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March 4, 1955

Dr. Paul B. Pearson, Chief
Biology Branch
Division of Biology and Medicine
United States Atomic Energy Commission
Washington 25, D.C.

Dear Dr. Pearson:

The accompanying table is a partial list of the results of collections of biological samples in the Marshall Islands during January and February, 1955.

Water samples were also taken at nine stations off Bikini Atoll. A surface sample and two subsurface samples (maximum depth 275 feet) were taken at each station. Duplicate 5 ml aliquots were evaporated to dryness and their radioactivity determined. Of the 54 samples counted, five were at background level, while the maximum activity found was 7.6 d/m/ml.

It is obvious that the plankton samples collected at the same time and place as the water samples contain a great deal more radioactive material.

A great deal of work remains to be done on the nature of the radioactive material and their distribution. We hope these preliminary results will be of use to you.

Sincerely,

Lauren R. Donaldson

Lauren R. Donaldson
Director

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Radioactivity in Plankton Samples

Collected in the Marshall Islands
January and February, 1955

LOCATION	Date of Collection	Net Mesh	d/m/g
Likiep Atoll, at sea 3 mi. off	1-22-55	#6	1,810
Uterik Atoll, Uterik Island	1-23-55	#20	849
" " " "	1-23-55	#6	3,560
Rongelap Atoll, Rongelap Island	1-26-55	#6	1,180
" " " "	1-26-55	#20	2,100
" " Labaredj Island	1-28-55	#6	2,040
" " " "	1-28-55	#20	900
" " Kabelle Island	1-29-55	#6	4,010
" " " "	1-29-55	#20	12,800
" " Lukuen Island	1-30-55	#6	3,390
" " " "	1-30-55	#20	9,610
Bikini Atoll, 1 mi. off Nan	2-15-55	#6	17,700
Off Bikini Atoll 11° 38' N 165° 10' E	2-16-55	#6	719
" " " " " " " " "	2-16-55	#20	163
" " " 11° 32' N 165° 10' E	2-16-55	#6	402
" " " " " " " " "	2-16-55	#20	5,400
" " " 11° 29' N 165° 19' E	2-16-55	#6	1,190
" " " " " " " " "	2-16-55	#20	657
Eniwetok Atoll, Wide Passage	2-12-55	#6	370
" " Leroy	2-12-55	#6	597
" " Belle	2-12-55	#6	4,120
" " Vera	2-12-55	#6	4,340
" " Deep Entrance	2-12-55	#6	2,600

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