



EXECUTIVE CORRESPONDENCE D20

Department of Energy
Washington, D.C. 20585

November 30, 1984

MEMORANDUM FOR: JAMES U. DeFRANCIS
Principal Deputy Assistant Secretary
for Congressional, Intergovernmental
and Public Affairs

THROUGH: WILLIAM E. TUCKER
Acting Director
Intergovernmental Affairs

FROM: R. DENNIS BEVANS
Chief, Field/Territorial Affairs
Intergovernmental Affairs

SUBJECT: Bikini/Eneu Atolls

I think that you should be made aware of recent developments regarding the issue of the possible radiological cleanup of Bikini Atoll and the somewhat related question of whether its former inhabitants might be permitted to return to Eneu Atoll prior to any cleanup of Bikini. Eneu is near Bikini and is the atoll that is the subject of the letter from Secretary Clark to Hodel dated July 5, 1984 (attached).

As additional background information, I have also attached a copy of my earlier note to you (July 84) about Bikini.

In summary:

- o DOE has not yet drafted a reply for Secretary Hodel to send Secretary Clark in response to his July 5, 1984, letter about Eneu Atoll.
- o The DP/PE technical people cannot agree on what dose levels of radiation are an acceptable risk--and there are moral/ethical issues which surround this question in addition to the scrutiny of world opinion if we (USG) return people and they suffer an increased level of illness.
- o At least three joint DP/PE/GC/IR meetings have been held on the topic and it seems to me that DP/PE are still far apart.
- o John Rudolph has agreed to take another try at an acceptable draft--but I do not see too much for them to agree upon given their very different interpretation of some basic data related to likely health hazard dose levels.
- o Roger Ray feels strongly that (aside from data dose questions) the people of Bikini should be given the right of informed choice.

DOE - John Rudolph's Files, Box

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- o Since a prior attempt at such an informed choice resulted in the people eating food that they were told not to eat--some say the risk is high they will do it again.
- o If we (DOE) only answer the questions asked by Secretary Clark and do not treat the broader moral and/or historical issues of which the people around the table are well aware--some say that is a cop out.
- o As mentioned earlier, even if the letter is drafted by John Rudolph to treat only the questions surrounding dose levels, the group cannot agree on which levels are the correct ones.
- o I cannot guess how this will develop except that DP/PE (GC?) may end up providing Ms. DeRocco with different versions for her choice--since she is apparently still managing this for the Secretary.

On the topic of the study of the feasibility of moving people back to Bikini after a cleanup designed to reduce radiation risks to an acceptable level:

- o DOI treated the funds which Congress mandated for Report No. 1 as a pass through and did not comment on the results, e.g., findings or conclusions. The Report was delivered by Dr. Kohn and others on his task force to the House and Senate Committees on Interior Appropriations in November 1984.
- o No entity of the Federal Government took a formal position on this Report, although the possibility of doing so was discussed at an interagency meeting convened in June 1984 by OMSN when the Report was in draft form. DP (you may recall from my weekly report items) was requested to provide an informal opinion to OMSN through us. It never did, in spite of repeated requests.
- o Now, we have learned that DOI has been provided with more money, \$1.9 million, to refine the points discussed in Report No. 1 which had cost \$400,000 to produce.
- o This time, DOI wants to stay more on top of the steps necessary for Dr. Kohn to move ahead towards completion of Report No. 2 (due March 1985 to the Congress).
- o The same person (Dr. Kohn) will be the technical lead. He provided a proposal to Congressman Yates that resulted in the \$1.9 million being placed into the continuing resolution for DOI as a followup to Report No. 1.
- o DOI does not have a copy of this proposal but is attempting to obtain a copy.
- o In order to determine the types of technical assistance Dr. Kohn will require from DOI/DOE, a meeting has been agreed to in Las Vegas sometime early in '85. Roger Ray and Larry Morgan (Chief of Congressional Affairs, DOI) are the only people that I know at this point will definitely

meet with Dr. Kohn. It is likely in my opinion that Mr. Weisgall, lawyer for the Bikini people and a strong influence in all this, will attend also.

- o The meeting is expected to result in a "set of technical assistance needs"--some will be of which will be requested from DOE.
- o As a followup to the Las Vegas meeting--a Memo of Understanding is expected to be developed between DOI and DOE in support of the needs outlined by Dr. Kohn.
- o Larry Morgan thinks that the USG will ultimately receive orders from Congress to clean up Bikini. That will cost between \$40-90 million if it proves to be technically feasible. He thinks Mr. Yates is convinced and so is Mr. Seiberling. I fear that since the people who might offer evidence that the idea is not technically feasible have never been heard, the USG will be told to perform this cleanup regardless. If hearings are held, the other side of this question may be heard--but hearings are not being discussed at this point at all. Larry also told me that to attempt to mount a campaign now against the idea of a cleanup could have negative effects on other phases of DOI's funding having nothing to do with this question.
- o I have talked to OMSN about this matter, and they may wish to hold a working group meeting to discuss it. I hope they do.

Attachments

ISSUES/AGENDA
RESETTLEMENT OF BIKINI PEOPLE TO ENEU

November 27, 1984
Room 5A-104, Forrestal

1. Clark (DOI) letter to Hodel, July 1984

Questions:

- A. "...we would like to again consider the acceptability of Eneu for resettlement at this time and, if we cannot now support such resettlement, to provide to the Marshall Islands Government the requisite information for its future management of this issue."
- B. "We would appreciate your advice in these matters and ask you to update the Department of Energy's evaluation and inform us what conditions, if any, should be imposed if the people of Bikini are relocated to Eneu Island in their home atoll."

2. Application of ICRP Publication 39 and the proposed new principles for limiting exposure from natural sources of radiation. What are the broader implications of applying new standards to Eneu? What about Rongelap? Other atolls?

3. DOE's judgment on the effectiveness of administrative measures to control diet.

- Our experience is neither extensive or uniform and, therefore, incapable of yielding single conclusion or predicting a single result.
- Are the Marshallese incapable of making their own decision-- providing they have all necessary information?

4. The Enewetak "discount"

- Our knowledge and understanding should have improved since the "discount" was applied for Enewetak.

5. Acceptance of Risk

Are we attempting to weigh the Bikinian's benefit against our risk? In attempting to protect the U.S. from criticism, embarrassment, etc., we are looking for absolute assurances against avoidable exposure. The Bikini people are paying for this through our denial of their right to manage their own destiny.

6. Until any new standards are adapted which are more restrictive, is it not possible to answer the DOI questions with as much information as we have? Making whatever reference is necessary to new standards--in the proper context.

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after 207

DRAFT
Ray/jc
1/10/85

Dear Mr. Secretary:

This is in response to your request that the Department of Energy update its 1979 evaluation of the habitability of Eneu Island in Bikini Atoll and inform you of what conditions, if any, should be imposed upon a population which may resettle on that island.

At the time of our 1979 evaluation of the Eneu question, the United States Federal guidelines established limits of 500 mrem/year for an individual and a population limit of 5000 mrem over a 30-year period. These remain the U.S. guidelines, but action is underway to modify them.

Recently, the International Commission on Radiological Protection (ICRP) has revised its recommendations in two pertinent respects. It suggests that: (1) for repeated exposures over prolonged periods it would be prudent to restrict exposures to 100 mrem for each year of lifelong exposure from controllable artificial sources; (2) actions taken or planned to reduce the effective dose equivalent from naturally occurring sources should weigh the social costs of the remedial measure against the degree of risk.

EPA
NCRP

The ICRP suggests:

"An action level is not determined by the choice of any limits intended for future situations, nor by the primary dose limits recommended by the Commission for members of the public (or for workers) in the control of artificial sources of radiation. In deciding whether to take action, the hazard or social costs involved in any remedial measure must be justified by the reduction of risk that will result. Because of the great variability of the circumstances in which remedial action might be considered, it is not possible for the Commission to recommend action levels that would be appropriate for all occasions."

The U.S. National Council on Radiation Protection and Measurements (NCRP) in its Report 77 on "Exposures from the Uranium Series with Emphasis on Radon and its Daughters" recommended a similar approach.

We believe that the social cost of continuing to deny the Bikini people access to their homeland must be considered, but we claim no special knowledge or appreciation of that aspect of this issue. What we can do and have done is to provide the people of Bikini with our best evaluation of the radiological conditions and their potential consequences to man.

The most recent information regarding doses and health risks which has been provided the bikini people is contained in the bilingual book entitled "The Meaning of Radiation at Bikini Atoll." A copy is enclosed with this letter. On page 21, full time residence on Eneu is discussed, for two alternative cases: (a) with imported food available, and (b) with only Eneu-grown food available. The expected doses and their predicted consequences are tabulated. With imported foods available, the average dose to individuals in a population resettled on Eneu would be expected to be approximately 115 mrem in the highest year after resettlement.

(The dose to a maximally exposed individual is estimated in the enclosure to be 390 mrem or three times the average. Our current estimate of 115 mrem reflects an adjustment of the resettlement date from 1981 to 1986.) The nature and magnitude of health risks are also discussed on page 21.

If Eneu is resettled, there are a number of actions which we believe ^{need} ~~should~~ be taken to minimize the radiation doses received by the inhabitants:

1. Imported foods ^{must} ~~should~~ constitute a substantial fraction of the Eneu diet. Our experience in recent years and our observations at Rongelap, Utirik, and more recently at Enewetak, indicate a distinct preference for a mix including imported foods over an exclusively locally produced diet. This apparent preference ^{must} ~~may~~ be reinforced by authoritative dietary recommendations and by assuring that regular field trip service or some other dependable source of imported foods is maintained.
2. Residence on, and the consumption of terrestrial foods from, other than Eneu Island should be avoided. ~~Substituted~~

While some Eneu residents, notwithstanding these recommendations, may visit Bikini and partake of some local foods, the population must be informed of the risks associated with such practices. Although some evidence, from Enewetak, indicates that diet restrictions are not always effective, we have convincing long-term evidence from Rongelap that people are following recommendations restricting the use of foods from the northern islands. Brief visits to Bikini Island, especially if Bikini foods are not eaten, will not appreciably change the dose prediction, but if visits are extended and include consumption of local foods, the doses will rise rapidly. For example, if 50 percent of the diet were to come from Bikini Island the average annual dose would be in excess of 500 mrem.

3. At least for several years following resettlement a program should be maintained to monitor the actual radiological situation.

~~We believe that only the Bikini people and their leadership can judge the reasonableness of these recommendations. With their effective~~ *If properly*
implementation^{ed}, reinforced by the monitoring we suggest, a population resettled on Eneu will be committed to average doses which are below those experienced from natural sources in ~~many~~ ^{some} other parts of the world including parts of the United States mainland.

Should you decide to authorize or facilitate an Eneu resettlement, we will be pleased to assist in your detailed planning and implementation.

Sincerely,

Secretary of Energy

*Endorsed by
W. Sinclair, NCRP*

DRAFT

R. Ray

12/20/84

Dear Mr. Secretary:

This is in response to your request that the Department of Energy update its 1979 evaluation of the habitability of Eneu Island in Bikini Atoll and inform you of what conditions, if any, should be imposed upon a population which may resettle on that island.

At the time of our 1979 evaluation of the Eneu question, the United States federal guidelines established limits of 500 mrem/year for an individual and a population limit of 5,000 mrem over a 30-year period. These remain the U.S. guidelines, but action is underway to modify them. ^P Recently, the International Commission on Radiological Protection (ICRP) has revised its recommendations in two pertinent respects. It suggests that: (1) for repeated exposures over prolonged periods it would be prudent to restrict exposures to 100 mrem for each year of lifelong exposure from controllable artificial sources; (2) action ^{nature or planned} [levels] to reduce the effective dose equivalent from naturally occurring sources should weigh the social costs of the remedial measure against the degree of risk. [In discussing the specific case of radon in houses, for example, the ICRP suggests an action level of 1,000 mrem/yr for future exposures and as high as 2,000 mrem/yr for existing situations.]

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FAX DOCUMENT
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The ICRP suggests:

"An action level is not determined by choice of any limits intended for future situations, nor by the primary dose limits recommended by the Commission for members of the public (or for workers) in the control of artificial sources of radiation. In deciding whether to take action, the hazard of social costs involved in any remedial measure must be justified by the reduction of risk that will result. [Because of the great variability of the circumstances in which remedial action might be considered, it is not possible for the Commission to recommend action levels that would be appropriate for all occasions.]"

The U.S. National Council on Radiation Protection & Measurements
^ (NCRP, in its Report 77 on "Exposures from the Uranium Series with Emphasis on Radon and its Daughters" recommended a similar approach and ^{the Department is moving} similar action levels. ^{to establish requirements consistent w/ the NCRP recommendations})

we believe that the social implications of denying the Bikini people access to their homeland
~~Since the fallout contamination of Eneu Island is an existing situation, we must be considered in the total risk analysis and that such consideration is fully suggest that the development of a remedial action level patterned after the in accord w/ ICRP & NCRP philosophy. In this situation this approach should be considered ICRP and NCRP approach to natural background is more appropriate than the better than the imposition of numerical limits application of a non-occupational dose limit.~~

The most recent information regarding doses and health risks which has been provided the Bikini people is contained in the bilingual book entitled "The Meaning of Radiation at Bikini Atoll." A copy is enclosed with this letter. On page 21, full time residence on Eneu is discussed, for two alternative cases: (a) with imported food available, and (b) with only Eneu-grown food

available. The expected doses and their predicted consequences are tabulated.

[The average one year dose expected for an individual is 130 mrem in case a; 260 mrem in case b. (Doses to a maximally exposed individual are assumed to be three times as large, noted in the enclosure as 390 mrem in case a; 780 mrem in case b.) The average dose to this population over 30 years is estimated to be about 3 rem. These estimates assumed that residence on Eneu would begin in January 1981. For a resettlement date of January 1986, the doses would be reduced by about 11 percent.] Thus, with imported foods available, the average dose to individuals in a population resettled on Eneu would be expected to be approximately 115 mrem in the highest year after

(Estimated doses have been reduced by about 11% from those contained in the publication to reflect a shift in the resettlement date from JAN 81 to JAN 86)

~~resettlement. The nature and magnitude of health risks are also discussed on page 21. Whether reduction of these health risks would outweigh the benefits of resettlement is in my judgment a matter in which the Bikini people should have a strong voice.~~

If Eneu is resettled, there are a number of actions which we believe ^{must} ~~should~~ be taken to minimize the radiation doses received by the inhabitants:

1. ^{constitute a substantial fraction of} [Maximum use of] imported foods should [be encouraged.] ^{in ENEU diet. In fact} ~~Our observations and our experience in recent years lead us to conclude that~~ ^{our predictions indicate that if no local or terrestrial food is consumed average exposure would be approximately 14 mrem - vs - are current standard of 100.} ~~the use of imported foods as a substantial fraction of the Marshallese diet is likely to be easily achieved. We have observed, at Rongelap, and Utirik, and more recently at Enewetak, a distinct preference for a mix including imported foods over an exclusively locally produced diet, especially if the imported foods are well chosen, and we would expect this apparent preference ^{should also} to be reinforced by authoritative dietary recommendations.~~

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2. Residence on, and the consumption of terrestrial foods from, other than Eneu Island should be avoided.

While some Eneu residents, notwithstanding these recommendations, may visit Bikini and partake of some local foods, [we believe that this is a matter for the people themselves, and their leaders, to evaluate and control. Our obligation, we believe, is to inform the subject ^{the} population ^{must be informed} of the risks associated with such practices. Although some evidence, from Enewetak, indicates that diet restrictions are not always effective, we have convincing long-term evidence from Rongelap that people are following recommendations restricting the use of foods from the northern islands. Brief visits to Bikini Island, especially if Bikini foods are not eaten, will not appreciably change the dose prediction, but if visits are extended and include consumption of local foods, the doses will rise rapidly. For example, if 50 percent of the diet were to come from Bikini Island the average annual dose would be in excess of 500 mrem.

3. Regular field trip service or other dependable sources of imported foods to Bikini Atoll ^{must} ~~should~~ be maintained.

4. At least for several years following resettlement a program should be maintained to monitor the actual radiological situation.

To summarize, individuals resettled on Eneu at this time would inevitably be subjected to radiation exposures which are higher than those which they now encounter at Kili and Ejit, but with reasonable care their dose commitment would be within the range of that which goes without notice in many other parts of the world.

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Should you decide to authorize or facilitate an Eneu resettlement, we will be pleased to assist with detailed planning and implementation.

I apologize for the long delay in our response. Considerable time was required to assure that we gave appropriate consideration to the revised guidance recently provided by the ICRP and the NCRP.

Sincerely,

Donald Paul Hodel

Enclosure

DXR05A

Page 5--Dated: 12/20/84

COMMENTS UPON THE 12/10/84 McCRAW DRAFT

- 1- The first sentence omits an important part of Judge Clark's request, viz: that the DOE update its 1979 evaluation and advise on conditions to be imposed. The update evaluation should be broader than simply an evaluation of the conditions we recommend.
- 2- In the first sentence of the second paragraph the last three words "of short duration" were not used in 1979. 500 mrem was the dose limitation which should not be exceeded by an individual in any year as a means of assuring that the population average would remain below the population limit.
- 3- In the third paragraph the 115 mrem/yr I assume to have been borrowed from my draft. It is not based upon "imported food being the primary diet" but upon a mix of local and imported foods which we have observed to be realistic, as stated in my draft.
- 4- The footnote does not in my judgement "put these values in perspective" as stated. What would put them in perspective would be an acknowledgement of our expectation that this same population of 1,000 people will likely experience 150 fatal cancers from other than radiation causes.
- 5- On the top of page 2, the first sentence ignores the excellent correlation between observation (Lessard) and prediction (Robison) noted recently by Dr. Bair. And, incidentally, what else in life can be known with certainty in advance?
- 6- The imposed conditions numbered 1, 2, 3 are couched in inappropriate language. We cannot Eliminate, Prohibit, etc., where we have no jurisdiction. We have chosen words such as avoid, discourage, encourage, limit, etc., relying upon comprehension on the part of the population rather than ^{upon} fear and blind following.
- 7- Finally, McCraw's 100 mrem/yr in imposed condition #1 is a number out of thin air. The DOE officially published and accepted number for a starting date in 1981 is 14 mrem in the maximum year. We have provided the derivation of this number in UCRL-53225, Page 42. PE has provided no citation for its 100 mrem and has provided no basis, scientific or otherwise for the 14 mrem/year number.

^{1/2}challenging

FAX DOCUMENT # 3

TOTAL P.14

14

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3 DOCUMENTS TRANSMITTED HERewith:

- NO. 1 DRAFT LETTER TO THE SECRETARY OF INTERIOR (I BELIEVE THIS MAY BE CONSIDERED A FINAL DRAFT).
- NO. 2 A DRAFT OF TEXT FOR AN ACTION MEMORANDUM TO THE SECRETARY OF ENERGY (THIS IS ADMITTEDLY A BIT LONG AS IT NOW STANDS BUT MAY BE USEFUL AS A BRIEFING PAPER FOR THE STEPS LEADING TO SECRETARIAL ACTION).
- NO. 3 COMMENTS UPON THE 12/10/84 McCRAW DRAFT (THESE ARE NOT IN A FORM TO GO BEYOND YOUR OFFICE BUT MAY BE HELPFUL IN RESPONDING TO PE COMMENTS).

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