



**STRATEGY
RESEARCH
PROJECT**

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**JOINTNESS IN THE ARMY AND MARINE CORPS
PREPOSITIONED MAINTENANCE AFLOAT PROGRAM**

BY

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ABSTRACT

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The Marine Corps and the Army each currently operate a separate maintenance facility to service their heavy equipment and supplies that are strategically prepositioned on ships afloat around the world. In this time of a declining defense budget, many defense critics advocate that, the Department of Defense (DOD) does not need two completely separate maintenance prepositioning afloat programs, each run independently by their respective service. There are efficiencies and dollars to be saved by having one designated proponent in charge and possibly one location for the maintenance of prepositioned stocks afloat. This paper will examine Maritime Prepositioning Ships (MPS) of the Maritime Prepositioning Force (MPF) program of the Marine Corps and the Army Prepositioned Afloat (APA) program.

Introduction

The Marine Corps and the Army each currently operate a separate maintenance facility to service their heavy equipment and supplies that are strategically prepositioned on ships afloat around the world. In this time of a declining defense budget, many defense critics advocate that, the Department of Defense (DOD) does not need two completely separate maintenance prepositioning afloat programs, each run independently by their respective service. There are efficiencies and dollars to be saved by having one designated proponent in charge and possibly one location for the maintenance of prepositioned stocks afloat. Currently, Joint Pub 4-0 states that "each Service is responsible for the logistic support of its own forces, except when logistic is otherwise provided for by agreements with national agencies or allies, or by assignments to common, joint, or cross-servicing."¹ A Joint program would most likely enhance efficiency, save dollars, and fully utilize assets available.²

This paper will examine Maritime Prepositioning Ships (MPS) of the Maritime Prepositioning Force (MPF) program of the Marine Corps and the Army Prepositioned Afloat (APA) program. The goal is to determine common areas and capabilities of the programs that could be shared and those aspects of the programs that are possibly service unique and should not be modified. The paper first reviews the overall PREPO Afloat requirement and then identifies how the Army and Marine PREPO Afloat meets that requirement. Areas common to both programs that lend themselves

to consolidation or shared resources will be identified as well as areas that may be so service specific that consolidation is not practical. Conclusions will be drawn and recommendations made based on this analysis.

To fully understand why the services preposition (PREPO) equipment and supplies, in strategic land based locations in foreign countries and on ships around the world, it is necessary to have a basic historical background. Prior to the fall of the Soviet Union, the United States maintained a large forward deployed air and ground force to establish a rapid defense against the large standing force of the Warsaw Pact. Equipment and supplies were also stored in warehouses in allied countries to reduce the strategic air and sea lift required to flow, follow-on-forces, to the theater of operations. Our presence and strategic plan for the rapid introduction of combat forces built a strong NATO trust that still exists today. Now, our allies throughout the world count on our rapid military presence when requested. Since we do not know where contingencies will erupt, this becomes a real challenge to our CONUS based power projection force.

Background

The breakdown of the Warsaw Pact and the fall of the Soviet Union has generated a newly focused National Security Strategy for the United States and a major revision in our National Military Strategy. The lack or disappearance of a real global

threat and a declining National Defense budget has caused a drastic downsizing of our Armed Forces. The post cold war, 1995 National Military Strategy (NMS) which focuses on Flexible and Selective Engagement, is geared toward a smaller forward deployed force and a smaller, more capable, ready, and trained CONUS based power projection capability. The new strategy requires that both CONUS and forward deployed military forces maintain a ready posture to rapidly project forces into multiple areas that affect our national interest³.

To truly make power projection a viable strategy requires enhancements in our strategic mobility capabilities. Lessons learned from Desert Shield and Desert Storm clearly noted that there was insufficient strategic air and sea lift to put our forces in Southwest Asia when the CINC wanted them. Strategic air and sea lift problems were further compounded by inadequate rail and ground transportation assets. These problems are well documented and currently are being worked by USTRANSCOM and the Services. The NMS sites the necessity for enhancements in four specific areas for strategic mobility: "increased airlift capability, additional pre-positioning of heavy equipment afloat and ashore, increased surge capacity of our sealift, and improved readiness and responsiveness of the Ready Reserve Force."⁴

For years, the Army and the Marine Corps prepositioned equipment and supplies in land based humidity controlled warehouses, in various theaters, to enhance their rapid response capability for contingencies. The maintenance of the equipment

and supplies was normally contracted out to a civilian company. The prepositioning of unit equipment and supplies in perspective areas of conflict combined with Host Nation support, reduced DOD strategic mobility requirements for air and sea lift. Forces can be deployed faster to man the equipment abroad. This strategy saves time and money required for strategic lift assets and their upkeep but does require a secure airfield or airfields for the debarkation of the forces. Prepositioning also demonstrates our commitment to our allies and sends a strong signal of U.S. resolve to our potential foes.

In the early 1990s', the Army had equipment and supplies in sixteen theater reserves outside the continental United States (OCONUS) plus reserve stocks within the United States. The Marines also maintain prepositioned stocks OCONUS but in the early 1980s, they established their first prepositioned stocks of a brigade's worth of heavy equipment on ships. Since then, the Marine Corps program has grown to thirteen ships.

The Congressional tasked Mobility Requirements Study (MRS), which began before Desert Shield/Storm recommended that the Army put a heavy brigade afloat. The study validated the Marine Corps Afloat program and recommended that the Army put "an afloat prepositioned package of approximately 2 million sqft of Army combat and combat support equipment."⁵ The Army program was launched in 1993 and currently consists of 14 ships afloat.

The prepositioned stocks (PREPO) of heavy equipment and supplies, that are currently in storage locations in Europe,

Southwest Asia, and the Republic of Korea, combined with the Marine Corps Maritime Prepositioning Ships (MPS) and Army heavy PREPO afloat, enhance strategic mobility planning and helps reduce threat planning risks to an acceptable level. The PREPO Afloat heavy equipment and sustainment supplies definitely provides the CINCs' flexibility and versatility in planning their campaigns to meet the future threats to our national interests in various regions. Strategically positioning these ships and moving them at the first signs of aggression can deter our aggressors or rapidly provide equipment and supplies for combat operations if the need arises.

The Marine Corps Maritime Prepositioning Force

In 1979 the Marine Corps developed the maritime prepositioning ship concept to fulfill this need for rapid deployment of heavy forces with a minimum requirement of strategic air or sea lift.⁶ They anticipated the shortfall in strategic air and sea to employ their forces rapidly if a conflict should arise in Southwest Asia.⁷ "The Maritime Prepositioning Ships (MPS) program was funded in December 1981 to increase the responsiveness of Marine Corps forces requiring immediate and rapid deployment."⁸ The Marine Corps worked diligently on this program to enhance their readiness posture.

In 1984, four additional ships were delivered and loaded with the newly activated 6th Marine Amphibious Brigade.⁹ "By 1986 the concept manifested itself in the Maritime Prepositioning

Force (MPF), consisting of 13 ships organized into three squadrons: MPSRON-1, based in the Atlantic (now based in the Mediterranean); MPSRON-2, at Diego Garcia; and MPSRON-3, in the Guam-Saipan area. Each MPSRON is loaded with 30 days of supplies and most of the equipment for a brigade-size Marine Air-Ground Task Force (MAGTF) as well as smaller, tailored forces."¹⁰ These ships contain the ground combat, combat support, and combat service support equipment and supplies to support the entire MAGTF minus any fixed or rotor wing aircraft. Aircraft join the force at a nearby secure airfield when the MPSRON is deployed to a region.

Currently, approximately forty percent of the Marine Corps equipment is afloat on thirteen leased roll-on/roll-off (RO/RO) ships which are operated by Military Sealift Command. These ships are self-sustaining and can be used separately or in groups of two or three to support the force requirement. Each ship is loaded with what equates to a battalion task force of equipment. The "Computer Aided Embarkation Management System (CAEMS) is used to loadplan each ship."¹¹ The loadplan shows in detail, by deck and cargo hold area, the positions of all equipment and containers. All vehicles are preloaded with combat equipment. All other equipment not preloaded is containerized and accounted for through a computerized logistics system. Ships can discharge cargo in ports or over the shore using their own organic cranes and lighterage but only in a benign secure environment. The ships have helicopter landing platforms, that are CH-53 capable,

but due not carry helicopters on board or allow off loading of equipment or supplies by the use of helicopters.¹²

Maritime Prepositioning Ship Squadron one (MPSRON-1) and MPSRON-3 are each comprised of four ships and MPSRON-2 has five ships. Each MPSRON is capable of sustaining a MAGTF of about 17,300 personnel for a thirty day period.¹³ The ships also carry bulk water and fuel. Each ship is also capable of making at least 26,000 gallons of fresh potable water per day. If the ship is anchored within two miles of shore, fuel and water can be pumped through hoses or pipeline to support combat operations.

To turn a MPSRON into a combat capable Marine Air Ground Task Force (MAGTAF) requires a Fly-in-Echelon (FIE). The FIE consists of Marines, special equipment, and a Naval Support Element (NSE) of about 1200 personnel. This requires a secure airfield in close proximity to the secure port or beach where downloading of the MPSRON occurs. To move the Fly-in-Echelon (FIE) of personnel and equipment requires about 250 aircraft sorties. The primary Air Force strategic lift aircraft required is the C-141 but some C-5 lift is required for certain equipment. The key is the rapid movement of a powerful combat force with a minimal strategic air lift requirement.

The Marine Corps initially loaded out their MPS at Military Ocean Terminal Sunny Point, North Carolina. Understanding the importance of maintaining these ships, equipment, and supplies, they thoroughly searched for a facility that would accommodate portside maintenance.¹⁴ To meet U.S. Coast Guard certification,

on a U.S. flag ship, the hull of the ship must have a complete inspection twice in a sixty month time frame.¹⁵ One of these inspections must be while the ship is in drydock and the other may be done underwater.¹⁶ These maintenance and inspection requirements prompted the Marine Corps to establish a thirty month inspection cycle.¹⁷ "The ship departs its location and sails to Blount Island for a complete downloading of all equipment, ammunition, and supplies."¹⁸ With thirteen ships, this allows sixty days per ship to complete the download of all cargo, inspection of the ship, and the inspection, maintenance, and upload of all equipment and supplies.¹⁹

In 1985, the Marine Corps leased a small part of Blount Island off Jacksonville, Florida for its MPS maintenance site. In 1990, they renewed the lease for 15 years, on 262 acres, with Gate Maritime for over 10 million dollars annually.²⁰ The lease cost will continue to grow in the out years but it is a known budgeted cost. This well established model Marine Corps maintenance program at Blount Island had proven its efficiency and effectiveness long before the Army Prepositioned Afloat (APA) Program was directed.

Blount Island Command (BIC), which currently consists of about 144 DoD personnel (military and civilian) is located at Blount Island in Jacksonville, Florida.²¹ The BIC command is responsible for the readiness of the equipment and supplies of the MPS program. They provide logistical and operational personnel for requisition, receipt and accountability, and

maintenance of equipment and supplies. Civilian contractors provide organizational and intermediate wheel and track vehicle maintenance and aviation ground support equipment maintenance.²² A small contractor operated crew also maintains the Marine equipment while the ship is afloat. Required depot level maintenance and certain equipment modification upgrade requirements are shipped to one of the two Marine Corps multicommodity maintenance centers. All weapons are also shipped to the depot for storage and inspection. These Marine Corps logistics bases are located in Albany, Georgia, and Barstow, California. Watercraft and ship maintenance is contracted out to the local area shipyards.

A perceived disadvantage for using Blunt Island as a Joint Maintenance Facility is the fact that no ammunition can be held or stored at the Blount Island facility. The Secretary of the Navy has granted a special certification of 1.3 million pounds net explosive weight (NEW) for download or upload of Maritime prepositioned ships.²³ The NEW is a safety arc factor for large amounts of explosives. The loadplans for the Marines' ships are well within this NEW arc certification. Upon arrival at the Jacksonville port, all ammunition is downloaded from the ship and immediately loaded on rail cars and taken to Naval Weapon Station (NWS) Charleston. Upload is accomplished in the reverse manner. Once uploaded the ship departs. Ammunition handling is normally conducted after normal work hours and on weekends to minimize safety hazard for the nearby civilian industry workers.²⁴ This

is a self-imposed informal policy by the Marine Corps and not a port restriction imposed by the state or federal regulations.

Blount Island fully meets the Marine Corps requirements for maintenance of their maritime prepositioned ships. The Marines' have a quality managed and operated maintenance facility that has proven itself in peacetime and war. The work force is available, trained, and very knowledgeable of their required duties. They have maintained exceptional standards of readiness as proven during Desert Shield/Storm and Somalia. Rail and truck transport are readily available for the movement of ammunition, equipment, and supplies for any higher level maintenance that may be required. The landlord (Gate Maritime) has thoroughly maintained the facility upholding their end of the lease. Presently, "with the exception of the wharf, the island has no excess facilities,"²⁵ but Gate Maritime is willing to expand and increase facilities to accommodate the Army's afloat maintenance requirements.

The Army Prepositioned Afloat Program

The Army War Reserve (AWR) Program began a drastic overhaul in 1992, after the completion and publication of the DOD Mobility Requirements Study. All policies and procedures were intensely reviewed. In May of 1992, the Chief of Staff of the Army, directed the pooling of all war reserve materials.²⁶ He also directed central management and accountability for the material.²⁷ In March of 1993, as a result of thorough policy

reviews and the directives from the CSA, the Army Strategic Mobility Program (ASMP) was published. It was the Army's roadmap to implement the conclusions of the MRS and the Chief of Staff of the Army directives.²⁸

The sixteen theater reserve and CONUS based stocks were reduced to five Army War Reserve regions. These regions are: CONUS (AWR-1), Europe (AWR-2), Army Prepositioned Afloat (AWR-3), Korea (AWR-4), and Southwest Asia (AWR-5). In May of 1994, U.S. Army Material Command became the central manager and accountable executive agent (less Class VIII medical) for all war reserve material in all five AWR locations. Class VIII medical material is the responsibility of the U.S. Army Medical Material Agency.

The critical stocks in these locations are geared toward supporting the initial requirements of multiple CINCs' based on a two Major Regional Contingency (MRC) scenario per the DOD planning guidance. These critical stocks should sustain the initial warfighting force until the lines of communication are opened and stocks can flow from CONUS.

The strategic vision of our former Army Chief of Staff, Gordon R. Sullivan and the MRS was the driving force for the Army's (AWR-3) Prepositioned Afloat (APA) Program.²⁹ Without land basing rights for U.S. military equipment in such a place as Saudi Arabia, the Army lacked the ability to rapidly project a heavy combat force, in a timely fashion. The MRS recommended an afloat pre-positioned package of approximately 2 million sqft of Army equipment. To protect our vital national interests and

provide enhancements in mobility, the Army launched into the PREPO Afloat Program utilizing interim RRF RO/ROs.

The Army's strategic goal of the APA program is to have a heavy brigade size task force (4500 soldiers and equipment), plus CS and CSS soldiers (5500), in theater and ready to fight by C+15. The APA endstate program, which has been approved and projected for Fiscal Year 1998, will consist of sixteen ships to respond to multiple contingency requirements.³⁰ These ships will contain the heavy brigade with 15 days of critical sustainment, combat support and combat service support theater opening equipment, 30 days of the contingency corps' critical sustainment, and port opening and watercraft equipment.³¹

With fourteen ships, currently in the interim APA program, the (2X2) brigade of two armored battalions and two mechanized battalions, plus its combat support and combat service support slices, are currently afloat on five roll-on roll-off (RO/RO) ships of the Ready Reserve Force (RRF). Two additional RRF RO/RO ships carry Echelon Above Division theater opening combat support and combat service support sets. Five additional ships carry thirty days of critical supply for the Contingency Corps, which includes ammunition for up to a five division force. The remaining two ships in the program are loaded with port opening equipment, the Army's watercraft fleet, and supplies for conducting military operations other than war.

These ships currently utilized for the Army's interim program total 870,000 square feet of storage space. When the

new, much larger LMSRs are brought on line and the program increases to sixteen ships, this storage space will increase to 2 million square feet. Four of the new ships will contain the armored brigade. The other four will contain a much more robust theater opening combat support and combat service support package.

This initial loading of the heavy brigade afloat was done in Antwerp, Belgium. With the tremendous drawdown of Army units in Germany, equipment and supplies became readily available for the APA program. The equipment was consolidated, inventoried, inspected and brought up to 10/20 standards. It was then staged in accordance with individual ship loadplans in a secure area. Loading of the seven RRF RO/RO ships began in November of 1993 and was completed in May of 1994. Realizing the importance of onboard maintenance of equipment, the Army coordinated with the Marine Corps to use contractor maintenance teams from the Blount Island maintenance onboard ship contract.

Knowing the importance of establishing a total maintenance program to sustain the APA Program the Army staff went to work. In June of 1992, the Army Deputy Chief of Staff for Logistics funded a study for the Logistics Management Institute (LMI) to survey the east coast ports for a location to serve as a joint east coast afloat maintenance prepositioning site.³² LMI initially developed a Study Plan to accomplish the taskings within the limited 100 days directed by the sponsor.³³ The actual study was expanded beyond the initial timeline. The study

approach used by LMI was site survey visits, key individual interviews, and data analysis.³⁴ LMI would then perform a cost/benefit analysis to prioritize its findings.³⁵ The LMI study led them to the recommendation that a joint-use afloat facility be established at NWS Charleston, a government owned facility. It was further recommended that if the Marine Corps decided to remain at Blount Island then the Army should establish its own facility at NWS Charleston.³⁶

On 7 July 1993, the Acting Secretary of the Army, John W. Shannon, sent a memorandum to the Secretary of the Navy, discussing the establishment of a joint afloat maintenance site at Naval Weapons Station, Charleston, South Carolina.³⁷ He stated that an "exhaustive study of alternative afloat prepositioned material maintenance sites"³⁸ had been conducted by the Army. He went on to say that a Joint Working Group had "validated the costing data of this study and reached agreement in principle concerning operation issues. The Joint Working Group agreed that executive agents of both services will manage their respective programs with the Marine Corps acting as the contracting agent providing contracting service to the Army on a "fee-for-service" basis."³⁹ The letter further stated that the Army agrees that the Marine Corps should command this maintenance site and that a Memorandum of Understanding detailing this facility should be signed at the Department level. The goal was to brief the Office of the Secretary of Defense by 15 July, 1993.

On 21 July, 1993, the Office of the Secretary of the Navy

sent a response to the Acting Secretary of the Army's letter. It stated that "the Marine Corps is ready to establish a command in Charleston in time to meet the needs of the Army prepositioning requirements while maintaining its current operation in Blount Island, Florida consistent with the existing lease."⁴⁰ The letter also noted that they were ready to work the details and formulate the Memorandum of Understanding.

In a memorandum for The Secretary of the Navy and the Acting Secretary of the Army, dated 18 August 1993, the then Deputy Secretary of Defense, William J. Perry, wrote that he "reviewed the results of the Joint Working Group Study alternative Army afloat prepositioned material maintenance sites" and concurred that NWS Charleston was the "most cost-effective and operationally-suitable."⁴¹ This letter directed the Army to establish its site at Charleston. The Deputy Secretary of Defense further stated that he remained "committed to identifying a joint-use site for afloat prepositioned material maintenance."⁴² He further directed "the Secretary of the Navy and the Acting Secretary of the Army are to take action, in coordination with the Chairman of the Joint Chiefs of Staff, to complete a detailed operational and cost analysis of a joint maintenance facility."⁴³

This decision took place during the infamous Base Closure and Realignment Commission (BRAC) proceedings. Charleston was a good candidate for closure. On August 20, 1993, Secretary of Defense Les Aspin announced that "the Naval Weapons Station,

Charleston, S.C., will be the site of a U.S. Army afloat prepositioned material maintenance facility. The new facility will be fully operational by 1996. It will be managed by the U.S. Army Material Command."⁴⁴ This definitely was a relief to the state of South Carolina.

The decision to pursue a joint facility, and the possible loss of the Marine Corps facility in Jacksonville, created some political turmoil in the state of Florida. Public Law 103-160, section 317, to the National Defense Authorization Act for fiscal year 1994, was enacted on 30 November 1993. It requires the Secretary of the Army to establish a maintenance prepositioning site at Charleston. It also limited the movement of the Marine Corps Blount Island facility for a minimum of two years from the laws enactment date. The section of the law also required the Secretary of Defense to submit a "detailed cost analysis and operational analysis"⁴⁵ before directing the Marines to relocate their maintenance facility. Presently, the Joint Staff J-4 is working the issue of coordinating the detailed cost analysis and operational analysis.

Conclusions

What is obvious from reviewing the LMI study and talking with Blount Island, by telephone, is that both of these locations would require an initial upfront investment in facilities to accommodate both maintenance programs. There are no apparent service unique aspects of the Army or Marine program that could

not be performed utilizing either facility. A joint program at either location would obviously benefit from economy of scale as noted by the Marine Corps and the Army. The total value would have to be determined by the detailed cost operational and effectiveness analysis.

The Marine Corps has voiced some sincere concerns about the Joint Staff wanting to use the LMI Study as a credible source document for analysis in determining a joint facility. First, and foremost is the fact that they never concurred with the LMI Study. It is not a comprehensive detailed cost and operational analysis of both facilities. Second, the Army's program at Charleston is in its infancy. The Army's total concept of operations is still developing and is largely based on the study of the Marine Corps experiences at Blount Island. This new facility at Charleston is still under construction and has never performed a complete download and maintenance cycle on any Army prepositioned ship. The work force has never been tested with regeneration of equipment and supplies as the Blount Island force was after Desert Storm and Somalia.

At Blount Island the Marine have a contiguous facility located on 262 acres adjacent to the dock. The maintenance facility in Charleston is approximately 10 miles from the wharf area.⁴⁶ This distance factor for transport of equipment and supplies would have to be factored into the available maintenance mandays. The Marines' estimate 6 of the present 27 maintenance mandays would be lost to transport. They do not want to degrade

maintenance or keep these ships off station in a CINCs' area of operations (AO) any longer than necessary. The presence of these ships on station in a CINCs' AO is power, and would have to be factored into any analysis.

A concern that caught my attention is the fact that both of these afloat programs are still growing. It appears that DOD has accepted Prepositioning Afloat as a viable cost effective link in their military strategy. The Marine Corps will soon add one additional ship to each of their MPSRONS. The Army will change out their current RRF RO/ROs for new and modernized much larger LMSR ships that may require longer maintenance cycles. The Marines' are also accustomed to having exclusive pier usage at Blount Island. The pier at Charleston is currently shared with other naval ships.⁴⁷ Obviously, more study is required to determine actual availability.

My conclusion from reviewing the available data I collected and looking into the future is that we need to maintain both of these maintenance prepositioned afloat facilities and maximize their efficiencies to enhance the Warfighting CINCs' capabilities. Availability of these ships is the most important aspect of any maintenance program developed. Blount Island is a proven facility with a trained work force. Charleston can also develop into a quality facility. With both of these facilities in place we are buying an insurance policy for the unforeseen natural disaster that could easily occur in either location. In this regard, two facilities currently appear to be relatively

inexpensive to maintain our nations military strength. A single joint facility run by one proponency would most likely save money for DOD over the life cycle of the program. This can only be determined by a comprehensive detailed cost and operational analysis.

In no shape or form should this paper construe the idea that the Army and Marine Corps are duplicating wartime missions by both prepositioning equipment and supplies afloat. These two forces have been validated as a necessity by the DOD Mobility Requirements Study.

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