The CH-53E and Container Offload

by Maj Charles A. Dallachie

Marines must be prepared to maintain the flow of critical supplies ashore even in adverse conditions. CH-53Es can help if we recognize the need and prepare for the task.

Recently, while attending the Ninth Amphibious Warfare Conference at Coronado, CA, I heard once again that the offload of containers from maritime preposition ships (MPS) was halted because of the onset of sea state condition three. This time it was Exercise TANDEM THRUST 92. Last year it was DISPLAY DETERMINATION 91. Unfortunately the needs of our forces ashore for supplies and equipment do not decrease as sea state conditions increase. What are we doing about addressing the need to continue the offload of containers in sea state condition three? Why not look at the CH-53E?

Today's Marine expeditionary force (MEF) requires massive tonnage to sustain it. The assault follow-on echelon (AFOE) is designated to bring most of the supplies required to sustain a MEF for an extended period of time. Today's planning envisions lifting the AFOE to the amphibious objective area via commercial containership. The number of 8x8x20-foot containers, shelters, or their equivalent to support a MEF is about 6,000. Placed side by side and end to end, these containers would take up a space greater than 14 football fields, or about 22 acres.

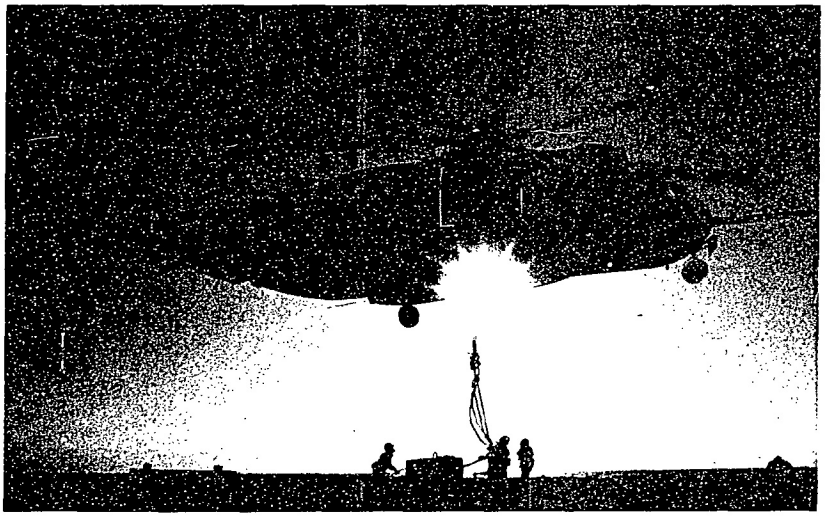
Several articles have appeared in various military journals over the past few years about the need to develop systems whereby we can transport these containers ashore, segregate them, quickly identify their contents, and get the equipment in them to Marines fighting forward. With advances in the container/equipment handling arena, we are heading in the right direction. Suppose, however, an urgent need arose to get a container to a unit or location and undeveloped road nets and poor terrain precluded surface transportation? The CH-53E was designed for just such a heavy-lift mission.

Nearly ideal sea state conditions are required to transfer containers over the shore and achieve effective throughput of supplies and equipment. Joint logistics over the shore (JLOTS) tests have clearly demonstrated that we really have no container offloading capability available for employment during sea state three or above. Actually, in tests run by the Department of Defense and the U.S. Navy, container offloading over the shore and transfers at sea indicate sea state three or higher negates effective offloading. Even sea state one inhibits maximizing container throughput. The DISPLAY DETERMINATION 91 Test Report (JLOTS III March 1992) stresses the need for the Services to readdress sea state three operational requirements because during the exercise operations were halted several times by the onset of sea state three. We need a fallback position because high sea state occurs all too often.

OFFSHORE DISCHARGE OF CONTAINERSHIP II (OSDOC II) was an exercise conducted at Fort Story, VA, in 1972. The Marine Corps CH-53D helicopter was evaluated in its capability to offload containers from a ship and transport them ashore. The containership was moored about a mile off Cape Henry. Wave height was 2½ feet and wind varied between 15 and 20 knots. Average time to hover, hook up, and clear the area was 1⅓ minutes. Average time to transit the 1¼ miles to the helicopter landing zone was 1½ minutes. The average time to hover and release the load was 45 seconds. At that rate, a couple of CH-53Es could put ashore almost 35 containers per hour. Working in tandem, two sections of CH-53Es could easily, in 8 hours, put ashore the 300 containers per day goal established by the Navy in just 8 hours. OSDOC II concluded that helicopters can be used to transport containers from ship-to-shore. Unfortunately, I can find no evidence it has been done since.

The CH-53E was designed for heavy lift. Let's put it to work. The 15 to 20 knot winds associated with sea state condition three do not significantly hamper the CH-53E in offloading containers. Whether it is containers from MPS to sustain Marines in battle or containers from a containership of the AFOE, the CH-53E could deliver the container to the beach or directly to the unit. The empty containers could then be collected up after the beach is secured.

There are no serious technology obstacles to offloading containers with helicopters. There are, however, some configuration and engineering problems that can be solved with a reasonable commitment of funding and effort.



The opening and closing of hatch covers on non-self-sustaining containerships at sea will require some type of portable device that will be able to be lifted on board to accomplish this task. A winching device to harness the lifting power of the heavy lift helo might suffice.

A second engineering problem is the design of a high-speed winch and spreader bar combination that will allow the helicopter to hover over a ship's hold and reach deep into the hold to pull up a container. Perhaps a portable deck device like the hatch cover movement device could be designed.

We currently have the capability to position containers for helicopter lift when the containership is moored to a crane ship (T-AC5). These portable deck devices would allow containerships to be offloaded by helicopters while underway, thus providing operational flexibility.

Of the maritime prepositioning force ships, only the *Waterman* class would allow helicopter lift of containers underway. The gantry style crane on the *Waterman* ships can position any container at any desired spot for pickup and then move out of the way during helicopter pickup. The fixed-base cranes on the Amsea and Maersk prepositioning ships prohibit lifting anything from these ships by helicopter.

Granted, the lifting of containers from ships by helicopter is not without its operational and engineering challenges but the hardware and techniques already exists. It was done in 1972. We need to break out the manuals and start training our CH-53E and landing support Marines. We cannot allow ourselves to be held hostage to sea state condition three. USMC

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Intelligence and Logistics, A Vital MAGTF Mixture

by LtCol Mary V. Jacocks

You can't 'fight smart' without intelligence—and that applies (two ways) to combat service support elements as much as it does to combat arms.

The formation of force service support groups (FSSGs) in 1976 represented a major change in Marine Corps structure. As these organizations have matured, organizational and doctrinal refinements have properly focused on combat service support. Unfortunately, the specific mission requirements for the FSSG G-2 section have yet to be adequately defined. The new *FMFM 3-21, MAGTF Intelligence Operations* outlines for the first time in a doctrinal publication some of the intelligence requirements of an FSSG; however, it offers just a beginning. Basically, our Marine Corps doctrine and, likewise, our schools continue to concentrate on intelligence support for the ground and aviation combat elements. It should therefore be of no surprise that the intelligence effort of the Marine air-ground task force (MAGTF) is often directed primarily to support of those same elements. Though the combat service support element (CSSE) is an integral part of the MAGTF, its intelligence requirements are seldom sufficiently emphasized by the MAGTF command element (CE).

I think any commander would agree that without the provision of critical combat service support (CSS), the battle would swiftly grind to a halt. A CSSE has combat and logistical intelligence requirements that are essential to its operation and, consequently, are essential to the MAGTF as a whole. It is therefore crucial that the logistics commander be a full sharing partner in the MAGTF intelligence process; he has legitimate needs that are as critical to mission accomplishment as those of the other elements of the MAGTF.

As was clearly stated in the now defunct *FM 30-5, Combat Intelligence*:

> In noncombat commands, combat intelligence provides a basis for security measures, for decisions as to the best use of the area of operations in accomplishing the mission, and for determining or anticipating future support requirements.

A CSSE requires the same tactical intelligence as the rest of the MAGTF and additionally requires greater in-depth information regarding such things as terrain analysis; exploitation of transportation equipment and facilities; lines of communication; utilities; and industrial, military, and government control centers. It is somewhat ironic that the smallest intelligence section of the MAGTF probably has, with the exception of the CE, the most comprehensive requirement for intelligence. The CSSE must be well attuned to the air, ground, and rear area situations, as well as the logistical ones. Intelligence support must always be assessed to ensure the needs of the logistician are met.

Lines of communication are a major consideration in the establishment of logistic and beach support areas. Special information is required on road and bridge capacities. At a minimum the logistics commander requires all-source information on all routes—land, water, and air—that can be used to move supplies, maintenance support, and reinforcements to operating forces. This should include geological, forestry, and climatological information, all of which is particularly useful to engineers. There must be enough information to identify possible alternative lines of communication, such information should include, but not be restricted to, locations and capacities for railheads, marshaling yards, inland waterways, and helicopter landing zones.

Comprehensive urban analysis studies are also quite important to combat service support. Textual and graphic data on built-up area densities, functional divisions of built-up areas, building construction patterns, industrial areas, petroleum storage, military installations, and air and port terminal information are all valuable to the logistical planner.

When considering intelligence support for the CSSE, there is a tendency to associate requirements solely with the movement of supplies forward to support combat forces. Although supply is an important CSS function, there are other significant tasks to be accomplished by the CSSE. Engineers, for example, are normally tasked to build a prisoner of war (POW) compound, as well as field fortifications for the combat and combat support organizations. Medical support will ultimately become involved not only with the care and evacuation of friend-