BNL AUI

BROOKHAVEN NATIONAL LABORATORY

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SAFETY & ENVIRONMENTAL PROTECTION DIVISION

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September 1, 1976

R

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

Dear Tommy:

Dr. Conard [illegible] plutonium problem at length, and have [illegible] which will hopefully shed [illegible] survey (September 19 to October [illegible]) [illegible] to test the "regional theory", [illegible] generally higher in the tropical Pacific [illegible]. The survey has scheduled stops [illegible] and Kikini. We expect to collect [illegible] environmental samples as possible at these [illegible] samples will be collected at Ebeye and Majuro. We [illegible] investigating the possibility of collecting [illegible] "long-term" residents at Kioajalein and [illegible] (?). [illegible] we can obtain separate specimens [illegible] and from Peace Corps volunteers [illegible] of their residence. Additional [illegible] Brookhaven National Laboratory employees will be analyzed and samples [illegible] collected from several BNL employees who spent substantial [illegible] time in the northern Marshalls during the [illegible] days. [illegible] will be taken to minimize cross contamination of [illegible] with Pu contaminated soil and the samples will [illegible] radiochemical analysis.

Vic Nelson will [illegible] additional data on the geographical [illegible] on the testing programs. We expect to [illegible] analyses for transuranic isotopes. I plan to [illegible] "reservoirs" for resuspended and redeposited soil [illegible] preliminary finding that plutonium [illegible] from inert materials [illegible] resuspended.

As a result of some recent discussions with Ed Wrenn (NYU), I am convinced that we should look for americium in Marshallese whole body counts. Making inferences about Pu from Am data can be pretty tenuous, but ^{241}Am 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 a maximum permissible body burden for ^{241}Am, and the incremental cost of adding this specific analysis to the present whole body counting program would be small; I am strongly encouraging the addition of Ed Wrenn's [illegible] to the whole body counting program tentatively scheduled for next [illegible]. I hope to arrange a meeting soon between Ed Wrenn, Stan Gold, [illegible] Conard, and myself to discuss the details. If additional costs are identified beyond our budgets, I may have to talk to you about the possibility of additional funding from BER or CS.

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

The following approximate schedule may [illegible] a week depending on interface requirements with [illegible] program at Bikini.

Fri.	September [illegible]	[illegible]	Kwaj
Sun.	September [illegible]	Kwaj	Wotje
Wed.	September [illegible]	Wotje	Ailuk
Thurs.	September [illegible]	Ailuk	Utirik
Mon.	September [illegible]	Utirik	Rongelap
Fri.	October [illegible]	Rongelap	Bikini
Sun.	October [illegible]	Bikini	Kwaj
Mon.	October [illegible]	Kwaj	Hon[illegible]

I will keep you a pitified of my [illegible] developments.

Best regards,

[illegible]

[illegible] Greenhouse

sls

cc: C. Meinhold
J. Naidu
R. Conard

MEMO ROUTE SL

Form AEC-93 (Rev. May 4, 1947) [illegible]

See me [illegible]	[illegible]	For action.
Note and [illegible]	[illegible]	For information.

TO (Name and unit)	INITIAL	REMARKS
Dr. Biles	[illegible]	[illegible] make [illegible] [illegible] [illegible] [illegible] [illegible]
T. Deal	[illegible]	[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
		Sent to [illegible] Burr, [illegible] [illegible] 10/4

FROM (Name and unit)	REMARKS
T. McCraw	This gives an indication of what is being done to pin down some facts associated with the observation of Pu in Bikini urine samples. Note ENL may need a few extra $$.

PHONE NO.	DATE
	Sept 29 '76

USE OTHER SIDE FOR ADDITIONAL REMARKS

[illegible] 445-469