Table of Contents

¶¶¶¶¶¶¶¶¶¶¶¶¶¶¶¶¶¶¶¶

Part III: Intake Quantities and Health Risk Factors

ÁÁÁ

Cancer Risk Slope Factors Summary Table
Risk Library: FGR 13 Morbidity

Menu	Parameter	Current Value	Base Case*	Parameter Name
Sf-1	Ground external radiation slope factors, 1/yr per (pCi/g):			
Sf-1	Cs-137+D	2.55E-06	5.32E-10	SLPF(1,1)
Sf-1	Pb-210+D	4.21E-09	1.41E-09	SLPF(2,1)
Sf-1	Ra-226+D	8.49E-06	2.29E-08	SLPF(3,1)
Sf-1	Sr-90+D	1.96E-08	4.82E-10	SLPF(4,1)
Sf-2	Inhalation, slope factors, 1/(pCi):			
Sf-2	Cs-137+D	1.12E-10	1.12E-10	SLPF(1,2)
Sf-2	Pb-210+D	3.08E-08	1.58E-08	SLPF(2,2)
Sf-2	Ra-226+D	2.83E-08	2.82E-08	SLPF(3,2)
Sf-2	Sr-90+D	4.33E-10	4.25E-10	SLPF(4,2)
Sf-3	Food ingestion, slope factors, 1/(pCi):			
Sf-3	Cs-137+D	3.74E-11	3.74E-11	SLPF(1,3)
Sf-3	Pb-210+D	3.44E-09	1.18E-09	SLPF(2,3)
Sf-3	Ra-226+D	5.15E-10	5.14E-10	SLPF(3,3)
Sf-3	Sr-90+D	9.53E-11	6.88E-11	SLPF(4,3)
Sf-3	Water ingestion, slope factors, 1/(pCi):			
Sf-3	Cs-137+D	3.04E-11	3.04E-11	SLPF(1,4)
Sf-3	Pb-210+D	2.66E-09	8.81E-10	SLPF(2,4)
Sf-3	Ra-226+D	3.86E-10	3.85E-10	SLPF(3,4)
Sf-3	Sr-90+D	7.40E-11	5.59E-11	SLPF(4,4)
Sf-3	Soil ingestion, slope factors, 1/(pCi):			
Sf-3	Cs-137+D	3.74E-11	3.74E-11	SLPF(1,5)
Sf-3	Pb-210+D	3.44E-09	1.18E-09	SLPF(2,5)
Sf-3	Ra-226+D	5.15E-10	5.14E-10	SLPF(3,5)
Sf-3	Sr-90+D	9.53E-11	6.88E-11	SLPF(4,5)
Sf-Rn	Radon Inhalation slope factors, 1/(pCi):			
Sf-Rn	Rn-222	1.80E-12	1.80E-12	SLPFRN(1,1)
Sf-Rn	Po-218	3.70E-12	3.70E-12	SLPFRN(1,2)
Sf-Rn	Pb-214	6.20E-12	6.20E-12	SLPFRN(1,3)
Sf-Rn	Bi-214	1.50E-11	1.50E-11	SLPFRN(1,4)
Sf-Rn	Radon K factors, (mrem/WLM):			
Sf-Rn	Rn-222 Indoor	7.60E+02	7.60E+02	KFACTR(1,1)
Sf-Rn	Rn-222 Outdoor	5.70E+02	5.70E+02	KFACTR(1,2)

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

Risk Slope and Environmental Transport Factors for the Ground Pathway

Nuclide (i)	Slope(i)*	ETFG(i,t) At Time in Years (dimensionless) t= 0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.000E+01	1.000E+02	3.000E+02	1.000E+03
At-218	3.570E-09	5.208E-01	5.208E-01	5.208E-01	5.208E-01	5.208E-01	5.208E-01	5.208E-01	5.208E-01
Ba-137m	2.690E-06	4.963E-01	4.963E-01	4.963E-01	4.963E-01	4.963E-01	4.963E-01	4.963E-01	4.963E-01
Bi-210	2.760E-09	5.077E-01	5.077E-01	5.077E-01	5.077E-01	5.077E-01	5.077E-01	5.077E-01	5.077E-01
Bi-214	7.480E-06	4.981E-01	4.981E-01	4.981E-01	4.981E-01	4.981E-01	4.981E-01	4.981E-01	4.981E-01
Cs-137	5.320E-10	5.161E-01	5.161E-01	5.161E-01	5.161E-01	5.161E-01	5.161E-01	5.161E-01	5.161E-01
Pb-210	1.410E-09	5.215E-01	5.215E-01	5.215E-01	5.215E-01	5.215E-01	5.215E-01	5.215E-01	5.215E-01
Pb-214	9.820E-07	5.075E-01	5.075E-01	5.075E-01	5.075E-01	5.075E-01	5.075E-01	5.075E-01	5.075E-01
Po-210	3.950E-11	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01
Po-214	3.860E-10	4.963E-01	4.963E-01	4.963E-01	4.963E-01	4.963E-01	4.963E-01	4.963E-01	4.963E-01
Po-218	4.260E-11	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01
Ra-226	2.290E-08	5.189E-01	5.189E-01	5.189E-01	5.189E-01	5.189E-01	5.189E-01	5.189E-01	5.189E-01
Rn-222	1.740E-09	4.971E-01	4.971E-01	4.971E-01	4.971E-01	4.971E-01	4.971E-01	4.971E-01	4.971E-01
Sr-90	4.820E-10	5.187E-01	5.187E-01	5.187E-01	5.187E-01	5.187E-01	5.187E-01	5.187E-01	5.187E-01
Tl-210	0.000E+00	6.000E-01	6.000E-01	6.000E-01	6.000E-01	6.000E-01	6.000E-01	6.000E-01	6.000E-01
Y-90	1.910E-08	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01	4.974E-01

* - Units are 1/yr per (pCi/g) at infinite depth and area. Multiplication by ETFG(i,t) converts to site conditions.

Amount of Intake Quantities QINT(i,p,t) f or Individual Radionuclides (i) and Pathways (p)
As pCi/yr a t t= 0.000E+00 years

Radio-	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways						Total
Nuclide	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	Ingesti	on*
Cs-137	2.697E-03	4.092E+01	3.579E+00	1.169E+00	3.219E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.599E	+01
Pb-210	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00
Ra-226	1.749E-02	2.654E+02	7.735E-01	9.471E-01	2.087E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.692E	+02
Sr-90	9.103E-03	1.036E+03	2.090E+01	6.207E+00	1.086E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.064E	+03

* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil
and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W (irn,i,t) for Inhalation of
Radon and its Decay Products as pCi/yr at t= 0.000E+00 years

Radon	Radionuclides								
Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22	0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio-	Ground		Inhalation		Plant		Meat		Milk		Soil	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Cs-137	1.749E-06	0.0287	6.534E-12	0.0000	3.311E-08	0.0005	2.895E-09	0.0000	9.453E-10	0.0000	2.604E-10	0.0000
Pb-210	8.981E-09	0.0001	5.399E-09	0.0001	2.313E-06	0.0380	8.058E-09	0.0001	3.886E-09	0.0001	7.213E-08	0.0012
Ra-226	5.059E-05	0.8313	1.423E-08	0.0002	3.930E-06	0.0646	1.146E-08	0.0002	1.403E-08	0.0002	3.092E-08	0.0005
Sr-90	4.203E-08	0.0007	7.872E-11	0.0000	1.970E-06	0.0324	3.978E-08	0.0007	1.181E-08	0.0002	2.066E-09	0.0000
Total	5.239E-05	0.8609	1.971E-08	0.0003	8.246E-06	0.1355	6.220E-08	0.0010	3.067E-08	0.0005	1.054E-07	0.0017

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 0.000E+00 years

Water Depe ndent Pathways

Radio- Nuclide	Water risk	Water fract.	Fish risk	Fish fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	All Pathways** risk	All Pathways** fract.
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	1.786E-06 0.0293
Pb-210	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	2.411E-06 0.0396
Ra-226	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	5.459E-05 0.8971
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	2.066E-06 0.0339
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	6.086E-05 1.0000

** Sum of water independent ground, inhalation, plant, meat, mi lk, soil
and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn ,i,t) for Inhalation of
Radon and its Decay Products at t= 0. 000E+00 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22 0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 0.000E+00 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio- Nuclide	Ground risk	Ground fract.	Inhalation risk	Inhalation fract.	Radon risk	Radon fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	Soil risk	Soil fract.
Cs-137	1.749E-06	0.0287	6.534E-12	0.0000	0.000E+00	0.0000	3	.311E-08	0.0005	2.895E-09	0.0000	9.453E-10	0.0000	2.604E-10 0.0000
Ra-226	5.060E-05	0.8315	1.962E-08	0.0003	0.000E+00	0.0000	6	.243E-06	0.1026	1.952E-08	0.0003	1.792E-08	0.0003	1.030E-07 0.0017
Sr-90	4.203E-08	0.0007	7.872E-11	0.0000	0.000E+00	0.0000	1	.970E-06	0.0324	3.978E-08	0.0007	1.181E-08	0.0002	2.066E-09 0.0000
Total	5.239E-05	0.8609	1.971E-08	0.0003	0.000E+00	0.0000	8	.246E-06	0.1355	6.220E-08	0.0010	3.067E-08	0.0005	1.054E-07 0.0017

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 0.000E+00 years

Water Depe ndent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All path		ways	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk			fract.
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	1.786E-06		0.0293
Ra-226	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	5.701E-05		0.9367
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	2.066E-06		0.0339
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	6.086E-05		1.0000

***CNRSI(i,p,t) includes contribution from decay daughter radio nuclides

Amount of Intake Quantities QINT(i,p,t) f or Individual Radionuclides (i) and Pathways (p)
As pCi/yr a t t= 1.000E+00 years

Radio-	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways						Total
Nuclide	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	Ingesti	on*
Cs-137	2.635E-03	3.999E+01	3.497E+00	1.142E+00	3.146E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.494E	+01
Pb-210	5.341E-04	2.245E+00	9.347E-03	4.108E-03	6.374E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.322E	+00
Ra-226	1.744E-02	2.646E+02	7.716E-01	9.447E-01	2.082E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.684E	+02
Sr-90	8.840E-03	1.006E+03	2.032E+01	6.032E+00	1.055E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.034E	+03

* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil
and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W (irn,i,t) for Inhalation of
Radon and its Decay Products as pCi/yr at t= 1.000E+00 years

Radon	Radionuclides								
Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22	0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+00 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio-	Ground		Inhalation		Plant		Meat		Milk		Soil	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Cs-137	1.709E-06	0.0281	6.385E-12	0.0000	3.235E-08	0.0005	2.829E-09	0.0000	9.237E-10	0.0000	2.545E-10	0.0000
Pb-210	9.478E-09	0.0002	5.697E-09	0.0001	2.441E-06	0.0402	8.512E-09	0.0001	4.103E-09	0.0001	7.612E-08	0.0013
Ra-226	5.045E-05	0.8306	1.419E-08	0.0002	3.919E-06	0.0645	1.143E-08	0.0002	1.399E-08	0.0002	3.083E-08	0.0005
Sr-90	4.081E-08	0.0007	7.645E-11	0.0000	1.913E-06	0.0315	3.864E-08	0.0006	1.147E-08	0.0002	2.006E-09	0.0000
Total	5.221E-05	0.8596	1.997E-08	0.0003	8.306E-06	0.1368	6.141E-08	0.0010	3.049E-08	0.0005	1.092E-07	0.0018

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+00 years

Water Depe ndent Pathways

Radio- Nuclide	Water risk	Water fract.	Fish risk	Fish fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	All Pathways** risk	All Pathways** fract.
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	1.745E-06 0.0287
Pb-210	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	2.545E-06 0.0419
Ra-226	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	5.444E-05 0.8963
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	2.006E-06 0.0330
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	6.074E-05 1.0000

** Sum of water independent ground, inhalation, plant, meat, mi lk, soil
and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn ,i,t) for Inhalation of
Radon and its Decay Products at t= 1. 000E+00 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22 0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+00 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio- Nuclide	Ground risk	Ground fract.	Inhalation risk	Inhalation fract.	Radon risk	Radon fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	Soil risk	Soil fract.
Cs-137	1.709E-06	0.0281	6.385E-12	0.0000	0.000E+00	0.0000	3	.235E-08	0.0005	2.829E-09	0.0000	9.237E-10	0.0000	2.545E-10 0.0000
Ra-226	5.046E-05	0.8308	1.988E-08	0.0003	0.000E+00	0.0000	6	.361E-06	0.1047	1.994E-08	0.0003	1.809E-08	0.0003	1.070E-07 0.0018
Sr-90	4.081E-08	0.0007	7.645E-11	0.0000	0.000E+00	0.0000	1	.913E-06	0.0315	3.864E-08	0.0006	1.147E-08	0.0002	2.006E-09 0.0000
Total	5.221E-05	0.8596	1.997E-08	0.0003	0.000E+00	0.0000	8	.306E-06	0.1368	6.141E-08	0.0010	3.049E-08	0.0005	1.092E-07 0.0018

Total Excess Cancer Risk CNRS(i,p,t)*** for Initially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+00 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All path		ways	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk			fract.
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	1.745E-06			0.0287
Ra-226	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	5.699E-05			0.9382
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	2.006E-06			0.0330
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	6.074E-05			1.0000

***CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As pCi/yr at t= 3.000E+00 years

Radio-	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways						Total
Nuclide	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	Ingesti	on*
Cs-137	2.516E-03	3.818E+01	3.339E+00	1.090E+00	3.003E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.291E	+01
Pb-210	1.547E-03	6.085E+00	2.247E-02	1.050E-02	1.846E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.303E	+00
Ra-226	1.734E-02	2.632E+02	7.673E-01	9.394E-01	2.070E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.669E	+02
Sr-90	8.336E-03	9.488E+02	1.916E+01	5.689E+00	9.950E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.747E	+02

* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil
and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W (irn,i,t) for Inhalation of
Radon and its Decay Products as pCi/yr at t= 3.000E+00 years

Radon	Radionuclides								
Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22	0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+00 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio-	Ground		Inhalation		Plant		Meat		Milk		Soil	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Cs-137	1.632E-06	0.0270	6.096E-12	0.0000	3.089E-08	0.0005	2.701E-09	0.0000	8.819E-10	0.0000	2.430E-10	0.0000
Pb-210	1.042E-08	0.0002	6.262E-09	0.0001	2.681E-06	0.0443	9.331E-09	0.0002	4.502E-09	0.0001	8.367E-08	0.0014
Ra-226	5.017E-05	0.8294	1.411E-08	0.0002	3.898E-06	0.0644	1.136E-08	0.0002	1.391E-08	0.0002	3.066E-08	0.0005
Sr-90	3.849E-08	0.0006	7.210E-11	0.0000	1.804E-06	0.0298	3.644E-08	0.0006	1.082E-08	0.0002	1.892E-09	0.0000
Total	5.185E-05	0.8572	2.045E-08	0.0003	8.414E-06	0.1391	5.983E-08	0.0010	3.011E-08	0.0005	1.165E-07	0.0019

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+00 years

Water Depe ndent Pathways

Radio- Nuclide	Water risk	Water fract.	Fish risk	Fish fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	All Pathways** risk	All Pathways** fract.
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	1.666E-06 0.0275
Pb-210	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	2.795E-06 0.0462
Ra-226	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	5.414E-05 0.8950
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	1.892E-06 0.0313
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	6.049E-05 1.0000

** Sum of water independent ground, inhalation, plant, meat, mi lk, soil
and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn ,i,t) for Inhalation of
Radon and its Decay Products at t= 3. 000E+00 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22 0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+00 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio- Nuclide	Ground risk	Ground fract.	Inhalation risk	Inhalation fract.	Radon risk	Radon fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	Soil risk	Soil fract.
Cs-137	1.632E-06	0.0270	6.096E-12	0.0000	0.000E+00	0.0000	3	.089E-08	0.0005	2.701E-09	0.0000	8.819E-10	0.0000	2.430E-10 0.0000
Ra-226	5.018E-05	0.8295	2.037E-08	0.0003	0.000E+00	0.0000	6	.579E-06	0.1088	2.069E-08	0.0003	1.842E-08	0.0003	1.143E-07 0.0019
Sr-90	3.849E-08	0.0006	7.210E-11	0.0000	0.000E+00	0.0000	1	.804E-06	0.0298	3.644E-08	0.0006	1.082E-08	0.0002	1.892E-09 0.0000
Total	5.185E-05	0.8572	2.045E-08	0.0003	0.000E+00	0.0000	8	.414E-06	0.1391	5.983E-08	0.0010	3.011E-08	0.0005	1.165E-07 0.0019

Total Excess Cancer Risk CNRS(i,p,t)*** for Initially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+00 years

Water Dependent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All pathways	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
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	1.666E-06	0.0275
Ra-226	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	5.693E-05	0.9412
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	1.892E-06	0.0313
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	6.049E-05	1.0000

***CNRSI(i,p,t) includes contribution from decay daughter radionuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As pCi/yr at t= 1.000E+01 years

Radio-	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways						Total
Nuclide	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	Ingesti	on*
Cs-137	2.140E-03	3.247E+01	2.839E+00	9.271E-01	2.554E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.649E	+01
Pb-210	4.568E-03	1.754E+01	6.160E-02	2.958E-02	5.452E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.818E	+01
Ra-226	1.701E-02	2.580E+02	7.524E-01	9.211E-01	2.030E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.617E	+02
Sr-90	6.790E-03	7.728E+02	1.561E+01	4.633E+00	8.104E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.938E	+02

* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil
and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W (irn,i,t) for Inhalation of
Radon and its Decay Products as pCi/yr at t= 1.000E+01 years

Radon	Radionuclides								
Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22	0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+01 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio-	Ground		Inhalation		Plant		Meat		Milk		Soil	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Cs-137	1.388E-06	0.0233	5.184E-12	0.0000	2.627E-08	0.0004	2.297E-09	0.0000	7.500E-10	0.0000	2.066E-10	0.0000
Pb-210	1.320E-08	0.0002	7.933E-09	0.0001	3.390E-06	0.0569	1.175E-08	0.0002	5.683E-09	0.0001	1.060E-07	0.0018
Ra-226	4.919E-05	0.8257	1.383E-08	0.0002	3.822E-06	0.0641	1.114E-08	0.0002	1.364E-08	0.0002	3.006E-08	0.0005
Sr-90	3.135E-08	0.0005	5.872E-11	0.0000	1.470E-06	0.0247	2.968E-08	0.0005	8.810E-09	0.0001	1.541E-09	0.0000
Total	5.062E-05	0.8498	2.183E-08	0.0004	8.708E-06	0.1462	5.487E-08	0.0009	2.889E-08	0.0005	1.378E-07	0.0023

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+01 years

Water Depe ndent Pathways

Radio- Nuclide	Water risk	Water fract.	Fish risk	Fish fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	All Pathways** risk	All Pathways** fract.
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	.000E+00	0.0000	0.000E+00	0.0000	1.417E-06	0.0238
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	.000E+00	0.0000	0.000E+00	0.0000	3.535E-06	0.0593
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	.000E+00	0.0000	0.000E+00	0.0000	5.308E-05	0.8910
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	.000E+00	0.0000	0.000E+00	0.0000	1.541E-06	0.0259
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	.000E+00	0.0000	0.000E+00	0.0000	5.958E-05	1.0000

** Sum of water independent ground, inhalation, plant, meat, mi lk, soil
and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn ,i,t) for Inhalation of
Radon and its Decay Products at t= 1. 000E+01 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+01 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio- Nuclide	Ground risk	Ground fract.	Inhalation risk	Inhalation fract.	Radon risk	Radon fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	Soil risk	Soil fract.
Cs-137	1.388E-06	0.0233	5.184E-12	0.0000	0.000E+00	0.0000	2.627E-08	0.0004	2.297E-09	0.0000	7.500E-10	0.0000	2.066E-10	0.0000
Ra-226	4.921E-05	0.8259	2.177E-08	0.0004	0.000E+00	0.0000	7.212E-06	0.1211	2.289E-08	0.0004	1.933E-08	0.0003	1.361E-07	0.0023
Sr-90	3.135E-08	0.0005	5.872E-11	0.0000	0.000E+00	0.0000	1.470E-06	0.0247	2.968E-08	0.0005	8.810E-09	0.0001	1.541E-09	0.0000
Total	5.062E-05	0.8498	2.183E-08	0.0004	0.000E+00	0.0000	8.708E-06	0.1462	5.487E-08	0.0009	2.889E-08	0.0005	1.378E-07	0.0023

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+01 years

Water Depe ndent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All path		ways	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk			fract.
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	1.417E-06		0.0238
Ra-226	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	5.662E-05		0.9503
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	1.541E-06		0.0259
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	5.958E-05		1.0000

***CNRSI(i,p,t) includes contribution from decay daughter radio nuclides

Amount of Intake Quantities QINT(i,p,t) f or Individual Radionuclides (i) and Pathways (p)
As pCi/yr a t t= 3.000E+01 years

Radio-	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways						Total
Nuclide	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	Ingesti	on*
Cs-137	1.347E-03	2.044E+01	1.787E+00	5.836E-01	1.608E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.297E	+01
Pb-210	9.893E-03	3.773E+01	1.305E-01	6.319E-02	1.181E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.911E	+01
Ra-226	1.608E-02	2.440E+02	7.113E-01	8.709E-01	1.919E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.475E	+02
Sr-90	3.777E-03	4.299E+02	8.682E+00	2.578E+00	4.508E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.416E	+02

* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil
and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W (irn,i,t) for Inhalation of
Radon and its Decay Products as pCi/yr at t= 3.000E+01 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22	0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+01 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio-	Ground		Inhalation		Plant		Meat		Milk		Soil	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Cs-137	8.735E-07	0.0154	3.264E-12	0.0000	1.654E-08	0.0003	1	.446E-09	0.0000	4.721E-10	0.0000	1.301E-10	0.0000
Pb-210	1.793E-08	0.0003	1.078E-08	0.0002	4.596E-06	0.0810	1	.587E-08	0.0003	7.690E-09	0.0001	1.440E-07	0.0025
Ra-226	4.651E-05	0.8198	1.308E-08	0.0002	3.613E-06	0.0637	1	.053E-08	0.0002	1.290E-08	0.0002	2.842E-08	0.0005
Sr-90	1.744E-08	0.0003	3.267E-11	0.0000	8.176E-07	0.0144	1	.651E-08	0.0003	4.902E-09	0.0001	8.573E-10	0.0000
Total	4.742E-05	0.8359	2.389E-08	0.0004	9.043E-06	0.1594	4	.436E-08	0.0008	2.596E-08	0.0005	1.734E-07	0.0031

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+01 years

Water Depe ndent Pathways

Radio- Nuclide	Water risk	Water fract.	Fish risk	Fish fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	All Pathways** risk	All Pathways** fract.
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	8.920E-07 0.0157
Pb-210	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	4.792E-06 0.0845
Ra-226	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	5.019E-05 0.8847
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	8.573E-07 0.0151
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	5.673E-05 1.0000

** Sum of water independent ground, inhalation, plant, meat, mi lk, soil
and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn ,i,t) for Inhalation of
Radon and its Decay Products at t= 3. 000E+01 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22 0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+01 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio- Nuclide	Ground risk	Ground fract.	Inhalation risk	Inhalation fract.	Radon risk	Radon fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	Soil risk	Soil fract.
Cs-137	8.735E-07	0.0154	3.264E-12	0.0000	0.000E+00	0.0000	1	.654E-08	0.0003	1.446E-09	0.0000	4.721E-10	0.0000	1.301E-10 0.0000
Ra-226	4.652E-05	0.8202	2.385E-08	0.0004	0.000E+00	0.0000	8	.209E-06	0.1447	2.640E-08	0.0005	2.059E-08	0.0004	1.724E-07 0.0030
Sr-90	1.744E-08	0.0003	3.267E-11	0.0000	0.000E+00	0.0000	8	.176E-07	0.0144	1.651E-08	0.0003	4.902E-09	0.0001	8.573E-10 0.0000
Total	4.742E-05	0.8359	2.389E-08	0.0004	0.000E+00	0.0000	9	.043E-06	0.1594	4.436E-08	0.0008	2.596E-08	0.0005	1.734E-07 0.0031

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+01 years

Water Depe ndent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All path		ways
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk		fract.
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	8.920E-07	0.0157
Ra-226	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	5.498E-05	0.9692
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	8.573E-07	0.0151
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	5.673E-05	1.0000

***CNRSI(i,p,t) includes contribution from decay daughter radio nuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As pCi/yr at t= 1.000E+02 years

Radio-	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways						Total
Nuclide	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	Ingesti	on*
Cs-137	2.666E-04	4.046E+00	3.538E-01	1.155E-01	3.182E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.547E	+00
Pb-210	1.303E-02	4.959E+01	1.708E-01	8.288E-02	1.555E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.139E	+01
Ra-226	1.321E-02	2.004E+02	5.844E-01	7.155E-01	1.577E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.033E	+02
Sr-90	4.851E-04	5.522E+01	1.115E+00	3.310E-01	5.790E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.672E	+01

* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil
and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W (irn,i,t) for Inhalation of
Radon and its Decay Products as pCi/yr at t= 1.000E+02 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22	0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+02 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio-	Ground		Inhalation		Plant		Meat		Milk		Soil	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Cs-137	1.729E-07	0.0037	6.459E-13	0.0000	3.273E-09	0.0001	2	.862E-10	0.0000	9.345E-11	0.0000	2.574E-11 0.0000
Pb-210	1.952E-08	0.0004	1.173E-08	0.0003	4.999E-06	0.1070	1	.722E-08	0.0004	8.354E-09	0.0002	1.567E-07 0.0034
Ra-226	3.821E-05	0.8177	1.074E-08	0.0002	2.969E-06	0.0635	8	.655E-09	0.0002	1.060E-08	0.0002	2.335E-08 0.0005
Sr-90	2.240E-09	0.0000	4.196E-12	0.0000	1.050E-07	0.0022	2	.121E-09	0.0000	6.295E-10	0.0000	1.101E-10 0.0000
Total	3.841E-05	0.8218	2.248E-08	0.0005	8.075E-06	0.1728	2	.828E-08	0.0006	1.967E-08	0.0004	1.802E-07 0.0039

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+02 years

Water Dependent Pathways

Radio- Nuclide	Water risk	Water fract.	Fish risk	Fish fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	All Pathways** risk	All Pathways** fract.
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	1.766E-07	0.0038
Pb-210	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	5.212E-06	0.1115
Ra-226	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	4.123E-05	0.8823
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	1.101E-07	0.0024
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	4.673E-05	1.0000

** Sum of water independent ground, inhalation, plant, meat, milk, soil
and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn,i,t) for Inhalation of
Radon and its Decay Products at t= 1.000E+02 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-220	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-dependent

Total Excess Cancer Risk CNRS(i,p,t)*** for Initially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+02 years

Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground risk	Ground fract.	Inhalation risk	Inhalation fract.	Radon risk	Radon fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	Soil risk	Soil fract.
Cs-137	1.729E-07	0.0037	6.459E-13	0.0000	0.000E+00	0.0000	3.273E-09	0.0001	2.862E-10	0.0000	9.345E-11	0.0000	2.574E-11	0.0000
Ra-226	3.823E-05	0.8181	2.248E-08	0.0005	0.000E+00	0.0000	7.967E-06	0.1705	2.587E-08	0.0006	1.895E-08	0.0004	1.801E-07	0.0039
Sr-90	2.240E-09	0.0000	4.196E-12	0.0000	0.000E+00	0.0000	1.050E-07	0.0022	2.121E-09	0.0000	6.295E-10	0.0000	1.101E-10	0.0000
Total	3.841E-05	0.8218	2.248E-08	0.0005	0.000E+00	0.0000	8.075E-06	0.1728	2.828E-08	0.0006	1.967E-08	0.0004	1.802E-07	0.0039

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+02 years

Water Depe ndent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All path		ways	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk		fract.	
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	1.766E-07		0.0038
Ra-226	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	4.644E-05		0.9939
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	1.101E-07		0.0024
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	4.673E-05		1.0000

***CNRSI(i,p,t) includes contribution from decay daughter radio nuclides

Amount of Intake Quantities QINT(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As pCi/yr at t= 3.000E+02 years

Radio-	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways						Total
Nuclide	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	Ingesti	on*
Cs-137	2.605E-06	3.953E-02	3.457E-03	1.129E-03	3.110E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.443E	-02
Pb-210	7.822E-03	2.977E+01	1.025E-01	4.974E-02	9.335E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.085E	+01
Ra-226	7.535E-03	1.143E+02	3.334E-01	4.081E-01	8.993E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.160E	+02
Sr-90	1.378E-06	1.568E-01	3.167E-03	9.402E-04	1.645E-04	7.282E-02	3.694E-05	1.109E-03	1.152E-04	6.289E-05	2.352E	-01

* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil
and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W (irn,i,t) for Inhalation of
Radon and its Decay Products as pCi/yr at t= 3.000E+02 years

Radon	Radionuclides								
Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22	0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+02 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio-	Ground		Inhalation		Plant		Meat		Milk		Soil	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Cs-137	1.689E-09	0.0001	6.312E-15	0.0000	3.198E-11	0.0000	2	.797E-12	0.0000	9.132E-13	0.0000	2.516E-13 0.0000
Pb-210	1.151E-08	0.0004	6.921E-09	0.0003	2.949E-06	0.1109	1	.015E-08	0.0004	4.928E-09	0.0002	9.248E-08 0.0035
Ra-226	2.180E-05	0.8195	6.129E-09	0.0002	1.693E-06	0.0637	4	.937E-09	0.0002	6.045E-09	0.0002	1.332E-08 0.0005
Sr-90	6.362E-12	0.0000	1.192E-14	0.0000	2.982E-10	0.0000	6	.023E-12	0.0000	1.788E-12	0.0000	3.127E-13 0.0000
Total	2.181E-05	0.8200	1.305E-08	0.0005	4.643E-06	0.1746	1	.510E-08	0.0006	1.098E-08	0.0004	1.058E-07 0.0040

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+02 years

Water Depe ndent Pathways

Radio- Nuclide	Water risk	Water fract.	Fish risk	Fish fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	All Pathways** risk	All Pathways** fract.
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	.000E+00	0.0000	0.000E+00	0.0000	1.725E-09	0.0001
Pb-210	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	.000E+00	0.0000	0.000E+00	0.0000	3.075E-06	0.1156
Ra-226	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	.000E+00	0.0000	0.000E+00	0.0000	2.352E-05	0.8843
Sr-90	1.250E-10	0.0000	8.164E-14	0.0000	2.451E-12	0.0000	.546E-13	0.0000	1.390E-13	0.0000	4.406E-10	0.0000
Total	1.250E-10	0.0000	8.164E-14	0.0000	2.451E-12	0.0000	.546E-13	0.0000	1.390E-13	0.0000	2.660E-05	1.0000

** Sum of water independent ground, inhalation, plant, meat, mi lk, soil
and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn ,i,t) for Inhalation of
Radon and its Decay Products at t= 3. 000E+02 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22 0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+02 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio- Nuclide	Ground risk	Ground fract.	Inhalation risk	Inhalation fract.	Radon risk	Radon fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	Soil risk	Soil fract.
Cs-137	1.689E-09	0.0001	6.312E-15	0.0000	0.000E+00	0.0000	.198E-11	0.0000	2.797E-12	0.0000	9.132E-13	0.0000	2.516E-13	0.0000
Ra-226	2.181E-05	0.8199	1.305E-08	0.0005	0.000E+00	0.0000	.642E-06	0.1745	1.509E-08	0.0006	1.097E-08	0.0004	1.058E-07	0.0040
Sr-90	6.362E-12	0.0000	1.192E-14	0.0000	0.000E+00	0.0000	.982E-10	0.0000	6.023E-12	0.0000	1.788E-12	0.0000	3.127E-13	0.0000
Total	2.181E-05	0.8200	1.305E-08	0.0005	0.000E+00	0.0000	.643E-06	0.1746	1.510E-08	0.0006	1.098E-08	0.0004	1.058E-07	0.0040

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 3.000E+02 years

Water Depe ndent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All path		ways
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk		fract.
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	1.725E-09	0.0001
Ra-226	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	2.659E-05	0.9999
Sr-90	1.250E-10	0.0000	8.164E-14	0.0000	0.000E+00	0.0000	2	.451E-12	0.0000	2.546E-13	0.0000	1.390E-13	0.0000	4.406E-10	0.0000
Total	1.250E-10	0.0000	8.164E-14	0.0000	0.000E+00	0.0000	2	.451E-12	0.0000	2.546E-13	0.0000	1.390E-13	0.0000	2.660E-05	1.0000

***CNRSI(i,p,t) includes contribution from decay daughter radio nuclides

Amount of Intake Quantities QINT(i,p,t) f or Individual Radionuclides (i) and Pathways (p)
As pCi/yr a t t= 1.000E+03 years

Radio-	Water Independent Pathways (Inhalation w/o radon)					Water Dependent Pathways						Total
Nuclide	Inhalation	Plant	Meat	Milk	Soil	Water	Fish	Plant	Meat	Milk	Ingesti	on*
Cs-137	2.403E-13	3.647E-09	3.189E-10	1.041E-10	2.869E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.099E	-09
Pb-210	1.097E-03	4.173E+00	1.437E-02	6.974E-03	1.309E-01	4.922E+01	1.031E-01	6.973E-01	7.766E-03	6.363E-03	5.436E	+01
Ra-226	1.056E-03	1.603E+01	4.673E-02	5.721E-02	1.261E-01	7.002E+01	4.248E-02	9.994E-01	1.379E-02	3.016E-02	8.737E	+01
Sr-90	1.682E-15	1.915E-10	3.867E-12	1.148E-12	2.008E-13	1.194E-09	6.058E-13	1.819E-11	1.892E-12	1.032E-12	1.412E	-09

* Sum of all ingestion pathways, i.e. water independent plant, meat, milk, soil
and water-dependent water, fish, plant, meat, milk pathways

Amount of Intake Quantities QINT9(irn,i,t) and QINT9W (irn,i,t) for Inhalation of
Radon and its Decay Products as pCi/yr at t= 1.000E+03 years

Radon	Radionuclides								
Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22	0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E	+00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+03 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio-	Ground		Inhalation		Plant		Meat		Milk		Soil	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.
Cs-137	1.558E-16	0.0000	5.823E-22	0.0000	2.950E-18	0.0000	2	.580E-19	0.0000	8.424E-20	0.0000	2.321E-20	0.0000
Pb-210	1.614E-09	0.0002	9.703E-10	0.0001	4.134E-07	0.0481	1	.423E-09	0.0002	6.908E-10	0.0001	1.296E-08	0.0015
Ra-226	3.055E-06	0.3554	8.591E-10	0.0001	2.374E-07	0.0276	6	.921E-10	0.0001	8.473E-10	0.0001	1.867E-09	0.0002
Sr-90	7.768E-21	0.0000	1.455E-23	0.0000	3.642E-19	0.0000	7	.354E-21	0.0000	2.183E-21	0.0000	3.819E-22	0.0000
Total	3.057E-06	0.3556	1.829E-09	0.0002	6.508E-07	0.0757	2	.115E-09	0.0002	1.538E-09	0.0002	1.483E-08	0.0017

Excess Cancer Risks CNRS(i,p,t) for Individual Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+03 years

Water Depe ndent Pathways

Radio- Nuclide	Water risk	Water fract.	Fish risk	Fish fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	All Pathways** risk	All Pathways** fract.
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	1.592E-16 0.0000
Pb-210	3.953E-06	0.4598	1.072E-08	0.0012	7.249E-08	0.0084	8	.073E-10	0.0001	6.615E-10	0.0001	4.469E-06 0.5198
Ra-226	8.148E-07	0.0948	6.599E-10	0.0001	1.553E-08	0.0018	2	.142E-10	0.0000	4.685E-10	0.0001	4.129E-06 0.4802
Sr-90	1.754E-18	0.0000	1.146E-21	0.0000	3.442E-20	0.0000	3	.581E-21	0.0000	1.953E-21	0.0000	2.177E-18 0.0000
Total	4.768E-06	0.5546	1.138E-08	0.0013	8.801E-08	0.0102	1	.021E-09	0.0001	1.130E-09	0.0001	8.597E-06 1.0000

** Sum of water independent ground, inhalation, plant, meat, mi lk, soil
and water dependent water, fish, plant, meat, milk pathways

Excess Cancer Risks CNRS9(irn,i,t) and CNRS9W(irn ,i,t) for Inhalation of
Radon and its Decay Products at t= 1. 000E+03 years

Radionuclides

Radon Pathway	Rn-222	Po-218	Pb-214	Bi-214	Rn-22 0	Po-216	Pb-212	Bi-212
Water-ind.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Water-dep.	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00
Total	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E +00	0.000E+00	0.000E+00	0.000E+00

Water-ind. == Water-independent Water-dep. == Water-depende nt

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+03 years

Water Independent Pathwa ys (Inhalation excludes radon)

Radio- Nuclide	Ground risk	Ground fract.	Inhalation risk	Inhalation fract.	Radon risk	Radon fract.	Plant risk	Plant fract.	Meat risk	Meat fract.	Milk risk	Milk fract.	Soil risk	Soil fract.
Cs-137	1.558E-16	0.0000	5.823E-22	0.0000	0.000E+00	0.0000	2	.950E-18	0.0000	2.580E-19	0.0000	8.424E-20	0.0000	2.321E-20 0.0000
Ra-226	3.057E-06	0.3556	1.829E-09	0.0002	0.000E+00	0.0000	6	.508E-07	0.0757	2.115E-09	0.0002	1.538E-09	0.0002	1.483E-08 0.0017
Sr-90	7.768E-21	0.0000	1.455E-23	0.0000	0.000E+00	0.0000	3	.642E-19	0.0000	7.354E-21	0.0000	2.183E-21	0.0000	3.819E-22 0.0000
Total	3.057E-06	0.3556	1.829E-09	0.0002	0.000E+00	0.0000	6	.508E-07	0.0757	2.115E-09	0.0002	1.538E-09	0.0002	1.483E-08 0.0017

Total Excess Cancer Risk CNRS(i,p,t)*** for I nitially Existent Radionuclides (i) and Pathways (p)
and Fraction of Total Risk at t= 1.000E+03 years

Water Depe ndent Pathways

Radio-	Water		Fish		Radon		Plant		Meat		Milk		All path		ways	
Nuclide	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk	fract.	risk			fract.
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	1.592E-16		0.0000
Ra-226	4.768E-06	0.5546	1.138E-08	0.0013	0.000E+00	0.0000	8	.801E-08	0.0102	1.021E-09	0.0001	1.130E-09	0.0001	8.597E-06		1.0000
Sr-90	1.754E-18	0.0000	1.146E-21	0.0000	0.000E+00	0.0000	3	.442E-20	0.0000	3.581E-21	0.0000	1.953E-21	0.0000	2.177E-18		0.0000
Total	4.768E-06	0.5546	1.138E-08	0.0013	0.000E+00	0.0000	8	.801E-08	0.0102	1.021E-09	0.0001	1.130E-09	0.0001	8.597E-06		1.0000

***CNRSI(i,p,t) includes contribution from decay daughter radio nuclides