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NM 34

Dr. Allyn H. Seymour
 Marine Biologist, Biology Department
 Division of Biology and Medicine
 U.S. Atomic Energy Commission
 1901 Constitution Avenue N.W.
 Washington 25, D.C.

Dear Al:

During a conversation while Ed and I were in Washington last month, you mentioned that the activity levels in the water at Rongelap were higher in July 1956 than the levels reported in UWFL-43 obtained at earlier visits. Ed has looked up the data and summarized it.

The best evidence seems to indicate that the increase noted in the July 1956 samples is due to the recontamination of Rongelap from the 1956 series of weapons tests. The decay of the newly added radioactivity is such that it will soon be insignificant when compared with that from the 1954 series.

The decay of activity of the particulate matter and the filtrate of a cistern water and a lagoon water sample collected at Rongelap Island in July 1956 was followed. Although the counting error is too large to permit a precise evaluation of the decay rate, it is clear that the half life immediately after August 22 (first counting date) was between 20 and 40 days, indicating the presence of short half-life radionuclides. The count of January 1957 resulted in values which compare to those found in October 1956 and reported in UWFL-43, Table 13, as follows (values in d/m/liter):

Collection Date	Oct. '55	July '56	July '56
Counting Date	Oct. '55	Aug. '56	Jan. '57
Cistern water particulate matter	75 [±] 17	390 [±] 17	91 [±] 10
Cistern water filtrate	310 [±] 190	110 [±] 73 910 [±] 100	64 [±] 80
Lagoon water particulate matter		140 [±] 12	24 [±] 9
Lagoon water filtrate	60 [±] 120	2400 [±] 210 2000 [±] 200	240 [±] 165

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LRD:gb

Sincerely, *Lauren R. Donaldson*
 Lauren R. Donaldson
 Director