BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.
Upton, New York 11973
Safety & Environmental Protection Division
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August 18, 1977

PASO ROUTING SLIP				
AUG 22 1977	A	I	SEE ME	INIT
DIRECTOR WS 8/22				
Admin. Assistant				
PROJECT ENGINEER		✓		
ADMINISTRATIVE OFF.	✓			
PROGRAM SPECIALIST				
SEND COPY TO:				

Mr. W. J. Stanley, Director
USERDA Pacific Area Support Office
P. O. Box 29939
Honolulu, Hawaii 96820

Dear Bill:

Our funding problems in headquarters were finally solved last week, allowing us to make definite plans for the October voyage to Utirik, Rongelap and Bikini. At this point, our greatest concern is in minimizing the costs of shipping over 10 tons of gear to Kwajalein. The largest part of the shipment will consist of the wind generators and associated towers and battery sets. I have spoken with Jack Livingston and Bill Streenan about this, and it appears that we can have most of this equipment shipped via surface carriers. The following list describes shipments from several points of origin which hopefully will arrive in Honolulu in time to make "Islander" voyage #97 departing September 15 for Kwajalein.

1) Wind generators, 3 each Dunlite 2 KW - Each generator will be shipped in 4 crates of aggregate weight 681 lbs. (23.2 cu.ft.), for a total shipment of 12 crates, 2040 lbs. and 69.6 cu.ft. This will be the first of two shipments from Australia, and it will be arriving Honolulu on the merchant ship "Paralla" on or about September 5, 1977. The shipment is consigned to Enertech Corporation (the U.S. sales representative for Dunlite). The customs agent, American Customs Brokerage Company, (235 South Queens Street) will be cabled by Enertech to expedite clearance and consign the generators to H & N for transshipment to Kwajalein.

A fourth Dunlite generator and a spare parts kit will be shipped via air freight to Honolulu. No details are available yet on the carrier or ETA, but it is expected that this equipment will arrive in time for inclusion on Islander voyage #97. The generator will be shipped in 4 crates totaling 680 lbs. and 23.2 cu.ft. The spare parts kit will be shipped (probably) in 2 crates totaling about 200 lbs. (No volume estimate available).

2) Batteries, 124 each, 6 volt, 360 amp hr. shipped on 4 pallets plus 37 crated pails of electrolyte (also palletized). Shipping weights are batteries-6800 lbs, electrolyte-1900 lbs. This shipment will be leaving the east coast manufacturer by truck ~August 22 bound for the H & N, Oakland Logistics Office with instructions for transshipment to H & N, Honolulu for inclusion on Islander voyage #97.

3) Towers, 3 each Rohn 70 ft, guyed, with anti-climb sections and spare parts kit. This export-packaged shipment will be packed in 3 crates totaling 2700 lbs. It is expected to leave the midwest manufacturer ~August 19 bound for H & N, Oakland.

4) Inverters, 3 each, 110 vdc to 110 vac, 60 Hz, sinusoidal, 250 watt. To be shipped from manufacturer on August 22 to H & N, Oakland. The shipment will consist of 1 crate ~200 lbs.

5) Miscellaneous items to be shipped from Enertech Corporation:

(a) Low-voltage disconnects, 8 each, 1 crate ~80 lbs.
(b) Lightning protection systems, 3 each, 120 lb. bundle of ground rods.
(c) Installation kit, shipped as 3 bundled poles and 2 crates, total weight ~300 lbs. and 600 lbs. each.

This shipment will depart Norwich, Connecticut ~August 22 for H & N, Oakland.

I will keep Jack Livingston informed by phone or TWX as further details become available on these shipments.

We would also like to enlist your assistance in having the reinforced concrete base piers (3) and guy anchors (9) for the wind generator towers prefabricated for us at Kwajalein. I am enclosing drawings for your information; and, if the prefabrication work can be arranged, we will forward some jigs to Kwajalein which will facilitate the construction of forms and insure the proper allignment of special hardware (also supplied by us) which will be cast into the concrete. $? where

There are also some supplies which might best be provided by Global or H & N to save our having to ship from the mainland. They are as follows: # ? Where

1) Shelving for the battery sets - We will need a total of 108 board feet (36 bd.ft. per installation) of lumber, preferably as 2 x 6 inch stock, but sufficient 2 x 4 stock to make shelving nominally 12 inches deep will suffice.

2) Concrete or cinderblock supports for shelves - We will need 48 standard 8 x 8 x 16 inch cinderblocks.

3) Cement and sand for tower installations - Assuming that the tower anchors and piers can be prefabricated at Kwajalein we will need 25 bags of cement and 4 yards of sand or coral aggregate for site preparation.

4) Rebar for tower installations - We will need a total of 72 feet of 1/2 or 5/8" stock. We can cut it to size, but for your information, our "working size" pieces will be ~3 feet.

I had also spoken with Kris Morris and Bill Streenan about rental or loan of a back hoe and a "portable" cement mixer to go with us on the LCU. I understand that these are available from Martin Zacchary at Kwajalein, and we would appreciate you making the arrangements for their inclusion on our October voyage. We will have a qualified rigger and heavy equipment operator on our team for this trip.

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As far as the LCU configuration for this trip, in addition to the aforementioned back hoe and cement mixer, we will need the standard bunk trailer, the jeep and jeep trailer, and sheltered storage for the cement and sand.

We expect to have a team of six people from BNL, and our objectives will be as follows:

1) Install a second air sampler at Roi-Namur (there is an existing sampler on Kwajalein Island) for control samples in our radionuclide resuspension study.

2) Install wind generators and air samplers (one each) at Utirik, Rongelap and Bikini Islands; and, set up the air samplers for continuous unattended operation.

3) Collect air samples with portable equipment from the aforementioned sites while the team is on station. These samples will be used primarily for mass loading and particle size analyses.

4) Collect urine samples from selected Marshallese residents at Utirik, Rongelap and Bikini as part of a continuing effort to obtain unequivocal bioassay results on possible plutonium body burdens. Our thoughts are to have 4 to 5 local residents "live" on the LCU during the five days on station at each location. We can insure in this manner that the samples remain free of ambient soil contamination, and that a sufficient sample volume is collected from each individual to exceed our detection limits for Pu and other radionuclides of concern. It is expected that the LCU would provide meals and sleeping accomodations for these people. We will try to identify individual subjects through discussions with the BNL Medical Group, and will relay the names to you so that (hopefully) the people involved can be notified in advance.

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5) Collect environmental samples at all stations as part of our continuing environmental monitoring program.

I understand that Bill Schell from the University of Washington may wish to join us on this trip for some marine sampling work at Bikini. Dr. Conard has also asked that we provide space on a con-- tingency basis for Dr. Knudsen in the event he does not make the September medical trip.

Our crew (6) will be arriving Honolulu ~October 1 and would like to depart for Kwajalein on October 3. Coincidentally, our whole body counting crew (4) for Enewtak will be arriving the same weekend enroute to Enewetak via Kwajalein possibly on the same Monday MAC flight. We will provide your office with names, firm dates and other details within two weeks.

Your efforts in our behalf in preparing for this trip are greatly appreciated. I will continue to provide your office with further details as they develop. Please do not hesitate to call me if I can provide further information, (FTS 664-4207). Thank you in advance.

With best regards,

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N. A. Greenhouse
Project Director
Marshall Islands Radiological Safety Program

sls/Enclosure

cc: R. B. Conard
C. B. Meinhold
T. F. McCraw
R. Ray