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Department of Energy

Pacific Area Support Office

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Honolulu, HI 96820

6 FEB 1986

Addressees

OPERATIONS PLAN NO. 86-3, FY 1986, LLNL/BARC TO BIKINI ATOLL; LLNL TO ENEWETAK AND RONGELAP ATOLLS - FEBURARY 4-MARCH 5, 1986

The enclosed Operations Plan has been coordinated with Dr. William Robison(LLNL); BARC; and DOE Coordinator, Kwajalein.

Any travel changes are to be made directly with H&N/PO, Travel, Jimmy Foard, phone (808) 4229241.

Any other additions, changes or questions should be directed to Bill Jackson, phone (808) 4229211.

W. G. Jackson
for: J. H. Dryden
Director

OP-072:WDJ

Encl:
Operations Plan No. 86-3

DOE, John Rudolph's files, box

Addressees

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Kittie Baier, Deputy Assistant Secretary, Territorial & International Affairs, DOI
Hon. Janet McCoy, HICOM, TTPI
Hon. Oscar deBrum, Chief Secretary, REPMAR, Majuro
Hon. Charles Dominick, Minister, Foreign Affairs, Majuro
Hon. Henchy Balos, Senator, The Nitijela, Majuro
Hon. Jetan Anjain, Senator, The Nitijela, Majuro
Hon. Ismael John, Senator, The Nitijela, Majuro
Larry Morgan, Territorial & International Affairs, DOI
Dr. Henry Kohn, Chairman, BARC
Jonathan Weisgall, Esq.
John Rudolph, DP-224, DOE/HQ
Ralph Waltz, Bikini Liaison Office
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Dr. James Maragos, Corps of Engineers
Michael J. Senko, U.S. Status LNO, Majuro
Dr. W. Robison, LLNL
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Col. William Spin, Cmdr., KMR
Dr. Keith Chave, University of Hawaii
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Capt. Keith Coberly, USO, Kwaj.
Jiba Kabua, Chief Secretary's Rep., REPMAR, Kwaj.
Lance Yamaguchi, DOE Coordinator, Kwaj.
Reynold deBrum, DOE Coordinator, Majuro
Stan Miyasato, Manager, Field Station, Enewetak
Jeff Helgoe, Field Station, Bikini
H&N/PO (Kronsbein, Hiner, Ulrich, Grewe, Koga, Foard)
H. U. Brown, A/MOCO, NV
W. D. Jackson, DOE/PASO

OPERATIONS PLAN
Mission No. 3, FY 1986
Bikini, Enewetak, and Rongelap Atolls

I. BACKGROUND AND PURPOSE

Lawrence Livermore National Laboratory (LLNL) on behalf of DOE, conducts terrestrial investigations to measure and analyze radionuclides in the environment at Bikini and other atolls in the Marshall Islands. From these investigations, dose assessments to man are formulated and the results are made available to Bikinians, their Government and other interested entities. Another major aspect of the program is to conduct experiments aimed at reducing the inventory of radionuclides in the soil so as to otherwise limit their entrance into the food chain.

The Bikini Atoll Rehabilitation Committee (BARC) established in 1982 through the Department of the Interior, is authorized and funded by the U.S. Congress to study and report on the feasibility and cost of rehabilitating Bikini Atoll. A significant task of BARC is to investigate how radioactive contamination of Bikini can be reduced while at the same time respecting the Atoll's biological and environmental integrity.

Since the scientific objectives of the LLNL and the recommendations of the BARC are so complementary and similar with respect to Bikini Atoll, the two organizations have agreed to collaborate on scientific field work on Bikini, under DOE sponsorship. The mission and objectives, which are for the most part outgrowths of previous work conducted by LLNL at Bikini, are described below.

II. WORK TO BE PERFORMED

A. Enewetak Atoll

1. Collect samples from all bearing trees in the Enjebi Garden.
2. Put up new satellite station on Enjebi Island.
3. Collect samples from permanent sites on Belle, Clara, Daisy, and Irene.
4. Collect samples from coconut trees planted on Olive, Pearl, Sally, Tilda, Ursula, and Vera.

B. Bikini Atoll

1. Bikini Island

- a. Sample coconut trees from the large scale N, P, K. experiment.
- b. Sample coconuts from new irrigation site.

- c. Sample all wells including the new irrigation site and Frank Peterson wells.
 - d. N, P, K applications on N, P, K site.
 - e. N, P, K applications on permanent "high K" trees.
 - f. Collect samples from the irrigation plot.
 - g. Collect samples from the irrigation control plots.
 - h. Collect samples from the excavation plot.
 - i. Collect samples from the excavation control plot.
 - j. Preliminary layout of the new irrigation experiment.
 - k. Gamma spectroscopy around permanent trees and the irrigation plot.
2. Eneu Island
- a. Collect samples from the garden plot.
 - b. N, P, K application to permanent "High K" trees.
 - c. Collect a composite coconut sample from Eneu Island.
 - d. Repair drip irrigation system.
 - e. Gamma spectroscopy around permanent trees.
- C. Rongelap Atoll
- 1. Explore Rongelap, Eniaetok, and Kabelle Islands to locate University of Washington sites sampled in 1959.
 - 2. Collect all vegetation samples available at those sites which correspond to collections made in 1959.
 - 3. Collect appropriate soil samples.

III. PERSONNEL

A. H&N Advance Mission Party

- 1. Jeff Helgoe (on station)
- 2. Manny Sproat (on station)
- 3. Wayne Olival (arrives 5 February)
- 4. Ken Selk (arrives 5 February)

5. Wilson Note (arrives 5 February)
6. Ed Madison (arrives 5 February)
7. Aitti Almen (arrives 5 February)

B. Regular Mission Party

H&N

1. Kent Hiner, Group Leader
2. John Pico
3. Leo Migvar
4. Ed Fox

DOE

1. Harry Brown
2. Curt Schryer
3. Reynold deBrum

LLNL

1. Dr. William Robison, Party Chief
2. Marshall Stuart
3. Jim Johnson
4. John Rehder
5. William Phillips
6. Cleo Fry
7. Bruce Clegg
8. Bobby Smith

BARC

Dr. Earl Stone

University of Washington

1. Stan Gessel
2. Dick Walker

3. Lynn Melby

University of Hawaii

Mark Underwood

Local Temporary Hire

1. Wilson Note
2. Ed Madison
3. Aitti Almen
4. Stanley Johnny
5. Francis Harry
6. (Unnamed)
7. (Unnamed)
8. (Unnamed)

IV. ITINERARIES^{1/}

<u>Name</u>	<u>Organ.</u>	<u>Ar</u> <u>Kwaj</u>	<u>Lv</u> <u>Kwaj</u>	<u>Ar</u> <u>Enew</u>	<u>Ar</u> <u>Bik</u>	<u>Lv</u> <u>Bik</u>	<u>Ar</u> <u>Kwaj</u>	<u>Lv</u> <u>Kwaj</u>
Helgoe	H&N	(on station Bikini)						
Sproat	H&N	(on station Bikini)				2/14	2/14	2/14
Olival	H&N	2/4	2/5	--	2/5	3/5	3/5	3/5
Selk	H&N	2/4	2/5	--	2/5	3/5	3/5	3/5
Note	H&N	2/5	2/5	--	2/5	3/5	3/5	3/5
Madison	H&N	2/5	2/5	--	2/5	3/5	--	--
Almen	H&N	2/5	2/5	--	2/5	3/5	--	--
Hiner	H&N	2/13	2/14	--	2/14	2/28	2/28	2/28
Pico	H&N	2/13	2/14	--	2/14	3/5	3/5	3/5
Fox	H&N	2/27	2/28	--	2/28	3/5	3/5	3/5
Migvar	H&N	2/13	2/14	--	2/14	3/5	3/5	3/5
Brown	DOE	2/13	2/14	--	2/14	2/19	2/19	2/19
Schryer	DOE	2/18	2/19	--	2/19	2/28	2/28	2/28
R. deBrum	DOE	2/18	2/19	--	2/19	2/28	2/28	2/28
Robison	LLNL	2/4	2/5	2/5	2/14	2/28	2/28	2/28
Stuart	LLNL	2/4	2/5	2/5	2/14	3/5	3/5	3/5
Johnson	LLNL	2/4	2/5	2/5	2/14	3/5	3/5	3/5
Rehder	LLNL	2/4	2/5	2/5	2/14	3/5	3/5	3/5
Phillips	LLNL	2/4	2/5	2/5	2/14	3/5	3/5	3/5
Fry	LLNL	2/4	2/5	2/5	2/14	3/5	3/5	3/5
Clegg	LLNL	2/4	2/5	2/5	2/14	3/5	3/5	3/5
Smith	LLNL	2/4	2/5	2/5	2/14	3/5	3/5	3/5
Stone	BARC	2/13	2/14	--	2/14	3/5	3/5	3/5
Gessel	UW	2/13	2/14	--	2/14	3/5	3/5	3/5
Walker	UW	2/13	2/14	--	2/14	2/28	2/28	2/28
Melby	UW	2/13	2/14	--	2/15	3/5	3/5	3/5

^{1/} Unless otherwise indicated, all dates are U.S./Kwajalein dates.

<u>Name</u>	<u>Organ.</u>	<u>Ar Kwaj</u>	<u>Lv Kwaj</u>	<u>Ar Enew</u>	<u>Ar Bik</u>	<u>Lv Bik</u>	<u>Ar Kwaj</u>	<u>Lv Kwaj</u>
Underwood	UH	2/13	2/14	--	2/14	2/28	2/28	2/28
Johnny	H&N	2/5	2/5	2/5	2/14	3/5	3/5	3/5
Harry	H&N	2/13	2/14	--	2/14	3/5	3/5	3/5
3 Workers	H&N	2/13	2/14	--	2/14	3/5	3/5	3/5

V. TRANSPORTATION SCHEDULE

A. AMI Aircraft

2/5 Regular 748 flight, Kwajalein to Enewetak with diversion to Bikini

2/14 Dornier double-charter flight, Kwajalein to Enewetak to Bikini and Kwajalein to Bikini to Kwajalein

2/19 Regular 748 flight, Kwajalein to Enewetak with diversion to Bikini

2/28 Dornier charter flight, Kwajalein to Bikini to Kwajalein

3/5 Regular 748 flight, Kwajalein to Enewetak with diversion to Bikini

B. M.V. Liktanur III

2/13 Lv Kwajalein
 2/14 Ar Bikini
 2/19 Lv Bikini
 2/20 Ar Rongelap
 2/24 Lv Rongelap
 2/25 Ar Bikini
 3/5 Lv Bikini
 3/6 Ar Kwajalein

VI. LOGISTICAL SUPPORT REQUIREMENTS

A. H&N

1. Hire and pay salaries of up to eight Marshallese field workers for mission. Secure local SSN from Ralph Waltz in Majuro and/or Lance Yamaguchi in Kwajalein.
2. Arrange travel, entry, hotel, vehicles, etc., for LLNL party per Robison's letter of 1/7/86 and TWX of 1/21/86.
3. Ship and retrograde mission gear, supplies, and samples.
4. Provide following specialized personnel to support the mission: two mechanics, one electrician, one cook.
5. Purchase and ship required insects for agricultural program.
6. Ensure the barges are all on station at Bikini.

B. DOE Coordinator, Majuro

1. Reconfirm AMI charter and diverted flights per schedule above (See para.V, subpara. A)

2. Coordinate with Ralph Waltz on the selection and assignment of up to five Bikini field workers to support mission at times shown on itinerary (See para. IV).
 3. Secure insect import permit from local Department of Agriculture.
 4. Accompany LLNL team and DOE staff (C. Schryer) on Rongelap portion of the mission; provide support as appropriate.
- C. DOE Coordinator, Kwajalein
1. Prepare and load DOE sleeping van aboard ship.
 2. Check receipt of mission cargo and gear and forward to Bikini aboard AMI flights and/or vessel.
 3. Arrange, billeting, retail/ID cards, vehicle/bicycle support for mission party in accordance with itineraries above.
 4. Purchase and load eight bbls. of mogas for LLNL party.
 5. Ensure six freezers are aboard vessel to store samples.
 6. Purchase and load one (1) case of blue spray paint, one (1) case of black spray paint, and eight (8) machetes for mission.
 7. Obtain services of Marshallese field workers (A. Almen, S. Johnny, F. Harry) from Ebeye to support the mission per itineraries.
- D. DOE Station Manager, Enewetak^{2/}
1. Support LLNL mission at Enewetak and Enjebi from February 6-February 15.
 2. Prepare Enjebi camp for seven days occupation by nine-person LLNL party (plus two Enewetakese).
 3. Provide M-boat to transport one 4-wheel drive vehicle plus mission gear/supplies to and from Enjebi on February 7, 1986 and February 14, 1986.
 4. Provide 4-wheel drive vehicle at Enjebi for LLNL party.
 5. Provide one Boston Whaler with sufficient oil and gas for work in and around Enjebi.
 6. Assign M-boat from February 10/12 to LLNL mission for their use in northern islands.
 7. Provide radio(s) to LLNL party at Enjebi to maintain contact with Enewetak Field Station.
 8. Provide (and pay) two Enewetakese field workers to work on Enewetak-Enjebi with LLNL party.

2/ All days shown are Enewetak dates.

E. USO

1. Coordinate with DOE Coordinator, Kwajalein, on mission preparation and loading activities.
2. Install and provide up to six freezers on board to store mission samples.
3. Support LLNL activities with the use of three barges.
4. Transfer 3,000 gallons of diesel fuel to LLNL at Bikini.
5. Assign one Boston Whaler to LLNL for use at Rongelap.
6. Load 4-wheel vehicle, and landing mats at Bikini for use at Rongelap.
7. Billet up to sixteen persons on board during Rongelap portion of the mission.
8. Ensure handi-talkies are functioning and ready to use.

VII. FUNDING

General program charges for this mission are to be recorded against SANL 417-001, but shared between LLNL and BARC in accordance with an agreed upon formula. In addition, specific costs incurred by the various BARC subcontractors will be billed to BARC.

VIII. REPORTS

The Party Chief is to provide a comprehensive report on the mission no later than 30 days after completion of the operation to the Director of PASO, with an information copy to the Assistant for Off-Continent Programs, Office of the Manager, NV. This report should be concise and cover all pertinent information such as adequacy of support and offer any comments or recommendations which will improve future operations.