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MEDICAL DEPARTMENT

REFER:

403184

April 8, 1970

Dr. John R. Totter
Director, Div. of Biology & Medicine
U.S. Atomic Energy Commission
Washington, D.C. 20545

Dear John:

Dave Bruner suggested I send you a brief summary of our recent medical survey. Attached are a few summarizing statements which might be of interest to you and the Commissioners.

Sincerely,

Robert A. Conard, M.D.

RAC:jr
encl.

cc: D. Bruner
E.P. Cronkite
V.P. Bond

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April 9, 1970

Preliminary Remarks Concerning the 1970 Annual Medical Survey in the Marshall Islands

The annual medical survey of the Rongelap people accidentally exposed to radioactive fallout in 1954 was carried out in March, 16 years after the accident. In spite of rough seas and difficult travel on a small cargo ship we visited the Atolls of Bikini, Rongelap, Utirik, Kwajalein (Ebeye) and Majuro for examination purposes.

A brief stop was made at Bikini. There are 25 Bikini people comprising a labor force who are there for rehabilitation purposes (planting coconut trees, etc.) In regard to our responsibilities of monitoring the Bikini people related to the low level of radiation in the environment, we obtained pooled urine samples on the group there and several specimens of coconut crabs for radiochemical analyses. These samples are being sent to the Health and Safety Laboratory of NYOO for analysis for ^{90}Sr, ^{137}Cs and Pu. Unfortunately a water sample from the well behind the camp which we collected was broken. However a similar sample had been obtained from this well and was taken to Las Vegas for analysis.

Last year at Kili 12 urine sample were collected on Bikini people. All of these showed only low levels of ^{137}Cs and ^{90}Sr as expected.

Since for several years it appears that only small groups of Bikini people will be at Bikini on a rotating basis for several months at a time we believe that occasional checks of urine, water, crabs, etc. are all that is necessary at this time. When sufficient numbers of people have returned for a more permanent stay on the island more comprehensive exam such as whole body gamma spectroscopy will be carried out. Plans are being formulated for such examinations.

I was somewhat concerned about the collection of metal scrap, mostly brass and copper, I believe, which the Bikinians are collecting to sell. They were making piles of it in the open,since we did not have instruments for measuring radioactivity with us I warned them against piling too much scrap in one place. If any of the scrap is radioactive perhaps the AEC could buy those pieces from the natives. I have already mentioned this problem verbally to some of you.

It was encouraging that no new cases of thyroid nodularity were detected in the exposed Rongelap or Utirik people. One 20 year old exposed Rongelap female who had a partial thyroidectomy in 1964 and had not been seen for several years due to the fact that she lived on an outlying island was the cause of some concern. She showed an increase in the size of her thyroid remnant. In view of the development of 3 cases of cancer of the thyroid in the Rongelap people serious consideration is being given to having this girl returned to the United States for study and possible further surgery. Of the 82 exposed people of Rongelap, 66 are now living and of these 21 have developed thyroid abnormalities, 19

with nodularity and 2 with atrophy of the gland associated with hypothyroidism. Of 19 children exposed at less than 10 years of age (receiving doses of 700-1400 rad to the thyroid), 17 have developed thyroid abnormalities. Surgical exploration or thyroidectomy, partial to complete, in 18 Rongelap patients has revealed benign adenomatous nodules in 17 cases and malignant lesions in 3 cases. In addition one Utirik woman operated on during the past year had a thyroid malignancy, but the association with radiation exposure in this case seems unlikely in view of the low dose of radiation received by this population. Growth retardation noted in some Rongelap children has been correlated with hypothyroid tendency due to thyroid lesions and some of these children appear to be responding favorably to thyroid hormone treatment.

The maintenance of a strict thyroid hormone treatment schedule in the exposed Rongelap people, particularly those who have had thyroid surgery,is extremely important. Some of these people will become hypothyroid if they do not take their treatment properly. We have encountered serious difficulties in maintaining this treatment schedule in the people. We are also concerned about generally unsatisfactory medical care of the exposed Rongelap people during the interval between the surveys. These topics will be the subject of further communication.

During the survey thyroid examinations were carried out on several unexposed Marshallese populations (at Rongelap, Utirik, Likiep, and Kwajalein Atolls). Such "street surveys" were made by our proceeding from one end of the village to the other feeling necks and recording findings. The village magistrates were most helpful and the people good naturedly agreed to the examinations even at Likiep village where we had never been before. These data are being analyzed and will afford valuable statistical information (which is almost entirely lacking) on the general incidence of thyroid diseases in Marshallese people. We will then be in a better position to place the radiation-induced thyroid abnormalities in the Rongelapese in better perspective.

During hematological examinations samples of red blood cells were collected on Rongelap people for ^{55}Fe analysis which will be done for us at University of Washington.

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