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Mr. Richard D. Copaken
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Dear Richard,

I have had the opportunity to review the most recent communication from Wallace O. Green, Deputy Under Secretary, Territorial and International Affairs, to President Amata Kabua, wherein certain "clarifications" are detailed by Mr. Bruce W. Wachholz, germane to the proposed agreement of March 27, 1980 for the medical survey of the inhabitants of Likiep Atoll. I find these clarifications most welcome since they specify, to a degree, the proposed "biochemical screening profile".

Before commenting specifically on them, I must appraise you of some general considerations in light of our April 23, 1980 meeting with representatives of the Department of Energy (DOE), Brookhaven National Laboratory (BNL), and the Department of Interior. I also found this meeting helpful and informative, specifically discussions with Dr. Pratt, whose extensive medical experience and data gathering at the Marshall Islands clearly detailed major foreseeable difficulties with the proposed studies by the Department of Interior and the Department of Energy.

It is blatantly clear that interpretation of biochemical analyses requires a reference standard of comparison normal values. Simply put, such a normal standard currently does not exist for the Marshallese population at large. Dr. Pratt informed us that several prior attempts of gathering biochemical and hematological data from populations in the Marshall Islands, other than Rongelap and Utirik, to be used as normal standard reference, could not be meaningfully interpreted for two reasons:

- 1) The data obtained varied considerably from established norms, and
- 2) the quantity of data collected was not large enough to be statistically significant.

The March 27 proposal, as you know, plans on studying Likiep Atoll and one other atoll, as a "comparison population". I find it difficult to

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comprehend how this small sampling of another atoll, will provide a comparison standard, if, after "26 years of medical follow up study" of the inhabitants of Rongelap and Utirik, no standard on other atolls has yet been established.

The entire problem of establishing a standard reference for normals, is further complicated by a more basic issue. Even if one were to assume the current availability of a comprehensive hematological and biochemical standard, it, in itself, may not be truly "normal" because of possible direct or indirect prior effect of radiation exposure on this "standard" population.

There are several other intrinsic shortcomings of the proposed study:

- 1. The proposal outlines a single screening attempt at one point in time. Since radiation induced carcinogenicity entails a lengthy latency period, future interval screening of the same population would be required to assess possible radiation related health effects.
- 2. No provision is made for anthropometric data collection and assessment.
- 3. The term "clinical studies" as proposed, is generic and non-specific. If it truly implies a complete physical examination, it should be so stated. Paragraph four (indicated as "2." in the March 27 1980 proposal) should not read "The Department of Energy will send to Likiep a physician for the purpose of examing the population with respect to detecting the existence of thyroid nodules" but should read: "The Department of Energy will send to Likiep and other atolls physicians to carry out complete physical examinations on the population."
- 4. The proposal, as written, provides that "medical problems" (whether possibly radiation related or not) will be referred to a medical officer of the Health Services of the Government of the Marshall Islands and that treatment funding will be the responsibility of the Department of the Interior/Trust Territory of the Pacific Islands. I find this difficult to comprehend since the medical officers of the Department of Energy and Brookhaven National Laboratory advised us at our April 23, 1980 meeting, that they have in the past provided requisite treatment, including stateside transport, surgery at U.S. Hospitals, etc., for even "remotely possible radiation effects".

- 5. T<sub>4</sub>, TSH and HTG determinations are not proposed as general screening parameters, but "as indicated to follow thyroid carcinoma". The implication is that only individuals with the established diagnosis of a carcinoma of the thyroid or suspected thyroid carcinoma on clinical grounds, will be biochemically tested; this is unacceptable.
- 6. As proposed, the Department of Energy will be responsible for the preparation, handling and transportation of biochemical analyses of the collected samples. Should handling, transportation and analysis be rather carried out, by an independent major laboratory? As you are aware, currently, such arrangements are being finalized and cost analyses are being prepared.

Having outlined some of my objections to the proposed Likiep study, I think that with appropriate modification, it nevertheless, should be instituted with the clear understanding that it would represent an initial phase of screening and data collection in preparation for compliance with Public Law 96-205.

The preliminary conclusions gleaned from the proposed study could, and should, be used to direct further planning and implementation of comprehensive health care to the people of each Marshall Islands atoll that was exposed to radiation — which I gather from Dr. Wachholz' comments in our meeting of April 23, 1980, includes the entire population of the Marshall Islands. Since such care has been clearly mandated by Congress and the President, the proposed Likiep screening study could well be used as an initial step.

Sincerely,

Robert G. Loeffler, M.D.

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