

Eise-hud -nyoo

BMB:WRB

September 19, 1955

Dr. Lauren R. Donaldson
Director
Applied Fisheries Laboratory
University of Washington
Seattle, Washington

Dear Dr. Donaldson:

The Division of Biology and Medicine is interested in conducting a radiobiological resurvey of the islands of Kabelle, Labaredj, Rongelap and Ailinginae Atoll. We would like to have your organization make this important survey as soon as possible. It is my understanding that in conversations with the Division staff on September 12 you set the tentative departure date of the expedition for October 15, 1955 and the report of your findings would be submitted two months later.

Arrangements are being made with Paul W. Spain, Eniwetok Field Office, to obtain either a F4U or Grumman Albatross aircraft to fly your group and equipment from Eniwetok to Rongelap Atoll and return on October 20th and 24th. Military Air Transport Orders will be issued by the Eniwetok Field Office as soon as you forward the names of your participating scientists to Paul Spain.

The Health and Safety Laboratory of the New York Operations Office has requested duplicate samples of some of the material that will be collected at the two Atolls. It is my understanding that Dr. John Harley will telephone you to discuss this matter.

I am enclosing a list of representative samples in which we have the greatest interest, and also some suggestions from the staff.

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Dr. Lauren R. Donaldson

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We appreciate your willingness to conduct the resurvey on such short notice. If we can be of further assistance, do not hesitate to contact the Division staff.

Sincerely yours,

Charles L. Dunham
Deputy Director
Division of Biology and Medicine

Enclosure:
List of samples

cc: Merrill Eisenbud - NYOO ✓
Paul W. Spain - Eniwetok, SFOO
Lt. Col. R. I. Schnittke - DMA
Gordon Dunning - BMBP
Paul B. Pearson - BMB

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BIOLOGICAL SAMPLING PROGRAM

Rongelap (Kaballe, Labordj, Rongelap Islands) and Ailinginae Atolls.

1. Soil Samples

To be collected over a known area of surface. Recommend a template of one foot or longer on a side be placed on the ground. The total activity per square foot of earth surface can thus be determined as long as depth of sample is such that it is equal to or exceeds any percolation of radioactive nucleotides. It is recommended that the sample be divided into two depths. The first to a depth of 3 to 4 inches and second to 6 or 8 inches. Attention should be paid to the microrelief of the terrain.

2. Water

Both fresh cistern and marine.

3. Plankton

4. Edible Plants

5. Invertebrates

Sea cucumber, muscle of gisn'clams

6. Fish (Omnivorous and Carnivorous)

Muscle, bone, liver

7. Birds - Muscle, bone, liver and eggs

A limited number of duplicate samples of items 1, 2 (sea water) 3, 4 and 6 should be sent to the NYOO.

The Sr^{90} data should be reported in units of disintegrations per minute per gram wet weight of items 4, 5 and 6.

It would be helpful in correlating these data with other information to have a calcium analysis made of the same samples and reported in units of activity of Sr^{90} per gram of calcium - Sunshine Units.

The external gamma dose rates should be taken in the same manner as reported in UWFL-42.

It would be helpful if on each and every data sheet were included the dates of collection and of analysis. Also, when plotting on log-log paper, it would be advantageous to use cycles on the two coordinates that were of equal physical length, and thus facilitate a quick estimation of decay curves.

It would facilitate the evaluation of the data, to also include the rate of decline of radioactivity data of the UWFL-42 report (figs. 6b, 9a, etc.) on the log-log paper having equal cyclic length on the two coordinates.