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REMARKS

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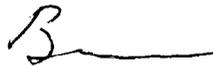
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FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Bruce Wachholz	Phone No.

Thanks for your attention -- and welcome home.

Sincerely,



Bruce W. Wachholz, Ph.d.
Office of Health and Environmental
Research, Office of Environment

Enclosure

as I know, no technical report has yet been published on the MLS diet and may never be, nor has there been any independent review of these critical new data or of their impact on dose assessments and risks.

2. The MLS diet has two categories for coconut intake; fluid and meat. Naidu's diet (a diet based in part on actual observation of food use by Jan Naidu, BNL, living with a group of Marshallese) has six; milk, meat, water, flesh, husk, embryo, and sap. The total "no imports" coconut intake level for adult males (fluid and meat) has a mean value of 293 grams per day in the MLS diet. The equivalent for all six items in the Naidu diet (see his letter to Robison dated January 22, 1980) is 929 grams per day. This is the low end of the range of values obtained from Naidu's study which applies to the case of no imported food. Naidu's dietary information was

I have consumed. We do not know how strong the preference for local fresh food is, compared to dried, powdered, and canned foods, i.e., the imported foods. We can assume 50% of the diet will be imported, but the degree to which imports actually replace use of local foods is only a guess. Efforts to provide imported food to residents of Bikini Island were largely a failure. Little if anything was learned about the impact that imported foods may have had on use of local food crops. We have a chicken and egg situation where dietary measurements are needed to support any resettlement plans while people must be resettled to get valid measurements. My current view, and this is based in part on the experience of underpredicting Marshall Island doses in the past, is that because of use of the MLS diet, the dose estimates in the LLNL draft are not conservatively derived, and if used as average doses for imports and no imports, may be too low by a factor of two or more.

On the issue of what kind of assessments and evaluations are needed to make good decisions on resettlements, decisions that will be vindicated post-return when the cesium and strontium body burdens have peaked, dose assessments must be conservatively derived and then evaluated against radiation standards in a conservative manner. This was the key to the dose assessments and evaluations in the Enewetak EIS that stood up under many reviews. I expect that these assessments will be

the average population. This only has meaning for the dose standard for 30 years. One must also limit doses to individuals, even those individuals who for one reason or another get doses much higher than the average.

If one looks at the draft objectively, one sees that we are using assumed living patterns, an average diet based upon a questionnaire and not upon any measurements or observations, and average levels of radioactivity in foods that are predicted, not measured. With all these uncertainties, good practice would say predict on the high side and state that doses may be lower. We should be able to state that this report contains conservative estimates of dose, that there are uncertainties throughout the calculations and particularly there are uncertainties inherent in trying to determine how much and what kinds of food different age groups within a population will eat when they return to an atoll, and that if these estimates are in error, it is more likely that doses have been overpredicted than underpredicted. I don't think this kind of statement can be used for the dose estimates in this draft.

As you know, I have also been concerned about use of the factor of three to estimate doses for the highest individuals in the Bikini and Enewetak populations. The most recent report from BNL entitled "A Reconstruction of Chronic Dose Equivalents for

This could be done by updating the diet used in their 1977 report using Naidu's food intake levels. Naidu claims these may represent maximum intake, which is what is needed, i.e., the maximum intake for a population group. I think the Naidu numbers can be defended as a conservative "no imports" diet for such a group. Also, I urge that the 250 mrem/year and 4,000 mrem/30 years be recommended to DOI for use in comparing the dose to the highest individuals and to the population with Federal standards in the interest of providing some degree of assurance that the standards will not be exceeded.

I urge that until we have better information on the range of dietary intakes by various groups within a returned population, and on various individuals within such groups, that doses for population groups be multiplied by 5 to obtain doses to the highest individuals in the population. This would help keep the highest doses received in the future from being such a surprise if people return too soon to Eneu, Bikini, or Enjebi Islands.

I agree with the draft that further dietary studies are needed, but not that we should rely solely on the MLS diet or on Naidu's diet for predicting doses at Bikini and Enewetak Atolls at this time.

Tommy F. McCraw

Tommy F. McCraw,
Office of Health and
Environmental Research

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COLLECTION Marshall Islands
BOX No. 5686
FOLDER Gnewetch June - Dec 1980

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Reviewed by P. Schmitt Date 5/1/97