



BROOKHAVEN NATIONAL LABORATORY
 ASSOCIATED UNIVERSITY OF CALIFORNIA, RICHMOND, CALIF. 94807

40755J

SAFETY & ENVIRONMENTAL PROTECTION DIVISION

TELEPHONE: (516) 345-4250

September 1, 1976

R

Mr. T. F. McInaw
 Division of Operational Safety
 U. S. Energy Research & Development
 Administration
 Washington, D. C. 20545

Dear Tommy:

Dr. Conrad and I have discussed the environmental problem at length, and have agreed that several major activities which will hopefully shed more light on the problem will be conducted. The first of these is a survey (from September 19 to October 23) which will be conducted at several localities to test the "regional theory" that the radioactivity level is generally higher in the tropical Pacific than in temperate latitudes. The survey has scheduled stops at Wake, Midway, Phoenix, and Fanning Islands. We expect to collect environmental samples as well as biological samples. Environmental samples will be collected at Ebey and Napier. We are also investigating the possibility of collecting samples from the "long term" residents at Kiojaleir and Iokoteh (1). It is hoped that we can obtain separate specimens from young children, young adults, and from Peace Corps volunteers with a history of a number of their residence. Additional "control" samples from other National Laboratory employees will be analyzed and samples will be collected from several BNL employees who spend substantial amounts of time in the northern Marshalls during the testing cycle. Special efforts will be taken to minimize cross contamination of water and fish with Pu contaminated soil and the samples will be analyzed for alpha and beta activity analysis.

Vic Nelson will be making the trip to collect additional data on the geographical distribution of radioactivity from the testing programs. We expect to plan special analytical analyses for transuranic isotopes. I plan to plan additional sampling of "reservoirs" for re-suspended and redispersed soil of Pu from the surface. Preliminary finding that plutonium is being re-suspended from inert materials and is being re-suspended.

As a result of some recent discussion with Ed Wienn (NYU), I am convinced that we should look for Amerindian, Marshallese whole body counts. Making inferences about Pu from Am data can be pretty tenuous, but ²⁴¹Am uptake data would be useful in establishing conservative upper limits on Pu body burdens. Besides that, the present state of the art allows us to see a small fraction of the maximum permissible body burden for ²⁴¹Am, and the incremental cost of doing this specific analysis to the present whole body counting program would be small; I am strongly encouraging the addition of Ed Wienn's services to the whole body counting program tentatively scheduled for next summer. I hope to arrange a meeting soon between Ed Wienn, Stan Conrad, and myself to discuss the details. If additional resources are identified beyond our budgets, I may have to talk to you about the possibility of additional funding from BER or US.

As a follow-up to our discussion of the Utirik thyroid cancer cases, I spoke with Ed Conrad about the available data. He substantiated our surmise that the estimates were based on other tissues and late (post-exposure) urine analyses, and that the exposure rate measurements. Evaluations of environmental ¹³¹I levels may prove helpful in shedding more light on thyroid dose estimates and thus in establishing a dose ratio between Rongelap and Utirik. However, preliminary attempts at activation analysis by the BNL chemistry department have indicated a total soil iodine level of ~ 10 ppm in samples from Rongelap. This is near the limit of detection, and the ¹³¹I level is yet to be established. We will continue to look into this approach, however, because of the availability of preliminary chemical separation of iodine by the BNL chemistry department.

The following approximate schedule may begin in week depending on interface requirements with the health physics program at Bikini.

Fri.	September 27	Utirik	Kwajalein
Sun.	September 29	Kwajalein	Wotje
Wed.	September 30	Wotje	Ailsh
Thurs.	September 30	Ailsh	Utirik
Mon.	September 27	Utirik	Rongelap
Fri.	October 3	Rongelap	Bikini
Sun.	October 5	Bikini	Kwajalein
Mon.	October 6	Kwajalein	Kona

I will keep you posted of any new developments.

Best regards,



M. J. Greenhouse

sls

cc: C. Meinhold
 J. Naidu
 R. Conrad

MEMO ROUTE SL

Form AEC-95 (Rev. May 4, 1947)

For action.	For information.
-------------	------------------

TO (Name and unit)	INITIAL	REMARKS
Dr. Biles	MB	May, 1947 - make L4 copy of the attached report + make copy to

TO (Name and unit)	INITIAL	REMARKS
T. Deal	TD	Good. Will call you - will give you a copy of report + Biondop

TO (Name and unit)	INITIAL	REMARKS
		Sent to Robinson Biondop Hawaii 10/4

FROM (Name and unit)	REMARKS
T.M. Crow	This gives an indication of what is being done to provide some facts associated with the observation of Pu in Bikini urine samples. Note EM - may need a few extra \$\$. Sept 29 '46

PHONE NO.	DATE
	Sept 29 '46