

## OPERATIONS PLAN

## MISSION FY 1978 #4

BNL MEDICAL SURVEY - MAJURO, EBeye, RONGELAP, UTIRIK, BIKINI  
BNL BIOASSAY AND ENVIRONMENTAL SAMPLING PROGRAM - RONGELAP, UTIRIK  
AND ENEWETAK  
LLL RESUSPENSION EXPERIMENT, GARDEN PROJECT - BIKINI AND ENEWETAK

I. BACKGROUND AND PURPOSE

- A. Brookhaven National Laboratory has conducted medical surveillance of Rongelap and Utirik persons who were exposed to fallout from the 1954 nuclear event, Bravo. A control group of unexposed persons is also monitored for comparison data. In addition, DOE in 1977 in response to requests from the people of Rongelap and Utirik agreed to supplement TTPI outer island medical service by providing an expanded health care program on these atolls. These visits are made quarterly with one visit per year (Mission #4 this year) expanded to provide this additional care.

BNL also conducts environmental sampling on Rongelap, Utirik and Bikini and performs whole body counting. Additionally, there will be a urine bioassay for various radionuclides.

- B. Lawrence Livermore Laboratory has undertaken DOE sponsored projects in the Northern Marshalls to investigate measurements of radionuclides in the soil, water and their biota radio-ecological transport. The garden project on Enewetak was extended to Bikini to further these assessments. Additionally, LLL has procured and will install air sampling equipment on Bikini so as to detect the presence or absence of radioactive airborne particles.

II. WORK TO BE PERFORMED

## A. BNL - Dr. Conard

1. A team of 20 medical specialists and technicians under the auspices of BNL and from the TTPI will conduct complete physical examinations of all people living on Rongelap and Utirik, and of exposed and control group people living on Majuro and Ebeye. Also, a thyroid survey of unexposed Rongelap and Utirik people living on Majuro and Ebeye will be made.
2. A two-day "sick call" visit will be made to Bikini.

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B. BNL - Greenhouse/Miltenberger

1. Urine bioassay at Rongelap, Utirik, Bikini and Ebeye.
2. Establish systematic, routine urine bioassay programs for above atolls.
3. Environmental sampling.
4. Radiological preview of northern islands at Rongelap.
5. Whole body counting at Bikini.

C. LLL - Bikini

1. Implement initial resuspension experiment.
2. Develop parameters for resuspension model.
3. Take samples from test plot on Enyu.
4. Complete permanent living quarters on Enyu.
5. Refine irrigation system.
6. Sample Bikini subsistence crops.

D. LLL - Enewetak

Sample vegetation, fruits, soils from islands of Belle, Clara, Daisy, Irene, Janet, Sally and Tilda.

III. RESPONSIBILITIES

- A. The Party Chief for the April 1 voyage is Dr. Robert Conard. Mr. Robert Miltenberger will be Party Chief for persons under the auspices of the Safety and Environmental Protection Division of BNL. Dr. William Robison is the LLL Party Chief both at Bikini and Enewetak. Any scheduling changes for the voyage are to be discussed in advance by the Party Chiefs involved to best insure use of the vessel to fully satisfy all mission objectives.
- B. The DOE/DNA Coordinator is responsible for preliminary inspection of M.V. Caroline Islands as to potential problems involving beaching, especially at Bikini and Enyu. He is to monitor and assist Global Associates as necessary in work associated with making vessel alterations for the mission and the work to return it to the TTPI in the same condition as received. He will insure all trailers, equipment and supplies are procured and loaded and that charges are proper and correctly allocated. He will supply H&N with a manifest for billing purposes and keep PASO apprised of problems and other relevant matters on a continuing basis.

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- C. PASO is responsible for coordinating any changes in the mission other than minor changes dictated by expediency which can be handled better by the Party Chief(s).
- D. H&N/Ent and the DOE/PASO Site Representative, Enewetak will insure that the whole body trailer on Enewetak is prepared and loaded aboard the M.V. Caroline Islands on or around March 22, 1978 (refer to msg. from Director, PASO to HiCom TTPI DTG 241835Z Feb 78).
- E. H&N/PTD will make all travel related arrangements per PASO SOP No. 5.

IV. SCHEDULE OF M.V. CAROLINE ISLANDS

|         |                           |
|---------|---------------------------|
| 3/20    | Lv Majuro                 |
| 3/22    | Arr Enewetak              |
| 3/22    | Dep Enewetak              |
| 3/23-24 | Arr Kwajalein             |
| 4/1     | Lv Kwajalein              |
| 4/2     | Arr Utirik                |
| 4/8     | Arr Rongelap              |
| 4/14    | Arr Bikini                |
| 4/16    | Lv Bikini                 |
| 4/17    | Arr Kwajalein             |
| 4/20    | Lv Kwajalein              |
| 4/21    | Arr Bikini                |
| 5/5     | Arr Kwajalein             |
| 5/7     | Ready for TTPI deployment |

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V. PERSONNEL AND SCHEDULE (All Location Times)

| A - Arrive<br>D - Depart | Honolulu |      | Majuro |      | Kwajalein | Rongelap,<br>Bikini, Utirik | Kwajalein | Enewetak         |      | Hono |
|--------------------------|----------|------|--------|------|-----------|-----------------------------|-----------|------------------|------|------|
|                          | A        | D    | A      | D    | A         |                             | D         | A                | D    | A    |
| <u>BNL</u>               |          |      |        |      |           |                             |           |                  |      |      |
| Dr. R. Conard            | 3/23     | 3/25 | 3/26   | 3/30 | 3/30      | 4/1-4/17                    |           | 4/24             |      |      |
| Dr. W. Grant             | 3/23     | 3/25 | 3/26   | 3/30 | 3/30      | 4/1-4/17                    |           | Remains at Kwaj. |      |      |
| Dr. J. Nicoloff          | 3/23     | 3/25 | 3/26   | 3/30 | 3/30      | 4/1-4/17                    |           | 4/21             |      |      |
| Dr. R. Nicoloff          | 3/23     | 3/25 | 3/26   | 3/30 | 3/30      | 4/1-4/17                    |           | 4/24             |      |      |
| Dr. W. Krotoski          | 3/23     | 3/25 | 3/26   | 3/30 | 3/30      | 4/1-4/17                    |           | 4/24             |      |      |
| Dr. A. Lowroy            | 3/23     | 3/25 | 3/26   | 3/30 | 3/30      | 4/1-4/17                    |           | 4/24             |      |      |
| Mr. W. Scott             | 3/23     | 3/25 | 3/26   | 3/30 | 3/30      | 4/1-4/17                    |           | 4/24             |      |      |
| Mr. P. Heotis            | 3/23     | 3/25 | 3/26   | 3/30 | 3/30      | 4/1-4/17                    |           | 4/24             |      |      |
| Mr. D. Clareus           | 3/24     | 3/27 |        |      | 3/27      | 4/1-4/17                    |           | 4/24             |      |      |
| Mr. W. Nelson            | 3/28     | 3/30 |        |      | 3/30      | 4/1-4/17                    |           | 4/24             |      |      |
| Dr. H. Pratt             | 2/18     | 2/22 |        |      | 2/22      | 4/1-4/17                    |           | 4/24             |      |      |
| Dr. J. Naidu             | 3/27     | 3/29 |        |      | 3/29      | 4/1-4/17                    |           | 4/24             |      |      |
| <u>TTPI</u>              |          |      |        |      |           |                             |           |                  |      |      |
| Dr. J. Iaman             |          |      |        |      |           | 4/1-4/17                    |           |                  |      |      |
| Mr. S. Shoniber          |          |      |        |      |           | 4/1-4/17                    |           |                  |      |      |
| Mr. N. Ketkeia           |          |      |        |      |           | 4/1-4/17                    |           |                  |      |      |
| Mr. L. Elanjo            |          |      |        |      |           | 4/1-4/17                    |           |                  |      |      |
| X-Ray Tech.              |          |      |        |      |           | 4/1-4/17                    |           |                  |      |      |
| Nurse                    |          |      |        |      |           | 4/1-4/17                    |           |                  |      |      |
| <u>BNL</u>               |          |      |        |      |           |                             |           |                  |      |      |
| R. Miltenberger          | 3/27     | 3/29 |        |      | 3/29      | 4/1-4/17                    |           | 4/19             |      |      |
| E.T. Lessard             | 3/27     | 3/29 |        |      | 3/29      | 4/1-4/17                    |           | 4/19             |      |      |
| (Bikini Trip)            |          |      |        |      |           |                             |           |                  |      |      |
| <u>LLL</u>               |          |      |        |      |           |                             |           |                  |      |      |
| W. Robison               | 4/16     | 4/17 |        |      | 4/17      | 4/20-5/4                    | 5/10      | 5/10             | 5/16 | 5/16 |
| W. Burke                 | 4/16     | 4/17 |        |      | 4/17      | 4/20-5/4                    | 5/10      | 5/10             | 5/16 | 5/16 |
| B. Clegg                 | 4/16     | 4/17 |        |      | 4/17      | 4/20-5/4                    | 5/8       |                  |      | 5/8  |
| C. Fry                   | 4/16     | 4/17 |        |      | 4/17      | 4/20-5/4                    | 5/8       |                  |      | 5/8  |
| G. Holladay              | 4/16     | 4/17 |        |      | 4/17      | 4/20-5/4                    | 5/8       |                  |      | 5/8  |
| D. Homan                 | 4/16     | 4/17 |        |      | 4/17      | 4/20-5/4                    | 5/8       |                  |      | 5/8  |

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|             | Honolulu |      | Majuro |   | Kwajalein | Rongelap,<br>Bikini, Utirik | Kwajalein | Enewetak |      | Hono |
|-------------|----------|------|--------|---|-----------|-----------------------------|-----------|----------|------|------|
|             | A        | D    | A      | D | A         |                             | D         | A        | D    | A    |
| J. Kirby    | 4/16     | 4/17 |        |   | 4/17      | 4/20-5/4                    | 5/8       |          |      | 5/8  |
| J. Koranda  | 4/16     | 4/17 |        |   | 4/17      | 4/20-5/4                    | 5/8       |          |      | 5/8  |
| W. Phillips | 4/16     | 4/17 |        |   | 4/17      | 4/20-5/4                    | 5/10      | 5/10     | 5/16 | 5/16 |
| J. Rehder   | 4/16     | 4/17 |        |   | 4/17      | 4/20-5/4                    | 5/10      | 5/10     | 5/16 | 5/16 |
| J. Shinn    | 4/16     | 4/17 |        |   | 4/17      | 4/20-5/4                    | 5/8       |          |      | 5/8  |
| M. Stuart   | 4/16     | 4/17 |        |   | 4/17      | 4/20-5/4                    | 5/10      | 5/10     | 5/16 | 5/16 |
| S. Thompson | 4/16     | 4/17 |        |   | 4/17      | 4/20-5/4                    | 5/10      | 5/10     | 5/16 | 5/16 |

VI. LOGISTICS SUPPORT REQUIREMENTS

A. PASO has scheduled the M.V. Caroline Islands as above. The following equipment will be aboard for the BNL trip.

1. Medical trailer (bunk trailer)
2. Whole body trailer
3. Mess trailer
4. Jeep, 2-whalers, CAT tractor
5. 2 - 1-1/2 - 2 KW generators
6. Rubber raft
7. Chill and freeze facilities for medical and food storage
8. Provisions, gift food
9. 2 exam tables, 16 MM movie projector, 8 tables and 24 chairs
10. Medical equipment
11. 2 conex containers

Other

- a. For Ebeye exams the new medical trailer from NV should be in place if possible, and 2 vehicles available. (DOE/DNA)
- b. 2 air conditioners installed in Majuro medical trailer. (DOE/DNA)
- c. Medical equipment to be taken from M.V. Caroline Islands to Ebeye after voyage. (DOE/DNA)
- d. Arrangements for Aejon Tima, Naiki Rebuca and Katnar Tima to be examined at Tripler Hospital 8:30 AM March 24. (H&N)

B. LLL (Bikini Portion)

As stated in February 27, 1978 letter from W. Robison to W. Stanley.

C. LLL (Enewetak Portion)

1. M boat trip to Enjebi May 11 and pick up for return May 15
2. Food at Enjebi for 6 people for 1 week
3. Water truck full
4. Diesel fuel - 100 gal. in drains - and enough for trailer generator
5. Gasoline - 100 gal. in drains
6. 3 - 4x4 trucks
7. Ford tractor

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8. Backhoe
9. 2 dump trucks
10. Billets on Enewetak May 10 and 15 (remainder of time on Enjebi)

VII. FUNDING

The use costs of the M.V. Caroline Islands are to be charged against the LCU account. H&N and Global charges for loading and unloading the whole body trailer are to be billed to BNL (Dr. Greenhouse).

LLL efforts are funded through (SANL) No. 609 under USDOE Contract No. W-740-5-ENG-48. The BNL medical program (Dr. Conard) is funded by DOE Biomed and Environmental Program. BNL (Dr. Greenhouse) is funded through BNL purchase order.

VIII. REPORTS

Each Party Chief is to submit a report on the mission no later than 30 days after completion of the operation to the Director, PASO with an information copy to the Assistant for Pacific Operations, 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.