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The contamination with fission products, as the result of the atomic bomb detonations, over, water or near the water at Bikini and Eniwetok atolls, has created very complicated problems of evaluation. Each of the five detonations in these areas pose separate problems, but studies of all five bursts contribute to a better understanding of the problem.

The waters from Bikini Atoll carry trace quantities of radiation. The great mass of sludge from the target center (approximately 900,000 tons) remains moderately active. From the target area the radiation spreads by the biotic forms about the atoll where it is absorbed and retained. Some "migration" of radiation has taken place up onto the islands where it is picked up by the plants. Such translocated fission products onto the land are of a low order of intensity, about three to four times the natural background.

The shot islands at Eniwetok, and the plants and animals on the shot islands contain radioactive fission products. Some migration of these plants is observable. The plants and animals in the lagoon adjacent to the shot islands have absorbed radioactive products. Distribution of the active wastes about the Eniwetok Lagoon is not uniform as is the case at Bikini but concentrated adjacent to the shot islands.

The effect of mixed fission product contamination of biotic systems is being continued both in the test areas and in the laboratories in this country.

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| DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW | |
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Preliminary statement of an area of radiobiology study for Bikini.

1. Following the Crossroads tests at Bikini during 1956, studies were initiated to evaluate the distribution of the fission products in the biotic system of the area.
2. At the conclusion of the test program at Bikini in the Spring of 1958, studies following a pattern similar to the Bikini studies, were expanded to include Eniwetok.
3. The radiobiology studies followed in general three (3) main lines of effort:
 - a. Evaluation of the distribution of fission products geographically about the atolls.
 - b. The absorption of fission products by the plants and animals about the lagoon, reefs and islands.
 - c. The selective concentration of fission products by the various organs and tissues.
4. The effect of radiation contamination upon the plants and animals, has of necessity, been reserved for future studies in the field and in the state side laboratories.
5. As a part of the continuity of the past studies, and to form a preliminary base of operations for studies following the contemplated testing programs it is proposed that a limited field party (six(6) men²) spend two or three weeks in the field at Eniwetok during August of 1958.
6. During the test program of 1958 it is proposed that two (2) radiobiologists from the Applied Fisheries Laboratory, University of Washington, be in attendance to act as observers and aid in collecting data on the immediate effect of the detonations on the local fauna and flora. The data collected would be those of most practical use to the medical program.
7. Immediately following the "test program" the major programs of the radiobiology group would be activated.
8. The immediate radiation absorption studies are of interest to the Commission to fill in gaps in the information provided by previous testing programs.
9. It is proposed that a group of specialists (12) be assigned the responsibility of carrying on this work.
10. To conduct the field work following the "tests" it would be essential to have available a small naval vessel, preferably the LSI (L) 1091.

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1163

11. Follow up studies at yearly intervals are essential to measure the recovery rate of damaged areas and further distribution of fission products.
12. The active support of the A.E.C. and the Navy is essential to the execution of this program.

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