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UNITED STATES  
ATOMIC ENERGY COMMISSION  
NEVADA OPERATIONS OFFICE  
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*With Enclosure*  
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AUTHORITY: DOE/SA-20

Major General E. B. Giller, USAF  
Assistant General Manager for Military Application, HQ

BY H. R. SCHMIDT, DATE:  
*1 APR 6/9/94*  
*MSA 6/15/94*

BIKINI/ENIWETOK RADIOLOGICAL SURVEYS

This acknowledges your 22 July letter advising that weapons program funds are not to be used for Bikini and Eniwetok radiologic surveys and cleanup activities.

As discussed in advance with you, we did participate last week in an Air Force Weapons Laboratory recon of Eniwetok preliminary to their conducting a cratering program there; however, all of our costs were reimbursable except the Program 18 salary and travel of the one NVOO participant.

We have previously expressed our concerns relative to the Bikini situation, but feel you should be apprised of what we learned at the recent Eniwetok reconnaissance. This involved a quick look at seven shot islands, including a general radiation survey of each entire island. Most measurements were taken at the ground surface. Substantial quantities of activated metal debris were discovered at radiation levels of up to 35 mr/hr on contact. Using a PAC-1S survey instrument we found in addition what appears to be a significant plutonium contamination along one stretch of beach. This area is subject to erosion into the ocean from rain and probably high tide action. Evaluation of the possible hazard presented by this area of contamination must await analysis of soil samples.

A number of craters were surveyed, and the highest gross gamma exposure rates encountered ranged up to 1 mr/hr. Of all the locations examined, the highest measurements of gamma, plutonium and scrap metal counts exist on the island of Yvonne (Runit), which has been used by Kentron (the maintenance contractor) and the Coast Guard for recreation purposes. Soil and water samples were taken from several of the islands, and results will be available for evaluation within the next six weeks. It is of significance however that we found areas on several of the islands which would be considered controlled areas based on present NTS criteria.

This situation at Yvonne was discussed informally with the Kentron site manager, who indicated that the area would be placed off limits to Kentron personnel. However it may be appropriate that AEC/Headquarters formally contact the DOT (Coast Guard) and DOD (Kentron) to apprise them of these preliminary findings and suggest suitable precautionary measures. Department of the Interior (Trust Territories) should probably also be notified when the situation becomes better understood.

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Major General E. B. Giller

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As a result of our recent discussions, I do appreciate your position relative to the funding of this type of activity. This does not however alter my conviction that the AEC has a responsibility somewhere within the agency to conduct some level of surveillance at both locations. Suggested scope of work for a Bikini effort has been developed in conjunction with DOS, and is attached for your reference. Also included is a progress report as to rehabilitation work at Bikini through mid-June, which indicates to us a need for additional radiological work before reoccupation proceeds too much farther.

I acknowledge your direction not to use weapons funds on this work and am issuing instructions to this effect. We had been planning to do a radiological survey of the two areas soon after Cannikin, and I would still recommend that this be done through NVOO contractor resources if some acceptable funding arrangement can be concluded.

I would appreciate your further advice on the long-range problem and assistance in arranging for possible funding alternatives.

  
Robert E. Miller  
Manager

Enclosures:  
As noted above

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Enclosure No. 1

Follow-up program of surveillance and study of the radiation environment at Bikini (Ref: DOS staff proposal of December 1970)

Among the objectives of the program, the following are of immediate concern:

- (1) Determination of shielding provided by housing under construction.
- (2) Determination of base-line body burdens of certain radionuclides when people first return.
- (3) Determination of actual diet and radionuclide content of same.  
(This diet is likely to require a supplement for calcium, which should be provided to minimize exposure to Strontium-90.)
- (4) Determination of levels of key radionuclides in food crops grown in the atoll.
- (5) Determination of daily activities by age and sex.
- (6) Air sampling under occupancy conditions.
- (7) Sampling of water supplies (wells and cisterns).
- (8) Determination of body burdens of key radionuclides as residents come into equilibrium with their diet.

There are also requirements with longer range objectives which are also important:

- (1) Study of movement of radionuclides through soils.
- (2) Monitoring of radiation levels on other island in the atoll presently off limits.
- (3) Study of radionuclide content of coconuts from trees now being planted and of pandanus yet to be planted.
- (4) Study of radionuclide content of products obtained from coconuts, the use of these products outside the atoll, and pathways to man for radionuclides in these products.
- (5) Monitoring of radionuclide content of salt water and sediment in Bikini Lagoon.

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Enclosure No. 2

Status report on reoccupation of Bikini Atoll by native populations.  
(Summarized from June 21, 1971 msg from District Administrator,  
Trust Territories)

- (1) 40 dwellings are under construction in Bikini Island, using aggregate from Peter-Oboe, sand from Bikini Island, other materials from old buildings on Bikini Island.
- (2) 62 Marshallese are now living on Bikini Atoll, 24 on Bikini Island and 38 on Eneu.
- (3) Fifty Thousand coconuts, 200 pandanus and some breadfruit have been planted, and plans call for many more of all of these plus other edible plants. Arrowroot from pre-test period is present in good quantity and will be part of the food supply when the people return.
- (4) Drinking water is used on Bikini from the roof tops and from concrete cisterns built by H&N at close of cleanup program.

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