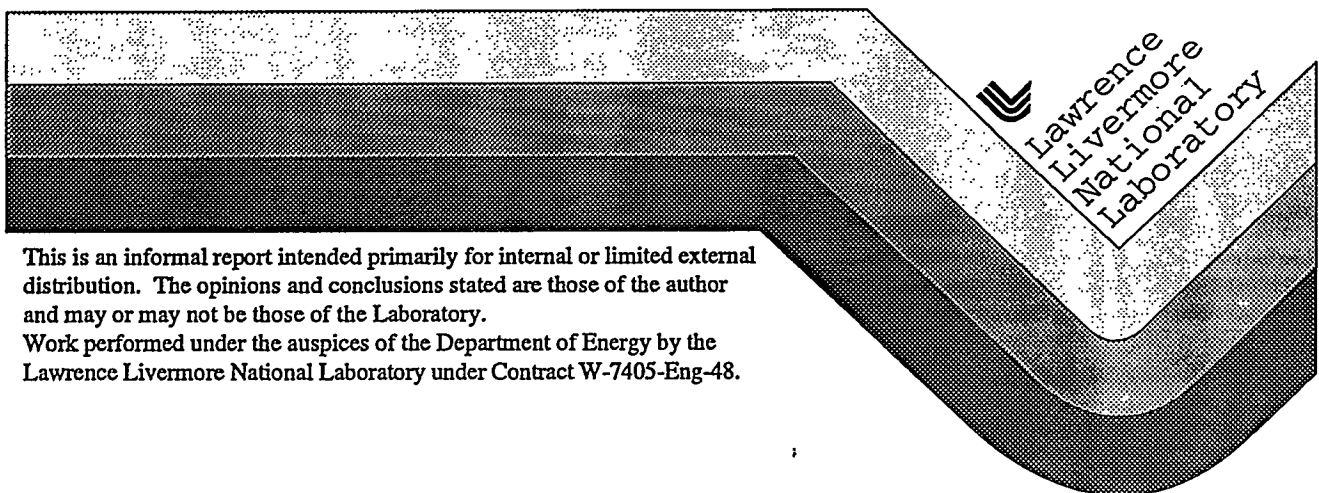


Radiological Conditions at the Southern Islands
of Rongelap Atoll

William L. Robison
Cynthia L. Conrado

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Radiological Conditions at the Southern Islands of
Rongelap Atoll

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Lawrence Livermore National Laboratory
Environmental Sciences Division

Report to DOE Environment, Safety, and Health
for Dr. Harry Pettengill, March 1992

March, 1996

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INTRODUCTORY COMMENTS

The data presented in the following tables is the total available for each southern island; they include both the data from the 1978 Northern Marshall Island Radiological Survey (NMIRS) and trips to Rongelap Atoll from 1986 through 1991. There are additional samples that were taken at Rongelap Island in 1990 and 1991, and the data are unavailable for this report.

In one table we present the number of vegetation samples collected in the 1978 NMIRS and from 1986 through 1991. Again, the majority of the ^{137}Cs is from the 1986-1991 trips. We have not made additional analyses of $^{239+240}\text{Pu}$, ^{241}Am and ^{90}Sr because the concentrations are very low and these radionuclides contribute less than 5% of an already very small dose.

In another table we show the number of soil samples collected at each island in 1978 and the number collected since 1986. Most of the data are from 1986 through 1991. The major exception is ^{90}Sr where all of the data are from the 1978 NMIRS. We have done some additional Pu analyses of soils from Rongelap Eniaetok, and Borukka Island but none of the other southern islands. A significant amount of new data for ^{137}Cs and ^{241}Am have been generated from the samples collected from 1986 through 1991.

The data are presented in the form of summary tables, graphics, detailed appendices and aerial photographs of the islands with the sample locations marked. The identified sample locations from the 1978 NMIRS will be added later.

Table 1. The number of food crops collected at the southern islands at Rongelap Atoll and the mean and median ^{137}Cs concentrations.

and the mean and median ¹³⁷ Cs concentrations.						
Island Name	Island Code	Number of Samples			Cs-137 pCi/g wet wt.	
		Total	1978 NMIRS	1986-1991	median	mean
Drinking Coconut Meat						
Erapuotsu	32f	3	0	3	2.0	2.2
Eniaetok	33f	7	2	5	1.7	2.7
Busch	38f	5	0	5	1.1	1.1
Rongelap	42f	200	3	197	1.4	1.9
Arbar	43f	4	1	3	0.88	0.93
Eniran	46f	4	0	4	0.98	1.1
Tufa	47f	6	0	6	0.74	0.78
Borukka	49f	5	0	5	1.2	1.3
Drinking Coconut Juice						
Erapuotsu	32f	3	0	3	0.79	0.85
Eniaetok	33f	7	2	5	0.32	0.56
Busch	38f	5	0	5	0.28	0.32
Rongelap	42f	194	3	191	0.62	0.85
Arbar	43f	4	1	3	0.17	0.17
Eniran	46f	4	0	4	0.47	0.48
Tufa	47f	7	0	7	0.21	0.22
Borukka	49f	5	0	5	0.36	0.46
Copra Meat						
Eniaetok	33f	14	2	12	3.3	3.4
Rongelap	42f	72	14	58	2.6	3.4
Arbar	43f	1	0	1	0.82	0.82
Tufa	47f	1	0	1	1.1	1.1
Borukka	49f	6	1	5	2.0	2.9
Copra Juice						
Eniaetok	33f	14	2	12	2.4	2.5
Rongelap	42f	70	13	57	1.4	1.9
Arbar	43f	1	0	1	1.1	1.1
Tufa	47f	1	0	1	0.80	0.80
Borukka	49f	6	1	5	1.2	2.1

Table 1. The number of food crops collected at the southern islands at Rongelap Atoll and the mean and median ¹³⁷Cs concentrations (continued).

Island Name	Island Code	Number of Samples			Cs-137 pCi/g wet wt.	
		Total	1978 NMIRS	1986-1991	median	mean
<i>Pandanus</i>						
Erapuotsu	32f	3	0	3	2.0	2.4
Eniaetok	33f	15	2	13	2.2	4.0
Busch	38f	2	0	2	0.83	0.83
Rongelap	42f	78	16	62	5.9	7.6
Arbar	43f	4	2	2	1.4	3.1
Tufa	47f	2	0	2	4.0	4.0
Borukka	49f	9	4	5	1.0	1.4
<i>Breadfruit Meat</i>						
Rongelap	42f	30	1	29	3.0	3.2
<i>Tacca Meat</i>						
Busch	38f	1	0	1	2.3	2.3
Rongelap	42f	5	0	5	4.3	5.7
Tufa	47f	2	0	2	1.6	1.6
Borukka	49f	4	1	3	1.2	1.2
<i>Lime Meat</i>						
Rongelap	42f	9	0	9	1.5	1.6
<i>Squash Meat</i>						
Rongelap	42f	2	0	2	5.8	5.8

NOTE: Specific activity decay corrected to 1994.

Table 2. The number of indicator species collected at the southern islands at Rongelap Atoll and the mean and median ^{137}Cs concentrations.

Atoll and the mean and median ¹³⁷ Cs concentrations.						
Island Name	Island Code	Number of Samples			Cs-137 pCi/g wet wt.	
		Total	1978 NMIRS	1986-1991	median	mean
Morinda Fruit						
Eniaetok	33f	1	1	0	2.5	2.5
Rongelap	42f	2	0	2	1.6	1.6
Arbar	43f	1	0	1	0.47	0.47
Eniran	46f	3	0	3	0.56	0.57
Tufa	47f	1	0	1	0.74	0.74
Morinda Leaves						
Arbar	43f	1	0	1	0.38	0.38
Eniran	46f	3	0	3	0.22	0.31
Tufa	47f	1	0	1	0.66	0.66
Guettardia Leaves						
Rongelap	42f	1	0	1	2.9	2.9
Arbar	43f	3	0	3	0.38	0.67
Tufa	47f	1	0	1	0.25	0.25
Messerschmidia Leaves						
Rongelap	42f	2	0	2	0.49	0.49
Pisonia Leaves						
Tufa	47f	1	0	1	3.0	3.0
Pandanus Leaves						
Rongelap	42f	5	3	2	7.3	5.6
Scaevola Leaves						
Arbar	43f	4	0	4	0.27	0.32
Eniran	46	1	0	1	0.19	0.19
Tufa	47f	2	0	2	0.31	0.31
Borukka	49f	1	0	1	3.7	3.7

Table 2. The number of indicator species collected at the southern islands at Rongelap Atoll and the mean and median ¹³⁷Cs concentrations (continued).

Atoll and the Mean and Median Cs Concentrations (continued)						
Island Name	Island Code	Number of Samples			Cs-137 pCi/g wet wt.	
		Total	1978 NMIRS	1986-1991	median	mean
At-At Vine						
Tufa	47f	1	0	1	0.34	0.34
Tabero Fruit						
Rongelap	42f	3	0	3	2.0	1.8
Tabero Leaves						
Rongelap	42f	1	0	1	1.2	1.2
Coconut Fronds						
Rongelap	42f	16	0	16	1.1	2.4

NOTE: Specific activity decay corrected to 1994.

Table 3. The number of animal samples collected at the southern islands at Rongelap Atoll and the mean and median ^{137}Cs concentrations.

Atoll and the mean and median Cs concentrations						
Island Name	Island Code	Number of Samples			Cs-137 pCi/g wet wt.	
		Total	1978 NMIRS	1986-1991	median	mean
Coconut Crab Muscle						
Erapuotsu	32f	1	0	1	4.9	4.9
Busch	38f	1	0	1	1.4	1.4
Arbar	43f	2	2	0	2.5	2.5
Eniran	46f	2	0	2	1.5	1.5
Tufa	47f	2	0	2	1.6	1.6
Borukka	49f	1	0	1	2.1	2.1
Coconut Crab Hepatopancreas						
Erapuotsu	32f	1	0	1	3.4	3.4
Busch	38f	1	0	1	0.98	0.98
Eniran	46f	2	0	2	1.1	1.1
Tufa	47f	2	0	2	1.1	1.1
Borukka	49f	1	0	1	1.9	1.9
Pig Heart						
Rongelap	42f	4	0	4	13	14
Pig Liver						
Rongelap	42f	6	2	4	5.3	5.6
Pig Muscle						
Rongelap	42f	7	2	5	13	14

NOTE: Specific activity decay corrected to 1994.

Table 4. The number of soil samples collected at the southern islands at Rongelap Atoll.

		<u>Number of Soil Samples for Cs-137 and Am-241</u>			
Island Name	Island Code	<u>1978</u>		<u>1986-1991</u>	
		Profiles	0-5 cm.	Profiles	0-5 cm.
Erapuotsu	32f	0	0	3	3
Eniaetok	33f	6	6	15	15
Busch	38f	0	0	5	5
Rongelap	42f	28	27	90	267
Arbar	43f	7	6	7	7
Eniran	46f	0	0	7	6
Tufa	47f	0	0	8	8
Borukka	49f	3	3	10	10

		<u>Number of Soil Samples for Pu-239+240</u>			
Island Name cm.	Island Code	<u>1978</u>		<u>1986-1991</u>	
		Profiles	0-5 cm.	Profiles	0-5
Erapuotsu	32f	0	0	0	0
Eniaetok	33f	6	6	0	15
Busch	38f	0	0	0	0
Rongelap	42f	20	18	0	59
Arbar	43f	0	0	0	0
Eniran	46f	0	0	0	0
Tufa	47f	0	0	0	0
Borukka	49f	3	3	0	10

		<u>Number of Soil Samples for Sr-90</u>			
Island Name cm.	Island Code	<u>1978</u>		<u>1986-1991</u>	
		Profiles	0-5 cm.	Profiles	0-5
Erapuotsu	32f	0	0	0	0
Eniaetok	33f	6	6	0	0
Busch	38f	0	0	0	0
Rongelap	42f	21	20	0	0
Arbar	43f	0	0	0	0
Eniran	46f	0	0	0	0
Tufa	47f	0	0	0	0
Borukka	49f	3	3	0	0

Table 5. Average ^{137}Cs , ^{90}Sr , $^{239+240}\text{Pu}$, and ^{241}Am soil concentrations in pCi/g dry weight for soil profiles taken on Erapuotsu Island (F32).

Soil depth (cm)	^{137}Cs		^{90}Sr		$^{239+240}\text{Pu}$		^{241}Am	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
00-05	22	23	NDA	NDA	NDA	NDA	5.2	7.7
05-10	31	35	NDA	NDA	NDA	NDA	4.5	4.5
10-15	5	8.1	NDA	NDA	NDA	NDA	0.0	0.0
15-25	1.6	1.4	NDA	NDA	NDA	NDA	0.0	0.0
25-40	0.86	0.96	NDA	NDA	NDA	NDA	0.0	0.0
40-60	0.0	0.0	NDA	NDA	NDA	NDA	0.0	0.0
00-05	22	23	NDA	NDA	NDA	NDA	5.2	7.7
00-10	26	29	NDA	NDA	NDA	NDA	4.4	4.4
00-15	18	22	NDA	NDA	NDA	NDA	0.0	0.0
00-25	11	14	NDA	NDA	NDA	NDA	0.0	0.0
00-40	7.4	9.0	NDA	NDA	NDA	NDA	0.0	0.0
00-60	0.0	0.0	NDA	NDA	NDA	NDA	0.0	0.0

NOTE: Specific activity decay corrected to 1994.

NDA stands for no data available.

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Table 6. Average ^{137}Cs , ^{90}Sr , $^{239+240}\text{Pu}$, and ^{241}Am soil concentrations in pCi/g dry weight for soil profiles taken on Eniaetok Island (F33).

Soil depth (cm)	^{137}Cs		^{90}Sr		$^{239+240}\text{Pu}$		^{241}Am	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
00-05	21	21	5.4	6.6	6.6	7.2	5.5	5.1
05-10	8.0	9.1	8.1	9.2	3.0	3.3	0.88	1.7
10-15	3.3	4.4	3.4	6.1	2.0	2.6	0.61	0.70
15-25	1.3	1.5	2.1	3.3	0.31	1.8	0.11	0.16
25-40	0.49	0.75	3.1	5.9	0.059	0.056	0.027	0.041
40-60	0.50	1.6	2.7	2.4	0.089	0.17	0.067	0.11
00-05	21	21	5.4	6.6	6.6	7.2	5.5	5.1
00-10	13	15	6.8	7.9	2.6	2.6	2.8	3.1
00-15	10	11	5.9	7.3	2.1	2.6	1.6	2.1
00-25	7.2	7.2	4.4	5.7	1.4	2.3	0.76	0.78
00-40	4.8	4.8	4.0	5.8	0.87	1.4	0.37	0.48
00-60	2.7	2.5	4.0	4.7	0.71	1.0	0.28	0.35

NOTE: Specific activity decay corrected to 1994.

Table 7. Average ^{137}Cs , ^{90}Sr , $^{239+240}\text{Pu}$, and ^{241}Am soil concentrations in pCi/g dry weight for soil profiles taken on Busch Island (F38).

Soil depth (cm)	^{137}Cs		^{90}Sr		$^{239+240}\text{Pu}$		^{241}Am	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
00-05	12	27	NDA	NDA	NDA	NDA	5.4	6.9
05-10	22	23	NDA	NDA	NDA	NDA	6.0	6.0
10-15	16	15	NDA	NDA	NDA	NDA	2.6	3.1
15-25	6.0	4.9	NDA	NDA	NDA	NDA	0.51	0.69
25-40	1.4	2.0	NDA	NDA	NDA	NDA	0.43	0.43
40-60	0.0	0.0	NDA	NDA	NDA	NDA	0.0	0.0
00-05	12	27	NDA	NDA	NDA	NDA	5.4	6.9
00-10	23	25	NDA	NDA	NDA	NDA	3.5	3.5
00-15	22	22	NDA	NDA	NDA	NDA	3.5	3.5
00-25	15	15	NDA	NDA	NDA	NDA	2.4	2.4
00-40	9.9	10	NDA	NDA	NDA	NDA	1.3	1.3
00-60	0.0	0.0	NDA	NDA	NDA	NDA	0.0	0.0

NOTE: Specific activity decay corrected to 1994.
NDA stands for no data available.

Table 8. Average ^{137}Cs , ^{90}Sr , $^{239+240}\text{Pu}$, and ^{241}Am soil concentrations in pCi/g dry weight for soil profiles taken on Rongelap Island (F42).

Soil depth (cm)	^{137}Cs		^{90}Sr		$^{239+240}\text{Pu}$		^{241}Am	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
00-05	14	14	5.2	4.8	2.8	3.4	1.6	2.0
05-10	6.5	7.4	3.3	5.5	1.0	2.1	0.68	1.3
10-15	2.9	4.0	3.1	4.1	0.50	0.92	0.48	0.61
15-25	1.2	1.8	2.2	3.1	0.20	0.27	0.18	0.31
25-40	0.36	0.60	1.4	1.8	0.090	0.13	0.046	0.079
40-60	0.19	0.36	0.0	0.0	0.0	0.0	0.020	0.071
00-05	14	14	5.2	4.8	2.8	3.4	1.6	2.0
00-10	9.4	11	4.1	5.2	1.8	2.6	1.7	2.2
00-15	7.5	8.8	3.7	4.8	1.4	2.0	1.4	1.6
00-25	5.1	6.0	3.6	4.2	1.2	1.4	0.87	1.0
00-40	3.5	3.9	2.9	3.3	0.82	0.90	0.32	0.38
00-60	2.4	2.7	0.0	0.0	0.0	0.0	0.18	0.25

NOTE: Specific activity decay corrected to 1994.

Table 9. Average ^{137}Cs , ^{90}Sr , $^{239+240}\text{Pu}$, and ^{241}Am soil concentrations in pCi/g dry weight for soil profiles taken on Arbar Island (F43).

Soil depth (cm)	^{137}Cs		^{90}Sr		$^{239+240}\text{Pu}$		^{241}Am	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
00-05	10	14	NDA	NDA	NDA	NDA	3.5	7.0
05-10	7.3	11	NDA	NDA	NDA	NDA	0.95	2.2
10-15	2.4	6.6	NDA	NDA	NDA	NDA	2.7	2.7
15-25	1.5	3.3	NDA	NDA	NDA	NDA	2.9	2.9
25-40	1.0	0.80	NDA	NDA	NDA	NDA	0.0	0.0
40-60	0.31	0.47	NDA	NDA	NDA	NDA	0.0	0.0
00-05	10	14	NDA	NDA	NDA	NDA	3.5	7.0
00-10	10	13	NDA	NDA	NDA	NDA	2.7	4.1
00-15	7.3	11	NDA	NDA	NDA	NDA	2.7	2.7
00-25	5.3	8.0	NDA	NDA	NDA	NDA	3.5	3.5
00-40	3.7	5.5	NDA	NDA	NDA	NDA	0.0	0.0
00-60	2.3	2.4	NDA	NDA	NDA	NDA	0.0	0.0

NOTE: Specific activity decay corrected to 1994.

NDA stands for no data available.

Table 10. Average ^{137}Cs , ^{90}Sr , $^{239+240}\text{Pu}$, and ^{241}Am soil concentrations in pCi/g dry weight for soil profiles taken on Eniran Island (F46).

Soil depth (cm)	^{137}Cs		^{90}Sr		$^{239+240}\text{Pu}$		^{241}Am	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
00-05	13	13	NDA	NDA	NDA	NDA	5.0	4.8
05-10	8.3	9.8	NDA	NDA	NDA	NDA	1.8	1.8
10-15	3.3	3.9	NDA	NDA	NDA	NDA	0.60	0.60
15-25	2.0	2.4	NDA	NDA	NDA	NDA	0.0	0.0
25-40	0.34	0.91	NDA	NDA	NDA	NDA	0.0	0.0
40-60	0.0	0.0	NDA	NDA	NDA	NDA	0.0	0.0
00-05	13	13	NDA	NDA	NDA	NDA	5.0	4.8
00-10	12	12	NDA	NDA	NDA	NDA	2.3	2.3
00-15	9.2	9.7	NDA	NDA	NDA	NDA	1.7	1.7
00-25	6.6	6.9	NDA	NDA	NDA	NDA	0.0	0.0
00-40	4.7	4.7	NDA	NDA	NDA	NDA	0.0	0.0
00-60	0.0	0.0	NDA	NDA	NDA	NDA	0.0	0.0

NOTE: Specific activity decay corrected to 1994.

NDA stands for no data available.

Table 11. Average ^{137}Cs , ^{90}Sr , $^{239+240}\text{Pu}$, and ^{241}Am soil concentrations in pCi/g dry weight for soil profiles taken on Tufa Island (F47).

Soil depth (cm)	^{137}Cs		^{90}Sr		$^{239+240}\text{Pu}$		^{241}Am	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
00-05	18	24	NDA	NDA	NDA	NDA	3.6	4.5
05-10	21	22	NDA	NDA	NDA	NDA	2.1	5.2
10-15	8.4	11	NDA	NDA	NDA	NDA	1.4	1.3
15-25	3.0	4.4	NDA	NDA	NDA	NDA	0.20	0.38
25-40	1.1	1.9	NDA	NDA	NDA	NDA	0.0	0.0
40-60	0.0	0.0	NDA	NDA	NDA	NDA	0.0	0.0
00-05	18	24	NDA	NDA	NDA	NDA	3.6	4.5
00-10	17	23	NDA	NDA	NDA	NDA	3.5	4.7
00-15	15	19	NDA	NDA	NDA	NDA	3.6	3.9
00-25	9.8	13	NDA	NDA	NDA	NDA	3.3	2.9
00-40	6.9	8.8	NDA	NDA	NDA	NDA	0.0	0.0
00-60	0.0	0.0	NDA	NDA	NDA	NDA	0.0	0.0

NOTE: Specific activity decay corrected to 1994.

NDA stands for no data available.

Table 12. Average ^{137}Cs , ^{90}Sr , $^{239+240}\text{Pu}$, and ^{241}Am soil concentrations in pCi/g dry weight for soil profiles taken on Borukka Island (F49).

Soil depth (cm)	^{137}Cs		^{90}Sr		$^{239+240}\text{Pu}$		^{241}Am	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
00-05	22	25	12	12	5.3	6.9	3.2	4.5
05-10	13	15	9.3	7.6	0.66	0.93	0.88	2.6
10-15	7.2	9.1	6.2	5.6	0.25	0.29	0.61	0.76
15-25	2.6	4.3	2.4	3.0	0.18	0.16	0.20	0.26
25-40	0.84	1.4	2.5	2.5	0.069	0.069	0.035	0.092
40-60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
00-05	22	25	12	12	5.3	6.9	3.2	4.5
00-10	17	20	10	9.6	4.3	4.1	2.2	3.3
00-15	14	17	9.0	8.3	2.9	2.8	1.7	2.0
00-25	9.5	12	6.0	6.2	1.8	1.7	0.82	1.3
00-40	6.1	7.8	5.2	5.2	1.3	1.3	0.48	0.46
00-60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

NOTE: Specific activity decay corrected to 1994.

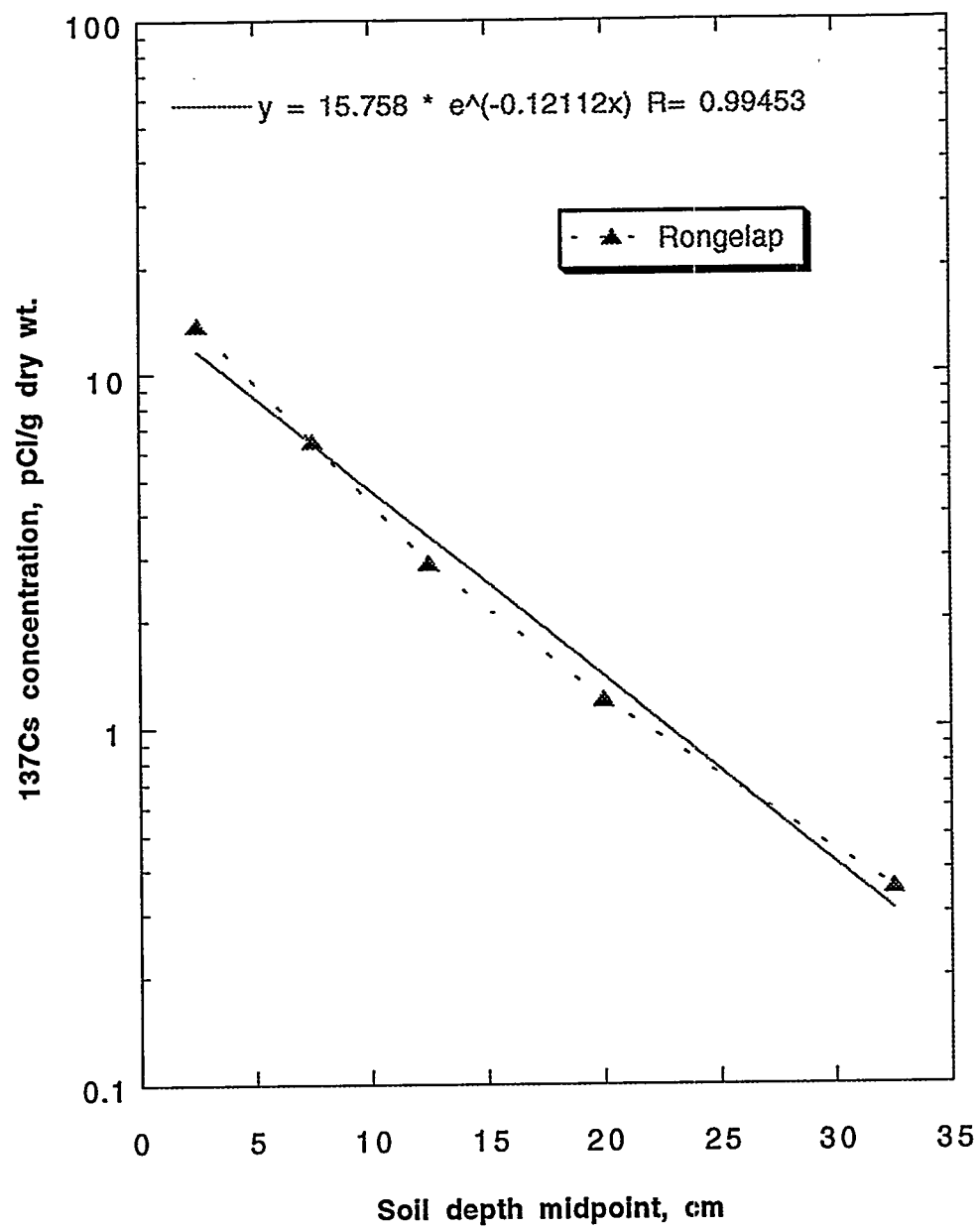


Figure 1. Rongelap Island—¹³⁷Cs Distribution in Soil.

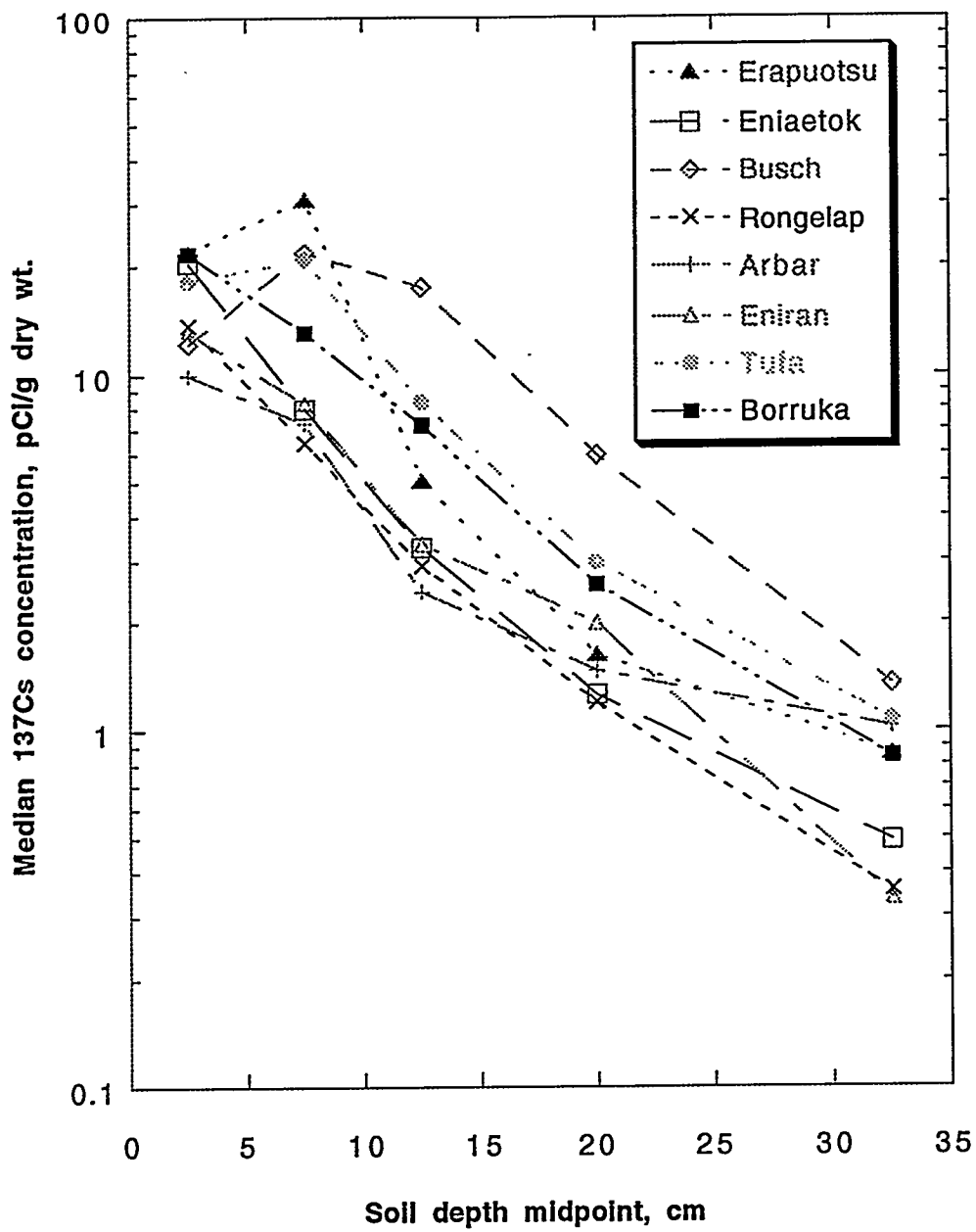


Figure 2. ^{137}Cs in soil at southern islands of Rongelap Atoll.

Appendix A

**Radionuclide concentration summary in vegetation samples
collected during the 1978 NMIRS and from 1986 through 1991
in the southern islands of Rongelap Atoll.**

Table A-1. The ^{137}Cs radionuclide concentration summary for vegetation (food crops) collected from the southern islands of Rongelap Atoll during the 1978 NMIRS together with our recent trips in 1986 through 1991.

1991.

Island name	Island code	N ^a	pCi g ⁻¹ wet wt					Mean of logs	SD of logs
			Minimum	Maximum	Median	Mean	SD		
Drinking Coconut Meat									
Erapuotsu	32f	3	1.5 × 10 ⁰	3.1 × 10 ⁰	2.0 × 10 ⁰	2.2 × 10 ⁰	8.2 × 10 ⁻¹	7.4 × 10 ⁻¹	3.7 × 10 ⁻¹
Eniaetok	33f	7	1.7 × 10 ⁻¹	7.9 × 10 ⁰	1.7 × 10 ⁰	2.7 × 10 ⁰	2.9 × 10 ⁰	3.1 × 10 ⁻¹	1.4 × 10 ⁰
Busch	38f	5	5.6 × 10 ⁻¹	1.6 × 10 ⁰	1.1 × 10 ⁰	1.1 × 10 ⁰	3.8 × 10 ⁻¹	3.6 × 10 ⁻²	3.9 × 10 ⁻¹
Rongelap	42f	200	2.9 × 10 ⁻¹	9.8 × 10 ⁰	1.4 × 10 ⁰	1.9 × 10 ⁰	1.4 × 10 ⁰	4.0 × 10 ⁻¹	6.9 × 10 ⁻¹
Arbar	43f	4	4.9 × 10 ⁻¹	1.5 × 10 ⁰	8.8 × 10 ⁻¹	9.3 × 10 ⁻¹	4.9 × 10 ⁻¹	-1.9 × 10 ⁻¹	5.7 × 10 ⁻¹
Eniran	46f	4	4.7 × 10 ⁻¹	1.9 × 10 ⁰	9.8 × 10 ⁻¹	1.1 × 10 ⁰	6.0 × 10 ⁻¹	-4.0 × 10 ⁻²	5.8 × 10 ⁻¹
Tufa	47f	6	3.7 × 10 ⁻¹	1.6 × 10 ⁰	7.4 × 10 ⁻¹	7.8 × 10 ⁻¹	4.2 × 10 ⁻¹	-3.6 × 10 ⁻¹	5.0 × 10 ⁻¹
Borukka	49f	5	6.3 × 10 ⁻¹	2.5 × 10 ⁰	1.2 × 10 ⁰	1.3 × 10 ⁰	7.4 × 10 ⁻¹	1.6 × 10 ⁻¹	5.5 × 10 ⁻¹
Drinking Coconut Juice									
Erapuotsu	32f	3	4.0 × 10 ⁻¹	1.4 × 10 ⁰	7.9 × 10 ⁻¹	8.5 × 10 ⁻¹	4.8 × 10 ⁻¹	-2.8 × 10 ⁻¹	6.2 × 10 ⁻¹
Eniaetok	33f	7	1.8 × 10 ⁻²	1.8 × 10 ⁰	3.2 × 10 ⁻¹	5.6 × 10 ⁻¹	6.1 × 10 ⁻¹	-1.2 × 10 ⁰	1.5 × 10 ⁰
Busch	38f	5	1.6 × 10 ⁻¹	4.5 × 10 ⁻¹	2.8 × 10 ⁻¹	3.2 × 10 ⁻¹	1.2 × 10 ⁻¹	-1.2 × 10 ⁰	4.1 × 10 ⁻¹
Rongelap	42f	194	9.2 × 10 ⁻²	3.7 × 10 ⁰	6.2 × 10 ⁻¹	8.5 × 10 ⁻¹	6.7 × 10 ⁻¹	-4.6 × 10 ⁻¹	8.0 × 10 ⁻¹
Arbar	43f	4	5.0 × 10 ⁻²	3.0 × 10 ⁻¹	1.7 × 10 ⁻¹	1.7 × 10 ⁻¹	1.1 × 10 ⁻¹	-2.0 × 10 ⁰	7.7 × 10 ⁻¹
Eniran	46f	4	1.9 × 10 ⁻¹	7.7 × 10 ⁻¹	4.7 × 10 ⁻¹	4.8 × 10 ⁻¹	2.5 × 10 ⁻¹	-8.6 × 10 ⁻¹	6.0 × 10 ⁻¹
Tufa	47f	7	7.9 × 10 ⁻²	3.5 × 10 ⁻¹	2.1 × 10 ⁻¹	2.2 × 10 ⁻¹	1.0 × 10 ⁻¹	-1.6 × 10 ⁰	5.6 × 10 ⁻¹
Borukka	49f	5	8.8 × 10 ⁻²	1.2 × 10 ⁰	3.6 × 10 ⁻¹	4.6 × 10 ⁻¹	4.2 × 10 ⁻¹	-1.1 × 10 ⁰	9.4 × 10 ⁻¹
Copra Meat									
Eniaetok	33f	14	6.1 × 10 ⁻¹	7.2 × 10 ⁰	3.3 × 10 ⁰	3.4 × 10 ⁰	1.9 × 10 ⁰	1.0 × 10 ⁰	7.0 × 10 ⁻¹
Rongelap	42f	72	8.4 × 10 ⁻¹	1.8 × 10 ¹	2.6 × 10 ⁰	3.4 × 10 ⁰	2.7 × 10 ⁰	1.0 × 10 ⁰	6.6 × 10 ⁻¹
Arbar	43f	1	8.2 × 10 ⁻¹	8.2 × 10 ⁻¹	8.2 × 10 ⁻¹	8.2 × 10 ⁻¹	0.0 × 10 ⁰	-1.9 × 10 ⁻¹	0.0 × 10 ⁰
Tufa	47f	1	1.1 × 10 ⁰	1.1 × 10 ⁰	1.1 × 10 ⁰	1.1 × 10 ⁰	0.0 × 10 ⁰	7.8 × 10 ⁻²	0.0 × 10 ⁰
Borukka	49f	6	9.5 × 10 ⁻¹	7.1 × 10 ⁰	2.0 × 10 ⁰	2.9 × 10 ⁰	2.4 × 10 ⁰	7.9 × 10 ⁻¹	7.9 × 10 ⁻¹
Copra Juice									
Eniaetok	33f	14	5.2 × 10 ⁻¹	5.6 × 10 ⁰	2.4 × 10 ⁰	2.5 × 10 ⁰	1.6 × 10 ⁰	6.5 × 10 ⁻¹	8.0 × 10 ⁻¹
Rongelap	42f	70	2.5 × 10 ⁻¹	6.4 × 10 ⁰	1.4 × 10 ⁰	1.9 × 10 ⁰	1.5 × 10 ⁰	3.4 × 10 ⁻¹	7.8 × 10 ⁻¹
Arbar	43f	1	1.1 × 10 ⁰	1.1 × 10 ⁰	1.1 × 10 ⁰	1.1 × 10 ⁰	0.0 × 10 ⁰	6.6 × 10 ⁻²	0.0 × 10 ⁰
Tufa	47f	1	8.0 × 10 ⁻¹	8.0 × 10 ⁻¹	8.0 × 10 ⁻¹	8.0 × 10 ⁻¹	0.0 × 10 ⁰	-2.2 × 10 ⁻¹	0.0 × 10 ⁰
Borukka	49f	6	3.6 × 10 ⁻¹	5.1 × 10 ⁰	1.2 × 10 ⁰	2.1 × 10 ⁰	2.0 × 10 ⁰	3.3 × 10 ⁻¹	1.0 × 10 ⁰
Pandanus									
Erapuotsu	32f	3	1.4 × 10 ⁰	4.0 × 10 ⁰	2.0 × 10 ⁰	2.4 × 10 ⁰	1.4 × 10 ⁰	7.9 × 10 ⁻¹	5.5 × 10 ⁻¹
Eniaetok	33f	15	5.3 × 10 ⁻¹	1.4 × 10 ¹	2.2 × 10 ⁰	4.0 × 10 ⁰	4.7 × 10 ⁰	8.0 × 10 ⁻¹	1.1 × 10 ⁰
Busch	38f	2	5.6 × 10 ⁻¹	1.1 × 10 ⁰	8.3 × 10 ⁻¹	8.3 × 10 ⁻¹	3.8 × 10 ⁻¹	-2.5 × 10 ⁻¹	4.8 × 10 ⁻¹
Rongelap	42f	78	5.1 × 10 ⁻¹	3.4 × 10 ¹	5.9 × 10 ⁰	7.6 × 10 ⁰	6.5 × 10 ⁰	1.7 × 10 ⁰	8.3 × 10 ⁻¹
Arbar	43f	4	5.7 × 10 ⁻¹	8.9 × 10 ⁰	1.4 × 10 ⁰	3.1 × 10 ⁰	3.9 × 10 ⁰	5.7 × 10 ⁻¹	1.2 × 10 ⁰
Tufa	47f	2	3.4 × 10 ⁰	4.7 × 10 ⁰	4.0 × 10 ⁰	4.0 × 10 ⁰	9.4 × 10 ⁻¹	1.4 × 10 ⁰	2.4 × 10 ⁻¹
Borukka	49f	9	2.8 × 10 ⁻¹	2.9 × 10 ⁰	1.0 × 10 ⁰	1.4 × 10 ⁰	9.5 × 10 ⁻¹	6.7 × 10 ⁻²	7.9 × 10 ⁻¹

Table A-1. The ^{137}Cs radionuclide concentration summary for vegetation (food crops) collected from the southern islands of Rongelap Atoll during the 1978 NMIRS together with our recent trips in 1986 through 1991 (continued).

1991 (continued).

Island name	Island code	N ^a	pCi g ⁻¹ wet wt					Mean of logs	SD of logs
			Minimum	Maximum	Median	Mean	SD		
Breadfruit Meat									
Rongelap	42f	30	1.0 × 10 ⁰	7.0 × 10 ⁰	3.0 × 10 ⁰	3.2 × 10 ⁰	1.5 × 10 ⁰	1.0 × 10 ⁰	4.9 × 10 ⁻¹
Tacca Meat									
Busch	38f	1	2.3 × 10 ⁰	2.3 × 10 ⁰	2.3 × 10 ⁰	2.3 × 10 ⁰	0.0 × 10 ⁰	8.4 × 10 ⁻¹	0.0 × 10 ⁰
Rongelap	42f	5	1.0 × 10 ⁰	1.5 × 10 ¹	4.3 × 10 ⁰	5.7 × 10 ⁰	5.4 × 10 ⁰	1.4 × 10 ⁰	9.6 × 10 ⁻¹
Tufa	47f	2	5.2 × 10 ⁻¹	2.7 × 10 ⁰	1.6 × 10 ⁰	1.6 × 10 ⁰	1.5 × 10 ⁰	1.7 × 10 ⁻¹	1.2 × 10 ⁰
Borukka	49f	4	5.2 × 10 ⁻¹	2.1 × 10 ⁰	1.2 × 10 ⁰	1.2 × 10 ⁰	7.5 × 10 ⁻¹	4.4 × 10 ⁻²	6.7 × 10 ⁻¹
Lime Meat									
Rongelap	42f	9	1.2 × 10 ⁰	2.0 × 10 ⁰	1.5 × 10 ⁰	1.6 × 10 ⁰	2.5 × 10 ⁻¹	4.4 × 10 ⁻¹	1.6 × 10 ⁻¹
Squash Meat									
Rongelap	42f	2	3.7 × 10 ⁰	7.8 × 10 ⁰	5.8 × 10 ⁰	5.8 × 10 ⁰	2.9 × 10 ⁰	1.7 × 10 ⁰	5.2 × 10 ⁻¹

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table A-2. The ^{137}Cs radionuclide concentration summary for vegetation (indicator species) collected from the southern islands of Rongelap Atoll during the 1978 NMIRS together with our recent trips in 1986 through 1991.

through 1991.

Island name	Island code	N ^a	pCi g ⁻¹ wet wt.					Mean of logs	SD of logs	
			Minimum	Maximum	Median	Mean	SD			
Morinda Fruit										
Eniaetok	33f	1	2.5 × 10 ⁰	2.5 × 10 ⁰	2.5 × 10 ⁰	2.5 × 10 ⁰	0.0 × 10 ⁰	9.1 × 10 ⁻¹	0.0 × 10 ⁰	
Rongelap	42f	2	1.1 × 10 ⁰	2.1 × 10 ⁰	1.6 × 10 ⁰	1.6 × 10 ⁰	7.2 × 10 ⁻¹	4.4 × 10 ⁻¹	4.6 × 10 ⁻¹	
Arbar	43f	1	4.7 × 10 ⁻¹	4.7 × 10 ⁻¹	4.7 × 10 ⁻¹	4.7 × 10 ⁻¹	0.0 × 10 ⁰	-7.5 × 10 ⁻¹	0.0 × 10 ⁰	
Eniran	46f	3	2.8 × 10 ⁻¹	8.7 × 10 ⁻¹	5.6 × 10 ⁻¹	5.7 × 10 ⁻¹	3.0 × 10 ⁻¹	-6.7 × 10 ⁻¹	5.7 × 10 ⁻¹	
Tufa	47f	1	7.4 × 10 ⁻¹	7.4 × 10 ⁻¹	7.4 × 10 ⁻¹	7.4 × 10 ⁻¹	0.0 × 10 ⁰	-3.0 × 10 ⁻¹	0.0 × 10 ⁰	
Morinda Leaves										
Arbar	43f	1	3.8 × 10 ⁻¹	3.8 × 10 ⁻¹	3.8 × 10 ⁻¹	3.8 × 10 ⁻¹	0.0 × 10 ⁰	-9.7 × 10 ⁻¹	0.0 × 10 ⁰	
Eniran	46f	3	1.3 × 10 ⁻¹	5.6 × 10 ⁻¹	2.2 × 10 ⁻¹	3.1 × 10 ⁻¹	2.3 × 10 ⁻¹	-1.4 × 10 ⁰	7.4 × 10 ⁻¹	
Tufa	47f	1	6.6 × 10 ⁻¹	6.6 × 10 ⁻¹	6.6 × 10 ⁻¹	6.6 × 10 ⁻¹	0.0 × 10 ⁰	-4.2 × 10 ⁻¹	0.0 × 10 ⁰	
Guettardia Leaves										
Rongelap	42f	1	2.9 × 10 ⁰	2.9 × 10 ⁰	2.9 × 10 ⁰	2.9 × 10 ⁰	0.0 × 10 ⁰	1.1 × 10 ⁰	0.0 × 10 ⁰	
Arbar	43f	3	2.2 × 10 ⁻¹	1.4 × 10 ⁰	3.8 × 10 ⁻¹	6.7 × 10 ⁻¹	6.4 × 10 ⁻¹	-7.1 × 10 ⁻¹	9.5 × 10 ⁻¹	
Tufa	47f	1	2.5 × 10 ⁻¹	2.5 × 10 ⁻¹	2.5 × 10 ⁻¹	2.5 × 10 ⁻¹	0.0 × 10 ⁰	-1.4 × 10 ⁰	0.0 × 10 ⁰	
Messerschmidia Leaves										
Rongelap	42f	2	2.7 × 10 ⁻¹	7.1 × 10 ⁻¹	4.9 × 10 ⁻¹	4.9 × 10 ⁻¹	3.1 × 10 ⁻¹	-8.3 × 10 ⁻¹	6.9 × 10 ⁻¹	
Pisonia Leaves										
Tufa	47f	1	3.0 × 10 ⁰	3.0 × 10 ⁰	3.0 × 10 ⁰	3.0 × 10 ⁰	0.0 × 10 ⁰	1.1 × 10 ⁰	0.0 × 10 ⁰	
Pandanus Leaves										
Rongelap	42f	5	6.1 × 10 ⁻¹	9.3 × 10 ⁰	7.3 × 10 ⁰	5.6 × 10 ⁰	3.8 × 10 ⁰	1.4 × 10 ⁰	1.2 × 10 ⁰	
Scaevola Leaves										
Arbar	43f	4	1.7 × 10 ⁻¹	5.5 × 10 ⁻¹	2.7 × 10 ⁻¹	3.2 × 10 ⁻¹	1.7 × 10 ⁻¹	-1.3 × 10 ⁰	5.0 × 10 ⁻¹	
Eniran	46f	1	1.9 × 10 ⁻¹	1.9 × 10 ⁻¹	1.9 × 10 ⁻¹	1.9 × 10 ⁻¹	0.0 × 10 ⁰	-1.7 × 10 ⁰	0.0 × 10 ⁰	
Tufa	47f	2	2.9 × 10 ⁻¹	3.4 × 10 ⁻¹	3.1 × 10 ⁻¹	3.1 × 10 ⁻¹	3.4 × 10 ⁻²	-1.2 × 10 ⁰	1.1 × 10 ⁻¹	
Borukka	49f	1	3.7 × 10 ⁰	3.7 × 10 ⁰	3.7 × 10 ⁰	3.7 × 10 ⁰	0.0 × 10 ⁰	1.3 × 10 ⁰	0.0 × 10 ⁰	
At-At Vine										
Tufa	47f	1	3.4 × 10 ⁻¹	3.4 × 10 ⁻¹	3.4 × 10 ⁻¹	3.4 × 10 ⁻¹	0.0 × 10 ⁰	-1.1 × 10 ⁰	0.0 × 10 ⁰	
Tabero Fruit										
Rongelap	42f	3	1.4 × 10 ⁰	2.1 × 10 ⁰	2.0 × 10 ⁰	1.8 × 10 ⁰	3.8 × 10 ⁻¹	5.8 × 10 ⁻¹	2.3 × 10 ⁻¹	
Tabero Leaves										
Rongelap	42f	1	1.2 × 10 ⁰	1.2 × 10 ⁰	1.2 × 10 ⁰	1.2 × 10 ⁰	0.0 × 10 ⁰	2.1 × 10 ⁻¹	0.0 × 10 ⁰	
Coconut Fronds										
Rongelap	42f	16	2.7 × 10 ⁻¹	7.3 × 10 ⁰	1.1 × 10 ⁰	2.4 × 10 ⁰	2.4 × 10 ⁰	4.0 × 10 ⁻¹	9.9 × 10 ⁻¹	

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Appendix B

**Radionuclide concentration summary in animal samples
collected during the 1978 NMIRS and from 1986 through 1991
in the southern islands of Rongelap Atoll.**

Table B-1. The ^{137}Cs radionuclide concentration summary for animals (food source) collected from the southern islands of Rongelap Atoll during the 1978 NMIRS together with our recent trips in 1986 through 1991.

1991.

Island name	Island code	N ^a	pCi g ⁻¹ wet wt.					Mean of logs	SD of logs	
			Minimum	Maximum	Median	Mean	SD			
Coconut Crab Muscle										
Erapuotsu	32f	1	4.9 × 10 ⁰	4.9 × 10 ⁰	4.88 × 10 ⁰	4.9 × 10 ⁰	0.0 × 10 ⁰	1.6 × 10 ⁰	0.0 × 10 ⁰	
Busch	38f	1	1.4 × 10 ⁰	1.4 × 10 ⁰	1.39 × 10 ⁰	1.4 × 10 ⁰	0.0 × 10 ⁰	3.3 × 10 ⁻¹	0.0 × 10 ⁰	
Arbar	43f	2	2.3 × 10 ⁰	2.6 × 10 ⁰	2.5 × 10 ⁰	2.5 × 10 ⁰	1.9 × 10 ⁻¹	9.0 × 10 ⁻¹	7.8 × 10 ⁻²	
Eniran	46f	2	1.1 × 10 ⁰	2.0 × 10 ⁰	1.5 × 10 ⁰	1.5 × 10 ⁰	6.5 × 10 ⁻¹	3.8 × 10 ⁻¹	4.4 × 10 ⁻¹	
Tufa	47f	2	1.2 × 10 ⁰	2.0 × 10 ⁰	1.6 × 10 ⁰	1.6 × 10 ⁰	6.1 × 10 ⁻¹	4.2 × 10 ⁻¹	3.9 × 10 ⁻¹	
Borukka	49f	1	2.1 × 10 ⁰	2.1 × 10 ⁰	2.1 × 10 ⁰	2.1 × 10 ⁰	0.0 × 10 ⁰	7.3 × 10 ⁻¹	0.0 × 10 ⁰	
Coconut Crab Hepatopancreas										
Erapuotsu	32f	1	3.4 × 10 ⁰	3.4 × 10 ⁰	3.4 × 10 ⁰	3.4 × 10 ⁰	0.0 × 10 ⁰	1.2 × 10 ⁰	0.0 × 10 ⁰	
Busch	38f	1	9.8 × 10 ⁻¹	9.8 × 10 ⁻¹	9.8 × 10 ⁻¹	9.8 × 10 ⁻¹	0.0 × 10 ⁰	-2.3 × 10 ⁻²	0.0 × 10 ⁰	
Eniran	46f	2	9.6 × 10 ⁻¹	1.3 × 10 ⁰	1.1 × 10 ⁰	1.1 × 10 ⁰	2.2 × 10 ⁻¹	1.1 × 10 ⁻¹	2.0 × 10 ⁻¹	
Tufa	47f	2	9.0 × 10 ⁻¹	1.3 × 10 ⁰	1.1 × 10 ⁰	1.1 × 10 ⁰	2.2 × 10 ⁻¹	7.0 × 10 ⁻²	2.5 × 10 ⁻¹	
Borukka	49f	1	1.9 × 10 ⁰	1.9 × 10 ⁰	1.9 × 10 ⁰	1.9 × 10 ⁰	0.0 × 10 ⁰	6.3 × 10 ⁻¹	0.0 × 10 ⁰	
Pig Heart										
Rongelap	42f	4	9.7 × 10 ⁰	2.2 × 10 ¹	1.3 × 10 ¹	1.4 × 10 ¹	5.6 × 10 ⁰	2.6 × 10 ⁰	3.8 × 10 ⁻¹	
Pig Liver										
Rongelap	42f	6	3.2 × 10 ⁰	8.5 × 10 ⁰	5.3 × 10 ⁰	5.6 × 10 ⁰	2.0 × 10 ⁰	1.7 × 10 ⁰	3.7 × 10 ⁻¹	
Pig Muscle										
Rongelap	42f	7	5.3 × 10 ⁰	2.9 × 10 ¹	1.3 × 10 ¹	1.4 × 10 ¹	7.8 × 10 ⁰	2.5 × 10 ⁰	5.6 × 10 ⁻¹	

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Appendix C

Radionuclide concentration summary of all soil profile samples collected during the 1978 NMIRS and from 1986 through 1991 in the southern islands of Rongelap Atoll.

Table C-1. Cesium-137 radionuclide concentration summary for all soil profiles taken from our most recent trip in 1991 on Erapuotsu Island (F32).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	3	7.3 × 10 ⁰	4.1 × 10 ¹	2.2 × 10 ¹	2.3 × 10 ¹	1.7 × 10 ¹	2.9 × 10 ⁰	8.8 × 10 ⁻¹
05-10	3	3.0 × 10 ¹	4.3 × 10 ¹	3.1 × 10 ¹	3.5 × 10 ¹	7.4 × 10 ⁰	3.5 × 10 ⁰	2.0 × 10 ⁻¹
10-15	3	2.6 × 10 ⁰	1.7 × 10 ¹	5.0 × 10 ⁰	8.1 × 10 ⁰	7.6 × 10 ⁰	1.8 × 10 ⁰	9.5 × 10 ⁻¹
15-25	3	7.0 × 10 ⁻¹	1.9 × 10 ⁰	1.6 × 10 ⁰	1.4 × 10 ⁰	6.3 × 10 ¹	2.6 × 10 ⁻¹	5.4 × 10 ⁻¹
25-40	3	8.3 × 10 ⁻¹	1.2 × 10 ⁰	8.6 × 10 ⁻¹	9.6 × 10 ⁻¹	1.9 × 10 ⁻¹	-5.8 × 10 ⁻²	1.9 × 10 ⁻¹
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	3	7.3 × 10 ⁰	4.1 × 10 ¹	2.2 × 10 ¹	2.3 × 10 ¹	1.7 × 10 ¹	2.9 × 10 ⁰	8.8 × 10 ⁻¹
0-10	3	1.9 × 10 ¹	4.2 × 10 ¹	2.6 × 10 ¹	2.9 × 10 ¹	1.2 × 10 ¹	3.3 × 10 ⁰	4.1 × 10 ⁻¹
0-15	3	1.4 × 10 ¹	3.4 × 10 ¹	1.8 × 10 ¹	2.2 × 10 ¹	1.0 × 10 ¹	3.0 × 10 ⁰	4.5 × 10 ⁻¹
0-25	3	9.1 × 10 ⁰	2.1 × 10 ¹	1.1 × 10 ¹	1.4 × 10 ¹	6.3 × 10 ⁰	2.6 × 10 ⁰	4.3 × 10 ⁻¹
0-40	3	6.1 × 10 ⁰	1.3 × 10 ¹	7.4 × 10 ⁰	9.0 × 10 ⁰	3.9 × 10 ⁰	2.1 × 10 ⁰	4.1 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-2. Cesium-137 radionuclide concentration summary for all soil profiles taken from the 1978 NMIRS together with our most recent trip in 1989 on Eniaetok Island (F33).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	21	6.4 × 10 ⁻²	5.7 × 10 ¹	2.1 × 10 ¹	2.1 × 10 ¹	1.7 × 10 ¹	2.3 × 10 ⁰	1.8 × 10 ⁰
05-10	21	2.8 × 10 ⁻²	2.5 × 10 ¹	8.0 × 10 ⁰	9.1 × 10 ⁰	6.4 × 10 ⁰	1.8 × 10 ⁰	1.4 × 10 ⁰
10-15	20	2.5 × 10 ⁻²	1.4 × 10 ¹	3.3 × 10 ⁰	4.4 × 10 ⁰	3.4 × 10 ⁰	1.1 × 10 ⁰	1.3 × 10 ⁰
15-25	21	4.3 × 10 ⁻²	3.2 × 10 ⁰	1.3 × 10 ⁰	1.5 × 10 ⁰	9.4 × 10 ⁻¹	7.6 × 10 ⁻²	1.0 × 10 ⁰
25-40	21	6.0 × 10 ⁻²	2.4 × 10 ⁰	4.9 × 10 ⁻¹	7.5 × 10 ⁻¹	6.1 × 10 ⁻¹	-6.5 × 10 ⁻¹	9.7 × 10 ⁻¹
40-60	6	2.3 × 10 ⁻¹	6.8 × 10 ⁰	5.0 × 10 ⁻¹	1.6 × 10 ⁰	2.6 × 10 ⁰	-3.3 × 10 ⁻¹	1.2 × 10 ⁰
0-05	21	6.4 × 10 ⁻²	5.7 × 10 ¹	2.1 × 10 ¹	2.1 × 10 ¹	1.7 × 10 ¹	2.3 × 10 ⁰	1.8 × 10 ⁰
0-10	21	4.6 × 10 ⁻²	3.5 × 10 ¹	1.3 × 10 ¹	1.5 × 10 ¹	1.0 × 10 ¹	2.2 × 10 ⁰	1.5 × 10 ⁰
0-15	20	4.0 × 10 ⁻²	2.5 × 10 ¹	1.0 × 10 ¹	1.1 × 10 ¹	7.3 × 10 ⁰	2.0 × 10 ⁰	1.4 × 10 ⁰
0-25	20	4.1 × 10 ⁻²	1.5 × 10 ¹	7.2 × 10 ⁰	7.2 × 10 ⁰	4.5 × 10 ⁰	1.6 × 10 ⁰	1.3 × 10 ⁰
0-40	20	5.0 × 10 ⁻²	9.7 × 10 ⁰	4.8 × 10 ⁰	4.8 × 10 ⁰	2.9 × 10 ⁰	1.2 × 10 ⁰	1.2 × 10 ⁰
0-60	6	9.9 × 10 ⁻¹	4.6 × 10 ⁰	2.7 × 10 ⁰	2.5 × 10 ⁰	1.4 × 10 ⁰	7.9 × 10 ⁻¹	6.1 × 10 ⁻¹

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-3. Cesium-137 radionuclide concentration summary for all soil profiles taken from our most recent trip in 1991 on Busch Island (F38).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean		
0-05	5	2.2 × 10 ⁰	8.5 × 10 ¹	1.2 × 10 ¹	2.7 × 10 ¹	3.4 × 10 ¹	2.6 × 10 ⁰
05-10	5	1.1 × 10 ¹	3.4 × 10 ¹	2.2 × 10 ¹	2.3 × 10 ¹	1.1 × 10 ¹	3.0 × 10 ⁰
10-15	5	6.8 × 10 ⁰	2.2 × 10 ¹	1.6 × 10 ¹	1.5 × 10 ¹	6.7 × 10 ⁰	2.6 × 10 ⁰
15-25	5	7.5 × 10 ⁻¹	8.1 × 10 ⁰	6.0 × 10 ⁰	4.9 × 10 ⁰	3.0 × 10 ⁰	1.3 × 10 ⁰
25-40	5	3.1 × 10 ⁻¹	4.0 × 10 ⁰	1.4 × 10 ⁰	2.0 × 10 ⁰	1.7 × 10 ⁰	2.6 × 10 ⁻¹
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	5	2.2 × 10 ⁰	8.5 × 10 ¹	1.2 × 10 ¹	2.7 × 10 ¹	3.4 × 10 ¹	2.6 × 10 ⁰
0-10	5	6.8 × 10 ⁰	5.3 × 10 ¹	2.3 × 10 ¹	2.5 × 10 ¹	1.9 × 10 ¹	3.0 × 10 ⁰
0-15	5	1.2 × 10 ¹	3.8 × 10 ¹	2.2 × 10 ¹	2.2 × 10 ¹	1.1 × 10 ¹	3.0 × 10 ⁰
0-25	5	9.5 × 10 ⁰	2.3 × 10 ¹	1.5 × 10 ¹	1.5 × 10 ¹	5.4 × 10 ⁰	2.7 × 10 ⁰
0-40	5	7.3 × 10 ⁰	1.5 × 10 ¹	9.9 × 10 ⁰	1.0 × 10 ¹	2.9 × 10 ⁰	2.3 × 10 ⁰
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-4. Cesium-137 radionuclide concentration summary for all soil profiles taken from the 1978 NMIRS together with our most recent trips in 1986 through 1989 on Rongelap Island (F42).

Soil depth (cm)	Na	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	294	8.3×10^{-2}	5.7×10^1	1.4×10^1	1.4×10^1	9.6×10^0	2.3×10^0	1.1×10^0
05-10	114	6.9×10^{-2}	3.3×10^1	6.5×10^0	7.4×10^0	5.8×10^0	1.7×10^0	9.3×10^{-1}
10-15	114	2.0×10^{-1}	3.2×10^1	2.9×10^0	4.0×10^0	4.2×10^0	9.5×10^{-1}	9.8×10^{-1}
15-25	115	3.9×10^{-2}	1.2×10^1	1.2×10^0	1.8×10^0	1.8×10^0	7.2×10^{-2}	1.1×10^0
25-40	113	2.4×10^{-2}	3.0×10^0	3.6×10^{-1}	6.0×10^{-1}	6.6×10^{-1}	-1.0×10^0	1.0×10^0
40-60	93	2.9×10^{-2}	2.4×10^0	1.9×10^{-1}	3.6×10^{-1}	4.6×10^{-1}	-1.6×10^0	1.1×10^0
0-05	294	8.3×10^{-2}	5.7×10^1	1.4×10^1	1.4×10^1	9.6×10^0	2.3×10^0	1.1×10^0
0-10	113	8.5×10^{-2}	3.8×10^1	9.4×10^0	1.1×10^1	7.3×10^0	2.2×10^0	8.7×10^{-1}
0-15	111	1.2×10^{-1}	3.4×10^1	7.5×10^0	8.8×10^0	5.7×10^0	1.9×10^0	8.0×10^{-1}
0-25	110	1.7×10^{-1}	2.5×10^1	5.1×10^0	6.0×10^0	3.8×10^0	1.6×10^0	7.0×10^{-1}
0-40	108	1.3×10^{-1}	1.6×10^1	3.5×10^0	3.9×10^0	2.4×10^0	1.2×10^0	6.7×10^{-1}
0-60	88	1.4×10^{-1}	1.1×10^1	2.4×10^0	2.7×10^0	1.7×10^0	8.0×10^{-1}	6.5×10^{-1}

NOTE: Specific activity is decay corrected to 1994.

Na stands for number of individual samples.

Table C-5. Cesium-137 radionuclide concentration summary for all soil profiles taken from the 1978 NMIRS together with our most recent trip in 1991 on Arbar Island (F43).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean		SD		
		Minimum	Maximum	Median	Mean	SD	of logs	Mean	of logs	SD	of logs
0-05	13	4.0 × 10 ⁰	3.8 × 10 ¹	1.0 × 10 ¹	1.4 × 10 ¹	1.1 × 10 ¹	2.4 × 10 ⁰	2.4 × 10 ⁰	1.1 × 10 ¹	6.7 × 10 ⁻¹	6.7 × 10 ⁻¹
05-10	13	2.0 × 10 ⁰	3.7 × 10 ¹	7.3 × 10 ⁰	1.1 × 10 ¹	1.0 × 10 ¹	2.0 × 10 ⁰	2.0 × 10 ⁰	1.0 × 10 ¹	9.5 × 10 ⁻¹	9.5 × 10 ⁻¹
10-15	13	6.9 × 10 ⁻¹	2.4 × 10 ¹	2.4 × 10 ⁰	6.6 × 10 ⁰	8.2 × 10 ⁰	1.2 × 10 ⁰	1.2 × 10 ⁰	8.2 × 10 ⁰	1.2 × 10 ⁰	1.2 × 10 ⁰
15-25	12	1.5 × 10 ⁻¹	1.6 × 10 ¹	1.5 × 10 ⁰	3.3 × 10 ⁰	4.9 × 10 ⁰	3.8 × 10 ⁻¹	3.8 × 10 ⁻¹	4.9 × 10 ⁰	1.3 × 10 ⁰	1.3 × 10 ⁰
25-40	11	1.2 × 10 ⁻²	1.8 × 10 ⁰	1.0 × 10 ⁰	8.0 × 10 ⁻¹	6.4 × 10 ⁻¹	-8.7 × 10 ⁻¹	-8.7 × 10 ⁻¹	6.4 × 10 ⁻¹	1.6 × 10 ⁰	1.6 × 10 ⁰
40-60	4	5.9 × 10 ⁻²	1.2 × 10 ⁰	3.1 × 10 ⁻¹	4.7 × 10 ⁻¹	5.3 × 10 ⁻¹	-1.5 × 10 ⁰	-1.5 × 10 ⁰	5.3 × 10 ⁻¹	1.5 × 10 ⁰	1.5 × 10 ⁰
0-05	13	4.0 × 10 ⁰	3.8 × 10 ¹	1.0 × 10 ¹	1.4 × 10 ¹	1.1 × 10 ¹	2.4 × 10 ⁰	2.4 × 10 ⁰	1.1 × 10 ¹	6.7 × 10 ⁻¹	6.7 × 10 ⁻¹
0-10	12	3.0 × 10 ⁰	3.6 × 10 ¹	1.0 × 10 ¹	1.3 × 10 ¹	9.1 × 10 ⁰	2.3 × 10 ⁰	2.3 × 10 ⁰	9.1 × 10 ⁰	7.1 × 10 ⁻¹	7.1 × 10 ⁻¹
0-15	12	2.5 × 10 ⁰	3.2 × 10 ¹	7.3 × 10 ⁰	1.1 × 10 ¹	8.3 × 10 ⁰	2.1 × 10 ⁰	2.1 × 10 ⁰	8.3 × 10 ⁰	7.5 × 10 ⁻¹	7.5 × 10 ⁻¹
0-25	11	1.7 × 10 ⁰	2.3 × 10 ¹	5.3 × 10 ⁰	8.0 × 10 ⁰	6.6 × 10 ⁰	1.8 × 10 ⁰	1.8 × 10 ⁰	6.6 × 10 ⁰	8.0 × 10 ⁻¹	8.0 × 10 ⁻¹
0-40	9	1.1 × 10 ⁰	1.5 × 10 ¹	3.7 × 10 ⁰	5.5 × 10 ⁰	4.7 × 10 ⁰	1.4 × 10 ⁰	1.4 × 10 ⁰	4.7 × 10 ⁰	8.8 × 10 ⁻¹	8.8 × 10 ⁻¹
0-60	3	7.2 × 10 ⁻¹	4.2 × 10 ⁰	2.3 × 10 ⁰	2.4 × 10 ⁰	1.8 × 10 ⁰	6.5 × 10 ⁻¹	6.5 × 10 ⁻¹	1.8 × 10 ⁰	9.0 × 10 ⁻¹	9.0 × 10 ⁻¹

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-6. Cesium-137 radionuclide concentration summary for all soil profiles taken from our most recent trip in 1991 on Eniran Island (F46).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	6	6.2 × 10 ⁰	2.2 × 10 ¹	1.3 × 10 ¹	1.3 × 10 ¹	6.0 × 10 ⁰	2.5 × 10 ⁰	4.8 × 10 ⁻¹
05-10	7	1.7 × 10 ⁰	2.3 × 10 ¹	8.3 × 10 ⁰	9.8 × 10 ⁰	7.3 × 10 ⁰	2.0 × 10 ⁰	8.6 × 10 ⁻¹
10-15	7	5.3 × 10 ⁻¹	7.3 × 10 ⁰	3.3 × 10 ⁰	3.9 × 10 ⁰	2.5 × 10 ⁰	1.1 × 10 ⁰	9.1 × 10 ⁻¹
15-25	7	1.4 × 10 ⁻¹	6.1 × 10 ⁰	2.0 × 10 ⁰	2.4 × 10 ⁰	2.3 × 10 ⁰	3.4 × 10 ⁻¹	1.3 × 10 ⁰
25-40	7	4.2 × 10 ⁻²	2.5 × 10 ⁰	3.4 × 10 ⁻¹	9.1 × 10 ⁻¹	1.0 × 10 ⁰	-8.4 × 10 ⁻¹	1.5 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	6	6.2 × 10 ⁰	2.2 × 10 ¹	1.3 × 10 ¹	1.3 × 10 ¹	6.0 × 10 ⁰	2.5 × 10 ⁰	4.8 × 10 ⁻¹
0-10	6	6.6 × 10 ⁰	1.9 × 10 ¹	1.2 × 10 ¹	1.2 × 10 ¹	5.5 × 10 ⁰	2.4 × 10 ⁰	4.7 × 10 ⁻¹
0-15	6	5.5 × 10 ⁰	1.5 × 10 ¹	9.2 × 10 ⁰	9.7 × 10 ⁰	3.9 × 10 ⁰	2.2 × 10 ⁰	4.1 × 10 ⁻¹
0-25	6	3.7 × 10 ⁰	9.6 × 10 ⁰	6.6 × 10 ⁰	6.9 × 10 ⁰	2.1 × 10 ⁰	1.9 × 10 ⁰	3.3 × 10 ⁻¹
0-40	6	2.4 × 10 ⁰	6.1 × 10 ⁰	4.7 × 10 ⁰	4.7 × 10 ⁰	1.4 × 10 ⁰	1.5 × 10 ⁰	3.4 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.
N^a stands for number of individual samples.

Table C-7. Cesium-137 radionuclide concentration summary for all soil profiles taken from our most recent trip in 1991 on Tufa Island (F47).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	8	6.5 × 10 ⁰	6.1 × 10 ¹	1.8 × 10 ¹	2.4 × 10 ¹	1.8 × 10 ¹	2.9 × 10 ⁰	7.0 × 10 ⁻¹
05-10	8	6.2 × 10 ⁰	5.5 × 10 ¹	2.1 × 10 ¹	2.2 × 10 ¹	1.6 × 10 ¹	2.9 × 10 ⁰	7.6 × 10 ⁻¹
10-15	8	2.0 × 10 ⁰	3.1 × 10 ¹	8.4 × 10 ⁰	1.1 × 10 ¹	9.5 × 10 ⁰	2.0 × 10 ⁰	9.3 × 10 ⁻¹
15-25	8	1.1 × 10 ⁰	1.6 × 10 ¹	3.0 × 10 ⁰	4.4 × 10 ⁰	4.8 × 10 ⁰	1.1 × 10 ⁰	8.4 × 10 ⁻¹
25-40	8	2.5 × 10 ⁻¹	5.2 × 10 ⁰	1.1 × 10 ⁰	1.9 × 10 ⁰	1.8 × 10 ⁰	1.9 × 10 ⁻¹	1.1 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	8	6.5 × 10 ⁰	6.1 × 10 ¹	1.8 × 10 ¹	2.4 × 10 ¹	1.8 × 10 ¹	2.9 × 10 ⁰	7.0 × 10 ⁻¹
0-10	8	1.0 × 10 ¹	4.5 × 10 ¹	1.7 × 10 ¹	2.3 × 10 ¹	1.4 × 10 ¹	3.0 × 10 ⁰	6.0 × 10 ⁻¹
0-15	8	7.9 × 10 ⁰	3.6 × 10 ¹	1.5 × 10 ¹	1.9 × 10 ¹	1.1 × 10 ¹	2.8 × 10 ⁰	6.1 × 10 ⁻¹
0-25	8	5.3 × 10 ⁰	2.8 × 10 ¹	9.8 × 10 ⁰	1.3 × 10 ¹	8.1 × 10 ⁰	2.4 × 10 ⁰	6.0 × 10 ⁻¹
0-40	8	3.5 × 10 ⁰	2.0 × 10 ¹	6.9 × 10 ⁰	8.8 × 10 ⁰	5.6 × 10 ⁰	2.0 × 10 ⁰	6.1 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-8. Cesium-137 radionuclide concentration summary for all soil profiles taken from the 1978 NMIRS together with our most recent trip in 1989 on Borukka Island (F49).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean		
0-05	13	6.7 × 10 ⁰	5.1 × 10 ¹	2.2 × 10 ¹	2.5 × 10 ¹	3.1 × 10 ⁰	5.4 × 10 ⁻¹
05-10	13	4.0 × 10 ⁰	3.9 × 10 ¹	1.3 × 10 ¹	1.5 × 10 ¹	2.5 × 10 ⁰	6.5 × 10 ⁻¹
10-15	13	2.7 × 10 ⁰	2.5 × 10 ¹	7.2 × 10 ⁰	9.1 × 10 ⁰	2.0 × 10 ⁰	7.1 × 10 ⁻¹
15-25	13	1.0 × 10 ⁰	1.3 × 10 ¹	2.6 × 10 ⁰	4.3 × 10 ⁰	1.1 × 10 ⁰	8.3 × 10 ⁻¹
25-40	13	1.6 × 10 ⁻¹	4.2 × 10 ⁰	8.4 × 10 ⁻¹	1.4 × 10 ⁰	-8.3 × 10 ⁻²	1.0 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	13	6.7 × 10 ⁰	5.1 × 10 ¹	2.2 × 10 ¹	2.5 × 10 ¹	3.1 × 10 ⁰	5.4 × 10 ⁻¹
0-10	13	1.3 × 10 ¹	4.3 × 10 ¹	1.7 × 10 ¹	2.0 × 10 ¹	3.0 × 10 ⁰	3.6 × 10 ⁻¹
0-15	13	9.4 × 10 ⁰	3.7 × 10 ¹	1.4 × 10 ¹	1.7 × 10 ¹	2.7 × 10 ⁰	3.8 × 10 ⁻¹
0-25	13	6.1 × 10 ⁰	2.8 × 10 ¹	9.5 × 10 ⁰	1.2 × 10 ¹	2.4 × 10 ⁰	4.1 × 10 ⁻¹
0-40	13	3.9 × 10 ⁰	1.9 × 10 ¹	6.1 × 10 ⁰	7.8 × 10 ⁰	2.0 × 10 ⁰	4.3 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-9. Strontium-90 radionuclide concentration summary for all soil profiles taken during the 1978 NMIRS on Eniaetok Island (F33).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	6	7.3 × 10 ⁻¹	1.5 × 10 ¹	5.4 × 10 ⁰	6.6 × 10 ⁰	5.5 × 10 ⁰	1.5 × 10 ⁰	1.2 × 10 ⁰
05-10	6	2.9 × 10 ⁰	2.0 × 10 ¹	8.1 × 10 ⁰	9.2 × 10 ⁰	6.0 × 10 ⁰	2.0 × 10 ⁰	6.9 × 10 ⁻¹
10-15	6	1.5 × 10 ⁰	1.4 × 10 ¹	3.4 × 10 ⁰	6.1 × 10 ⁰	5.3 × 10 ⁰	1.5 × 10 ⁰	8.8 × 10 ⁻¹
15-25	6	5.3 × 10 ⁻¹	7.9 × 10 ⁰	2.1 × 10 ⁰	3.3 × 10 ⁰	2.9 × 10 ⁰	8.6 × 10 ⁻¹	9.7 × 10 ⁻¹
25-40	6	3.2 × 10 ⁻¹	2.3 × 10 ¹	3.1 × 10 ⁰	5.9 × 10 ⁰	8.4 × 10 ⁰	1.0 × 10 ⁰	1.4 × 10 ⁰
40-60	6	2.4 × 10 ⁻¹	4.9 × 10 ⁰	2.7 × 10 ⁰	2.4 × 10 ⁰	1.8 × 10 ⁰	4.9 × 10 ⁻¹	1.2 × 10 ⁰
0-05	6	7.3 × 10 ⁻¹	1.5 × 10 ¹	5.4 × 10 ⁰	6.6 × 10 ⁰	5.5 × 10 ⁰	1.5 × 10 ⁰	1.2 × 10 ⁰
0-10	6	1.8 × 10 ⁰	1.7 × 10 ¹	6.8 × 10 ⁰	7.9 × 10 ⁰	5.7 × 10 ⁰	1.8 × 10 ⁰	8.3 × 10 ⁻¹
0-15	6	1.7 × 10 ⁰	1.6 × 10 ¹	5.9 × 10 ⁰	7.3 × 10 ⁰	4.8 × 10 ⁰	1.8 × 10 ⁰	7.3 × 10 ⁻¹
0-25	6	1.3 × 10 ⁰	1.2 × 10 ¹	4.4 × 10 ⁰	5.7 × 10 ⁰	3.8 × 10 ⁰	1.5 × 10 ⁰	7.8 × 10 ⁻¹
0-40	6	9.0 × 10 ⁻¹	1.4 × 10 ¹	4.0 × 10 ⁰	5.8 × 10 ⁰	4.7 × 10 ⁰	1.4 × 10 ⁰	9.4 × 10 ⁻¹
0-60	6	6.8 × 10 ⁻¹	1.0 × 10 ¹	4.0 × 10 ⁰	4.7 × 10 ⁰	3.4 × 10 ⁰	1.2 × 10 ⁰	9.5 × 10 ⁻¹

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-10. Strontium-90 radionuclide concentration summary for all soil profiles taken during the 1978 NMIRS on Rongelap Island (F42).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean		Mean of logs	SD of logs
		Minimum	Maximum	Median		Mean	SD		
0-05	20	1.2 × 10 ⁻¹	1.3 × 10 ¹	5.2 × 10 ⁰		4.8 × 10 ⁰	3.1 × 10 ⁰	1.2 × 10 ⁰	1.1 × 10 ⁰
05-10	20	1.6 × 10 ⁻¹	1.6 × 10 ¹	3.3 × 10 ⁰		5.5 × 10 ⁰	5.0 × 10 ⁰	1.2 × 10 ⁰	1.2 × 10 ⁰
10-15	20	2.4 × 10 ⁻²	1.4 × 10 ¹	3.1 × 10 ⁰		4.1 × 10 ⁰	4.1 × 10 ⁰	7.6 × 10 ⁻¹	1.5 × 10 ⁰
15-25	20	3.9 × 10 ⁻¹	8.6 × 10 ⁰	2.2 × 10 ⁰		3.1 × 10 ⁰	2.4 × 10 ⁰	7.7 × 10 ⁻¹	9.3 × 10 ⁻¹
25-40	21	1.1 × 10 ⁻²	7.5 × 10 ⁰	1.4 × 10 ⁰		1.8 × 10 ⁰	1.7 × 10 ⁰	-3.8 × 10 ⁻²	1.5 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	20	1.2 × 10 ⁻¹	1.3 × 10 ¹	5.2 × 10 ⁰		4.8 × 10 ⁰	3.1 × 10 ⁰	1.2 × 10 ⁰	1.1 × 10 ⁰
0-10	19	1.4 × 10 ⁻¹	1.5 × 10 ¹	4.1 × 10 ⁰		5.2 × 10 ⁰	3.9 × 10 ⁰	1.3 × 10 ⁰	1.1 × 10 ⁰
0-15	18	2.8 × 10 ⁻¹	1.3 × 10 ¹	3.7 × 10 ⁰		4.8 × 10 ⁰	3.8 × 10 ⁰	1.2 × 10 ⁰	1.0 × 10 ⁰
0-25	17	7.6 × 10 ⁻¹	9.9 × 10 ⁰	3.6 × 10 ⁰		4.2 × 10 ⁰	3.1 × 10 ⁰	1.1 × 10 ⁰	8.5 × 10 ⁻¹
0-40	17	6.1 × 10 ⁻¹	7.4 × 10 ⁰	2.9 × 10 ⁰		3.3 × 10 ⁰	2.2 × 10 ⁰	9.2 × 10 ⁻¹	8.3 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-11. Strontium-90 radionuclide concentration summary for all soil profiles taken during the 1978 NMIRS on Borukka Island (F49).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean		
0-05	3	1.1 × 10 ¹	1.2 × 10 ¹	1.2 × 10 ¹	1.2 × 10 ¹	2.5 × 10 ⁰	5.4 × 10 ⁻²
05-10	3	3.8 × 10 ⁰	9.9 × 10 ⁰	9.3 × 10 ⁰	7.6 × 10 ⁰	2.0 × 10 ⁰	5.4 × 10 ⁻¹
10-15	3	3.4 × 10 ⁰	7.3 × 10 ⁰	6.2 × 10 ⁰	5.6 × 10 ⁰	1.7 × 10 ⁰	4.0 × 10 ⁻¹
15-25	3	1.6 × 10 ⁰	5.2 × 10 ⁰	2.4 × 10 ⁰	3.0 × 10 ⁰	9.8 × 10 ⁻¹	6.1 × 10 ⁻¹
25-40	2	1.7 × 10 ⁰	3.2 × 10 ⁰	2.5 × 10 ⁰	2.5 × 10 ⁰	8.5 × 10 ⁻¹	4.5 × 10 ⁻¹
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	3	1.1 × 10 ¹	1.2 × 10 ¹	1.2 × 10 ¹	1.2 × 10 ¹	2.5 × 10 ⁰	5.4 × 10 ⁻²
0-10	3	7.8 × 10 ⁰	1.1 × 10 ¹	1.0 × 10 ¹	9.6 × 10 ⁰	2.3 × 10 ⁰	1.7 × 10 ⁻¹
0-15	3	6.4 × 10 ⁰	9.5 × 10 ⁰	9.0 × 10 ⁰	8.3 × 10 ⁰	2.1 × 10 ⁰	2.2 × 10 ⁻¹
0-25	3	4.8 × 10 ⁰	7.8 × 10 ⁰	6.0 × 10 ⁰	6.2 × 10 ⁰	1.8 × 10 ⁰	2.5 × 10 ⁻¹
0-40	2	4.4 × 10 ⁰	6.1 × 10 ⁰	5.2 × 10 ⁰	5.2 × 10 ⁰	1.6 × 10 ⁰	2.3 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-12. Plutonium-239+240 radionuclide concentration summary for all soil profiles taken during the 1978 NMIRS together with our recent trip in 1989 on Eniaetok Island (F33).

Soil depth (cm)	Na	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	21	2.3×10^{-2}	2.0×10^1	6.6×10^0	7.2×10^0	5.9×10^0	1.3×10^0	1.7×10^0
05-10	6	1.5×10^0	7.2×10^0	3.0×10^0	3.3×10^0	2.0×10^0	1.1×10^0	5.5×10^{-1}
10-15	6	2.3×10^{-1}	6.9×10^0	2.0×10^0	2.6×10^0	2.6×10^0	3.1×10^{-1}	1.4×10^0
15-25	6	4.5×10^{-3}	9.3×10^0	3.1×10^{-1}	1.8×10^0	3.7×10^0	-1.3×10^0	2.4×10^0
25-40	6	9.9×10^{-3}	8.7×10^{-2}	5.9×10^{-2}	5.6×10^{-2}	2.6×10^{-2}	-3.1×10^0	7.8×10^{-1}
40-60	6	1.6×10^{-2}	6.8×10^{-1}	8.9×10^{-2}	1.7×10^{-1}	2.5×10^{-1}	-2.5×10^0	1.3×10^0
0-05	21	2.3×10^{-2}	2.0×10^1	6.6×10^0	7.2×10^0	5.9×10^0	1.3×10^0	1.7×10^0
0-10	6	8.7×10^{-1}	5.9×10^0	2.6×10^0	2.6×10^0	1.8×10^0	7.7×10^{-1}	7.1×10^{-1}
0-15	6	6.5×10^{-1}	6.2×10^0	2.1×10^0	2.6×10^0	1.9×10^0	7.5×10^{-1}	7.3×10^{-1}
0-25	6	3.9×10^{-1}	7.5×10^0	1.4×10^0	2.3×10^0	2.6×10^0	4.2×10^{-1}	9.5×10^{-1}
0-40	6	2.5×10^{-1}	4.7×10^0	8.7×10^{-1}	1.4×10^0	1.6×10^0	-3.3×10^{-2}	9.4×10^{-1}
0-60	6	1.7×10^{-1}	3.2×10^0	7.1×10^{-1}	1.0×10^0	1.1×10^0	-3.6×10^{-1}	9.4×10^{-1}

NOTE: Specific activity is decay corrected to 1994.

Na stands for number of individual samples.

Table C-13. Plutonium-239+240 radionuclide concentration summary for all soil profiles taken during the 1978 NMIRS together with our recent trip in 1986 on Rongelap Island (F42).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	77	2.7 × 10 ⁻¹	1.3 × 10 ¹	2.8 × 10 ⁰	3.4 × 10 ⁰	2.8 × 10 ⁰	8.8 × 10 ⁻¹	9.3 × 10 ⁻¹
05-10	16	2.1 × 10 ⁻¹	1.0 × 10 ¹	1.0 × 10 ⁰	2.1 × 10 ⁰	2.5 × 10 ⁰	2.0 × 10 ⁻¹	1.1 × 10 ⁰
10-15	18	4.7 × 10 ⁻²	3.5 × 10 ⁰	5.0 × 10 ⁻¹	9.2 × 10 ⁻¹	9.8 × 10 ⁻¹	-7.0 × 10 ⁻¹	1.2 × 10 ⁰
15-25	18	1.8 × 10 ⁻²	1.1 × 10 ⁰	2.0 × 10 ⁻¹	2.7 × 10 ⁻¹	2.6 × 10 ⁻¹	-1.8 × 10 ⁰	1.1 × 10 ⁰
5-40	19	5.8 × 10 ⁻⁴	4.9 × 10 ⁻¹	9.0 × 10 ⁻²	1.3 × 10 ⁻¹	1.3 × 10 ⁻¹	-2.8 × 10 ⁰	1.7 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	77	2.7 × 10 ⁻¹	1.3 × 10 ¹	2.8 × 10 ⁰	3.4 × 10 ⁰	2.8 × 10 ⁰	8.8 × 10 ⁻¹	9.3 × 10 ⁻¹
0-10	15	3.6 × 10 ⁻¹	6.2 × 10 ⁰	1.8 × 10 ⁰	2.6 × 10 ⁰	2.1 × 10 ⁰	5.4 × 10 ⁻¹	1.0 × 10 ⁰
0-15	14	2.7 × 10 ⁻¹	5.2 × 10 ⁰	1.4 × 10 ⁰	2.0 × 10 ⁰	1.6 × 10 ⁰	3.0 × 10 ⁻¹	1.0 × 10 ⁰
0-25	13	1.8 × 10 ⁻¹	3.5 × 10 ⁰	1.2 × 10 ⁰	1.4 × 10 ⁰	1.1 × 10 ⁰	-7.9 × 10 ⁻²	1.0 × 10 ⁰
0-40	13	1.1 × 10 ⁻¹	2.3 × 10 ⁰	8.2 × 10 ⁻¹	9.0 × 10 ⁻¹	6.6 × 10 ⁻¹	-4.3 × 10 ⁻¹	9.4 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-14. Plutonium-239+240 radionuclide concentration summary for all soil profiles taken during the 1978 NMIRS together with our recent trip in 1989 on Borukka Island (F49).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean		
0-05	13	7.4 × 10 ⁻¹	1.6 × 10 ¹	5.3 × 10 ⁰	6.9 × 10 ⁰	4.0 × 10 ⁰	1.7 × 10 ⁰
05-10	3	5.0 × 10 ⁻¹	1.6 × 10 ⁰	6.6 × 10 ⁻¹	9.3 × 10 ⁻¹	6.1 × 10 ⁻¹	-2.1 × 10 ⁻¹
10-15	3	2.4 × 10 ⁻¹	3.9 × 10 ⁻¹	2.5 × 10 ⁻¹	2.9 × 10 ⁻¹	8.8 × 10 ⁻²	-1.3 × 10 ⁰
15-25	3	9.2 × 10 ⁻²	1.9 × 10 ⁻¹	1.8 × 10 ⁻¹	1.6 × 10 ⁻¹	5.6 × 10 ⁻²	-1.9 × 10 ⁰
25-40	2	4.8 × 10 ⁻²	9.1 × 10 ⁻²	6.9 × 10 ⁻²	6.9 × 10 ⁻²	3.0 × 10 ⁻²	-2.7 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	13	7.4 × 10 ⁻¹	1.6 × 10 ¹	5.3 × 10 ⁰	6.9 × 10 ⁰	4.0 × 10 ⁰	1.7 × 10 ⁰
0-10	3	2.9 × 10 ⁰	5.0 × 10 ⁰	4.3 × 10 ⁰	4.1 × 10 ⁰	1.1 × 10 ⁰	1.4 × 10 ⁰
0-15	3	2.1 × 10 ⁰	3.4 × 10 ⁰	2.9 × 10 ⁰	2.8 × 10 ⁰	6.8 × 10 ⁻¹	1.0 × 10 ⁰
0-25	3	1.3 × 10 ⁰	2.1 × 10 ⁰	1.8 × 10 ⁰	1.7 × 10 ⁰	3.9 × 10 ⁻¹	5.4 × 10 ⁻¹
0-40	2	1.2 × 10 ⁰	1.3 × 10 ⁰	1.3 × 10 ⁰	1.3 × 10 ⁰	1.2 × 10 ⁻¹	2.2 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-15. Americium-241 radionuclide concentration summary for all soil profiles taken from our most recent trip in 1991 on Erapuotsu Island (F32).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD		
0-05	3	3.2 × 10 ⁰	1.5 × 10 ¹	5.2 × 10 ⁰	7.7 × 10 ⁰	6.1 × 10 ⁰	1.8 × 10 ⁰	7.8 × 10 ⁻¹
05-10	2	4.5 × 10 ⁰	4.6 × 10 ⁰	4.5 × 10 ⁰	4.5 × 10 ⁰	1.1 × 10 ⁻¹	1.5 × 10 ⁰	2.3 × 10 ⁻²
10-15	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
15-25	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
25-40	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	3	3.2 × 10 ⁰	1.5 × 10 ¹	5.2 × 10 ⁰	7.7 × 10 ⁰	6.1 × 10 ⁰	1.8 × 10 ⁰	7.8 × 10 ⁻¹
0-10	2	3.9 × 10 ⁰	4.8 × 10 ⁰	4.4 × 10 ⁰	4.4 × 10 ⁰	6.6 × 10 ⁻¹	1.5 × 10 ⁰	1.5 × 10 ⁻¹
0-15	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-25	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-40	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-16. Americium-241 radionuclide concentration summary for all soil profiles taken from the 1978 NMIRS together with our most recent trip in 1989 on Eniaetok Island (F33).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean		
0-05	18	2.4 × 10 ⁻¹	1.1 × 10 ¹	5.5 × 10 ⁰	5.1 × 10 ⁰	3.6 × 10 ⁰	1.2 × 10 ⁰
05-10	15	1.9 × 10 ⁻¹	8.2 × 10 ⁰	8.8 × 10 ⁻¹	1.7 × 10 ⁰	2.1 × 10 ⁰	1.1 × 10 ⁰
10-15	9	1.1 × 10 ⁻¹	2.0 × 10 ⁰	6.1 × 10 ⁻¹	7.0 × 10 ⁻¹	6.2 × 10 ⁻¹	1.0 × 10 ⁰
15-25	6	5.8 × 10 ⁻²	4.7 × 10 ⁻¹	1.1 × 10 ⁻¹	1.6 × 10 ⁻¹	1.6 × 10 ⁻¹	7.3 × 10 ⁻¹
25-40	6	1.5 × 10 ⁻²	1.1 × 10 ⁻¹	2.7 × 10 ⁻²	4.1 × 10 ⁻²	3.5 × 10 ⁻²	6.7 × 10 ⁻¹
40-60	5	2.8 × 10 ⁻³	3.4 × 10 ⁻¹	6.7 × 10 ⁻²	1.1 × 10 ⁻¹	1.3 × 10 ⁻¹	1.8 × 10 ⁰
0-05	18	2.4 × 10 ⁻¹	1.1 × 10 ¹	5.5 × 10 ⁰	5.1 × 10 ⁰	3.6 × 10 ⁰	1.2 × 10 ⁰
0-10	15	3.9 × 10 ⁻¹	6.9 × 10 ⁰	2.8 × 10 ⁰	3.1 × 10 ⁰	2.0 × 10 ⁰	8.8 × 10 ⁻¹
0-15	8	4.6 × 10 ⁻¹	4.9 × 10 ⁰	1.6 × 10 ⁰	2.1 × 10 ⁰	1.7 × 10 ⁰	9.0 × 10 ⁻¹
0-25	6	3.2 × 10 ⁻¹	1.5 × 10 ⁰	7.6 × 10 ⁻¹	7.8 × 10 ⁻¹	4.5 × 10 ⁻¹	6.3 × 10 ⁻¹
0-40	5	2.1 × 10 ⁻¹	9.2 × 10 ⁻¹	3.7 × 10 ⁻¹	4.8 × 10 ⁻¹	3.1 × 10 ⁻¹	6.7 × 10 ⁻¹
0-60	5	1.4 × 10 ⁻¹	6.4 × 10 ⁻¹	2.8 × 10 ⁻¹	3.5 × 10 ⁻¹	2.3 × 10 ⁻¹	7.0 × 10 ⁻¹

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-17. Americium-241 radionuclide concentration summary for all soil profiles taken from our most recent trip in 1991 on Busch Island (F38).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean		SD	Mean of logs	SD of logs
		Minimum	Maximum	Median		Mean	SD			
0-05	4	1.0 × 10 ⁰	1.6 × 10 ¹	5.4 × 10 ⁰		6.9 × 10 ⁰	7.2 × 10 ⁰		1.3 × 10 ⁰	1.4 × 10 ⁰
05-10	2	4.1 × 10 ⁰	7.9 × 10 ⁰	6.0 × 10 ⁰		6.0 × 10 ⁰	2.7 × 10 ⁰		1.7 × 10 ⁰	4.7 × 10 ⁻¹
10-15	3	2.1 × 10 ⁰	4.5 × 10 ⁰	2.6 × 10 ⁰		3.1 × 10 ⁰	1.2 × 10 ⁰		1.1 × 10 ⁰	3.8 × 10 ⁻¹
15-25	3	5.0 × 10 ⁻¹	1.1 × 10 ⁰	5.1 × 10 ⁻¹		6.9 × 10 ⁻¹	3.1 × 10 ⁻¹		-4.4 × 10 ⁻¹	4.2 × 10 ⁻¹
25-40	1	4.3 × 10 ⁻¹	4.3 × 10 ⁻¹	4.3 × 10 ⁻¹		4.3 × 10 ⁻¹	0.0 × 10 ⁰		-8.6 × 10 ⁻¹	0.0 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	4	1.0 × 10 ⁰	1.6 × 10 ¹	5.4 × 10 ⁰		6.9 × 10 ⁰	7.2 × 10 ⁰		1.3 × 10 ⁰	1.4 × 10 ⁰
0-10	2	2.6 × 10 ⁰	4.5 × 10 ⁰	3.5 × 10 ⁰		3.5 × 10 ⁰	1.3 × 10 ⁰		1.2 × 10 ⁰	3.8 × 10 ⁻¹
0-15	2	2.5 × 10 ⁰	4.5 × 10 ⁰	3.5 × 10 ⁰		3.5 × 10 ⁰	1.4 × 10 ⁰		1.2 × 10 ⁰	4.3 × 10 ⁻¹
0-25	2	1.9 × 10 ⁰	2.9 × 10 ⁰	2.4 × 10 ⁰		2.4 × 10 ⁰	7.0 × 10 ⁻¹		8.5 × 10 ⁻¹	3.0 × 10 ⁻¹
0-40	1	1.3 × 10 ⁰	1.3 × 10 ⁰	1.3 × 10 ⁰		1.3 × 10 ⁰	0.0 × 10 ⁰		2.9 × 10 ⁻¹	0.0 × 10 ⁰
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-18. Americium-241 radionuclide concentration summary for all soil profiles taken from the 1978 NMIRS together with our most recent trips in 1986 through 1989 on Rongelap Island (F42).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt					Mean SD		Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	SD				
0-05	267	4.0 × 10 ⁻²	1.1 × 10 ¹	1.6 × 10 ⁰	2.0 × 10 ⁰	1.7 × 10 ⁰	3.0 × 10 ⁻¹	9.7 × 10 ⁻¹	3.0 × 10 ⁻¹	9.7 × 10 ⁻¹
05-10	84	4.9 × 10 ⁻²	7.2 × 10 ⁰	6.8 × 10 ⁻¹	1.3 × 10 ⁰	1.5 × 10 ⁰	-2.8 × 10 ⁻¹	1.0 × 10 ⁰	-2.8 × 10 ⁻¹	1.0 × 10 ⁰
10-15	51	7.6 × 10 ⁻⁴	2.6 × 10 ⁰	4.8 × 10 ⁻¹	6.1 × 10 ⁻¹	5.5 × 10 ⁻¹	-1.1 × 10 ⁰	1.4 × 10 ⁰	-1.1 × 10 ⁰	1.4 × 10 ⁰
15-25	35	7.5 × 10 ⁻³	1.4 × 10 ⁰	1.8 × 10 ⁻¹	3.1 × 10 ⁻¹	3.6 × 10 ⁻¹	-1.8 × 10 ⁰	1.2 × 10 ⁰	-1.8 × 10 ⁰	1.2 × 10 ⁰
25-40	22	7.5 × 10 ⁻⁴	4.4 × 10 ⁻¹	4.6 × 10 ⁻²	7.9 × 10 ⁻²	9.9 × 10 ⁻²	-3.4 × 10 ⁰	1.6 × 10 ⁰	-3.4 × 10 ⁰	1.6 × 10 ⁰
40-60	17	1.2 × 10 ⁻³	4.0 × 10 ⁻¹	2.0 × 10 ⁻²	7.1 × 10 ⁻²	1.1 × 10 ⁻¹	-4.0 × 10 ⁰	1.9 × 10 ⁰	-4.0 × 10 ⁰	1.9 × 10 ⁰
0-05	267	4.0 × 10 ⁻²	1.1 × 10 ¹	1.6 × 10 ⁰	2.0 × 10 ⁰	1.7 × 10 ⁰	3.0 × 10 ⁻¹	9.7 × 10 ⁻¹	3.0 × 10 ⁻¹	9.7 × 10 ⁻¹
0-10	78	4.4 × 10 ⁻²	8.0 × 10 ⁰	1.7 × 10 ⁰	2.2 × 10 ⁰	1.6 × 10 ⁰	4.5 × 10 ⁻¹	9.2 × 10 ⁻¹	4.5 × 10 ⁻¹	9.2 × 10 ⁻¹
0-15	41	1.3 × 10 ⁻¹	5.6 × 10 ⁰	1.4 × 10 ⁰	1.6 × 10 ⁰	1.3 × 10 ⁰	1.8 × 10 ⁻¹	8.6 × 10 ⁻¹	1.8 × 10 ⁻¹	8.6 × 10 ⁻¹
0-25	21	9.4 × 10 ⁻²	3.5 × 10 ⁰	8.7 × 10 ⁻¹	1.0 × 10 ⁰	9.4 × 10 ⁻¹	-4.0 × 10 ⁻¹	9.9 × 10 ⁻¹	-4.0 × 10 ⁻¹	9.9 × 10 ⁻¹
0-40	10	6.5 × 10 ⁻²	9.8 × 10 ⁻¹	3.2 × 10 ⁻¹	3.8 × 10 ⁻¹	2.8 × 10 ⁻¹	-1.3 × 10 ⁰	8.9 × 10 ⁻¹	-1.3 × 10 ⁰	8.9 × 10 ⁻¹
0-60	7	4.4 × 10 ⁻²	7.3 × 10 ⁻¹	1.8 × 10 ⁻¹	2.5 × 10 ⁻¹	2.4 × 10 ⁻¹	-1.8 × 10 ⁰	1.0 × 10 ⁰	-1.8 × 10 ⁰	1.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-19. Americium-241 radionuclide concentration summary for all soil profiles taken from the 1978 NMIRS together with our most recent trip in 1991 on Arbar Island (F43).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean		
0-05	8	2.3 × 10 ⁰	1.6 × 10 ¹	3.5 × 10 ⁰	7.0 × 10 ⁰	5.7 × 10 ⁰	1.7 × 10 ⁰
05-10	6	3.5 × 10 ⁻¹	7.1 × 10 ⁰	9.5 × 10 ⁻¹	2.2 × 10 ⁰	2.7 × 10 ⁰	1.8 × 10 ⁻¹
10-15	2	5.9 × 10 ⁻¹	4.7 × 10 ⁰	2.7 × 10 ⁰	2.7 × 10 ⁰	2.9 × 10 ⁰	5.1 × 10 ⁻¹
15-25	1	2.9 × 10 ⁰	2.9 × 10 ⁰	2.9 × 10 ⁰	2.9 × 10 ⁰	0.0 × 10 ⁰	1.1 × 10 ⁰
25-40	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	8	2.3 × 10 ⁰	1.6 × 10 ¹	3.5 × 10 ⁰	7.0 × 10 ⁰	5.7 × 10 ⁰	1.7 × 10 ⁰
0-10	6	1.5 × 10 ⁰	9.8 × 10 ⁰	2.7 × 10 ⁰	4.1 × 10 ⁰	3.4 × 10 ⁰	1.2 × 10 ⁰
0-15	2	1.4 × 10 ⁰	3.9 × 10 ⁰	2.7 × 10 ⁰	2.7 × 10 ⁰	1.7 × 10 ⁰	8.6 × 10 ⁻¹
0-25	1	3.5 × 10 ⁰	3.5 × 10 ⁰	3.5 × 10 ⁰	3.5 × 10 ⁰	0.0 × 10 ⁰	1.3 × 10 ⁰
0-40	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-20. Americium-241 radionuclide concentration summary for all soil profiles taken from our most recent trip in 1991 on Eniran Island (F46).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean SD		Mean of logs	SD of logs
		Minimum	Maximum	Median	Mean	Mean	SD		
0-05	5	1.6 × 10 ⁰	7.7 × 10 ⁰	5.0 × 10 ⁰	4.8 × 10 ⁰	2.2 × 10 ⁰	2.2 × 10 ⁰	1.4 × 10 ⁰	5.9 × 10 ⁻¹
05-10	2	1.2 × 10 ⁰	2.4 × 10 ⁰	1.8 × 10 ⁰	1.8 × 10 ⁰	9.0 × 10 ⁻¹	9.0 × 10 ⁻¹	5.2 × 10 ⁻¹	5.2 × 10 ⁻¹
10-15	2	1.9 × 10 ⁻¹	1.0 × 10 ⁰	6.0 × 10 ⁻¹	6.0 × 10 ⁻¹	5.8 × 10 ⁻¹	5.8 × 10 ⁻¹	-8.4 × 10 ⁻¹	1.2 × 10 ⁰
15-25	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
25-40	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	5	1.6 × 10 ⁰	7.7 × 10 ⁰	5.0 × 10 ⁰	4.8 × 10 ⁰	2.2 × 10 ⁰	2.2 × 10 ⁰	1.4 × 10 ⁰	5.9 × 10 ⁻¹
0-10	2	2.0 × 10 ⁰	2.5 × 10 ⁰	2.3 × 10 ⁰	2.3 × 10 ⁰	3.4 × 10 ⁻¹	3.4 × 10 ⁻¹	8.2 × 10 ⁻¹	1.5 × 10 ⁻¹
0-15	2	1.7 × 10 ⁰	1.7 × 10 ⁰	1.7 × 10 ⁰	1.7 × 10 ⁰	3.2 × 10 ⁻²	3.2 × 10 ⁻²	5.4 × 10 ⁻¹	1.9 × 10 ⁻²
0-25	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-40	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-21. Americium-241 radionuclide concentration summary for all soil profiles taken from our most recent trip in 1991 on Tufa Island (F47).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean		Mean of logs	SD of logs
		Minimum	Maximum	Median		Mean	SD		
0-05	8	1.8 × 10 ⁰	9.4 × 10 ⁰	3.6 × 10 ⁰		4.5 × 10 ⁰	2.6 × 10 ⁰	1.4 × 10 ⁰	5.6 × 10 ⁻¹
05-10	6	7.0 × 10 ⁻¹	1.6 × 10 ¹	2.1 × 10 ⁰		5.2 × 10 ⁰	6.0 × 10 ⁰	1.1 × 10 ⁰	1.2 × 10 ⁰
10-15	4	1.6 × 10 ⁻¹	2.3 × 10 ⁰	1.4 × 10 ⁰		1.3 × 10 ⁰	8.8 × 10 ⁻¹	-1.1 × 10 ⁻¹	1.2 × 10 ⁰
15-25	4	1.7 × 10 ⁻¹	9.4 × 10 ⁻¹	2.0 × 10 ⁻¹		3.8 × 10 ⁻¹	3.8 × 10 ⁻¹	-1.3 × 10 ⁰	8.2 × 10 ⁻¹
25-40	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	8	1.8 × 10 ⁰	9.4 × 10 ⁰	3.6 × 10 ⁰		4.5 × 10 ⁰	2.6 × 10 ⁰	1.4 × 10 ⁰	5.6 × 10 ⁻¹
0-10	6	1.9 × 10 ⁰	9.6 × 10 ⁰	3.5 × 10 ⁰		4.7 × 10 ⁰	3.2 × 10 ⁰	1.3 × 10 ⁰	6.8 × 10 ⁻¹
0-15	4	1.3 × 10 ⁰	7.2 × 10 ⁰	3.6 × 10 ⁰		3.9 × 10 ⁰	2.8 × 10 ⁰	1.1 × 10 ⁰	8.2 × 10 ⁻¹
0-25	3	8.5 × 10 ⁻¹	4.7 × 10 ⁰	3.3 × 10 ⁰		2.9 × 10 ⁰	1.9 × 10 ⁰	8.5 × 10 ⁻¹	9.0 × 10 ⁻¹
0-40	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Table C-22. Americium-241 radionuclide concentration summary for all soil profiles taken from the 1978 NMIRS together with our most recent trip in 1989 on Borukka Island (F49).

Soil depth (cm)	N ^a	pCi g ⁻¹ dry wt				Mean		SD	Mean of logs	SD of logs
		Minimum	Maximum	Median		Mean	SD			
0-05	13	1.1 × 10 ⁰	1.1 × 10 ¹	3.2 × 10 ⁰		4.5 × 10 ⁰	2.9 × 10 ⁰		1.3 × 10 ⁰	6.2 × 10 ⁻¹
05-10	9	1.6 × 10 ⁻¹	1.5 × 10 ¹	8.8 × 10 ⁻¹		2.6 × 10 ⁰	4.8 × 10 ⁰		5.3 × 10 ⁻²	1.3 × 10 ⁰
10-15	8	9.9 × 10 ⁻²	2.3 × 10 ⁰	6.1 × 10 ⁻¹		7.6 × 10 ⁻¹	7.4 × 10 ⁻¹		-7.6 × 10 ⁻¹	1.1 × 10 ⁰
15-25	9	3.9 × 10 ⁻²	8.8 × 10 ⁻¹	2.0 × 10 ⁻¹		2.6 × 10 ⁻¹	2.5 × 10 ⁻¹		-1.7 × 10 ⁰	9.0 × 10 ⁻¹
25-40	5	1.6 × 10 ⁻²	2.9 × 10 ⁻¹	3.5 × 10 ⁻²		9.2 × 10 ⁻²	1.2 × 10 ⁻¹		-3.0 × 10 ⁰	1.2 × 10 ⁰
40-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰
0-05	13	1.1 × 10 ⁰	1.1 × 10 ¹	3.2 × 10 ⁰		4.5 × 10 ⁰	2.9 × 10 ⁰		1.3 × 10 ⁰	6.2 × 10 ⁻¹
0-10	9	1.3 × 10 ⁰	8.1 × 10 ⁰	2.2 × 10 ⁰		3.3 × 10 ⁰	2.2 × 10 ⁰		1.0 × 10 ⁰	6.0 × 10 ⁻¹
0-15	6	8.9 × 10 ⁻¹	3.4 × 10 ⁰	1.7 × 10 ⁰		2.0 × 10 ⁰	1.0 × 10 ⁰		5.6 × 10 ⁻¹	5.4 × 10 ⁻¹
0-25	5	5.9 × 10 ⁻¹	2.2 × 10 ⁰	8.2 × 10 ⁻¹		1.3 × 10 ⁰	7.4 × 10 ⁻¹		8.2 × 10 ⁻²	6.0 × 10 ⁻¹
0-40	3	3.7 × 10 ⁻¹	5.2 × 10 ⁻¹	4.8 × 10 ⁻¹		4.6 × 10 ⁻¹	7.7 × 10 ⁻²		-7.9 × 10 ⁻¹	1.8 × 10 ⁻¹
0-60	0	0.0 × 10 ⁰	0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰		0.0 × 10 ⁰	0.0 × 10 ⁰

NOTE: Specific activity is decay corrected to 1994.

N^a stands for number of individual samples.

Appendix D

Maps of Islands

