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Office of the Assistant Secretary  
Territorial & International Affairs  
Interior Department  
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Discussion Paper  
Health Plan for the Marshall Islands  
Meeting of August 4, 1980

The purpose of the meeting is to discuss the content of the health plan, required by law to be developed by the Secretary of the Interior and submitted to the Congress no later than January 1, 1981.

1. The statute. The pertinent statute is Public Law 96-205, approved March 12, 1980, which provides in section 102:

"(a) In addition to any other payments or benefits provided by law to compensate inhabitants of the atolls of Bikini, Enewetak, Rongelap, and Utirik, in the Marshall Islands for radiation exposure or other losses sustained by them as a result of the United States nuclear weapons testing program at or near the atolls during the period 1946 to 1958, the Secretary of the Interior (herein after in this section referred to as the 'Secretary') shall provide for the people of the atolls of Bikini, Enewetak, Rongelap, and Utirik and for the people of such other atolls as may be found to be or to have been exposed to radiation from the nuclear weapons testing program, a program of medical care and treatment and environmental research and monitoring for any injury, illness, or condition which may be the result directly or indirectly of such nuclear weapons testing program. The program shall be implemented according to a plan developed by the Secretary in consultation with the Secretaries of Defense, Energy, and Health, Education, and Welfare and with the direct involvement of representatives from the people of each of the affected atolls and from the government of the Marshall Islands. The plan shall set forth, as appropriate to the situation, condition, and needs of the individual atoll peoples:

- "(1) an integrated, comprehensive health care program including primary, secondary, and tertiary care with special emphasis upon the biological effects of ionizing radiation;
- "(2) a schedule for the periodic comprehensive survey and analysis of the radiological status of the atolls to and at appropriate intervals, but not less frequently than once every five years, the development of an updated radiation dose assessment, together with an estimate of the risks associated with the predicted human exposure, for each such atoll; and

"(3) an education and information program to enable the people of such atolls to more fully understand nuclear radiation and its effects;

"(b) (1) The Secretary shall submit the plan to the Congress no later than January 1, 1981, together with his recommendations, if any, for further legislation. The plan shall set forth the specific agencies responsible for implementing the various elements of the plan. With respect to general health care the Secretary shall consider, and shall include in his recommendations, the feasibility of using the Public Health Service. After consultation with the Chairman of the National Academy of Sciences, the Secretary of Energy, the Secretary of Defense, and the Secretary of Health, Education, and Welfare, the Secretary shall establish a scientific advisory committee to review and evaluate the implementation of the plan and to make such recommendations for its improvement as such committee deems advisable.

"(2) At the request of the Secretary, any Federal agency shall provide such information, personnel, facilities, logistical support, or other assistance as the Secretary deems necessary to carry out the functions of this program; the costs of all such assistance shall be reimbursed to the provider thereof out of the sums appropriated pursuant to this section.

"(3) All costs associated with the development and implementation of the plan shall be assumed by the Secretary of Energy and effective October 1, 1980, there are authorized to be appropriated to the Secretary of Energy such sums as may be necessary to achieve the purpose of this section.

"(c) The Secretary shall report to the appropriate committees of the Congress, and to the people of the affected atolls annually, or more frequently if necessary, on the implementation of the plan. Each such report shall include a description of the health status of the individuals examined and treated under the plan, an evaluation by the scientific advisory committee, and any recommendations for improvement of the plan. The first such report shall be submitted not later than January 1, 1982."

2. What the statute requires. Section 102, quoted above, is not free of ambiguity. It has been argued by some that the plan required of the Secretary of the Interior, and the program resulting from it, should be restricted solely to the four named atolls, and then only to injuries, illnesses, or conditions resulting from the nuclear testing program. It has been argued by others that the plan, and the resulting program, should apply to all atolls and islands of the Marshall Islands, and should provide comprehensive medical care to all people of the Marshall Islands.

The Interior Department has not reached any definitive position with respect to the scope of the plan required, or of the program to arise from it. It would welcome the early expressions of views from any source as to the requirements of the statute. Preliminarily, the Interior Department suggests that the most reasonable reading of the statute appears to be that the Secretary's plan should provide for comprehensive health care for the inhabitants of the four listed atolls -- Bikini, Enewetak, Rongelap, and Utirik; and that the inhabitants of additional atolls should also be afforded comprehensive health care if they have been affected by radiation from the nuclear weapons testing program. In deciding whether the inhabitants of additional atolls have been so affected, the Secretary would consider information obtained from on-site health evaluations of the people of those atolls, and other relevant evidence presented to him. X

3. General procedure. The Interior Department proposes to enter into a negotiated contract with a suitable institution to obtain advice as to the health care program required by subsection (a)(1), quoted above. In order to meet the statutory deadline of January 1, 1981, for submission of the plan to the Congress, it will be necessary that the contractor's advice be received by the Interior Department by mid-November. Given the magnitude of the task to be performed by the contractor, clearly such a contract must be entered into as soon as possible.

The Interior Department has asked the Department of Energy to provide advice to Interior by mid-November 1980 as to the details of the schedule required by subsection (a)(2), pertaining to environmental research and monitoring, radiation dose assessments, and risk estimates, and the education and information program required by subsection (a)(3). The Department of Energy has agreed to provide this detailed advice by that date.

4. Background information to be supplied to proposed contractors. The Department of the Interior proposes to supply the following information to prospective contractors:

(a) Rongelap and Utirik

The medical monitoring and follow-up care program of the exposed people of Rongelap and Utirik atolls commenced after the Bravo Shot Fallout of March 1, 1954. This program has been the responsibility of the Atomic Energy Commission, the Energy Research and Development Administration, and now the Department of Energy. The medical monitoring and follow-up medical care program of the exposed residents of these two atolls, and for members of selected "comparison" groups, has from the onset of the program been contracted to the Brookhaven National Laboratory, Associated Universities, Upton, New York.

Brookhaven now has 26 years of medical research findings and experience in the field with the people of Rongelap and Utirik. It is regarded, therefore, as essential that any health care organization that develops a plan for future health care of the people of the "affected atolls" work closely with the Medical Department of the Brookhaven National Laboratory on past and current medical activities, as well as recommendations for the future. It is estimated that costs to the Medical Department of Brookhaven National Laboratory to participate in this phase of the planning work will be in the range of \$40,000 to \$50,000. The basic contract must include reimbursement funds for the Brookhaven National Laboratory for participation in the overall health plan contract.

The Brookhaven medical program for the people of Rongelap and Utirik basically has been a medical research program, but this mandate has, of necessity, over the years been expanded to include care of non-radiation related diseases. This has been occasioned by the lack in the past of adequate primary medical care in the Marshall Islands.

In 1954, 84 Rongelapese were exposed to fallout. Of these 84 originally exposed individuals, 50 are still living. There are also some 500 to 600 unexposed Rongelapese, made up of descendants of the exposed group plus the Marshallese who have Rongelapese blood or marriage affiliation. About 500 of the unexposed Rongelapese have been on occasion<sup>v</sup> as a "comparison" group to the exposed population. *med*

The original Utirik exposed group consisted of 158 individuals, of which 120 still are alive. Another 500 unexposed Utirikese, made up of descendants of the exposed group and Marshallese with Utirik blood or marriage affiliation, also fall into the Utirik category. Some 375 of this larger group have been studied as a "comparison" group to the exposed Utirikese.

(b) Bikini

Bikini Atoll was the site of 23 U.S. atmospheric tests. The 170 Bikinians resident there in 1946 were removed from the atoll in March 1946 prior to the start of the testing program. After several years of very unsatisfactory resettlement efforts in other parts of the Northern Marshalls, the Bikinians were resettled in March 1948 on the isolated island of Kili in the southern Marshalls. Thus, from March 1948 onward the main body of the people of Bikini have lived well outside the zone of the nuclear tests.

No radiological monitoring or medical examinations were conducted on any Bikinians until the early 1970's, after a small group returned to Bikini Island. The group, at first consisting of workers, then expanded to family groups, periodically was radiologically monitored. In April 1978, some 99 of the 145 residents on Bikini island had whole body count examinations as well as medical examinations. These 145 residents were evacuated from Bikini Island in late August 1978. Some of this group have been given follow-up monitoring examinations since the August 1978 removal.

Today there are over 900 Bikinians. Some 500 or so reside on Kili Island, another 140 live on Ejit Island near Majuro, some 100 or so live in Majuro, and another 100 or so live on Ebeye. Small numbers are scattered in other parts of the Marshalls.

In 1969, after certain parts of Bikini Atoll were considered safe for resettlement, small numbers of Bikinians began to return to Bikini Island. The first returnees, as noted above, were workers in the cleanup and rehabilitation program started in 1970. Gradually, family members joined the workers and by the mid-1970's some 60 or so Bikinians were in residence on Bikini Island. By 1978, the group had grown to 145 individuals. It was this group that was evacuated from Bikini Island in late August 1978 when the Interior Department concluded that "body burden levels" exceeded acceptable standards. Cesium 137 ingestion from locally grown foods primarily appeared to be the cause for the rising body burden levels. As a result, it now has been determined that Bikini Island must be off limits for another 60 years.

Additionally, some 50-60 Marshallese of non-Bikiniian descent lived and worked on Bikini Island for varying periods between 1970-76. These individuals also require special screening.

There has also been close association, including inter-marriage, between the people of Rongelap and people of Bikini. At least one exposed Rongelapese and his family were resident on Bikini Island in 1978 when the last evacuation occurred.

The latest resettlement proposal of the people of Bikini involves living on the island of Eneu in the Bikini Atoll, probably on a rotation basis, and the maintenance of a community on Kili Island. Should this proposal be feasible, health care must be planned for (1) the Kili Island community, (2) a possible community on Eneu Island, Bikini Atoll, (3) a small Bikini community in Majuro, and (4) several hundred other Bikinians residing at Ebeye and other parts of the Marshalls.

(c) Enewetak

In 1947, the 142 residents of Enewetak Atoll also were evacuated from their home atoll. They were settled on Ujelang Atoll, which lies 124 miles southeast of Enewetak, in the Northern Marshalls. From 1948 to 1958, there were 43 test detonations performed at Enewetak Atoll.

Ujelang Atoll is within the region of low level fallout. At least once during the nuclear testing period, it is reported that the U.S. Navy temporarily evacuated the people of Ujelang by taking the entire community to sea during a test operation.

Today approximately 500 people make up the Ujelang-Enewetak community, with another 40 or so Ujelangese living on Ebeye or Majuro.

With the start of the cleanup and rehabilitation program of Enewetak Atoll in 1976, a small revolving community of some 60 Ujelangese was permitted to live on Japtan Island in the southern part of Enewetak Atoll. Most of the members of the Ujelang community have thus lived for at least a six month period on Japtan Island during the timespan of 1976-1980. In April 1980, the Japtan community was expanded to 140 individuals. As of July 1, 1980, 265 Enewetakese had returned to the three new communities. Most of the remaining population on Ujelang is expected to return to Enewetak and Medren within the coming year. Ujelang Atoll, however, will continue to be used as a source of fresh food supply and will be in continual use for the next 8-10 years by the Enewetak people, either by having an outpost community there or a revolving community. Health care for the people of Enewetak, accordingly, must be provided at Ujelang if a community remains there as well as Enewetak.

The Department of Energy in the spring of 1980 carried out a "whole body" count on the entire Ujelang group prior to the planned return to the southern parts of Enewetak Atoll. No basic medical survey of the Enewetak group has as yet been carried out.

(d) Other Atolls of the Northern Marshalls

The Government of the Marshall Islands has expressed considerable concern that other atolls in the Northern Marshalls known to be in the areas of low level radiation fallout, should in reality be listed in the category of "affected atolls".

In early 1979, the Government of the Marshall Islands conducted a survey on the people of Likiep Atoll, and it contends that its survey demonstrates that there is more than a normal incidence of thyroid disorders, throat problems, and other medical abnormalities among the people of that atoll.

The Government of the Marshalls has requested that the health of the people of Likiep and associated atolls be studied. The Department of Energy has agreed to provide a biochemical screening profile of the people of Likiep Atoll, and of the people of one other atoll in the Marshalls to be selected as a comparison population. Medical staff would be included in the survey team. Negotiations between the Department of the Interior, the Department of Energy, and the Government of the Marshall Islands currently (summer 1980) are underway to accomplish the carrying out of the screening profile of the people of Likiep Atoll.

(e) Current practice

Annual costs for the medical monitoring, follow up care, and environmental monitoring program of the Department of Energy for the people of Rongelap and Utirik currently are in the range of \$3-4 million. In contrast, in FY 80, the entire health budget of the Marshall Islands Government was \$2.7 million. This amount had to provide curative and preventive medical care and programs for a population of over 30,000 people, many scattered on outer islands. This amount supported the major hospital at Majuro, which serves as the only major in-patient facility in the Marshalls. The current hospital facility in Majuro has 90 beds and is in very poor condition, but funds for a new hospital have been appropriated. In addition to the Majuro hospital and an Ebeye sub-hospital, the Marshalls Health Department supports some 56 out-island dispensaries. Some of these are under-manned and ill-equipped.

*Bikini &  
Enewetak*

Administrative and professional staffing of the health services of the Marshalls has not met minimum acceptable health standards in the past. In an attempt to improve health care, the Marshall Islands Government recently concluded an agreement with a "medical care adjunct" of the Seventh-Day Adventist Mission in Guam to take over the control and management of health services from the Ministry of Health Services. This new health care service agency should be brought into any planning exercise by the contractor at an early stage.

(f) Special Problems Related to Diversity of Residence

Monitoring and special health care for the people of Rongelap, Utirik, Bikini, and Enewetak must be provided not only in their home atolls but in other parts of the Marshall Islands where considerable numbers of these individuals now reside either on a temporary or permanent basis. For example, there often are as many Rongelapese and Utirikese living on Ebeye and/or Majuro as are in residence on Rongelap and Utirik Atolls. The past and current medical program under the auspices of the Department of Energy has had to be tailored to the places where the residents are living at the time of the quarterly or annual surveys. This pattern can be expected to continue in the future and must be an integral part of any proposed health care program.

Large numbers of Bikinians also are scattered throughout the Marshalls and these individuals also will be entitled to medical care. Although the people of Enewetak, having lived on the isolated atoll of Ujelang for the past 34 years, are the most cohesive group, under the current return program to the atoll of Enewetak, four communities will be in existence. There will be new communities on (1) Enewetak Island, on (2) Medren Island, and on (3) Japtan Island in the southern part of Enewetak Atoll. Distance between these islands is too great to permit one centralized local health facility. For the foreseeable future also, there very likely will be an Enewetak community of varying size on (4) Ujelang Atoll, which is 124 miles southeast of Enewetak, and this community also must be provided with medical care.

## 5. Definition of Comprehensive Health Care

The Interior Department proposes to provide to the contractor the following definition of comprehensive health care:

### Primary Care

Primary care is the care received when the patient first seeks assistance from the medical care system. The care at that point would include the care and treatment of the simpler and/or more common illnesses, or determine the need for consultation with or referral to medical specialists. In addition to immediate care, primary care may also include ongoing responsibility for the patient in both health maintenance and therapy.

### Secondary Care

Secondary care is the care provided by medical specialists who generally do not have first contact with the patient, for example, neurologists, internists, and dermatologists. This care generally cannot be provided at the primary care level and is obtained upon consultation or referral through the primary health care system.

### Tertiary Care

Tertiary care consists of services provided by highly specialized medical personnel, for example, ~~neuro~~urologists and neurosurgeons. Such services generally require highly sophisticated technological and support facilities, such as intensive care units and specialized surgical facilities. These specialized services and facilities generally are not available at the secondary care level.

## 6. Responsibilities of the Contractor

The Department of the Interior proposes to require the contractor to offer advice, by mid-November, on at least the following issues:

(a) A plan to provide for comprehensive health care for the inhabitants of Bikini, Enewetak, Rongelap, and Utirik, and for the inhabitants of additional atolls if they have been affected by radiation from the nuclear weapons testing program. As noted in point 2 above, in deciding whether the inhabitants of additional atolls have been so affected, the Secretary would consider information obtained from on-site health evaluations of the people of those atolls, and other relevant information presented to him.

It would be anticipated that the health evaluations would focus initially on atolls of the Northern Marshall Islands, beyond the four specified. The sequence in which atolls would be investigated would be developed following consultation with the representatives of the people of each of the affected atolls and the Government of the Marshall Islands.

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people?



Comprehensive health care would encompass primary, secondary, and tertiary care, as defined in point 5 above. Such comprehensive care would include the necessary infrastructure, including communication and transportation capability. The health care program would give special emphasis to the detection and treatment of any injury, illness, or condition that may be the result, directly or indirectly, of the nuclear weapons testing program.

The contractor should undertake to insure that, to the extent possible, the services and activities to be provided under the proposed plan be integrated to achieve maximum efficiency. In particular, the health care functions of the Government of the Marshall Islands should be coordinated with the health care program established pursuant to the statute.

(b) Although the Interior Department's preliminary view is that a plan for comprehensive health care for all of the Marshalls exceeds the boundaries of the statute, it proposes to ask the contractor also to develop an integrated, comprehensive health care program for all atolls and islands of the Marshalls. As the statute provides, the extent of care to be provided would be appropriate to the "situation, condition, and needs of the individual atoll peoples".

(c) Although the Interior Department's preliminary view is that a program for health care that is more extensive than that outlined in (a) above, and less extensive than that outlined in (b), exceeds the boundaries of the statute, it proposes to ask the contractor to develop a health care program for the Marshalls along the following lines:

The Interior Department would initiate promptly implementation of a comprehensive health care plan, including health evaluation, of all of the peoples of Rongelap, Utirik, Bikini, and Enewetak, and would provide them primary, secondary, and tertiary care. Access to secondary and tertiary medical care would be afforded by appropriate communication and transportation capabilities (that is, voice and visual communication with the medical center at Majuro, and emergency evacuation capabilities), as part of the comprehensive health care program.

Concurrently, the Secretary would begin to establish a basic primary health care capability on other inhabited atolls. This basic primary health care would generally consist of a trained aide, a dispensary, and communication and transportation capabilities. Subsequent to the health care evaluation of the four named atolls, the Secretary would carry out a health evaluation of the peoples of other inhabited atolls in the Marshall Islands. The extent to which additional health care services may be included would be determined by the information obtained from the health evaluation of the peoples of these atolls. The Secretary would carry out the health evaluation at other atolls in a sequential manner, to be determined following consultation with representatives of the people of the atolls and the government of the Marshall Islands.

(d) Although the Interior Department's preliminary view is that a program for health care that is less extensive than that outlined in (a) above may not meet the requirements of the statute, it proposes to ask the contractor to develop a plan to provide health care for the people of Bikini, Enewetak, Rongelap, Utirik, Likiep, Mejit, Ailuk, Wotho, Wotje, Ujae, and Lae atolls, with respect to any injury, illness, or condition that may be the result, directly or indirectly, of the nuclear weapons testing program.

(e) To the extent relevant to each of the foregoing plans, the Contractor should provide information with respect to the following:

(1) Rongelap and Utirik peoples. What will be required by way of staff, facilities, transportation, communications, equipment, etc., to provide for the continuance of special medical screening and care of the exposed persons and expansion of this special program to provide comprehensive health care for all inhabitants of Rongelap and Utirik. To the extent appropriate, alternative methods of providing this specialized care, plus comprehensive health care, should be presented, along with estimated annual costs. The plan must provide for On-Atoll and Off-Atoll residents.

(2) Enewetak. What will be required by way of staff, facilities, transportation, communications, equipment, etc., to provide for radiological screening of the people of Enewetak in their new communities on Enewetak Atoll and to provide also a comprehensive health care program for them. To the extent appropriate, alternative methods of providing this specialized radiological screening and comprehensive health care should be presented, along with estimated annual costs.

(3) Bikini. What will be required by way of staff, facilities, transportation, communications, equipment, etc., to provide for radiological screening of the people of Bikini if they return to part of the Bikini Atoll? What will be required to provide a comprehensive health care program for the Bikinians in the various locations in which they may reside in the foreseeable future. To the extent appropriate, alternative methods of providing this specialized radiological screening and comprehensive health care should be presented, along with estimated annual costs.

(4) Responsibilities of and services available from the Government of the Marshall Islands. The constitution of the Marshall Islands "recognizes the right of the people to health care, education, and legal services and the obligation to take every step reasonable and necessary to provide these services". (Section 15, Art. 1. Constitution of the Marshall Islands.) The Government of the Marshall Islands has a Ministry of Health and an on-going program of health care.

Any program of health care for the people affected by radiation should be integrated, to the maximum extent possible, with a future health care program of the Government of the Marshall Islands. The contractor, accordingly, will be required to examine current facilities and proposed hospital and dispensary facilities and staff to determine how such local staff and facilities can be utilized to provide comprehensive health care for the peoples of the affected atolls.

(5) Primary care. Because many of the peoples concerned will be living in an "out-island" context, the contractor should set forth recommendations on how "primary care" can best be provided to the people in such a context. This should include recommendations on the type of staff, facilities, training of practitioners, etc. It will be necessary to determine whether present out-island facilities and programs maintained by the Government of the Marshalls Islands can be upgraded and subsidized to provide this essential primary care for the peoples concerned, or whether a separate primary health care system, supported and operated by the U.S, will be required?

(6) Secondary and Tertiary care. The contractor will be required to set forth recommendations on where and in what manner secondary and tertiary care can be most effectively provided, both from treatment and cost standpoints.

(7) Cost of Provision of Comprehensive Health Care for all of the Marshalls. The peoples of the "designated affected atolls" will require both "on-atoll" and "off-atoll" comprehensive care. Many of the individuals requiring the comprehensive care will be in the present major populated centers. The numbers away from the home atolls may well run into several thousand. The contractor will be requested to draw up cost estimates of a comprehensive health care program for all of the Marshalls that would give the type of comprehensive care required for the peoples of the affected atolls.

#### 7. Further comments

Because some representatives who are required by the statute to be directly involved in the preparation of the plan may not be present at the meeting of August 4, and because some who are present may wish to supplement comments made at the meeting, the Interior Department will welcome the receipt of views by no later than the close of business on Monday, August 18. Views may be expressed either in writing or, if the representative prefers, orally to pertinent officers or employees of the Interior Department. Whether in writing or otherwise, however, such views must be received no later than August 18, in order to permit the contract procedure to commence immediately thereafter.

As this Discussion Paper attempts to make clear, the Interior Department's position as to the directives to a contractor is not now fixed. This paper has been prepared solely as a guide to further discussions and exchanges of views. The Interior Department will welcome, and will give careful consideration, to any views that may be presented to it, particularly from the representatives of the people of the affected atolls and the Government of the Marshall Islands.

8. Contractor.

The Department of the Interior will welcome suggestions, received by us no later than August 6, as to firms, institutions, or individuals who may be qualified to perform the proposed contract, in the time available.