



BROOKHAVEN NATIONAL LABORATORY
 ASSOCIATED UNIVERSITIES, INC. UTAKE 1000, 1973

R

SAFETY & ENVIRONMENTAL PROTECTION DIVISION

TELEPHONE: (516) 345-4250

October 27, 1976

Mr. T. F. McCraw
 USERDA/SSC
 Washington, D. C. 20545

Dear Tommy:

The following is a preliminary report of the external radiation survey results for Wotje, Ailuk, Utirik, and Rongelap Atolls. Other details of the environmental survey are included in my trip report to PASO (to be attached).

I selected (arbitrarily) Wotje Island and Ailuk Island as gamma background "controls". At both of these locations, the average of all pressurized ion chamber gamma readings was 3.8 ± 0.4 μ R/hr. This corresponds to an average whole-body gamma (plus cosmic ray) exposure rate of 20 mR/yr.

The average exposure rates at Ailuk and Utirik are listed below.

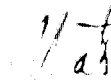
<u>Island</u>	<u>Average Exposure Rate (μR/hr)</u>	<u>Annual Exposure (mR)</u>
Utirik	4.1	36
Eorukku	4.2	37
Aon	4.1	36

At Rongelap surveys were made on Namu Island in the northwest corner of the atoll, Kabella Island in the northeast corner, Eniaetok Island midway along the east coast, and Rongelap Island in all locations but Rongelap the external gamma fields over the islands were too heterogeneous to reasonably estimate an "island average" exposure rate with this preliminary review of the data. Rongelap Island, however, was sufficiently uniform at the village (east end) to estimate an average exposure rate of 70 mR/yr, or 60 mR/yr, which is about twice "normal" background levels from unaminated Marshalls, and slightly less than the average exposure rate of Long Island.

A cursory look at the gamma spectral data shows a conspicuous ^{137}Cs peak, which we had assumed was possible for the excess exposure above "normal" background.

Vic Nelson collected the environmental samples on this trip. When his data results are available, we will co-author a detailed report in which I will include refined dose estimates with gamma spectral data and other energy dependence corrections.

Best regards,



N. A. Greenhouse

sls

cc: A. P. Hull
C. E. Meindl
J. Naidu