

RADIOLOGICAL PROBLEMS IN THE MARSHALL ISLANDS

The following statement is based upon information furnished by the Atomic Energy Commission.

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Bikini and Eniwetok:

Permanent alteration from atomic explosions is limited to the test atolls of Eniwetok and Bikini. Here, in addition to structural change of the coral reefs, there are high levels of radioactive contamination which will require several years to pass before all of the islands of these two atolls would be suitable for human habitation.

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Rongelap:

Outside the immediate test area, the only serious radioactive contamination occurred in the atolls of Rongelap, Rongerik and Uterik following the detonation of March 1, 1954. As a matter of fact, only the Rongelap atoll and especially the northern section of this atoll was very seriously affected.

Some degree of damage to leaves and plants by the fallout material on Rongelap appears to have occurred but this in itself is of no especial importance. However, such leaf contamination does establish a mechanism for the entry of certain radioactive isotopes into the plant itself. Considerable careful analytic study, in addition to the large amount already performed, will be necessary before a firm statement concerning the degree of entry, if any, of the radioactive material into the edible portions of the

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cocconut palm and other plants can be made. In any event, such internal contamination of plants as may have occurred will steadily diminish with time.

The most significant factor in the Rongelap situation is time in relation to radioactive decay. On this basis alone the Rongelap land areas will be below the permissible occupational exposure rate in about 12 months, no allowance being made for the additional decontaminating effect of weather, especially the heavy tropical rains.

Profound alternations of the Bikini Lagoon fauna have, of course, already occurred and shortly after March 1 highly contaminated fish specimens were taken in the Rongelap Lagoon. The species of fish which predominate in these atolls are non-migratory and unlikely to be taken in the course of fishing outside the lagoons in question. By the time the islands are ready for reoccupancy, even the most highly contaminated fish will no longer be dangerous as food.

No other fallout of consequence occurred ~~other than the two test~~ <sup>other than the two test atolls,</sup> in the atolls mentioned during the remaining detonations of the 1954 series nor were there any concentrations of health significance over any of the other Marshall Islands.

In summary, it is unlikely that any significant abnormality will be found in either the flora or fauna outside the two test atolls. These matters will be the subject of continuing investigation in an elaborate program of ecologic study that was, in fact, put into operation before the first thermonuclear detonation of November 1, 1952.