



UNITED STATES MARINE CORPS
2d Landing Support Battalion
2d Force Service Support Group (REIN)
Fleet Marine Force, Atlantic
Camp Lejeune, North Carolina 28542

IN REPLY REFER TO

3000
3
29 Nov 1984

From: Commanding Officer, 2d Landing Support Battalion
To: Joint Test Director, Headquarters Joint Logistics
Over-the-Shore II (JLOTS II)
Via: (1) Commanding General, 2d Force Service Support Group
(Rein)
(2) Commanding General, Fleet Marine Force, Atlantic
Subj: POST TEST REPORT FOR JOINT LOGISTICS OVER-THE-SHORE II,
PHASE III
Ref: (a) JLOTS II Field Test Plan, Throughput Phase dtd
1 Aug 1984
(b) 2d LdgSptBn (-)(Rein) OPORD 2-84, JLOTS II, PHASE III
(c) CO, 2d LdgSptBn ltr 3000 6 dtd 16 Oct 1984
(d) Final Test Report, MACTDS Test Director, Headquarters,
FMFLant dtd 26 Oct 1984
(e) Test Report (OT-III), RTCH Test Director, 2d LdgSptBn,
2d FSSG dtd 20 Nov 1984
Encl: (1) Post Test Report JLOTS II, Phase III

1. The enclosed post test report for JLOTS II, Phase III satisfies the requirement contained in Section IV of reference (a). This post test report encompasses the establishment, organization, and operation of 2d LdgSptBn (-)(Rein) for the conduct of JLOTS II, Phase III at Fort Story, Virginia.
2. The intention of this post test report is to highlight significant information gathered through experience during JLOTS II, Phase III. The comments and recommendations contained herein should enhance planning efforts associated with any similar future operation.
3. Reference (b) constituted this organization's Operation Order for JLOTS II, Phase III. Reference (c), which was submitted to the Commander, Amphibious Squadron Four, contained initial post operation observations. In order to eliminate duplication, those observations have not been incorporated herein.
4. In conjunction with Headquarters, FMFLant, 2d LdgSptBn (-)(Rein) supported the demonstration of the Marine Corps Automated Cargo Throughput Documentation System (MACTDS). Reference (d), the final test report for MACTDS, has been promulgated/forwarded by separate correspondence.

ENCLOSURE (2)



Subj: POST TEST REPORT FOR JOINT LOGISTICS OVER-THE-SHORE II,
PHASE III

5. The test report for the operational test (OT-III) of the Rough Terrain Container Handler (RTCH) was promulgated/forwarded by reference (e).

D. F.HERR

Copy to:
COMPHIBRON FOUR



2D LANDING SUPPORT BATTALION (-) (REIN)

POST TEST REPORT JLOTS II, PHASE III



TABLE OF CONTENTS

PART I - ORGANIZATIONAL DATA

- 101 - Task Organization
- 102 - Key Billets and Personnel
- 103 - Force List and Troop List

PART II - CHRONOLOGY

PART III - MISSION AND TRAINING OBJECTIVES

- 301 - Mission
- 302 - Concept of Operations
- 303 - Training Objectives

PART IV - SUMMARY AND LESSONS LEARNED

- 401 - Personnel and Administration
- 402 - Embarkation
- 403 - Transportation
- 404 - Maintenance
- 405 - Material Handling Equipment
- 406 - Engineer Support
- 407 - Operations
- 408 - Landing Support
- 409 - Communications
- 410 - Military Police
- 411 - Supply
- 412 - Medical
- 413 - Dental



PART I

ORGANIZATIONAL DATA

101 - Task Organization

2d LdgSptBn (-)(Rein)
 HQ (-), 2d LdgSptBn

HQSVCCo (-)(Rein), 2d LdgSptBn
 Det, MP Co, HQSVCBn, 2d FSSG
 Det, 8th MTBn
 Det, 8th EngrSptBn
 Det, Rations Co, 2d SupBn

Co B (-)(Rein), 2d LdgSptBn
 Det, MHE/MT Plt, HQSVCCo, 2d LdgSptBn
 1stPlt, B&P Co, 2d LdgSptBn

Det, 2d SupBn
 Det, HQSVCCo, 2d SupBn
 Det, Supply Co, 2d SupBn
 Det, MHE/MT Plt, HQSVCCo, 2d LdgSptBn

Transport Co (-)(Rein), 8th MTBn
 Det, HQSVCCo, 8th MTBn
 Det, Truck Co, 8th MTBn

Det, 2d MedBn
 Det, HQSVCCo, 2d MedBn
 Det, Co A, 2d MedBn

Det, 2d DenBn
 Det, 22d Dental Co, 2d DenBn

Det, 8th EngrSptBn
 Det, 2d Bulk Fuel Co, 8th EngrSptBn

Det, 2d MaintBn
 Det, HQSVCCo, 2d MaintBn
 Det, EngrMaint Co, 2d MaintBn
 Det, MTMaint Co, 2d MaintBn
 Det, GSM Co, 2d MaintBn

102 - Key Billets and Personnel, 2d LdgSptBn (-)(Rein)

Commanding Officer	LtCol D. F. Herr
Executive Officer	Maj G. L. Spring
Sergeant Major	SgtMaj J. A. Vasilko
Administrative Officer	CWO-2 M. L. Ward
Operations Officer	Capt P. W. Pfohl
Logistics Officer	Maj G. C. Cutchall
CO, Co B, 2d LdgSptBn	Capt M. W. Morris
CO, HQSVCCo, 2d LdgSptBn	Capt B. L. Tonnacliff
OIC, MHE/MT Plt, 2d LdgSptBn	Capt D. T. Troublefield
OIC, Comm Plt, 2d LdgSptBn	Capt J. T. Walsh
OIC, Det, 2d SupBn	Capt R. G. Lyell



PART I

OIC, Det, 2d MaintBn
 OIC, Det, 2d MedBn
 OIC, Det, 8th MTBn
 OIC, Det, MP Co, HQSVCBn
 OIC, Det, 8th EngrSptBn

GySgt J. A. Martinez
 Lt J. P. Dohm
 Capt J. B. Murgo
 2ndLt H. J. Miller
 WO-1 K. J. Shusko

103 - Force List and Troop List, 2d LdgSptBn (-)(Rein)

	USMC OFF/ENL	USN OFF/ENL
2d LdgSptBn (-)	11/166	1/4
2d Supply Bn	1/28	0/0
2d Maintenance Bn	0/22	0/0
8th Motor Transport Bn	2/125	0/0
8th Engineer Support Bn	2/54	0/0
8th Communications Bn	0/4	0/0
2d Force Recon Co Det	0/2	0/9
2d Radio Bn	0/1	0/0
HQSVC Bn	1/71	0/0
2d Medical Bn	0/6	1/17
2d Dental Bn	0/0	0/1
2d MarDiv	0/18	0/0
2d MAW	0/8	0/0
4th LdgSptBn	4/0	0/0
TOTALS	21/505	2/31

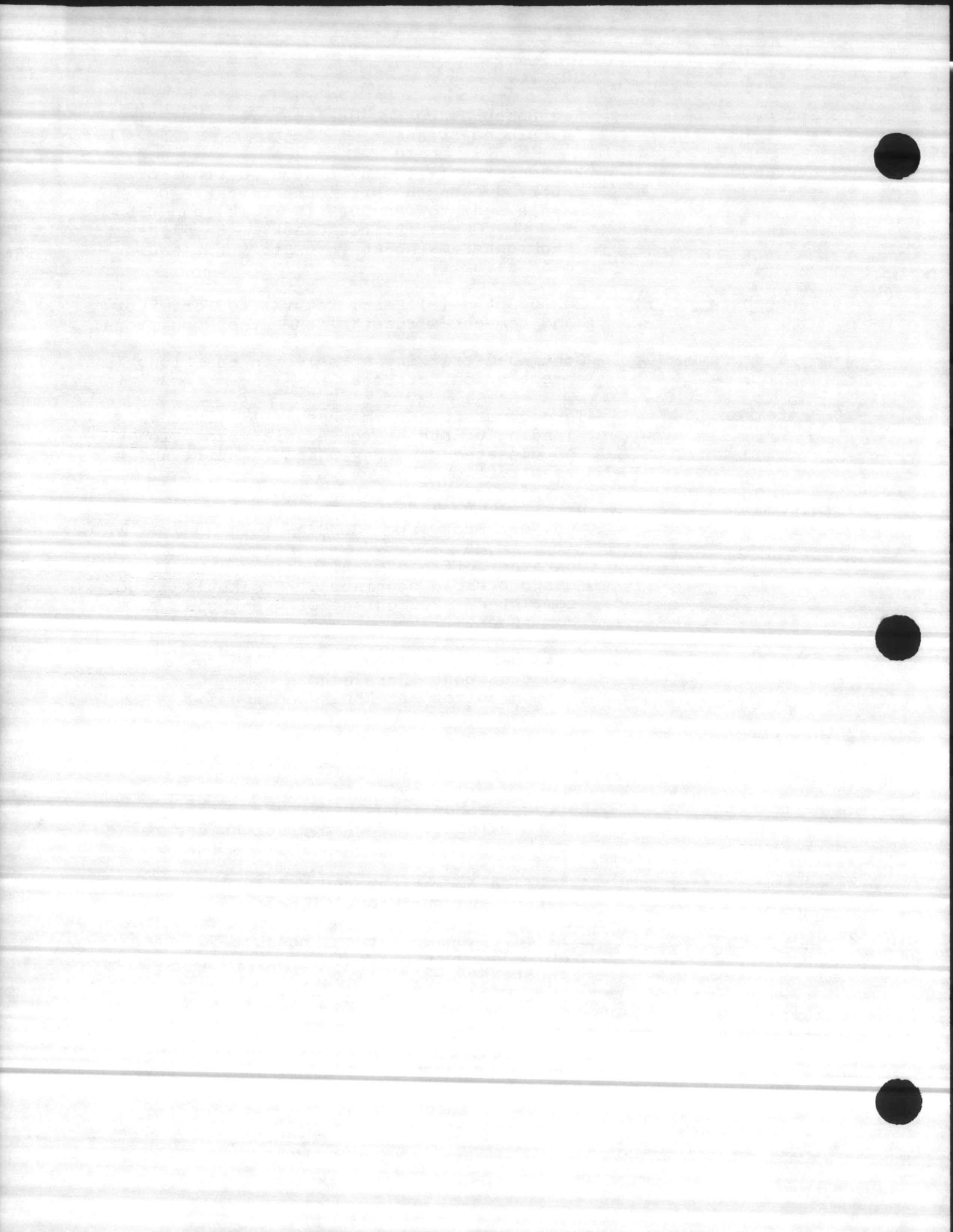


PART II
CHRONOLOGY

<u>DATE</u>	<u>SUBJECT</u>
25 - 26 May	JLOTS II Operations Conference, Fort Story
13 - 14 June	Deployed FASC Conference, Norfolk
21 - 22 June	Initial JLOTS II Admin/Logistics Conference, Little Creek.
21 June	Submitted request for augmentation to 2d FSSG
5 - 6 July	Final JLOTS II Admin/Logistics Conference Little Creek
10 July	Deadline for LACH arrival at CLNC (QTY - 6)
16 - 20 July	LACH operator and mechanic course, CLNC
20 July	Det commanders report to 2d LSB for initial planning brief
29 July - 14 August	RTCH training at Ft. Eustis (1st segment)
6 August	Receipt of JLOTS II, Phase III Field Test Plan
8 - 10 August	Deploy AAFS at 8th EngrSptBn for testing and inspection
10 - 15 August	Join augmented personnel and equipment
15 - 31 August	RTCH training at Ft. Eustis (2nd segment)
22 August	2d LdgSptBn (-)(Rein) OPORD 2-84 issued
22 August	Advance Party and first convoy departs CLNC for Fort Story
4 September	Second convoy departs CLNC for Fort Story
6 September	Main Body, 2d LdgSptBn (-)(Rein) embarks aboard USS RALEIGH (LPD-1) at Morehead City
7 September	Main Body lands across Red Beach, Fort Story
8 - 13 September	Extensive training conducted at Red Beach and the three cargo marshalling yards.



<u>DATE</u>	<u>SUBJECT</u>
13 September	Red Beach evacuated due to threat of Hurricane "Diana"
14 September	2d LdgSptBn (-)(Rein) evacuated from Fort Story due to the hurricane threat. Detachments sent to USS GUAM (Norfolk) and USS LAMOUR COUNTY (Little Creek). Small detachment remains at Fort Story for equipment security.
16 September	2d LdgSptBn (-)(Rein) returns to Fort Story and commences reestablishment of positions.
17 - 19 September	Continued training at selected positions in preparation for test.
20 September	Throughput test commences. All lighterage landing points exercised with exception of elevated causeway which is still under construction.
21 September	Det, Bulk Fuel Co, 8th EngrSptBn transits to Fort Story from CLNC.
23 September	Container offload continues. Breakbulk cargo offload continues. Breakbulk cargo completed. Retrograde of breakbulk commences.
24 September	Container offload continues. Retrograde of selected containers ashore commences. Retrograde of breakbulk continues.
25 September	Elevated causeway begins operation. Container offload from shipping concludes. Retrograde continues.
26 September	Retrograde continues until receipt of storm warning. Beach operations secure at this point.
27 September	All beach operations secured due to severe weather and surf conditions.
28 - 29 September	Limited beach operations conducted. LACH/LCU mode is only feasible method to continue retrograde. Transition plans between Marines and Army are modified.
30 September	Limited transition conducted. U. S. Army takes control of operations ashore. Main Body, 2d LdgSptBn (-)(Rein) departs Fort Story for CLNC. Bulk Fuel Det and support elements remain in position for POL test.



DATE

SUBJECT

2 October

Heavy equipment loaded aboard USS RALEIGH
for transit to CLNC.

3 October

USS RALEIGH arrives Morehead City and
offloads equipment.

7 October

POL test commences. Problems with U. S.
Navy equipment forces conclusion of test.

8 October

Bulk Fuel Det returns to CLNC.



PART III

MISSION AND TRAINING OBJECTIVES

301. Mission. 2d Landing Support Battalion (-)(Rein) supported an administrative landing and provided a CSSE in support of continuous and simultaneous breakbulk and container operations during JLOTS II, Phase III. Additionally, 2d LdgSptBn (-)(Rein) provided those personnel and equipment assets required for accomplishing the following subobjectives:

- a. Test of Rough Terrain Container Handler (RTCH).
- b. Evaluation of Marine Corps Automated Cargo Throughput Documentation System (MACTDS).
- c. Test of one section of the Amphibious Assault Fuel System (AAFS).

302. Concept of Operations. 2d LdgSptBn (-)(Rein) constituted a task organized Combat Service Support Element consisting of a Headquarters and subordinate elements. The advance party of the CSSE deployed overland to Fort Story, Virginia on 22 August 1984. The advance party established the base camp from which the CSSE conducted CSS operations. All billeting, maintenance, messing, supply and command and control facilities were erected by the advance party prior to the arrival of the main body. The remaining elements of the CSSE deployed incrementally to Fort Story, Virginia. The CSSE remained ashore and supported throughput operations during the JLOTS II, Phase III Test. On order, Detachment, Bulk Fuel Company deployed overland to Fort Story, Virginia for operations during the POL Phase of JLOTS II, Phase III. On order, the CSSE began the transfer of command and control of throughput operations to elements of the U. S. Army. On order, the CSSE retrograded incrementally to Camp Lejeune, North Carolina. Upon return to Camp Lejeune, the CSSE prepared attached personnel and equipment for return to respective parent organizations.

303. Objectives

- a. To establish a self-sustained Combat Service Support Element at Fort Story, Virginia in preparation for JLOTS II, Phase III.
- b. To initiate and conduct Rough Terrain Container Handler (RTCH) training at Red Beach and container marshalling areas "X-Ray" and "Yankee".
- c. To initiate and conduct Light Amphibious Container Handler (LACH) training at Red Beach in conjunction with U. S. Navy lighterage availability.
- d. To support and achieve the goals of JLOTS II, Phase III.
- e. To monitor motor transport operations to include usage, traffic flow and access.



f. To support the MACTDS test in conjunction with Fleet Marine Force, Atlantic.

g. To establish and maintain a manual documentation system during the offload and retrograde phases of the test.

h. To establish and operate two container marshalling areas and one breakbulk marshalling area during the test.

i. To provide beach landing support for three LCM-8, two LCU, two barge ferries, one administrative pier, and one elevated causeway landing points during the test.

j. To establish one section of the Amphibious Assault Fuel System (AAFS) and conduct the POL portion of the test.



PART IV

SUMMARY AND LESSONS LEARNED

401. Personnel and Administration

1. Deployment Summary. Several weeks of preparation and planning went into the refinement and submission of a working T/O for JLOTS II, Phase III. Once personnel were attached and assigned to the appropriate work section, the deployment of 2d LdgSptBn (-)(Rein) to Fort Story, Virginia went smoothly. No significant administrative problems were encountered during the deployment.

2. Topic, Discussion and Recommendation

Topic. Manpower management system.

Discussion. With the augmentation of one ADPE-FMF system with a ticker tape punch machine, MMS reporting was accomplished on a daily basis without any significant problems. Unit diary tapes were delivered to the Little Creek communications center for transmission to Camp Lejeune. Processing of the unit diaries was timely and turn around time for UTR's ran between four to seven days.

Recommendation. That the same procedures be followed on subsequent deployments.

Topic. Communications center support.

Discussion. With the exception of the three day period spent aboard Naval ships, all communications requirements were handled through the Little Creek Naval Base Communications Center. No major problems were encountered with the communications center with respect to sending messages, either by utilization of the standard DD Form 173/2 message form or the ticker tape method. Confirmation was received on all occasions on the transmission and receipt of all message traffic.

Recommendation. None.

402. Embarkation

1. Deployment Summary. Planning for embarkation primarily consisted of finalizing the load plan in coordination with the Combat Cargo Officer of the USS RALEIGH (LPD-1). The USS RALEIGH was loaded at Morehead City on 6 September. The ship transited to the Chesapeake Bay area and was offloaded by U. S. Navy lighterage at Fort Story on 7 September.

2. Topic, Discussion and Recommendation

Topic. Dunnage requirements at Morehead City Port Facility.

Discussion. Dunnage requirements at this facility's roll-on/roll-off ramp are excessive.



Recommendation. That a reinforced concrete loading area be built adjacent to the RO/RO ramp to preclude the requirement for excessive dunnage when loading tracked vehicles.

403. Transportation

1. Deployment Summary. Transport Company, 8th Motor Transport Battalion was formed and began preparations for deployment to Fort Story in early August. After an extensive period of vehicle and personnel preparation, the unit departed Camp Lejeune in three increments. On 22 August, the 2d LdgSptBn (-)(Rein) advance party was transported by bus to Fort Story. Transport Company deployed convoys on this date to transport equipment necessary for the establishment of the CSSE operational areas. On 4 September, a second increment moved all remaining equipment that would not be embarked aboard ship. On 6 September, designated motor transport equipment and personnel were embarked aboard the USS RALEIGH. In addition, Transport Company provided support for the many administrative/logistics runs between Camp Lejeune and Fort Story.

2. Statistics. Motor transport usage data 22 August - 9 October:

- a. Total miles: 129,516
- b. Passengers Transported: 16,535
- c. Cargo transported: 14,513 tons.
- d. Diesel Consumption: 32,335 gallons.
- e. MOGAS Consumption: 1563 gallons.

3. Topic, Discussion and Recommendation

Topic. Equipment density.

Discussion. JLOTS II, Phase III evidenced the need for an increased utilization of tractor/trailer assets while decreasing the need for 5-ton cargo/passenger trucks. Based on the experience gained during this test, the following recommendation is made for future operations.

Recommendation. For a similar exercise, motor transport assets should include the following equipment:

40 - Tractor	M931/M818
35 - Trailer/Highbed	M127
5 - Trailer/Lowboy	M870
5 - 5 Ton Cargo Truck	M923/M925
5 - Dolly Converter	M198
1 - 5,000 GAL Refueler Trailer	M970
1 - 2½ Ton 1000 Gal Refueler	M49
1 - 1,000 gal Water Truck	M50
4 - Water Bull	M149



3 - CVCC M1008
1 - Fuel Ferrying Unit
150 - Air Force Cargo Strap
150 - Chains/Binders

Topic. Personnel requirements.

Discussion. Based on operational experience, the motor transport T/O should be manned according to the following recommendation:

Recommendation

1 - MTO/OIC	3502
1 - Ops Officer	3502
1 - Motor Transport Chief	3537
2 - Truck Master	3537
86 - Tractor/Trailer Operators	3533
2 - Dispatchers	3533
4 - Refuel Operators	3534
8 - Heavy Vehicle Operators (5 with dolly converter licenses)	3531

Topic. M127 trailers and compatibility with LACH operations.

Discussion. The use of M127 trailers is an acceptable but less than ideal way to transport containers. When utilizing the M127 for container operations, the container must be loaded well forward on the bed of the trailer to ensure safe operation. This is due to a weak fifth wheel pin which reduces overall weight capacity of the trailer. When a LACH is utilized to load a container aboard an M127 trailer, the lengths of the LACH straddling the trailer prohibits the loading of the container as far forward as is desirable. This situation causes unnecessary stress and strain on the trailer itself. In addition, the majority of trailers used during JLOTS II, Phase III did not have self-locking ISO fittings with hold down pins. This situation made it necessary to use chains and binders to secure the container to the trailer. This process is laborious and time consuming.

Recommendation. Procurement of a number of 40 ft. trailers with self-locking pins, similar to those used by the U. S. Army, would ensure greater efficiency in Marine Corps container handling operations.

Topic. Utilization of the M127 vice the M923 for transport of breakbulk cargo.

Discussion. The M923 5-ton truck was utilized to move breakbulk cargo from the beach to the marshalling areas. Although the M923 is capable of moving such cargo, the onload/offload time is vastly increased when compared to the rate which can be achieved by other vehicles.



Recommendation. Use M127 trailers to transport breakbulk cargo whenever feasible. The onload/offload time is reduced overall when compared to the weight and volume these trailers are able to transport.

404. Maintenance

1. Deployment Summary. The JLOTS II, Phase III maintenance effort was highly successful. A close working relationship between the S-4, Maintenance Management Office, Supply and the Maintenance Detachment provided for a smooth flow of all ERO and MIMMS procedures. Additionally, final post deployment LTI's were scheduled and conducted prior to leaving Fort Story, Virginia.

2. Statistics

a. Utilities. Electrical Support.

- Contact teams required - 3
- Projects completed - 3

NOTE: Contact teams were on call at all times and made an average of three calls per night to restart floodlights.

Materials Utilized:

Romex wiring	3,750 ft.
Size and gauge wire - #8	8,000 ft.
Lamp Holders	150 ea.
Wall Receptacles	80 ea.
Floodlights	15 ea.
Lightbulbs - 60 watt	180 ea.
Electrical tape	33 rolls

Total Manhours: 66

b. Contact Team Support

	<u>Requested</u>	<u>Completed</u>	<u>Equip Evac</u>
Engineer	9	9	0
MT	5	5	0

c. Intermediate Maintenance Support

	<u>ERO's Opened</u>	<u>ERO's Closed</u>
Engineer	65	65
MT	28	28

d. 2d Echelon Maintenance Support

	<u>ERO's Opened</u>	<u>ERO's Closed</u>
Engineer	86	86
MT	62	62



e. Maintenance Support Projects

(1) Materials expended

- Oxygen 1 bottle
- Acetylene 1 bottle
- Angle iron 360 ft.

(2) Construction of engineer stakes

- Total man hours: 16

f. Other Projects

(1) Dining Facility

- Total Man Hours: 18
- No materials expended

(2) Beach Development Lights

- Total Man Hours: 225
- Materials Expended

500 Watt Floodlights	41 ea.
20 ft. (4"x4") Lumber	27 ea.
3 ft. (2"x4") Lumber	27 ea.

g. Major Repairs

(1) MHE

- 1 - 72-31 Torque Converter Seal
- 2 - 72-31 Blower
- 1 - MC-4000 Steering Valve
- 1 - 72-31 ORF Transaction (Engine)
- 1 - RT-6000 Wheel Seal
- 1 - RT-6000 Oil Coolers
- 1 - MC-4000 Oil Coolers
- 3 - RT-6000 Volume Control Valves

(2) MT

- 1 - M-151A2 Engine
- 2 - M-151A2 Clutch Assemblies
- 2 - M-818 Clutch Assemblies
- 1 - M-818 Transmission
- 1 - M-931 Water Pump (warranty replacement)

h. Warranty Repairs on Equipment

- 2 - CUCV Transfer
- 1 - CUCV Starter
- 1 - LACH Alternator



3. Topic, Discussion, and Recommendation

Topic. Lightweight Amphibious Container Handler (LACH).

Discussion. During the operation, several problems were encountered with the LACH. They are as follows:

- a. Several oil sensing devices were damaged by inexperienced operators stepping on them for support.
- b. Not all electrical control boxes aboard the LACH are air tight. This situation allowed the entrance of salt water, thereby corroding and damaging electrical components.
- c. On numerous occasions, bolts vibrated loose during operation.
- d. Hoses are of a rigid construction. The occurrence of twisting motions during operations caused some hose connections to break free.

Recommendations

- a. Steel plates could be installed to protect the devices and allow for ease of maintenance.
- b. All control boxes should be made air tight to prevent any further occurrence of damage.
- c. Place safety wire on lock nuts to prevent loosening due to vibration.
- d. Flexible hoses should be considered as replacements for those of rigid construction.

Topic. Maintenance Detachment organization.

Discussion. Consolidation of 2nd and 3rd echelon maintenance prior to and during the operation worked very well. Contact team maintenance in the Beach Support Area was very effective. Overall, the maintenance mission was a success due to the cooperation of all detachments in 2d LdgSptBn (-)(Rein). Maintenance Detachment was able to maintain an overall readiness rate of 98.4%.

Recommendation. None.

405. Material Handling Equipment

1. Deployment Summary. Preparation prior to deployment for the MHE Detachment was extensive. Personnel of various backgrounds and experience were molded into a cohesive team. Each individual Marine knew his assignment and the capabilities of his assigned equipment. The related maintenance effort started early and was continuous throughout the term of the operation. Training consisted primarily of gaining experience and preparing for the goals of the operation. This included the testing of all equipment, proper licensing of all personnel and preventive maintenance



training. JLOTS II, Phase III presented unique problems to MHE due to the anticipation of 24 hour per day operations. Personnel were split into two shifts. The anticipated tempo of operations significantly increased the amount of equipment needed to support the exercise. The predeployment effort proved invaluable and, as a result, the detachment deployed with few personnel shortages and no equipment shortages. Upon embarkation, the MHE Detachment began final planning and organization for operations at Fort Story, Virginia. Debarkation of MHE assets onto Red Beach was completed in 8 hours on 7 September. MHE assets were then moved to marshaling area X-Ray and staged in preparation for salt water checks due to the wet landing at Red Beach. Operators and mechanics performed this maintenance within two days. Once this was accomplished, assets were moved to pre-designated areas of operations. Operators began real lift training and rehearsals with their assigned equipment on D + 3 (10 September) and continued this training until the commencement of the test. The MHE and Maintenance Detachments were colocated. This situation allowed for a decreased response time and provided for smooth MHE operations.

2. Statistics

a. Class III (W) Usage Status

1. POL/Lubes

<u>ITEM</u>	<u>QUANTITY</u>	<u>U/I</u>
10 wt.	360	gal
30 wt.	497	gal
90 wt.	207	gal
GAA	30	gal

(2) Diesel Fuel. 28,536 gallons.

b. Operational Data

<u>NOMENCLATURE</u>	<u>NO. OF ITEMS</u>	<u>TOTAL HOURS</u>
72-31	9	1015
MC-4000	7	285
RT-6000	6	321
DROTT Crane	4	29
D7G	6	100
Road Grader	1	2
LACH	6	73
RTCH	8	323
A265 Floodlights	9	1005
MEP 005A	5	1632
MEP 003A	1	500



c. Repair Parts Usage Data

<u>ITEM</u>	<u>QUANTITY</u>	<u>U/I</u>
Tires	110	ea
Batteries	25	ea
Lights	20	ea
Hydraulic Hose	200	ft

3. Topic, Discussion and Recommendation

Topic. T/O for JLOTS II, Phase III.

Discussion. The tempo of operations demanded a greater need for MOS 1345 personnel. Some qualified MOS 3051 personnel were utilized to operate forklifts, however, their experience was limited so their overall usage in particularly hazardous situations was very limited. As a result, great dependence was placed on the MOS 1345 personnel and they performed admirably during their long and hard hours of work.

Recommendation. When utilizing material handling equipment for long periods of time, it is necessary to provide enough MOS 1345 personnel to allow equipment operation without unnecessary stress and fatigue on the operators. It is important that operators be rested and alert especially if they are to operate equipment 8 - 12 hours per day under demanding situations.

Topic. Electrical problems with equipment.

Discussion. Due to operations in and around salt water, resulting corrosion created electrical malfunctions. This corrosion affected a large portion of the gear which created a heavy usage and replacement demand for alternators, lights, and wiring harnesses.

Recommendation. Procure and apply silicone sealing to corrosion prone parts of equipment intended for use in or around salt water.

406. Engineer Support

1. Deployment Summary. This provision requirement was satisfied by a Bulk Fuel Detachment from 8th Engineer Support Battalion. Commencing with its attachment to 2d LdgSptBn (-)(Rein), the Bulk Fuel Detachment planned and prepared for its involvement in the test. Nine 20,000 gallon collapsible tanks were purged and filled with approximately 5,000 gallons of fresh water to rid them of any remnant fuel and to check for serviceability. All hoses were pressure checked, SL-3 components were maintenance checked, main pumps identified and tested and all equipment was staged for movement to Fort Story, Virginia. The detachment departed Camp Lejeune on the morning of 21 September. Personnel were transported by commercial bus, and equipment by military tractor-trailer convoy. On 22 September installation of the system (1 section of the Amphibious Assault Fuel System) commenced. By mid-day on 23 September the system was in place, ready for operation complete with necessary berming. Due to adverse weather conditions and an

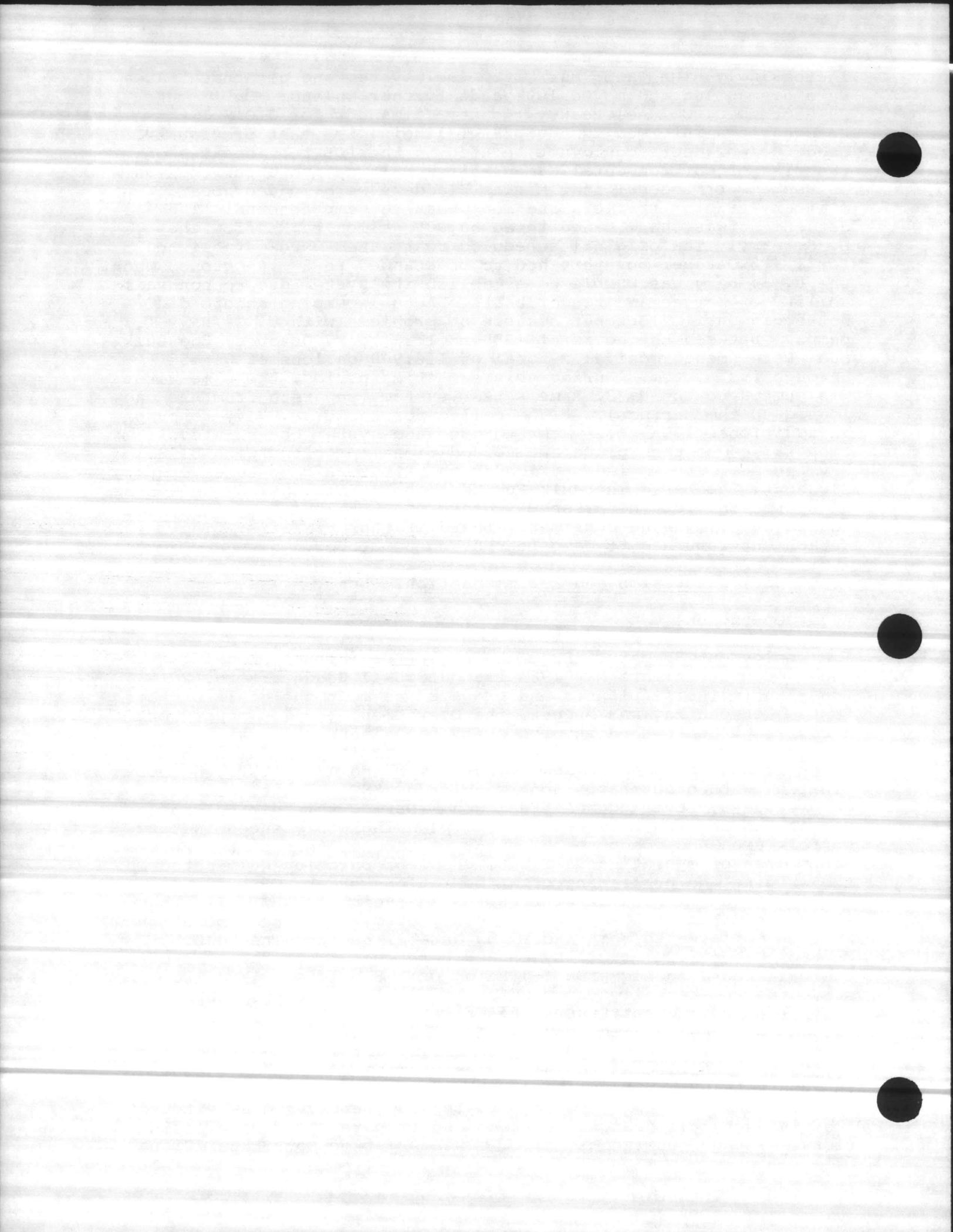


increasingly high water mark, the fuel system and detachment area were dismantled and moved 100 yards further inland. On 29 September, Colonel Beakey, Deputy Commander for JLOTS II Headquarters informed 2d LdgSptBn (-)(Rein) S-4 that previously used fuel bladders could not be used in the POL test because of the risk of environmental damages if a malfunction occurred. On 30 September, the original Marine bladders were loaded aboard military tractor-trailers and sent back to Camp Lejeune. The detachment was then loaned three 50,000 gallon tanks from the U. S. Army. The original scheduled test dates were established for 1 - 3 October but this had to be changed to 3 - 6 October when the U. S. Navy was unable to establish its system due to nonavailability of barges and tender boats. Actual pumping ashore did not begin until 7 October because of problems with U. S. Navy pumps. Between the hours of 1258 to 1738, on 7 October, the Bulk Fuel Detachment received a total of 110,900 gallons of water through its system. During this same time period, the same water was pumped to the U. S. Army's test system (separate from the one loaned to the Marines). Plans called for the U. S. Navy to pump an additional 100K + of water through the system but this evolution failed to take place due to additional problems with U. S. Navy pumps. The Marine portion of the POL test came to an end at 2400 on 7 October. The Bulk Fuel detachment dismantled their area of operation, returned respective equipment to the U. S. Army and loaded its remaining equipment aboard tractor-trailers. The detachment returned to Camp Lejeune on 8 October.

2. Topic, Discussion and Recommendation. None.

407. Operations

1. Deployment Summary. From the outset of initial planning guidance received in late May 1984 from JLOTS II Headquarters, 2d LdgSptBn (-)(Rein) planned and prepared to meet the goals of the test. Between May and August, the Operations section mapped out a course of action and studied every detail and alternative to achieve success. Early and demanding emphasis was placed on the establishment of a solid and workable T/O and T/E. Through coordination with other battalions within 2d FSSG, the requirements were studied, reviewed and finalized. During this period, the Operations Section attended several planning conferences in the Norfolk area and conducted a number of reconnoiters to the Fort Story area of operations. Planning and preparation culminated in the writing and publishing of an operations order, OPORD 2-84, outlining the mission of 2d LdgSptBn (-)(Rein) in JLOTS II, Phase III. On 22 August 1984, advance party elements of the Operations Section deployed to Fort Story and established the Throughput Control Group (TCG) facility on Red Beach before the arrival of the main body, 2d LdgSptBn (-)(Rein) on 7 September. The TCG served as the battalion command and control/operations center during the throughput test. This facility was the focal point for decision making and operational conduct of USMC forces. It housed communications capabilities sufficient in scope to contact any Marine position at Fort Story as well as COMPHIBRON-4 aboard the USS RALEIGH and Naval Beach Group Headquarters ashore at Red Beach. Commencing on 8 September, the TCG supervised an extensive training schedule designed to test and prepare all Marine positions for the upcoming exercise. The threat of Hurricane "Diana"



forced the evacuation of the beach on 13 September and the subsequent evacuation of Marine personnel from Fort Story to amphibious shipping on 14 September. Returning to the area on 16 September, all positions were reestablished and training continued. With all positions manned and ready, throughput operations commenced on the morning of 20 September. The TCG served as a coordination center between the Beach Support Area and the three marshalling yards. Additionally, the TCG conducted continuous liaison with Navy Beach Group concerning U. S. Navy lighterage operations and informed subordinate units of operational plans and changes. The Operations Section established and maintained a manual documentation system to track the flow of containers and cargo across the beach destined for the three marshalling yards. Throughput operations were conducted until 30 September when a modified transition phase resulted in U. S. Army assuming control of operations ashore. At that point, the TCG was dismantled and the Operations section returned to Camp Lejeune with the main body that same day.

2. Statistics

a. Daily Container Throughput Rates

0600 20 Sep - 0600 21 Sep	189
0700 21 Sep - 0600 22 Sep	150
0600 22 Sep - 0600 23 Sep	175
0600 23 Sep - 0600 24 Sep	258
0600 24 Sep - 1830 24 Sep	<u>154</u>
TOTAL =	926

b. Average Daily Rate of Container Throughput

205.8 containers per day.

c. Pallet Throughput Rate

0600 20 Sep - 1820 23 Sep	1919
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d. Average Daily Rate of Pallet Throughput

548.3 pallets per day

NOTE: Due to the destruction of many pallets before their arrival ashore, the above figures for throughput rates are lower than actual. Only pallets positively identified and marshalled have been tallied.

e. Average Offload Time Utilizing RTCH/Barge Ferry Combination

8.5 minutes per container

f. Average Offload Time Utilizing LACH/LCU Combination

15 minutes per container

3. Topic, Discussion and Recommendation



Topic. RTCH operations.

Discussion. The RTCH was utilized as the primary container handler during this operation. It proved to be quick and efficient. When coupled with barge ferry operations, the RTCH offers the most dependable and economical means of offloading large numbers of containers.

Recommendation. The RTCH should be placed within the Table of Equipment for a Landing Support Battalion. Its flexibility as both a container handler and heavy forklift would enhance the supporting role of landing support operations.

Topic. LACH operations.

Discussion. Use of the LACH is limited to the offload/onload of landing craft and longitudinally loaded barge ferries. Its main disadvantage is its rather slow performance. However, when used in conjunction with LCU operations, it is the most reliable form of container handling during increased sea states. As experienced during JLOTS II, Phase III, the LACH/LCU combination was the only viable mode to continue the retrograde of containers during a sea state III condition.

Recommendation. Procurement of the LACH in limited quantities is encouraged based on this unit's experience. Despite its slow performance, it can serve as a contingency container handler during "real world" situations when other container handlers become inoperable.

Topic. Manual documentation system.

Discussion. 2d LdgSptBn (-)(Rein) successfully operated a manual documentation system during this exercise. The information flow was conducted as follows:

a. A beach checker recorded on a three part chit the identification numbers of container/pallets being loaded aboard a vehicle. He also recorded time of offload from the landing craft, time loaded aboard the vehicle and vehicle number.

b. The three part chit was then given to the operator of the vehicle who then moved his vehicle to a designated position.

c. At this position, another beach checker received the three part chit from the driver and verified the information.

d. Once verified, the beach checker pulled the third part of the document and returned the two remaining parts to the driver.

e. The driver departed with the cargo and transited to a cargo marshalling area as directed.

f. Meanwhile, the beach checker delivered the third part document to a Traffic Management Clerk (TMC) located in his vicinity.



g. The TMC recorded the data in a master log.

h. When the respective vehicle reached a cargo marshalling area, the remaining two parts of the document were turned over to a clerk who immediately supervised the offload of the truck and positioned the cargo within the marshalling area.

i. Once this had been accomplished, the clerk recorded the location (row, spot and tier) on the two document parts.

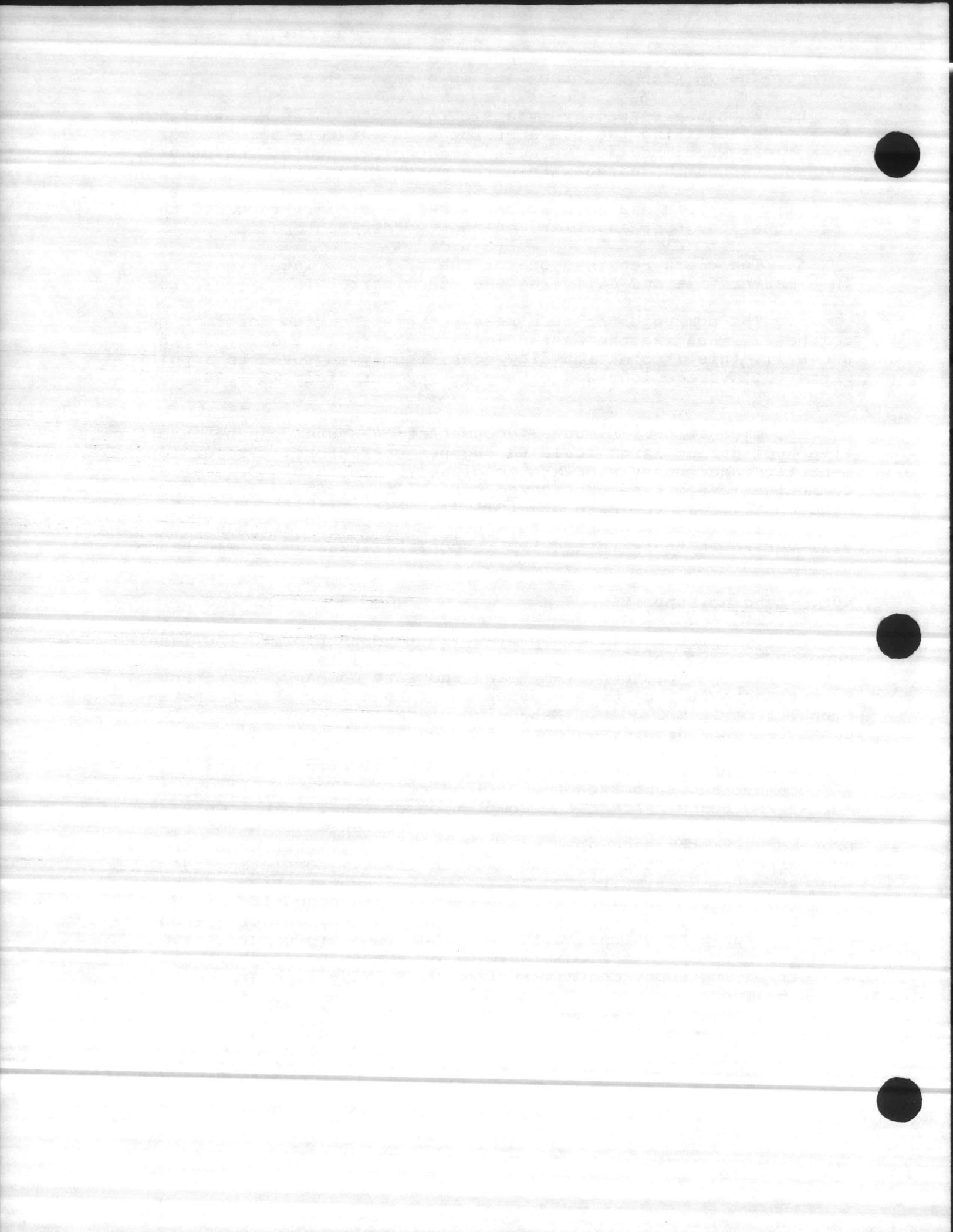
j. The clerk retained one of the parts for later insertion in a master file and delivered the other part to a communicator.

k. The communicator then relayed this location information to the TMC managing the master log and the cycle ended. During JLOTS II, this information flow consistently improved to a point where the average loop was closed in approximately 15 - 20 minutes.

Recommendation. A manual documentation system can be an effective tool during large scale throughput operations. Proper implementation and supervision are absolutely necessary. Dedicated communications between the cargo marshalling areas and the TMC is a necessity. In the case of JLOTS II, Phase III, wire was the primary and radio was the alternate. Ensure that all hands are well versed in their respective responsibilities. Legible handwriting is a must.

408. Landing Support

1. Deployment Summary. Company B, 2d LdgSptBn formed the landing support nucleus for 2d LdgSptBn (-)(Rein). This company was augmented with one platoon from Beach and Port Company, 2d LdgSptBn. Representatives from Co B conducted a reconnoiter of the operational area in mid-July. Extensive planning and preparation was conducted throughout the month of August. Embarking with the main body aboard the USS RALEIGH on 6 September 1984, Co B landed at Fort Story on the first wave of the administrative landing on 7 September and supported the offload of 2d LdgSptBn (-)(Rein) across Red Beach. After the completion of the landing, Co B established a company command post and initiated a series of improvements to the sand grid/mobility matting circuit which the U. S. Army established in late August for the test. Completing the improvements, Co B initiated and supported an extensive training evolution in conjunction with the overall training plan of 2d LdgSptBn (-)(Rein). Specifically, this plan called for a step-by-step dry run through the entire plan for the throughput test. LACH and RTCH operator teams were given extensive practice loading and offloading empty containers from U. S. Navy lighterage and motor transport assets. Communications were tested. The entire throughput scenario was tested and practiced until all hands were familiar with the plan for operations. On 20 September, actual throughput operations commenced and Co B was well established to provide landing support for nine beach offload points. All points



were exercised with the exception of the elevated causeway, which was not ready for operation until 25 September. Co B supported the throughput test at Red Beach until the U. S. Army assumed control on 30 September. Co B retrograded to CLNC the same day.

2. Topic, Discussion and Recommendation

Topic. Sand grid.

Discussion. Sand grid is a matrix roadbed surface established with the use of asphalt, gravel or sand. During the operation, the sand grid held up well despite the wear and tear of continuous use. However, when vehicles rolled over the edge of a grid surface, this tended to weaken the overall strength of that section. Such occurrences, if continued in the same general area, caused an accordion effect which transmitted damage to the center of the track in that particular area.

Recommendation. Mark the edges of the sand grid distinctly to keep MT operators away from the edges. This is especially important for night operations. Additionally, in areas where it is necessary for vehicles to transit over the edge of sand grid, overlap the edge with mobility matting and secure properly. This will reduce the maintenance effort required for sand grid upkeep.

Topic. LACH operations and grade of the beach.

Discussion. For LACH/LCU operations, the grade of the beach should not be more than 10 degrees. The LACH requires a more level surface for timely loading and offloading of containers to and from LCU's. It will operate under varying slopes, however, this point is raised to increase efficiency.

Recommendation. Graders/dozers should be utilized as much as possible to level LACH offload/load landing points on the beach. This will make the transition on and off the LCU less difficult.

Topic. Work area on the beach.

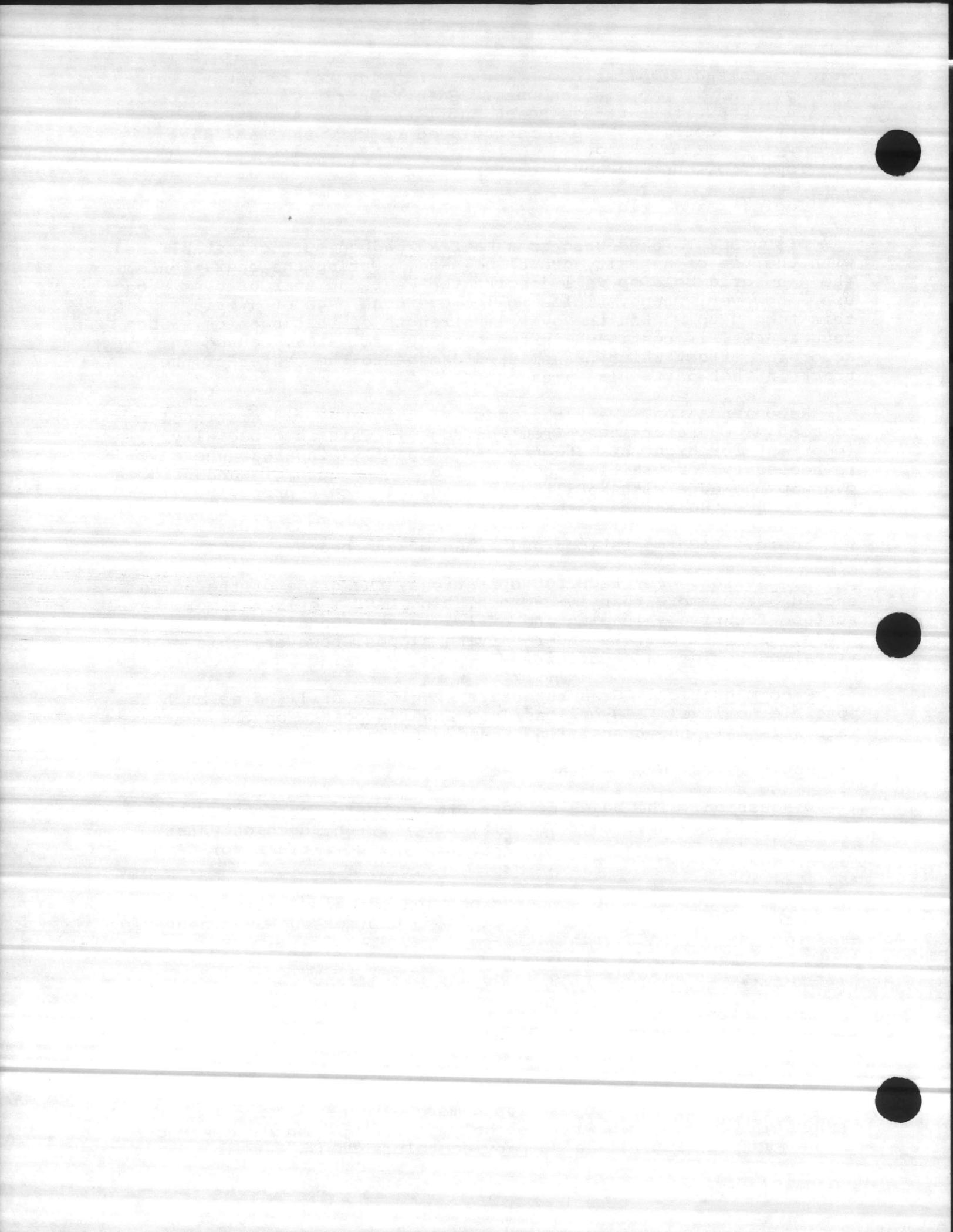
Discussion. The beach at Fort Story was too narrow for the LACH and RTCH to operate. The distance between the high water mark and the truck circuit was especially insufficient for LACH operations.

Recommendation. The distance between the high water mark and the track should be at least 75 yards to provide enough maneuvering area for the D7G/LACH combination.

Topic. Mobility matting usage and performance.

Discussion. Overall performance of the momat was satisfactory. However, a major problem experienced was that of having to constantly resecure various sections.

Recommendation. The momat surface is satisfactory. However, efforts should be made to develop a more permanent and reliable anchoring system. This will not only prevent premature destruction of the surface, but will also provide tolerance for heavier loads.



409. Communications

1. Deployment Summary. Initial planning guidance was received in early July and immediate planning preparations were begun, to include: reconnoiter of Fort Story, liaison visits with joint service counterparts, development of operational concepts and determination of optimum T/O and T/E. Prior to the departure of the advance party which included the communications officer, all inter-service agreements and/or working relationships were solidified: U. S. Army to provide base telephone access at various locations throughout the operating area; communication center support at NTCC, Little Creek; U. S. Navy to provide VINSON key-list for forces ashore. Shortages of T/O personnel and T/E equipment were filled from other units within 2d FSSG. On 22 August, the advance party departed to Fort Story and activated radio communications. The communications platoon assisted in the construction of the base camp and completed a site survey of telephone support provided by the Army. Prior to the arrival of the main body, all commercial and tactical telephone systems were operational and NTCC, Little Creek was providing a conduit to both send and receive hard copy message traffic. At this time, the communications network was totally operational and combat essential equipment readiness was 100%. The arrival of the main body identified minor changes and/or additions to the communications network. They were considered "routine" and were easily incorporated into the operational concept. However, a major change developed when it became necessary to dismantle the base camp and retrograde to amphibious shipping to avoid a hurricane. Emergency radio communications were established to support the retrograde. The wire system was deactivated but not dismantled. Upon return to Fort Story, the tactical wire system was returned to service with minimum delay. As the unit entered the operational phase of the exercise, the communications system was 98% operational with equipment readiness at 97%. Throughout the remainder of the operation, the system was continuously upgraded and refined. The anticipated transition to Army control was dramatically curtailed due to inclement weather and, therefore, communications to support the transition were not realistically tested. At the conclusion of JLOTS II, Phase III, the communications network was operationally checked, cleaned and returned to CLNC.

2. Topic, Discussion and Recommendation

Topic. Coordination during planning phase.

Discussion. At no point was a "senior" communicator designated. The result was less than complete coordination on such matters as: use of call signs; frequency assignments; use of crypto systems; and utilization of available telephone resources. Although all these minor problems were resolved on site, future planners should address them early on.

Recommendation. Include communication officer participation at JLOTS Test Directorate level.

Topic. Extensive use of field wire.



Discussion. Although original estimates identified the need for approximately 20 miles of field telephone wire, in excess of 50 miles were installed. This was due to the ever-increasing requirement for telephone service. While it was easily within our means to provide the extended service, it may be worth installing 26 pair assault cable between the beach and the base camp in the future.

Recommendation. Be prepared for maximum use of telephone assets and insist on requests for telephone service from all possible players.

410. Military Police

1. Deployment Summary. The Military Police Detachment was formed in early August. Predeployment activities included reconnaissance of the area of operations at Fort Story, Virginia to solidify requirements for traffic control. Additionally, liaison was made with the Fort Story Provost Marshal to determine and outline law enforcement duties. A small number of Military Police departed with the advance party on 22 August from Camp Lejeune and served as convoy escorts. The same was done with the 4 September convoy. The majority of Military Police and detachment equipment was embarked aboard the USS RALEIGH and arrived at Fort Story on 7 September. The largest commitment of Military Police resources went to the establishment and maintenance of an orderly and safe traffic control circuit during the exercise. Seven traffic control points were manned 24 hours a day at various locations extending from the beach area to the three container/cargo marshalling yards. Additionally, one mobile roving patrol was maintained to respond to emergencies. Fort Story imposed some additional duties on the Military Police Detachment and these were met with little difficulty or interference to the operational needs of 2d LdgSptBn (-)(Rein).

2. Topic, Discussion and Recommendations

Topic. Use of PRC-68 radio.

Discussion. The PRC-68 radio is not well suited for the Military Police mission. It's awkward size causes problems in handling when both hands are required to perform the mission (i. e., Traffic Control). It's low volume level forces the operator to hold the radio to his ear for reception, tying up at least one of his hands. The batteries required to power the PRC-68 pose additional problems. They are not rechargeable and, in an emergency, cannot be obtained through commercial sources.

Recommendation. That commercial hand-held radios capable of operating in the UHF (400 MHZ) region or mid VHF (140 MHZ) region be procured to support the Military Police mission.

411. Supply

1. Deployment Summary. The Supply Detachment from 2d Supply Battalion was formed for deployment to Fort Story in early August. Representatives toured the operational area at that time in order



to prepare for its dual mission of operating the three container/cargo marshalling yards as well as maintaining and operating the Class IX supply block. The bulk of Supply Detachment deployed to Fort Story with the motor transport convoy of 4 September. The remainder of personnel and equipment were transported via the USS RALEIGH on 7 September. Immediately upon arrival, Supply Detachment established use points and prepared the layout of each of the three container marshalling yards. Supply Detachment was augmented with appropriate material handling equipment and operators as well as lashing/unlashing teams for use during the throughput exercise. Additionally, four officers were assigned to the detachment to provide for shift changes and more direct supervision in each of the marshalling yards. Upon arrival at Fort Story, Supply Detachment was equipped with 92% of the items annotated on the support generator package. During the operation, two tractor-trailer loads of Class IX were received. Additionally, numerous walk-thru requests were filled by the administrative/logistics trips to Camp Lejeune.

2. Statistics. Information gathered from 15 August to 15 October 1984:

Demands, RO		1040
Demands, NRO		209
Fills, RO	961	
Fills, NRO	167	
Backorders	275	
Backorders Received	223	
Backorders Pending	N/A	
Total Demands	1249	
Total Folls	1128	
RO Fill Rate	92.4%	
NRO Fill Rate	79.9%	
Total Fill Rate	90.3%	

3. Topic, Discussion and Recommendation

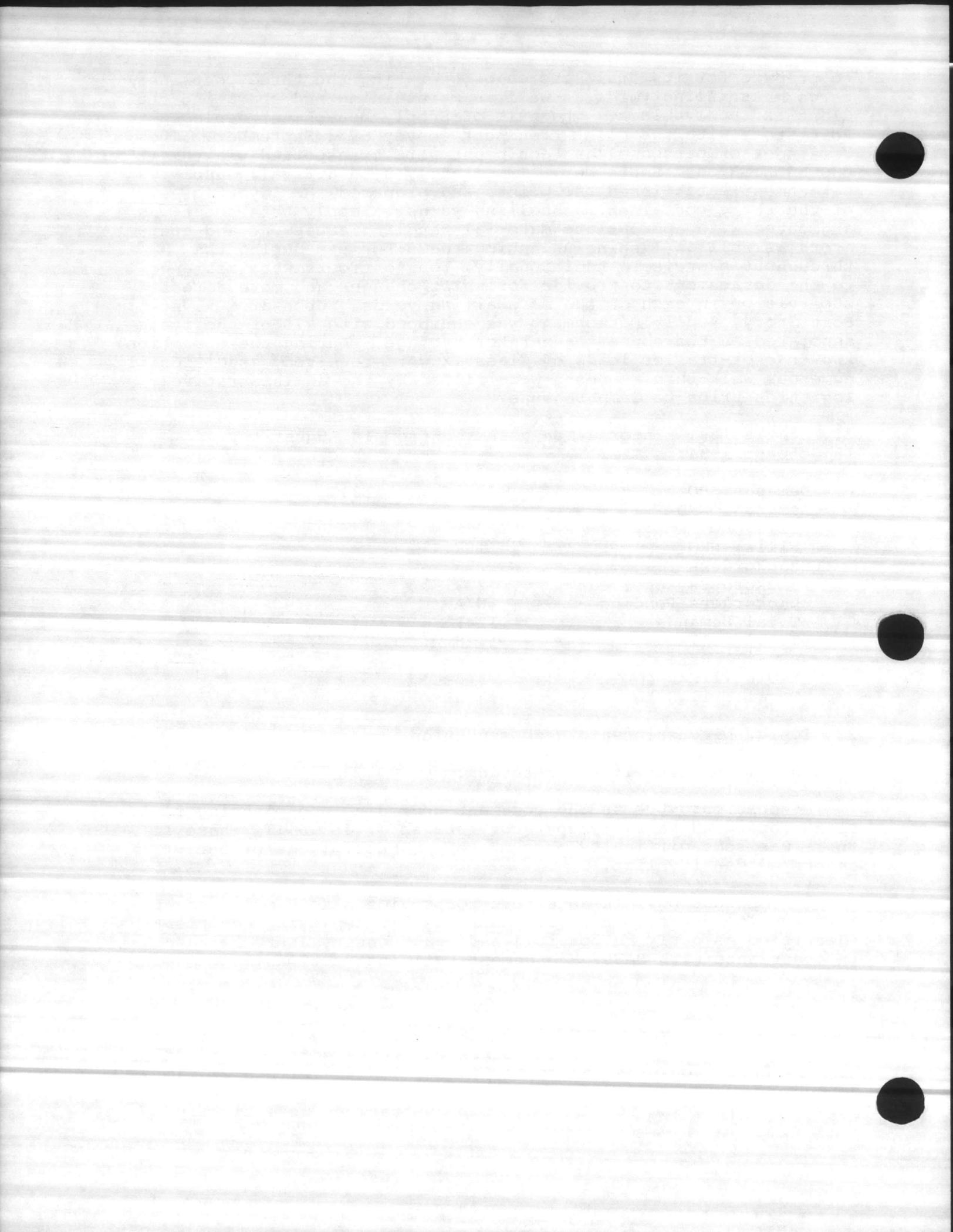
Topic. Density list annotation.

Discussion. Due to the constant upgrading and planning revisions conducted in the preparatory stages of JLOTS II, Phase III, there was some difficulty encountered in receiving a properly annotated density list.

Recommendation. In an effort to provide more timely and effective supply support, it is recommended that deploying equipment be identified as early as possible and that density lists be annotated in accordance with SASSY Management Unit instructions.

412. Medical

1. Deployment Summary. Medical preparation began in earnest in mid-July. Subsequent to the identification of deficiencies, 2d Medical Battalion provided 2d LdgSptBn (-)(Rein) with a 24 man detachment which included a medical officer, medical chief and a preventive medicine technician. Representatives were closely



involved in the planning stages. On or about 3 August, the detachment initiated requests to obtain additional supplies. By 13 August all augmented medical personnel had reported to 2d LdgSptBn (-)(Rein) and the detachment began to conduct training classes for other detachments within the command. On 22 August a small element of the medical detachment deployed overland to Fort Story with the advance party and established a Battalion Aid Station in the vicinity of the billeting area. Preventive medicine operations were also conducted to include insect control and police of operational areas. The remainder of medical detachment deployed aboard the USS RALEIGH and arrived at Fort Story on 7 September. In addition to maintaining the BAS, medical detachment was tasked with providing on-site medical coverage at Red Beach and the three cargo marshalling areas at various times throughout the test. After completion of the exercise on 30 September, medical detachment retrograded incrementally with 2d LdgSptBn (-)(Rein) to Camp Lejeune. Some corpsmen remained with the Bulk Fuel Detachment for the POL test and returned to CLNC on 8 October.

2. Topic, Discussion and Recommendation

Topic. Medical support from existing military medical facilities.

Discussion. Medical care beyond the capabilities of the BAS was limited especially after hours and on weekends.

Recommendation. Initiate liaison with military medical facilities in proximity to the area of operations. Pinpoint deficiencies and work out a viable course of action to solve them.

413. Dental

1. Deployment Summary. During the early planning stages, very close scrutiny was given to dental care and availability to 2d LdgSptBn (-)(Rein) while at Fort Story. Initial preparations included a fully staffed dental unit as part of the unit. However, liaison with the USS RALEIGH and JLOTS II Headquarters indicated that a full blown dental unit would not be necessary due to the close proximity of dental facilities in the area. As a result of this planning, the USS RALEIGH agreed to provide dental care to members of 2d LdgSptBn (-)(Rein) during the entire operation. 2d LdgSptBn (-)(Rein) provided one dental technician MOS 8707 to the USS RALEIGH to assist the ship's dental officer. No dental emergencies arose among 2d LdgSptBn (-)(Rein) during the entire operation. Furthermore, due to the small time frame of the exercise, routine dental care was minimal. Marines and sailors of this unit had been screened for dental Class I status prior to departure from CLNC. Nothing significant concerning dental took place during this operation.

2. Topic, Discussion and Recommendation. None.

