

MARSHALL ISLANDS RADIOLOGICAL SAFETY PROGRAM  
FIELD TRIPS 1974-1981

## I. Dose Assessment-Environmental Food Chain Surveillance

- 4/74 - Greenhouse, Ash, Nelson - Utirik, Rongelap, Bikini  
Orientation Field Trip (with Medical)  
-External radiation measurements  
-Sampling groundwater, soil, plants, fish, coconut crabs
- 12/74- Greenhouse, Nelson - Rongelap, Rongerik, Bikini  
-External radiation measurements  
-Sampling Fish
- 4/75 - Greenhouse, Williams, Reilly, Davis, Nelson - Bikini (Enue)  
-External radiation levels  
-Soil and vegetation (also Wotho, Kwajalein)  
Guidance on Siting of Second Increment of Housing
- 6-7/75-Greenhouse, LLL, UWLRE, EPA - Multiagency - Bikini (Enue)  
-Soil, groundwater and vegetation (to UW)  
Guidance on Siting of Second Increment of Housing
- 11/12/75-Greenhouse, Nelson - Majuro, Ponape, Truk, Guam, Polau  
Regional Radiological Background Study
- 3-4/76-Greenhouse, Naidu, Kuehner, Haughey, Terpilak - Bikini (Enue)  
Followup of Previous Study  
- $\beta$ - $\gamma$  dose rates  
-Soil and vegetation
- 9/76 - Greenhouse, Nelson with Medical - Wotje, Ailuk, Utirik,  
Rongelap, Bikini  
-Environmental surveys

11. Augmented Program: Pu Air Sampling, Residency, Dose Assessment,  
Diet and Life Style Study

1-2/77-Naidu - Rongelap

-Residency, effects of radiation on men

4-5/77-Greenhouse, Levine, Miltenberger - Utirik, Rongelap, Bikini,  
Kwajalein

-Site planning, wind-powered generators and air samplers,  
also conventional, Kwajalein-Pu excretion sampling

10/77 - Greenhouse, Levine, Dillingham, DeAngelis, Cua - Utirik, Rongelap,  
Bikini, Kwajalein

-Installation of windmills  
-Large volume urine sampling collection

10/77 - Miltenberger, Cohn, Rothman, Clareus, WBC - Japtan

-WBC-Japtan Marshallese (unsuccessful)  
-WBC-Enewetak (Holmes and Narver employees)

1/78 - Balsamo, Sherwin - Bikini, Rongelap, Utirik

-Complete installation of wind generators and repairs

3-4/78 - Miltenberger, Lessard, Naidu - Rongelap, Utirik, Bikini

-Collect urine, soil, vegetation and fish  
-5 Day Hi-Vol Air Sampling  
-Residency-Utirik (Naidu)  
-WBC, urine, vegetation, local foods

9/78 - Greenhouse - Nor Marshall Islands Radiological Survey

- 1/79 - Miltenberger, Greenhouse, Craighead - Majuro (former Bikinian)  
 -WBC (of 64 former Bikinians), 49 urine samples; 37 Majuro residents  
 -Complete Pacific Basin Study (UWLRS)
- 5/79 - Miltenberger, Lessard - Majuro, Kili (former Bikinian)  
 -WBC (of 79 former Bikinians, 50 Kili)
- 8-9/79-Miltenberger, Lessard, Balsamo, Hunt, Dillingham, Sherwin, Rademacher -  
 Kwajalein, Rongelap, Utirik  
 -Reestablish air samplers, Kwajalein, Rongela, Utirik  
 -WBC 150 persons (Rongelap, Utirik)  
 -Environmental Monitoring (EM), Rongelap, and Utirik  
 -146 urines  
 -local foods
- 2/80 - Miltenberger, Levine, Greenhouse, Manalastas - Japtan, Enewetak  
 Ujelang - Baseline data, prior to repatriation  
 -WBC 400  
 -Urine samples (400)
- 7-8/80-Greenhouse, Moorthy, Wells Rivera - Majuro, Kili  
 -WBC (200 persons)  
 -urine (100 persons)
- 1-2/81-Miltenberger, Roesler, Bennett - Enewetak  
 -WBC  
 -x-ray machine survey

WBC - whole body counting

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MARSHALL ISLAND RADIOLOGICAL SAFETY PROGRAM

Environmental Sampling

	<u>Water</u>	<u>Vegetation</u>	<u>Soil</u>	<u>Animal</u>	
1955				7	Crabs - R
1956				7	" "
1957				2	Coconut Crabs - R
1958				2	" " "
1961				?	" " "
1962				3	" " "
1964				3	" " "
1965				1	" " "
1969				2	" " "
1972				2	" " "
1973				3	" " "
4/74	-	50	-	3	" " "
12/74	-	-	-	25	
6/75	-	120	130	2	
4/76	30	100	130	-	
4/78	2	50	-	-	
8/79	2	50	-	10	
8/81		*	*		

R - Rongelap

\* Planned R & U

U - Utirik



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Marshall Islands Radiological Safety Program  
Scientific & Professional Staff

Program Directors

MIRSP

1974 - Sept 1980 Nathaniel Greenhouse

Sept 1980 - Present Edward T. Lessard

(Dose Reassessment)

1978 - Sept 1980 Janakiram R. Naidu & Nathaniel Greenhouse

Sept 1980 - Present Janakiram R. Naidu & Edward T. Lessard

Principal Support Staff

1974 - 1975 Frances J. Haughey

1976 - Present Janakiram R. Naidu

1977 - Present Robert P. Miltenberger (WBC, Data basis)

1979 - Present Edward T. Lessard

Part-Time Staff

1978 - 1980 Florence Cua

1978 - 1980 Jerry Knight

Adjunct Staff

1974 - Present Andrew P. Hull

Rongelap & Utirik

Dose Reassessment (DBER)

(Part-Time)

1978 - Sept 1980 Nathaniel Greenhouse

1978 - Present Janakiram R. Naidu

1979 - Present Edward T. Lessard

Consultants

8/78 Charles Sondhaus (UCCM)

Diet and Living Pattern Study

(LLL, DOE)

9/78 Janakiram R. Naidu  
Evelyn Craighead  
Nathaniel Greenhouse

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Marshall Islands Radiological Safety Program

<u>FY</u>	<u>Person-Years</u> <u>Sci - Prof</u>	<u>Other</u>	<u>Budget</u>	
			<u>Scientific Prog</u> <u>(\$1,000)</u>	<u>Capital</u> <u>(\$1,000)</u>
1975	1.5	1.0	\$125	20
1976 (inc Trans 8)	2.0	1.0	172	20
1977	2.0	1.25	207	80
1978	2.5	2.5	207 + +50 (RUDR)	10
1979	3.4	1.6	281 +50 (RUDR)	25
1980	3.8	2.2	351 +50 (RUDR)	50
1981	3.4	3.1	415 <u>-30</u> 385 +50 (RUDR)	5



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Marshall Islands Radiological Safety Program  
Major Capital Equipment Acquisitions

FY 1975 Computer Based Multi-channel (and Ge-Li)  
1976 Portable  $\gamma$  Spectrometer, two Reuter-Stokes RS-111  
1977 Wind powered generators (air sampling), three multi-channel  
analyzers, (two NaI detectors)  
1978 Peripherals alpha spectrometry (Pu)  
1979 Davidson mutli-channel, tower extension for windmills  
1980 Computer based, multi-channel P.H.S.

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