

## Office Memorandum • UNITED STATES GOVERNMENT

TO : Dr. Leonard R. Dunning

DATE: June 30, 1958

FROM : A. H. Seymour, Marine Biologist, Environmental Sciences Branch, Division of Biology & Medicine

SUBJECT: POST HARDTACK OCEANOGRAPHIC SURVEY

SYMBOL: EMMS:AMS

Mr. Alfred Klement from Dr. Gordon Dunning's office will be the DEM representative at Kulusuk for the last part of the Hardtack series and will be on hand during the first part of the "Silverstein" cruise. He will be in touch with you and Col. Lucks to coordinate plans for certain phases of the oceanic survey especially the sampling within the Restricted Area and the transmission of these data.

The general plan for the transmission of data from the Restricted Area is that the Silverstein will report daily to Task Group 7.1 who in turn will make available these data to Joint Task Force Seven, to J-1 and to Klement. DEM, Washington, will be informed by Klement. The information is being supplied to DEM, Washington, in anticipation of a request from DEM for an independent evaluation of the data by DEM (Dunning).

The desired information will include the gross activity of samples of water above and below the thermocline, of plankton and of fish; the activity of decaying and, any information on the isotopic composition of the samples that can be obtained while on shipboard, fully realizing the limitations of time and equipment. As you well know, the important information about the samples is the determination of the radioisotopes, quantitatively and qualitatively, rather than merely gross counts.

The areas to be sampled initially should be based upon the best available information as to where the spots of contamination in the ocean may be. It is suggested that the course be such as to sample as many stations within the Restricted Area as possible and consistent with the most feasible overall survey course before moving outside of the Restricted Area for samples. Based upon the 1956 survey more stations in the Restricted Area and fewer in the Guam area would appear to be in order.

When conferring with Joint Task Force Seven headquarters it would be well to mention that the information on the water contamination will not be available as rapidly after Hardtack as it was after Redwing.

Dr. L. R. Donaldson

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In 1956 aerial surveys and water samples obtained immediately after Redwing provided in a few days the information upon which the contamination in the Restricted Area was estimated. This year, assuming the stations are about fifty miles apart, three to three and a half stations per day can be taken and a longer time will be required to obtain the necessary information.

We assume that between you, Klement and Task Group 7.1 a code will be worked out for identification of sample, location and radiation level such as was done in 1956.

cc: Lt. Col. R. I. Schmittke, DEM  
A. Klement, DEM  
C. Dunning, DEM