

## OPERATIONS PLAN FOR VOYAGE FY 78 #2 TO BIKINI

November 12 through November 29, 1977

I. BACKGROUND

Lawrence Livermore Laboratory (LLL) has established a program in conjunction with DOE to investigate measurement of radionuclides in the soil, water and biota radioecological transport modeling and dose evaluation in the Marshall Islands. These investigations are to fulfill the high priority needs for effective rehabilitation of affected Marshall Atolls.

II. PURPOSE

The Bikini Survey of June 1975 was a follow up effort of DOE to the 1969 Bikini Survey which was accomplished prior to the cleanup and resettlement of Bikini Atoll. Efforts to resettle Bikini Atoll are continuing through the Trust Territory and Marshall District Governments. The purpose of this mission is to continue work on establishing the garden on Eneu Island which was started during the August trip. Samples from the garden will be taken to study the rate of radionuclide uptake in plants and to provide a program to monitor the resettlement of Bikini and ensure the safety of the Marshallese currently inhabiting the atoll. Also, work will be done during this trip to establish a base camp to be used on future trips.

III. DESCRIPTION OF MISSION

## A. LLL will conduct the following at Bikini:

1. General work to maintain the garden on Eneu Island and plant additional species of plants as required.
2. Establishment of a drip irrigation system for the garden and build a cover for the catchment pool.
3. Obtain water samples from existing wells for radioecological analysis.
4. Collection of water and sediment samples from various lagoon locations.
5. Obtain marine life samples for radiological analysis.
6. Collect samples from any crops that have grown.
7. Work towards setting up permanent camp housing.
8. Collect soil samples for radiological analysis.

Ops. Plan #2/Bikini

- B. The University of Hawaii personnel will be conducting similar environmental sampling work under the hydrogeochemistry research program. Dr. Robert Buddemeier is the Principal Investigator for this program.

IV. RESPONSIBILITY

- A. The Party Chief for this mission is Victor Noshkin, LLL. The Party Chief is responsible for the coordination of overall mission activities with the Captain R. V. Liktanur and while at Bikini, coordinate project with all interested Bikini residents.
- B. The DOE Coordinator is responsible for ensuring the proper support trailers are on R. V. Liktanur, ensuring that special procurement items at Kwajalein are aboard as well as equipment shipped from the mainland, supplying a manifest to H&N/PTD for billing purposes at the end of Voyage FY 78 #2 and keeping the PASO staff informed on the status of the mission.
- C. The PASO staff is responsible for the coordination of this plan with all involved parties prior to publishing; arranging logistical support in Honolulu and coordinating changes.

V. SCHEDULE

- A. Following is the schedule for the R.V. Liktanur:

11/1 Arrive Kwajalein from previous trip  
11/2-11/11 Prepare for Voyage #2  
11/12 Depart for Bikini  
11/13 or 11/14 Arrive Bikini  
11/14-11/26 On station at Bikini  
11/26-11/27 Depart Bikini  
11/28 or 11/29 Arrive Kwajalein

- B. Following is the schedule for the arrivals and departures of personnel:

Ops. Plan #2/Bikini

<u>NAME</u>	<u>ORG.</u>	<u>ARR</u> <u>HONO</u>	<u>DEP</u> <u>HONO</u>	<u>ARR</u> <u>KWAJ</u>	<u>DEP</u> <u>KWAJ</u>	<u>ARR</u> <u>KWAJ</u>	<u>DEP</u> <u>KWAJ</u>	<u>ARR</u> <u>HONO</u>	<u>ARR</u> <u>Enewetak</u>
Phillips, William A.	LLL	11/10	11/11	11/11	11/12	11/28	11/30		11/30
Koranda, John J.	LLL	11/10	11/11	11/11	11/12	11/28	11/30	11/30	
Rehder, John	LLL	11/10	11/11	11/11	11/12	11/28	11/30		11/30
Thompson, Stanley E.	LLL	11/10	11/11	11/11	11/12	11/28	11/30		11/30
Stuart, Marshall M.	LLL	11/10	11/11	11/11	11/12	11/28	11/30		11/30
Noshkin, Victor E.	LLL	11/10	11/11	11/11	11/12	11/28	11/30	11/30	
Holladay, Gale	LLL	11/10	11/11	11/11	11/12	11/28	11/30	11/30	
Eagle, Rodney	LLL	11/10	11/11	11/11	11/12	11/28	11/30	11/30	
Davis, Paul	LLL	11/10	11/11	11/11	11/12	11/28	11/30	11/30	
Fraley, Charles M.	U of H		11/11	11/11	11/12	11/28	11/30	11/30	

VI. LOGISTICAL SUPPORT REQUIREMENTS

A. The following equipment is required to be on board for this trip:

1. Bunk Trailer
2. Whaler
3. 1-1/4 Ton 4 x 4 Truck
4. Backhoe and Dump Truck (to be rented from Martin-Zachary)
5. Gift food for the dri-Bikini
6. Jeep with Trailer
7. 30 KW Generator
8. Lumber (shipped on barge from Honolulu)
9. 8 Bunk Beds (frames, springs and mattresses)
10. Tent (from Enewetak - to be replaced by buying one in Honolulu)
11. 500 Gal. Diesel Fuel Tank

Ops. Plan #2/Bikini

12. Air Sampling Gear (to be shipped from Livermore)
  13. Miscellaneous boxes of gear (to be shipped from Livermore)
  14. Two (2) 55 Gal. Drums of Aviation Gas
  15. Ten (10) 55 Gal. Drums of Diesel Fuel
  16. Five (5) 55 Gal. Drums of Regular Gasoline
- B. Other PASO supplied logistics include:
1. Entry approval into Kwajalein
  2. GSA car reservations and hotel reservations at Outrigger West hotel for days in Honolulu.
  3. MAC reservations and travel orders

VII. FUNDING

- A. LLL efforts have been funded through Request for Services (SANL) No. 609 issued by the University of California Lawrence Livermore Laboratory under USDOE Prime Contract No. W-7405-ENG-48.
- B. The backhoe and dump truck will be rented from Martin-Zachary at Kwajalein under a purchase order arranged by Holmes & Narver, PTD, and reimbursable by LLL. The backhoe and dump truck will be returned to MZ in the same condition as it was received.

VIII. REPORTS

In accordance with requirements V., of the "Development of R.V. Liktanur Operations Plans" procedure dated September 25, 1975, the Party Chief will submit a report no later than 30 days after completion of the operation to the Director, PASO, with an information copy to the Assistant Manager for Environment & Safety, 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.