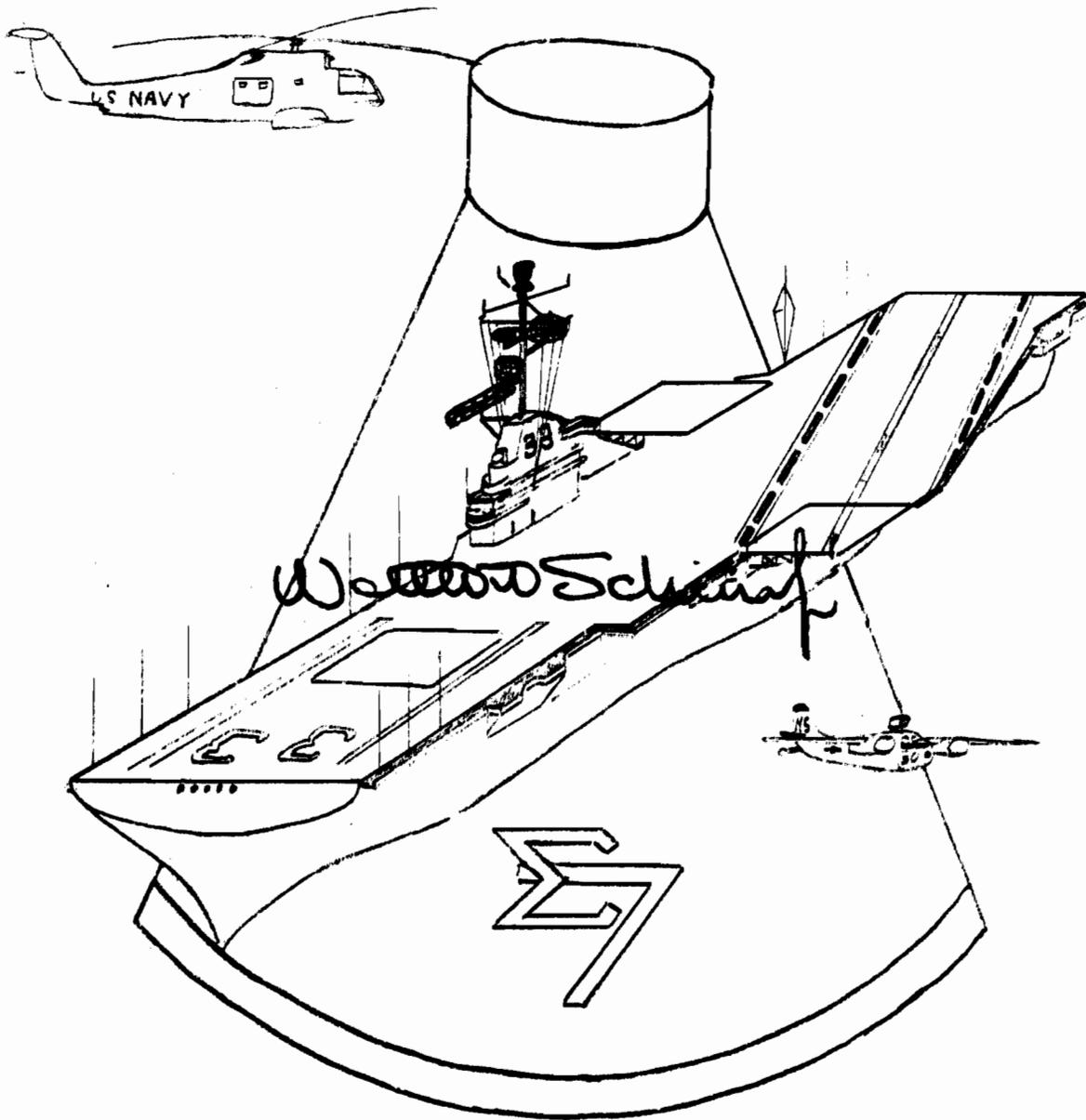


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ID 543

U.S.S. KEARSARGE (CVS-33)



PROJECT MERCURY REPORT OF MA-8 1 AUG-17 OCT 1962

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ATTACHMENT #6

U.S.S. KEARSARGE (CVS-33)
c/o Fleet Post Office
San Francisco, California

CVS33/3120
11:RBL:rw
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19 November 1962

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From: Commanding Officer, USS KEARSARGE (CVS-33)
To: Distribution List

Subj: Report of Project Mercury MA-8 Recovery Operation during the
period 1 August to 17 October 1962; forwarding of

Encl: (1) Report of the Project Mercury MA-8 Recovery Operation

1. A report of USS KEARSARGE (CVS-33) deployment to the Mid-Pacific area during the period 1 August - 17 October 1962 in connection with the Project Mercury MA-8 Recovery Operation is forwarded as enclosure (1).
2. The report has been tailored to present a compendium of pertinent facts and information that relate to each of the phases of the operation. Areas have been flagged where particular attention should be focused to avoid the pitfalls that attend support operations of this type.
3. The successful conclusion of the operation in the recovery of the astronaut, Commander Walter M. SCHIRRA, U. S. Navy, and the Sigma 7 capsule by KEARSARGE is indicative of the enthusiasm, cooperation, and esprit de corps aboard KEARSARGE. The actual accomplishments of this operational period will be more fully reflected in the acceleration and success of future events in our nation's Man in Space Program.


E. P. RANKIN

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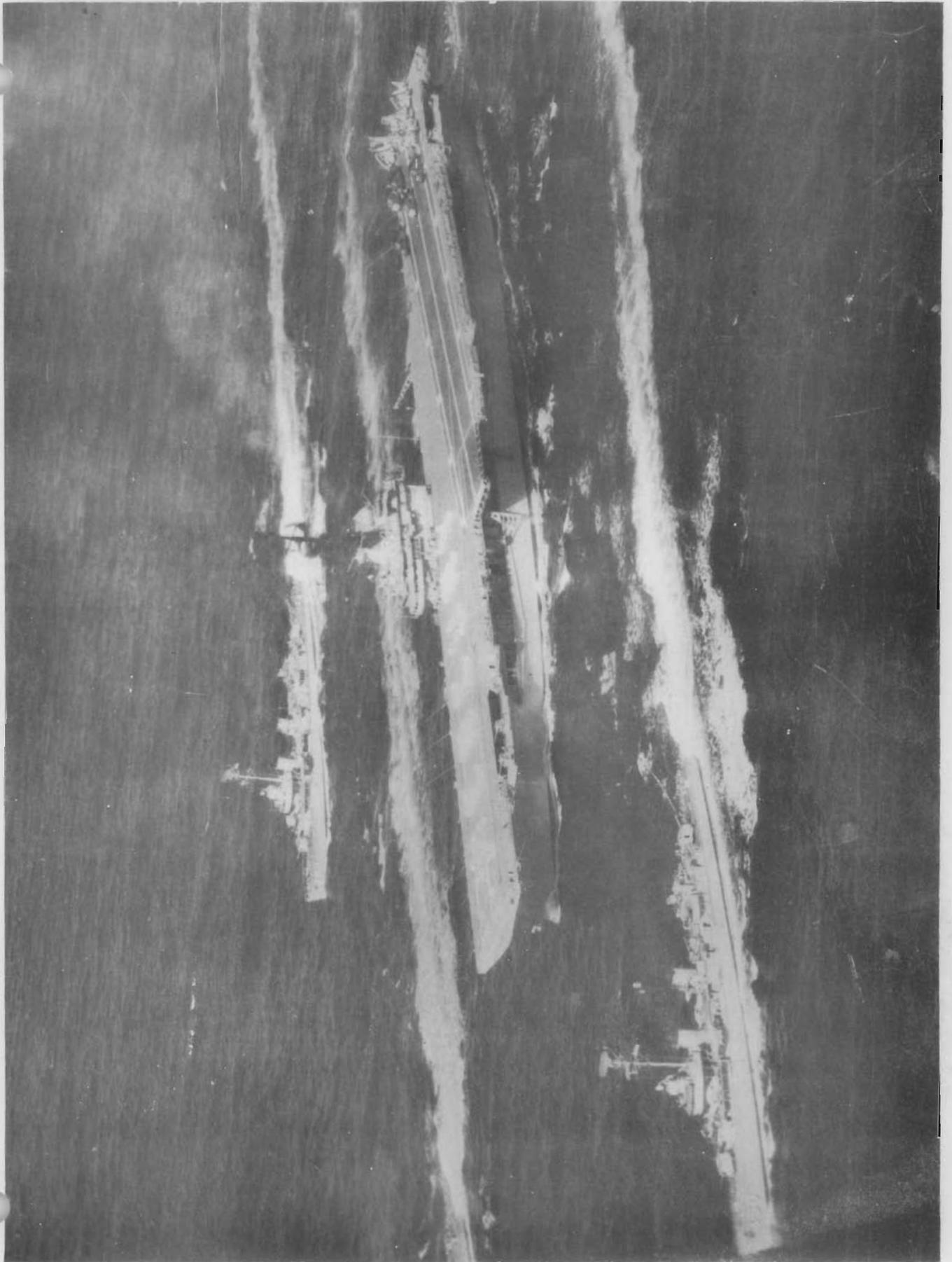
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MAG-13	1
HMM-161	1

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FOREWORD

The MA-8 operation was the first of Project Mercury manned orbital flights of such duration as to necessitate recovery forces in both Atlantic and Pacific. The primary recovery area was scheduled in the Pacific in a locality far from the point of origin. Initially this consideration of distance apparently was not viewed with much cause for concern. It did require the establishment of a new recovery command structure, CTF 130, and the application of techniques not previously tested. Its existence also disallowed the convenience of short range communications, and the proximity of support bases. It required initiative and application of training to an extent not previously anticipated.

The first section of this report covers the operational aspects in narrative form. Special areas of interest follow in greater detail in Section II. The narrative section is an attempt to tell the whole story, as it happened aboard KEARSARGE, in an interesting manner and without the burden of lengthy statistics and details.

The success and accuracy of this recovery is a tribute to the cooperation and versatility of the forces and agencies involved. It was an interesting and challenging experience.

Others have preceded us in a task of similar nature as, indeed, others will follow in this nation's attempt to conquer the unknown of space. To our predecessors we owe thanks for their assistance and for showing the way. To our followers we hope that the information that is contained in this report will help in making their mission easier.

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CHRONOLOGY

AUGUST

- 1 Departed Long Beach for San Diego. Loaded CVSG-53 aboard. Departed San Diego for Pearl Harbor, Hawaii.
- 1-7 Enroute Pearl Harbor.
- 7-31 Pearl Harbor.

SEPTEMBER

- 1-3 Pearl Harbor.
- 4-7 At Sea Local Hawaii Operating Area. Completed day and night qualifications of CVSG-53 personnel.
- 8-9 Pearl Harbor.
- 10-15 At Sea Local Hawaii Operating Area and for Rehearsal in Recovery Area 285 miles North of Midway Island.
- 15-24 Pearl Harbor.
- 25-27 At Sea Local Hawaii Operating Area.
- 28-29 Pearl Harbor. Loaded NASA and Press Personnel.
- 29-30 Enroute Recovery Area.

OCTOBER

- 1-2 Enroute Recovery Area.
- 3 On Station Recovery Area. Recovered CDR W. M. SCHIRRA, USN.
- 4-6 Enroute Pearl Harbor via Midway Island.
- 6-7 Pearl Harbor.
- 8-11 At Sea Local Hawaii Operating Area.
- 11 Pearl Harbor.
- 11-17 Enroute San Diego and Long Beach.

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SECTION I - NARRATIVE

a. THE PREPARATIONS

KEARSARGE was selected in late July 1962 to be the major unit in the Pacific Recovery force for the MA-8 operation of Project Mercury. Rear Admiral C. A. BUCHANAN, USN, Commander Hawaiian Sea Frontier, was designated Project Mercury Recovery Force Commander, CTF 130, and Captain T. S. KING, Jr., Commander Destroyer Flotilla Five, was designated Recovery Group Commander, CTG 130.2 for areas 5-1 and 6-1. KEARSARGE with CVSG-53 and detachment from VAW-11 embarked was directed to depart Long Beach, California on 1 Aug to arrive Naval Shipyard Pearl Harbor 7 Aug for installation of special communications equipment. Initial design and layout, and partial installation of this equipment had commenced at NSY Long Beach prior to departure.

Test MA-8 of Project Mercury was scheduled for 18 September.

The preliminary draft of CTF 130 Operations Plan 101-62 was received for planning purposes prior to departure from Long Beach. A conference at Pearl Harbor on 27 July was attended by the KEARSARGE Operations Officer and two assistants. Correspondence had also been initiated to two of our predecessors in Mercury operations, the USS RANDOLPH (CVS-15) and USS INTREPID (CVS-11), requesting information and suggestions that could be of use on our forthcoming adventure.

The conference on 27 July indicated that firm support requirements for the operations had not been established by NASA. To overcome the void created by the meager detailed information available, a draft plan was commenced to consolidate the ship's preparation efforts for the recovery operation. Accordingly, a project team of appropriate ship's officers was formed and assigned specific duties. This group consisted of a Commander as NASA liaison officer; a Lieutenant Commander as MA-8 Project coordinator; two Lieutenants, one as communications and equipment officer and one as press coordinator; two Lieutenants Junior Grade, one as berthing and messing coordinator and one as public information officer; and the Senior Medical Officer to coordinate the medical requirements.

From this team evolved KEARSARGE Operation Order 310-62 based on CTF 130's preliminary Op Plan 101-62 and from information received from NASA, USS RANDOLPH and USS INTREPID, and information acquired through brain picking all available talent. The scope of the Operation Order was of necessity rather broad and was, in particular, conceived to be flexible to adjust to the anticipated changing requirements. The Schedule of Events Annex to this Op Order was ambitious and attempted to satisfy the diversified interests of many masters, and as a result each published revision was short lived. The Op Order, however, did provide the necessary guidance to prepare the ship's departments and personnel for what lay ahead.

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The first period in Pearl Harbor Naval Shipyard (7 August - 3 September) was very productive. The ship's communication equipment installation problems were solved and installation and modification of other equipment was undertaken. Training of ship's personnel for special tasks was started as soon as a need was determined. This included selected personnel for training in equipment operation at Naval Communication Station, Wahiawa; development and training in capsule recovery technique; and training of Air Group personnel in astronaut pick-up procedures. In addition, regular ship's up-keep continued and the general tempo of activity for all departments increased as all hands became involved either directly or indirectly in Project Mercury. The Air Group, temporarily based ashore at Ford Island, was equally active in ASW training and preparation for night carrier qualifications. During the second week in port, weekly Status Report messages were commenced which summarized the work accomplished during the preceding week and when possible, included projected or planned operations. These reports were sent to COMFIRSTFLT with information copies to CINCPACFLT, COMNAV-AIRPAC, COMCARDIV 15, COMHAWSEAFRON, and COMFAIRHAWAII. They provided timely information to these interested commands and, through wide internal distribution, presented to the department heads and other appropriate officers a current over-all report of what had been completed and what was to be expected. In effect, they became the newsletter for progress made in Project Mercury, and have been valuable as an accurate log for reference in the preparation of other reports. The Status Reports were discontinued with the termination of MA-8.

On the evening of 22 August, the ship's TF aircraft was involved in an accident caused by an inflight fire in the starboard engine. A successful emergency landing was effected at NAS Barbers Point but the aircraft was partially consumed by fire, rendering it to strike status. Only through immediate action on the part of senior commands was it possible to have aboard, at the time of departure for the actual recovery, the three TF's needed to COD aboard from Midway Island 18 NASA people on the day following the recovery. Two TF's were received on temporary custody from other carriers and one from COMFAIRHAWAII.

During this first period in Pearl then, the preliminary training for special jobs, the installation of the special and additional communication equipment, the development of procedures for the handling of the NASA and press guests and, finally, an overall understanding of what would be required of the ship were accomplished. This last through visits by NASA and press representatives, and visits with the other commands and personnel involved.

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b. THE REHEARSALS

With Commander Destroyer Flotilla Five embarked, as CTG 130.2, KEARSARGE departed Pearl Harbor on 4 September for training and rehearsal exercises in the local operating areas. CVSG-53 and a detachment of three Marine HUS helicopters from HMM-161 were received on board after KEARSARGE had cleared the channel. Initial work conducted was in developing and testing a workable technique of recovery with a practice capsule using the ship's crane. This training also presented an opportunity for refreshing ship handling procedures and techniques to approach and maneuver close to the capsule while it was in the water. Results of this training were satisfactory.

On 5 September the first of five rehearsals was conducted with destroyers in company. Ship's aircraft were also launched in order to test communications that would be used in the actual recovery. This first rehearsal indicated a need for procedural revision and a further check of communications reliability. CTG 130.2 and staff were flown ashore at the completion of this exercise.

Also aboard during these sea operations were CBS Newsmen and a Pacific Fleet Photography Team obtaining background movie and still photographic coverage to be released during actual MA-8 recovery operations.

KEARSARGE remained at sea for submarine and Julie training, re-qualifying Air Group pilots (day and night), and continuing with the evaluation of the experimental radar approach equipment (TPN-8) that had been installed prior to departure from Long Beach. This at-sea period of 3 days produced 352 hours of flight time. On the night of 5 September unexpected training was realized when an ill crewmember from the USS RADFORD was transferred by highline to KEARSARGE and an appendectomy performed. Upon arrival in Pearl on the 8th, a critique of the rehearsal was attended by representatives of the forces involved. It became evident that the greatest problem was with the communications equipment, not only from the standpoint of reliability in transmitting and receiving but also a minor problem from the standpoint of a radiation hazard from the AN/FRT-39 antenna (special communications equipment) which had been installed on the starboard side of the flight deck outboard between the island and No. 3 elevator

As the MA-8 operation date was postponed until the 28th of September, it had been planned to utilize this additional time for ASW, sonar, engineering, damage control and gunnery exercises to increase combat readiness posture and to complete the ship's competitive exercise syllabus if possible.

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It was with very short notice that the commands in Hawaii arranged for the necessary services of submarines, destroyers and utility aircraft and provided areas in which to operate. Their cooperation was outstanding. It was, therefore, with deep regret that many of these services previously arranged had to be cancelled (on some occasions with very short notice) in order to undertake additional rehearsals to insure success at our prime mission.

Steady progress was made in eliminating electronic noise interference that affected communication reception and in obtaining acceptable communications. The second rehearsal (first in this series) was scheduled with the participation of all of the forces that would be present at the actual recovery. These forces were deployed in an area north of Oahu and in a formation that simulated that which would be later used. This rehearsal was terminated prior to scheduled FINEX time due to problems in obtaining effective communications between CTF 130 at Kunia and CTG 130.2 aboard KEARSARGE. Communications between the ship and the aircraft involved were satisfactory.

The Task Group was directed to proceed to an area about 300 miles northeast of Midway Island to conduct a third rehearsal. Enroute, continuous communication tests and equipment adjustments were made. This effort appreciably improved the reliability and performance of the equipment.

The final full dress rehearsal in this series took place 385 miles northwest of Oahu on the 14th of September with Air Force aircraft again participating with the Task Group. This rehearsal proved that a state of readiness existed which would provide the required capability. Credit for the solution of these communications problems is attributed to the many hours of hard work and determination of the shipboard electronics personnel, and the excellent cooperation and assistance rendered by embarked personnel of NAVCOMMSTA Honolulu, Industrial Manager Fourteenth Naval District, and Naval Communication System Headquarters.

A critique was again held when KEARSARGE returned to Pearl on the 15th of September. During this meeting minor procedural changes in aircraft control was agreed upon and arrangements for the few remaining preparations were completed.

A pre-sail conference was held by CTF 130.2 on the 21st. On this day the senior NASA Recovery Team Representative, Mr. Bill HAYES, visited the ship and inspected the spaces designated for their use when embarked. These spaces and the recovery procedures outlined were approved by Mr. HAYES. About noon on this day word was also received that the shot had been delayed until the 3rd of October.

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The decision was made to put to sea again for two days to continue the ship's training. During the next two days a gunnery competitive exercise was completed and the BUSHIPS project of evaluating the TPN-8 equipment was continued. The communication equipment was kept in full operation and results improved through practice and refinement. One hundred and seventy hours of flight time was completed.

The crew exchanged waves once more with the swimmers at the Hickman AFB pool as KLARSARGE passed through the channel to Pearl early on the 27th. On this and the next day the press and NASA personnel embarked. It was encouraging to see them come aboard because surely their diversions at the Hawaiian Village Hotel would not have been interrupted if the shot was not still GO.

Extensive preparations had been made for their arrival. Their prominence and the need for good relations were well appreciated and they were encouraged to feel as part of the ship's company as well as welcome guests. A working party assisted with the luggage and equipment and junior officers, one to each three guests, guided them to their quarters and insured their immediate needs were secured. These officers were available to assist the guests during their entire stay aboard the ship. The success of this approach can be attested to by the friendly and cooperative attitude that prevailed in our relationship with them. No embarrassing incidents occurred and, indeed, it was with regret that we saw them depart at the end of the operation.

A final pre-sail conference was held by CTG 130.2 on the 28th. All material, personnel, operational and emotional preparations had been completed, both in the obvious and the envisioned. The success of the venture now lay in the hands of Providence and mortals beyond our control.

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c. THE RECOVERY

The Task Group, with CTG 130.2 embarked and composed of KEARSARGE and six destroyers, departed Pearl Harbor on the afternoon of 28 September. MA-8 was still GO for 3 October. The six destroyers had worked as hard as KEARSARGE during the preceding two months. In fact, their enthusiasm had prompted them on one occasion to surreptitiously obtain from the deck of the KEARSARGE a practice capsule for their own use.

Out guest list had grown to include a total of 88 officers, men and representatives of NASA, the press, the staff of CTG 130.2, HMM-161, Navy PIO and other military and civilian organizations for technical assistance. Air Group and other aircraft included 16 S2F-1S1, 4 HSS-1N, 2 HSS-2, 3 TF, 4 HUS (Marine) and 3 AD-5W.

On the evening of the 28th a welcome aboard meeting was held in the wardroom during which our plans for the next few days enroute were outlined. At the conclusion of this meeting, the heads of departments and other key officers were introduced and were made available to answer questions.

The following night a captain's dinner - a la LURLINE complete with decorations - was held in the wardroom for the guests and senior officers. During the interim of these social pleasantries, a final rehearsal was completed. The results of this rehearsal were excellent, particularly with communications. This rehearsal also provided the opportunity for the NASA and press representatives to become familiar with their working spaces and with the recovery procedures.

On 30 September, NASA recovery team personnel were transferred by helicopter for a last briefing of their representatives aboard the destroyers. On 1 October a COD flight was sent to Midway and return for Capt. R. POLLARD, CDR SCHIRRA's personal physician, and Mr. R. MERCER, both assigned to NASA. To ensure proper operation of ship's equipment and aircraft for the following day's work, on 2 October all aircraft to be used in the recovery operation were given a final test flight. All destroyers had been refueled from KEARSARGE and three were detached to proceed to the fourth orbit recovery area, some three hundred miles to the south of TF 130.2 area.

To provide entertainment as well to relieve the mounting apprehension and tension, a "smoker", albeit without the smoke, was held on the hangar deck. The performers were provided from the crew and one volunteer from the press team. Wrestling and boxing matches were spaced by vocal and musical groups. Their efforts were only surpassed by their boundless energy. The reception by the audience was enthusiastic. The climax to this show was an original song by a quartet, entitled, "The Astronaut."

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KEARSARGE arrived on station on 2 October at 1630Y. On the eve of this day we had paused to ask HIS attendance and help.

The following is the prayer offered by Catholic Chaplain Patrick J. GRACE, aboard KEARSARGE, on the evening of 2 October:

"O Almighty and Everlasting God, Who, by Thine infinite wisdom and limitless power, did bring this vast and wonderful universe, we humbly ask Thy guidance and assistance in our search to fathom its deep and endless mysteries. We are rightfully proud of our efforts and accomplishments in this regard - we are equally humble in the knowledge that the mysteries which we probe, as well as the minds and talents which we probe, have their source in Thee.

"Several blessings we would ask of Thee this night. Bless, we pray Thee, our nation, the United States of America - grant that we might ever be as generous in serving her as Thou hast been in blessing her. Bless this ship and all who serve in her; be with us as we seek to accomplish our assigned task; if it be Thy Will, crown our efforts with success. Above all, we pray for the safety and well-being of Thy servant, Walter SCHIRRA, and for the success of his mission. Grant to this courageous servant of his nation the consolation of Thy presence and strength. Fill his spirit with patience, fortitude, perseverance, and an abiding trust in Thy gracious Providence. Protect him against all harm and grant him a safe return to those who await to receive and welcome him. May Thy holy angels be his constant companions throughout his flight. Amen."

T-DAY, 3 October 1962

There were no late sleepers on this day. NASA and press spaces were active all during the night. News from Canaveral was encouraging, and indicated that SIGMA SEVEN would be launched on schedule. All TF 130 forces had reported on station and ready. We waited.

In Flag Plot, TIME was the master and dictated the log. The following excerpts give progress of prelaunch, orbit flight and descent of capsule .

0022 (Local times, Yankee Zone +11) T-53 and counting.
0030 T-45 and holding. Canary Island tracking station tuning.
0045 T-30 and counting.
0110 T-5 and counting, all systems GO.
0115 T-ZERO. Lift off, all systems GO!
0156 SIGMA SEVEN approaching first sunset.

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0455 Spacecraft over Africa on third orbit.

0533 All search aircraft have been launched from Hickman. Midway backup aircraft standing by.

0550 Capsule commencing fourth orbit.

0610 Over Grand Turk Island at 0600.

0645 Advised CTF 130 weather excellent for recovery in Areas 5-1 and 6-1.

0702 SIGMA SEVEN past point of retro-fire on orbit 4.

0810 CTG 130.2 advised CTF 130 of having established communications with all search aircraft.

0825 TU 130.2.1 directed to reorient along sixth orbit stations.

0840 CTG 130.2 was advised by CTF 130 that DOD Representative Cape Canaveral had directed SA-16 aircraft be launched from Midway to assist in Area 6-1.

0851 Capsule beginning orbit 6.

0915 Beautiful day, two tenths cloud cover, no build-ups, rainbow sighted astern.

0930 Canaveral advises retros to fire on schedule.

0945 SIGMA SEVEN over Indian Ocean ship.

0946 Launched 2 AD5W's for Middleman.

1000 Helos (Marine HUS and Navy HSS-2) in ready condition TWO (15 minute standby).

1007 Retros fire. All fired normally.

1013 KEARSARGE increased speed to 20 knots.

1015 First estimated landing position relayed by CTF 130 from Goddard Space Center (Maryland) is 10 miles overshoot.

1019 CTF 130 reports that prior to communications blackout, astronaut reported, "All systems, GO."

1020 CTG 130.2 received from CTF 130, "Estimated time of landing 10:27:30." KEARSARGE changed course to 120° true. (Wind 125° true). Speed 12 knots.

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1021 KEARSARGE reported possible radar contact bearing 279^o true, distance 179 miles at 1020.

1023 Side Car (DD) reported sonic boom.

On the bridge, the announcement is made on the LMC that the capsule has been contacted by radar and will be approaching from the starboard quarter and descending on the port bow. Every crewmember whose duties would permit, was on deck and heads shifted to monitor this indicated position in the blue sky. The press was ready with their equipment, some looked like caricatures of the American Tourist abroad with three or more cameras hanging from their necks, others shouting directions to the sailors who were assisting in moving the massive telephoto equipment or lugging still more equipment and boxes of film. Finally, a hand was raised to point overhead, it was followed by others that lead the eyes of companions to the spot that introduced the evidence of the capsule's return, a beautiful contrail, brilliant from the sun. It faded, then disappeared behind a low flying cloud. At last, the parachute streamed, then blossomed and gently began to drift down. Beneath it, swaying slowly and reflecting the light from its metallic skin, was SIGMA SEVEN.

KEARSARGE reduced speed and changed course left to 050^o true as it became obvious that the capsule would land very close, and made preparations to approach the capsule after it landed in the water. The order was given to launch the helicopters. At 1028, SIGMA SEVEN splashed about four and one half miles ahead. By radio the voice of CDR SCHIRRA, the astronaut, informed the ship that he was uninjured and felt fine, and that the capsule was watertight. A group of trained Navy frogmen, and a medical team, dropped from the hovering helos into the ocean and quickly installed the flotation collar around the capsule to steady it and prevent its sinking if a leak should develop. CDR SCHIRRA indicated he desired to stay inside the capsule, and that he would not blow the hatch until the capsule was recovered. KEARSARGE was directed by CTG 130.2 to retrieve the astronaut and capsule. An affirmative answer was given by the Commanding Officer to CDR SCHIRRA's parlance of the tradition honored, "Request permission to come aboard." At 1045 a whaleboat was lowered as the ship was maneuvered to bring the capsule abeam 350 feet from the starboard side of KEARSARGE.

The whaleboat slowly approached the capsule, fighting the rolls of the sea and spray being blown by the downwash of one helicopter that was retrieving one of the medical team who indicated he was having difficulty in the water from the capsule. Apprehension that mounted at hearing this report was relieved in knowing it to be of a minor nature and that the recovery was still progressing without being marred by such an occurrence. The ship was cast to starboard to a position upwind of the capsule to provide a lee for the boat and capsule. The boat made a second approach and attached a line to the top of the capsule. On station at the ship's number 3 elevator a willing crew hauled in the line until the capsule was beneath the ship's crane. At 1105 it was lifted clear of water and at 1108 the dripping capsule was gently

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lowered into the pallet resting on the elevator. SIGMA SEVEN, SCHIRRA's "sweet little bird", had come to roost; Lat 32 05N, Long 174-28.5W.

It seemed an eternity before the preparations were complete for the hatch to be blown from the capsule by CDR SCHIRRA. At first a silver covered hand and then a figure appeared at the tiny opening and slowly worked its way out. The hesitant applause broke into wild cheers and a thunder of noise as the helmet was raised and CDR Walter SCHIRRA stepped onto the deck of the KEARSARGE at 11:13. His journey of 160,000 miles was ended.

The NASA recovery team took over the work that still had to be done. CDR SCHIRRA was escorted to the Medical Department spaces where he began his long post-flight debriefing and examination. His physical condition was excellent and he was in good spirits as he talked first to the President, the Vice President, and then to his wife by long distance phone and assured them that he was well and that the trip was a great success. SIGMA SEVEN was washed down with fresh water and later moved to the hangar bay where it was put on display for all hands to examine.

A good feeling of success permeated the ship and all hands looked forward to the chance to associate with the new members of NASA who arrived by COD from Midway on the morning of 4 October. This group included all of the astronauts (except CDR SHEPPARD) and top NASA operations and medical officers. SIGMA SEVEN was transferred from KEARSARGE to Midway Island by tug at first light on 4 October to continue its journey to the NASA space center at Houston, Texas.

The days enroute to Pearl offered many occasions to meet and talk to the past and future travelers of space and to perhaps get an auto-graph as a memento of this newest quest into earth's surrounding element. The required seventy-two hours for CDR SCHIRRA's post-flight procedures passed quickly. He departed by COD (as co-pilot in a TF) to Hickam AFB in Hawaii at 0945, 6 October for the next of his richly deserved welcomes.

KEARSARGE entered Pearl at 1100 for the last time as a unit of the Pacific Recovery Force under CTF 130, with a large banner on the starboard side displaying "CANAVERAL TO KEARSARGE" in letters six feet high. From the yardarm flew an "Astronauts Pennant."

The Project Mercury mission assigned to KEARSARGE had been accomplished.

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NASA and other press personnel departed and Mercury equipment that was no longer needed was removed. In their place KEARSARGE received Marine personnel and equipment of two Marine Attack Squadrons (attached to MAG 13) that would day and night carrier qualify. In this period from 8 through 11 October four pilots day qualified and forty three pilots night qualified, making 302 day and 260 night arrested landings in A4D's.

KEARSARGE departed for California on the evening of 11 October.

The ship that departed Hawaiian waters this eleventh day of October was still from all outward appearance the same one that had arrived some two and one half months before. True, some antennas were new, others were gone and she showed new paint in the continuous preservation battle against rust and in her attempt to dress up for the publicity she received. But beneath this outward veneer there was a new ship, new in her place in history and new in her acceptance by the crew that had given her that place in history.

The crew that departed with her was still the crew that had brought her to this place. But they also had changed. They were now a team and knew how to work their ship. It was not easy on the first mission after FRAM, this welding of people and ship into a unit, to cope with the challenge. But it had to be done. And they took with them the feeling of richness that comes of knowing a job well done.

There will be others who follow in what KEARSARGE has done. May they also find the success that was so fortunately ours.

It is of historical significance that in June 1942, during the Battle of Midway the U. S. Carriers launched and recovered their aircraft while steaming in the same waters where Sigma 7 was recovered.

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SWIMMERS SECURE FLOTATION COLLAR TO SIGMA 7 CAPSULE TO INSURE BUOYANCY IN EVENT OF LEAK.



MOTOR WHALE BOAT ENROUTE WITH LINE FROM KEARSARGE TO CAPSULE, HELICOPTER HOVERS TO PICK UP SWIMMER.



BOAT CREW AND SWIMMERS IN THE PROCESS OF
SECURING LINE FROM KEARSARGE TO CAPSULE.



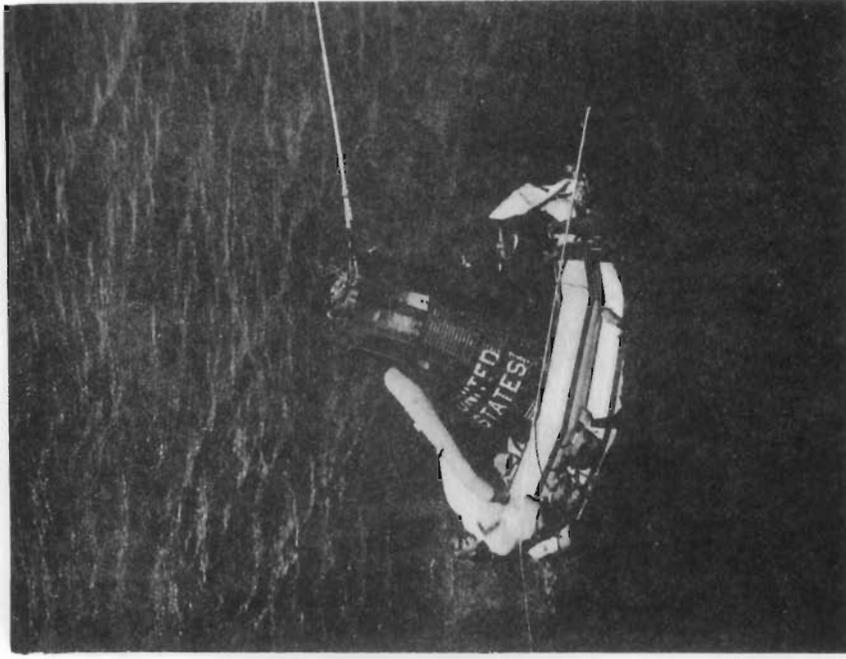
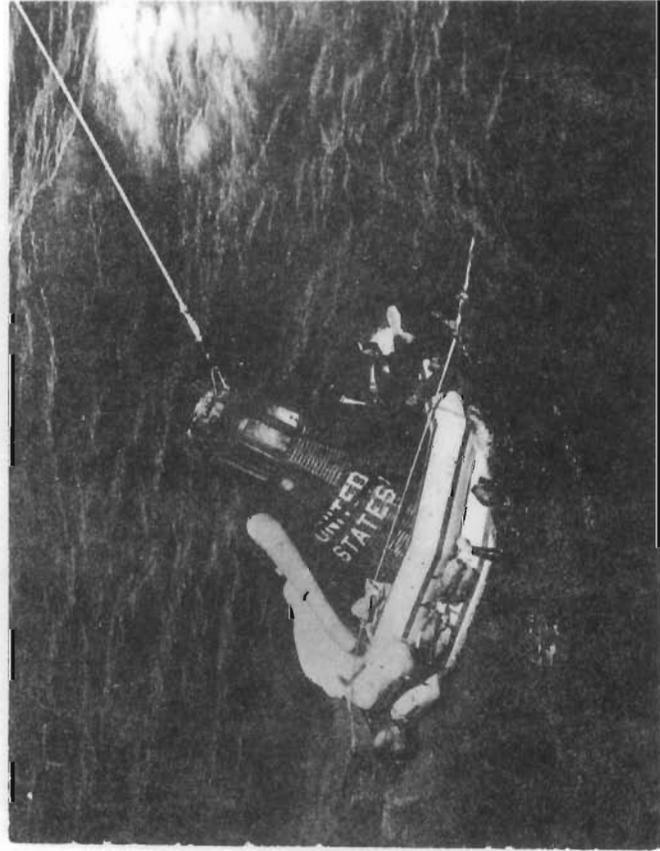
BOAT STANDS BY AS CAPSULE IS CARE-
FULLY HAULED TOWARD KEARSARGE.



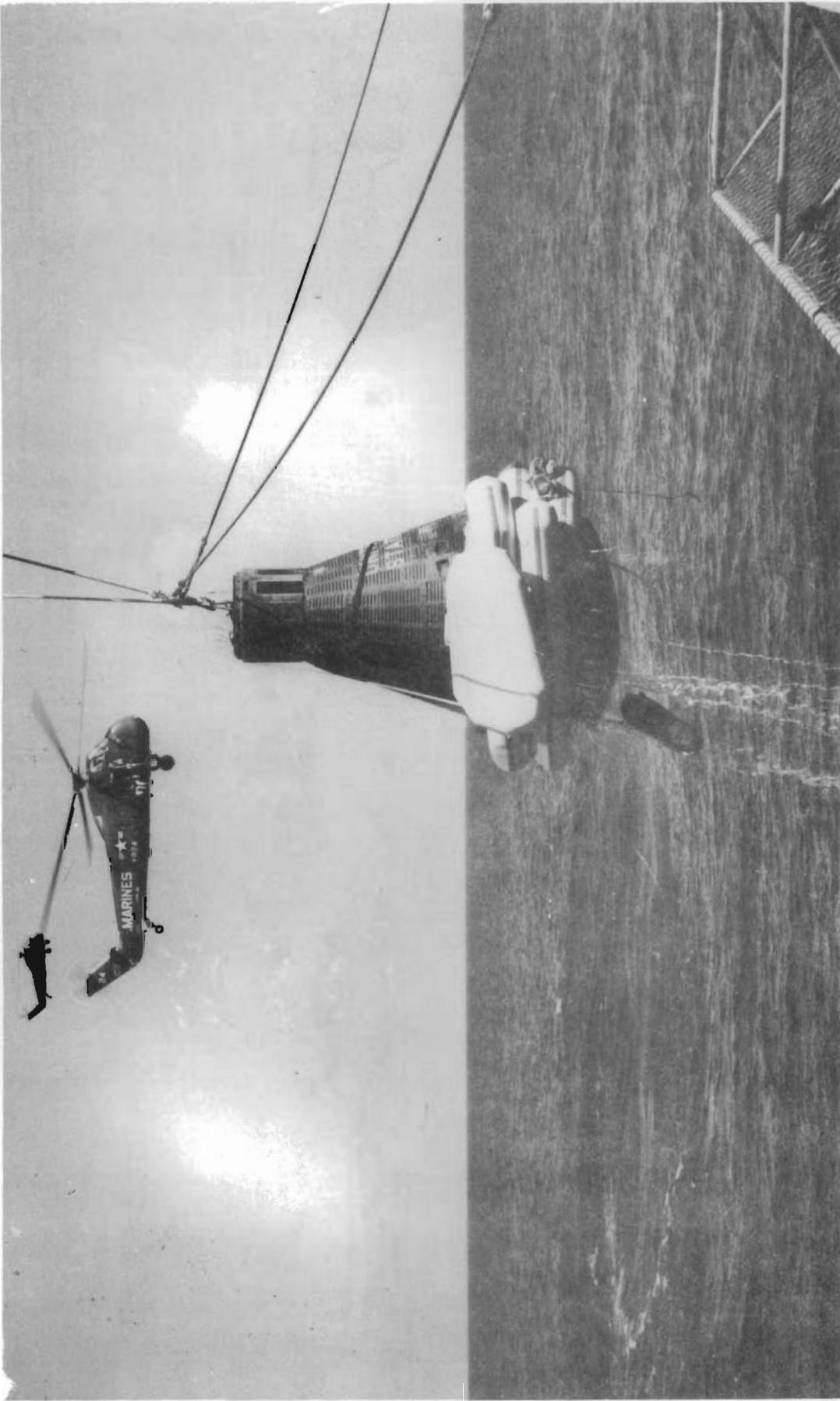
CLOSEUP VIEW OF CAPSULE MOVING SLOWLY TOWARD SHIP. NOTE SWIMMERS CHECKING FLOTATION COLLAR.



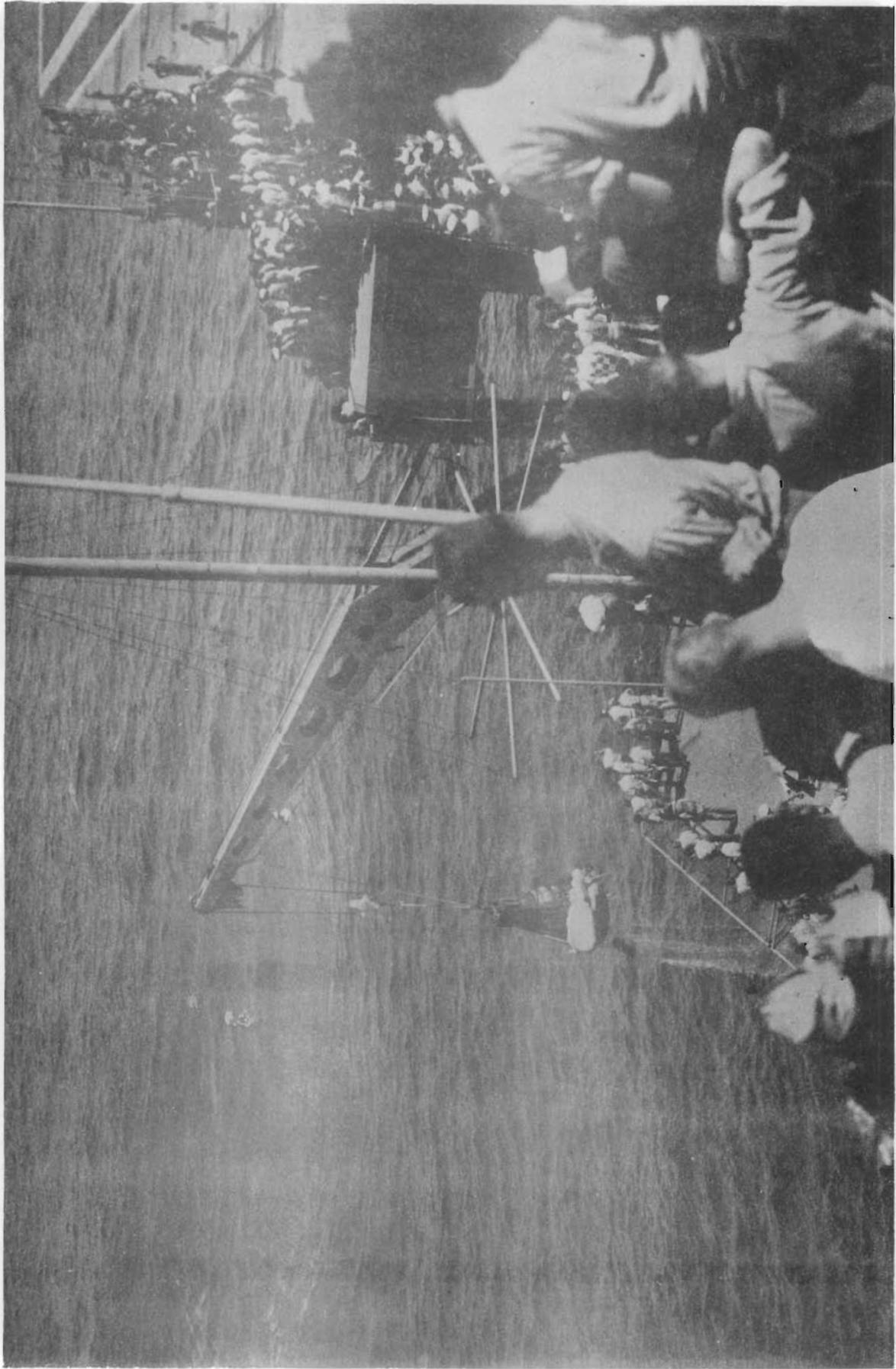
SIGMA 7 CONTINUES MOVEMENT TOWARD KEARSARGE, TENDEL
BY SWIMMERS IN THE WATER. BOAT STANDS BY.



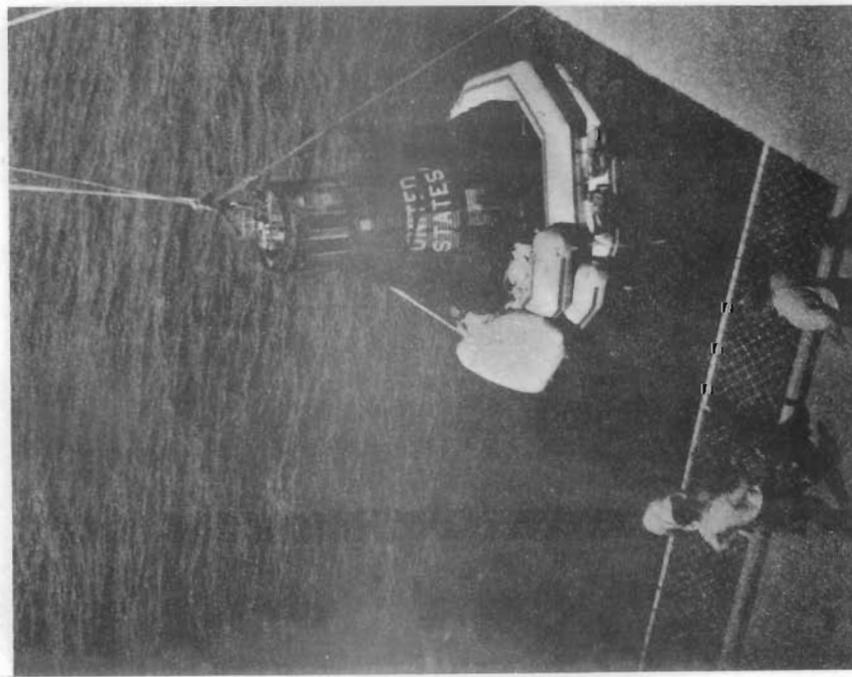
CLOSEUP VIEWS OF SIGMA 7 CAPSULE. SWIMMERS ENSURING SECURITY OF FLOTATION COLLAR.



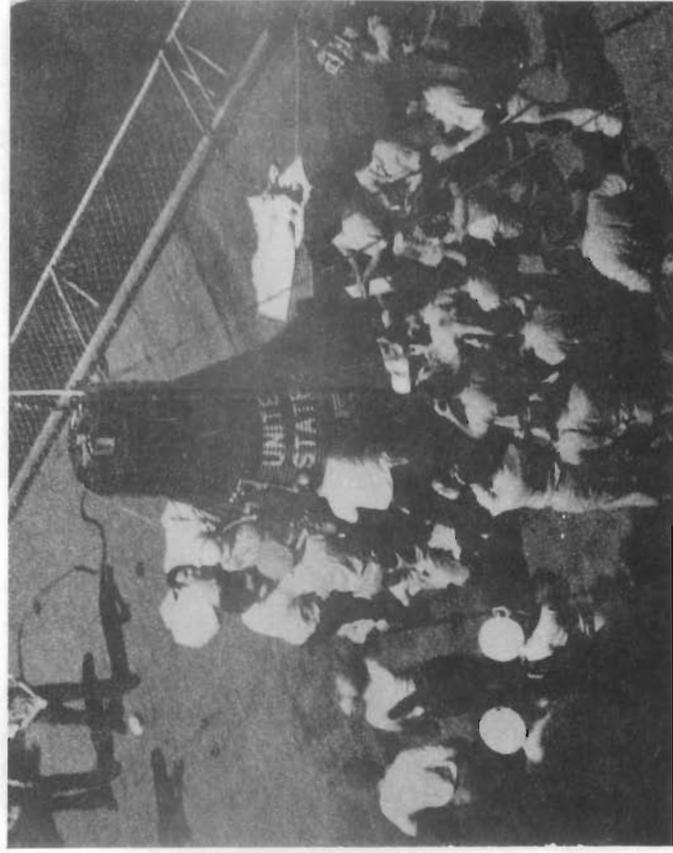
SIGMA 7 IS HOISTED ON BOARD KEARSARGE NUMBER 3 ELEVATOR
BY BOAT CRANE AS MARINE HELICOPTERS STANDBY.



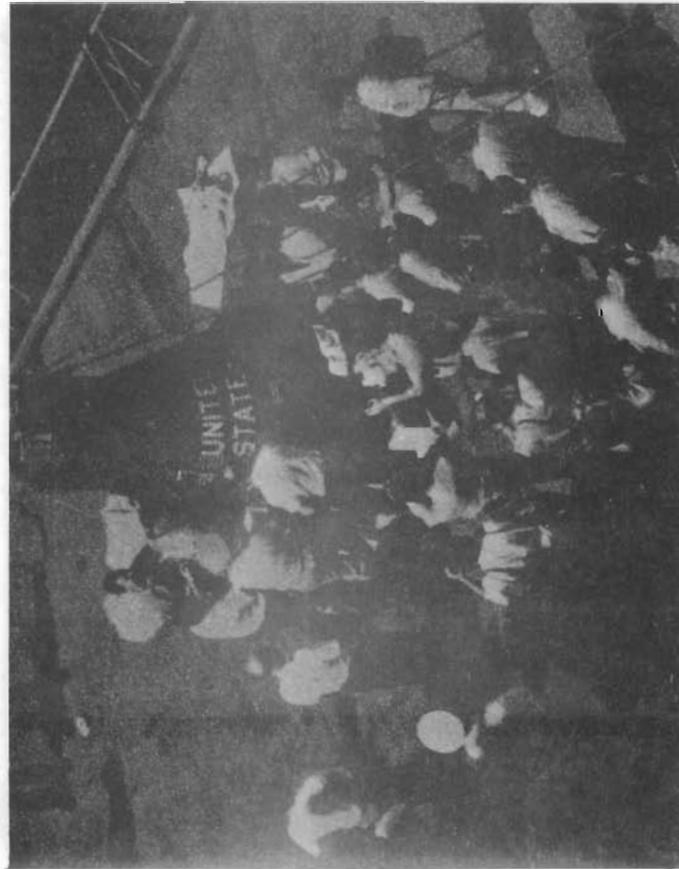
ALL HANDS OBSERVE AS SIGMA 7 AND CDR SCHIRRA ARE HOISTED ON BOARD.



CAPSULE IN PROCESS OF BEING
LOWERED ONTO SPECIAL PALLET.



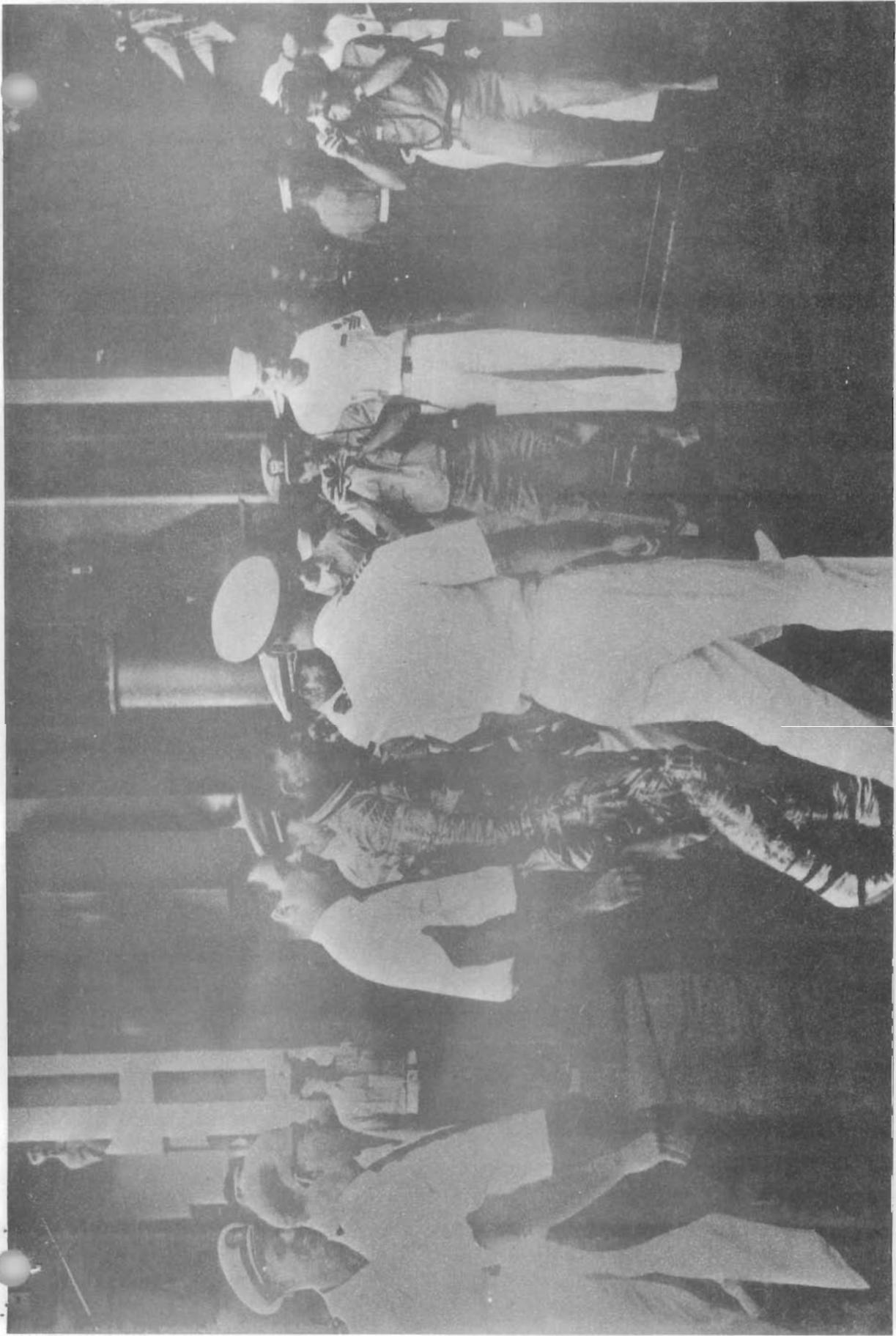
ASTRONAUT, CDR WALTER M. SCHIRRA, U. S. NAVY, EMERGES
FROM SIGMA 7, REQUESTS PERMISSION TO COME ABOARD.



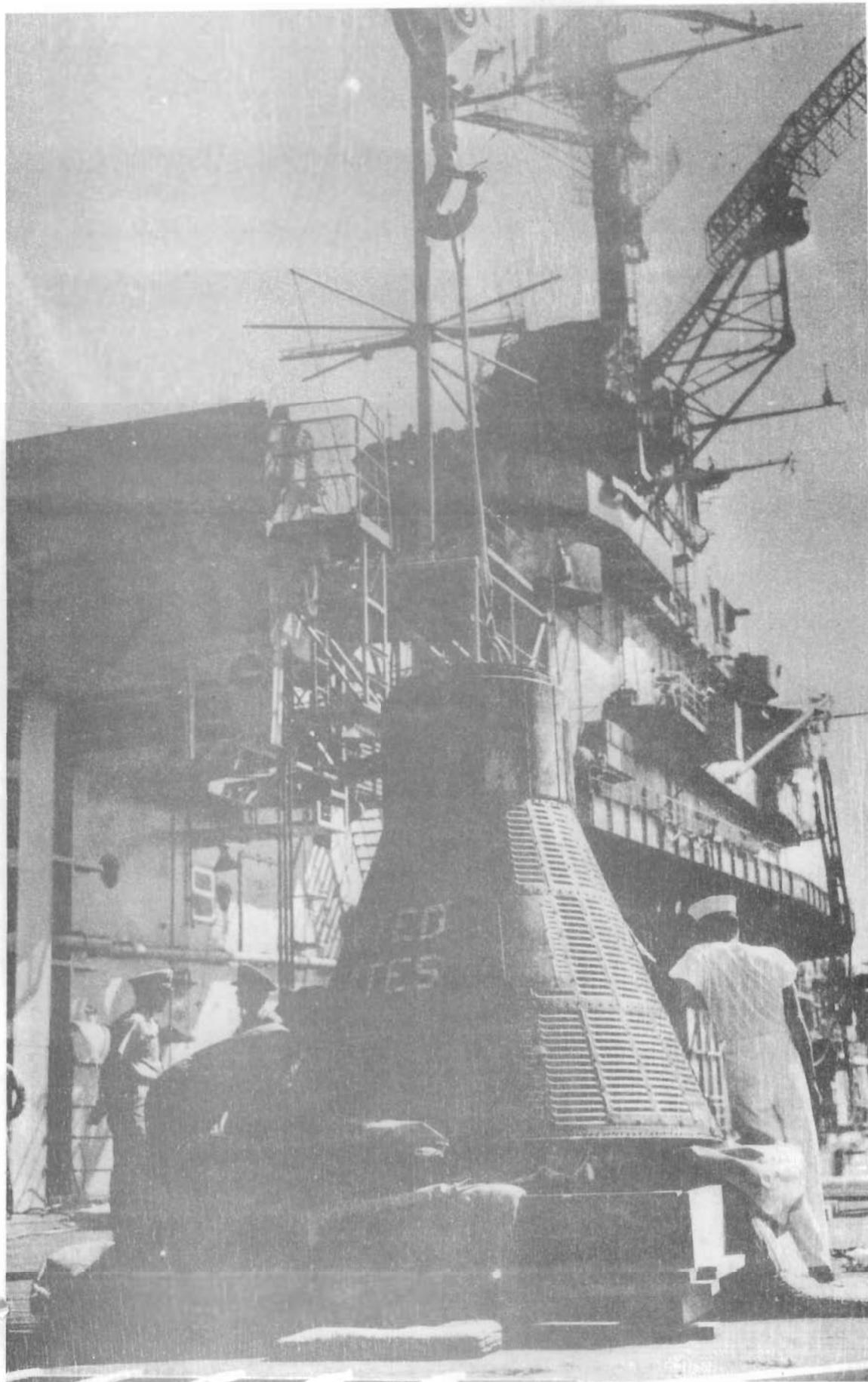
HELMET NOW REMOVED, ASTRONAUT IS ASSISTED FROM SIGMA 7 TO KEARSARGE DECK.



COMMANDING OFFICER, CTG 130.2, MILITARY AND NASA OFFICIALS GREET ASTRONAUT, AS PERSONNEL COMMENCE CHECK OF CAPSULE.



ASTRONAUT ENROUTE TO SICK BAY FOR PRELIMINARY PHYSICAL EXAM, ESCORTED BY COMMAND-
ING OFFICER, MILITARY AND NASA OFFICIALS. SHUTTERBUGS HAVE MOMENTARY FIELD DAY.



SIGMA 7 CAPSULE RESTS ON IMPROVISED PADDING IN SPECIAL PALLET ON KEARSARGE NUMBER 3 ELEVATOR.



CLOSEUP OF HISTORIC SIGMA 7 CAPSULE. ALTHOUGH SOMEWHAT SCORCHED DURING REENTRY, NATIONAL ENSIGN IS CLEARLY EVIDENT.

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SECTION II - DEPARTMENTAL AND SPECIAL REPORTS

a. ELECTRONICS

1. EQUIPMENT

Paragraph 5 to this section is a list of all the special communication equipment installed by NSY PEARL for Project Mercury. The installation provided an 80% improvement to the communications capability of KEARSARGE. The most significant improvement was provided by the AN/FGC-60(V) Voice Frequency Terminal Equipment. Only minor modifications to the ship's transmitter trunk lines were necessary to permit the use of the AN/FGC-60(V) with the ship's own transmitters (AN/WRT-2). The AN/FGC-60(V) made it possible to operate up to 8 full duplex TTY channels plus one voice channel on a single frequency using AN/WRT-2 transmitters. The AN/FRT-39C, having a 12 KC bandwidth, together with TD-410 and TD-411 multiplexing demultiplexing equipment, added the capability of 2 additional channels on the same frequency which were also used for voice transmission. In direct connection with the above installation was the addition of 2 TA-401A/U voice terminal units (on loan from NAVCOMMSTA HONOLULU) which made it possible to extend any voice channel into the Ship's Service telephone system. It was in this manner that CDR SCHIRRA was able to talk to President KENNEDY and others direct from his room in Sick Bay. However, it was necessary to provide constant level amplifiers for all four channels to compensate for the difference in voice input from either the remote control units or the telephone system.

The primary advantage of the AN/FGC-60(V) was the large reduction in the time required to pass a given amount of traffic to any station (ship or shore) having compatible equipment, and the resultant reduction in circuit requirements.

The C-745/FRT-15 Remote Control units were installed as follows:

- (a) - At the terminal equipment for operator use.
- (b) - In the NASA Operations Office for use by the Public Affairs Officers and Engineers to provide them direct communication with Cape Canaveral.
- (c) - In Flag Plot for use of the radio and TV commentator.
- (d) - A fourth "hybrid" remote control was installed in Flag Plot for the use of the NASA PAO for the KEARSARGE-CANAVERAL voice channel. This unit was constructed using a standard AM-215/U Audio Amplifier to which a sound-powered chest set was attached.

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2. GENERAL COMMENTS

Lack of timely firm information as to space usage and/or requirements resulted in unnecessary cramping of equipment and poor arrangement of the AN/FGC-60(V) and companion TTY equipment.

There is also definite need for EARLY liaison with both NASA PAO and the press media as to broadcast coverage capability desired, type of coverage that will be permitted by NASA, etc. Some requirements include remote control facilities for the voice channels from various vantage points on the ship, a "quiet room" with near studio quality equipped with adequate microphones for news conferences and/or interviews to permit video taping and filming, plus direct broadcasts whenever permitted.

The ship was able to meet every requirement for additional facilities, however, it should be noted that they were made known AFTER the ship was underway for the recovery area and required considerable "jury-rigging" to do so.

Communications with the other ships in the task force were, for the most part, satisfactory, but some equipment deficiencies were noted. Of particular note is the need for additional single-side-band equipment on the accompanying destroyers. It was necessary to use a combination of AM transmission to the destroyers, patched through the multiplexing system of AN/FGC-60(V) to the AN/FRT-39C in order to provide a sort of "Round Robin" circuit in order to broadcast "on-the-spot" reports from both the group in the primary recovery area (TG 130.2) and the fourth orbit force (TG 130.1). This was due to the lack of sufficient frequency assignments in addition to the equipment shortage mentioned above.

There were several "last minute" technical modifications. Specific mention should be made of the addition of a toggle switch to all the remote control microphones by INDMAN 14, which bypassed the "push-to-talk" switch and particularly made the job easier for the NBC commentator, Mr. Herbert KAPLOW, during his continuous "on the scene" broadcast during the actual recovery phase of SIGMA SEVEN. It was also found necessary to de-activate the two whip antennas (No. 3-2 and No. 3-4) just forward of the No. 3 elevator, due to the power being radiated by the AN/FRT-39C. This caused some difficulty because it left only one antenna in Radio III for the 2-6 MC and 18-30 MC frequency range.

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For future assignments of this type it is recommended that consideration be given to the procurement or development of a microphone, possibly a chest type, with adequate shielding to provide exclusion of excessive external noise (i.e., wind, etc.) without muffling or otherwise creating distortion of the user's voice.

The installation provided KEARSARGE is considered superior to the use of commercial portable equipment used on previous occasions in that it provides better control of the information being released and more definite assurance of reliable communications.

3. PROBLEMS EXPERIENCED

The following are the individual ship equipment difficulties experienced during the execution of Project Mercury:

(a) AN/SPN-6. The stabilization and elevation systems of the antenna continued to give trouble and the equipment was used with the stabilization and elevation units in "STOW" position during MA-8. It was necessary to leave the elevation hydraulic pump motor (B-1301) to be rewound and the stabilization motor (B-801) required shipyard overhaul.

(b) AN/SPS-43A. A slight water leak developed in the P. S. plate cavity, causing severe arcing on one side of the cavity, which in turn crystallized approximately 15 inches of the rubber "O" ring seal, thereby causing an air leak. Disassembly of the cavity disclosed that the severe arcing had built up a hard metal ridge on the edge of the lower body and badly pitted the inside of the main body of the cavity. The ridge was dressed down, electrical sealing ring cleaned, the "O" ring replaced and the cavity was reassembled. Equipment operation returned to normal.

Approximately ten days later the VSWR began to rise to unacceptable levels. Operation was normal in dummy load position but the VSWR rose immediately when switched to the antenna. The right angle connection of the waveguide at the base of the antenna was removed and evidence of severe arcing was found on the center conductor. Approximately one inch of the center conductor connector was completely burned off, providing no actual mechanical contact. An interim repair was made by brazing a piece of 7/8" I. D. brass tubing to the burned stub. The other end was heated and flared to make a tight electrical connection to the waveguide extension (Ckt. symbol #16ALE1). After repairs the equipment was energized and the VSWR was found to be well within acceptable limits. The average reading was 1:1.2 on all channels. The equipment was placed in standby status, using IFF only, until required for the recovery phase of the operation and performed excellently, picking up the capsule at a slant range of 179 miles and a height of 22 miles.

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(c) AN/SPS-8. (The following was not an "encountered difficulty" but is included in this section for convenience).

The 90° conversion kit was obtained and installed by ship's force. This equipment was used by the Aerologists for obtaining RAWIN soundings. A lifeboat radar reflector was used in place of the standard reflector and tracking data at a slant range of 42,000 yards and altitudes up to 90,000 feet was obtained.

(d) AN/SRA-22. There is a definite need for a protective device to prevent burnout of the tuning inductance (composed of L-1; H-7; and E-7) in the event of a high VSWR.

4. SPECIAL ASSISTANCE

The assistance of civilian technicians prior to and during the entire recovery operation was sincerely appreciated. These included Mr. H. WINTERS and Mr. D. YETTER of Technical Material Corporation, along with Mr. P. MUNROE, their Vice-President. Deserving of mention are the personnel of INDMAN 14 in general and Mr. G. OSBORNE and Mr. H. KITAMURA in particular. Mr. KITAMURA worked unstintingly to assist in every possible way to ensure complete and satisfactory operation of the special communications equipment. Special assistance by Naval personnel aboard was provided by LTJG E. ANSEMI and RMC R. BLANEY assigned from NAVCOMSTA, Wahiawa, Hawaii.

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5. SPECIAL EQUIPMENT USED

(a) FURNISHED BY CNO

- (1) AN/FRT-39C, 10KW PEP, Transmitter, Radio.
- (1) Discone-Discage Transmitting Antenna, Complete with Coaxial Lines and Coax Switch.
- (1) AN/FGC-60(V), 8 Channel Voice Frequency Terminal Equipment (Associated Patching Panels supplied by INDMAN 14).
- (2) R-390A/URR, Receiver, Radio.
- (2) CV-157/USS, Single Sideband Converters.

(b) ON LOAN FROM OTHER ACTIVITIES (AS INDICATED)

- (1) URA-42, Single Sideband Converter-ATCU-100.
- (2) TD-410/UGC Multiplexers - NAVCOMMSTA HONO.
- (2) TD-411/UGC DE-Multiplexers - NAVCOMMSTA HONO.
- (2) TA-401A/U Voice Terminals - NAVCOMMSTA HONO.
- (2) AM-413/U Voice Terminals - NAVCOMMSTA HONO.
- (1) AN/GRM-33A Frequency Spectrum Analyzer (Partial) - NAVCOMMSTA HONO.
- (2) AN/UGC-6 Teletype Set - NSY LONG BEACH.
- (2) TT-176/UG Teletype PER-REPERF - NSY LONG BEACH.
- (2) TT-253/UG Teletype PER-REPERF - NSY LONG BEACH.
- (2) TT-253/UG Teletype PER-REPERF - CINCPAC.
- (3) C-745/FRT5 Remote Control Units - NSY PEARL.
- (1) Frequency Counter Mod 524B - NSY PEARL.
- (3) Frequency Isolation Filters (4 to 27 MC) INDMAN NR14 Design - INMAN NR14 (2 EA from NEL) (1 EA from INDMAN 14).
- (2) R-390A/URR, Receivers, Radio - NAVCOMMSTA HONO.

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b. COMMUNICATIONS

1. INSTALLATIONS

For the first month of the MIDPAC Cruise KEARSARGE was in Pearl Harbor Naval Shipyard undergoing installation of the special communications equipment for Project Mercury. The general design of the installation was started in Long Beach and completed in the Hawaiian area. Closer liaison between design personnel and ship's operating personnel would have resulted in a better equipment arrangement in the spaces allotted. Designed installation was unsatisfactory from the operators view point. After the equipment was installed it was necessary for the ship-board ET's and RM's TTY repairmen to reposition all TTY machines for a better working arrangement.

The 5 TTY circuits available were: an orderwire, two 100 WPM press channels, the NAVOPNET, and a TTY back up for the task force recovery common. One of the voice slots was used by the NASA personnel to pass public affairs information back to Hawaii, the second voice slot was used by the NBC commentator and the third slot was held as a spare and could have been used to transmit FAX if the need had arisen.

2. PRESS TRAFFIC

All requirements for the press was received by message and no personal visits were made to the ship until after the installation was complete. The actual working press and the NASA press representatives did not come aboard until the ship was ready to deploy to the recovery area. Consequently, part of the installation was not compatible with actual requirements and last minute rewiring and repositioning of equipment were done. This lack of advance information on the press requirements caused concern and resulted in additional work.

As mentioned above, there were two 100 WPM TTY channels terminating in the press center in Hawaii. There were 4 tt 253's to cut tapes and at peak press periods 4 men, 2 RM and 2 YN, cut tapes and fed the 2 UGC-6's which were used as terminal equipment for the 2 press channels. Only once was there more than a five minute delay in the transmission of press traffic. This was due to malfunction at the shore end and lasted several hours during which time some repeat transmissions were necessary to obtain receipt. During the period 28 Sep - 6 Oct a total of 380 messages consisting of approximately 40,000 words was transmitted successfully. Press channels were not scheduled for activation until T - 48, but press members wanted to start sending lead stories as soon as they embarked. NASA personnel approved the sending of early press; arrangements were made with NAVCOMMSTA HONO to send press over the NAVOPNET for further relay. NAVCOMMSTA held

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these messages temporarily until it was confirmed that NASA had released the press. One special TTY press circuit was then brought up temporarily but was subsequently ordered secured by NASA representatives until T - 48.

The voice slots were excellent for both voice press circuits and telephone patches. During the actual recovery Mr. Herb KAPLOW, NBC commentator, transmitted approximately 1½ hours of on the scene reports. A voice press circuit with DD's had been planned. After departure to the recovery area, it was indicated that this should be a full duplex circuit with capability of patching it into KEARSARGE voice press circuit connecting with Canaveral. Extra frequencies for this purpose were obtained, and extensive work was done to establish this circuit on an acceptable standard for relay to Canaveral.

Throughout the entire operation the press members were most cooperative and no problems arose except the question of passing advance press stories and the setting up of adequate voice channels. NASA, Press Representatives, and the CINCPACFLT PIO Officer were most helpful in liaison with press personnel.

3. OPERATIONAL CIRCUITS

Numerous requirements were set forth by the various OpPlans and OpOrds. The following circuits were used for the recovery:

a. Task Force Recovery Common Voice, SSB. This was the primary command circuit for the entire operation and included CTF 130, all TG CDRS, surface ships and aircraft. Transmitter tuning proved to be very critical, any station that was off frequency would be unheard when the band width on the receiver was cut down in fine tuning. CTF 130 transmitted a 1000 cycle tone for transmitter and receiver tuning but even this did not completely alleviate the problem of the one or more of the ship's transmitters being off frequency. CTF 130 would simultaneously key 3 frequencies. Many times it was necessary to transmit on one frequency and receive on another. Due to lack of additional SSB equipment the DD's had to transmit and receive on the same frequency. Therefore, at times the only contact with the DD's was on Sec Tac. Frequency shifts were not excessive and usually were well timed to meet the propagation problems.

b. Task Group Common - CW. Two frequencies were provided which proved more than adequate. A high volume of traffic was passed with little difficulty.

c. Primary Maneuvering - UHF (Flt Common). This circuit was used in transit to and from the recovery area only, on station all units were out of UHF range.

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d. Secondary Tactical - MF Voice. Used primarily when ships were on station for recovery and out of UHF range. The requirement existed for the assignment of 2 frequencies instead of 1, one high for day and one low for night time.

e. Air Control - One MF and one UHF. Both frequencies were very satisfactory from the communications standpoint.

f. Air to Air Coordination - 1 UHF and 1 VHF. The ship has only two VHF transmitters/receivers. One receiver went down for a short period making it impossible to guard both VHF emergency and the air to air coordination during this time. Recommend use of two UHF vice a VHF frequency if compatible with aircraft equipment. Use of VHF in this instance was imposed by requirement to coordinate USAR aircraft movements after capsule had landed.

g. Ship/Shore AI Series. All of the DD ship/shore traffic was relayed to KEARSARGE via Task Group Common for relay to Honolulu. The NAVOPNET was used for this but during periods of outage all of this traffic was sent via the AI series. During the rehearsals encrypted call signs on weather messages proved to be a problem on the Ckt, but permission was obtained from CPF to send weather with plain calls.

h. Recovery Area Press - Simplex tone Mod. Drills on this Ckt proved satisfactory but it was not used during the recovery because the astronaut was recovered by KEARSARGE.

i. Voice Press to KEARSARGE - SSB. There were no plans to use this Ckt until the press actually came aboard. The DD's had initially used their S-100 transmitters but because of low power and poor quality of transmission they shifted to URC-32's. This presented a hardship on the DD's as they had no back-up equipment for traffic. It was not possible to bring up all the DD's on this Ckt at one time with acceptable quality for relay. This could have been a major problem had the astronaut been recovered by a DD. Again if this requirement had been known during the many rehearsals this could have been made workable.

j. Astronaut Voice

(1) HF: Very poor reception of SIGMA SEVEN capsule on this circuit except after landing. Capsule control stations heard frequently.

(2) UHF: There are no crystals in the Navy allowance for this frequency. The crystals had to be manufactured by NSY Mare Island. Good reception of the astronaut was possible while he was in the capsule after impact.

(3) UHF (Life raft circuit): No crystals available in ship's allowance, nor considered necessary since 5 AN/GRC-27's were available if required.

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k. FAX. Press photos were not transmitted. NASA press representatives concurred with Navy PIO representatives that this circuit not be used to transmit photos. The circuit satisfies an operational requirement for the ship. FAX could have been put in one of the 4 4KCS slots on the FRT-39 had the requirement been established.

1. Fleet Broadcasts.

(1) HR copied medium to good during the entire time on station. Condition Uniform was used frequently by NAVCOMMSTA HONO. Prior to full power runs on the FRT-39, NAVCOMMSTA HONO was informed condition Uniform would be required as soon as possible after the test. There was full cooperation from NAVCOMMSTA HONO on reruns. The FRT-39 caused some hits and reception was 2 to 3 during full power runs.

(2) FRA Broadcast was copied during the early periods of the rehearsals. Permission was received from COMFIRSTFLT via CTF 130 to secure FRA because of poor reception.

4. PERSONNEL

a. Prior to being designated for MA-8, "OR" Division had 41 radiomen. A request for 20 additional radiomen to CINCPACFLT resulted in assignment of 16: 2 RM1's, 8 RM2's, 4 RM3's, and 2 RMSN's. All men were of excellent caliber, but had no experience with Carrier radio equipment (i.e., R390, WRR-2 Receivers and WRT-2, URC-32 Transmitters). All were trained for specific jobs after reporting aboard. One TAD RM2, a qualified TTY repairman, was of great value in the repair and maintenance team.

b. NAVCOMMSTA HONO provided one LDO LTJG and one RMC who were experienced in the operation of the FGC-60 and associated equipment. Both men proved to be invaluable. Without these two men circuit outage would have been excessive.

c. NAVCOMMSYS Headquarters provided two technical representatives for the AN/FRT-39 and Tele-sig Corp, Manufacturers of the AN/FGC-60 sent one man, and INDMAN 14 sent an engineer. All were very cooperative and helpful, although no failures occurred which required engineering assistance.

d. It was found that ship's company RM's needed more training in the tuning of both WRT-2 and URC-32 transmitters. Precise tuning of SSB signals on R-390's and WRR-2 receivers proved to be a problem during the early rehearsals.

e. Two radiomen were sent to NAVCOMMSTA HONO to receive training in the operation of the AN/FGC-60 and two others were sent to be trained in the operation of the AN/FRT-39. This training proved to be very valuable.

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5. GENERAL COMMENTS

a. During outage of AN/FGC-60 and/or task force recovery Comm (V), the A1 series (CW) was used in conjunction with the HR BCST to coordinate frequency shifts and to handle other technical problems.

b. CWO wire notes were used frequently between ships in company and NAVCOMMSTA HONO to iron out minor problems. CWO wire notes were used to report ship's position so that NAVCOMMSTA HONO could train their directional antenna on the recovery forces.

c. CINCPACFLT HICOMM Ckt (E33.3) was used as back-up for task force recovery Common. This requirement presented some problems, as KEARSARGE back-up transmitters were being used for task force recovery Common. Unfortunately, this Ckt had to be given secondary consideration as compared to Task Force Recovery Common.

d. The assistant Communications Officer and Radio Officer stood Port and Starboard watches during all rehearsals and actual recovery to handle all problems relating to radio, technical difficulties and trouble calls. One day prior to the actual recovery and until completion all other CWO's stood Port and Starboard watches. Two CWO's were used to handle Navy traffic, and one was used to handle press traffic. Press traffic was kept separate from official traffic and was not assigned a date time group. All radiomen stood Port and Starboard watches throughout MA-8.

e. ASCAC personnel and equipment were used to record both Astro Voice circuits and Task Force recovery Common.

f. Because of air operations, frequent raising and lowering of antennas caused some circuit outages. Transmitters had to be retuned frequently. It is recommended that antennas be left in the lowered position during the daylight hours instead of constantly lowering and raising them prior to and after each launch. A ready deck was not available at all times during air operations and on occasion radiomen had to be standing by in Flight Deck Control in the event of an emergency. It was found that neither transmission nor reception improved noticeably after raising the antennas during the daylight hours. Circuit outage could have been reduced if the antennas had been left in the lowered position.

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c. COMBAT INFORMATION CENTER

1. MISSION

CIC's functions during the recovery of the MA-8 capsule were to control the assigned aircraft, afford safe separation in both VFR and IFR weather, and plot all available information to enable the position of the capsule to be determined.

2. FORCES

The aircraft involved in the recovery were as follows:

- 4 Air Force search and homing aircraft. (SC-130 and SC-54)
- 4 miscellaneous aircraft assigned radio relay and telemetry recording. (WV2)
- 2 AEW aircraft launched from KEARSARGE for Middleman, Bellhop and helo control as required. (AD-5W)
- 3 pick-up helicopters launched from KEARSARGE. (HUS)
- 2 photo helicopters launched from KEARSARGE. (HSS-1 and 2)

3. CONCEPT OF OPERATIONS

All aircraft not launched from KEARSARGE were assigned stations for the recovery. The search aircraft, equipped to home on the SARAH beacon contained in the capsule, were planned as the primary locating units. Upon the receipt of a calculated landing position for the capsule, the search aircraft were to head for that position and switch to the homing mode of their UHF radios. This necessitated switching from UHF and the use of VHF for air control. The use of the two air controllers was mandatory as only the search aircraft switched control frequencies. The other aircraft in the area relayed the astronaut voice circuit back to the communications center in the Hawaiian Islands and recorded the telemetry signals from the capsule.

The AEW aircraft were launched 30 minutes prior to impact so as to be in position to control the helicopters on the way to the landing area if it was beyond radar range of KEARSARGE. The helicopters were not to be launched until a definite area had been established. Provisions were made for the AEW aircraft to use Middleman and Bellhop if the range of the impact area from the ship was too great for normal reception.

Provisions were made to record the primary astronaut voice frequency and the Middleman link was ready to be used for this purpose if distance made it necessary. Also, provisions were made to have one of the helicopters transmit astronaut information to KEARSARGE on HF to parallel the flow of information in the event of Middleman failure and to insure the reception of this information.

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KEARSARGE arrived on station on 2 October at 1630Y. On the eve of this day we had paused to ask HIS attendance and help.

The following is the prayer offered by Catholic Chaplain Patrick J. GRACE, aboard KEARSARGE, on the evening of 2 October:

"O Almighty and Everlasting God, Who, by Thine infinite wisdom and limitless power, did bring this vast and wonderful universe, we humbly ask Thy guidance and assistance in our search to fathom its deep and endless mysteries. We are rightfully proud of our efforts and accomplishments in this regard - we are equally humble in the knowledge that the mysteries which we probe, as well as the minds and talents which we probe, have their source in Thee."

"Several blessings we would ask of Thee this night. Bless, we pray Thee, our nation, the United States of America - grant that we might ever be as generous in serving her as Thou hast been in blessing her. Bless this ship and all who serve in her; be with us as we seek to accomplish our assigned task; if it be Thy Will, crown our efforts with success. Above all, we pray for the safety and well-being of Thy servant, Walter SCHIRRA, and for the success of his mission. Grant to this courageous servant of his nation the consolation of Thy presence and strength. Fill his spirit with patience, fortitude, perseverance, and an abiding trust in Thy gracious Providence. Protect him against all harm and grant him a safe return to those who await to receive and welcome him. May Thy holy angels be his constant companions throughout his flight. Amen."

T-DAY, 3 October 1962

There were no late sleepers on this day. NASA and press spaces were active all during the night. News from Canaveral was encouraging, and indicated that SIGMA SEVEN would be launched on schedule. All TF 130 forces had reported on station and ready. We waited.

In Flag Plot, TIME was the master and dictated the log. The following excerpts give progress of prelaunch, orbit flight and descent of capsule.

- 0022 (Local times, Yankee Zone +11) T-53 and counting.
- 0030 T-45 and holding. Canary Island tracking station tuning.
- 0045 T-30 and counting.
- 0110 T-5 and counting, all systems GO.
- 0115 T-ZERO. Lift off, all systems GO!
- 0156 SIGMA SEVEN approaching first sunset.

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e. Extra recorders were assigned to cover the major frequencies associated with the recovery. The nets covered are as followed:

- (1) UHF air control
- (2) VHF air control
- (3) HF air control
- (4) Circuit 12, SSB

The messages received were copied on R/T message forms which were prenumbered and labeled with the circuit name. They were made up with carbon paper so as to give an original and two copies for each message. The messages were passed to the Flag Evaluator, Ship's Evaluator and the CIC Watch Officer for disposition.

f. The DRT operator plotted all information available such as ship and search aircraft positions, bearing reports, Datum, etc. The DRT plotting sheet contained the recovery area and station assignments consistent with DRT scale.

g. The VP plotter kept the air picture current and also included Datum information on the display. The recovery area and the station assignments were also shown on the VP.

4. RESULTS

At 1022 the air controller detected the spacecraft on three successive radar sweeps which plotted at:

280° true 179 miles
280° true 132 miles
280° true 79 miles

The height finding radar operator was unable to locate the spacecraft until the main parachute deployed -- probably because of its high speed. At about 1023 height finding contact was made slightly below 10,000 feet and very shortly thereafter the spacecraft slowed enough to be reported at 044° true, 7 miles range and 7400 feet altitude. The spacecraft and parachute were both clearly visible on the height finding radar during the descent. The spacecraft faded at 3400 feet and the parachute at 1200 feet at a range of 4.5 miles. The spacecraft landed at 1028.

After a discussion with the NASA representatives using the best information at their disposal, it appears that initial radar detection was made at an altitude of at least 100,000 feet. The spacecraft tracked on the radar at a speed of about 15,000 knots.

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5. RECOMMENDATIONS

The following is a list of recommendations compiled from experience gained during rehearsals and the actual recovery.

a. Insure that aircraft maintain station during the phase prior to homing on the SARAH beacon. The number of aircraft in the area make this mandatory as the area could become crowded very rapidly. Eight aircraft were assigned and one relief aircraft along with an extra aircraft were actually in the area.

b. Someone should monitor the message traffic that the watch officer receives over the various nets. The same message often comes in over three different nets and time is wasted reading superfluous traffic.

c. Have every radar available searching for the capsule. The SPS-43 tracked the capsule from 179 miles. The target indication was 1 1/4" by 2" and impossible to miss. The air search operator was on a 200 mile scale so the first contact might have been missed. The SPS-8 was used in conjunction with a VL to track the capsule to impact.

d. Get sighting data from NASA representatives. This will enable the lookouts to be briefed properly and allow the height finder to sector search an area. The sighting data proved to be very accurate.

e. Have search plans preplanned for use in case of an emergency.

f. Assign aircraft IFF codes by station number, call sign and/or mission to assist the air controllers.

g. Check and double check communications. Once each watch isn't too often the day prior to the recovery.

h. Be alert for rapid changes to the Op Order and Op Plan. Aircraft were added at the drop of a hat and their station changed just as rapidly. For example, the morning of the recovery, another aircraft was added to the forces involved.

i. Synchronize all clocks and keep a chronological log of all important events. This will be difficult at impact due to the heavy volume of traffic. However, the information will be of interest to NASA.

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d. AIR INTELLIGENCE AND PHOTOGRAPHY

1. AIR INTELLIGENCE

a. Organization. Plans for the establishment of an Air Intelligence Team were well laid as a result of a conference held a few weeks before departure to MIDPAC. The ship's Air Intelligence Officer headed the team and from all appearance no organizational problems were encountered.

b. Briefings. Ships briefings were of an informal nature and vital information was passed on to shipboard personnel on a "need to know" basis. During this period the squadron AIO's pursued the COMNAVAIRPAC Air Intelligence Syllabus with much enthusiasm and as a result a large portion of the required briefs were completed. The team concept worked well in this area, in that the large briefs were conducted as joint briefs simplifying the preparation of graphics and also making each individual AIO somewhat of an expert in a specific phase of Air Intelligence during this period. Some planning was done toward the presentation of the forthcoming ship's competitive exercise brief (Z-10-I).

c. Spaces. The ship's AI spaces were adequate for the presentation of the various briefs. A self-scheduling board was used and each individual AI could pick a time for his brief so as not to conflict with another group. As many as twenty-five officers could be handled at one time in the AI office. There are many advantages in utilizing the AI office for briefs, mainly because it is a restricted space, graphics can be prepared and displayed on a semi-permanent basis. One problem encountered during the cruise was that many squadron officers felt that this was the office where many of their general administrative chores could be performed. This type of intrusion was discouraged early in the cruise in order to maintain the security of the space and in order to give working space to those that had to prepare briefs.

d. Supply. In general there were no problems in this area. Drafting and graphic material appeared to be adequate. The chart allowance was more than adequate and the maintenance of the chart allowance was accomplished by drawing required items from the Air Navigation office at Barbers Point. Service in this respect was excellent. It's recommended that the squadrons procure sufficient office supplies and equipment to enable the administrative groups to function without imposing on the AI spaces and facilities. The only major weakness in support material was the lack of an adequate slide projector on the ship. This hampered the presentation of recognition briefs to a great extent.

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e. Personnel. Each squadron had at least one officer who was assigned the job of Air Intelligence as primary duty, which proved to be sufficient in most cases. Problems could arise if around the clock operations were conducted and the AIO's had to perform pre-flight and post-flight briefing functions. Two enlisted men were assigned to the squadron AIO's, and in addition, there was one ship's company AI assistant. None of the enlisted personnel have attended the AI school, but all proved to be very capable. It is recommended that for future operations, where around the clock scheduling is anticipated, the enlisted personnel be assigned on a TAD basis to the ship. This would enable the ship's AIO to keep the spaces and library open on a basis to match the operational schedule. The security of the spaces as well as most of the material is a responsibility of the ship and in order to get the maximum utilization of the library the enlisted personnel should be working for the ship's AIO.

2. PHOTOGRAPHY

a. General. The normal requirements for official photography was met with the personnel and equipment available.

b. Material Requirements. Problems were encountered with respect to planning because of the unusual nature of this operation. Material requirements were very vague as presented in the available Op Order for the task assigned. This was further hampered by difficulties in obtaining funds. Actually the mission was assigned after the quarterly OPTAR funding was made and funds for additional material to be stocked came from those funds already assigned to other important functions within the Operations Department. What to stock and how much was a problem of great concern, as it was difficult to determine just what the ship's role would be photographically. Delays in delivery of material (films, chemicals, paper and cameras) necessitated many open purchases of material prior to departure from Long Beach, this in turn resulted in duplicate ordering of stock to ensure deliveries prior to departure. Present equipment is generally good, but there is still considerable material to be ordered to bring the lab up to the standards prescribed by the Commanding Officer.

c. Personnel. The photo lab has been above allowance in personnel and was further augmented by TAD personnel from the air group. This assisted greatly in carrying out the photo requirements for this particular operation.

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e. METEOROLOGY

1. PERSONNEL

For the MA-8 operation there were 8 rated aerographers aboard and 3 AN's in training. Personnel were split into three sections. Two sections worked 12 hour watches per day and one section completed two RAWINSONDES daily. This number of personnel is considered a bare minimum for providing the weather services required for MA-8.

2. MATERIAL

MA-8 required RAWINS, therefore modifications were completed to the SPS-3 in order to give tracking capabilities to higher elevations. Radar reflectors of the life raft type were obtained and used for all RAWINS. Fleet Weather Central Pearl was of great assistance in obtaining critical supply items and METLO Pearl provided outstanding services and assistance.

3. TECHNIQUES

Weather broadcasts on RATT were copied from JMG (Japan) and NPM (Pearl) throughout all MA-8 operations in order to obtain adequate map coverage for the Pacific recovery area. Gears of 66 WPM were obtained in order to copy JMG.

Forecasts for MA-8 covered normal parameters with no unusual forecasts required. Of most importance were the weather elements of ceiling, visibility, wind, sea and swell, radar/radio propagation, and winds to 30,000 feet. Special weather observation codes were specified in the Op Order for frequent transmission.

RAWINSONDES were required 2 times a day. The average height obtained on radiosondes was 69,715 feet with 3 soundings over 105,000 feet. RAWINS were generally terminated at 35,000 feet as inaccuracies became apparent at higher altitudes with the type of radar used and the method of computation.

Twice daily, forecasts were sent to accompanying destroyers.

4. COMMENT

The weather was generally good throughout MA-8 operations.

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f. ADMINISTRATIVE AND PUBLIC INFORMATION

ADMINISTRATIVE

1. GENERAL

The unusual nature of the Project Mercury recovery operation demanded not only routine work of the KEARSARGE administrative organization, but also many unique arrangements requiring extremely close liaison with other ship's departments as well as other commands. Much of the work was complicated by lack of precedent and non-availability of guidelines, since the KEARSARGE is the first aircraft carrier to conduct such an operation in the Pacific. Both the USS RANDOLPH and the USS INTREPID supplied valuable information based upon their experiences in previous Atlantic tests; however, numerous problems were encountered which were unique to this command. Early planning for the operation was hampered to some extent by the meager information which was provided concerning numbers and names of people to be embarked, their working requirements and information as to the actual dates of the operation. Much of this information was not available until the people actually arrived.

The Administrative Assistant was assigned the duty of Press Coordination Officer. This was a very satisfactory solution as it permitted the Public Information Officer and the Administrative Assistant to share this work load while continuing with their normal duties.

2. GUESTS

Early estimates of numbers of people to be embarked for this operation indicated that some 200 additional people would be aboard. The number that arrived prior to sailing was approximately 88.

The diversity of the personnel embarked for the Mercury test was a challenge for all concerned. It was inevitable that many of these individuals were to work under new, unfamiliar and crowded conditions. Time schedules, subject to frequent change, created many spontaneous problems. Among the groups embarked were the regular ship's air group, U. S. Marine Corps helicopter crews and maintenance personnel, members of the press pool including commentators, writers, photographers, and audio technicians, the NASA recovery team, and an additional debriefing team which arrived after the recovery. Also embarked were electronics specialists who were concerned with the complex communications equipment installed for the test, the OTC CTG 130.2 and his staff, and representatives of other commands directly concerned with the recovery operations.

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3. PROCEDURES

The problems of personnel not normally acquainted with ship's operations were manifold, and it was necessary to formulate means for acquainting them with the ship and with shipboard routine in the shortest possible time. This resulted in the Administrative Office being used as a central "clearing house" for problems of a personal nature which it was anticipated the embarked personnel might encounter. The following procedures were used in order to acclimate the embarked personnel expeditiously as possible:

a. As soon as practicable after arrival of the various groups they were assembled for an extensive brief covering details of ship's rules, regulations, and personal services available, including meal hours, laundry, recreational activities and other pertinent information. This briefing period further afforded the guest an opportunity to present any problem unique to his work. These problems and related solutions are too numerous to attempt to cover completely in this report. Some examples of problems which developed are:

(1) Means to allow commercial movie and television equipment to be adapted to ship's power outlets.

(2) Locating suitable working areas for the type coverage needed by press representatives (i.e., open areas for photographers).

(3) Procedures which would provide expeditious transfer of press copy to communications personnel for prompt transmission. This work was accomplished by other departments, but extensive coordination was again required to effect the end result.

b. General information booklets were furnished to all personnel not regularly assigned to the ship. Information contained in this booklet is outlined in the Public Information section of this report.

c. Twenty junior officers of the ship's company were assigned the additional duty of aiding the guests by arranging tours and acquainting them with their surroundings. It was found that little was required of these officers except during the first days after the guests embarked. However, these officers provided a very useful source of assistance for the guests who required more complete information than that given in the brief.

d. Office spaces were allocated for the use of the press and NASA representatives. Since CTG 130.2 and his staff did not require the flag office spaces, these spaces were made available to NASA and the press. In addition, one of the ready rooms was converted for use

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as a combination teletype and press interview room. The press room was immediately adjacent to the NASA recovery room in order that the press representatives would be available to the NASA public information officers. The offices were furnished with office supplies, typewriters, and other materials as required.

e. An officer in charge and three enlisted messengers per watch were assigned to the press and NASA offices throughout the operation. Their primary duties included the logging and delivery of outgoing and incoming press messages. Both the officers and men for these watches were supplied from throughout the administrative organization. Two additional enlisted personnel were supplied to communications to act as teletype operators.

f. Honorary Crewmember Certificates and cards were issued to all guests who sailed aboard KEARSARGE; also printed were schematic guide cards of the ship.

g. All press messages were handled on a first-come-first-served basis in order that no friction should develop between the representatives of the press. The press operated in a pool arrangement through which any member newspaper or network could use any of the information supplied by any press representative in the pool. In spite of this arrangement, considerable competition was noted among the press personnel. One factor which emerged was that the press writers had a distinct aversion to one writer being afforded access to another writer's stories. Accordingly, it was necessary to provide each writer with a file of his own material after it had been transmitted so that he could keep the material secure from the other writers. As a result of this competition each page of a story was treated as a separate story in order that the information could be sent as it was received rather than waiting until one whole story had been transmitted before another could be started. In general, the relationship with the press representatives proved to be excellent once these procedures were completed.

In addition to other duties the Administrative Assistant coordinated COD requirements and scheduling for the embarked groups. The transfer of mail, exposed film, and equipment was also coordinated in this manner.

4. SPECIAL CONSIDERATIONS. The following is a description of duties performed by these organizations:

a. Printing and Publications. Throughout the exercise period a considerable effort was required of the Printing and Publications Shop. Much effort was expended in providing material such as the "Welcome Aboard" booklets, room assignment cards, special notices, etc.

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b. Post Office. The Post Office was equally burdened with a large volume of work. Philatelic mail began to arrive at the ship nearly a month before the test was conducted, and is currently continuing to arrive. A cachet was designed and all mail was marked with the cachet as well as being postmarked on the day of the test. In order to expedite the work generated by such a volume of mail, much of the early cacheting of mail was handled by the Ship's Secretary and his office staff.

c. Personnel Office. Normal operations were conducted by the Personnel Office except for difficulties encountered with respect to the inclusion of embarked personnel on the sailing diary. In order to achieve maximum results and avoid unnecessary confusion a yeoman was assigned to remain in the area of the quarterdeck on the day of sailing to insure that the proper forms were completed.

d. Captain's Office. In addition to normal business, the Captain's Office experienced a considerable increase in the volume of official mail handled, both incoming and outgoing. A memento of the recovery operation was produced and printed in the form of a first day cover at the request of the Commanding Officer for his personal signature. It was mailed to important officials and friends of the Navy. Clerical service was provided the astronauts and others as required. It was found that reasonably augmented stocks of certain office supplies were rapidly exhausted, particularly the Commanding Officer's personal stationery. Between two and three thousand philatelic envelopes were autographed personally by the Commanding Officer and carefully serviced with the Project Mercury MA-8 cachet stamp by the Captain's Office. In addition to their regular duties, the Ship's Secretary and other personnel from the Captain's Office were assigned watches in the press room.

e. Chief Master at Arms. The Chief Master at Arms and his force were required to spend many extra hours in preparing and assigning extra enlisted personnel to berthing accommodations.

f. Chaplain's Office

(1) Religious. A full and complete religious program was maintained throughout the MA-8 Cruise. In addition to Divine Services on Sunday, daily Mass and a daily Devotional were conducted by the Catholic and Protestant chaplains respectively. The Jewish Lay Leader aboard conducted High Holy Day Services for Jewish personnel. Special to the MA-8 operation were the prayers delivered over the LMC on the occasion of the SIGMA SEVEN flight - a prayer for the safety of the astronaut and the success of his mission, delivered on

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the eve of launch by the Catholic Chaplain; and a prayer of thanksgiving, delivered immediately after the recovery of the astronaut, by the Protestant Chaplain. Both prayers were extremely well received by all hands, including the press representatives and NASA officials aboard.

(2) Counseling and Morale. Since the overall MA-8 operation necessitated the KEARSARGE's being away from her homeport for approximately two and a half months, many emergency leave requests were received, resulting from domestic hardships and problems occasioned by the lengthy separation. The number of the requests seemed disproportionately excessive - probably due in some measure to the unexpected advancement of the original sailing date which prevented proper planning for domestic hardships which might otherwise have been anticipated - e.g., difficult pregnancies, care of children, etc.

(3) Tours. Full-day tours of the island of Oahu were made available to all hands on Saturdays and Sundays during the in-port period in Pearl Harbor. Because the preliminary in-port period was so lengthy, response to these tours was only moderate.

The following is the prayer of thanksgiving offered by Chaplain Benjamin C. FAIRCHILD, LCDR, USN, aboard the USS KEARSARGE (CVS-33) on 3 October immediately following CDR SCHIRRA's recovery:

"Eternal and ever-blessed God, Lord of heaven and earth, how grateful we are to Thee that the mission was a success and that Walter SCHIRRA has returned safely.

"We have been abundantly blessed of Thee as a nation. We give Thee thanks for all the bounties of Thy providence. Through the successful completion of this mission, Thou hast opened to us more of the wonders and the glory of Thy creation. May all that we learn serve to make us more conscious of Thy presence, more sensitive to Thy hand upon our lives.

"We ask Thy blessing also upon Mrs. SCHIRRA. Thou hast returned him safely. Grant her a release from the tensions shared by us all as we were awaiting his return.

"Hear our prayer, for we pray in the name of Jesus Christ our Lord. Amen."

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PUBLIC INFORMATION

1. GENERAL

Public information activities concerning the Project Mercury MIDPAC cruise began prior to departure from Long Beach in August.

The PIO published a tourist guide to Hawaii which was distributed to all hands. The booklet was a 28-page production complete with photographs of special interest sights. Upon arrival at Pearl Harbor, the appropriate PIO officers were informed that KEARSARGE would be available for tours if requested. Several commands sponsored group visits to the ship.

2. PROCEDURES

A Project Mercury "Welcome Aboard" booklet was published by the office and distributed to all guests who were to be aboard for the space shot. The brochure familiarized guests with the ship, its policies, and ship's services available to them. It contained a schedule of events as well as histories and photographs of the ship, the Commanding Officer, and Executive Officer, and information concerning each department. It also contained a list of useful telephone numbers.

Other publications provided by the Public Information Office included two issues of the "KEARSAGA", the ship's offset newspaper, and while at sea, a daily news bulletin called the "MORNING KAY", which is wire serviced by various international news services.

The Public Information Officer was given TAD orders to the Public Information staff of CINCPACFLT before and after the Mercury flight. In this way he was afforded the opportunity of being associated with a large scale PI organization, thus gaining valuable experience in his duties.

The Public Information Officer was among those who stood watches in the Press Room as liaison officer during the crucial hours of the recovery phase.

When permitted by the operation order, the PIO issued press releases concerning the ship's participation in MA-8. These releases consisted of a master story and roster of ship personnel to the Fleet Home Town News Center, releases to Long Beach and San Diego area television stations and newspapers, as well as a feature story releases to recommended military media.

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g. NAVIGATION DEPARTMENT

1. GENERAL

a. Navigation in the MIDPAC area is similar to that of the West Coast area. No navigational difficulties were encountered. Dead reckoning, Celestial, Radar and Fathometer navigation may all be used to advantage.

2. METHODS

a. Loran coverage in the MIDPAC area varies from outstanding to poor, depending upon the area and time of day. Weather presented no problem whatsoever. Fixes in the Hawaiian Op Area were possible at all times. Day coverage north of Midway is poor resulting in a single loran line and sun line fix. Night coverage in this area was good. Four station coverage is possible.

b. Celestial navigation was a regular routine. Weather was excellent. Clear skies, good visibility and sharp horizons were ever present. Good results were obtained during the night with an aircraft bubble sextant.

c. Radar navigation was used whenever targets were available. The Radar Navigation team was manned in CIC for all entries and departures from port and whenever in restricted waters.

d. Dead Reckoning. A manual DR was kept on the DR chart at all times. This was found to be more accurate than the DRT.

e. Fathometer readings were helpful in confirming positions.

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h. AIR DEPARTMENT

1. AIRCRAFT HANDLING

The ship deployed from Pearl Harbor with 16 S2F-1S1's, 3 AD-5W's, 3 TF's, 4 HUS's, 4 HSS-IN's and 2 HSS-2's. The S2F's were for long range search, if required, and the AD's were for normal radar search and communications relay. The HUS's were assigned as primary astronaut recovery aircraft; the HSS-2's for distant recovery. One HSS-IN and two HUS's were specially configured for photo coverage. The proposed flight deck spot necessitated leaving 4 S2F's and 4 HSS-IN's behind.

The flight deck spot for the capsule recovery consisted of two HSS-IN's spotted forward to act as plane guards and one folded as standby forward of the island. The two "go" AD's were spotted one on each catapult with the standby aft of the island. Three HUS's were spotted down the deck outboard. The fourth HUS was spotted to starboard and was pulled forward into a regular spot after the AD's were launched. One HSS-IN assigned for photo coverage was spotted aft of the HUS's and the HSS-2's occupied the last two spots on the flight deck. All S2F aircraft were retained on the hangar deck ready to be brought topside in the event a search was required.

It was necessary to provide two six foot wide paths on the hangar deck to allow for passage of the astronaut to sick bay. The primary route was across the flight deck and down the escalator. The secondary route, to accommodate the injured astronaut, was across the flight deck and down the number two elevator.

Special handling was required for the deck edge whip antennas because of the need to keep them in a vertical position as much as possible for communications reliability. The starboard forward antennas were lowered only for the AD launch. The port antennas were lowered just prior to angel helo and AD launch and remained down until all aircraft were recovered. Starboard after antennas were lowered for aircraft recovery. The personnel assigned to lower and raise the whip antennas were stationed in flight deck control.

A large antenna, designated FRF-39, was installed as a fixed antenna on a special platform forward of the number 3 elevator for single side band, press and other communications. Its presence prevented the use of most of the flight deck area aft of the island. Further, the transmitted power was so great that high voltages were induced in aircraft spotted nearby. After the radiation intensity around the antenna had been measured, it was decided not to spot aircraft in the vicinity of the antenna.

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2. AIRCRAFT REFUELING

The high induced voltages from the FRT-39 antenna precipitated the possibility of induced sparking during aircraft fueling operations. As a result, fueling operations were restricted to a minimum distance of 150 feet from the antenna.

3. AIRCRAFT MAINTENANCE

A total of three TF aircraft were assigned for COD of large groups and their associated equipment. Since this number was greater than the V-6 Division could maintain or the ship could supply aviators for, the Air Group accepted responsibility for maintaining and flying two of them. Complete utilization of these aircraft was necessary to satisfy the requirements both at Midway Island and Pearl Harbor.

4. PERSONNEL

Two aviation electricians were trained to assist in post recovery capsule preparations should the necessity arise. The requisite technical material for study was furnished by NASA.

5. SPECIAL PREPARATIONS

The flight deck was stained and striped preparatory for the recovery just prior to deploying to assume recovery station. Inasmuch as the capsule was recovered onboard, the ship was the subject of extensive aerial photography.

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i. GUNNERY DEPARTMENT

1. DECK GROUP

The KEARSARGE's mission for this cruise was the successful retrieval of the MA-8 space craft and its astronaut. Training for this mission began in August 1962 with personnel attending briefings conducted by Commander Destroyer Flotilla Five. These briefs concerned recovery techniques and, during the course of presentation, a NASA film on the subject was shown.

The next step involved training with the Training Capsule. First the capsule was towed about Pearl Harbor using the KEARSARGE's motor whaleboat. After some experience was gained in this fashion an attempt was made to tow the capsule in the open sea. High sea and wind conditions soon made evident the fact that the capsule would be difficult to handle by this method. The outcome of these efforts was perfection of a technique whereby a long (600 foot) nylon line is passed to the whaleboat. The line is attached to the special snap-lock which is in turn attached to the head of the Shepherd's Crook. This then is tended by one of the boat crew members and, as the boat is positioned near the capsule, it is snapped on the capsule. The nylon line is passed through a block near the head of the boat crane and hand tended. Hauling in on the nylon line brings the capsule alongside the ship just below the crane hook. The special NASA nylon hoisting strap is placed on the hook which is lowered and attached to the capsule. The capsule is then hoisted aboard by the crane and placed on the Number 3 elevator, as shown in enclosure (1) to this section. Retrieval by the forward, Number 1 Fueling Boom was also evaluated and found to be possible.

A special pallet was constructed which would fit the contour of the capsule heat shield, and which could be lifted by a fork lift. The pallet originally given to KEARSARGE could not be lifted or moved by a fork lift. Lowering the capsule, impact bag extended, on to the pallet was then practiced as was picking up the capsule on the pallet and moving it inboard.

On Friday, 28 September 1962, the KEARSARGE set sail for the recovery area. Two underway refuelings of destroyers were held; six DD'S were refueled on Sunday and two on Tuesday. These refuelings provided the Deck Divisions with valuable and needed experience. On Monday another onboard handling practice was held and the optimum padding for the capsule was determined. Early Wednesday morning the No. 1 fueling station was rigged for capsule recovery in event of failure of the ship's No. 3 elevator. The recovery station at the boat crane was also rigged and all hands stood

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ready. At approximately 1027 local time the first visual sighting of the capsule was reported and the KEARSARGE headed for the parachute. As planned, the ship's motor whaleboat was put over the side. It came around to the No. 3 elevator where it received the end of the 600 foot line. Several Marine and Navy helicopters were hovering at extremely low altitudes about the capsule and prevented the boat from getting to the capsule before it drifted out of range of the 600 foot line. This made it necessary for the ship to maneuver closer to the capsule before the whaleboat could approach and hook up. Higher hovering altitudes and better helicopter discipline on station would have removed the danger and the noise. A flotation collar had been attached to the spacecraft by swimmers. All hands tending the nylon line heaved in carefully until it was under the crane. The whale boat followed close behind to pick up swimmers and was prepared to hold the capsule off in event the ship was set-on by the wind. The crane was lowered and the special 6 inch nylon strap was attached by one of the swimmers. An easy strain was taken by the crane and the capsule was hoisted carefully aboard. The heat shield was rested upon the waiting padded pallet on the No. 3 elevator just as practiced. At the direction of Mr. STONESIFER of NASA the flotation collar was cut to deflate it and the capsule was lowered on to the heat shield. Sound powered telephone communication with the bridge indicated that the astronaut would "Blow" the hatch himself; the capsule had been lowered so that the hatch faced inboard. The explosive hatch was actuated and CDR SCHIRRA emerged to the cheers of all on board.

After the astronaut departed the area the capsule was minutely examined and photographed by NASA technicians. It was then necessary to hoist it up to the full extent of the impact bag and hose it down with fresh water. New padding mattresses were then provided to replace the wet ones and the capsule was again lowered, slowly folding the bag in place and securing the heat shield to the spacecraft. Finally the pallet was lifted and moved inboard. Provisions were made to safeguard the spacecraft, but these measures permitted all hands a satisfying close view of it.

Preparation for off-loading the spacecraft on to a tug near Midway was accomplished by securing the craft to its pallet with nylon straps. It was hoisted by its own hoisting point, steadied by two hand tended lines, and set aboard the tug.

2. RECOMMENDATIONS

The following summations and recommendations are offered:

a. Present retrieval method using the ship's boat, the hand tended line and the ship's crane are quite satisfactory. It is recommended that more than 600 feet of line be available.

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b. All helicopters should be cleared from the area when the ship's boat starts toward the capsule. Swimmer recovery can be made by the boat, or by the jacob's ladder alongside the ship. The helicopters should be vectored off far enough that their engine noises do not drown out voice communication in the vicinity of the ship's boat or the crane and recovery platform.

c. Spacecraft pallet should be checked to insure adequate fork lift handling capabilities.

d. If a small portable radio transceiver operating at the spacecraft frequency were made available at the No. 3 elevator so that direct communication between the astronaut and the working party outside the spacecraft could be achieved, then, operation of the explosive hatch to release the astronaut could be expedited.

e. Those handling the capsule on the deck should be prepared to have their uniforms soiled by the capsule dye marker.

3. GUNNERY EXERCISES

The services of VU-1 at the Naval Air Station Barbers Point were utilized for three periods of anti-aircraft gunnery exercises during this deployment. Full utilization was made of two such periods; however, low cloud cover limited the operation of the towing aircraft during one period. Competitive exercises were scheduled for the week of 21-27 September, but the obligations of Project Mercury were such as to allow completion of the Z-5-G only.

Whenever possible, the services of the embarked aircraft were used for combined CIC - Gunnery tracking and designation. The cooperation of the Air Group in this endeavor provided excellent training opportunities for the Fire Control Organization.

4. AVIATION ORDNANCE

Although KEARSARGE did not participate in any HUK exercises during its MIDPAC Cruise, the good availability of Submarine services for Air Group Julie training induced a high usage rate of MK64 underwater sound signals. Replacement stocks of the SUS MK64 were not available at NAD Oahu. It is evident that sustained Julie Operations will require a sizeable number of underwater sound signals.

5. AMMUNITION

One hundred twenty-nine practice Hedge Hog charges and projectiles were issued to Pearl Harbor based Destroyers during the deployment. These items were temporarily not available at NAD Oahu. Otherwise, liaison with NAD Oahu indicated that ample quantities of service type ammunition was available if required.

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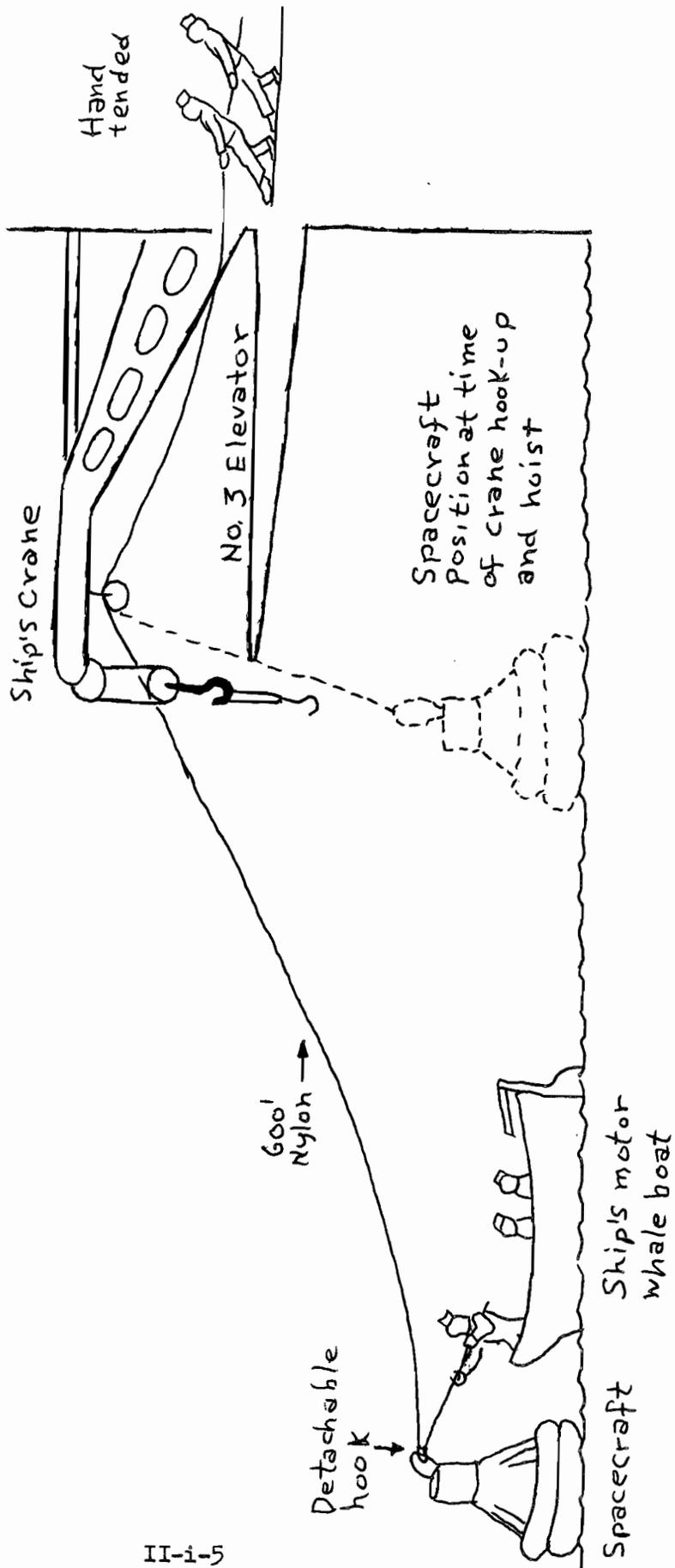
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6. EXPLOSIVE ORDNANCE DEMOLITION

The primary EOD Unit of the Pacific Fleet is located at West Lock and all team members are more than willing to pass on their latest information relating to their profession. A telephone call to LT R. J. DUNBAR, USN, (18385) or one of his representatives will effect transportation to EODU-1. They are currently undergoing training with the closed circuit MK5 and the Hand Held Sonar. Indoctrination on these "soon to become operational" pieces of equipment was appreciated by our divers. It allowed us to keep abreast of new developments at no cost in TAD funds. The EOD Unit in West Lock also provided time and equipment for requalification diving.

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Enclosure (1) to i Gunnery Department

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j. SECURITY - THE MARINE DETACHMENT

The Marine Detachment performed various security duties during and after the recovery of astronaut Walter M. SCHIRRA, Jr. and his space capsule, SIGMA SEVEN.

During the initial recovery phase of the space capsule, the detachment maintained security of the civilian press area and ship's personnel in hangar bay three. Also a path of security was maintained from elevator No. 3 to sick bay, where more sentries were awaiting the arrival of the astronaut.

Upon being escorted to sick bay, astronaut SCHIRRA was continuously guarded by Marine sentries during the three hours he was undergoing a physical examination. Sentries were posted outside all hatches having access into sick bay plus two sentries inside..

After CDR SCHIRRA's physical examination was completed he was escorted to the Admiral's cabin where two sentries were posted twenty-four hours a day until his departure from KEARSARGE.

After the NASA personnel completed their examination of the space capsule it was moved from elevator No. 3 into hangar bay 3 where a close up view by all hands was allowed. Again security was needed to prevent anyone from touching or taking photos of the interior of the capsule. Thus two Marine sentries were posted near the capsule until it was removed from KEARSARGE.

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k. ENGINEERING DEPARTMENT

1. MAINTENANCE - MATERIAL

During the period of this MIDPAC deployment the ship spent twenty-four consecutive days at berth B-22, Naval Shipyard, Pearl Harbor, for the purpose of installation of special communication gear for Project Mercury. Due to a combination of extreme shortage of repair funds available to COMFAIRHAWAII and the heavy workload of the shipyard, only the most necessary repair items were undertaken. The shipyard completed eight work items for the Engineering Department, one of which was funded from OPTAR. In addition, two repair items were funded from OPTAR for accomplishment by a private contractor.

The amount of assistance available from the destroyer tender in port is limited since they have very little equipment capability which is not available on CV types. Utilizing tender facilities, ship's force personnel completely overhauled six (6) movie projectors. Further tender assistance consisted of repairs to typewriters, use of pipe bending facilities, and engraving of label plates for plaques used in connection with public information purposes.

Valuable assistance was furnished by the Submarine Base machine shop by permitting ship's force personnel to use their lathes for work that was beyond the capacity of the lathes on the KEARSARGE.

The ship experienced a high incidence of burnt out motors (25) which required rewinding, a majority of these (12) were ventilation motors. This was the first time that the ship had operated in hot weather for more than 10 months and it is likely that much of the trouble with the ventilation motors was due to infrequent use during the period preceding deployment, combined with clogged-up heater coils that had not yet been cleaned by the ventilation detail. Some difficulty was experienced in obtaining certain sizes of wire. It is recommended that ships carry a full stock of wire necessary to accomplish rewind of installed equipment.

2. SERVICES

Shore power connections at Pearl Harbor Shipyard are not considered adequate to allow an aircraft carrier to go completely cold iron. It was found necessary to keep one or more diesels in operation in addition to the electric supply from shore sources. Considerable delay was experienced in shifting to shore power due to faulty voltage regulation of shore supply, e.g. at 500 KW load, voltage dropped from 450 to 432. Shore steam was inadequate to completely run the laundry when all galleys and dishwashing equipment was lit off.

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NSFO was delivered by barge or YO on all except one occasion and in all cases the pumping rate was very slow, about 720 GPM per hose. This required very long hours for the fueling detail when the amount to be taken on was large. On the one occasion when the ship fueled from the dock at B-23.5, pumping rate was about 1250 GPM per hose.

3. TRAINING

Ample shipboard time was available for Engineering and Damage Control Drills. The changes in the ship's schedule resulting from Project Mercury demands complicated the problem of providing observers at the proper time, therefore the engineering department was unable to finish all competitive exercises.

Limited use was made of Fleet Training Group Schools. Many of those listed on current notices as being available had been deleted.

4. STATISTICS

During the period of deployment in support of Project Mercury from 1 August to 6 October, a total of 66 days, the ship was in port in Pearl Harbor for 991 hours and underway 654 hours, steamed 10,661 miles, expended 1,834,339 gallons fuel, 3,620,424 gallons of fresh water and 725,003 gallons of feed water.

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1. SUPPLY DEPARTMENT

1. INTRODUCTION

The Supply Department is presented in Divisional sections and includes for each division a synopsis of:

- a. Pre-deployment plans and action
- b. Ports of call
- c. Operational notes of useful importance.

Project Mercury, SIGMA SEVEN a national event of historical importance, was a unique challenge to the entire Supply Department but particularly to the S-5 Division. Hosting 82 VIP guests of NASA, and all services including Astronauts GLENN, CARPENTER, COOPER, SCHIRRA, and GRISSOM was a major task. Of all the fine services contributed however, one stands above all others in consistency and value. That is the outstanding attitude and performance of all of the Stewards and Cooks of the S-5 Division who made the cruise one to long remember. Prodigious, appetizing steaks, roast beef, baked alaska and a daily open salad bar of fresh pineapple, cantaloup and cottage cheese won praise even from our professional but sometimes cynical friends of the press, radio and newsreels.

2. STORES DIVISION (S-1)

a. Pre-deployment. Due to relatively short notice it was impossible for the General Stores section to make any long or medium range plans as far as stock build-up was concerned. However, since we had just come out of a supply overhaul and were in port with access to a Naval Supply Center of excellent reputation, no real concern was felt. All out expediting of outstanding requisitions became the order of the day. The items considered most necessary for the mission involved were obtained by contacting all Department Heads to review essential needs. These items were immediately expedited or were placed on order with Long Beach Naval Shipyard. Detail operational planning was furnished the traffic branch there to forward all stores to Pearl Harbor FFT KEARSARGE. Finally, the Ship's Imprest Fund was reopened and has proven to be a most valuable technique in getting material quickly especially on weekends.

b. Ports of Call. The only port of call was Pearl Harbor so there is no other with which to compare the services rendered or amount of material furnished. The NSC at Pearl has an excellent Fleet Service staff and they helped in every way possible to prepare us for the forthcoming operation. KEARSARGE was permitted

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to hand carry priorities 12's through the system whereas the normal walk-thru is permitted only on priority 5's. KEARSARGE was afforded all the privileges of both transient and home ported ships. Difficulty was experienced in the routine processing of requisitions submitted to the NSC when KEARSARGE first arrived. Issue time for priority 12's was given as 4 days by Fleet Service section. However, even after three weeks, and 250 requests, we had only received fifty items. Several liaison visits were made by the Supply Officer to NSC whereupon the material flow improved as the status and location of KEARSARGE became better known. As can be seen from the figures below the majority of items requested were available from local supply sources:

<u>COGNIZANCE</u>	<u>REQNS SUBMITTED</u>	<u>REQNS FILLED</u>	<u>PERCENT</u>
H	268	247	92
N	190	174	91
MISC	862	843	98

c. At Sea. There were no replenishments at sea. High priority material was flown by COD when necessary.

d. Project Mercury Support

(1) As can be imagined most of the emphasis was on support of Project Mercury. This was the "open sesame" for all requests. Premium transportation was obtained for material delivered from the mainland on everything from a motor whaleboat engine to be used for capsule recovery to the smallest resistor used in communications and tracking equipment. For proper tracking and communications operations, there were three types of electronic equipment placed aboard which KEARSARGE did not carry. They were FGC-60, CV-157 and the FRT-39. Upon screening the applicable new APL's it was noted that out of 1984 items KEARSARGE storerooms already had 1271 items for an on board percentage of 64%. After processing the remaining 713 items, NSC Pearl Harbor came up with an additional 569 items which brought us up to 93%. All parts requirements for this equipment were met during the operation from the spares aboard.

(2) CTG 130.1 Op Order and COMNAVAIRPAC letter 01069 requires special accounting reports to be made on the costs of Project Mercury operations. While the guide lines were broad, the reports submitted attempt to charge NASA with only a fair and equitable pro-rata sharing of expenses beyond the routine ship's maintenance, supply and services functions. Total charges actual or estimated to date:

Ship's OPTAR	\$6500
Ship and Squadron BRAVO - NSA	\$2300
APA	\$16,000
Fuel oil consumed	1,020,354 gallons

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e. General

(1) As is customary the stores division left an SK behind whenever possible while operating. This has been found to be an excellent practice as the man handles any message requests coming from the ship and also handles other matters of ship's supply department business (i.e. receiving, separation, and preparation of stores for immediate loading upon the ship's return). This aids in obtaining the good will of the local supply personnel also.

(2) Difficulty was experienced with transportation. There were vehicles available but no drivers on weekends. There was one instance of 1800# of priority one (1) material at NOACT for which no weekend transportation could be provided. Only civilian drivers perform this function and to bring one in on the weekend would have necessitated authorizing overtime for which funds were not available. After a delay of four hours a ship's driver was located that had the proper truck license required and a truck was obtained on loan from NSC. Log Requisitions should be very specific on the requirement for vehicles particularly on weekend arrivals. Otherwise, you will find transportation pools totally secured and non-available to you at Pearl.

f. Port Services. Services as a whole were good. However, a better method for arranging for the movement of aircraft from the shipyard to Ford Island and vice versa is needed. The present procedure requires the ship to make all the arrangements, i.e. call Port Control for the use of a barge; arrange shipyard crane service; and arrange for Ford Island crane service. Also the shipyard objects to the movement of aircraft loaded with fuel. It is believed that all of these functions could better be coordinated through one shipyard or Naval Station office.

3. COMMISSARY (S-2)

a. Pre-deployment. Endurance loading on fresh, frozen and dry stores was accomplished at Long Beach prior to departure, in order to minimize the impact upon Pearl Harbor of provision requirements on which freight costs must be paid.

b. Ports of Call. Services from NSC Pearl were excellent. Fresh provisions were of the highest quality and delivery services prompt. Fresh pineapple and cottage cheese became a salad bar favorite. It is recommended that milk and bakery products be ordered on open requisition which runs from month to month for your ship. In this manner orders can be called in by telephone or cited easily in Log Reqs when underway. Invoices were found to count out accurately with stores received. However, pricing and extension on the smooth invoice is no longer performed by NSC Pearl. Dairy products were neither as

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good as mainland sources nor as cheap. During the first two months of operations milk could be obtained only in ½ pint containers. This speeded up the souring of the drink and created a very real container disposal problem. The cost of \$1.37 per gallon versus 81¢ at Long Beach is quite a difference. NSC Pearl plans to have milk in 6 gallon Scholle Plastic Packs sometime in October. Meanwhile the KEARSARGE preferred the use of 5 gallon can containers to the paper cartons.

4. SALES DIVISION (S-3)

a. Pre-deployment. Prior to deployment on KEARSARGE MIDPAC Cruise for MA-8, ship's store stock was procured in quantities sufficient to support ninety (90) days of operation.

b. High Usage Items. In general a normal ninety day stock level was adequate but there were a few notable exceptions that should be taken into consideration for future operations of a similar nature.

(1) Photographic Supplies. The increase in the sale of photographic supplies exceeded all expectations. It is recommended that a six month supply of cameras and film be loaded prior to deployment. KEARSARGE received prompt film service from Kodak Hawaii, Ltd. in Honolulu.

(2) Soft Drinks. Although the contract bulletin prepared by NSC Pearl Harbor list a number of contractors for soft drinks, it was found that none of them had sufficient stock on hand of the more popular brands to adequately support the needs of the KEARSARGE. Also, prices in several instances were found to be slightly higher.

(3) C and SS. NSC Pearl Harbor has outstanding support in all C and SS items including the short sleeve white shirt which is authorized for wear as a part of the liberty uniform in the 14th Naval District. An adequate supply of short sleeve "officer-type" white shirts should be purchased prior to deployment.

c. Rainbow Flowers. A representative of Rainbow Flowers of Hawaii meets all ships that enter the port of Pearl Harbor. Upon receiving permission this company will set up a display aboard ship and sell flowers and costume jewelry for delivery in the mainland. Although most of the items are on contract, definite arrangements should be made with NSC Pearl Harbor Purchase Branch prior to sale of non-contract items. KEARSARGE sales exceeded \$1,000.00 with no complaints on delivered merchandise.

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5. DISBURSING (S-4)

a. Pre-deployment. In general, no additional effort was required by Disbursing personnel in preparation for the Project Mercury deployment. Insurance of having a sufficient quantity of required forms and cash to support additional Air Group personnel is a routine function.

b. Ports of Calls. Pearl Harbor was the only port of call during this period. Funds were readily available from the Navy Regional Finance Office located at the Naval Supply Center, Pearl Harbor. Three days advance notice is sufficient for pick-up of any amount of required funds. Funds received were packaged in bundles and certified by the bank to facilitate the pick-up. It was necessary to request a Saturday pick-up on one occasion and services were readily furnished by the finance office.

c. General

(1) No problems were encountered by the Disbursing Office relative to Project Mercury. Numerous observers from other branches of the services were on board but no pay records were presented for payment. The Disbursing Officer was prepared to pay any of the military guests aboard with or without pay records under the provisions of the NAVCOMPT Manual.

(2) The Disbursing Officer returned to CONUS on emergency leave. By having a Deputy Disbursing Officer and an appointed Agent Cashier on board the Disbursing Officer was able to leave the ship on short notice via COD flight and all disbursing functions continued without any interruption in service.

6. WARDROOM (S-5)

a. Pre-deployment

(1) General. The greatest single factor concerning the MA-8 project in relation to the duties of the S-5 Division was the great influx of guests to be accommodated on the main recovery vessel. Time to plan for the proper preparation for these guests was of great importance since both the quantity and quality of the spaces at that time left much to be desired. By using every non-emergency berth about 100 guests could be accommodated under very crowded conditions. This would have meant a total of 296 people living in Officers' Country.

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On arrival each guest was given a "Welcome Aboard Book" and a blue baseball cap with identification "NASA" or "Press" etc. The relationships thus established and maintained, greatly aided the accomplishment of Project Mercury missions. As mentioned in the Introduction however, the outstanding effort, attitude and performance of the stewards and cooks made the time spent aboard by our guests a pleasant experience. In conclusion, by planning ahead it was possible to give the kind of service we wanted our guests to have. The smaller problems didn't have a chance.

7. AVIATION SUPPLY (S-6)

a. Pre-deployment

(1) General

(a) The Supply Officer and Aviation Stores Officer had completed a two day visit with Air Group (CVSG-53, HS-6, VS-21 and VS-29) personnel in July prior to Project Mercury deployment. The purpose of this visit was to obtain information relative to maintenance/supply problem areas. As a result of this visit a complete updating of the Section "B" allowance lists for the HSS-2 and S2F-1/1S1 was accomplished. Recommendation for approximately 689 line items were submitted to COMNAVAIRPAC for approval and inclusion in the AVCAL currently being outfitted by AMO Oakland. This action was initiated as a means of preparation for the next WESTPAC deployment as participation by KEARSARGE in Project Mercury was not known at this time.

(b) An Avionics Assist Conference was also conducted on board KEARSARGE in July 1962. Represented at this conference were maintenance personnel from COMFAIRSDIEGO, CVSG-53, HS-6, VS-21, VS-29, V-6 USS KEARSARGE and Supply personnel of S-6 USS KEARSARGE. As a result of this conference an IBM deficiency listing was accomplished by COMFAIRSDIEGO and corrective action taken by KEARSARGE. Approximately 262 line items in the category of test equipment, block boxes and rotatable spares were placed on order. This material is required prior to WESTPAC deployment.

(c) As the result of KEARSARGE designation to Project Mercury it became necessary to include support of eight HSS-IN's. A special project was set up for immediate provisioning action for these HSS-IN's. This action was completed on schedule through the coordinated efforts of COMNAVAIRPAC, COMFAIRSDIEGO, CVSG-53, USS BENNINGTON and USS KEARSARGE. Approximately 177 line items were involved. Two AK's were made available to COMFAIRSDIEGO to accomplish this project.

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(d) At the time of deployment the on board availability of the AVCAL was 81%. (This did not include the 689 line items submitted to up-date the section for HSS-2 and S2F-1/1S1).

(e) Upon deployment KEARSARGE departed CONUS with the following aircraft:

8	HSS-1N
2	HSS-2
20	S2F-1/1S1
5	AD-5W
1	TF-1

b. Ports of Call

(1) General

(a) The only port of call was Pearl Harbor and Ford Island. Service was generally good. However, some difficulty was experienced on several occasions in coordinating and obtaining crane service and/or transportation. Services for the on-load of incoming stores usually required the furnishing of transportation by NSC Pearl and crane service by the Naval Station or Shipyard. Off-load of outgoing stores and RB material usually required the furnishing of transportation and crane service by the Naval Station or Shipyard. Coordination of these services was sometimes slow and difficult.

c. General

(1) FAD Assignment

(a) KEARSARGE was assigned a FAD of II for Project Mercury. It was a great help, and the entire Aviation Supply system responded energetically throughout the Mercury operation. AMO Oakland did an outstanding follow up job at all times.

(2) Intercept Action

(a) All message requisitions for priorities O2 and O5 submitted to NSC Oakland were made info to COMFAIRHAWAII, NAS Barbers Point and MCAS Kaneohe. Intercept action by NAS Barbers Point and MCAS Kaneohe was excellent considering their non-support of Carrier type aircraft. Cooperation of these supply activities was outstanding.

(3) COD Aircraft

(a) KEARSARGE deployed with one TF-1. Availability of two

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additional TF's was made by COMNAVAIRPAC. It is interesting to note that on one of these receipts a total of 81 AOCPS were issued to place the aircraft in flyable condition. After much effort by CVSG-53 maintenance personnel, a total of three TF's were made available for COD services prior to recovery operations, Project Mercury.

d. At Sea

(1) A "Credit Card" issue system was effected prior to deployment, thereby reducing issue times to a minimum. This system is very popular and acceptable to the customer.

(2) COD service was excellent. Many Air Parcel Post items (AOCPS/ANFE) were received on board via COD aircraft.

(3) Zero O AOCPS Reports

(a) By a combination of good maintenance, good supply support and "good luck," KEARSARGE was able to have 6 zero (0) AOCPS reports out of 10 during this period, a period marked by heavy flight operations. Most notable was the outstanding cooperation of the CVSG-53 squadrons to reduce AOCPS situations to a minimum. Since KEARSARGE deployed 8 months early with an interrupted outfitting, this is a most healthy situation pointing to a successful WESTPAC deployment in April 1963.

(b) Storage space for aeronautical material was an Aviation Stores Officers' "nightmare" from the day of departure CONUS until several days after arrival in Pearl Harbor. Approximately sixty pallets of electronics items for provisioning the HSS-1N were on-loaded at San Diego on the evening of departure in CONUS plus 17 aircraft engines and several dozen pallets of "expedites" AVCAL items - a majority of which were bulky items. Re-evaluating for this mission and restoring had to be done to accomplish the end product of successful stowage and accurate location.

e. TAD of AK's

(1) Each squadron assigned one AK TAD to the Aviation Stores Division while deployed. This is necessary and was a great help. Aviation Stores Division also assigned one AK TAD to the CVSG-53 Intergrated Avionics Shop. Since a major portion of aviation supply support is required for Avionics this is highly recommended.

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f. Carrier-Quals

(1) Immediately upon completion of Project Mercury KEARSARGE was assigned to Carrier-Qual USMC A4D Squadrons in the Hawaiian area. Ample preparation had already been made to support this training phase prior to the recovery operation of Project Mercury.

g. Flight Clothing and Flight Deck Shoes

(1) KEARSARGE departed CONUS with a complete allowance of flight clothing and flight deck shoes. By the end of Project Mercury, these allowances, especially flight suits and common size flight deck shoes, were depleted. Squadrons were requested in July to make provisions to obtain their allowances for these items in order that KEARSARGE might have sufficient quantities on board for replacement purposes during next WESTPAC deployment. Honorable mention should be given VS-29. This squadron did bring a complete allowance of these items. It is highly desirable and recommended that squadrons attempt to bring a complete allowance of these items on board at the time of deployment.

h. BRAVO expenditures for NSA/APA material for support of aircraft during Project Mercury.

(a) Sqd	Nr of A/C	NSA	APA
VS-21	10 S2F-1/1S1	\$1,000.00	\$4,000.00
VS-29	10 S2F-1/1S1	800.00	5,000.00
HS-6	8 HSS-1N; 2 HSS-2	360.00	3,580.00
VAW-11	5 AD5-W	696.00	5,820.00
CVS-33	3 TF-1	1,244.00	6,414.00

i. Usage Data Report

Sqd	Total	Issued from	Not available		Availability
	Requests	stock	NVCAL	AVCAL	Per Cent
VT/AC	71	46	12	13	66
HS-6	129	111	7	11	86
VS-21	484	310	94	80	70
VS-29	588	373	133	82	62
VAW-11	134	108	14	12	77
TOTAL	1406	948	260	198	72

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m. MEDICAL DEPARTMENT

1. GENERAL

The Medical Department of the USS KEARSARGE (CVS-33) consisted of a Senior Medical Officer (Captain), an Assistant Medical Officer (Lieutenant), 2 Flight Surgeons, a Medical Administrative Officer (LTJG) and 22 enlisted Hospital Corpsman.

The ship departed Long Beach, California on 1 August 1962, with only a few days prior notice, for Pearl Harbor by way of San Diego, California. At San Diego the personnel, aircraft and equipment of CVSG-53 were loaded aboard. The ship arrived at Pearl Harbor on 7 August 1962. A long inport period at Pearl Harbor was anticipated in order to permit the installation of a considerable amount of complex special communications equipment. It was hoped by the Medical Department that during this period it might be possible to procure the medical supplies and equipment necessary to bring the medical inventory up to an acceptable level for a prolonged MIDPAC cruise.

Working contact was quickly established with the District Medical Officer, the Naval Station Medical Officer and other District Medical facilities. The ship's Medical Department received outstanding cooperation from all concerned. An example of this cooperation was the solution of the problem of performing eye refractions on a large number of ship's personnel. The equipment available on this vessel for the performance of eye refractions consisted only of the basic trial lens case. Refractions using this equipment require a great deal of time for each individual refracted. Arrangements were easily made for one of the air group flight surgeons to utilize the modern, fast facilities of the district eye clinic in the performance of these many refractions on ship's personnel. This resulted in saving considerable time, and in the performance of more accurate refractions than might have been utilizing the ship's trial lens case.

Except for emergencies, initially, the obtaining of specialist consultations at Tripler Army Hospital resulted in appointments several weeks in the future. The Senior Medical Officer visited the department heads concerned at Tripler Army Hospital and thereafter was able to obtain appointments with only a few days delay. This was important since the actual date of sailing of the ship for the MIDPAC area was indeterminate.

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During the initial in-port period Preventive Medicine Unit #6 at Pearl Harbor was called upon for assistance in inspection of the ship and in instruction of food handlers and sanitary inspectors. The personnel of this unit were most helpful, and their instruction and training undoubtedly resulted in long term benefits to the ship.

During the initial in-port period eight cases of severe sunburn were admitted to the ward as in-patients. A total of 23 sick days eventuated. It is suggested that prior to deployment to tropical and subtropical areas such as Hawaii, that the ship's personnel be briefly instructed regarding the hazards of excessive exposure to the sun.

2. STATISTICS

The following statistical data give a breakdown of the medical treatments given during this MIDPAC cruise: Sick call visits 1104, Surgical procedures 27, Major 20, Minor 7. Admission to the sick list 135 with 781 sick days of which 29 were injuries totaling 121 sick days and non-injuries 114 patients totaling 659 sick days. Transfers 18, deaths none. Venereal Disease 3 cases from CONUS contacts.

3. LOGISTICS

Inasmuch as the primary mission of the ship was support of the MA-8 Project, in particular the recovery phase, all material requests were submitted under priority 5. The logistic support given by the Pearl Harbor Naval Supply Depot was excellent. No undue delay was experienced with the procurement of standard stock items nor of those locally procured, open purchase items. Several weeks of the initial in-port period were spent bringing our medical stock level up in preparation for the cruise, the length of which could not be accurately anticipated.

4. PROJECT MERCURY

On 23 August 1962 our initial personal contact with representatives of NASA occurred. On this date an advance team of three members from the NASA Manned Space Flight Center at Houston, Texas arrived aboard the ship for preliminary survey and discussion. The three men composing this group were LTCOL Charles BERRY, MC, USAF; LTCOL DOUGLAS, MC, USAF; and CAPT R. POLLARD, MC, USA. These three NASA medical officers were accompanied by two specialists from Tripler Army Hospital, LTCOL MOSER, Chief of Medicine, and LTCOL HANNON, Chief of Thoracic Surgery. LTCOL BERRY, the Medical Director of the NASA manned space center, stated that during this recovery, for the first time, the entire medical debriefing spanning the first 72 hours following recovery and retrieval, would be spent aboard this aircraft carrier.

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Prior to this time, only the first few hours, the very initial medical debriefing, had been accomplished aboard ship. Shortly after the NASA team came aboard a detailed conference was held with the Commanding Officer in his in-port cabin. At this time all major requirements were discussed. It was agreed that the initial detailed medical debriefing and examination would be held in the medical spaces proper of the ship. Following this the Astronaut and the NASA medical team would go to the Flag in-port cabin, and remain there for the balance of the initial 72 hour period. Following this the NASA group was brought down to the medical department spaces, where a detailed conference and inspection of available space and equipment was conducted. It was agreed that the primary initial debriefing area would be conducted in the small air conditioned and sound-proofed quiet room across the passageway from the medical officers office. This included the attached head and shower facilities. It was decided to remove the four berths from this room and to put in an examining table. In addition, to install the ship's electrocardiograph machine, the ship's audiometer and various smaller pieces of medical equipment ordinarily used in conducting a physical examination. Further, it was agreed that the adjoining x-ray room, laboratory, and pharmacy would be available to the NASA team during the debriefing. Certain laboratory procedures would be performed aboard ship on specimens of blood and urine. Other blood specimens would be refrigerated in the medical spaces, and urinary specimens throughout the entire 72 hour period would be frozen and kept in deep freeze.

The NASA group came aboard the ship daily from 23 to 26 August inclusive. During subsequent visits and discussions it was determined that the use of the ship's slit-lamp, and walking blood-bank facilities would also be desirable. Considerable concern was expressed by the NASA team regarding security, in particular interference from members of the press pool who would be aboard in numbers during the actual recovery of the Astronaut. Another requirement was the availability of three desks and chairs immediately across the passageway from the quiet room space, in order to permit the NASA debriefing team to perform their paper work and keep records.

After the departure of the NASA medical representatives, arrangements were made with the District Medical Officer and the Pearl Harbor Station Medical Officer to borrow three extra desks to be placed in a corner of the ward, where the ship's medical officers might continue to conduct their medical work during the astronaut's debriefing period.

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On 30 August 1962, on invitation of the ship's medical officer, all members of the back-up specialist team for project mercury visited the ship, and following lunch in the wardroom inspected the ship's medical spaces. The specialists were seven in number. The radiologist present suggested that the ship obtain a spare x-ray tube and spare electron tubes for the transformer equipment which is an integral part of the 100 MA x-ray unit. This recommendation was acted upon immediately and the new tubes were obtained prior to the actual deployment to the recovery area which occurred on 29 September.

On 29 September 1962, CDR M. J. TRUMMER, MC, USN (surgeon); MAJ F. L. MAHAN, MC, USAF (anesthesiologist); MSgt R. TIMIN (OR and blood bank Tech); and SSgt C. L. STEWART, USAF (EEG Tech), medical members of NASA-I team, reported aboard for deployment to the recovery area above Midway. They brought with them 65 cubic feet of medical equipment packed in metal cases. Having no other storage space, it was necessary to store this equipment in a corner of the open ward.

Some confusion arose at this time. Members of this team posed problems which had not previously been discussed by Dr. BERRY or Dr. POLLARD. It was now determined that it would be necessary to utilize the larger Treatment Room for the preliminary physical examination vice the Quiet Room as originally planned. This requirement was due to the now large number of medical personnel involved in the examination, and two additional sound movie cameramen with full equipment. This large treatment room along with the Aviation Examining Room were placed at their disposal.

CAPT R. POLLARD, MC, USA arrived one day prior to the proposed recovery date. A requirement which had not been previously discussed now became apparent. It would be necessary to draw four pints of blood to be on hand to back up any surgical emergency. This was accomplished using special donor sets which had been brought by the NASA medical team, and members of our "Walking Blood Bank." Although we had a sample of the Astronaut's blood, no attempt was made to screen donors through crossmatch procedure. To spare undue blood letting, it is strongly recommended that cross-matching be utilized prior to the drawing of blood from proposed donors.

The MA-8 capsule launch was made on schedule, recovery was uneventful, and fortunately no requirements for emergency medical action eventuated. On the day of the shot it was necessary to hold early sick call at 0700 and to alter the ward routine to allow complete

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security of all areas available to the NASA medical team for a minimum of two hours prior to recovery for extensive pre-debriefing preparations. During this time only required personnel were designated and issued NASA passes to permit them use of the passageways in the Medical Department. Specifically, sufficient Medical Department personnel were designated to cover the following areas: x-ray, laboratory, pharmacy, operating room and office. There was the additional requirement of a four-man stretcher team with access to these spaces, and the two man team trained to retrieve the astronaut from the capsule, if injured.

The Astronaut, CDR SCHIRRA, arrived in the Medical Department at 1120, 3 October 1962. He proceeded immediately to CAPT NELL's office to talk to President KENNEDY. He later talked with the Vice-President and then his wife. Upon completion of these formalities he proceeded to the Treatment Room for de-suiting and the following examination: General physical examination - vital signs, chest, EENT, etc.; EEG, chest x-ray; and drawing of blood and urine samples; caloric test - utilizing caloric apparatus developed by CAPT A. GRAYBIEL, MC, USN. CDR SCHIRRA departed the sick bay area at 1430 and proceeded to the Admiral's in-port cabin for further verbal debriefing and medical observation.

On the day following the recovery the NASA-II Medical Team arrived composed of Dr. C. A. BERRY; Dr. H. A. MINNIERS; CAPT A. GRAYBIEL, MC, USN; LTCOL D. FLYNN, MC, USAF; Dr. G. RUFF; LT COL E. KNOBLOCK, MC, USA; LTCOL J. CULVER, MC, USAF; CAPT W. B. CLARK, MC, USA; and one laboratory technician. They brought with them an additional 25 cubic feet of medical equipment. Upon their arrival CDR SCHIRRA was again brought to the sick bay for the following tests: Electrocardiogram, visual acuity determination, phorias checked, psychiatric examination, slit-lamp examination, ophthalmoscopic examination, tangent screen and near-vision tests.

The requirements of the recovery-minus-two days were minimal. CDR SCHIRRA returned to the Medical Department for brief re-evaluation of the previous day's examinations and laboratory examinations.

The primary considerations which confronted us during the astronaut's stay in the Medical Department spaces were security personnel utilization. All unnecessary personnel were kept away from the examination areas so as not to confuse the debriefing process. Although the NASA Medical Teams had much medical equipment at their disposal, they must be supported by the staff and basic medical equipment of the medical department. This is no problem as long as the ship is equipped in compliance with the initial outfitting allowance.

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5. RECOMMENDATIONS

The Medical Officer should establish contact with medical authority ashore, particularly the Station Medical Officer, the District Medical Officer, and the Fleet Medical Officer if present. They should be kept informed of developments and relations with NASA personnel. If this is done, they may be called upon when necessary for assistance which may not be available elsewhere.

The Medical Officer should determine from the DOD Representative at Cape Canaveral the name of the NASA Medical Officer to be in charge of astronaut medical activities aboard ship. This knowledge may be of great help in avoiding misunderstanding.

The Medical Officer should arrange, if possible, the performance of one or more major surgical procedures in the ship's operating room, utilizing the ship's surgeon, the DOD surgeon and the DOD anaesthiologist. These latter two being members of the NASA Medical Team. Such procedures should be done enroute to the capsule recovery area. They serve to familiarize the two DOD specialists with surgical operating conditions aboard and greatly enhance their in situ proficiency. If the astronaut were to require surgical treatment this factor might assume great importance.

Replacement spare parts of a critical nature, such as one x-ray tube, two x-ray transformer electron tubes, and blood typing sera, should be obtained and tested prior to departure for the capsule recovery area.

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n. DENTAL DEPARTMENT

1. GENERAL CONSIDERATION

a. Personnel. During the current MIDPAC deployment, three dental officers and six technicians comprised the department. Two strikers augmented this force. The ship's allowance calls for one Commander, two Lieutenants, one first class, one second class, one third, and two dentalmen. These billets were filled.

b. Equipment. Three of the four operating rooms are equipped with air turbine units and Pel-Vac aspirating units. The fourth unit is equipped with low speed and is utilized for oral hygiene and prophylaxis treatments. A completely equipped prosthetic laboratory is also present.

All equipment was in excellent condition at the beginning of the deployment and remained so throughout the cruise with any necessary maintenance taken care of by the department itself.

c. Supply. There were no unusual consumption of supplies and no shortages developed. Usage rates established to bring stock levels to IOL plus six months supply were considered adequate.

2. OPERATION

a. Personnel. The Dental Department complement as it now stands, is considered to be adequate to handle the existing work load of ship and squadron personnel.

b. Treatment. All types of dental treatment were rendered ranging from cleaning and prophylaxis to complete prosthetic replacement of missing natural teeth.

3. COMMENTS

a. Personnel. Utilization of one or more strikers, as is now in effect, is advisable to augment the Dental Department allowance so that more technicians are available for administrative and prophylactic duties.

b. Equipment. Dental repair service, when needed, is available in Pearl Harbor.

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c. Supplies. The Dental Department is self-sufficient if levels of supply and careful usage rates are compiled accurately. Supply support is available from Supply Center, Pearl Harbor.

4. CONCLUSIONS

In the future, on deployments similar to this one in length and mission, it is anticipated that the Dental Department will be completely self-sustaining and capable of carrying out its mission of rendering the optimum of professional services to ship's company and embarked personnel.

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o. AIR GROUP

1. PRE-CRUISE PERIOD - (JULY 1962)

Initial planning for the cruise was based on sketchy information contained in message traffic on the Mercury MA-8 shot. It was planned that the Air Group would embark 22 S2F's and 14 HSS-2's. In mid-July the AD5W's of VAW-11 Det Romeo were added. On 21 July COMNAVAIRPAC recommended to CTF 130 that HS-6 send a detachment of HSS-1N's and leave the HSS-2's at Ream Field. On 26 July the decision was made to add two HSS-2's to the bag. This was the third change in the aircraft planning and, needless to say, caused much consternation in the supply system.

COMNAVAIRPAC and COMFAIRSDIEGO were quick to realize the size of the task confronting both the ship and Air Group in preparing for a fast deployment. Both staffs assigned Project Officers to assist. Several Senior Petty Officers and NAESU Technicians were also made available. An emergency Avionics Assist Conference was held, as KEARSARGE had only recently completed a yard period and had never operated as Integrated Avionics Facility. BENNINGTON returned from WESTPAC two days before our departure and COMFAIRSDIEGO supply personnel were able to strip her of many of the critical shortage items in the KEARSARGE allowance lists. So prepared, we departed for Pearl on 1 August.

2. ENROUTE PEARL (1-7 AUG)

The trip to Pearl provided an opportunity to shake down the Air Group and ship's flight deck crew. Air operations were conducted most of the way across with refresher landings, some day quals, TPN-8/CCA evaluation, squadron tactics, CIC drills and "Angel" flight being flown.

Intensive ground training was the rule, when not flying. A VS-41 Instrument Instructor was aboard for the trip out. Twenty-five pilots completed his course of instruction and passed the instrument examination.

3. HAWAII (8 AUG - 25 SEP 62)

a. HS-6 Det "A"

All ten helicopters were based at Ford Island during the in-port periods. The HSS-2 helicopters were flown every third day by the designated recovery crews to maintain proficiency but conservation of the aircraft for MA-8 continued.

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The HSS-1N's were utilized for ASW exercises both day and night, individual training, instrument checks and training of KEARSARGE EOD personnel for crewman rescue duties as outlined in COMNAVAIRPAC Notice 3130 of 2 August 1962. Four instrument checks were accomplished during this period.

Aircraft service changes 46 and 47 (balanced engine shafts and yoke assembly weights) were installed on both HSS-2's; installation being completed on 28 August. Frequency of flights could be increased after this change and Mercury rehearsals conducted by CTF 130 included the HSS-2's. Training in rescue swimmer drop and hoist procedures was conducted prior to embarking for the MA-8 recovery area.

b. VAW-11 Det "R"

During this phase emphasis was placed on qualifying two radar technicians. The detachment accumulated a total of 38 hours per aircraft which was the most concentrated flying conducted on the cruise. This compares favorably with the average hours per aircraft of the previous detachment aboard KEARSARGE.

The role of the detachment in the Mercury recovery was to conduct helicopter control from the limits of the ship's radar to the point of contact of the Mercury capsule. The month of September was utilized in preparing for the recovery mission by participation in CTF 130 recovery rehearsals.

The entire month of September was a series of in-port and at-sea periods. Therefore, flight time for the month averaged only 25 hours per aircraft, however a certain amount of proficiency in carrier operations was maintained.

c. VS-21

During the in-port periods in Hawaii the squadron was based ashore at Ford Island. During these periods the squadron flew basic training flights in familiarization, instruments, and advanced air-crew training flights in ASW and photography. In addition, 2 pilots were day FCLP qualified, 6 pilots were night FLCP qualified, and 3 crews were qualified in Julie.

While embarked during this period the squadron concentrated on refresher and qualification landings, Julie training, and provided 58 hours of TPN-8 radar evaluation flying. Two pilots were day carrier qualified and 4 pilots were night carrier qualified.

During periods of reduced flight operations intensive ground training was conducted for a total of 48 hours.

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d. VS-29

The squadron conducted 42 ASW sorties during this period. These included searchlight runs, night photo, ECM, MAD, and Julie. Three crews were qualified in A-50-AS Julie exercises.

Refresher night landings and initial night carrier qualifications were conducted on CVS-33 after night bounce at NAS Barbers Point. Six pilots were night carrier qualified.

e. HMM-161

Four HUS type helicopters flew aboard from Kaneohe on 4 September to conduct familiarization and refresher operations, departing again from Kaneohe on 5 September. HMM-161 returned on board again on 11 September and conducted MA-8 rehearsals on the 11th and 14th of September, flying off again on 18 September. The rehearsals consisted of press coverage flights and swimmer exercises. No difficulties were experienced during these rehearsals. Pre-recovery operations for HMM-161 amounted to 37 sorties and 23 flight hours.

f. Shore based facilities

While based at Ford Island ALF the air group operated from its cruise boxes. There are no test benches, work benches, work stands, storage spaces, wing jacks, tie-downs, pre-oilers or L-stands available at Ford Island. In addition there is no office furniture, aviation gasoline or ordnance available. Aviation gasoline was trucked in from Hickam AFT, which sometimes posed a launch time problem due to transportation delays. All avionics support was through the Integrated Avionics Facility aboard KEARSARGE. With KEARSARGE moored at Ford Island, no significant delays were encountered, however it required approximately four hours to exchange RFI units when the ship was moored at the shipyard. This made it necessary to fly off all ordnance possible and truck in any additional requirements from NAS Barbers Point. Ground support equipment at Ford Island was in extremely short supply and generally in poor operating condition. Due to the limited personnel assigned to Ford Island the air group was required to provide gasoline and oil truck drivers.

Three engine changes were accomplished without difficulty utilizing the facilities at NAS Barbers Point AMD which was outstanding. These readily available facilities were also used for packing parachutes and testing survival equipment.

It is worthy of note that the Lockheed Aircraft Service Company located at Honolulu International Airport has the facilities and experience to de-magnetize the S2F aircraft to aid the compensation of MAD gear. The company has a contract with the Navy, to do "Airline

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Maintenance" on the WV-2 and R7V aircraft. Their assistance is arranged through COMFAIRHAWAII.

4. MAINTENANCE (RELATED SPECIFICALLY TO SUPPORT OF MA-8 OPERATIONS)

Each VS squadron was assigned a TF-1 type aircraft for maintenance while KEARSARGE assumed custody. Considerable effort was expended in preparing these aircraft for flight but no particular problems in maintenance training or qualifications were encountered.

Four S2F-1's and four HSS-1N's type aircraft were preserved and stored at NAS Barbers Point during the actual deployment to the MA-8 recovery area because of a lack of deck space and handling room aboard KEARSARSARGE.

a. HS T58 Jet Shop

A portion of this cruise has been used to set up the T58 jet engine shop. The pipe shop, located on the hangar deck, starboard side of hangar bay 2, has been assigned for squadron use as the T58 jet engine shop. This space has ample deck and counter work areas, and required only minor modifications to meet the needs of T58 jet engine maintenance. Four "milk stool" engine stands from the Assembly Stand Adapter Kit (NAVWEPS 028-105AHB-2, Section 1, page 19, fig 1-71) will be bolted on to angle iron bases welded to the deck. It is anticipated that six "milk stools" may be installed without overcrowding the shop. The T58 Universal Maintenance Stand (NAVWEPS 028-105AHD-2, Section 1, page 20, fig 1073) will not be used in this shop due to its bulky size and lack of free passageway to utilize its mobility. An overhaul rail is available to hoist and transport engines between hangar bay 2 and the shop.

b. Joint Avionics Facility

The KEARSARGE Joint Avionics Facility has been in operation since 1 Aug 1962. The facility grew from a bare shop space to a fully operational facility almost overnight. The outstanding assistance given the ship by the previously mentioned COMNAVAIRPAC and COMFAIRSDIEGO personnel was quite evident when the ship got under way and the monumental task of sorting through pile after pile of supplies began.

Initially the facility supported Communications and Navigation equipment only. By the time we reached Pearl a limited amount of ASW support was possible. While in the Hawaiian area the squadrons flew two periods of around the clock operations which severely taxed avionics maintenance both in the facility and on the line.

During the cruise the Joint Facility processed over seven hundred work orders. Four hundred sixty-eight Electronic Failure Reports (EFR's) were submitted. Fifty-five Failure or Unsatisfactory Reports (FURS) were required.

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The work load slackened as the MA-8 recovery approached. This provided an excellent opportunity to make the Facility Technicians and equipment available for on-the-job training of line maintenance personnel. This continued, flight operations permitting, until we returned to the mainland.

5. MA-8 RECOVERY (25 SEP - 4 OCT)

HSS-2 helicopters were airborne in all CTF 130 recovery rehearsals. During the actual recovery only one detachment helicopter (HSS-1N) became airborne. This was for photo coverage. The pin point accuracy of the capsule to the intended impact area and KEARSARGE eliminated the HSS-2's from the recovery picture.

Limited operations consisting of lifeguard and transfers were conducted by the HSS-1N's.

a. VAW-11 Det "R"

The detachment participated in CTF 130 recovery rehearsals during this phase for the purpose of communication and radar checks on the 3 DET aircraft.

Two aircraft were launched on recovery day to participate in the recovery but were not utilized due to the ship's proximity to impact point being only 4.5 miles.

b. VS-21/29

The squadrons were prepared to search for the capsule in the event that it became necessary.

Pilots and crewmen utilized as TF crews to carry newsmen, NASA personnel and Astronauts as required.

c. HMM-161

The detachment flew aboard from MCAS Kaneohe on 28 September. MA-8 rehearsals were again conducted on 29 September and 2 October.

On 3 October (recovery day) HMM-161 flew four sorties and approximately 40 flight hours. The helicopters were launched, with swimmers and photographers aboard, on capsule touch down. The swimmers were put in the water near the capsule with no difficulty. Photographic coverage was excellent. All helicopters remained airborne until the capsule was hoisted aboard KEARSARGE.

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6. POST RECOVERY (5 - 11 OCT)

a. Air Group TF crews made three trips to Hickam AFB, carrying Astronauts and NASA personnel. The remainder of the Air Group was put ashore at Barbers Point in order that Marine Air Group 13 squadrons might qualify on KEARSARGE. The Air Group returned aboard on 11 October as the ship left Pearl Harbor for the mainland.

b. HMM-161

On 6 October the 4 HUS's of HMM-161 were utilized to COD press and NASA representatives to Hickam AFB prior to the astronauts arrival in Honolulu in order to provide continuity of press coverage. Post recovery operation for the above purpose amounted to 11 sorties and approximately 7 flight hours.

In addition to the above, HMM-161 provided airlift support to and from KEARSARGE for MAG-13 personnel and equipment during the latter's qualification period. The support of MAG-13 by HMM-161 was excellent and played a most significant role in the successful completion of all MAG-13 requirements. A total of 13 sorties and approximately 17 flight hours were flown during this phase.

c. MAG-13 (VMA 212 and 214)

KEARSARGE was designated by COMNAVAIRPAC to provide day and night qualification services to MAG-13 during the week of 8 October. In order to have space available, CVSG-53 aircraft and crews were flown off to NAS Barbers Point and remained there until 11 October at which time they were flown back aboard.

MAG-13 loaded maintenance equipment and crews on board on 8 October and A4D qualification flights commenced on this date. Flights were staged from MCAS Kaneohe. The operation was successfully completed on the evening of 11 October with all requirements being met despite several catapult and arresting gear malfunctions on KEARSARGE.

One aircraft accident on 9 October marred the operation when an A4D struck the ramp shearing the starboard main landing gear. The aircraft engaged the #4 cross deck pendant coming to rest on the flight deck. There were no injuries sustained.

7. CONCLUSIONS

In retrospect it would seem that two important points should be made for the benefit of those who will follow. First, the facilities at Ford Island were fully adequate to support the Air Group as long as the ship was in the harbor. The training accomplished and maintenance on the aircraft made the inconvenience of the boat ride

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insignificant. The equipment that Ford Island or COMFAIR could not provide was offloaded from the ship and trucked over. Don't pass up a chance to shore base, just because of the facilities at Ford.

The second point to be made is that this Air Group was unable to derive the maximum benefit from the outstanding ASW training which is available in the Hawaiian area. Time after time we were forced to cancel submarine commitments because of changes in the MA-8 recovery schedule. It is believed that the Submarine and Destroyer services scheduled would have resulted in three times as much ASW training had they not been cancelled by the overriding requirements of our primary mission. Don't be discouraged by reports that "there is no sub time available in Pearl." If you are willing to share services with Destroyers there is an abundance of sub time to be had.

8. SUMMARY

	HS-6	VS-21	VS-29	VAW-11	HMM-161	MAG-13
Total flight hours	634	932	828	202	(Approx) 51	(Approx) 290
Total carrier ldgs (day/night)	259/3	335/72	399/91	73/22	53/13	302/260
No pilots day qualified	6	2	0	4	NA	5
No pilots night qualified	0	4	6	4	NA	43
Hours flown in support of:						
MA-8	16	0	0	29	34	NA
TPN-8	49	52	56	0	NA	NA
Soda trans	4	9	10	0	NA	NA
Utility (support)	191	0	0	0	17	NA
Squadron Trng (less ASW)	255	701	607	157	NA	NA
ASW Hours						
a. JULIE	0	47	40	0	NA	NA
b. SONAR	119	0	0	0	NA	NA
c. MAD, ECM, radar/ search light, etc.	0	121	125	16	NA	NA
Ground Training	30	48	54	23	NA	NA
Total flight hours all:		2937				
Total carrier landings day:		1421				
Total carrier landings night:		461				

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U.S.S. KEARSARGE (CVS-33)
Care of Fleet Post Office
San Francisco, California

KEARNOTE 1321
Oll:DFP:me
14 August 1962

USS KEARSARGE NOTICE 1321

From: Commanding Officer, USS KEARSARGE (CVS-33)
To: Distribution List

Subj: Project Mercury Liaison Officers; assignment of

1. Purpose. To promulgate specific duty assignments for KEARSARGE Liaison Officers in Project MERCURY Test MA-8.

2. Responsibilities. The assigned Liaison Officers provide Liaison and originate directives, instructions, and operations orders as required.

3. Duty Assignments. The below listed officers are assigned to duties as described herein:

a. MA-8 Project Coordinator - LCDR ZAGORSKI

(1) Coordinate planning in connection with KEARSARGE participation in Project Mercury Test MA-8.

(2) Originate KEARSARGE Operation Order for Test MA-8.

(3) Delegate assignments to other assigned project assistants as required.

b. NASA Liaison Officer - CDR McNAIR

(1) Conduct Liaison with NASA representatives as required.

c. Communication and electronics installation coordinator - LT CROZIER

(1) Coordinate installation of communication and electronics equipment to assure readiness for Test MA-8.

d. Press Coordinator - LT PARKER

(1) Coordinate arrangements for embarkation of assigned press representatives.

(2) Coordinate requirements of embarked press representatives with other ship's officers as required.

e. Berthing and messing coordinator - LTJG HARRINGTON

(1) Arrange berthing and messing for embarked personnel.

f. Public information coordinator - LTJG McKINLEY

Enclosure (1)

KEARNOTE 1321
14 August 1962

g. Medical department coordinator - LTJG DARR

h. The below listed officers will coordinate with other ships officers to alleviate individual problems of embarked NASA and press representatives and to expedite familiarization of embarked personnel with ships organization and routine:

LT CLICK	LTJG DIAZ
LTJG OLNEY	LTJG ROBINSON
LTJG HAUKEREID	LTJG ROREM
LTJG RICKERT	LTJG WESTMAN
LTJG POOL	LTJG TILLOTSON
LTJG WRIGHT	LTJG ANDRE
LTJG MITCHELL	LTJG LORD
LTJG STEWART	LTJG METZ

(1) Each officer listed will be assigned approximately five embarked representatives. He will meet these representatives upon embarkation and continue to aid them as necessary throughout their stay.

4. Cancellation. This notice will be cancelled when KEARSARGE participation in Test MA-8 is complete and for record purposes on 15 November 1962.

E. P. RANKIN

J. N. DURIO
By direction

DISTRIBUTION LIST:
AIRLANT/AIRPAC CV SHIP INST 5605.1
LIST I (CASE A)
Each Officer Concerned

UNITED STATES PACIFIC FLEET
U.S.S. KEARSARGE (CVS-33)
CARE OF FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA

231800Z AUGUST 1962

OPERATION ORDER
U.S.S. KEARSARGE NO. 310-62

Ref: (a) COMHAWSEAFRON OPORD 310-62
(b) COMDESFLT FIVE OPORD 310-62

Time Zone: Use time zone Zero (ZULU) for operations

Task Organization:

(a) Operations Department	CDR W. D. McNAIR, USN
(b) Navigation Department	CDR J. S. MUSIAL, USN
(c) Air Department	CDR E. D. KEMP, USN
(d) Gunnery Department	LCDR F. L. CRUMP, USN
(e) Engineering Department	CDR H. F. STAUFFER, USN
(f) Supply Department	CDR W. O. FOULKES, USN
(g) Medical Department	CAPT E. R. NELL, USN
(h) Dental Department	CDR A. E. SORENSON, USN
(i) COMCARASAIRGRU FIFTY-THREE	CDR J. A. STOCKTON, USN

1. GENERAL SITUATION

Project Mercury, a part of the U.S. space program being conducted by the National Aeronautics and Space Administration (NASA), has progressed to the manned, orbital flight phase of increased duration which requires planned landings in preselected areas of the Atlantic and Pacific Oceans. In support of this program, the Commander in Chief, U.S. Pacific Fleet has designated Commander, Hawaiian Sea Frontier as Commander Task Force 130, and has directed him to plan and conduct recovery operations of the space craft and its occupant utilizing forces assigned. Commander, Destroyer Flotilla FIVE, has been designated as CTG 130.2 and will direct the recovery operations of the space craft and its occupant in the prime recovery areas. CTG 130.2 will be embarked in USS KEARSARGE. This operation order provides for the assemble of equipment, training of personnel, and operations in support of references (a) and (b) (and the revisions thereto).

a. FRIENDLY FORCES. As set forth in reference (a).

2. MISSION.

The mission of the USS KEARSARGE for this operation is to participate in and provide support for Project Mercury as directed by CTF 130 and CTG 130.2 in the recovery of the space craft and its occupant.

Enclosure (2)

3. EXECUTION.

The primary tasks assigned to the USS KEARSARGE consist of the coordination and control of air and surface search and recovery operations in assigned landing areas, and the safe delivery of the spacecraft and occupant to a location and activity as directed by CTF 130. A secondary task, if required, is assigned to coordinate and control contingency air and surface search and recovery operations as directed by CTF 130.

a. OPERATIONS WILL:

- (1) Plan and coordinate KEARSARGE's participation.
- (2) Insure photographic coverage.
- (3) Provide helo transfers (if required) and COD flights for embarked NASA representatives.
- (4) Provide and brief lookouts for recovery.
- (5) Provide Communications as required by references (a) and (b).
- (6) Conduct air operations as directed.

b. NAVIGATION WILL:

- (1) Provide navigational charts of the local and recovery areas.
- (2) Ensure watch personnel are trained and proficient in group operations.

c. AIR WILL:

- (1) Conduct training and test flight operations as directed.
- (2) Assist Gunnery Department in recovery team training as necessary.
- (3) Designate ready room for use of MAG-13 pilots.
- (4) Provide adequate storage and working space for MAG-13 equipment.
- (5) As coordinated with Gunnery Department be prepared to hoist capsule aboard using the ship's mobile crane in the event KEARSARGE is designated recovery ship. (This is secondary method to the ship's crane).
- (6) Designate capsule working space.
- (7) Designate a route to Sick Bay for the astronaut and ensure that it is unobstructed.

(8) Designate a route from Sick Bay and/or the Flight Deck to Flag in-port cabin.

(9) Coordinate fresh water wash down of the capsule with Engineering Department.

(10) Designate and rope off when directed, safe vantage points from which personnel may view recovery operations.

d. GUNNERY WILL:

(1) Develop and test capsule recovery technique in coordination with NASA representatives.

(2) Assume custody and provide adequate storage of retrieval equipment as directed.

(3) In coordination with Air Department conduct recovery team training.

(4) Provide motor whale boats with crew for capsule recovery.

(5) Provide team to render safe all explosive fittings that may be in space craft after recovery.

(6) Provide and maintain post-retrieval equipment.

(7) Provide Marine sentries as requested by NASA representatives.

(8) Commanding Officer, Marine Detachment control security for personnel authorized access to certain areas as designated by NASA team leader.

e. ENGINEERING WILL:

(1) Provide fresh water for capsule wash down if KEARSARGE is designated recovery ship.

f. SUPPLY WILL:

(1) Assist all departments in procuring necessary equipment and supplies.

(2) Provide billeting spaces for NASA, medical, news and other embarked personnel.

g. MEDICAL WILL:

(1) Provide personnel and assist NASA Medical Team as required.

(2) Provide working space, equipment storage, and medical supplies as required.

h. DENTAL WILL:

(1) Assist Medical Department as required.

i. COMCARASAIRGRU FIFTY-THREE WILL:

(1) Ensure maximum squadron training is accomplished during the period in Pearl Harbor, Hawaii.

(2) Assume maintenance and provide qualified crews when directed for two additional TF aircraft.

(3) Provide COD services as directed.

(4) Provide aircraft and/or helicopter services for training and testing when directed.

j. ALL DEPARTMENTS WILL:

(1) Ensure personnel, spaces and machinery are in a high state of readiness to provide services as required.

(2) Provide assistance to news media representatives and NASA representatives as required.

x. COORDINATING INSTRUCTIONS:

(1) Tasks in accordance with Annex B of this Operation Order.

(2) This operation order is effective upon receipt for planning and for operations in accordance with Annex A, Schedule of events, commencing 041700 September 1962. This operation order ceases to be effective upon completion of operations and release of assigned units or when directed and may be destroyed by burning without report.

(3) For contacts with unidentified or hostile aircraft, submarines or submerged objects, action shall be in accordance with the current revision of CINCPACFLT INST 03300.2 and COMASWFORPAC INST 03360.2.

(4) SAR in accordance with Annex S, COMHAWSEAFRON OpOrder 201A-62.

4. COMMAND AND SIGNAL.

a. Communications in accordance with reference (b) and Annex C of this operation order.

b. Succession to command in accordance with U.S. Navy Regulations for U.S. Units.

E. P. RANKIN
CAPTAIN, U. S. NAVY
COMMANDING OFFICER
U.S.S. KEARSARGE (CVS-33)

ANNEXES

- A - Schedule of Events**
- B - Roster KEARSARGE's Coordinating Officers
- C - Communications (Higher Classification, not included)
- D - Billeting Assignments (Not included)
- X - Distribution

(**Enclosed Schedule of Events is only an example. Schedule was followed as shown until Monday, 10 September. New commitments required subsequent changes not included.)

OPERATION ORDER
USS KEARSARGE NO. 310-62

ANNEX A

SCHEDULE OF EVENTS

TUESDAY	4 September
0800	Underway for training area, Warning Area 319. See chart 5695-0A
1000-1500	Capsule recovery training. Conduct recovery communications checks as required.
1500	Recover CVSG-53 helos
1545	Recover CVSG-53 Fixed wing aircraft
1600-1900	Capsule training.
1900-2100	Engineering drills.
WEDNESDAY	5 September Warning Area 319 less G2, see Chart 5695-0A
0800-1300	Capsule recovery rehearsal
1300-1700	Launch Fixed wing for day refreshers.
1700-1900	Engineering drills
1900-2300	Night qualifications and refreshers. 2 DDs assign NPG
THURSDAY	6 September Warning Area 319 less G2, Sierra 3,4,5, & 6
0800-1200	CVSG aircraft for SS operations and Julie, S2Fs CCA to final landing
1200-1600	CVSG aircraft for SS operations and Julie, S2Fs CCA to final landing
1600-2000	CVSG aircraft for SS operations
2000-2400	CVSG aircraft for SS operations
0800-1100	2 Helos, 1 per 1.5 hr period for TPN-8 evaluation
1200-1500	Day refreshers for fixed wings
1600-1900	2 Helos, 1 per 1.5 hr period for TPN-8 evaluation
2000-2400	Night qualifications and refreshers. 2 DDs assign NPG

OPERATION ORDER
USS KEARSARGE (CVS-33)

FRIDAY 8 September Warning Area 319 less G2. Sierra 2,3,4,5 & 6
0400-0800 Z-30-U Z-41-U
0800-2400 Same as Thursday except no SS operations after 1600
SATURDAY 8 September
0800 APPROX Enter port and moor as directed
SUNDAY 9 September IN PORT
MONDAY 10 September Warning Area 319 less G2. Sierra 3,4,5 & 6
0800 Underway for training area
1000-1130 General Quarters, damage control drills
1000-1130 Z-5-G AA firing (practice) area G2, 12
1200-1600 CVSG aircraft for SS operations, Julie and TPN-8 evaluation
1600-2000 CVSG aircraft for SS operations, Julie and TPN-8 evaluation
1900 Man overboard drill
2000-2400 CVSG aircraft for SS operations
TUESDAY 11 September Warning Area 319 less G2, Sierra 3,4,5 & 6
0800-1200 CVSG aircraft for SS operations, Julie and TPN-8 evaluation
0830-1000 Z-5-G AA firing (complex) Observers required. Area G14
1200-1600 CVSG aircraft for SS operations, Julie and TPN-8 evaluation
1900 Man overboard drill
1600-2000 CVSG aircraft for SS operations and Julie
2000-2400 CVSG aircraft for SS operations
WEDNESDAY 12 September Warning area 319 less G2. Sierra 3,4,5 & 6
0400-0800 Z-30-U Z-41-U
0800-1200 CVSG aircraft for SS operations, Julie and TPN-8 evaluation
0830-1000 Z-3-G AA firing (practice) Area G14. General Quarters, DC Drills
1200-1400 CVSG aircraft for SS operations, Julie and TPN-8 evaluation
1430 Launch CVSG-53 for beach less HSS-1 angel requirements
1615 Enter port. Load MAG-13 personnel and equipment
THURSDAY 13 September Area Sierra 1, Alfa 5,7,9, 11,13 and Sierra 9
0800 Underway for training area
1100 Recover 18 MAG-13 A4Ds.
1200-1700 Recover 6 MAG-13 A4Ds; commence day refreshers. 2 DDs assgn
1900-2300 Night qualifications and refreshers. 2 DDs assgn NPG
FRIDAY 14 September Areas Alfa 5,7,9,11, & 13, Sierra 9
0800-1130 Day refreshers A4Ds
1300-1700 Day refreshers A4Ds

OPERATION ORDER
USS KEARSARGE (CVS-33)

1900-2300 Night qualifications and refreshers. As released, aircraft to return to MCAS Kaneohe

SATURDAY 15 September Areas Alfa 5,7,9,11, & 13, Sierra 1
0700 Launch remainder MAG-13 A4Ds for beach
0730 Recover CVSG-53
0900 APPROX Enter port, moor as directed

SUNDAY 16 September IN PORT

MONDAY 17 September Warning Area 319, Sierra 3,4,5, & 6
0800 Underway for training area
1000-1130 Z-5-G AA firing (complex) Area G2. Require observers
1200-1600 CVSG Aircraft for SS operations, Julie and TPN-8 evaluation
1400 Man overboard (complex) require observers
1800-0600 Submarine transit exercise

TUESDAY 18 September Warning area 319. Sierra 3,4,5 & 6
0800-2000 Submarine transit exercise
1600 Launch aircraft to beach; all aircraft not required for recovery (Mercury) operation

WEDNESDAY 19 September
0730 Radar navigation to anchorage
0900 APPROX Enter port, moor as directed

THURSDAY 20 September
1500 Underway for Mercury recovery area

E. P. RANKIN
CAPTAIN, U. S. NAVY
COMMANDING OFFICER
U.S.S. KEARSARGE (CVS-33)

Authenticated:

W. D. McNAIR
Operations Officer

UNITED STATES PACIFIC FLEET
U.S.S. KEARSARGE (CVS-33)
CARE OF FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA

OPERATION ORDER
USS KEARSARGE NO. 310-62

ANNEX B

ROSTER KEARSARGE'S COORDINATING OFFICERS

1. Concept.

a. In order to ensure coordinated effort in support of this operation order, specific duties are assigned to KEARSARGE Officers for Project Mercury.

b. Detailed duties in accordance with KEARSARGE NOTICE 1321 of 14 August 1962, where applicable.

2. Duty Assignments.

a. Planning and NASA Liaison Officer	CDR McNAIR
b. Coordinator	LCDR ZAGORSKI
c. Electronic Equipment	LT CROZIER
d. Communications	LCDR DESROSIERS
e. Capsule Recovery Training	LCDR CRUMP
f. Capsule Equipment	LCDR WYLIE
g. Medical	CAPT NELL
h. Press Coordinator	LT PARKER
i. Berthing and Messing	LTJG HARRINGTON
j. Public Information	LTJG MCKINLEY

E. P. RANKIN
CAPTAIN, U. S. NAVY
COMMANDING OFFICER
U.S.S. KEARSARGE (CVS-33)

Authenticated:

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CARE OF FLEET POST OFFICE
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OPERATION ORDER
USS KEARSARGE NO. 310-62

ANNEX X

DISTRIBUTION

Operations	(10)
Navigation	(2)
Air	(4)
Gunnery	(4)
Engineering	(3)
Supply	(4)
Medical	(4)
Dental	(2)
COMCARASAIRGRU 53	(7)
Administration	(6)

Copy to:
COMASWFORPAC
COMHAWSEAFRON (3)
COMDESFLOT FIVE (3)
COMFAIRHAWAII

E. P. RANKIN
CAPTAIN, U. S. NAVY
COMMANDING OFFICER
U.S.S. KEARSARGE (CVS-33)

Authenticated:

W. D. McNAIR
Operations Officer

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~~CONFIDENTIAL~~

PROJECT MERCURY RECOVERY FORCE, PACIFIC

TF 130	Project Mercury Recovery Force, Pacific	Commander Hawaiian Sea Frontier/CTF 130 RADM C. A. BUCHANAN
a. TG 130.1	Area 4-2 Recovery Group	Commander Destroyer Division 252 CAPT A. T. EMERSON
TU 130.1.1	Area 4-2 Surface Search and Recovery Unit	COMDESDIV 252 CAPT A. T. EMERSON
	USS RADFORD (DD-446)	CDR G. P. PEED
	USS EPPERSON (DD-719) (COMDESDIV 252 embarked)	CDR T. A. BUSH, Jr.
	USS WALKER (DD-517)	CDR G. W. PRADA
b. TG 130.2	Area 5-1 and 6-1 Recovery Group	Commander Destroyer Flotilla FIVE CAPT T. S. KING, Jr.
TU 130.2.1	Area 5-1 and 6-1 Surface Search and Recovery Unit	COMDESFLOT FIVE CAPT T. S. KING, Jr.
	USS KEARSARGE (CVS-33) (COMDESFLOT FIVE embarked)	CAPT E. P. RANKIN
	CVSG-53	CDR J. A. STOCKTON
	VS-21	CDR R. S. BROOKS
	VS-29	CDR C. R. HAMILTON
	HS-6 Det. "A"	CDR R. R. RILEY (OINC)
	VAW-11 Det. "R"	LT R. L. ROUTH (OINC)
	HMM-161 (4 HUS)	LTCOL L. V. TOPE
	USS RENSHAW (DD-499)	CDR J. T. DOYLE
	USS PHILIP (DD-498)	CDR D. D. GRANTHAM
	USS O'BANNON (DD-450)	CDR D. MILLER

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Enclosure (3)

GUESTS ON BOARD KEARSARGE FOR PROJECT MERCURY TEST MA-8

<u>NAME OF GUEST</u>	<u>ACTIVITY REPRESENTED</u>
CDR Walter M. SCHIRRA, USN	ASTRONAUT
LCOL John M. GLENN, USMC	ASTRONAUT
LCDR M. Scott CARPENTER, USN	ASTRONAUT
MAJ Gordon L. COOPER, USAF	ASTRONAUT
MAJ D. SLAYTON, USAF	ASTRONAUT
MAJ Virgil I. GRISSOM, USAF	ASTRONAUT
Dr. R. POLLARD, USA	NASA I
CDR TRUMER, USN	NASA I
MAJ F. L. MAHAN, USAF	NASA I
Mr. W. HAYES (NASA TEAM LEADER)	NASA I
Mr. J. STONESIFER	NASA I
Mr. RAMSEY	MacDonnel Aircraft Co.
Mr. B. JAMES (NASA PIO)	NASA I
Mr. E. EDMONDS	NASA I
Mr. W. LANDERS	NASA I
Mr. D. WENTZ	NASA I
Mr. E. LESKY	NASA I
Mr. W. SMEAD	NASA I
Mr. W. TAUB	NASA I
Mr. R. MERCER	NASA I
CAPT Ashton GRAYBIEL, MC, USN	NASA II
LCOL D. FLYNN, USAF	NASA II
LCOL E. KNOBLOCK, MC, USA	NASA II
LCOL John A. POWERS, USAF	NASA II
CAPT W. B. CLARK, MC, USAF	NASA II
Mr. Walter C. WILLIAMS	NASA II
Mr. John GRAHAM	NASA II
Mr. Richard DAY	NASA II
Mr. H. A. KUEHNEL	NASA II
Dr. Charles A. BERRY	NASA II
Dr. Howard K. MINNERS	NASA II
CAPT T. S. KING, USN	DESFLOT 5
CDR P. L. NUSCHKE, USN	DESFLOT 5
LT W. P. PRICE, USN	DESFLOT 5
LT A. N. ABELE, USN	DESFLOT 5
LT GIVEN, USN	DESFLOT 5
ENS F. B. MORLOCK, USN	DESFLOT 5
LCOL COLTHORPE, USAF	USAF
LCOL L. V. TOPE, USMC	HMM-161
CAPT K. W. ANDRUS, USMC	HMM-161
CDR P. P. UPSCHULTE, USMC	HMM-161

Note: NASA I personnel embarked aboard KEARSARGE 28 Sept. Departed
6 Oct. NASA II personnel and astronauts by COD from Midway
4 Oct. Departed 6 Oct.

Enclosure (4)

NAME OF GUESTACTIVITY REPRESENTED

CAPT A. DANIEL, USMC	HMM-161
CAPT V. R. HUGHES, USMC	HMM-161
CAPT D. A. DALRYMPLE, USMC	HMM-161
1/LT O. W. WILLIAMS, USMC	HMM-161
CWO E. S. OCKULY, USMC	HMM-161
Mr. N. FARBMAN	Life Photographer
Mr. K. ALLEN	Fox Movietown Camerman
Mr. R. BRACE	Fox Movietown Soundman
Mr. R. DIGHTON	AP Writer
Mr. R. MILLER	UPI Writer
LT CONGER, USN	Mobile Photo Unit
Mr. A. BROWN	London Daily Telegraph
Mr. J. FINNEY	New York Times Writer
Mr. H. KAPLOW	NRC Commentator
Mr. H. LOTIER	NBC Audio Technician
CDR C. TRIESCHMANN, USN	CINCPACFLT PIO
LTJG ANSELM, USN	HONO COMSTA
Mr. RICE	JEZEBEL
Mr. MONROE	Engineer
Mr. WINTERS	Engineer
Mr. HILL	NAVCOMSYSHDQTRS
Mr. POLATTY	GILFILLAN
Mr. KITAMURA	NAVSHYD, Pearl Harbor
LCDR BLACKWOOD, USN	OPDEVFOR
McCAFFERY, J. H., USN	DESFLOT 5
CLEMONS, D. W., USN	DESFLOT 5
STOCKMAN, J. B., USN	DESFLOT 5
BASTIN, P. I., USN	DESFLOT 5
BELCHER, B. E., USN	DESFLOT 5
DELOSTRINO, B. A., USN	DESFLOT 5
CLARK, C. E., USN	DESFLOT 5
KOCLE, J. L., USN	DESFLOT 5
ROHDE, J. D., USN	DESFLOT 5
WOODSON, U. (n), USN	DESFLOT 5
FREDERIKSEN, G. E., USN	DESFLOT 5
TALLON, R. P., USN	DESFLOT 5
EVERHART, M. L., USMC	HMM-161
TODD, S. L., USMC	HMM-161
FELDER, O. A., USMC	HMM-161
MERRITT, P. R., USMC	HMM-161
SORENSEN, L. D., USMC	HMM-161
VINCENT, C. D., USMC	HMM-161

Enclosure (4)

NAME OF GUESTACTIVITY REPRESENTED

WILDER, B. C., USMC	HMM-161
ABEYTA, J. G., USMC	HMM-161
GAROUTTE, J. L., USMC	HMM-161
HATZKY, R. A., USMC	HMM-161
JACKSON, R. C., USMC	HMM-161
JACKSON, W. J., USMC	HMM-161
McSAVANEY, J. W., USMC	HMM-161
PACKER, R. L., USMC	HMM-161
RAMIREZ, E. G., USMC	HMM-161
STOW, D. E., USMC	HMM-161
THOMPSON, J. C., USMC	HMM-161
DUNN, E. (n), USN	UDT-11
HAMEL, L. (n), USN	UDT-11
SAVOIE, L. S., USN	UDT-11
GAGLIARDI, G. M., USN	UDT-11
ALLEN, T. F., USN	UDT-11
SAILLIANT, R. E., USN	UDT-11
GARNER, B. J., USN	UDT-11
SMITH, D. J., USN	Mobile Photo Unit
O'BRIAN, K. M., USN	Mobile Photo Unit
KULU, H. (n), USN	Mobile Photo Unit
JACKSON, C. E., USN	Mobile Photo Unit
BLANEY, R. J., USN	HONO COMSTA
TIMIN, R. (n), USAF	USAF
STEWART, C. L., USAF	USAF

Enclosure (4)

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Center of area 6-1

station of KEARSARGE

Axis of recovery area 6-1

position at recovery

Bearing 102°T
4.9 miles from
center area 6-1

commenced
maneuvering

C 055
S 10-5

visual sighting
of impact
040°T 3 miles

visual sighting
053°T - 5 miles
sigma 7 descending

C 035
S 10

C 120
S 26

1024
C/G 050°

C 02
S 10

1028

Wind 125
12 kts

Sea 130
3 Pt

32.06

32.05

32.04

32.03

32.02

174.33

174.32

174.31

174.30

174.29

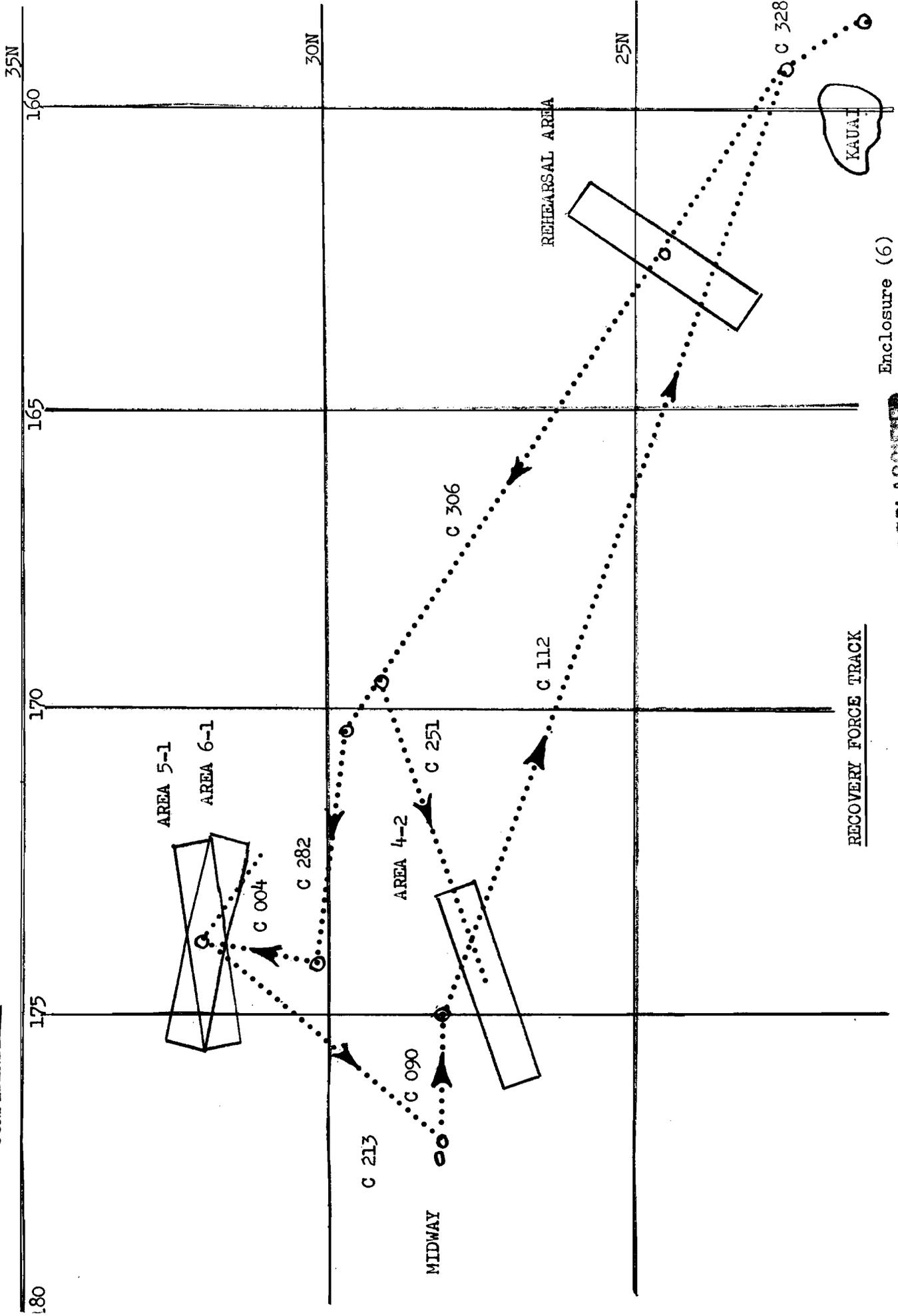
KEARSARGE RECOVERY TRACK

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RECOVERY FORCE TRACK

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