sb-125	Sb-125	1.000E+00	1.390E-01	5.715E-02	9.662E-03	3.114E-11	0.000E+00	0.000E+00
Zn-65	Zn-65	1.000E+00	5.230E-01	9.782E-02	3.422E-03	3.283E-19	0.000E+00	0.000E+00

BRF(i) is the branch fraction of the parent nuclide.

RESCALC.EXE execution time = 3.99 seconds

Landfill Design

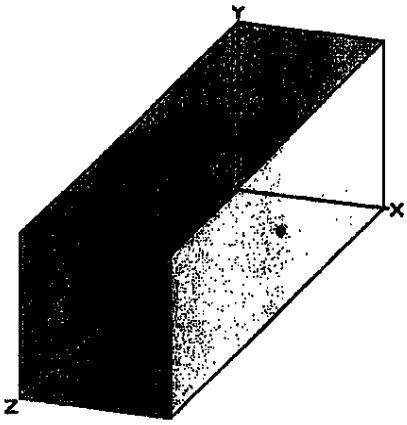
Cover	2 ft	Soil		Title 25 PA Code 273.233.c.11 Minimum cap
Liner				
Waste / Contaminated Zone	Variable depths	Waste		
Liner				
Unsat (1)	1 ft	Sand		Title 25 PA Code 273.255.b.1 Leachate detection zone thickness
Liner				
Unsat (2)	6 in	Clay		Title 25 PA Code 273.253.b.1 clay sub-base layer
Unsat (3)	8 ft	Soil		Title 25 PA Code 273.252.b Minimum distance from sub-base to water table
Saturated	Saturation Zone	Water		

MicroShield v6.02 (6.02-00204)
CEC, Inc.

Page : 1
DOS File : LFCHK.ms6
Run Date: May 2, 2005
Run Time: 12:52:18 PM
Duration : 00:00:03

File Ref: _____
Date: _____
By: _____
Checked: _____

Case Title: Check Exposure Rate
Description: Check LF Disposal Exposure Rate Estimation
Geometry: 13 - Rectangular Volume



Source Dimensions

Length	152.4 cm	5 ft 0.0 in
Width	609.6 cm	20 ft 0.0 in
Height	164.592 cm	5 ft 4.8 in

Dose Points

	X	Y	Z
# 1	156 cm	82 cm	304.8 cm
	5 ft 1.4 in	2 ft 8.3 in	10 ft 0.0 in

Shields

Shield Name	Dimension	Material	Density
Source	1.53e+07 cm³	Water	1
Shield 1	.318 cm	Iron	7.86
Air Gap		Air	0.00122

Source Input
Grouping Method : Standard Indices
Number of Groups : 25
Lower Energy Cutoff : 0.015
Photons < 0.015 : Included
Library : Grove

Nuclide	curies	becquerels	µCi/cm³	Bq/cm³
Ba-137m	5.3811e-005	1.9910e+006	3.5191e-006	1.3021e-001
Co-58	3.3335e-005	1.2334e+006	2.1800e-006	8.0660e-002
Co-60	9.5569e-004	3.5361e+007	6.2500e-005	2.3125e+000
Cs-137	5.6883e-005	2.1047e+006	3.7200e-006	1.3764e-001
I-131	6.7281e-006	2.4894e+005	4.4000e-007	1.6280e-002
Mn-54	2.6912e-004	9.9576e+006	1.7600e-005	6.5120e-001
Sb-125	1.1545e-005	4.2716e+005	7.5500e-007	2.7935e-002
Zn-65	5.2143e-005	1.9293e+006	3.4100e-006	1.2617e-001

Buildup
The material reference is : Shield 1

Integration Parameters

X Direction	10
Y Direction	20
Z Direction	20

Results

Energy MeV	Activity photons/sec	Fluence Rate MeV/cm²/sec No Buildup	Fluence Rate MeV/cm²/sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.015	3.664e+06	1.286e-74	2.405e-27	1.103e-75	2.063e-28
0.03	3.210e+05	1.647e-14	1.779e-14	1.632e-16	1.763e-16
0.04	4.547e+04	2.220e-09	2.553e-09	9.818e-12	1.129e-11
0.08	6.518e+03	9.007e-06	1.325e-05	1.425e-08	2.097e-08
0.1	1.115e+03	4.328e-06	7.110e-06	6.621e-09	1.088e-08
0.15	1.072e+03	1.305e-05	2.635e-05	2.150e-08	4.340e-08
0.2	3.308e+04	7.112e-04	1.636e-03	1.255e-06	2.888e-06
0.3	1.805e+04	7.736e-04	1.958e-03	1.467e-06	3.714e-06

DOS File : LFCHK.ms6
Run Date: May 2, 2005
Run Time: 12:52:18 PM
Duration : 00:00:03

Energy MeV	Activity photons/sec	Fluence Rate MeV/cm²/sec No Buildup	Fluence Rate MeV/cm²/sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.4	3.358e+05	2.296e-02	5.900e-02	4.473e-05	1.150e-04
0.5	4.680e+05	4.583e-02	1.160e-01	8.996e-05	2.276e-04
0.6	1.969e+06	2.587e-01	6.379e-01	5.050e-04	1.245e-03
0.8	1.120e+07	2.345e+00	5.484e+00	4.461e-03	1.043e-02
1.0	3.634e+07	1.098e+01	2.444e+01	2.023e-02	4.506e-02
1.5	3.537e+07	2.088e+01	4.228e+01	3.513e-02	7.113e-02
TOTALS:	8.977e+07	3.453e+01	7.302e+01	6.047e-02	1.282e-01