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MEDICAL DEPARTMENT

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May 11th, 1977

Dr. James L. Liverman
Assistant Administrator for Environment and SAfety
U. S. Energy Research and Development Administration
Washington, D. C. 20545

Dear Jim:

In answer to your letter of April 11th, 1977, I would like to bring you up-to-date on the status of the bioassay program on the Bikinians and make a few comments about the TTG report and the program in general.

First, I would like to call your attention to the results of the gamma spectrographic analysis on the Bikini people done by Dr. Cohn and his group when we were at Bikini last month. The ^{137}Cs levels had increased 10-15 times over those of 1974. (See enclosed table comparing Bikini levels with those of Rongelap and Utirik.) In discussions with the people, they admitted eating pandanus and breadfruit, even though they knew they were forbidden fruits. No doubt, their urine ^{90}Sr values will also prove to be elevated. Even though the mean body burdens of ^{137}Cs are only about 1/3rd the MPC for populations (some individuals were at or slightly above the MPC), I think this is a serious finding and merits consideration for positive action -- perhaps even moving the people or removing the plants.

An enclosed table from HASL shows the latest Pu findings on the Bikini and other groups. You will note that because of the error in counting, only a few samples gave reliable measurements. These appeared to be somewhat lower than previously reported, which may be encouraging. We still have not ruled out the problem of contamination. During the April visit to Rongelap and Bikini, we attempted to collect a number of samples aboard the LCU under "clean" conditions as suggested by the TTG panel. This collection was disappointing since the stay at the islands was not long enough to give an adequate collection. However, other samples were collected which are to be analyzed by HASL. Carboys were also left for long-term collection. I understand a low-level Pu analysis laboratory is being established here at BNL. In view of the increasing importance of these analyses and increasing numbers of samples indicated, other laboratories which can do this type of analysis are badly needed.

It was interesting that while at Bikini the subject of Pu was not brought up by the people. We told them that low levels of the isotope were found in their urines and that we were keeping constant tab on this and other radionuclides by urine analyses and whole body counts. Dr. Cohn presented a talk on radiation on Bikini compared with Rongelap and Utirik and some higher level areas of the world. The people asked us many questions; there was much discussion and the meeting lasted several hours.

I welcome the meeting at ERDA on May 16th since many of us here feel the need for clarification of responsibilities with so many groups involved in the bioassay program in the Marshalls.

Sincerely yours,

Bob

Robert A. Conard, M.D.

bwa/encl.

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MEAN CESIUM-137 BODY BURDENS IN ADULT MARSHALLESE - 1977

	MALES			FEMALES		
	n	uci	nci/Kg Body Wt	n	uci	nci/Kg Body Wt
Rongelap	34	0.296 ±0.11* (0.113-0.680)**	5.04 ±1.97	20	0.182 ±0.055 (0.097-0.278)	3.13 ±1.1
Utnik	27	0.119 ±.048 (0.050-0.215	1.79 ±0.77	21	0.0781 ±0.032 (0.038-0.131)	1.29 ±0.58
Bikini	22	1.301 ±0.73 (0.568-3.232)	19.1 ±10.6	20	0.926 ±0.47 (0.534-2.234)	14.8 ±6.3
Medical Team	7	.00154 ±0.00052 (.00105-.00216)	.0195 ±0.006			

* SD

** Range

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MEAN CESIUM BODY BURDEN IN MARSHALLESE CHILDREN - 1977

	MALES			FEMALES		
	n	uci	mci/Kg Body Wt	n	uci	nci/Kg Body Wt
Rongelap	5	0.217 ±0.044* (0.168-0.246)**	7.65 ±1.21	5	0.265 ±0.092 (0.154-0.396)	5.97 ±2.1
Utrik	5	0.0663 ±0.018 (0.049-0.091)	2.22 ±0.66	5	0.0843 ±0.024 (0.051-0.108)	2.84 ±1.1
Bikini	3	1.04 ±0.26 (0.824-1.331)	32.3 ±7.6	3	0.861 ±0.29 (0.706-1.196)	22.3 ±15.3

* SD

** Range

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