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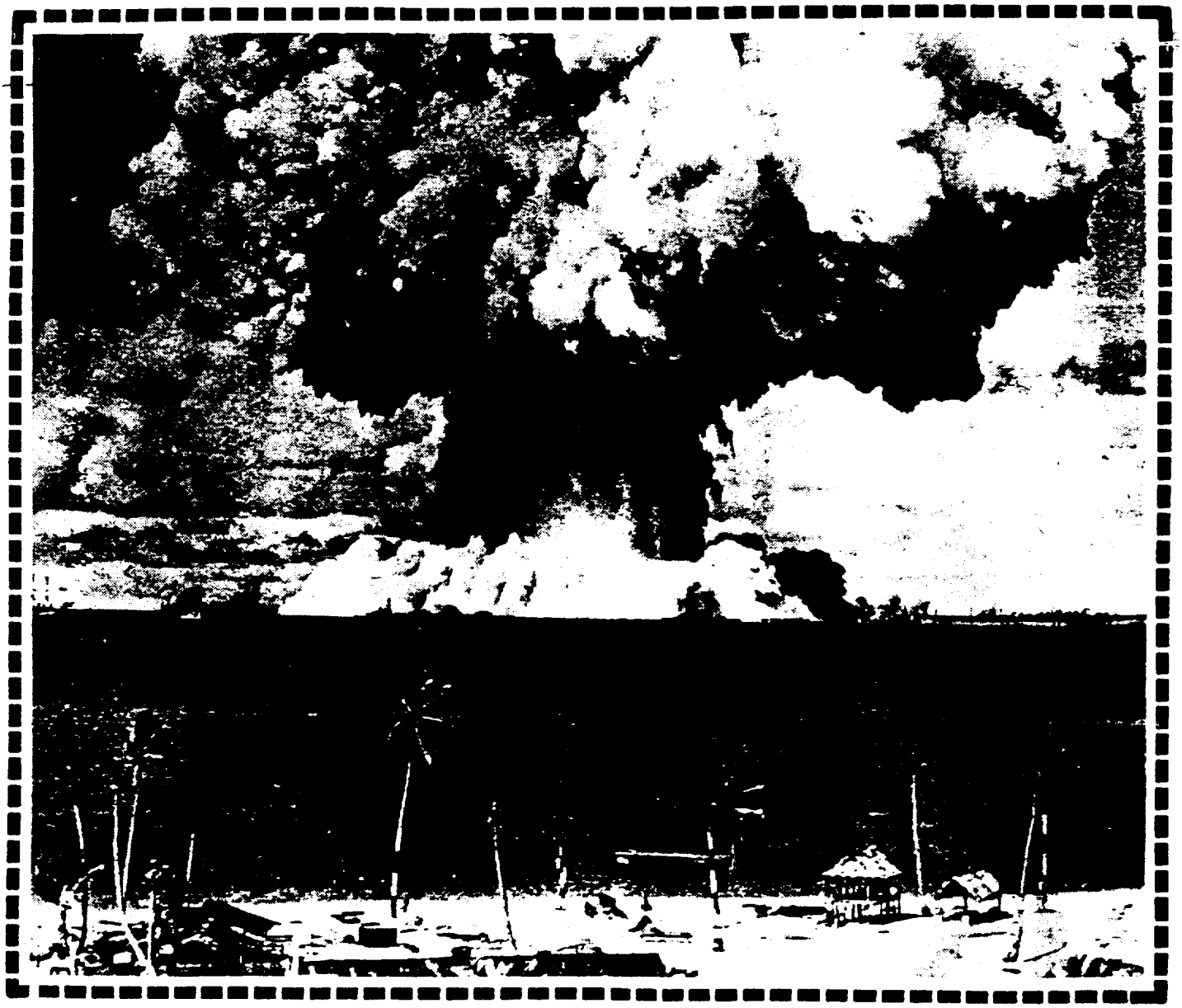
Marshall Islands



"Baker" atomic test at Bikini Atoll, July 1946. U.S. Navy photo.

A CHRONOLOGY: 1944-1981

MARSHALL ISLANDS CHRONOLOGY - ERRATUM SHEET

Page 12, column 1 and 2: "1955 - March 9 United Nations..." and "May Enewetak..."

This should read: 1956 - March 9 United Nations..." and May Enewetak..."

Marshall Islands

A CHRONOLOGY: 1944-1981

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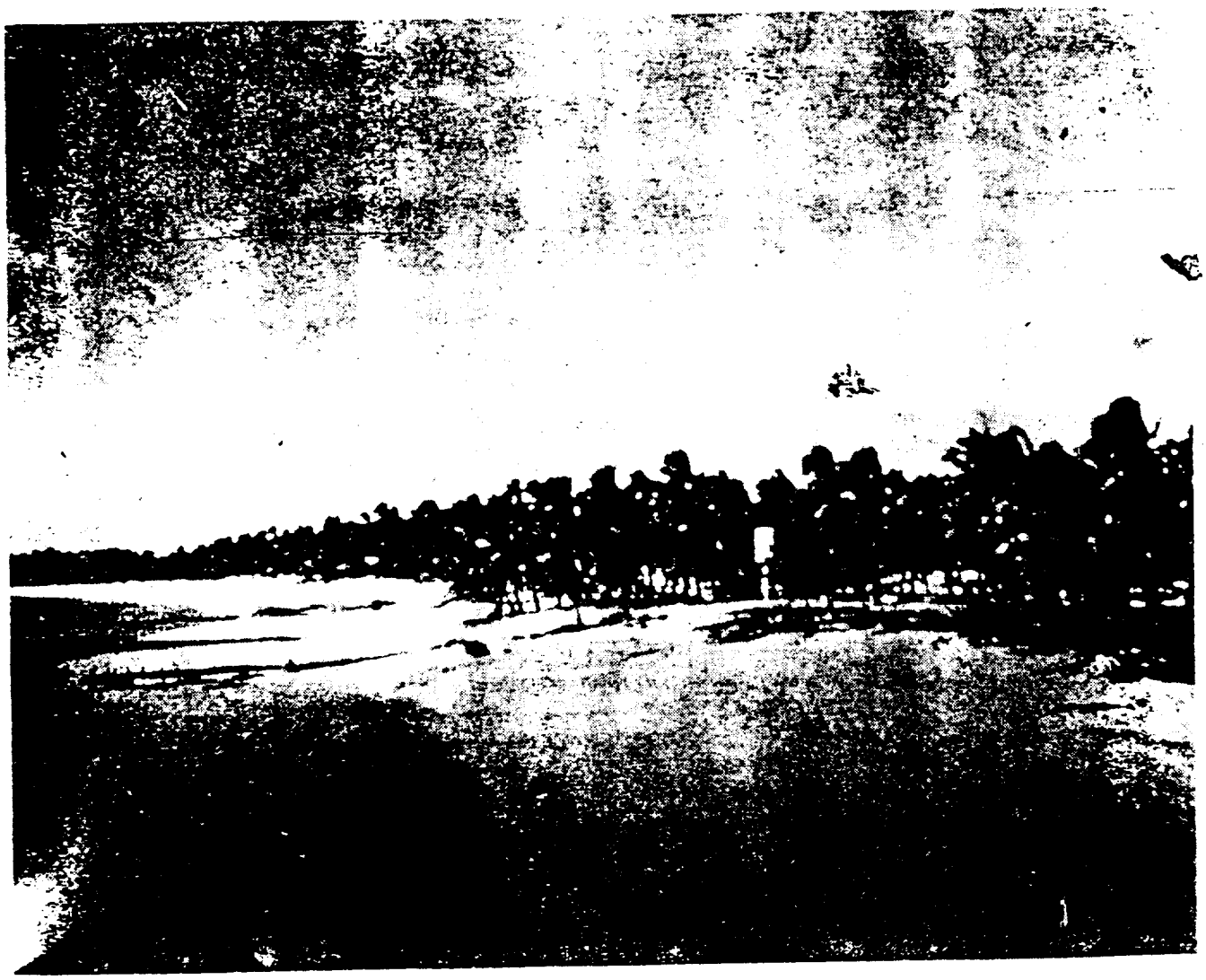
HOW TO READ THIS CHRONOLOGY:

Weapons Testing--even numbered left hand pages 4-34; destruction of island homelands and radioactive contamination of people, land and food sources.

Resettlement of People--odd numbered right hand pages 5-39; the struggle to survive in exile.

There is some necessary overlap for clarity; a list of sources used concludes the Chronology on pages 36 and 38.



BIKINI ATOLL IN 1946, PRIOR TO
THE START OF THE NUCLEAR TESTS.

1st edition published July 1978

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"FOR THE GOOD OF MANKIND..."

Marshall Islands people have borne the brunt of U.S. military activity in Micronesia, from nuclear weapons experiments and missile testing to relocations of people and radioactive contamination of people and their environment. All, as an American military commander said of the Bikini tests, "for the good of mankind and to end all world wars."

Of eleven United Nations Trusteeships created after World War II, only Micronesia was designated a "strategic" trust, reflecting its military importance to the United States. The U.N. agreement has allowed the U.S. to use the islands for military purposes, while binding the U.S. to advance the well being of the people of Micronesia.

Western nuclear powers have looked on the Pacific, because of its small isolated populations, as an "ideal" location to conduct nuclear activities unwanted in their own countries.

In addition to Bikini and Enewetak, the U.S. has tested nuclear weapons at Johnston and Christmas Islands; the British at Christmas Island and in Australia; and the French continue to test at Moruroa and Fangataufa Atolls in "French" Polynesia. More than 180 atomic and hydrogen bombs have been detonated in the Pacific region since 1946; over 100 by the United States.

The health and safety of people, be they Marshallese or American citizens and military personnel, has been a very low priority in the U.S. government's nuclear testing program. As Commissioner Libby of the Atomic Energy Commission said in 1953: "People have got to learn to live with the facts of life, and part of the facts of life are fallout."

The Marshall Islands Chronology tells the story of U.S. military activities in the Marshall Islands and their effect on Marshallese peoples' lives and environment. It is a story that has remained untold for too long.

* * * * * * * *

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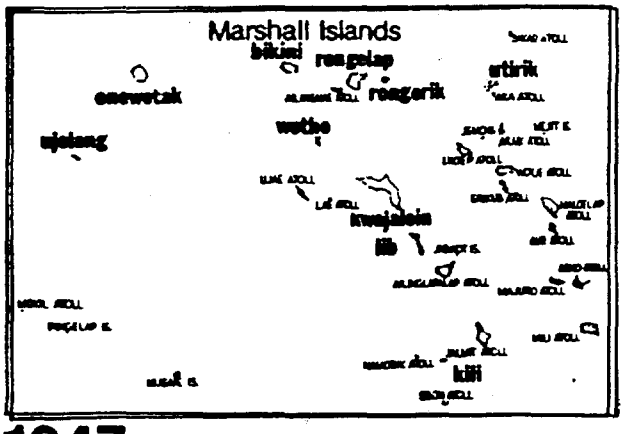
WEAPONS TESTING

1945 AUGUST 6 Japan: The U.S. drops a 13 kiloton atomic bomb on Hiroshima city, killing approximately 100,000 people. Three days later a second atomic bomb is dropped on Nagasaki city, killing approximately 70,000 people.

NOVEMBER Washington: American military and political leaders begin planning nuclear experiments for further development of nuclear weapons. Two tests, code named Operation CROSSROADS, are planned to demonstrate the effects of atomic explosions on naval vessels. A search is begun for an appropriate testing site.

1946 JANUARY Washington: Navy officials in Washington, D.C. announce that Bikini Atoll in the Marshall Islands fulfills all climatic, geographical and other requirements for Operation CROSSROADS (4,500 miles away from the U.S.; a small population of 167; a protected anchorage; and under the control of the U.S.).

JULY Bikini: Operation CROSSROADS begins and includes two atomic bomb blasts, Able (July 1), an air drop, and Baker (July 25), an underwater test. These bombs are about the size of the atomic bomb dropped on Nagasaki, Japan. About 42,000 military men and scientists participate in this test series.



1947 DECEMBER Enewetak: The Navy decides that Enewetak Atoll will be used for a second series of nuclear experiments.

1948 APRIL Enewetak: Operation SANDSTONE begins and includes three atomic blasts ranging in strength from 18 to 49 kilotons, detonated from towers: X-Ray (April 15), Yoke (May 1) and Zebra (May 15).

1951 APRIL Enewetak: Operation GREENHOUSE begins. This series includes four atomic tests exploded on towers: Dog (April 8), Easy (April 21), George (May 9) and Item (May 25). Easy test is 47 kilotons; information on the others remains classified. Approximately 3,200 military men participate in this series.

1947 JULY The Marshall Islands, along with the Caroline and Mariana Islands, formerly under a League of Nations Mandate to the Japanese, become the United Nations Trust Territory of the Pacific, administered by the United States.

"Ships remained in the lagoon during detonation and fallout periods and were subjected to considerable fallout (during Operation Greenhouse)."
Studies of Participants in Nuclear Tests, National Academy of Sciences, September 1980.

1952 NOVEMBER Enewetak: Operation IVY begins. It includes the first thermonuclear (hydrogen) device test, Mike (November 1), estimated at 10.4 megatons (750 times greater than the Hiroshima bomb). King (November 16) is described as a "high yield" 500 kiloton

(continued on page 6)

Excerpt from the United Nations Trusteeship Agreement for the United States Trust Territory of the Pacific Islands:
Article 6--"In discharging its obligations under Article 76(b) of the Charter, the administering authority (U.S.) shall:

2. promote the economic advancement and self-sufficiency of the inhabitants, and to this end shall regulate the use of the natural resources; encourage the development of fisheries, agriculture, and industries; protect the inhabitants against the loss of their lands and resources; and improve the means of transportation and communication;

3. promote the social advancement of the inhabitants, and to this end shall protect the rights and fundamental freedoms of all elements of the population without discrimination; protect the health of the inhabitants..."

1944 FEBRUARY Enewetak: United States forces attack and overcome major Japanese fortifications on Enewetak Atoll after heavy pre-invasion bombardment in which some Marshallese are killed.

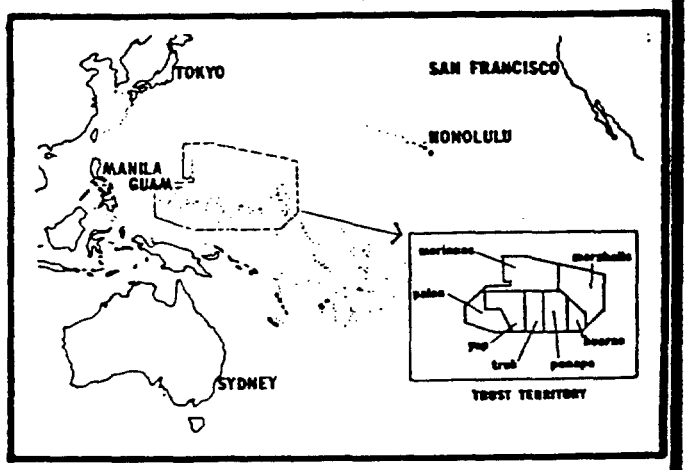
FEBRUARY Kwajalein: U.S. forces capture Kwajalein Atoll from the Japanese after heavy fighting. Americans recruit Marshallese to remove battle debris and build warehouses, air strips, air craft hangers and other military facilities on Kwajalein Island. Families join Marshallese workers at Kwajalein labor camp.

Kwajalein: The world's largest atoll is made up of approximately 93 tiny coral islands that encircle an 839 square mile ocean lagoon. Total land area of 93 islands is only 6.64 square miles.

1945 Enewetak: The Americans build a runway, barracks, warehouses and other base facilities to carry on the Pacific war. The Enewetak people are fed, clothed and housed by the U.S.Navy on Aomon and Bijire Islands in Enewetak Atoll.

1946 JANUARY Bikini: Washington, D.C. officials select Bikini Atoll for the first series of nuclear bomb tests and its population of 167 must be moved immediately.

FEBRUARY Bikini: One month after the decision was made in Washington, D.C. to use Bikini Atoll for nuclear experiments, the military governor of the Marshalls obtains the consent of Bikini's paramount chief for the relocation of his people. The American military governor informs the Bikinians that the scientists are experimenting with nuclear bombs "...for the good of mankind and to end all world wars." The Bikinians, with no alternative, agree to leave their home.



THE TRUST TERRITORY OF THE PACIFIC ISLANDS (MICRONESIA) COVERS A LAND AND OCEAN AREA OF THREE MILLION SQUARE MILES.

MARCH Bikini: As the Bikinians prepare to leave, approximately 250 naval ships, 150 aircraft for observation and transport and thousands of military and scientific personnel begin arriving for Operation CROSSROADS.

MARCH Bikini: Because the Americans said that Bikini would be returned to its people at the conclusion of the tests, the Bikinians believe their move is

(continued on page 7)

1952 continued

atomic test. The Mike blast vaporizes Elugelab Island leaving a crater one mile in diameter and 175 feet deep in the coral reef.

NOVEMBER 16 Enewetak: Ujelang Atoll, 150 miles southwest of "ground zero" is contaminated with radioactive fallout from the 500 kiloton King test.

"Prior to...and for weeks leading up to the blast the prevailing upper level troughs indicated that wind was blowing to the vicinity of our island."
Gene Curbow, HQ Weather Reporting Element, (U.S.Air Force) on Rongerik Atoll, 1954.

U.S. MILITARY COMMANDERS ARRIVE IN FEBRUARY 1946 TO TELL THE BIKINIANS THEY MUST LEAVE THEIR ATOLL TO MAKE WAY FOR THE NUCLEAR TESTS.

1954 JANUARY Rongerik: 25 Air Force and 3 Army men arrive on Rongerik Atoll, 125 miles east of Bikini, to set up a weather monitoring station in preparation for Operation CASTLE. This nuclear test series is to include the largest announced hydrogen bomb exploded by the U.S. The Rongerik weather station begins regular observations to determine temperature, barometric conditions and wind velocity up to and including 100,000 feet above sea level.

FEBRUARY Rongelap: John Anjain, the Magistrate of Rongelap Atoll, is warned by an American Navy friend that the Rongelap people may be in danger from the upcoming Bravo hydrogen bomb test. But he doesn't know the date of the test, and says there are no orders from Washington to evacuate the people.

Rongerik: The weather station men intensify their observations, as the test date draws near, checking surface wind directions and barometric conditions hourly and upper level weather conditions every two hours. They report to Joint Task Force-7 (JTF-7) Headquarters that winds are blowing east from Bikini towards Rongerik and other inhabited atolls.

MARCH Bikini: Operation CASTLE begins at Bikini and Enewetak lasting through May. The series includes Bravo, a 15-megaton hydrogen bomb blast, and five other tests. Koon test (April 7) is listed at 110 kilotons; information on the others remains classified. Approximately 7,200 military men participate in this test series.

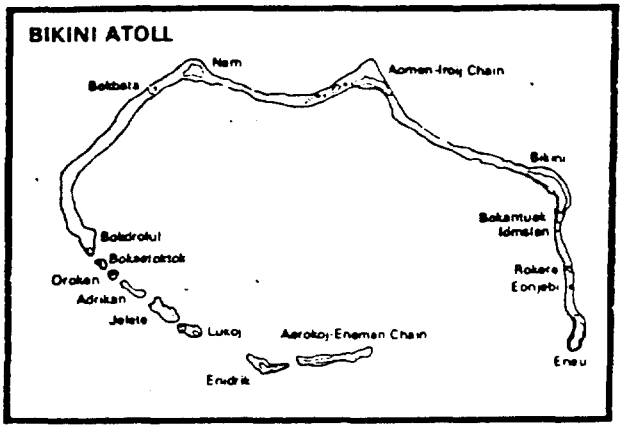
MARCH 1 Bikini: At 6:45 a.m., the Bravo surface detonation creates a blinding flash of light followed by a fireball of intense heat, tens of millions of degrees, shooting upward at a rate of 300 miles an hour. Within 10 minutes the giant nuclear cloud reaches more than 100,000 feet. Winds several hundred miles per hour at the center and 70 to 100 miles an hour at the blast's edge rock the placid lagoon like a full scale typhoon.

"The sky was suddenly completely lit up, brighter, if possible than daylight itself...The shock wave that came after the initial blast was so tremendous that all the pre-fabricated buildings were damaged in one way or another. Almost all of the windows just blew out."
Donald Baker, Air Force radio operator, Rongerik Atoll, 1954.

(continued on page 8)

1946 continued

temporary. Therefore, they choose to re-settle on nearby Rongerik Atoll, 125 miles east, although they recognize its drawbacks: poor quality coconuts, unusable well water and many species of fish which are edible on Bikini but are poisonous at Rongerik.



BIKINI ATOLL, SITE OF 23 ANNOUNCED NUCLEAR EXPLOSIONS

MARCH 7 Bikini: The Bikinians' first relocation is accomplished with little planning. The people are moved swiftly from Bikini to uninhabited Rongerik, whose 17 islands barely contain one-half square mile of dry land surrounding a lagoon of only 55 square miles, compared to Bikini's 2.3 square miles of land and 299 square mile lagoon.

MAY Rongerik: Less than two months after their arrival the Bikinians express anxiety over Rongerik's meager resources, and make the first of many requests to return home.

Enewetak: In preparation for the July atomic tests at Bikini, the Enewetak people are evacuated to Meck Island in Kwajalein Atoll, and the Rongelap and Wotho people are relocated to Lae Atoll for the duration of the Bikini tests.

Rongerik: The people of Rongelap Atoll, just 25 miles from Rongerik, catch fish and prepare food and transport it by outrigger canoes to Rongerik to help the Bikinians.

JULY Bikini: Bikini magistrate Juda is flown to view the results of the first atomic test. Detonated over the lagoon, the bomb had caused little visible damage to the islands. When he reports this, the Bikinians' desire to return home intensifies.

DECEMBER Rongerik: The Bikinians' situation on Rongerik worsens. Food shortages occur during late 1946 and early 1947.

1947 MAY Rongerik: A disastrous fire damages an estimated 30% of the productive coconut trees on Rongerik.

JULY Rongerik: The situation on Rongerik further deteriorates. A medical officer, after visiting Rongerik, reports the Bikinians "visibly suffering from malnutrition."

AUGUST Rongerik: An investigation board appointed by the U.S. administration to look into the Bikinian's plight meets with the people on Rongerik and reports: insufficient food, a bankrupt store, low supplies of water and only one brackish well on the island. The board's report concludes: "It would appear that their departure from Rongerik has been too long delayed."

SEPTEMBER Rongerik: Harold Ickes, a former cabinet member under President Franklin Roosevelt, in a nationally syndicated newspaper column makes serious charges against the Navy administration for neglecting the Bikinians on Rongerik and arouses a storm of criticism.

"The Seabees built a model village on Rongerik that anyone would be proud to live in...The natives are delighted, enthusiastic about the atomic bomb, which has already brought them prosperity and a new promising future."

U.S.Navy press statement, April 1, 1946.

(continued on page 9)

1954 continued

Bikini: JTF-7 ships are located in monitoring positions about 40 miles east of Bikini. Within minutes of the explosion, Navy personnel see the eastward movement of the radioactive cloud and the ships begin to record a steady increase in radiation levels. All men are ordered below decks and hatches and watertight doors are sealed.

Bikini: Hundreds of millions of tons of material from Bikini's reef, islands and lagoon are lifted into the air by Bravo. Approximately one and a half hours after the blast, a "gritty white ash" begins to fall on the 22 fishermen aboard the Japanese fishing vessel, the "Lucky Dragon." The fishermen are unaware that the ash is fallout from a nuclear test. Soon after the fallout, they begin showing the effects of acute radiation exposure: itching skin, nausea and vomiting.

Rongelap: About three to four hours after the blast, a white, snow-like ash begins to fall on the 64 people living on Rongelap and the 18 Rongelapese on Ailinginae, about 100 miles east of Bikini. The Rongelap people receive no official warning of the Bravo test, nor any notification of precautions to take to protect themselves from the fallout. The radioactive dust soon forms a layer on the island 2 inches deep. It turns the drinking water a brackish yellow and contaminates the food. By nightfall, as a result of their exposure, the people begin to experience severe vomiting and diarrhea.

Atomic Energy Commission press release following "Bravo" blast, 1954:

"During the course of a routine atomic test in the Marshall Islands, 28 United States personnel and 236 residents were transported from neighboring atolls to Kwajalein Island according to a plan as a precautionary measure. These individuals were unexpectedly exposed to some radioactivity. There were no burns. All were reported well. After the completion of the atomic tests, the natives will be returned to their homes."

Rongerik: The 28 Air Force and Army men, although providing hourly weather reports to Enewetak headquarters, are not warned when Bravo will be exploded. Within hours of the blast, 125 miles away, radioactive ash begins falling on them. "If you can imagine a snow storm in the middle of the Pacific, that's what it was like," said one Rongerik Air Force man.

Rongerik: The weather station reports the fallout to the Enewetak JTF-7 headquarters but receives no instructions about precautions to take. A second message is transmitted to Enewetak requesting evacuation, but headquarters replies that there are no airplanes available to evacuate Rongerik.

Utirik: Almost 275 miles east of Bikini, the Utirik people are the last to experience the fallout from Bravo. The fallout begins late in the day and is described as "mist like."

Bikini: Ailinginae, Ailuk, Bikar, Likiep, Rongelap, Rongerik, Taka, Wotho, Utirik, Jemo and Mejit are contaminated with radioactive fallout from the 15 megaton Bravo test at Bikini Atoll.

MARCH 2 Rongelap: Radiation monitoring personnel from Kwajalein arrive by seaplane at Rongelap, spend 20 minutes taking radiation measurements, tell the people not to drink the water, and leave to report their findings.

Rongerik: The weather station men continue sending radio messages to JTF-7 headquarters requesting evacuation.

MARCH 3 Rongerik: More than 48 hours after their exposure, the Americans are evacuated from Rongerik by an Air-Sea Rescue plane beginning at approximately 12 noon.

Rongelap: Joint Task Force-7 ships begin the evacuation of the 64 people on Rongelap and the 18 Rongelapese on Ailinginae Atoll.

MARCH 4 Utirik: Approximately 72 hours

(continued on page 10)

1947 continued

OCTOBER Rongerik: Navy officials announce the Bikinians will be moved to Ujelang, the western-most atoll in the Marshalls.

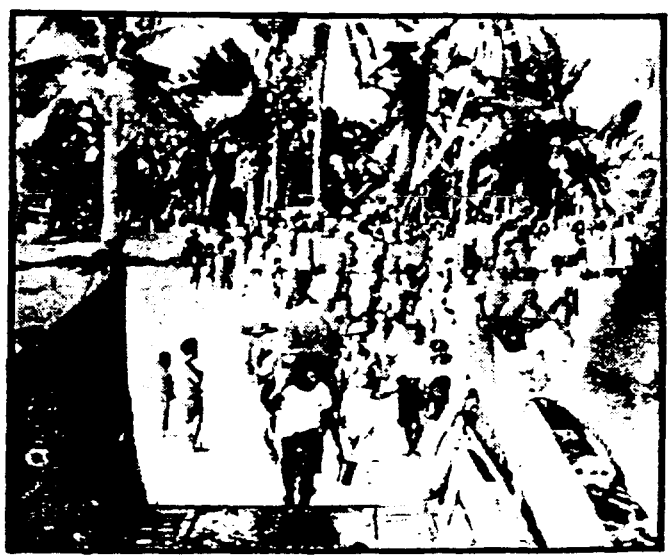
NOVEMBER 22 Ujelang: Ten Bikini men and 20 Navy Seabees go to Ujelang and begin construction of a new village.

DECEMBER 2 Enewetak: The Navy announces that Enewetak Atoll will be used for the second series of nuclear tests, and its inhabitants must be moved immediately.

DECEMBER 21 Enewetak: The 145 people of Enewetak are quickly relocated to uninhabited Ujelang, and the Bikinians remain at Rongerik, despite having built housing at Ujelang.

Ujelang: The atoll has only one-third the land area of Enewetak's 2.26 square miles and a much smaller lagoon: 25 miles compared to Enewetak's 390 square miles.

1948 JANUARY Rongerik: University of Hawaii anthropologist Leonard Mason arrives on Rongerik to independently assess the situation for the Trust Territory High Commissioner.



THE BIKINIANS, STARVING ON RONGERIK ATOLL, ARE EVACUATED A SECOND TIME BY THE NAVY IN 1948.

THE BIKINIANS ARE MOVED INTO A TEMPORARY TENT CAMP ON KWAJALEIN FOR SIX MONTHS DURING 1948, AS THEY LOOK FOR A NEW HOME.
Photo by Leonard Mason

FEBRUARY Rongerik: During Dr. Mason's second week on Rongerik, he is joined by a Trust Territory representative who immediately notifies the administration of the critical conditions. Within 24 hours, a medical officer and food are flown to Rongerik. After examining the Bikinians, the doctor states their condition to be that of a starving people.

MARCH 14 Rongerik: The Bikinians are evacuated from Rongerik and taken to a temporary camp at the Navy base on Kwajalein. The Rongerik resettlement attempt has lasted two years and one week.

APRIL Kwajalein: A search begins for an alternative resettlement site for the Bikinians.

JUNE 1 Kwajalein: After consideration of several atolls, the Bikini people vote in favor of moving to Kili Island, primarily because it is uninhabited and not controlled by a paramount chief.

SEPTEMBER Kili: An advance party of 24 Bikini men and 8 Seabees arrive on Kili to begin construction of a new village. Because of rough seas, lumber, roofing and tools for constructing the village have to be brought ashore on rafts.

(continued on page 11)

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1954 continued

after Bravo, the Utirik people are evacuated by a Navy LCU.

MARCH 5 Kwajalein: Many of the exposed people from Rongelap, Rongerik and Utirik, evacuated to the Kwajalein Navy base, continue experiencing symptoms of severe radiation exposure: itching and burning of the skin, eyes and mouth, nausea, vomiting and diarrhea. The majority of the Rongelap people and the 28 Americans suffer from skin burns on their necks, arms and feet and loss of body and scalp hair beginning about two weeks after their exposure.

MARCH Japan: Two weeks after their exposure, the fishermen on the "Lucky Dragon" arrive in Japan. Within a short time, the radio operator is dead of leukemia, and other crew members are ill. Within two years the Japanese government receives $2 million in compensations from the U.S. government for the "Lucky Dragon's" exposure.

"When we arrived on Kwajalein we started getting burns all over our bodies and people were feeling dizzy and weak,...After two days something appeared under my fingernails and then my fingernails came off and my fingers bled. We all had burns on our ears, shoulders, necks and feet and our eyes were very sore."

Etry Enos, Rongelap Atoll.

MARCH 27 Bikini: Following the Bravo test, the off limits zone around Bikini is enlarged eight times. The area includes the inhabited atolls of Rongelap, Utirik, Ujelang and Likiep. No islanders are ever evacuated before subsequent tests, however.

APRIL 20 United Nations: 111 Marshallese, elected and traditional leaders from more than 10 atolls, petition the United Nations Trusteeship Council requesting that "all the experiments with lethal weapons within this area be immediately ceased. If the experiments... should be judged absolutely necessary for the eventual well being of all people of this world...all possible precautionary measures to be taken (and) all human beings and their valuable possessions be transported to safe distances before such explosions occur..."

"The first shot (Bravo) has been variously described as devastating, out of control and with other exaggerated and mistaken characterizations. I do not wish to minimize it...but at no time was the testing out of control."

Admiral Lewis Strauss, U.S.AEC, at a Washington, D.C. press conference after the "Bravo" shot.

APRIL United Nations: The Trusteeship Council approves a resolution in response to the Marshallese petition supporting continued U.S. nuclear testing, but requesting that added safety precautions be taken and urging the U.S. to compensate the Marshallese for loss of land.

APRIL 26 Bikini: Ailinginae, Rongelap and Rongerik Atolls are contaminated with radioactive fallout from the Union test at Bikini Atoll. The yield of this bomb remains classified information.

MAY 5 Bikini: Ailinginae, Bikar, Rongelap and Rongerik Atolls are contaminated with radioactive fallout from the Yankee test at Bikini Atoll. The yield of this bomb remains classified information.

MAY 16 Rongerik: The 28 Americans evacuated from Rongerik are pronounced fit, and released for active duty after medical examinations at Kwajalein and Tripler Hospital in Hawaii. They receive no further medical follow up despite their exposure to at least 78 rads of whole body radiation.

(continued on page 12)

1948 continued

NOVEMBER 2 Kili: The total Bikini community of 184 people arrives on Kili after a 7-month stay on Kwajalein. Kili (with .36 sq. mile of land) has advantages of good agricultural soil and stands of quality coconut trees for copra export. Prior to World War II, the Japanese had used the island as a copra plantation. The Island's drawbacks include a lack of lagoon or protected anchorage. The full force of the ocean pounds Kili from November through May, halting fishing and isolating the island. Because the Bikinians were used to gathering fish from a protected lagoon with their nets, spears and outrigger canoes, the new Kili environment causes many problems.

"...Both the Bikini and Enewetak people have been relocated on other land that has been deeded to them and have been given considerable assistance in their resettlement and readjustment."
U. S. Representative Benjamin Gerig to the U. N. Trusteeship Council, 1956.

1949 Ujelang: The Enewetak people living on Ujelang are totally dependent on the infrequent (every 3-6 months or longer) and unreliable Trust Territory field trip vessels for food and other needs. Vast distances (640 miles to the District Center at Majuro, 410 miles to Kwajalein and 290 miles to the closest inhabited atoll, Ujae) prevent Marshallese craft from sailing to Ujelang to pick up copra or to supply trade goods.

1951 JANUARY Kili: The 40-foot ship provided for the Bikinians by the administration is washed into the Kili reef by the heavy surf and sinks with a full load of copra. Rough seas and a shortage of vessels cause food supplies to run critically low more than once from 1951 to 1953, even necessitating an air drop of emergency rations at one point.

JANUARY Kwajalein: About 550 Marshallese are relocated from squalid shacks in the Kwajalein Island labor camp near the U. S. military installation to Ebeye Island three miles away. The Navy constructs frame houses, cook houses and outhouses on Ebeye for 370 people.

Kwajalein: Until 1958, the Kwajalein Navy Station's primary functions are in supporting the nuclear testing at Enewetak and Bikini.

1952 Ujelang: The people make repeated requests for sail cloth and paint for upkeep, repair and operation of their sailing canoes, as well as fishing net material and fish hooks, but their orders do not arrive on the field trip ships.

OCTOBER Ujelang: A U.S. Navy LST takes the 169 Ujelang people to a point 100 miles farther away from Enewetak, which is to be the site of the first hydrogen bomb test as part of Operation IVY.

DECEMBER Ujelang: A special field trip ship arrives, but brings only enough sailcloth for two canoes. 5 out of 13 sailing canoes are unusable for lack of sails. The long awaited order of marine paint for wooden hulls was "filled" with ten gallons of red paint for metal and 16 quarts of enamel labeled "for garden furniture." Few of the other materials can be used, disappointing the people who planned to paint the canoes after the copra harvest.

"Canoes and fishing are the life of Ujelang. Without the canoes we cannot get to the other islands in the lagoon to harvest coconuts. Without the fishing equipment, we cannot catch fish to get enough to eat."
An Enewetak Iroij (chief).

1954 Kwajalein: The Navy Station employs 226 Marshallese, only 32 of whom are from Kwajalein Atoll. The popula-

(continued on page 13)

1954 continued

CONTAMINATED BY HIGH LEVEL RADIOACTIVE FALLOUT FROM THE BRAVO TEST, THE RONGELAP PEOPLE ARE CHECKED FOR RADIATION WITH GEIGER COUNTERS. Navy Photo.

MAY Rongelap: After three months of examinations and treatment at the Kwajalein Navy base, the Rongelap people are resettled temporarily on Ejit Island in Majuro Atoll, as high radiation levels on Rongelap prevent their return.

Utirik: Receiving what the AEC doctors term "small" amounts (14 rads) of radiation from Bravo, the Utirik people return home from Kwajalein. Brookhaven doctors state: "Their island was only slightly contaminated and considered safe for habitation."

JUNE Bikini: Radioactive contamination 130 times above normal levels is detected at a testing point 312 miles west of Bikini. A Japanese government-sponsored scientific team sampling ocean water and marine life reports that radioactive contaminants are found in the ocean from the northern Marshalls westward almost to the Mariana Islands, 3,000 miles away.

1955 MARCH 9 United Nations: Marshall Islands representatives again petition the U.N. Trusteeship Council requesting that the nuclear testing be halted and that the Bikini and Enewetak people be compensated for their islands.

"When we were returned to our home island, the U.S. gave us four large pontoons filled with drinking water and boxes of C-rations...They left and told us not to eat or drink anything from the island. We were quite suprised that they did not clean the cement water catchments which contained poisoned water. When we ran out of water in the pontoons, someone tasted the water in the catchments and found it to be okay, and so then we all drank this water."
Kel Joel, from Utirik Atoll.

MAY Enewetak: Operation REDWING begins at Enewetak and Bikini. This test series includes 17 atomic and hydrogen bombs through July. The Lacrosse test (May 5) at Enewetak is listed as 40 kilotons. Three hydrogen bombs are tested at Bikini: Cherokee (May 21) listed at "several megatons;" Zuni (May 28) at 3.5 megatons; Tewa (July 21) at 5 megatons; information on the other tests remains classified.

1957 JULY Rongelap: A Brookhaven report for the AEC states that "in spite of slight lingering radioactivity" Rongelap Atoll is safe for habitation. The people exposed in 1954 return home, along with more than 200 Rongelap people who had been away from the atoll during the Bravo test. Brookhaven doctors call this unexposed group "an ideal comparison population for the studies."

Utirik: On the gounds that the lower exposure of the Utirik people is less hazardous (14 rads compared to 175 for the Rongelap people) Brookhaven doctors examine the Utirik people only once every three years.

1958 Rongelap: Stillbirths and mis-

(continued on page 14)

1954 continued

tion of Ebeye Island (a 78 acre island less than one mile long and 650 feet wide) grows to 980 people.

1955 Kili: Trust Territory ships with supplies continue to have difficulties off-loading supplies at Kili because of rough seas.

1956 NOVEMBER 19 Ujelang: The Ujelang people have received no compensation for the loss of their home atoll, Enewetak, and are now offered $25,000 in cash and a trust fund of $150,000 with semi-annual interest payments at 3 1/3% by the U.S. government. Faced with harsh living conditions, the people accept and sign an agreement which says in part: "...The Government of the United States shall possess the full use rights to Enewetak Atoll until such time as it will not be necessary to occupy and use the Atoll in the interest of the maintenance of international peace and security" and "...This agreement was made voluntarily and without any compulsion or coercion whatsoever."

NOVEMBER Kili: As problems worsen on Kili, the Trust Territory government selects a site in nearby Jaluit Atoll to start a satellite community. Three Bikini families move from Kili Island to the site in Jaluit, 30 miles north. During 1957, several other families alternate with these first settlers as housing is erected and food crops (coconuts, pandanus and taro) are planted.

NOVEMBER Kili: Representatives of the Kili people sign an agreement giving the U.S. government "full use rights to Bikini Atoll...future claims by Bikinians based on the use of Bikini by the Government of the United States...or on the moving of the Bikini people from Bikini Atoll to Kili Island, shall be against them (the representatives) and not against the Government." In return, the Bikinians are given "full use rights" to Kili and several islands in Jaluit and $25,000 in cash and a $300,000 trust fund yielding semi-annual interest payment of $4,972.50 (about $15 per person

ENEWETAK PEOPLE ON UJELANG ATOLL IN THE EARLY 1960S
Photo by Leonard Mason.

a year) to be divided among the Bikinians on Kili.

1957 NOVEMBER Kili: Typhoon Lola hits Kili and causes extensive damage to crops in addition to sinking the Bikinians' supply ship.

1958 JANUARY Kili: Typhoon Ophelia causes great destruction on Jaluit and other southern atolls. All the Kili people living on Jaluit are forced to move back to Kili as the satellite community becomes uninhabitable.

1960 Kili: Rough seas once again prevent the field trip vessels from providing adequate service to Kili Island. The Bikinians face food shortages once more.

Kwajalein: The residents of Roi Namur Island, in the northern part of Kwajalein Atoll, are relocated to Ennubirr Island about two miles away, and to Ebeye. Ennubirr becomes an indigenous labor camp for the base facilities at Roi Namur, similar to Ebeye for Kwajalein workers and their dependents.

1961 OCTOBER Kwajalein: The inhabitants of Lib Island are relocated to Ebeye by the Navy, as Lib is in the new "impact

(continued on page 15)

1958 continued

carriages among exposed Rongelap women rise to more than twice the rate in unexposed Marshallese women for the first four years following their exposure in 1954.

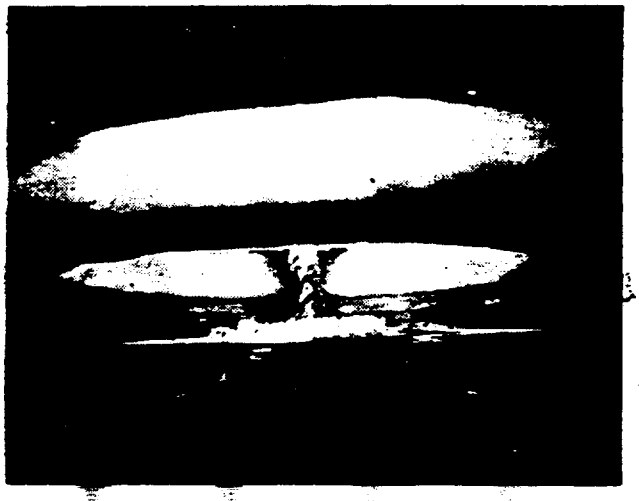
Rongelap: Amata Kabua, a Marshallese traditional leader, files a law suit in Guam Federal court seeking $8 million compensation for the Rongelap people. The judge dismisses the case citing lack of jurisdiction.

Rongelap: A Brookhaven report by Dr. Robert Conard shows that after the Rongelapese were returned to their islands in July 1957, their body burdens of radioactivity rapidly increased. In just one year, the Rongelap peoples' body levels of radioactive cesium 137 rose 60-fold, strontium 90 rose 20-fold and zinc 65 rose 8-fold.

MAY Enewetak: Operation HARDTACK (Phase I) begins at Enewetak and Bikini and continues through August. This series includes 32 nuclear tests (22 at Enewetak), one test north of the Marshall Islands, and two hydrogen bombs exploded in the atmosphere near Johnston Island, approximately 700 miles southwest of Hawaii. At Enewetak, Cactus test (May 6) is listed at 18 kilotons, Koa test (May 13) at 1.37 megatons, and Oak test (June 29) at 8.9 megatons; information on the other blasts remains classified.

"Even though...the radioactive contamination of Rongelap Island is considered perfectly safe for human habitation, the levels of activity are higher than those found in other inhabited locations in the world. The habitation of these people on the island will afford most valuable ecological radiation data on human beings."
Brookhaven National Laboratory 3-year report on Rongelap and Utirik.

Enewetak: Military personnel are stationed on Enewetak Island during Operation HARDTACK I. They witness 22 nuclear blasts, living within 10-20 miles of the explosions. More than 90 naval vessels and 40 planes are involved in supporting HARDTACK I. The 8.9 megaton Oak test's radioactive cloud covers Enewetak Island; no one is evacuated, although lagoon swimming is off limits for three days. At no time following the 21 other tests is lagoon use restricted.



NUCLEAR CLOUD FROM ONE OF MANY TESTS IN THE PACIFIC.

MAY 27 Enewetak: Ujelang Atoll, home of the displaced Enewetak people, is contaminated with radioactive fallout from the Magnolia test. The size of this blast remains classified, but indications are it is in the magaton range.

JUNE 11 Bikini: Ailinginae and Wotho Atolls are contaminated with radioactive fallout from the Maple test.

AUGUST 18 Enewetak: With the Fig test, the last explosion in Operation HARDTACK I, the U.S. concludes its nuclear testing program in the Marshall Islands, following 66 announced atomic and hydrogen bomb tests at Bikini (23) and Enewetak (43). More than $2.5 billion is spent during the testing program in the Marshalls.

Kwajalein: With the completion of the

(continued on page 16)

1961 continued

zone" for incoming Inter-Continental Ballistic Missiles shot from California.

"...It is the conviction of the United States that it has the responsibility not only to its people but to all the peoples of the free world to maintain at a maximum its capacity to deter aggression and preserve peace. Thus it believes that...further tests are...absolutely necessary for the eventual well being of all the people of this world."

U.S. statement to U.N. Trusteeship Council in response to a petition from Marshall Islands leaders (April, 1956).

1963 Kwajalein: A case of polio in the American population on Kwajalein starts an epidemic in the northern Marshall Islands. Although the polio vaccine was discovered 8 years earlier, no one had been given shots. 212 cases of severe residual paralysis resulting from polio are recorded among the 18,000 inhabitants of the Marshall Islands. The rate in the U. S. is about one patient with severe residual paralysis per 1,000 cases of polio.

"Land means a great deal to the Marshallese. It means more than just a place where you can plant your food crops and build your houses; or a place where you can bury your dead. It is the very life of the people. Take away their land and their spirits go also."

Petition from Marshall Islands leaders to United Nations, March 1956.

1964 Kwajalein: A 99 year lease for Kwajalein Island (the command base of the Pacific Missile Range) is signed by the Kwajalein landowners and the U. S. Government. The lease provides $750,000 in compensation for use of the 750 acre island, or about $10 per acre a year, and provides that the U.S. will "improve the economic and social conditions of the Marshallese people, particularly at Ebeye..."

Kwajalein: The central two-thirds of Kwajalein's lagoon becomes a new "impact area" for missiles. Faced with several hundred inhabitants on the islands bounding this area, known as the "Mid-Corridor," the Defense and Interior Departments decide the "most practical and economic solution to the range safety problem" is to relocate the people to Ebeye Island. The Army begins an "Ebeye Improvement Project," which includes the construction of 78 cement block units each containing four one-room apartments, and also a sewer system, fresh and salt water distribution systems, and a power plant. No funding, however, is budgeted for maintenance and upkeep of these facilities.

DECEMBER Kwajalein: The first 28 apartment units are completed and assigned to the Mid-Corridor people.

"We cannot make enough copra. The reason is that the people have to eat it, and the rats also eat it...We also need sail cloth and other materials to equip our canoes...The conditions on Ujelang are worse now...there are more people now, especially children who are too young to work or to work hard, but who must also eat. We did not complain when the Navy told us we had to leave our atoll of Enewetak...We cooperated with the Americans...Now we need help badly, we ask America for help in our suffering. Help us, or send us home."

Enewetak leader on Ujelang, 1969.

1965 JANUARY Kwajalein: Marshallese from the 13 inhabited Mid-Corridor islands

(continued on page 17)

1958 continued

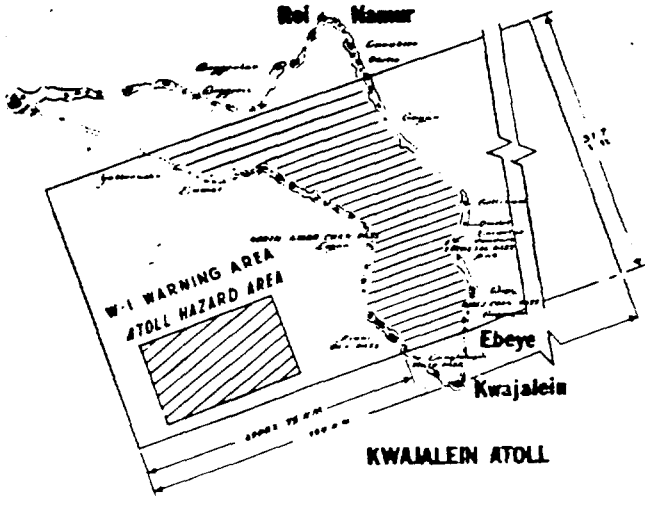
Atomic Energy Commission's nuclear experiments at Bikini and Enewetak, the importance of the Kwajalein Navy base diminishes. The Navy places it on the military base surplus list.

"...Several of my babies who were healthy at the time they were born died before they were a year old...Altogether I lost four babies. My son Winton was born just one year after the bomb, and he has had two operations on his throat for thyroid cancer."
Minji Kel, Utirik Atoll.

1959 Rongelap: The Rongelap people are warned by Brookhaven scientists not to eat the plentiful coconut crabs, considered a delicacy in the Marshalls, because of high radiation levels. No other restrictions are placed on food consumption.

Kwajalein: The Navy base's importance re-emerges as it is chosen as the testing site for the Nike-Zeus anti-missile missile tests; Roi Namur Island (in the northern part of Kwajalein Atoll) is selected as a center for studying missile re-entry characteristics; and the Naval Station is renamed "Pacific Missile Range Facility Kwajalein."

Enewetak: In support of Kwajalein's Pacific Missile Range, Enewetak's lagoon becomes an "impact area" for incoming Inter-Continental Ballistic Missiles (ICBM's) shot from Vandenberg Air Force Base in California.



1960 Kwajalein: An "impact area" for incoming missiles is established, extending from the southern tip of Kwajalein Atoll southwest 50 miles to Lib Island, whose inhabitants must be relocated.

Kwajalein: Radar, technical buildings, missile assembly and missile launching facilities are built on Kwajalein Island. Related radio receiving/transmitting equipment and living quarters are constructed on Gugeegue and Ennylabegan islands, located on opposite sides of the lagoon about 8 miles north of Kwajalein.

Kwajalein: A major radar installation, computer buildings and a launching site for firing missiles are constructed on Roi Namur Island, 40 miles north of Kwajalein Island.

1961 Kwajalein: The first Zeus missile is test fired from Kwajalein. It is being developed to destroy incoming enemy missiles.

1962 JULY Kwajalein: A Zeus missile successfully intercepts, for the first time, an ICBM shot from Vandenberg Air Force Base.

1963 Rongelap: The first thyroid tumors begin appearing among the Rongelap people exposed in 1954. Also, a higher than normal incidence of growth retardation among young Rongelapese is reported.

1964 Kwajalein: The prime user of

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1965 continued

are relocated from the hazard zone to Ebeye. A payment of $25 a month is provided for each of the 194 people residing on the islands, although more than 1,000 people have customary land rights in these islands.

BIKINI IN 1946: A SELF-SUFFICIENT PEOPLE PRIOR TO THEIR RELOCATION BY THE NAVY IN 1946.
Photo by Leonard Mason

Kwajalein: With increasing military activity at Kwajalein, employment of Marshallese increases to 663 people. The population on Ebeye rises to 3,500 people.

1966 Kwajalein: The Ebeye population grows 1,000 in a year to 4,500 people, living on the available 66 acres (the Coast Guard station on the tip of Ebeye uses 12 acres).

Kwajalein: An addendum to the 1964 Mid-Corridor Islands lease is negotiated, increasing subsistence payments to the 194 displaced people on Ebeye from $25 to $40 a month.

JUNE Kwajalein: With the new impact area for missiles in Kwajalein's lagoon, Lib Island, 50 miles south, is no longer in the impact zone. Its residents are returned home after five years on Ebeye.

1967 Bikini: United States Government agencies begin considering the possibility of the Bikini people returning to their home atoll.

Bikini: An AEC study states of Bikini: "Well water could be used safely by the natives upon their return to Bikini... It appears that radioactivity in drinking water may be ignored from a radiological safety standpoint."

Ujelang: After twenty years, the problems of the displaced Enewetak people on Ujelang have mounted until the situation approaches a crisis. Field trip ships continue to be erratic in visits and materials for keeping sailing canoes operational are badly needed. Copra production is low (only 1/3 of the 1952 level), as the trees are old and newly planted trees will not bear for five years or more. Although cats have been brought in, rats are destroying the copra, and when supplies of rice and flour are exausted, the people eat the coconuts instead of making copra to sell.

Ujelang: Housing built by the Navy in 1947 is severely deteriorated and there are no materials for repair or maintenance. While the housing supply is less, the population has grown to 285. The large community council house and the copra warehouse blew down years ago in a typhoon, and the sheet metal church and community center is rusting away.

OCTOBER 20 Ujelang: A Trust Territory supply ship arrives at Ujelang to find the people with no copra to sell and no money to buy needed food and supplies. Almost all of the nearly 300 people board the ship, demanding to leave Ujelang for Majuro to protest to the government that they have no food and are starving. Ataji Balos, a government official on board, after 7 hours of efforts to persuade the people to give up their plan, agrees to stay with them on Ujelang, saying "If you will die, I will die with you." He calls for help by radio and promises

(continued on page 19)

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1964 continued

the missile range is the Army Ballistic Missile Defense program, which tests, among others, the Minutemen, Titan, Polaris, Sprint, Spartan, Nike and Zeus missiles. The range also supports Air Force and Navy testing of ICBM's, Intermediate Range Ballistic Missiles, and Sea Launched Ballistic Missiles.

JULY 1 Kwajalein: Command of Kwajalein is transferred from the Navy to the Army, and the missile range is renamed "Kwajalein Test Site." At this time the range consists of facilities on five islands: Kwajalein, Roi-Namur, Eniwetak, Gugeegue and Ennylabegan.

Kwajalein: A new "impact area" for incoming Inter-Continental Ballistic Missiles is established. The central two-thirds of the lagoon, called the "Mid-Corridor," is designated as the new target area because it is surrounded by islands with missile tracking and testing devices. The 47 islands, many inhabited, that bound this part of the lagoon are in the hazardous zone. The new target area provides a recovery basin protected from enemy patrols.

SEPTEMBER Kwajalein: President Lyndon Johnson announces the U.S. has an operational system for shooting down Soviet satellites, developed from tests called "Project 437" begun in May 1963 at Kwajalein.

1965 FEBRUARY Enewetak: The Air Force assumes control of the missile range at Enewetak Atoll.

Kwajalein: To gather information on the atmosphere re-entry of missiles fired from Vandenberg Air Force Base, a variety of instrumentation and tracking facilities and helicopter landing pads are built on the Mid-Corridor islands of Eniwetak (not to be confused with Enewetak Atoll), Omelek, Gellinam and Legan. On Ennylabegan, additional telemetry equipment is installed and living quarters built.

Rongelap: The Rongelap peoples' body levels of radiation, which jumped in 1958 after living one year on their contaminated islands, have remained at the same level since then, according to Brookhaven's 12 year report.

1966 JANUARY Rongelap: The U.S.Congress approves an ex-gratia payment of $950,000 (approximately $11,000 per capita) to the exposed Rongelap people for injuries resulting from their exposure in 1954.

JUNE Rongelap: Of the 29 children who were under 10 years old in 1954 (including 4 in utero during the fallout) 15, or 52% have developed thyroid abnormalities.

Rongelap: A Bookhaven medical report shows little difference in radioactivity levels between those exposed in 1954, and those who had not been there in 1954, but moved back after 1957. Moreover, the body levels of radioactivity of these previously unexposed Rongelapese was 10 times greater than that of Marshallese living on Kili Island in the southern Marshalls.

"One of the things that has bothered us over the years is the fact that the AEC doctors have never bothered to explain our problems to us--instead they treat us as if we were merely children and we resent that."

Jirda Biton, Utirik Atoll.

1965 JULY The Congress of Micronesia, a territory-wide legislative body modeled on the U. S. Congress, holds its first session after being created by an executive order of President Lyndon Johnson in 1964.

(continued on page 20)

1967 continued

food within two weeks.

NOVEMBER 3 Ujelang: The supply ship returns with food.

DECEMBER Ujelang: After receiving information on the Ujelang crisis, the High Commissioner sets up a Rehabilitation Committee with one coordinator in Saipan and one in Majuro.

Ujelang: The people send thanks to members of the Ebeye protestant chapel and to the Rongelap people for providing them with clothing during the crisis on Ujelang.

Ujelang: A rat control program for Ujelang is set up using donations of $300 from visiting Americans to pay a bounty of 5¢ per rat to Ujelang people who bring in dead rats to be tallied.

Ujelang: The annual charity drive collection by Americans working on Enewetak is given to the Trust Territory for Ujelang relief.

1968 JUNE 1 Ujelang: Five Ujelang leaders petition the United Nations Trusteeship Council to help them set a date for the return of Enewetak Atoll to their people.

JUNE Ujelang: The people request that their Trust Fund be increased. It is $150,000, yielding about $16 per person annually.

Bikini: President Lyndon Johnson promises the 540 Bikinians living on Kili and other islands a permanent return to Bikini after the AEC concludes: "The exposures to radiation that would result from the repatriation of the Bikini people do not offer a significant threat to their health and safety."

AUGUST Ujelang: The announcement that Bikini will be returned to its people causes deep resentment among the Enewetakese, who protest because they also wish to return to their ancestral home.

Kwajalein: The Mid-Corridor landowners petition the Congress of Micronesia (COM), soliciting aid in "righting a grave injustice done" by the U.S. government. Only 194 out of 1,470 Mid-Corridor landowners are eligible for compensation, amounting to $40 a month. The petition states: "Electric bills and house rentals exceed $40 each month and already some of us have been threatened with eviction...Anyone born since the relocation is not considered eligible for compensation..." The Marshallese point out that they were accustomed to growing food on the "off-limits" islands, not possible on overcrowded Ebeye.

Kwajalein: The Congress of Micronesia responds with a resolution requesting the High Commissioner to reopen negotiations on the amount of compensation for the Mid-Corridor people.

SEPTEMBER Ujelang: The Marshall Islands Nitijela (legislature) passes Resolution 16, addressed to the President of the United States, the Trusteeship Council and others, concerning the present conditions on Ujelang and the need for discussion to set a date for the Ujelang people to return to Enewetak.

OCTOBER Ujelang: The people report they have left only 14 pounds of rice and flour per person which will last only 3 weeks. They have no breadfruit or edible pandanus. Ujelang representatives to the Nitijela say that if conditions "are not improved on Ujelang Atoll by January 1969, they will all get on a ship, come to Majuro and camp in front of the administration building."

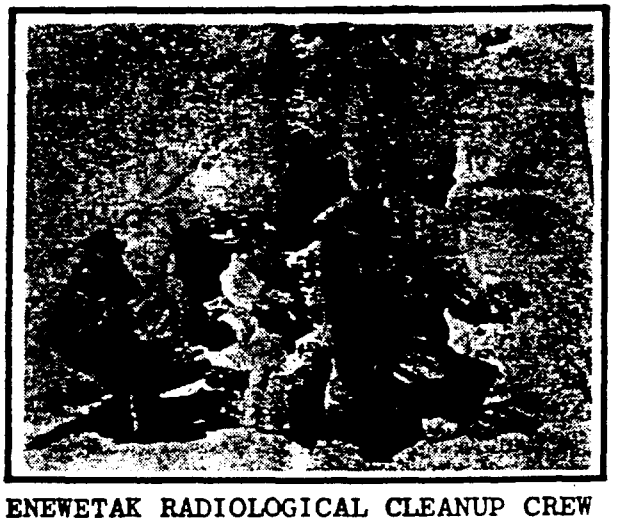
NOVEMBER 20 Ujelang: The people are out of flour, rice, sugar and other imported foods. The recent measle and chicken pox epidemic was very serious and ten deaths resulted. The people are still waiting for materials for repair and replacement of houses and community buildings.

(continued on page 21)

1970 continued

DECEMBER Kwajalein: A new agreement is signed by Mid-Corridor landowners and the U.S. providing $420,000 per year (approximately $285 per person, based on 1,470 people) to the people displaced by the missile tests. The agreement has a five year review clause.

1971 Bikini: The rehabilitation program is still proceeding at a snail's pace. With erratic shipping and no air service, construction and agricultural supplies arrive late. The replanting of coconuts at Bikini and Eneu Islands is finally completed.



ENEWETAK RADIOLOGICAL CLEANUP CREW TAKING SOIL SAMPLES ON RUNIT ISLAND
Defense Nuclear Agency Photo

DECEMBER Ujelang: Not placated by the 1969 Trust Fund "compensation," the Ujelang people declare their intention with a notice in the Marshall Islands newspaper: "We, the representatives of the displaced people of Enewetak are making public notice of our intent to return to our island of Enewetak before the end of 1972."

1972 FEBRUARY Ujelang: American officials are notified that unless the Enewetak people are granted permission to return home, they will institute legal action.

AUGUST 30 Ujelang: A supply ship arrives to find the people have been out of rice, flour, sugar, and canned meat for over two weeks. A typhoon in June destroyed the breadfruit crop. A ship which arrived earlier brought them a large check for their trust fund interest payment, but had no food or goods which they could buy with it.

OCTOBER Bikini: The AEC announces that coconut crabs can be eaten only in limited numbers because they are radioactive. As it grows, the crabs eat their shells, which contain radioactive strontium 90, and concentrate high levels of radiation.

Bikini: Because of information on the radiological contamination of Bikini supplied by the AEC, the Kili council votes not to return the entire community to Bikini at this time, but says it will not prevent individuals from returning.

Bikini: Three Bikini families move back to Bikini. They move into newly constructed houses on Bikini Island along with about 50 Marshallese workers involved in construction and maintenance of the buildings.

1973 OCTOBER Enewetak: The results of a highly sophisticated aerial radiation survey are published by the AEC as the 3-volume Enewetak Radiological Survey. This study provides a framework for the proposed nuclear cleanup operation.

Enewetak: Runit Island in eastern Enewetak Atoll, the site of 18 nuclear tests, is quarantined. High concentrations of plutonium on this island mean habitation will not be possible for 240,000 years.

Kwajalein: The Ebeye population is officially estimated at 5,263 people living on 66 acres. About 600 Marshallese are employed by the missile range, 200 work as domestics on Kwajalein and 139 others are employed by the Trust Territory on Ebeye.

(continued on page 25)

1972 continued

partment agencies sponsoring PACE, but the EIS was not made available to the Enewetakese.

"Our conclusion concerning the human test on the people of Rongelap is that it was a great mistake to permit the people of Rongelap to return to their island in July 1957, without sufficient work having been done to remove radioactive pollution from the island."
Report of the Japanese medical survey team to the Marshall Islands, December, 1971.

SEPTEMBER Enewetak: The Enewetak people file a law suit to halt all PACE activities until the final Environmental Impact Statement (EIS) is prepared, charging a violation of the National Environmental Policy Act provisions.

OCTOBER Enewetak: A federal judge in Honolulu grants the Enewetak people a temporary injunction against PACE activities.

NOVEMBER Rongelap: John Anjain's son, Lekoj, one year old when exposed to radiation on Rongelap in 1954, dies of myelogenous leukemia at the National Cancer Institute in Bethesda, Maryland. (At the age of 13, he was first taken to the U.S. for removal of thyroid nodules; his mother, father, and two brothers have also had thyroid surgery).

1973 Utirik/Rongelap: Because of the Marshallese insistence on improved medical treatment and evaluations, Brookhaven stations physician Knud Knudsen in the Marshalls to conduct quarterly visits to Rongelap. Complete medical surveys are still conducted yearly at Rongelap and every three years at Utirik.

JANUARY Kwajalein: A World Health Organization survey of Micronesia shows that during a five year period, 1967-1971, there were "328 cases of cataracts discharged from hospitals in the Trust Territory; 244 of them, or 74% were from the Marshalls." The report notes: "The heavy exposure to microwave radiation by the residents on Kwajalein has been suspected by some people as a possible cause of the incidence of cataracts in the Marshalls." The source of microwave radiation is the atoll's missile tracking radar, with major installations on four islands and smaller ones on others.

MARCH 26 Ujelang: A NEPA required public hearing on PACE takes place on Ujelang (see box on page 30).

APRIL 4 Enewetak: Following the Ujelang hearing, a second public hearing on PACE is held in Honolulu. Environmental groups, university students and faculty, lawyers, congressional representatives and other citizens testify in opposition to the PACE project.

JUNE 8 Enewetak: The U.S.Air Force calls off the PACE program in the face of court action by the Enewetak people and aroused public opinion.

Bikini man living on Kili:
"Why is it you Americans are so smart and powerful that you can send men to the moon, but you can't help us with our problems here on Kili?"

1974 MARCH With impetus gained from the separate Marianas negotiations, the Marshall Islands Nitijela (Legislature) requests the U.S. to enter into direct status talks with the Marshall Islands, apart from the Congress of Micronesia, which has been negotiating for all of Micronesia. In 1977, the U.S. begins separate political status negotiations with the Marshall Islands and Palau in addition to the Congress of Micronesia.

(continued on page 26)

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1966 continued

Rongelap: Brookhaven scientists take Marshallese food items from Rongelap (pandanus fruit and coconuts) to the U.S. to consume under laboratory conditions. After several weeks' study, they report: "The intake of strontium 90 over a seven day period was twenty times higher than normal and that of cesium 137, sixty times higher than normal."

1968 APRIL Kwajalein: The Kwajalein Test Site is renamed the "Kwajalein Missile Range" (KMR).

fense Nuclear Agency and the Air Force sponsor the Pacific Cratering Experiments (PACE) on Enewetak. More than 220 tons of explosives are brought to Enewetak for this series of tests which will simulate nuclear bomb blasts.

DECEMBER Rongelap: A Japanese medical survey team, including a thyroid specialist, comes to the Marshall Islands at the request of Marshallese leaders to conduct an "independent" medical survey. The American Trust Territory administration refuses the medical

1969 OCTOBER The Congress of Micronesia, representing all six Micronesian districts, begins negotiations with the United States to end the U.N. Trusteeship in favor of a new political status.

1970 Kwajalein: Two additional radars (ALCOR and ALTAIR) become operational as part of the Kiernan Re-Entry Measurements Site (KREMS) on Roi Namur Island, combining with the TRADEX radar (completed in 1963) to track missiles re-entering the earth's atmosphere.

APRIL Kwajalein: Illeginni Island in the Mid-Corridor is selected as the site for SPARTAN and SPRINT missile launches. The Illeginni facility is constructed and is controlled from Meck Island 17 miles across the lagoon.

Konrad P. Kotrady, M.D.:
"The Army's position was summed up to me one day when a high-level command officer at Kwajalein remarked that the sole purpose of the Army at Kwajalein is to test missile systems. They have no concern for the Marshallese and that it is not of any importance to their being at Kwajalein."

ROI NAMUR ISLAND IN THE NORTHERN PART OF KWAJALEIN ATOLL IS A MAJOR RADAR AND MISSILE TRACKING STATION.

1971 SEPTEMBER Enewetak: The De-

team permission to travel to Rongelap and Utirik in what the administration terms as visa problems. The Japanese,

(continued on page 22)

1969 JANUARY Ujelang: USDA feeding program for Ujelang is authorized to begin with shipment from Saipan on January 16.

JANUARY Kwajalein: The Congress of Micronesia again "supports the grievances of the Mid-Corridor and supports their efforts to return to their islands." The COM votes to send a representative to accompany the people if they attempt to return in defiance of the lease agreement.

APRIL 21 Kwajalein: Mid-Corridor residents living on Ebeye issue an ultimatum to the High Commissioner demanding that the U.S. compensate all the people and allow them access to their islands for food growing, or they will return to their islands without permission. The Army and Trust Territory government believe the Marshallese are bluffing and ignore the warning.

Kwajalein: Of 669 Mid-Corridor landowners who had voted to return, 31 protest with a sail-in to their islands, reportedly forcing cancellation of two missile test operations.

Kwajalein: Promising action to negotiate their demands, the Trust Territory returns the 31 Mid-Corridor people to Ebeye, after six days of illegal occupying their islands.

AUGUST 19 Ujelang: Protests of the Enewetak people stimulate the U.S. Congress to provide a trust fund of $1.02 million to try to stop their efforts to return to Enewetak.

Bikini: The Bikini cleanup and resettlement is planned to extend over a period of eight years to allow for maturation of coconuts and other crops. The Atomic Energy Commission and Defense Department plan the first phase: cleanup of radioactive debris on Bikini. The Trust Territory government assumes responsibility for the second phase: replanting the atoll, constructing houses and relocating the community.

Bikini: The radiation cleanup includes "removal of all test related debris with disposal at sea of all radioactive debris." The three dump sites are located less than one mile from islands in the atoll.

OCTOBER Bikini: The cleanup phase is finished. The phase two rehabilitation encounters serious problems with the withdrawal of military personnel and equipment and the end of weekly air service to Kwajalein.

Bikini: Following the limited radiological cleanup, Bikini is declared safe for reoccupation. The AEC states: "There's virtually no radiation left and we can find no discernible effect on either plant or animal life."

"I was disturbed by the 'demand' of the immediate commitment of all agencies, all funding and all personnel by January 21. I am sure you must realize that such a timetable is unrealistic...I am as much concerned as anyone, but I am not going to be stampeded or panicked by a January 21 deadline or strike threat..."

High Commissioner Norwood's response to proposal for action on the Ujelang crisis, 1969.

1970 FEBRUARY Ujelang: Ujelang representatives have a series of meetings with Trust Territory officials in Saipan to work out agreements on requests for Ujelang. The people are assured funds for permanent housing if it is determined within the next five years that a return to Enewetak is not possible.

MARCH Kwajalein: Untreated sewage is piped directly into the lagoon near Ebeye. A Trust Territory health report states: "...The shoreline water is grossly polluted; most of the sample points being over one million times the least acceptable standard set by Guam."

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1971 continued

therefore, stay on Majuro and one doctor comments: "The team was welcomed by the islanders who strongly desired our investigation work."

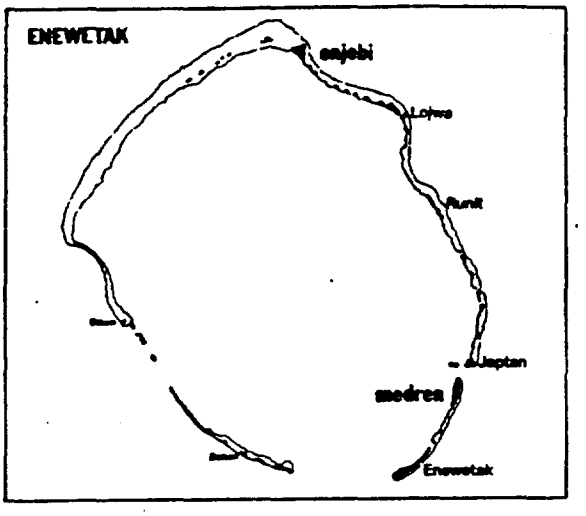
"Time and again the committee found that the people did not understand anything about their exposure, the possible effects on themselves and to their children and on their environment."
Congress of Micronesia Report on Rongelap and Utirik, February, 1973.

1972 Rongelap: An agreement is made between the Trust Territory administration and Marshall Islands elected leaders that the annual Brookhaven medical survey in March will include three Japanese medical specialists.

FEBRUARY Utirik/Rongelap: The Congress of Micronesia creates a Special Joint Committee to investigate the problems of the irradiated people living on Rongelap and Utirik Atolls.

MARCH Rongelap: After the Brookhaven medical survey ship leaves for Rongelap, Marshallese discover that the T.T. government has ignored the agreement, and only one Japanese doctor, who has no background in treatment of radiation sickness or thyroid disease, is on board. As a result, the Rongelap people refuse to allow the Brookhaven doctors to examine them, until the U.S. agrees to include independent doctors on their survey team.

1973 after completing certain "unspecified activities" currently underway on the atoll.



ENEWETAK ATOLL, SITE OF 43 ANNOUNCED NUCLEAR TESTS.

MAY Enewetak: Five Enewetak leaders and their lawyers make a brief visit to Enewetak and are shocked at the damage from the 43 nuclear tests between 1948 and 1958. Very disturbing to the leaders was the information that one-half of a 40-acre island had recently been stripped of soils in preparation for the Pacific Cratering Experiments (PACE). The initial phases of the "unspecified activities" which had already taken place included 190 holes drilled into the reefs and land for explosive charges and 86 trenches dug in different parts of the atoll, as well as detonation of six tons of explosives.

Enewetak: A draft EIS as required by

1972 DECEMBER The U.S. begins separate negotiations with the Mariana Islands toward that district becoming a U.S. commonwealth, after the rejection of this status by the rest of Micronesia. Military plans for an air base on Tinian Island are a focus of American interest in the Marianas.

APRIL Enewetak: The U.S. announces it will surrender Enewetak by the end of

NEPA was filed by the two Defense De-

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RESETTLEMENT OF PEOPLE

1974 JUNE Kwajalein: The total American population in Kwajalein Atoll is 4,114, including dependents, of which only 36 are military. 3,737 Americans live on 900 acre Kwajalein Island, with the remainder on Roi Namur (292) and four other islands. American civilians work on Kwajalein as technicians involved in the missile testing, medical corpspeople, security guards, mechanics, electricians, bartenders, cooks and other jobs needed for the operation of the missile range.

Bikini: Representatives of the Kili Council return to Bikini to inspect the new houses and review the rehabilitation progress.

SEPTEMBER Enewetak: The AEC releases the "Draft Environmental Impact Statement - Cleanup, Rehabilitation and Resettlement of Enewetak Atoll, Marshall Islands." The EIS states that radioactivity is much greater in the northern islands because a majority of the 43 nuclear blasts were conducted near these islands. Therefore, the EIS suggests no habitation in the north, although about half of the people wish to return to the northern island of Enjebi, their ancestral home. The EIS proposes dumping radioactive soil and debris from the other islands in Enewetak into an atomic bomb crater on Runit Island. The radioactive material would then be mixed with cement to form a massive concrete dome.

DECEMBER Enewetak: The Environmental Protection Agency in a review of the cleanup plan, states: "The fact that crater entombment is only a semi-permanent solution should be recognized."

Enewetak: The cleanup plan is questioned by Edward Martell, a scientist formerly involved in the nuclear testing program in the Marshalls. He expresses concern over the "very doubtful merits of proceeding with the resettlement of Enewetak Atoll on the basis of the recommendations of a Task Group assembled by the AEC and the Department of Defense. The resettlement of such sites is extremely likely to have tragic consequences, particularly for the younger members of the inhabitants..."

1975 APRIL Enewetak: Iroij (chief) Joanej Peter of Enewetak, appeals to a U. S. Senate Armed Services subcommittee to provide funding for the cleanup project, so the people can return home.

Enewetak: Lt. General Warren D. Johnson, head of the Defense Nuclear Agency, asks the U.S. Congress to fund the cleanup his agency will carry out. He cites the U.S.'s "moral commitment" to return the people to Enewetak.

JUNE Bikini: During regular monitoring of Bikini, radiological tests discover "higher levels of radioactivity than originally thought" and it "appears to be hotter or questionable as to safety," states an Interior Department representative.

Bikini: An AEC survey points out that some wells on Bikini Island are too radioactive for drinking purposes.

AUGUST Bikini: AEC data on local foods grown on Bikini Island point to the need to prohibit consumption of pandanus, breadfruit and coconut crabs.

Enewetak: The U.S. Congress refuses to approve funds to cleanup the radioactive debris on Enewetak Atoll.

Bikini: During medical tests, urine samples from the 100 people living on Bikini show the presence of low levels of plutonium 239 and 240. Dr. Conard of Brookhaven comments that these findings "are probably not radiologically significant."

OCTOBER Bikini: The Bikinians file a law suit in U.S. federal court, demanding that a complete scientific survey of Bikini and the northern Marshall Islands be conducted. The law suit maintains that the U.S. possesses and has used highly sophisticated technical equipment to measure radiation at Ene-

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1975 APRIL Rongelap: Nelson Anjain of Rongelap Atoll, participates in the first Conference for a Nuclear Free Pacific held in Suva, Fiji, seeking international support for the Marshallese. The 93 representatives of 22 Pacific and Pacific rim countries at the conference strongly endorse the Rongelap peoples' attempt to gain independent medical aid.

1976 Rongelap/Utirik: A Brookhaven report shows that to date, 20 out of 29, or 69% of the Rongelap children who were under 10 years old in 1954 have developed thyroid tumors. Of the total Rongelap population of 86 exposed in 1954, 30, or 35% have developed thyroid tumors; at Utirik, 10 out of 157 or 6% of the people who were exposed in 1954 have developed thyroid tumors.

Utirik: The people of Utirik, whose original exposure in 1954 of 14 rads was less than one-twelfth of the Rongelap peoples' exposure, suddenly show a higher rate of thyroid cancer. This thyroid cancer took 22 years to develop.

JULY Utirik: The people react angrily to this development because for 22 years the Brookhaven doctors have told the people not to expect any adverse effects from their contamination. In a letter to the Atomic Energy Commission, the Utirik people say they "are very distressed and angry as a result of the radiation. The people feel that the (AEC) program is in need of vast changes."

Rongelap/Utirik: Brookhaven's 22 year summary of medical findings points out the reason for a higher amount of thyroid cancers in the people exposed to low doses, rather than in those exposed to high doses: "...The thyroid doses in the Rongelap children (700-1,400 rads) were high enough to cause many cells to die...and thus reduce the number of cells at risk for malignant transformation. At lower doses, as in the adult group, a greater number of cells would be spared for malignant transformation."

DECEMBER Utirik: The people refuse to submit to a quarterly examination by Dr. Knudsen of Brookhaven. The L.A. Times points to a "monumental culture clash" between AEC doctors and the Utirik people as the cause of the peoples' refusal of the medical examination.

1977 JUNE Rongelap/Utirik: The U.S. Congress approves more than $1 million in compensation for the inhabitants of Rongelap and Utirik who were exposed to radiation in 1954. A payment of $25,000 will be made to anyone who has had a thyroid removed or has developed hypothyroidism; to anyone who develops a radiation related malignancy such as leukemia; and $100,000 to the survivors of any exposed person who dies. $100,000 each is set aside for Rongelap, Utirik, and Bikini for construction of community facilities. The law provides that: "A payment made under the provisions of this section shall be in full settlement and discharge of all claims against the U.S. government." $1,000 is to be provided to each of the original 157 Utirik people exposed to radiation in 1954.

1978 AUGUST Northern Marshalls: A Department of Energy (DOE) report reveals that in addition to Bikini, Enewetak, Rongelap and Utirik, ten other atolls or single islands "received intermediate range fallout from one or more of the megaton range tests," including Ailinginae, Ailuk, Bikar, Jemo, Likiep, Mejit, Rongerik, Taka, Ujelang, and Wotho. This information, that at least 1,600 more Marshallese were contaminated with radiation, is not released until 20 years after the nuclear testing stopped.

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1975 continued

wetak, but has refused to employ it at Bikini.

Kwajalein: The Trust Territory begins "Operation Exodus," an attempt to get unemployed people to leave overcrowded Ebeye and return to their home islands. About 300 people leave voluntarily. More people, however, continue to migrate to Ebeye; others refuse to leave. Operation Exodus fails to reduce the population.

Kwajalein: Of the 7,049 people on Ebeye, only 53% (3,717 are from Kwajalein Atoll, while 3,067 are from other atolls in the Marshalls, 167 from other parts of Micronesia, 27 are from Kiribati and Tuvalu and 71 from the U.S.

Kwajalein: A severe outbreak of flu followed by many cases of spinal meningitis on Ebeye leaves 12 dead and two children with permanent brain damage.

DECEMBER Bikini: The U.S. agrees to conduct an aerial radiation survey of the northern Marshalls as a result of the Bikinians' law suit. Three years of bureaucratic infighting follow among the departments of State, Interior and Energy (formerly AEC) over the costs and which agency will take responsibility for the survey.

"As with the shortage of water, the lack of proper sanitary facilities is a major cause of the high rate of sickness on Ebeye. Additionally, foul odors and visible pollution are part of the normal environment in which people must live and work and the children must play."

"Ebeye Redevelopment" Study, Trust Territory Government, April 1978.

1976 Kwajalein: The more than 1,000 Marshallese work on Kwajalein primarily at service and maintenance jobs: office clerks, equipment operators, taxi drivers, gardeners, cooks, etc., to keep the missile range functioning.

Kwajalein: Mid-Corridor landowners and the U.S. sign the first five year extension of the 1970 agreement for use of their islands. The new agreement calls for payment by the U.S. of $704,000 a year ($352 per capita based on 2,000 eligible).

JULY Kwajalein: U.S.House of Representatives subcommittee on Territorial and Insular Affairs holds hearings on Ebeye and Majuro chaired by Rep. Patsy Mink. After hearing Marshallese testimony about job and pay discrimination on Kwajalein, Ebeye residents' limited access to the excellent Kwajalein hospital and the social problems from overcrowding on Ebeye, Rep. Mink calls the situation on Ebeye "a patent violation of basic human rights," and demands strong corrective action on the parts of the Defense and Interior Departments. No action follows.

Enewetak: The U.S.Congress approves funding for the Enewetak cleanup, to be coordinated by the Defense Nuclear Agency. Congress authorizes $20 million and military logistic support for the massive cleanup, scheduled to take three years.

1977 MARCH Enewetak: About 50 of the Enewetak people who have lived on Ujelang in a U.S.-imposed exile since 1947, returned to Japtan Island in southern Enewetak Atoll to help in the rehabilitation program.

MAY Enewetak: The cleanup operation at Enewetak begins. About 700 Army men and civilians arrive for the first phase. The cleanup must remove an estimated 125,000 cubic yards of non-contaminated debris, to be dumped in the ocean, and about 100,000 cubic yards of soil and debris contaminated with plutonium and other radionuclides, to be put in a bomb crater on Runit Island and sealed with a cement cap.

Bikini: The level of radioactive strontium 90 in well water on Bikini Island is found to exceed the U.S. maximum limits.

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1978 continued

"The theory was put forth that Utirik received low radiation so a detailed follow up was not necessary. Now the facts of the thyroid cancer at Utirik have strongly shown that the theory was wrong. The people ask if this thyroid problem has suddenly occurred, is it not possible that the experts have been wrong for so many years and that more problems will occur in the future?"

Konrad Kotrady, M.D., a former Brookhaven resident physician in the Marshall Islands.

SEPTEMBER Northern Marshalls: A radiological survey of the Northern Marshall Islands, forced by the Bikinians' 1975 lawsuit, begins with Lawrence Livermore Laboratory scientists (on contract with the DOE) collecting soil, water and food samples.

1979 FEBRUARY Rongelap: Following completion of the Northern Marshalls radiological survey, DOE scientists warn Rongelap people not to visit or gather food on the northern islands in their atoll because of unsafe radiation levels.

MAY Kwajalein: Marshall Islands Government representatives, during a Defense Department briefing in Washington, D.C. learn that missiles fired into Kwajalein lagoon contain radioactive uranium.

1980 APRIL Rongelap: John Anjain and Julian Riklon from Rongelap participate in the first Citizens' Hearings for Radiation Victims in Washington, D.C. The Hearings provide an opportunity for exchange among and publicity for radiation victims, including: military veterans exposed to nuclear testing, nuclear power workers, miners and others exposed to uranium, and civilians exposed to N-testing near the Nevada Test Site.

MAY Rongelap/Utirik: Nelson Anjain, Lijon Eknilang and Almira Matayoshi from Rongelap, Norman Matthew from Utirik and Alvin Jacklick from Kwajalein, take part in the Nuclear Free Pacific Conference/1980 in Hawaii. The conference endorses proposals for supporting and carrying out a medical survey independend of the Brookhaven (DOE) program.

MAY Northern Marshalls: The U.S. Congress approves Public Law 96-205, directing the Secretary of the Interior to provide a medical program for the people of Bikini, Enewetak, Rongelap, Utirik and any other islands who may be found to be suffering from radiation related illnesses.

JULY Northern Marshalls: An American medical doctor, Reuben Merliss, visits the Marshall Islands for two weeks, interviewing and informally examining people from different atolls. He reports: "The people...have no great

PREPARING COPRA (DRIED COCONUT) FOR MARKET.
Photo by Robert Wenkam.

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1977 continued

JUNE Bikini: A Department of Energy (DOE) study based on 1975 data states: "All living patterns involving Bikini Island exceed Federal (radiation) guidelines for 30 year population doses."

OCTOBER Bikini: U.S. scientists record an 11-fold increase in radioactive cesium 137 in the 130 people living on Bikini, who are taking in higher than "acceptable" concentrations of cancer causing radiation from the water and food growin in the island's still radioactive soil.

Bikini: The DOE tells the people living on Bikini Island to eat only one coconut per day, rather than their normal 5 to 10, and begins sending in all food for consumption to Bikini.

Bikini: Trust Territoy field trip ship service to Bikini is erratic. Food imports arrive late forcing people to eat the radioactive foods grown on Bikini.

Kwajalein: Although the Ebeye Field Hospital is just three years old, its iron roof is deteriorated and leaking badly. During rainstorms the inside of the hospital is flooded with one to two inches of water.

DECEMBER Kwajalein: Handel Dribo leads 40 landowners in an occupation of Omelek and two other small islands in the Mid-Corridor, protesting lack of compensation for their use by the Army. Although these islands are in the Mid-Corridor, they are not covered by the 1970 lease agreement. The Marshallese withdraw after U.S. officials promise a prompt settlement.

1978 JANUARY Kwajalein: A study by Dr. William Alexander, "Wage Labor, Urbanization and Cultural Change in the Marshall Islands" cites the reasons people live on Ebeye: 1) many families are supporting their children in high school or college with wages earned at Kwajalein; 2) while the hospital care is "appalling" by U.S. standards, it is better than on the outer islands; 3) the entertainment provided by bars, TV, films and other activities is attractive; 4) many find work at Kwajalein exciting and it has the highest rate of pay available in Micronesia.

"...At Kwajalein 7 American trained and licensed physicians care for a population of approximately 3,000 residents. At Ebeye one Trust Territory physician and one volunteer physician care for a population estimated to be 7,000 to 8,000."

Konrad Kotrady,M.D., U.S.House Territorial and Insular Affairs Subcommittee Hearings, Majuro, July 14, 1976.

Kwajalein: The Alexander study notes that while American civilian employees of the missile range can shop at all the stores with subsidized low prices on Kwajalein (average of 35-50% less than Ebeye prices), similar to a military post exchange, Marshallese KMR employees cannot.

MARCH 1 Kwajalein: With negotiations at a standstill, Handel Dribo leads a reoccupation of Omelek. Lack of compensation, only limited access to his islands for food growing and overcrowding on Ebeye force Dribo's action.

"Bikini may be the only global source of data on humans where intake via ingestion is thought to contribute the major fraction of plutonium body burden...It is possibly the best available source of data for evaluating the transfer of plutonium across the gut wall after being incorporated into biological systems."

Lawrence Livermore Laboratory Study on Bikini, 1977.

APRIL 7 Kwajalein: The U.S.Ambassador to the Micronesian Status Negotiations,

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1980 continued

faith in these (DOE) physicians...I am also impressed with the failure of the physicians to communicate findings and prognosis to the people...These basic rights of a patient have been in a large part ignored...I found very few Marshallese who were acquainted with the nature of their pathology. I reject firmly the thought that the people were too primitive or uneducated to absorb such information, since I have found this not to be true."

OCTOBER U.S.: Scientists with the U.S. Center for Disease Control report that the number of leukemias found in servicemen exposed to the "Smoky" nuclear test in 1957 is almost three times the expected rate.

"For me and the other people on Rongelap, it is life which matters most. For you it is facts and figures. We want our life and our health. In all the years you've come to our Island, you've never once treated us as people. You've never sat down among us and really helped us honestly about our problems. You have told people that the 'worst is over,' then Lekoj Anjain died. I am very worried that we will suffer again and again."

Nelson Anjain, Magistrate of Rongelap in a 1975 letter to Dr. Robert Conard, Brookhaven National Laboratory.

DECEMBER Northern Marshalls: Loma Linda University completes a study for the Interior Department on the proposed medical program according to PL 96-205. At an Interior Department-sponsored meeting in Washington, D.C., spokespeople for the Marshall Islands Government state their "most strenuous exception to the statement in...the Loma Linda report that 'there are minimal radiation related health effects evident in the Marshalls.' The statement in the report apparently was based entirely on a cursory review of incomplete medical records, brief interviews with a limit-

PACE HEARING ON UJELANG - 1973

Seven PACE military and civilian personnel, Trust Territory officials, interpreters, hearing officers, reporters and others arrived by ship at Ujelang to find the community well prepared for their visit. People come out in small boats wearing cardboard signs saying "ENANA PACE" (PACE IS BAD). The Americans go through a welcoming arch to shake hands with the entire community, many of whom are wearing "ENANA PACE" signs.

PACE officials did not take the prospect of opposition seriously. "Local opposition is a fact of life in so many military projects," comments one PACE representative.

The Americans spend a day and a half presenting slide shows, films and photographs of proposed PACE high explosive tests. They argue that "the tests would help to protect the free world and were thus in the interest of all present."

The Enewetak magistrate responds to PACE officials: "My people and I ...do not like PACE; we do not want PACE to continue; and we want you to take this message to your people." The magistrate said if PACE is as safe for the atoll as the Americans say it is, President Nixon and High Commissioner Johnston should be told this and the PACE tests could take place near the White House and the Commissioner's residence. During occasional pauses in the magistrate's speech, the people respond in unison with a resounding "PACE is BAD."

Other members of the community speak, questioning the morality of PACE and suggesting that if the Americans went ahead they would sail to Enewetak to be killed in the explosions. At the end, the magistrate thanked the Americans for coming, and presented gifts of handicrafts to them; the people sang three songs, one "Oh, how I love my atoll" in a very emotional conclusion. The Americans were taken aback, one commenting, "What the hell is going on here?"

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1978 continued

Peter Rosenblatt, agrees to renegotiate U.S. payments for use of Kwajalein, ending the occupation of the Mid-Corridor Islands.

APRIL Kwajalein: A Trust Territoy study, "Ebeye Redevelopment, Gugeegue and Carlson Development" again reveals serious public health hazards on Ebeye:

- 8,000 people live on just 66 acres, giving it an extrapolated population density of 65,000 people per square mile (compared to Washington, D.C. with 12,400 per square mile);
- Most of the housing is substandard and deteriorating;
- 36% of the available work force is unemployed;
- More than 50% of the people are under 14 years old;
- The Ebeye Hospital is "in poor condition" and "equipment, supplies and staffing are also major problems...;"
- The electrical power plant "system is severely limited and results in numerous brownouts...."

Kwajalein: The American population on Kwajalein Island is estimated at 3,000. The amenities provided for the Americans include air conditioned housing, a hospital staffed by seven medical doctors, a high school, tennis and handball courts, swimming pools, parks, a golf course, bowling alley, teen club and free movies.

Kwajalein: Ebeye has one basket ball court and a baseball field, and no other recreational facilities. To gain access to Kwajalein, Marshallese must obtain a visitors pass issued in limited numbers for business purposes, such as going to the airport, bank or Trust Territory office.

Bikini: Medical examinations reveal radiation levels in many of the 139 people on Bikini well above the U.S. maximum "permissible" level.

MAY Bikini: Interior Department officials describe the 75% increase in radioactive cesium found in the people as "incredible." Interior Department announces plans to move the people from Bikini "within 75 to 90 days."

JULY Kili: Department of Interior official John DeYoung describes Kili Island's school, community facilities and homes as being "awfully shabby." Because Kili has been considered the Bikinians temporary home since 1948, little money has been appropriated for upkeep and maintenance of houses, or for building permanent community facilities.

SEPTEMBER Bikini: Trust Territory officials arrive at Bikini to re-evacuate the 139 people living on the atoll.

Bikini: The Northern Marshalls radiological survey, forced by the Bikinians' 1975 lawsuit, is finally begun, after the people are relocated from Bikini.

Kwajalein: An annual Interior Department report states: "No segregation... exists in the Trust Territory in either the public or the non-public schools. Children of any race, religion or color may attend any school...in the Trust Territory." Marshallese living on Ebeye cannot send their children to high school on Kwajalein, however, even though Ebeye doesn't have one.

"On July 4th, 1976, only a matter of hours after T.T.Acting High Commissioner Peter Coleman had finished telling the United Nations Trusteeship Council there was no segregation at Kwajalein (a statement he would not dare make on Ebeye), the command of Kwajalein Missile Range celebrated the Americon Bicentennial by closing Kwajalein Island to any Marshallese ...So American Independence was celebrated at Kwajalein Atoll by enforcement of all out and total segregation."

Congress of Micronesia Representative Ataji Balos, July, 1976.

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1980 continued

ed number of Marshallese citizens and a quick reading, without independent analysis, of reports prepared by the Brookhaven National Laboratory."

"According to (a DOE) survey... the radiation on Rongelap, especially in the northern part of the atoll, is higher than the level of radiation on Eneu in Bikini...We are told by DOE doctors not to eat the food on the land and fish in the ocean near these islands.... More alarming is the fact that we have been eating the food and living on these islands since the AEC told us it was safe in 1957."

John Anjain, former magistrate of Rongelap, 1980.

JANUARY The Marshall Islands and the U.S. initial a Compact of Free Association, indicating general approval of this status, which gives the Marshall Islands control over their internal and foreign affairs, to the degree that this control doesn't conflict with U.S. authority for security and defense.

1981 U.S.: American ex-military men exposed to radiation during nuclear tests at Bikini and Enewetak, report an increasing rate of sickness in themselves and their children, including dizzy spells, continuous fatigue, leg and back aches, skin problems, tumors, cataracts, cancers, sterility, and deformed and mentally retarded children. Many of these problems began within weeks or months of their radiation exposure, but the U.S. Veterans Administration refuses to acknowledge these disabilities as "service-related."

APRIL Northern Marshalls: The Marshall Islands Atomic Testing Litigation Project, a consortium of U.S. law firms, announces the filing of multi-million dollar personal injury claims against the U.S. government on behalf of more than 600 Marshallese; approximately 1,500 more individual lawsuits will be filed, state the attorneys. In addition, cases seeking compensation for loss and damage of land for 13 atolls and one island in the northern Marshalls will be filed.

MAY Rongelap: Senator Jeton Anjain, a member of the Marshall Islands Nitijela (legislature) attends the Radiation Victims Hearings in Salt Lake City, Utah. The Hearings primarily focus on civilians and servicemen who were exposed to radiation from the Nevada nuclear test site.

"There was a general complaint of diming vision some five or six years ago on Utirik, probably due to an increased incidence of cataracts. None of the people from Utirik that I spoke to told me that any physician examined their eyes in such a way as to be able to recognize cataracts. Instead, I was told that two boxes of eyeglasses were shipped to the island being of various models and frames, and the people were to come in and choose whichever eyeglass seemed to help them. And this was the sum of investigation and treatment of the eye problems—of what I think is a unique epidemic of cataracts. American citizens would not likely tolerate such handling. At least my patients would not."

Rueben Merliss, M.D., following a July, 1980 visit to the Marshall Islands.

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1978 continued

NOVEMBER Kwajalein: Ebeye Public Works Director, Ching Yee, writes to the High Commissioner requesting immediate action be taken to upgrade the rapidly deteriorating Ebeye sewer system.

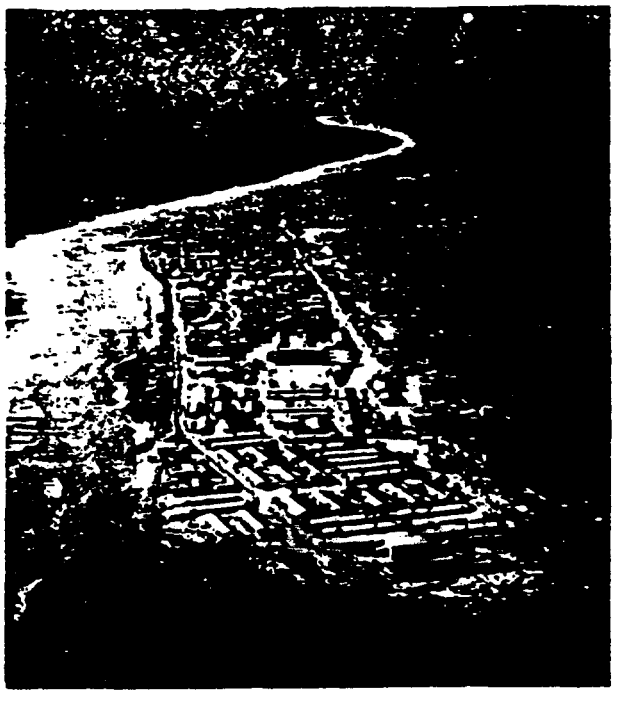
1979 MAY Kwajalein: Trust Territory headquarters does not respond to the November request for help and the entire sewer system on Ebeye collapses. Senator Imada Kabua, a resident of Ebeye, reports "when I flush my toilet, waste water gushes into my sink."

Bikini: Representatives of the Bikinians travel to Hawaii and meet with state government officials to discuss the possibility of their relocating the entire Bikini community on the island of Hawaii. Later, the Bikinians visit Wake and Midway islands as well as other islands in the Marshalls seeking an alternative to Kili. The search proves unfruitful.

JULY Kwajalein: Hundreds of Kwajalein Island, Mid-Corridor and Roi Namur landowners occupy their off limits islands in the missile range, protesting unlivable conditions on Ebeye.

Kwajalein: The Roi Namur people were given no compensation when they were relocated. As the occupation of Roi Namur begins, the Marshallese, led by Senators Imada Kabua and Jolle Lojkar, are confronted as they land on the beach by American security guards. Kabua is clubbed by a security guard and sustains a five-inch bruise on his ribs. No further incidents occur; the two week occupation ends when the U.S. agrees to renegotiate the 1964 Kwajalein Island lease and to provide compensation to the people of Roi Namur.

Bikini: After reviewing the results of the aerial radiological survey of Bikini, an Interior Department representative states: "...The new data reaffirmed that Bikini Island could not be used by the people of Bikini for at least the next 30 years and possibly the next 60 years....The island of Eneu must be placed off limits...for at least another 20-25 years."



MORE THAN 8,000 MARSHALLESE LIVE ON TINY 78-ACRE EBEYE ISLAND; KWAJALEIN ISLAND, THREE MILES AWAY, IS AT THE TOP OF THE PHOTO.

SEPTEMBER Kwajalein: Kwajalein Atoll landowners sign a one-year lease agreement with the U.S. providing them with $9.9 million in compensation.

Enewetak: The massive 370-foot wide concrete dome covering the plutonium contaminated soil and other debris is completed on Runit Island. Runit will be off limits forever.

Enewetak: The DOE publishes (in both Marshallese and English) a full color information booklet entitled "The Enewetak Atoll Today," about the radiological status of the atoll. It is criticized by Marshallese from different islands as attempting to minimize the potential hazards to the people if they return.

Enewetak: Two Brookhaven National Laboratory scientists, Drs. Michael Bender and Bertrand Brill, hired by Micronesian Legal Services to advise the Enewetak people, state in a meeting with the Enewetakese that a return

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CONCRETE DOME COVERING RADIOACTIVE DEBRIS ON RUNIT ISLAND, ENEWETAK

Defense Nuclear Agency Photo

"Minute amounts of plutonium are expected to be released through the geological formation (dome on Runit Island). These, however, will be small and insignificant compared to the amounts already in the lagoon."

Defense Nuclear Agency, EIS, April, 1975.

1979 continued

to northern Enjebi Island poses little health threat to the people: "Cancer mortality in the lifetime of the population is estimated to be less than a single (additional) case."

"The people of Kwajalein do not recognize the validity of that lease. When it was negotiated, the Army promised to help the people of Ebeye with social and economic problems. So did the Trust Territory. That lease was signed on the basis of those promises. Those promises have not been kept."
Marshall Islands Representative Ataji Balos, 1976.

Enewetak: The 200 inhabitants of Enjebi Island vote to return to their island in the north, despite the recommendation of the representatives of the DOE and the Interior Department against resettlement of Enjebi at this time because of the higher radiation levels still present from the ten nuclear tests conducted on the one-third of a square mile island.

1980 MARCH Enewetak: The Defense Nuclear Agency announces that the Enewetak cleanup is finished. The total cost of the cleanup and rehabilitation (replanting, house construction, etc.) phases is $218 million.

APRIL Enewetak: The entire Enewetak population returns for ceremonies marking their long awaited return to their atoll.

MAY Enewetak: The Enewetak Atoll Master Plan designates islands within three miles of off limits Runit Island as safe for picnics and food gathering.

MAY Kwajalein: The commander of Kwajalein Missile Range, Colonel Peter Wittereid, following the recommendation of the CIA, authorizes Kwajalein security police to search Marshallese who enter and leave Kwajalein, Any government merchandise, in particular "unauthorized retail goods purchased from the inexpensive Kwajalein stores, found in Marshallese belongings are confiscated.

SEPTEMBER Bikini: The DOE publishes in Marshallese and English a full color booklet entitled: "The Meaning of Radiation at Bikini Atoll."

OCTOBER Bikini: DOE scientists call a meeting to present the booklets to the Bikini people living on Kili. It says that the exposure of the Bikini people would be within U.S. radiation standards if they return to Eneu Island at Bikini, import 50% of their food and spend not more than 10% of their time on Bikini Island. Then Senator Henchi Balos asks the DOE scientists why they now have this position when just two years ago government officials said Eneu Island would be off limits for 20 to 25 years. The scientists reply that they have no knowledge of such statements.

"The population of Enewetak has the right to know that a value judgement has been made for them, namely that induction of cancer is their only concern. They may, if informed about hypothyroidism, aplastic anemia, premature aging, benign tumors and other such disorders, make a different judgement."
Dr. Rosalie Bertell, commenting on the Bender and Brill Enewetak study (see 1979).

Enewetak: Actual resettlement begins with about 500 people moving to three of the southern islands: Medren, Japtan and Enewetak.

DECEMBER Enewetak: The Interior Department urges the Congress to approve and set aside funds for a resettlement of Enjebi Island at a future date when radiation levels drop to "permissible" levels.

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(continued on page 38)

1981 JANUARY Kwajalein: U.S. and Marshall Islands government negotiators make public an agreement drafted as part of the Free Association Compact which will give the U.S. "free access to and unrestricted control" of the Kwajalein Missile Range for 30 years, with 100 year authority for military "denial" (the right to foreclose access to Kwajalein to any third nation for military purposes).

"The United States told us in 1978, when we were moved from Bikini a second time, that it would 'undertake a program for the permanent rehabilitation of Kili.' No action has been taken in over two years to make Kili a permanent home..."
Senator Henchi Balos, Bikini Atoll, 1981.

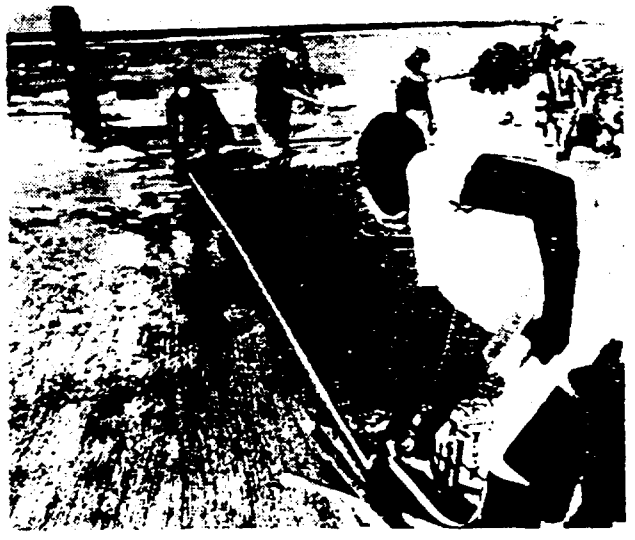
MARCH Kwajalein: Senator Imada Kabua, a Kwajalein landowner, criticizes the draft Missile Range agreement because it contains "no language about how we are going to be treated as people." Kabua states that Kwajalein landowners were not included in the negotiations and he is "concerned that there may be 30 more years of treatment as second class people in our homeland, with one standard of living for the Americans who live on Kwajalein and another for the Marshallese community on Ebeye."

Enewetak: Approximately 100 Enewetak people return to Ujelang after living on Enewetak since October. They cite lack of coconuts and other fresh fruits available, nothing to do on Enewetak and fear of remaining radiation on the island.

Bikini: The Bikinians file a class action suit against the U.S. government seeking $450 million in compensation. The suit charges, among other things, that the U.S. "breached its fiduciary obligations to the Bikinians by failing from 1972 to 1978 to conduct a thorough radiological survey of Bikini...even though it a) allowed the Bikinians to remain at the atoll and receive potentially dangerous amounts of radiation; and b) knew as early as 1974 that serious questions existed as to the atoll's safety."

MAY Bikini: The Marshall Islands government confirms that it was approached by the Japanese government about the possibility of using Bikini to store nuclear waste. Bikini representatives, not officially notified of the discussions, express "shock" at the proposal.

Enewetak: Enewetak leaders petition the United Nations Trusteeship Council to continue the Trusteeship arrangement with the U.S. after the agreement has been terminated for the rest of Micronesia.



U.S. ARMY MEN CONSTRUCTING DOME ON RUNIT ISLAND, ENEWETAK; PAPER RESPIRATORS ARE WORN TO PREVENT INHALATION OF PLUTONIUM PARTICLES. Defense Nuclear Agency Photo.

JUNE Kwajalein: A U.S. District Court judge, in response to Kwajalein resident Kinoj Mawilon's lawsuit seeking a court order stopping the U.S. Army's "search and seizure" policy against Marshallese, rules in favor of the Army, noting that the "base commander has in-

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herent authority to protect its security and integrity." The decision also states that the Marshall Islands is "now a sovereign nation," and that the Kwajalein issue "involves policies...made by the highest levels of government and no individual citizen has standing to challenge it...only the Marshallese Government can complain."

JUNE Kwajalein: Atoll landowners, not included in negotiations that drafted the proposed Kwajalein base agreement between the U.S. and Marshall Islands governments, respond with a 9-point resolution which states, "its members will not...grant any use of Kwajalein Atoll unless and until the Base Operating Rights Agreement...is limited to a term of 15 years," including a provision for review of the agreement every five years. Additionally, the resolution states future U.S. use of Kwajalein is contingent on "the development of a master plan to construct a decent Marshallese community on the Atoll, payment of full and fair compensation" for land used since 1944, and "agreement by the U.S. not to resume the search and seizure policy adopted ... in May 1980."

JUNE Enewetak: The Appropriations Committee of the U.S. House of Representatives does not approve funds (estimated at $10 million) for the resettlement of Enjebi Island in northern Enewetak.

MARSHALLESE CHILDREN ON EBEYE ISLAND
Photo by Monica Fadley

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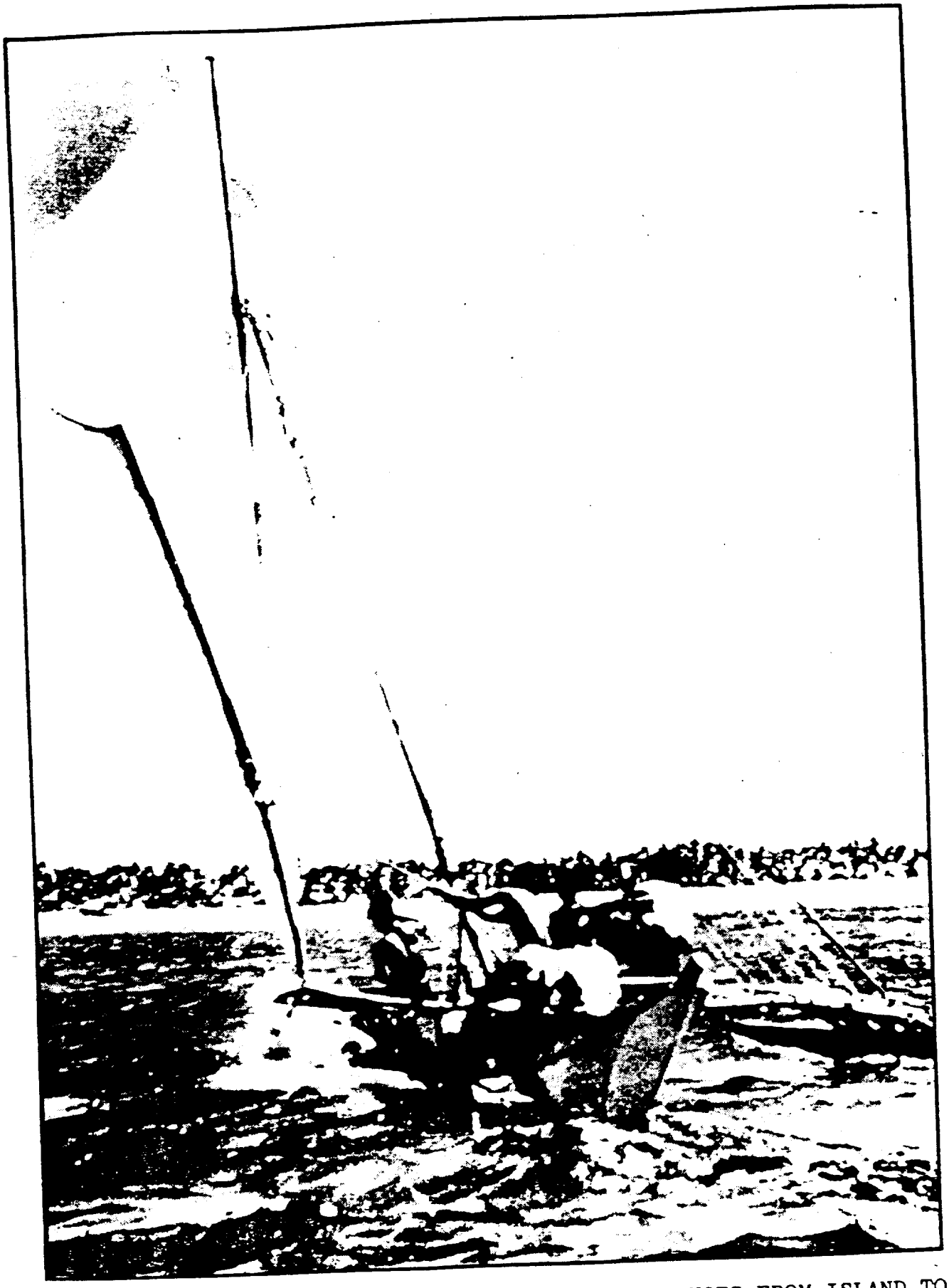

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