

REPOSITORY DOE/PASO
COLLECTION DOE/NV
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BNL FOLDER #3
FOLDER FY 1979
MEDICAL PROGRAM

TRIP REPORT

402101

March 14, 1979

Mr. William Stanley
Director, PASO/DOE
P. O. Box 29939
Honolulu, Hawaii 96820

Dear Mr. Stanley:

Trip Report for the first 1979 medical survey of the Marshall Islands

Purpose: The medical surveillance and primary care of patients exposed to the 1954 nuclear accident and to a comparable control group on Rongelap. In addition, sick call was held whenever possible on Majuro, Ebeye, Rongelap and Utirik.

Schedule and Participants: Please see Table I

Logistic Support:

A number of serious problems were encountered in the services provided both by U.S. Oceanography and the DOE Coordinator. These problems involved errors of omission and commission. The problems will be categorized as follows: 1) charter/contract deficiencies; 2) maritime problems - ship safety/ship handling; 3) DOE/PASO liaison - administrative; 4) medical team problems.

As an introduction to this very complex set of interacting problems, I think a few initial comments would be of assistance. On my way to the Marshall Islands on January 11, 1979, I stopped by the DOE/PASO office in Honolulu for a conference with Mr. Stanley and Mr. Harry Brown concerning the forthcoming survey. At that time the ship was in harbor in Honolulu and at no time during that long meeting was I informed of any changes in the basic operation plans as previously outlined in San Diego. Even though at that time a number

5051726

of major operational changes had been instituted. On January 26th, Mr. Otterman and Harry Brown arrived in Kwajalein via MAC. I was requested by Mr. Brown to "keep the medical survey team away from the ship" for a period of three days due to the hazardous conditions posed by off-loading a large amount of equipment. On January 29th, Mr. Otterman, Mr. Brown and I met aboard the ship; at this time I was informed of major changes in the logistic support for the forthcoming survey.

③ 1. Charter/Contract Deficiencies: During the initial contract negotiations in San Diego, Mr. Otterman presented a brochure outlining his proposed method of operation for transferring patients from ship to shore. I assumed since he was an experienced maritime contractor, that he had studied the charts carefully and knew of the existing oceanographic characteristics of the beaches he was attempting to approach. In essence, what he proposed was bringing the ship as close as possible to the shore, bow on, and then positioning a set of barges to provide a walk-on capability for the patients from the island. I informed him at the time that the beach was extremely shallow at Utirik. I asked him specifically "what was the minimum draft, forward obtainable by trimming the ship? He indicated that he could reduce the forward draft to four feet. (Please see enclosure 1, copies of his initial proposal.) During those initial negotiations, I had indicated both to Harry Brown and to Wayne Munk from Holmes & Narver that I considered the ship marginal in size but that the walk-on capability swung the decision in favor of U.S. Oceanography. Therefore, any change in that plan of operation should have been transmitted to me immediately. It was not. During our initial discussion on 29 January, I was informed that if I "insisted" on using the barge concept there would be a two to three week delay in the sailing of the ship. Since we were already four

days behind schedule and our medical consultants were due to arrive on the 31st of January, the prospect of holding the consultants for a two to three week period was untenable. We were forced to devise an alternate plan. That plan included fabricating a semi-stable 8 x 8' platform to be located under the gangway and utilizing Boston Whalers to pick the patients up on shore and transfer them to the platform. U.S. Oceanography had listed two whalers as ships equipment. Those whalers were not brought with the ship to Kwajalein. Again, a deficiency in the initial contract. They relied upon the DOE whalers that were located at Kwajalein. Those two whalers, I had been previously informed by The Global Marine Dept., were in "bad shape." One of them was declared "unsafe" because of worn steering cables. These were the whalers that they proposed using for patient transfer. I was aware that the ship had been in harbor in Honolulu for about 24 days. During this period of time, I feel an effort should have been made to make the necessary modifications to carry the barges. Instead, this time was utilized to install such "critical" items as a large automatic ice machine which was not required for the medical mission at all, and a gas barbeque grill.

A second deficiency involved the rigging of protective canvas for the medical staff and the patients. In San Diego, during our preliminary talks, we agreed that a canvas cover should be rigged from just forward of the wheel house to the forward part of the well deck to provide shade and rain shelter for both the patients and the medical teams working in exposed areas. No provision had been made for such protection and during the entire survey bits and pieces of canvas and plywood were used in a haphazard manner to attempt to give cover. On all occasions the cover leaked, providing a number of problems for laboratory personnel and to the staff in the open areas. The medical party's dining area was on the 01 level aft. A canvas fly had been

5051728

rigged over this area but it was open on all sides. Since we were operating with constant trade winds varying from 10 to 30 knots, any rain was driven horizontally across this deck rendering the area virtually unusable during the frequent showers we encountered.

During our initial discussions in San Diego, I emphasized the fact that on large medical surveys there was the distinct possibility that we would have at least 18 scientific personnel aboard and would, in addition, probably pick up one or two medical evacuations at a minimum, for a total of 20 required berthing areas. Somehow during the contract negotiations, this figure was reduced to twelve and I was never notified of this change. During the initial discussions plans for a waiting bench to be installed in the forecastle were included for the use of patients waiting to be x-rayed. This bench was never installed. My original plans for the berthing area included provisions for showering and shaving for the medical party apart from the patient examination area. These plans again were altered (please see ship plans) and the final arrangement was for our entire medical party of 14 to use one head, one shower and one shaving mirror. This presented serious problems when everyone arose at the same time and attempted to get ready for the days examinations. The ship's brochure (enclosure 1) stated a two ton freezer capacity. Apparently this capacity was sacrificed in the conversion of holds 1 and 2, leaving us with inadequate cold storage space and much of the fresh fruit that we were carrying to the outer islands as gifts for the study group rotted in transit.

2. Maritime Problems/ Ships Safety: Throughout the entire cruise, no organized safety drill or instructions were given by the ship to the medical party. We were not informed as to where the life vests were stored nor how to use the life rafts (many of the medical team were weak- or non-swimmers).

There were no fire extinguishers in the medical berthing area. Egress

from the berthing area (hold #2) was through one heavy water-tight hatch leading forward through a high hazard area, i.e., x-ray and laboratory areas (containing flammable chemicals and high voltage), then up a ladder and aft onto the well deck. A second hatch leading aft went through a cluttered machine shop, into a battery room with no egress. There was no outside ventilation into the berthing area that I could find. The water-tight hatch controlling access to the medical berthing area had no latch. When trying to pass through the hatch in high seas, the heavy hatch would swing violently. A piece of cord was finally tied to the hatch to keep it open. The outboard passageways, both port and starboard on the main deck level required climbing over a totally exposed fore and aft ladder with no safety lines. Since our passage was in heavy weather with severe rolling and pitching, we could easily have lost one of our party over the side and never have missed him (see pictures). From the health standpoint, the berthing area was inadequate. One bunk was under an airconditioning unit and throughout the first night at sea that bunk was drenched about every 30 minutes by 2-4 ounces of ice cold water. In addition, Dr. Nicoloff complained repeatedly about the "stagnant air in the berthing compartment." The large air conditioning unit which was integral and recirculating for the compartment rendered the area either too hot or too cold.

In our preliminary correspondence and in phone conversations with ~~AS~~ Mr. Brown in Honolulu I stressed the importance of having an outer island pilot for the survey and recommended Mr. Paul LaPoint who has had extensive experience with previous medical surveys. While in Honolulu, I was informed that a Mr. deBrum was to serve as outer island pilot. While we were in Kwajalein we were informed that Mr. deBrum would not be available and Mr. Brown attempted to obtain the services of Mr. LaPoint, unsuccessfully. Therefore, the ship sailed for the outer islands without an outer islands pilot. The

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Marshallese members of the medical team were asked to serve unofficially as guides when entering the pass at Rongelap and Utirik. I was unaware of this request. This is not their function and they were placed in a difficult position because of this request. The pass at Utirik is difficult for an experienced Marshallese navigator. We approached that pass in the early afternoon with good visibility, about a 2' sea, and just before high tide. As the ship approached the reef we noted a red fiberglass boat which I recognized as belonging to the island of Utirik approaching across the atoll. The boat was also spotted by Mr. Otterman who was conning the ship and by the navigator who was on the roof of the pilot house. The small Marshallese boat could have closed with the ship within 20 to 30 minutes if we had held our position outside the atoll. However, the decision was made to proceed without adequate pilotage. The ship missed the Utirik pass, passing over the reef approximately 200 yards south. Mr. Otterman/claims that the ship went through the pass. I can provide at least five affidavits from people who have been in and out of that pass repeatedly that we were well south of the pass and passed over the reef. Luckily, the ship draws only about 8' of water and with an exceptionally high tide we were able to get over the reef without encountering any obstructions. This set of circumstances is fortuitous and, in light of the ready availability of a knowledgeable Utirik pilot, showed very poor maritime judgment.¹⁹ After we crossed the reef, the ship dropped anchor and the Marshallese boat tied up astern. Five Marshallese were in the boat. They were not invited aboard - a common courtesy on any ship. Finally, one man was asked aboard to serve as pilot across the atoll. I later found out that the man at the tiller of the Marshallese boat was the new magistrate of the island. I found this a breach of common courtesy and very embarrassing to the medical survey.

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3. DOE/PASO Liaison/Administration: The initial breakdown in the PASO/BNL liaison occurred during my visit in Honolulu on January 11th. I think that a number of these problems might have been clarified at that time if they had been mentioned. When confronted with a "go - no go" situation in Kwajalein with our volunteer physicians on the way from the United States, I was locked into a very undesirable course of action from the BNL standpoint. During the two day loading period before we sailed, it quickly became apparent that Mr. Otterman, who was functioning as the Captain of the ship (although he was not the registered master of the ship) was extremely upset about the volume of supplies that were being loaded by the medical team. I assumed at this time that Mr. Otterman was unaware of the logistic letter that I had sent to the PASO office in November, 1978, listing exactly what supplies were to be carried. Mr. Brown tells me that he passed this letter on to Mr. Otterman. Mr. Otterman seemed quite surprised at the volume of material that was presented for storage. Because of inadequate storage space aboard the ship he insisted that the food gifts, many of which were perishable, be placed in the medical party's berthing area, leaving no storage space for personal gear. They suggested that we store anything we wanted to take along for the two week survey in laundry bags.

The housekeeping logistics for the survey have always been the ship's responsibility, including all linens. After we'd sailed, we found that no towels had been provided for the medical party and we had to break open our medical supply chest and use medical towels for our personal use, and we were still short.

On the return trip to Kwajalein from Utirik we were carrying a pre-eclamptic lady as a medical evacuation and at about 2230 in the evening she delivered her child at sea, under adverse conditions. The patient's mother was accompanying

5051732

her. After the child was delivered, the grandmother took charge of the baby until she became seasick. Both of the physicians who delivered the baby had previously become seasick and at this point in time, I suggested to Mr. Brown that the ship alter course since we were running downwind in a quartering sea, to head for Roi Namur. This course change would have put us on a course almost dead ahead of the wind and given both the patients and the medical team a much smoother ride. Mr. Brown apparently considered the idea but no change in course was ordered. I don't know if any recommendation was passed to the ship's crew. Thereafter, the ship followed the longest approach route to Kwajalein, estimated to be 4 hours longer than entry through Bigej channel pass.

One of the most distressing problems concerning the administrative/public relations aspect of this survey occurred during our stay at Rongelap. For some unexplained reason, the ship carried a cannon; a close replica of the old boarding cannons used on sailing ships to protect the gangway. The cannon was mounted just forward of the gangway on the starboard side. On February 6th, 1979, sometime after 2100, the cannon was fired twice (I understand with a half pound of black powder). The cannon, I was informed, was loaded with "toilet paper and tin foil" and was fired aft. Since the starboard side of the ship was parallel with the shore, the flash must have been directed towards some part of the island. I was asleep in hold #2 at the time and didn't perceive the noise as a cannon shot. On February 7th, 1979, the cannon was fired once, again after 2100, with the same load. However, on this occasion, immediately after the boom, a seven year old child on Rongelap cried out and stated that he was struck by a projectile from the cannon. (Please see enclosure 2.) I understand that he continued to cry for some time. Again, I was below deck and asleep and was unaware of what was going on. The boy's father was very upset that the Department of Energy's ship would injure his son. When I was informed of this

5051733

episode the following morning, I asked for a conference with Mr. Brown and Mr. Otterman and asked for some explanation. Mr. Brown stated that "the boy was lying" and appeared upset because I was questioning him about this matter. He stated that he had checked with the magistrate and that "there was no problem." I then checked with the magistrate and he said "to forget it, no harm was done." I asked to see the boy and his father to apologize but the magistrate indicated that this wasn't necessary - that the boy was his nephew, and that he had taken care of the problem.

\ \ Another serious problem involving administration/public relations that developed on Rongelap involved the distribution of candy ashore by Mr. Otterman. Three of the most serious conditions encountered in the Marshallese are maturity onset diabetes, severe dental caries and exogenous obesity. The medical group had discussed these problems at some length and in our preplanning had decided that we would restrict, as far as possible, the delivery of free sugars in the form of candy to the people. This decision was the foundation of our initial nutritional educational program and was an integral part of the medical care of this survey. I think it was on the second day of our visit to Rongelap that I noticed Mr. Otterman standing on the beach surrounded by children passing out something from a bag. I left the screening process aboard ship and went ashore and found that Mr. Otterman was passing out candy and chewing gum to the children. I asked him if he would discontinue the gifts until Mr. Brown and I had a chance to discuss the matter. Shortly thereafter, I located Mr. Brown ashore and informed him of the problem. At this point he became visibly agitated and he requested that I put my request "in writing." I returned to the ship and did so. Shortly thereafter, Mr. Otterman, Mr. Brown and I had a discussion involving the type of foodstuffs that were to be presented as gifts to the islanders. //

It would appear, superficially, that this is an insignificant problem,

5051734

however it represents the lack of communication that existed between the medical survey group, DOE liaison and the ships' company. The simple act of passing out candy compromised the beginning of a highly important nutritional educational program. Since there had been insufficient time to begin the comprehensive educational program that was necessary to explain the reasons for withholding "candy" from the group (the Marshallese did not understand why the medical group was depriving them of their "sweets"). I was informed by our Marshallese nurse that the people of the island were perplexed by the apparent lack of communication and different philosophies exhibited by the medical survey party and the ship's company. They perceived these differences most directly by the cannon incident and by the dispute over the distribution of candy as gifts. This obvious division in goals and methods, I think, was detrimental to the credibility of both the medical survey team and the Department of Energy in general. I had previously pointed out to the members of the medical team that our mission had two major goals.^u The first was obviously the medical survey goals that we were attempting to achieve, but equally important was our public relations stature. I think a review of past performance of this program has revealed that the medical care has been excellent but there have been major problems that have arisen in the public relations area. I consider this a very important aspect of the Marshall Islands medical survey. During this survey that public relations effort was compromised. //

4. Medical Team Problems: Both Mr. Brown and Mr. Otterman were aware of my problems with the Resident Physician and my attempts to solve those problems. On the last day at Utirik, I went ashore and spent 4 hours at sick call assisted by Dr. John Iaman. We delivered a large amount of drugs and medical equipment and supplies to the Health Aide. When I left at noon, at least 20 patients were still waiting. I seriously regretted leaving them but I had been informed

5051735

by Mr. Otterman on the prior day that a large storm was moving toward Utirik and he advised leaving a day ahead of our scheduled departure. I agreed to this for two reasons. First, we had discovered a pre-eclamptic lady who needed to be evacuated to Kwajalein as soon as possible - with the least amount of trauma, and second, because we were aware that a tropical storm had developed south of Kwajalein and the deteriorating weather, in Mr. Otterman's judgment, might hit Utirik and present some problems for the ship. An additional problem that developed because of our hasty departure involved a "going away party" scheduled to be given for the medical team by the people of Utirik. We attempted to have a combined BNL/island party the evening before departure but the magistrate had not understood that we were leaving early, the resulting confusion again compromised the credibility of the medical group.

SUMMARY OF SHIPS LOGISTIC REPORT

U It's obvious from the length and detail of this report that I consider the ship logistic support for the January-February medical survey to be inadequate. I have presented all of the foregoing observations and opinions in writing, in a rough draft, to Mr. Stanley, Mr. Brown and Mr. Ray. I did this specifically to alert them to the problems, as I saw them, prior to the Users Conference that was scheduled for February 28th, in Livermore, California. I anticipated that a very delicate administrative problem would develop during the Users Conference since Mr. Otterman had been invited to that conference. I requested that the concerned DOE representatives have a preliminary meeting at Livermore, prior to the conference, to attempt to resolve these problems and not to use the conference itself as a forum for the discussion of the details of the survey. Unfortunately, we were unable to accomplish this. I can expand on why this was not accomplished if necessary. During the Users

5051736

Conference, I was asked if I felt that the ship was adequate for future medical surveys and I indicated that, based on past experiences and performance, I did not feel that it would be suitable. The Users Conference was therefore adjourned and Mr. Ray, Mr. Stanley, Mr. Brown, and I had lunch together. During this period of time, it was apparent that there was a strong desire by the DOE group to renew the U.S. Oceanography contract. I understand their problem from a procurement and fiscal standpoint, but the problems that developed involved both significant material changes aboard the ship and some obvious behavioral changes by the personnel of U.S. Oceanography. I doubt very seriously if this can be accomplished under the present administrative organization. I requested a copy of the contract before we left Kwajalein. I finally was allowed to make a copy in Honolulu on the way back from the survey. A careful review of the contract reveals that the anniversary date is September 16, 1979, and it specifically stipulates that notification of termination of the contract must be given 90 days prior to that date. This would mean that the Department of Energy would need to give written notification on or before June 16th, 1979. The co-users of the ship pointed out to me the obvious problems that this termination would pose for their programs. I understand the funding for this charter has come primarily from the Medical Division of DOE and it is my firm opinion that this ship will be unsuitable for any extended use by the medical program. I have agreed to an interim schedule for the medical survey scheduled for May 26 - June 13th. This survey will be entirely different than the January-February Survey in that almost the entire program will be shore based, rather than ship based, and will be devoted primarily to pediatric consultation and sick call. In addition, the medical party will be considerably smaller than the previous survey.

5051737

SUMMARY OF MEDICAL SURVEY

From a medical standpoint, the January-February survey was a very productive one. We saw a total of 500 patients. From this group we identified eleven new patients with thyroid nodules. Most of these patients will be scheduled to return to the United States for evaluation and probable surgery. In addition, we found a significant number of ancillary primary care problems that were treated to the best of our ability, and those cases that needed further treatment were referred to the TT health care delivery system. I want to express my sincere thanks to the members of the party for their services under some very trying conditions. I would particularly like to thank Mr. William Stanley for his attempts to mediate in the severe logistic problems that we encountered in dealing with U.S. Oceanography.

5051738

1979 Marshall Islands Medical Survey

<u>Participants</u>	<u>Agency</u>	<u>Schedule</u>			
		<u>Maj.</u>	<u>Kwaj.</u>	<u>Rong.</u>	<u>Utirik</u>
Dr. H. Pratt	BNL	Arr.1/13 Dpt.1/18	1/18 2/2	2/3 2/9	2/10 2/15
Dr. W. Grant	BNL	Arr.1/12 Dpt.1/18	1/18 2/2	2/3 2/9	2/10 2/15
Dr. B. Dobyns	Case Western Res. Univ. Cleveland General Hosp.	Arr.1/13 Dpt.1/18	1/18 1/26		
Dr. H. Evert	Univ. of Wisconsin Medical Center	Arr.1/13 Dpt.1/18	1/18 1/26		
Dr. R. Nicoloff	Kaiser Permanente	Arr. Dpt.	1/31 2/2	2/3 2/9	2/10 2/15
Dr. J. Nicoloff	Univ. of California	Arr. Dpt.	1/31 2/2	2/3 2/9	2/10 2/15
Dr. B. Boccia	Brookhaven Memorial Hosp.	Arr.1/13 Dpt.1/18	1/18 1/27		
Dr. M. Dekle	Public Health Service San Francisco, CA	Arr. Dpt.	1/31 2/2	2/3 2/9	2/10 2/15
Dr. J. Iaman	T.T.P.I.	Arr.1/13 Dpt.1/18	1/18 2/2	2/3 2/9	2/10 2/15
W. Scott	BNL	Arr.1/10 Dpt.1/18	1/18 2/2	2/3 2/9	2/10 2/15
P. Heotis	"	Arr.1/10 Dpt.1/18	1/18 2/2	2/3 2/9	2/10 2/15
R. Brown	"	Arr. Dpt.	1/31 2/2	2/3 2/9	2/10 2/15
T. Cronkite	Univ. of Wisconsin Medical Center	Arr.1/13 Dpt.1/18	1/18 1/26		
D. Clareus	"	Arr. Dpt.	1/31 2/2	2/3 2/9	2/10 2/15
S. Shoniber	T.T.P.I.	Arr.1/15 Dpt.1/18	1/18 1/24		
N. Zetkeia	"	Arr.1/15 Dpt.1/18	1/18 2/2	2/3 2/9	2/10 2/15

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5051739

<u>Participants</u>	<u>Agency</u>	<u>Schedule</u>				
			<u>Maj.</u>	<u>Kwaj.</u>	<u>Rong.</u>	<u>Utirik</u>
L. Elanjo	T.T.P.I.	Arr.	1/15	1/18	2/3	2/10
		Dpt.	1/18	2/2	2/9	2/15
K. Gideon	"	Arr.	1/15	1/18	2/3	2/10
		Dpt.	1/18	2/2	2/9	2/15
J. Kabua	BNL	Arr.	1/12	1/18	2/3	2/10
		Dpt.	1/18	2/2	2/9	2/15

5051740