

C97



Department of Energy
Washington, D.C. 20545

H 7/18/78
also discussed in
briefing yesterday.

May 17, 1978

Hal Hollister, Director, OES

THRU: L. Joe Deal, ADFO

SUGGESTED DOE RESPONSES TO QUESTIONS ON BIKINI ATOLL RESETTLEMENT

The following questions and answers are presented in the interest of properly responding to inquiries about Bikini Atoll residents and recent radiological findings:

1. What is DOE's recommendation on the question of whether residents of Bikini Island should be again relocated?

Answer: DOE has performed followup radiological surveys of the environment and of people who have returned to live on Bikini Island. Survey results are used to predict radiation doses of residents which are then compared with current radiation protection standards applicable to members of the general public. DOE uses and applies current radiation protection philosophy and numerical standards and supports the concept of keeping radiation exposures as low as practical. 1974 survey results indicated doses of Bikini residents were well within the standards. 1977 results showed a tenfold increase in body burdens of cesium-137, the major contributor to wholebody radiation dose, with one individual slightly above the limit for cesium-137. These elevated dose rates were due to use of foods grown of Bikini Island. The residents were told they must not eat foods from Bikini Islands. The April 1978 survey shows a 75 percent increase in cesium-137 burdens in Bikini Island residents compared to 1977. Several individuals are exceeding current standards. Unless some effective measure is taken, these cesium-137 body burdens will remain at this level or move even higher, and the radiation standards will be exceeded year after year by some individuals.

✓

More: The following must be recognized:

1. Control of radiation exposures for Bikini Island residents requires a high level of compliance with recommended restrictions against use of foods grown on the island, a restriction that has proved impractical.

✓

NO 326
Collection L. Joe Deal
Box 13
Folder Marshall Island - Jan-June 1978

2. While DOE's predictive capability for assessing radiation doses is thought to be adequate, and radiological survey findings are confirming these predictions, there is not a comparable capability to predict the Bikinians actions and reactions, and the extent of their comprehension of efforts to limit and control their radiation exposures is largely unknown. ✓

It is, therefore, DOE's view, that at this time it is impractical to limit radiation exposures of Bikini Island residents so that current radiation standards can be met or does for all individuals limited within a factor of two or three of the standards. Therefore, Bikini Island should not be used as a residence island. Foods, including coconuts, grown on Bikini Island should be condemned for any use if Federal radiation standards are to be met. Products of the coconut trees on Bikini Island should not be used for any purpose. ✓

2. Can Eneu Island at Bikini Atoll be used as a village island?

Answer: The most recent predictions of radiation doses for residents of Eneu Island indicate that both annual and 30-year radiation protection guidelines would be met for individuals who are exposed to external radiation on that island and who use foods grown on that island plus fish from the lagoon. Foods grown on Bikini Island must not be used. The prediction of the external radiation portion of total whole body dose for Eneu residents is well supported by extensive measurements made in 1975. Since a number of food items common to the diet such as pandanus, breadfruit, and garden crops were either not present or present only recently on Eneu for collection and analysis, current internal dose predictions are based upon best estimates of the radioactivity that will be found when these foods are grown on Eneu Island. Thus, the prediction of doses for radioactivity taken into the body is less certain than external doses and will continue to be so until such foods are grown in Eneu and collected for analysis. This is being done. A team of scientists is working this month to collect samples of crops from a garden on Eneu. The most recent samples analyzed from Eneu are coconuts from 16 trees. The reported concentrations of cesium-137 are higher than predicted and higher than the average value used in the most recent dose assessments. Analysis of additional samples should provide the necessary data for internal radiation doses to be predicted with confidence. Preliminary results should be available in about 2 months. ✓

Tommy F. McCraw
Tommy F. McCraw, Acting Chief
Surveillance Projects Branch