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**MONTEREY, CALIFORNIA**

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**MBA PROFESSIONAL REPORT**

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**Innovations in Funding the Maritime Prepositioning Ships Program –  
A Case Analysis of the How and Why the Lease Option was Successful**

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**By: John Ryan Bailey, and  
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December 2004**

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PROGRAM – A CASE ANALYSIS OF THE HOW AND WHY THE LEASE  
OPTION WAS SUCCESSFUL**

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Submitted in partial fulfillment of the requirements for the degree of

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from the

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December 2004**

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# **INNOVATIONS IN FUNDING THE MARITIME PREPOSITIONING SHIPS PROGRAM – A CASE ANALYSIS OF THE HOW AND WHY THE LEASE OPTION WAS SUCCESSFUL**

## **ABSTRACT**

The purpose of this MBA project is to research, evaluate, analyze and provide written documentation of the details of how and why the U.S. Congress, the Department of Defense, and the Department of the Navy supported and appropriated funds for the leasing of Maritime Prepositioning Ships that would be used to position troops and equipment in strategic areas of the world. It will explain why the lease option was eventually approved when initially so many participants in the decision-making process objected to this type of financing for shipbuilding. The result of our work will provide a historical reference for the success of the lease program that can be used for future acquisitions by the United States Government.

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## LIST OF ABBREVIATIONS, ACRONYMS, AND SYMBOLS

APF	Afloat Prepositioning Force
BEA	Budget Enforcement Act
DOD	Department of Defense
DON	Department of the Navy
DP	Defense Plan
FFB	Federal Financing Bank
MARAD	Maritime Administration
MAGTF	Marine Air Ground Task Force
MEB	Maritime Expeditionary Brigade
MEF	Marine Expeditionary Force
MPF(F)	Maritime Prepositioning Force (Future)
MPS	Maritime Prepositioning Ship
MPSRON	Maritime Prepositioning Ship Squadron
MSC	Military Sealift Command
MV	Maritime Vessel
NIF	Navy Industrial Fund
O&M	Operations and Maintenance
ODS	Operation DESERT STORM
OIF	Operation IRAQI FREEDOM
OMB	Office of Management and Budget
RFP	Request for Proposal
RO/RO	Roll on / Roll off ship
RDJTF	Rapid Deployment Joint Task Force
TAK	The hull designation of MPS ships after delivery
TAKX	The hull designation of MPS ships before delivery
TEU	Twenty-Foot Equivalent
US	United States
USS	United States Ship
USNS	United States Naval Ship
USCENTCOM	United States Central Command

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## **I. EXTENSION OF PROPOSAL**

“Our Real Problem, then, is not our strength today; it is rather the vital necessity of action today to ensure our strength tomorrow.”

- Dwight D. Eisenhower -

The purpose of this project is to research, evaluate, analyze and provide written documentation of the details of how and why the U.S. Congress, the Department of Defense, and the Department of the Navy supported and appropriated funds for the leasing of Maritime Prepositioning Ships (MPS), also known as the T-AKX ships during their design and construction, that would be used to position troops and equipment in strategic areas of the world. It will explain why the lease option was eventually approved when initially so many participants in the decision-making process objected to this type of financing for shipbuilding. The result of our work will provide a historical reference for the success of the lease program that can be used for future acquisitions by the United States Government.

### **A. OBJECTIVES**

The intent of this document is to provide the reader with an illustration of the mission requirement of MPS ship capability at the time of funding; to provide details of the leasing program from the inception of the idea to the execution of the lease program; to provide an analysis of what factors lead to the success of the lease; to provide a detailed description as a historical reference for armed forces and government entities to emulate in the future; to provide lessons learned from the lease process through interviews, historical review of congressional hearings, and other published resources; to provide a description of barriers to the initial program; to provide details on existing barriers to future programs; and to describe the Maritime Prepositioning Ship capabilities and how they have been employed in recent conflicts.

### **B. BACKGROUND**

The Maritime Prepositioning Ship Lease Program was a resounding success during an era when most believed that it was a useless program and one that had no

mission. Since its inception in the 1980s, it was viewed as not only necessary in today's military positioning of troops and equipment for contingent operations, but critical in the success of Operation DESERT STORM, most recently Operation IRAQI FREEDOM, other exercises. There is a need to describe and analyze in detail how this program was presented to Congress to gain approval of the Lease program to build or reconfigure existing and new construction commercial ships.

### **C. PROBLEM IDENTIFICATION**

During the 1980s, the Secretary of the Navy identified the need for the repositioning of military troops and equipment in remote locations around the globe which meant the acquisition and building of expensive, cargo, roll-on/roll-off (RO/RO) deep draft vessels. During the period, procurement funds were needed for higher priority combat ships and leasing arrangements would allow the Navy to acquire the MPS ships without a large initial obligation of funds. It was incumbent on the champions of the program to align all of the players in the shipbuilding and financial world to see to the success of the shipbuilding program. Due to congressional resistance and budgetary constraints, the Secretary of the Navy developed an alternative acquisition process to fund a program known as the Maritime Prepositioning Ship Program Lease.

### **D. DATA**

For the completion of this topic, multiple data bases were researched, legislative hearings were reviewed, and existing documentation was explored. A review of legal, statutory, and regulatory restrictions governing congressional authorization and appropriations to procure ships was conducted. Additionally, interviews with key stakeholders and program managers of the project were conducted. In terms of cost of the program, a compilation of the actual building costs of MPS ships and the tax incentives that assisted in the success of the lease program was completed. Award Dates and Manufacturing timelines were also researched.

### **E. ANALYSIS**

An analysis was conducted of how the leasing option provided an immediate combat capability and support to the Secretary of the Navy's mission needs without an enormous initial outlay of government funds. A strategic environment analysis to

determine what factors lead to the final approval of the lease option was completed. And finally, an analysis of the strategic capabilities is provided for both the historical and current MPS lease program.

#### **F. ACCOMPLISHMENTS**

We will illustrate the capabilities of MPS ships, especially during Operation DESERT STORM and Operation IRAQI FREEDOM; we compare the timelines and details of procuring and building MPS ships and ships built using the traditional government planning and appropriation process; we provide details and analysis of the legislative history leading to the successful approval of the MPS Lease Program; we illustrate how the four major stakeholders (owners, operators, builders, and unions) were supportive of the MPS Lease Program when traditionally these groups were diametrically opposed when building Navy war and supply ships; and we provide historical proposals and/or alternatives that competed with the MPS Lease Program.

#### **G. RESEARCH QUESTIONS**

The objective of this project is to answer the following questions that will be addressed specifically in Chapter VI.

1. Why was leasing the option chosen?
2. What were the advantages of leasing vice other ways of funding the buy?
3. What has been learned about this type of financing from the MPS example?

#### **H. SUMMARY**

During a period in the 1980s when the United States was building up to a 600 ship Navy under the direction of President Ronald Reagan, there was not a focus on building auxiliary or support ships. Instead, the focus was on building United States Ships (USS), which primarily consisted of Aircraft Carriers, Cruisers, Destroyers, Frigates, and Amphibious ships. It was identified by the Secretary of the Navy, John Lehman, that a Prepositioned Fleet was necessary to maximize readiness of the Navy. While during that period funding was more available, or at least more important than other programs, for building sea going assets, congress was hesitant to appropriate funds to the MPS program due to government funding constraints.

It is our goal to provide the reader with a better understanding of why the lease program was the best option at the time; illustrating the need for their mission and ship capabilities; describing the contributions of the ships to Operation DESERT STORM, Operation IRAQI FREEDOM, and other exercises; portraying the success of the lease program; describing the role of the four major stakeholders in the process of appropriating and building the ships; illustrating a timeline comparison between the process of appropriation and building of MPS ships and Navy Commissioned ships; and concluding with our research question answers, lessons learned, and the future of leasing.

## II. THE NEED FOR A PREPOSITIONED FLEET

The need for the prepositioning of personnel and equipment could arguably date back to when ships first set sail. The realization for the United States occurred after World War II. As stated by the Office of the Chief of Naval Operations (CNO) "...the primary strategic sealift mission was to rapidly move men and equipment to Europe to defend against a Soviet/Warsaw Pact attack" (1991, p. 27). With the United States (U.S.) having to fight naval battles around the world, the most efficient way for the U.S. to be at maximum readiness was to have equipment and supplies available for personnel flown by air when the troops arrived in-theater. Depending on where the fight was, "the central front [could be] 3,600 miles away and sealift would be provided by over 600 NATO merchant vessels and an active U.S. merchant fleet that still numbered 578 major ships as of 1978" (USOCNO, 1991, p. 27). The need for more ships was made available, but the types of ships were not auxiliary ships, but combatants. According to the Office of the CNO, the "...578 ships dwindled to 367 over the next 12 years." (1991, p. 27)

The U.S. needed to be able to not only put troops on the ground, but they had to provide a way to supply them with equipment and supplies immediately. This dilemma became more evident during the "the Iranian crisis and Soviet invasion of Afghanistan in the late 1970s [when the Department of Defense] focused emphasis on developing rapid deployment forces to respond to contingencies in distant regions, such as Southwest Asia, in addition to the continuing NATO mission in Europe." (USOCNO, 1991, p. 27) It did not take military experts long to realize that without a contingency of resources, there would be a shortfall of sealift capabilities to support the ground troops. An alternate plan needed to be developed to ensure that the ships were made available for the support of global conflict before the next engagement.

Due to events in Afghanistan and Teheran in the late 1970s, "President Jimmy Carter announced a new American policy in 1980 that came to be called the Carter Doctrine" (<http://www.msc.navy.mil/sealift/2003/April/prepositioned.htm>). He informed the world that any attempt to take the Persian Gulf region or the assets thereof would be a direct attack on the U.S. This statement made the U.S. even more aware that without the

proper vessels properly positioned with the necessary equipment to fight a war in place, the U.S. could potentially not back up its message to repel any threat in that region, or others. “In 1979, in the Department of Defense Navy Program Objective Memorandum, President Carter's secretary of defense approved the creation of a Maritime Prepositioning Ship Program supporting the U.S. Marine Corps” (<http://www.msc.navy.mil/sealift/2003/April/prepositioned.htm>). The beginnings of what is now known as a Maritime Prepositioning Squadron (MPSRON) was developed, “and by 1980, MSC had designated seven ships as part of the Near Term Repositioning Force” in Diego Garcia (<http://www.msc.navy.mil/sealift/2003/April/prepositioned.htm>).

In 1980, the Maritime Prepositioning Ship program was approved. It would take the backing of the cabinet of President Ronald Reagan to make such a program become a reality, and “in 1984, the Secretary of the Navy [Secretary John Lehman] formally recognized the increased importance of strategic sealift and accorded it equal status with the Navy’s three other main missions: sea control, power projection and strategic deterrence.” (USOCNO, 1991, p. 27)

Another significant fact that ties the MPS ships and Marine Corps together is how Marine Corps equipment and supplies are transported to areas of conflict around the world. What is known today as the Maritime Expeditionary Force (MEF) is an entity that is sealift supported by the MPS ships. “By 1983, the CNO and the Commandant of the Marine Corps signed a memorandum of agreement establishing the concept of operations for maritime prepositioning in support of the Marine Corps” (<http://www.msc.navy.mil/sealift/2003/April/prepositioned.htm>).

**A. FUNDING ROLES AND RESPONSIBILITIES OF AGENCIES (USN, USMC, TRANSCOM, MSC)**

**USN:** “In the 1980s, the Navy contracted with the U.S. shipping industry to provide 13 ships to fill out the MPF” (<http://www.msc.navy.mil/mpsone/factfile.asp>). The ships are crewed by civilians under contract to Military Sealift Command. The ships of MPS ships Squadrons are civilian-owned by U.S. financial institutions and their shareholders. “The ships are chartered by the financial institution to an operating company, which in turn crews and operates them with civilian mariners under the terms

of a 25-year time charter with Military Sealift Command” (<http://www.msc.navy.mil/mpsone/factfile.asp>).

**USMC:** The Marine Corps is responsible for the funding of the equipment and maintenance of that equipment aboard the MPS ships.

**TRANSCOM/MSC:** “The Military Sealift Command is responsible for administering the Department of Defense (DOD) leases of auxiliary vessels. In the early 1970s and early 1980s, the Navy used long-term leases, called charter and build arrangements, to acquire Sealift tankers, Military Prepositioning Ships (MPS), and T-5 replacement tankers” (GAO, June 1999, p. 3). This form of contracting allowed the Department of the Navy to put the ship on a financial payment plan over the length of the lease keeping the government from having to budget and appropriate the entire cost of the ship at once. “Under these arrangements, the private sector lessors arranged for the construction, long-term financing, and delivery of the vessels. In return, the lessors, as owners of the ships, receive a return on their investment from the Navy’s lease payments, tax benefits, and the residual value of the vessels at the end of the leases” (GAO, June 1999, p. 3). During a time when the budgeting and spending for a 600 ship Navy, primarily combatants, was most important, the lease option became the only way for the Navy and Marine Corps to acquire the assets needed to preposition equipment across the globe. “The Navy leased the vessels for 20 to 25 years and agreed that it would pay scheduled termination costs if it canceled the leases. The termination costs ensure that lessors will recover their investment plus a specified rate of return” (GAO, June 1999, p. 3).

For these specialized ships to become available to the Navy, special financing outside of the normal appropriations procurement funding within Congress had to be created. “In 1982, the Navy awarded 13 contracts (based on offers received from 3 different companies) [Maersk Line LTD, General Dynamics Corp., and Waterman Steamship. Corp.] for the long-term lease of a total of 13 MPS vessels” (GAO, June 1999, p. 3). It was these 13 ships that arguably would later be the difference between success and failure in the rapid buildup of Operation DESERT STORM.

## **B. FINANCING DILEMMA**

As previously stated, during a period when the Navy and Marine Corps needed ground equipment and supplies to be on station immediately when a conflict arose, the Navy had no choice but to acquire assets to fulfill the mission of prepositioning vehicles, equipment, and supplies. There was not enough money in the budget for the building of multiple auxiliary ships, but the need was becoming more evident with the growing pressure of global conflicts occurring on the other side of the world. “According to Navy officials, the primary reason for proposing a long-term lease was the need to devote procurement funds to higher priority combat ships” (GAO, June 1999, p. 4). Long-term leasing allowed the Navy to meet its support requirements without a large, up-front obligation of procurement funds. The Navy was responsible for pleading their case with Congress and also for deriving a creative means to finance the MPS program. The major arguments for the Navy lease program were Cost effectiveness, Readiness, Industrial Base concerns, and Flexibility.

While one of the most important reasons for the lease proposal, “cost-effectiveness was not the primary reason for the Navy’s decisions to lease auxiliary vessels in the early 1970s and early 1980s” (GAO, June 1999, p. 4). The budget at this time would not allow the Navy to procure the MPS ships because the ships were competing with funds for combatant ships and the initial outlay of funds was not available through standard procurement channels. “By leasing the vessels, the Navy believed it could spread payments over the length of the leases and use its annual Operation and Maintenance appropriations to fund them without incurring an up-front obligation of the total lease amount” (GAO, June 1999, p. 4).

With the increased need for armed forces to be in so many different parts of the world on a contingent basis, the Navy could not perform its mission of providing sealift to the Marine Corps given its current inventory of ships which reduced the readiness of both armed forces. “For example, the Navy believed that the MPS vessel program could not fulfill its mission effectively unless all 13 vessels could be acquired in a short period” (GAO, June 1999, p. 5). The only way for the Navy to succeed at making that many ships available in a relatively brief period was to use existing ships that could be leased and convert them into specialized ships that could be used for prepositioning equipment.

“Through the long-term leasing arrangement, the Navy acquired all 13 vessels by 1986 – four years after the contracts were awarded” (GAO, June 1999, p. 5).

An indirect argument proposed by the Navy during this period was the need to keep the shipyards employed. The use of the U.S. yards to convert and build these ships would possibly provide the amount of work needed to get them through the difficult period. “A Navy official stated in a 1983 hearing that projects such as the MPS and T-5 replacement tankers programs were needed to prevent the potential closing of several commercial shipyards and to protect the nations’ industrial base” (GAO, June 1999, p. 5).

With the option of leasing available to the Navy, it added the aspect of being able to have the ship for a finite period of time and be able to return it when the mission was fulfilled. This flexibility was attractive to the Navy, even though we find years later that there was not a need to return the ships. “Flexibility and cost-effectiveness are cited as the primary reasons for leasing the Chouest vessels [vessels owned and operated by Edison Chouest Offshore]” (GAO, June 1999, p. 5). The ability to specifically design a certain type of ship without making a huge outlay of funds provided a good enough case for the government to lease the MPS ships instead of purchase them. A further description of the lease financing option is presented in Chapter III.

### **C. CAPABILITIES, OPERATIONS, AND DEPLOYMENT TIMELINES**

To the layman, there are subtle differences that can be confused when studying Prepositioning Forces. “Military Sealift Command’s Afloat Prepositioning Force was established in the early 1980s to provide inter-theater mobility and reduce response time for the delivery of urgently needed U.S. military equipment and supplies to a theater of operations during a war or contingency” (<http://www.msc.navy.mil/factsheet/apf.asp>). Over the years, the Afloat Prepositioning Force (APF) has expanded to 36 ships operating around the world. However, only 16 ships are currently considered MPS ships, and three of those are MPS Enhanced ships which will not be discussed under this topic because they were procured, not leased. In particular for this topic, the original 13 ships are discussed providing general and specific characteristics of each class of ship, the ship’s mission, to what Maritime Prepositioning Ship Squadron (MSPRON) it belongs, and where the ship was built or reconfigured.

The MPS ships are divided into three MSPRONs. Each MPS squadron carries the majority of the supporting weapons systems, equipment, and supplies needed to sustain a Marine Expeditionary Brigade (MEB) consisting of 17,000 men for 30 days. A further description of a ship's loadout is in Table 1. Below is a list of the MPSRONs and the ships that are assigned to each. The assignments of the ships vary from year to year based on its maintenance cycle and availability.

#### **D. MARITIME PREPOSITIONING SHIP SQUADRONS (MPSRON)**

**MPSRON ONE (Location: Mediterranean)** “MPSRON ONE is a component of the U.S. Navy's Military Sealift Command, administratively reporting to the Prepositioning Program Manager at MSC Headquarters in Washington, D.C. MPSRON ONE is an operational asset of the U.S. Navy's 6th Fleet. The squadron's operational commander is the MSC, Europe area commander located in Naples, Italy” (<http://www.msc.navy.mil/mpsone>).

MV PFC William B. Baugh (ex-MV Eleo Maersk) (T-AK 3001)  
MV PFC Eugene A. Obregon (ex-SS Thomas Heywood) (T-AK 3006)  
MV 2nd Lt. John P. Bobo (T-AK 3008)  
MV PFC Dewayne T. Williams (T-AK 3009)  
USNS Lance Cpl. Roy M. Wheat (T-AK 3016)

**MPSRON TWO (Location: Diego Garcia)** “MPSRON TWO is a component of the U.S. Navy's Military Sealift Command, administratively reporting to the Prepositioning Program Manager at MSC Headquarters in Washington, D.C. MPSRON TWO is an operational asset of the U.S. Navy's 7th Fleet. The squadron's operational commander is the MSC, Far East area commander located in Yokohama, Japan” (<http://www.msc.navy.mil/mpstwo>).

MV Pvt. Franklin J. Phillips (ex-Pvt. Harry Fisher, ex-MV Evelyn Maersk) (T-AK 3004)  
MV Sgt. Matej Kocak (Ex-SS John B. Waterman) (T-AK 3005)  
MV 1st Lt. Baldomero Lopez (T-AK 3010)  
MV Sgt. William R. Button (T-AK 3012)  
USNS Gunnery Sgt. Fred W. Stockham (T-AK 3017)

**MPSRON THREE (Location: Guam)** “MPSRON THREE is a component of the U.S. Navy's Military Sealift Command, administratively reporting to the Prepositioning Program Manager at MSC Headquarters in Washington, D.C. MPSRON THREE is an operational asset of the U.S. Navy's Seventh Fleet. The squadron's operational commander is the MSC, Far East area commander located in Yokohama, Japan” (<http://www.msc.navy.mil/mpsthree>).

MV Cpl. Louis J. Hauge, Jr. (ex-MV Estelle Maersk) (T-AK 3000)  
MV PFC James Anderson, Jr. (ex-MV Emma Maersk) (T-AK 3002)  
MV 1st Lt. Alex Bonnyman (ex-MV Emilie Maersk) (T-AK 3003)  
MV Maj. Stephen W. Pless (ex-SS Charles Carroll) (T-AK 3007)  
MV 1st Lt. Jack Lummus (T-AK 3011)  
USNS 1st Lt. Harry L. Martin (T-AK 3015)  
Source for particular ships within each MPSRON:  
(<http://www.msc.navy.mil/annualreport/2003/pm3.htm>)

Each of the three MPSRONS, MPS-1, MPS-2, and MPS-3, is associated with a particular Brigade in the Marine Corps. When the order is made for the MPS ship to deploy to the operating region, with some exception, knows what particular Marine Expeditionary Force with which it will marry-up. Each MPSRON was designed this way for maximum efficiency, planning, and training. “MPS-1, [is] associated with the 6th MEB and stationed at Camp Lejeune, NC...; MPS-2, [is] associated with the 7th MEB in California...; and MPS-3, [is] associated with the Hawaii-based 1st MEB (<http://www.globalsecurity.org/military/systems/ship/sealift-mps.htm>).

## **E. MAINTENANCE AND EQUIPMENT OF MPS SHIPS**

### **1. How Often Maintenance is Required**

The ships of the MPS fleet go through a cycle to offload equipment to be cleaned, repaired, or sent to the depot for overhaul. While the equipment is off of the ship for up to 60 days, the ship is sent to a local shipyard for upkeep and maintenance. “One ship at a time is scheduled for return to the United States on a thirty-month cycle to offload all equipment, ammunition, and stores for upkeep, repair, modification, and replacement as necessary. The ship is also provided a 45-day maintenance period in a shipyard. The cost of this unique maintenance operation is included in the operating and support costs for these ships” (VAMOSOC, February 2004, p. 5).

### **2. Where Maintenance is Performed**

While the ship is offloaded at Blount Island Command (BIC), the ship is sent to a local shipyard for upkeep and maintenance. Drydock work is performed “usually in Virginia in the Norfolk/Newport News area.” ([http://www.navyleague.org/sea\\_power/may\\_02\\_13.php](http://www.navyleague.org/sea_power/may_02_13.php)).

### 3. Typical Equipment Carried

Quantity	Item	Quantity	Item
5.2	Million gallons cargo fuel	7	Tactical airfield fuel dispensing systems
2,174	50,000-pound cargo containers	6	Motorized road graders
76	TOW missile launchers	4	Wheeled scraper trackers
24	Light armored vehicles (LAV)	104	3,000-gallon collapsible fabric tanks
105	Amphibious assault vehicles (AAV)	50	Tractors (various types)
30	Combat tanks (M1A1)	107	Forklift trucks (various types)
30	155mm howitzers	41	Reverse osmosis water purification units
123	Electrical generators	203	Cargo trailers
1	Field hospital (200 beds)	89	Powered trailers (various types)
14	50,000-pound container handlers	282	5-ton cargo trucks
8	25-ton cranes	42	5-ton dump trucks
16	7.5-ton cranes	22	5-ton wrecker trucks
47	Floodlight sets	530	Cargo/troop carriers (HMMWV)

Table 1. A sample loadout of an MPS squadron [four MPS ships].

Source: <http://forum.apan-info.net/spring99/mpf2.html>

#### F. CONTRIBUTIONS OF MARITIME PREPOSITIONING SHIPS TO:

##### 1. Operation DESERT STORM

In retrospect, the decision to lease the MPS ships so that they could be available to the U.S. Armed Forces was arguably the most important and best decision that the DOD could have made during the 1980s. The massive buildup in that region was comparable to World War II, Vietnam, and Korea. But in none of the previous wars was the ability or capability to put equipment and supplies in-theater performed more rapidly than in Operation DESERT SHIELD/DESERT STORM (ODS). The primary reason that the build up was possible was the use of MPSs located in their strategic locations throughout the world. Upon receipt of the deployment order, “The MPS squadron [TWO] at Diego Garcia was ordered underway on 10 August, and it arrived in the port of Al Jubayl [Saudi

Arabia] on the 16<sup>th</sup>” (<http://www.globalsecurity.org/military/systems/ship/sealift-mps.htm>). According to the Office of the CNO, this “mark[ed] the first use of MPS in an actual crisis” (1991, p. 28).

The capacity of the ships delivering cargo to the MEFs that met their MPSRONs in-theater is what allows for such a rapid and comparatively inexpensive buildup. If all of the cargo were to be flown to the theater, the cost would have been significantly more expensive and would have tied up aircraft that could be better utilized for other primary missions. The Office of the CNO stated that:

...within four days of [MPSRON-2's] arrival..., Navy cargo handlers averaging 100 lifts-hours per day offloaded more equipment and supplies from the three 755-foot ships than could have been moved by 3,000 C-141 cargo flights" (1991, p. 28).

MPSRON-2 of Diego Garcia was accompanied by MPSRON-3 of Guam in support of the buildup.

MPSRON-3 also sailed to Al Jubayl. According to Pokrant, "[MPSRON-3] left its base...on 8 August. Marines of 1<sup>st</sup> MEB flew from their base in Hawaii and started marrying up with their equipment of the [MPSRON-3] ships on 26 August." (pg. 78) In providing a further illustration of the capacity and feasibility of the MPS ships during ODS, between both MPSRON-2 and 3, for aircraft to have delivered the amount of cargo, "it would have required 2,100 lifts by C-5s, our largest military aircraft" (USOCNO, 1991, p. 28).

Had the government not approved the MPS lease program, the sealift capacity would not have been available, and arguably, the outcome of ODS would have been unfavorably different. The total investment in all prepositioning programs during the 1980s was about \$7 billion. Prepositioning ships have become part of the entire plan when developing Concept of Operations and battle plans within the military, and gauging from the success of MPS ships and MEFs during ODS, there is no doubt that they will be part of the future. Operation IRAQI FREEDOM is further evidence that MPS ships are in the future of the Department of the Navy.

## **2. Operation IRAQI FREEDOM**

Leased MPS ships that participated in Operation IRAQI FREEDOM (OIF):

MV Cpl. Louis J. Hauge, Jr. (T-AK 3000)  
MV PFC William B. Baugh (T-AK 3001)  
MV PFC James Anderson, Jr. (T-AK 3002)

MV 1st Lt. Alex Bonnyman (T-AK 3003)  
MV Pvt. Franklin J. Phillips (T-AK 3004)  
MV 2nd Lt. John P. Bobo (T-AK 3008)  
MV 1st Lt. Baldomero Lopez (T-AK 3010)  
MV Sgt. William R. Button (T-AK 3012)  
Source:<http://www.amo-union.org/Newspaper/Morgue/5-2003/Sections/Views/Index.htm>

The design of the MPS ships was to be available when the order to deploy for combat was issued from the Pentagon. When the conflict in Iraq was eminent, the MPS Squadrons were ready and able to support the MEFs that would arrive on the ground. As was the case with in ODS, MEFs did not have to wait once they arrived by airlift. According to U.S. Navy VADM Brewer III, Commander, Military Sealift Command (MSC), “when the buildup for Operation Iraqi Freedom began, MSC prepositioning ships were first on scene with significant amounts of combat gear for ground troops” (<http://www.msc.navy.mil/annualreport/2003/perspective.htm>).

The capacity of the MPS ships was proven again in OIF when the call to deploy was issued. MSC reported that “MPSRON-1 and MPSRON-2 deployed and discharged nearly 1.5 million square feet of cargo in Kuwait in support of the First Marine Expeditionary Force” (<http://www.msc.navy.mil/annualreport/2003/pm3.htm>). The chart below depicts of the amount of cargo that was delivered by all MSC ships, note the total cargo of the MPS ships.

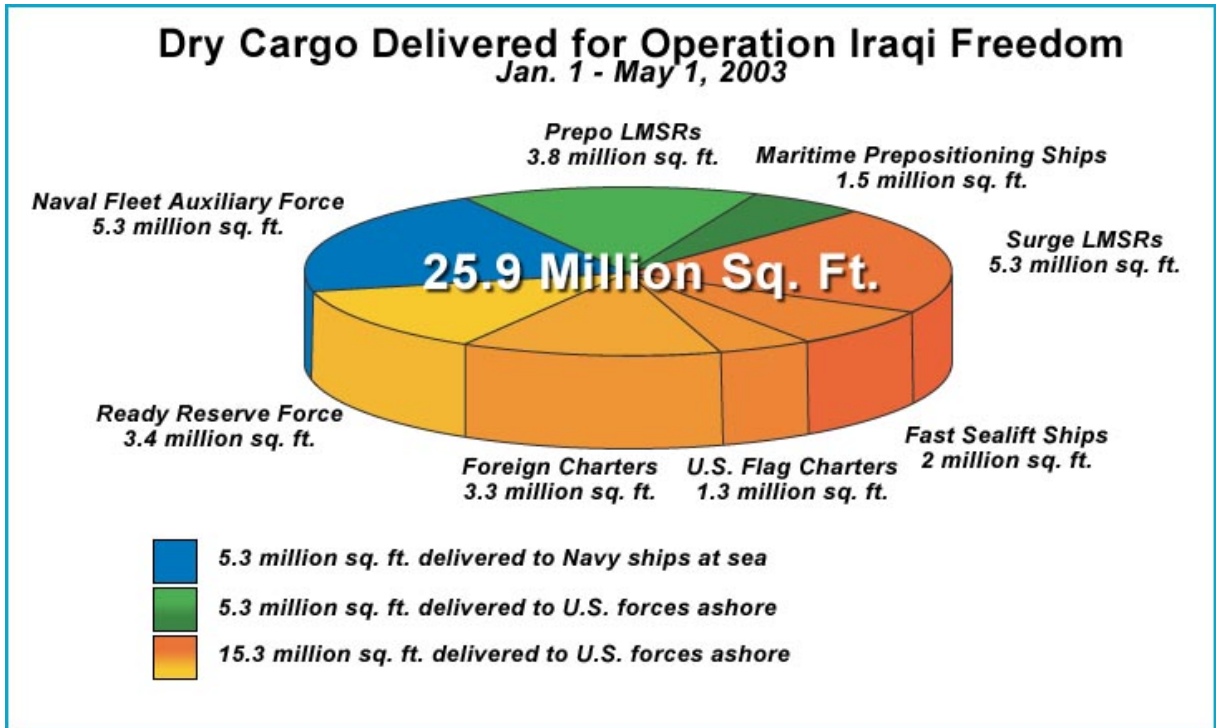


Figure 1. Illustration of the 1.5 million square feet transported by MPS ships during the buildup and the war of Operation IRAQI FREEDOM (<http://www.msc.navy.mil/annualreport/2003/perspective.htm>)

The MPS ships displayed superb versatility during the buildup and action in OIF. The primary mission of the MPS ships was to rapidly provide prepositioned cargo to the MEF when called to deploy. Once the ships were offloaded in January and February, the “MPF ships were assigned to the Sealift Program as common-user assets, available to transport cargo for all U.S. military services. For the next several months, these ships carried cargo from Europe and the United States to Kuwait, providing replacement equipment for U.S. forces operating in Iraq” (<http://www.msc.navy.mil/annualreport/2003/pm3.htm>).

### 3. Other Exercises

MPS ships and crews must stay active and proficient to be able to support the MEF during conflicts. To ensure that the ships and crews are at maximum readiness, they participate in exercises around the world. Provided below are examples of how the MPS fleet is exercised to prepare for the next engagement.

*a. COBRA GOLD*

Cobra Gold is an annual U.S. Pacific Command exercise conducted in Thailand that tested strategic lift readiness and joint interoperability. Ships of the MPS fleet participated in Cobra Gold 2002, particularly “MV 1st Lt. Jack Lummus and MV Pfc. Dewayne T. Williams” (<http://www.msc.navy.mil/annualreport/2002/pm3.htm>). There were approximately 700 pieces of cargo offloaded during this exercise ranging from generators to M1-A-1 tanks (<http://www.globalsecurity.org/military/ops/cobra-gold.htm>).



Figure 2. MSC Maritime Prepositioning Ship MV 1st Lt. Jack Lummus off-loads equipment in support of Exercise COBRA GOLD. (<http://www.msc.navy.mil/annualreport/2002/pm3.htm>)

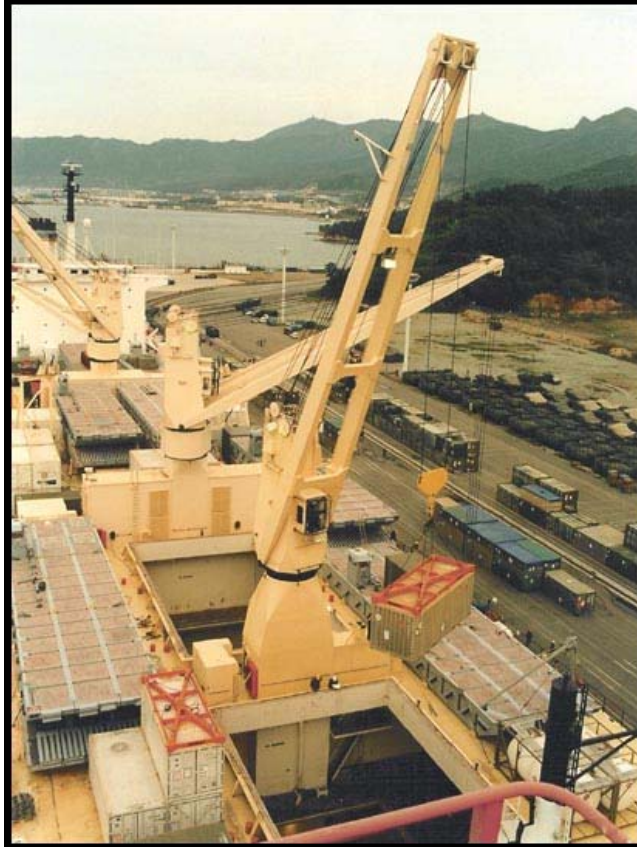


Figure 3. MV 1st Lt. Baldomero Lopez's onboard cranes off-load cargo for Exercise COBRA GOLD in Thailand. (<http://www.msc.navy.mil/annualreport/2002/pmfpb.htm>)

***b. BRIGHT STAR***

Bright Star is a bi-annual combined-forces exercise designed to enhance U.S. readiness, interoperability and joint sea control capability in conjunction with Egyptian forces. MV Cpl. Louis J Hauge participated in BRIGHT STAR in both 1999 and 2002 (<http://www.globalsecurity.org/military/systems/ship/sealift-mps.htm>). Additionally, in 2002, MV Maj. Stephen W. Pless participated in BRIGHT STAR (<http://www.msc.navy.mil/annualreport/2002/pm3.htm>).

***c. DYNAMIC MIX***

Dynamic Mix took place from 21 May until 06 June 2002 in Spain (including the Canary Islands), the Western Mediterranean, the Southeast Atlantic and Turkey. It is NATO's bi-annual land, maritime, amphibious and air exercise where more than 15,000 service personnel, over 50 ships and 150 aircraft from 13 NATO nations will

train in defence and humanitarian assistance operations (<http://www.afsouth.nato.int/exercises/Dynamic%20Mix%2002.htm>). MPS ships that participated were MV Pfc. Eugene A. Obregon and USNS 1st Lt. Harry L. Martin MPS (Enhanced) (<http://www.msc.navy.mil/annualreport/2002/pm3.htm>).

### **III. FROM IDEA TO REALITY – LEASING MARITIME PREPOSITIONING SHIPS**

#### **A. INTRODUCTION**

In the early 1980s, the Department of Defense needed to find a way to deploy power projection forces to the Persian Gulf, while at the same time, save on airlift costs. Afloat prepositioning was the answer; however, this requirement had to compete with higher priority combat ships for procurement funds. In order to fund the MPS ship's initiative, The Department of the Navy decided to enter into lease arrangements for the building and conversion of 13 vessels that would allow the Navy to meet its operational requirement without a large up front obligation of procurement funds.

This chapter will provide historical insight into the Navy decision to enter into long-term lease agreements as a method for funding the operational requirement for MPS. As a basis for analysis, it will examine a detailed charter versus purchase report prepared for the Navy by the Argent Group Ltd. as well as congressional testimony provided to the House of Representatives Committee on Armed Services, Readiness Subcommittee, by fellow Representatives, leaders in the shipbuilding industry, and key members from the Department of the Navy (DON).

#### **B. THE DEPARTMENT OF THE NAVY CASE FOR LEASING**

From 1981 to 1982 the Navy hired the Argent Group Ltd. to perform an analysis of the costs associated with leasing versus purchasing MPS vessels. The following is an excerpt from the Argent Group-report that provides background information on the initial Request for Proposals to satisfy the MPS requirement:

The Department of the Navy, through the Naval Sea Systems Command, issued in October 1981 a Request for Proposals (RFP) for TAKX Maritime Propositioning Ships sufficient to provide lift capability for three Marine Amphibious Brigades. The RFP contemplated a build or convert and charter plan, whereby the contractor will arrange for the construction of a new vessel, to meet the Navy requirements, and upon completion will charter the vessel to the Navy. The charter will take the form of a long-term time charter, extending (with option periods) for a total of 25 years, during which the contractor will operate the vessel for the Navy, under the direction of Military Sealift Command (Argent Group Ltd. Report, 1982, p. 39).

## **1. The Leveraged Lease**

To understand the Navy decision to lease versus buy, it is important to understand the mechanics of ship leasing. Typical commercial leveraged lease ship financing involves three basic parties: the lessee, the lessor, and the lender. The lessee, or charterer, is the user of the vessel. The lessor, frequently a bank or finance company, is the passive owner of the vessel. The lessor typically invests 20-50% of the capital cost as equity. The lender provides loans for the remaining 50-80% of the vessel cost (Argent Group Ltd. Report, 1982, p. 42).

In the TAKX program, the Navy, as charterer, desired to obtain the services to be performed by the vessel and to contract with a third party for its operation. The operator became an intermediate lessee in the leveraged lease structure. The vessel is “bareboat” chartered from the owner-lessor to the operator who in turn “time” charters the vessel to the Navy. The rent payable by the Navy is divided into two components: capital hire, which repays the equity and debt financing provided by the lessor and the lender, and operating hire which compensates the operator for the services rendered (Argent Group Ltd. Report, 1982, p. 42).

The lessor’s return on a leveraged lease investment is derived from a portion of the rental payments and from the tax benefits available to the owner: depreciation, investment credit, and investment deductions. A lessor can thus offer low-cost financing by passing through the effect of most of these tax benefits, in the form of reduced rental payments, to a lessee who might not (as the Navy is not) be in a position to take advantage of the tax benefits (Argent Group Ltd. Report, 1982, p. 42).

## **2. Lease vs. Purchase, a Present Value Analysis**

The analysis performed by the Argent Group examined the costs of leasing versus purchasing the MPS vessels. Analysis was based on prices, structure of lease payments, and tax effects base on inflows and outflows of tax revenue. To compare a lease versus buy option, a present value analysis compared the stream of rental payments for 25 years and the cost to purchase, with payment due on the delivery date. The present value analysis discounted the rental payments back to a single value as of the delivery date. A

discount rate of 10% was used during the present value analysis, a rate stipulated by the Office of Management and Budget (OMB) (Argent Group Ltd. Report, 1982, p. 41).

The Argent Group Report concluded that with a 10% discount rate, the cost to the Navy of leasing would be \$140.56 million per vessel, compared to a purchase cost of \$184.01 million. The advantage increases as the discount rate increases, and declines at lower discount rates.

<b>Summary Present Value Cost Comparison</b>	
	Present Value @10% (\$ in millions per vessel)
Purchase Cost	-184.01
Navy Charter Cost	-140.56
Navy Savings	43.45
<b>TREASURY EFFECT</b>	
Outflows	-131.37
Inflows	114.6
Net	-16.77
Total Government Charter Cost	-157.33
Total Government Savings	26.28

Table 2. Present Value Cost Comparison  
Source: Argent Group Ltd. Report 1982.

To perform the analysis, the Argent Group compared all of the vessel proposals and calculated the average capitalized cost of vessel purchase to be \$184.01 million. This average purchase price represents the capitalized costs from three offerors who the Navy selected for award: General Dynamics Corp., Maersk Line, Ltd., and Waterman Steamship Corporation. The charter costs represent capital hire rates based on current market rates. The capital hire rates are a function of the lessor's rate of return and the interest rate on long-term debt. The net effect on the Treasury represents tax outflows from tax incentives and inflows from tax revenues received. This analysis also relied on several assumptions including a Long Term Debt rate of 13%, Federal Income Tax Rate of 46%, Investment Tax Credit of 10%, and a zero residual value for each vessel at the end of 25 years. The present value analysis is a means of adjusting the lease payments, which occur over a period of time for the time value of money. The table above shows a present value analysis at a 10% discount rate. The Argent Group also performed additional analysis for discount rates ranging from 5% to 14%. Their analysis showed a

breakeven point at a 7% discount rate. Any rate above that represented additional cost savings to the government. The 1982 federal funds rate was 12.24% and the bank prime rate was 14.85% (<http://www.federalreserve.gov/releases/h15/data/a/fedfund.txt>).

Present Value Cost Comparison	Breakeven						
	5%	6%	7%	8%	10%	12%	14%
Discount Rate	5%	6%	7%	8%	10%	12%	14%
Purchase Cost	-184.01	-184.01	-184.01	-184.01	-184.01	-184.01	-184.01
Navy Charter Cost	-225.44	-203.05	-184.01	-167.32	-140.56	-120.12	-104.23
Navy Savings	-41.43	-43.45	0	16.69	43.45	63.89	79.78

Table 3. Analysis Performed at Varying Discount Rates  
Source: Argent Group Ltd. Report 1982.

The Argent Group and the Navy-in-depth financial analysis, coupled with the fact that procurement funds were allocated for high priority combat ships lead to the decision to lease MPS vessels rather than purchase. The Navy believed this course of action would save the government money and support an ailing ship building industry.

Although leasing is not the typical method for acquiring vessels and despite the fact that the Navy Industrial Fund (NIF) would have to absorb the rental payments, key players in the Navy presented their case to The Readiness Subcommittee for final approval.

**C. LESGISLATIVE HEARINGS**

During 1982, several congressional hearings were conducted to discuss the Navy proposal to enter into long-term lease agreements as a funding strategy for MPS. It is important to understand that the Navy lease proposal was a radical departure from the normal procurement methods for major defense projects. Congressional approval was necessary for the Navy to proceed because the lease strategy skirts the congressional authorization/appropriation processes that exist for major procurement programs. Therefore, this funding strategy received an enormous amount of scrutiny from many members of Congress. Another crucial point of debate was that to fund the lease, the Operations and Maintenance (O&M) account would absorb approximately \$5.4 billion in capital cost over 25 years. The Honorable Dan Daniel, Chairman of the Readiness

Subcommittee, addressed both the advantages and concerns about the TAKX Pre-positioning Ship Program in his opening statement during a hearing on September 17, 1982. Below is a portion of his statement:

I would like to make a few brief observations about the TAKX charter and convert program. There is much to be said for it. According to the Navy, this initiative will meet a well-documented operational requirement to support three marine amphibious brigades in the Indian Ocean for less cost and more quickly than a regular procedure. Furthermore, the construction and conversion of these vessels in American shipyards will give a badly needed shot in the arm for the ailing U.S. ship building industry and declining merchant marine. Not only with this translate into more jobs, but also the retention of skilled workers and capabilities that are critical to the defense industrial base.

On the other hand, the committee has a number of concerns about the Navy's acquisition strategy. Foremost among them is the fact that the Navy's use of long-term leases effectively circumvents the congressional authorization/appropriations process and impedes timely and effective legislative review (Contract Award hearings, 1982, p. 1).

### **1. The Navy Testimony**

Honorable George A. Sawyer, Assistant Secretary for Shipbuilding and Logistics, Department of the Navy, and Mr. Everett Pyatt, one of Sawyer's staff, and Mr. Robert H. Conn, Comptroller of the Navy, all provided testimony and answered questions about the specifics of the MPS vessel lease proposal. Admiral Harold Shear, the Maritime Administrator, also appeared before the Readiness Subcommittee in support of the program. The Navy presented four key points to Congress in support of their decision to lease. These points were:

- Acquiring strategic capability with mobile pre-positioning ships with assist in dealing with emerging threats.
- Leasing is cost effective.
- The program provides enormous support to the ship building industry.
- Leasing allows the Navy to acquire the vessels without the upfront costs of purchasing.

In support of the decision to lease, Mr. Sawyer testified to the strategic importance of the program and how it had been reviewed and endorsed by John Lehman, Secretary of the Navy, as well as members of Congress and the White House. Below is an excerpt from his testimony:

Moreover, the specific acquisition method, which we are presenting to you today, has had careful and rigorous congressional review commencing in March of this year when I gave my last presentation before this committee. I believe it has had many hours of analysis and review by members of your staff and other committee staffs as well as my staff members, including a review by the investigation staff of the House Appropriations Committee (Contract Award hearing, 1982, p. 7).

Mr. Sawyer also presented written endorsements from three important congressional committees including the Committee on Appropriations from both the House and Senate, and the Subcommittee on Defense, supporting the lease proposal.

To ensure members of the Subcommittee understood the specifics of the lease and the types of vessels to be leased, Mr. Sawyer also presented important facts and descriptions of the capabilities of the MPS vessels. Below is testimony from Mr. Sawyer concerning the vessels capabilities:

As you may know and as I presented to you in March, Mr. Chairman, the ships involved are large combination roll on/roll off self-sustaining container and break-bulk ships. As such these represent bottoms or tonnage which is somewhat different than what is available in the current U.S. Flag merchant marine, in that they can handle a wide variety of cargoes called spread loadings in terms of logistics and also have extensive self-sustaining capabilities so they can basically handle and load and unload in unimproved areas, including even in a roadstead itself.

Based on the proposals we have received, we have selected 13 ship group offerings from three owner offer or groups. Five of these will be conversions of essentially new tonnage with the older ship having been delivered in 1979. Ten of the ships will be new builds.

Ten ships are powered by state-of-the-art, efficient diesel plants. Conditional awards have been made, pending only congressional approval, with the first six of these ships being firm, with options for the remaining

seven. It is important to note that all ships will be U.S. flagged, U.S. owned and operated, and manned by civilian crews (Contract Award hearing, 1982, p. 8).

Mr. Sawyer also pointed to the fact that the lease option allowed the ships to be available two years earlier than if purchased, and that the costs of the conversions and construction would be borne by private capital.

Before answering numerous questions on the specifics of the lease, Mr. Sawyer justified the utilization of commercial recourses to meet defense needs in the following testimony:

You may recall also my remarks that for the first time since before World War II the Navy has begun to acquire commercial type ships to fulfill maritime contingency requirements. It is a situation to be deplored, but we have concluded that the best way which the Navy should proceed is to maximally utilize the assets, resources and capabilities of our U.S. maritime sector.

The present TAKX program which we present to you is a partial solution to our basic logistics problems, but is totally consistent with the precept of utilizing commercial resources and current defense readiness objectives. It is ready for immediate initiation, subject to the concurrence of this committee (Contract Award hearing, 1982, p. 10).

In support of the Navy testimony, Admiral Harold Shear also testified before the subcommittee. Admiral Shear was the Maritime Administrator for the Department of the Navy. As the U.S. Maritime Administrator, Admiral Shear recognized the importance of the lease proposal to the U.S. Merchant Marine and shipbuilding industries. Obviously, this would translate into the creation of jobs in Congressional districts and was a key point in the importance of approving the proposal. An excerpt from Admiral Shear's testimony communicated the importance of the lease for the maritime industry:

The merchant marine is not in good condition today in any sense, and that includes the shipbuilding industry itself. On the commercial side, there is very little prospect for significant work in U.S. shipyards in the near future. The TAKX program provides significant amounts of work to a number of our most important shipyards that are critical to our shipbuilding base and mobilization base at a time when that is vitally needed, and several of these yards are in rock bottom condition. So it's a very healthy program from the aspect of critically needed work to our

important yards at a vital time. In addition to that, from a purely commercial side, this program is going to be, as Secretary Sawyer has noted, ships which are manned by civilian union crews, and this is going to be a significant impact with regard to expanding our seafaring personnel at a time when they are also friendly. So from a shipbuilding point of view, from an operating point of view, from a union labor point of view, this program is solid across the board, and it has my wholehearted support, and the Department of Transportation's wholehearted support (Contract Award hearing, 1982, p. 12).

## **2. Congressional Concerns on Leasing**

Members of the Readiness Subcommittee and professional staff members had several concerns regarding the Navy decision to lease MPS vessels. Concerns included assumptions and financial variables such as capital hire costs, interest rates, and long-term debt rates used to calculate the lease versus purchase analysis. Also, members were very concerned about the financial impact of leasing on the O&M account. O&M funds support a range of requirements, including maintenance of equipment and infrastructure; operations of military forces, excluding military pay; flying hours; and base operations (<http://www.dod.mil/comptroller/icenter/budget/budgtitles.htm>). O&M funding is one-year money that must be executed accordingly. The proposal of leasing prepositioned ships would now become a line item in the Navy O&M budget. Mr. Aspin, Representative from Wisconsin, and a Chairman of the House Armed Services Committee had the following statements and questions regarding the impact on the O&M account:

The other issue I would like to explore a little bit is the issue of O&M funding and what putting leasing into the O&M account does. The chairman said it very well in his opening statement. I was just reading through it, about the concern that people have about the large percentage of O&M funding that now is fixed funding and this adds yet another element to that for a nice long period of time.

O&M is one that always gets cut. I am not a member of this subcommittee but I know they have done a lot work in this area and found a lot of problems. In the normal budget cycle at the end of the year that is what gets cut because you are looking for outlays and the easiest things to do not to have a constituency.

How can we be sure that if we are going into these kinds of things that we are not going to be cutting O&M funds, we are not going to hurt readiness? (Contract Award hearing, 1982, p. 20).

Mr. Sawyer and Mr. Pyatt addressed Congressman Aspin's concerns by pointing out the fact that leasing represented 1.3% of the Navy's O&M account. Mr. Sawyer also pointed to the fact that "it (O&M) shows a continual constant dollar increase over the fiscal year DP up from 1983 through 1988" (Contract Award hearing, 1982, p. 21).

Mr. Sawyer presented the following O&M cost projection:

<b>TAKX 13-Ship Cost Projection</b>					
(\$ Millions)	<b>FY-84</b>	<b>FY-85</b>	<b>FY-86</b>	<b>FY-87</b>	<b>FY-88</b>
Capital Hire	1.6	93.3	192.3	201.2	201.2
Operating Hire	1	63.4	137.3	144.1	144.1
Fuel	0.3	16	34.8	38.5	40.8
Maintenance and Repair	0.1	7.8	27.3	18.5	31.2
Contingency	0.04	2.8	6.2	6.8	7.1
Sub Total	3.04	183.3	397.9	409.1	424.4
MSC Overhead	0.08	4.6	9.9	10.2	10.6
Totals	3.12	187.9	407.8	419.3	435

Table 4. Ship Cost Projection FY 84-88  
Source: Contract Award Hearing, 1982

Assumptions: FY84 – 3 ships (1 in Aug 84, 2 in Sep 84)

Capital/Operating costs are average 5-year costs

All costs are then year dollars

FY 85 – 11 ships (72 ship months)

FY 86 – 13 ships (149 ship months)

FY 87 & out – 13 ships, full year

Mr. Conn, the Navy Comptroller, explained how the Navy Industrial Fund would provide funding for the lease payments in the following excerpt from his testimony:

Mr. Aspin, basically the industrial fund is a management-type fund which we call a working capital fund, if you will, where revenues from the industrial operations go into this fund and bills and expenditures are paid out of the fund. In these operations, such as shipyards, naval aircraft repair facilities, ordnance plants, and the operations of MSC, there is a time lag between when the expenditure is incurred and the reimbursement

is actually received, so you have the industrial fund to act as the working capital to carry you through that period of time (Contract Award hearing, 1982, p. 25).

The following exchange by Mr. Schaffer and Mr. Conn explained how the NIF is reimbursed:

Mr. Schaffer. “Where are the revenues coming from to reimburse the industrial fund for the lease payments?”

Mr. Conn. “Those would come from the people who are going to order the ship operations from MSC. In this case, it would be the fleets” (Contract Award hearing, 1982, p. 26-27).

After all testimony was heard, final concerns were expressed about how leasing circumvents congressional control. Mr. Dan Daniel stated that, “...the requirement for the program is valid and the committee interposes no objection to the Navy’s entering into contracts” for the TAKX program.

#### **D. REFLECTIONS ON THE DECISION TO LEASE**

During the early 1980s, limited guidelines existed for conducting lease versus purchase analyses. The financial assumptions made by the Argent Group and the Navy complied with all applicable federal regulations at the time. In 1999, the General Accounting Office (GAO) reviewed Navy decisions to lease MPS and presented their findings to the Subcommittee on Seapower, Committee on Armed Services, U.S. Senate. The report expressed concerns regarding budget authority needed to make long-term funding commitments and congressional concern about whether the NIF could adequately cover the total obligations that would accrue from these leases (GAO, April 1999, p.1). The GAO also raised concerns about the cost effectiveness of leasing. The report states:

When leasing decisions were made, there were limited standardized government wide guidelines for conducting lease versus purchase analyses. As a result, the studies used different assumptions and methodologies in analyzing the alternatives and drew different conclusions.

The differences between the studies’ conclusions are a result of different methodologies and assumptions regarding (1) tax revenues, (2) residual values, and (3) discount rates (GAO, April 1999, p. 2).

Specifically the report points to how tax revenues were accounted for in both studies.

The Navy reduced the total cost to the government of the lease by the taxes that would be paid on interest income received by the lenders that financed a portion of the ships acquisition. The committee's staff's methodology did not include these taxes as a source of government revenue (GAO, April 1999, p. 6).

The methodology used by the Navy in 1982 was acceptable under the then-existing guidelines regarding accounting for tax revenues. Another concern was the discount rate used by the Navy, which was the prescribed Office of Management and Budget discount rate, 10%. Subsequently, the GAO report believed that rate to be unrealistic. However, the Navy followed the correct procedures by using the OMB rate. The GAO stated that, "In our analysis, we used a discount rate based on the average yield on marketable Treasury obligation, which we believed was a better reflection of the governments true cost of borrowing funds" (April 1999, p. 7).

The report points to several changes that had happened since the 1982 decision to lease MPS vessels which made it more difficult to enter into long term lease arrangements. The Balanced Budget and Emergency Deficit Control Act of 1985, as amended by the Budget Enforcement Act of 1990 and the Omnibus Budget Reconciliation Act of 1993, established limits on federal government spending by creating spending caps on discretionary spending. Budget scorekeeping guidelines were established for lease-purchases, capital leases, and operating leases. According to the GAO report, "The current scorekeeping rules would require that the Navy request up-front budget authority for the estimated new present value of the government's total estimated legal obligations over the life of the contract" (April 1999, p. 8).

The report acknowledged the important fact that the decision to lease was not only based on costs. The decision also met the MPS vessel requirement without a large up front obligation and supported the declining maritime industry at the time. Financial decisions made over 20 years ago may be debated endlessly. However, the strategic decision to acquire MPS ships has since proven its value to the nation during times of conflict.

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## **IV. THE STRATEGIC ENVIRONMENT AND INTERESTS OF THE MAJOR STAKEHOLDERS**

### **A. INTRODUCTION**

To understand why the U.S. Congress, the Office of Management and Budget (OMB), the Department of Defense, the Department of the Navy, and the Maritime Industry supported appropriating funds for leasing of MPS ships, it is critical to understand the strategic environment and the vital interests of each of the stakeholders.

Elements of the strategic environment along with stakeholder interests provided the opportunity for the Navy to propose and eventually gain approval for the leasing option. Using the Robert's Strategic Environment Map model, this chapter will examine four strategic environmental factors: International Context, Cultural, Economic, and Political as well as actions by the major stakeholders involved in the decision to lease MPS, and the Navy strategy for gaining their support and approval (Roberts, 2003)

### **B. THE STRATEGIC ENVIRONMENT**

Elements within the strategic environment, along with the national security setting, required changes in national defense structure as well as increased strategic mobility for U.S. forces. Examining the International Context will provide insight into the threats present in the early 1980s. In the wake of the fall of the Shah of Iran and the Soviet Invasion of Afghanistan, in January 1980, President Jimmy Carter proclaimed that any attempt by outside force to gain control of the region would be regarded as an assault on U.S. vital interests. To enforce the Carter Doctrine, he established the Rapid Deployment Joint Task Force (RDJTF) on March 1, 1980 (<http://www.globalsecurity.org/military/systems/ship/sealift.htm>). World threats led the President to demand a program that would cut transit time to the Persian Gulf for major power projection forces. The Near Term Prepositioning Force (NTPF) was established to increase inter-theater mobility to U.S. Central Command (USCENTCOM), the major command with responsibility for rapid deployment to Southwest Asia (<http://www.globalsecurity.org/military/systems/ship/sealift.htm>).

The NTPF created the operational requirement for MPS, which would support forward deployment of three marine amphibious brigades in the Indian Ocean.

Cultural factors were also present which facilitated the lease option. Secretary of the Navy, John Lehman, prioritized the procurement of combat ships in pursuit of the 600-ship Navy requirement to fight the Cold War and emerging threats. The Secretary also realized the strategic importance of prepositioning and acquisition of RO/RO ships. To pursue both goals with limited procurement dollars, the Navy proposed the lease option, which eliminated the large upfront outlay of procurement dollars that could be used to fund the higher priority combat ships.

Changes in Political factors were also important in acquiring MPS ships. The changing political landscape of the early 1980s led to a new focus on defense spending. When Ronald Reagan was elected President, he changed the strategic approach when dealing with the Soviet Union. He encouraged moving against détente and beyond containment, substituting the objective of encouraging “long-term political and military changes within the Soviet empire that will facilitate a more secure and peaceful world order,” according to an early 1981 Pentagon defense guide (Schweizer, 1986, p. 6). The new aggressive policy placed the U.S. on the offensive in regards to dealing with Soviets.

The instrument for putting pressure on the Soviet Union was Reagan’s massive defense build-up, which raised defense spending from \$134 billion in 1980 to \$304 billion in 1989 (<http://www.cbo.gov/showdoc.cfm?index=4035&sequence=0>). The defense build-up created jobs for the ailing defense industry, and therefore, Congress supported many of the defense programs proposed by the Reagan administration.

The Economic factors of the troubled Maritime Industry also played an important role in the approval of the lease. Edwin M Hood, President of the Shipbuilders Council of America, provided the following testimony presented to Congress in 1982:

... Most important, TAKX represents a vital contribution to salvaging a ravaged portion of the nation’s shipbuilding industrial base. With commercial shipbuilding orders migrating overseas, the TAKX ship programs remain the only viable near term option for those yards specializing in commercial work (Contract Award hearing, 1982, p. 4)

Additionally, The Economic Recovery Tax Act of 1981 contributed to the growth of leasing in the public and private sectors. Firms were taxed on their corporate profits net of the depreciation charges on their assets. Under the 1981 tax law, firms were able to

reduce their corporate tax liabilities by investing in assets and then taking both investment tax credit and accelerated depreciation charges. In the MPS example, the ship owners then leased the assets to government agencies (i.e., the Navy) that normally could not take advantage of the favorable tax treatment (<http://www.cbo.gov/showdoc.cfm?index=4035&sequence=0>).

### **C. THE INTEREST OF THE MAJOR STAKEHOLDERS**

The Department of the Navy success in gaining support for leasing MPS ships can be understood by examining the Navy relationship with the key stakeholders, namely, the Secretary of Defense, OMB, the Maritime Industry, and Congress. With the backing of the Secretary of Defense and the Reagan Administration, the Navy gained support from both the Maritime Industry and Congress by reconciling competing stakeholders' needs, addressing all concerns, and proving the leasing option was the best course of action to acquire MPS ships. The Navy used a range of tactics to gain support for their lease proposal, primarily coalition building and persuasion (Roberts & King, 1989). It is important to note however, that the GAO voiced opposition to the lease in 1983, after Congressional approval in 1982.

#### **1. Office of the Secretary of Defense**

In 1981, the primary concern of the Reagan Administration and the Secretary of Defense, Casper Weinberger, was to safeguard U.S. interests in Southwest Asia and deter Soviet aggression in that region (CBO Study, 1983, p. xiv). The RDJTF, created at the end of the Carter Administration, was the primary force that would initially be deployed to the Southwest Asia region in the event of Soviet aggression. Discussions between Congress and the Reagan administration centered on the size, mobility and the budget authority necessary to finance the RDJTF requirement. The Secretary of Defense recommendation on the size of the RDJTF was 440,000 troops, double the initial plan of 220,000 troops. The 440,000 RDJTF required mobility for 737,000 tons of unit equipment to be delivered in 30 days (CBO study, 1983, p. 29). Prepositioning of Army and Marine Corps forces was a primary strategy to meet deployment timelines. The requirement for the Marine Corps was to preposition three amphibious brigades. The MPS lease program supported this concept. To meet the 30 day deployment timeline, the

Secretary of Defense pushed for mobility improvements in airlift and sealift. In support of this, the Secretary of the Navy proposed MPS leasing to speed the availability of the vessels.

## **2. The Office of Management and Budget (OMB)**

OMB's predominant mission is to assist the President in overseeing the preparation of the federal budget and to supervise its administration in Executive Branch agencies. In helping to formulate the President's spending plans, OMB evaluates the effectiveness of agency programs, policies, and procedures, assesses competing funding demands among agencies, and sets funding priorities. In addition, OMB oversees and coordinates the Administration's procurement, financial management, information, and regulatory policies (<http://www.whitehouse.gov/omb/organization/role.html>). The OMB did not oppose the MPS lease arrangement. Tax benefits were in place at the time to benefit private investors, and based on the OMB discount rate, the leasing arrangement appeared to be the less expensive option. OMB did not oppose the lease because it allowed the Administration to meet its priorities of purchasing combat ships and also fund the MPS requirement. However, the growth of government leasing in 1980s forced OMB and Congress to enact the Budget Enforcement Act (BEA) (1990) to more accurately score leasing arrangements. The BEA scoring rule requires agencies to include Budget Authority for the full cost of lease-purchases and other capital leases up-front in the budget in the first year of the transaction

## **3. The Navy Strategy**

Coalition building was one strategy used by the Navy to gain support for the MPS lease program. As discussed in Chapter III, the Navy engaged the Argent Group Ltd. to assist the Navy in examining proposals for the lease or purchase of ships for prepositioning. The Argent Group's in-depth analysis provided the Navy with financial facts to support the claim that financing the ships by long-term charter was less costly than purchasing. Armed with financial analysis, The Navy set out to gain, and received support from, key Congressional members. The Navy received letters of endorsement from: Ted Stevens, Chairman Senate Subcommittee on Defense; Joseph P. Addabbo, Chairman Defense Subcommittee, Senate Committee on Appropriations; and John

Tower, House Committee on Appropriations. The Navy also had the support of the Shipbuilders Council of America. Mr. Edwin Hood, President of the Shipbuilders Council of America, drafted a letter to Melvin Price, Chairman of the House Committee on Armed Services, endorsing the Navy strategy of leasing prepositioning vessels. Below is an excerpt from this letter:

...Our membership, composed of major shipyards and ship component manufacturers in all sections of the country, strongly endorses these requests and most respectfully urges your favorable consideration.

Our endorsement and appeal is based on the realities of today's circumstances: the ships are urgently needed for Military Sealift Command missions, and a significant segment of the U.S. shipbuilding industry urgently needs work (Contract Award hearing, 1982, p. 32).

Persuasion was another tactic employed by the Navy to gain approval for the lease option. With support of key Congressmen and the Shipbuilders Council, the Navy testified in front of the House Committee on Armed Services, Readiness Subcommittee. The purpose of the testimony was to persuade the Committee that the lease option was the right acquisition strategy and to quell Congressional concerns about the cost effectiveness, impact on the O&M account, and Congressional review of lease procedures. On August 17, 1982, the Navy informed Congress of its intention to award contracts to General Dynamics Corp., Maersk Lines Ltd., and Waterman Steamship Corp., which translated into jobs at the following shipyards: Bethlehem Steel, Beaumont, TX; Bethlehem Steel, Sparrows Point, MD; and National Steel & Shipbuilding Co., San Diego, CA. The Navy progress with the lease proposal concerned members of Congress who felt the lease circumvented the congressional authorization/appropriation process. Testimony provided by George Sawyer, Assistant Secretary of the Navy for Shipbuilding and Logistics, and Principle Deputy, Everett Pyatt, persuaded the Readiness Subcommittee that the lease was not only cost effective but the right approach given the condition of the Maritime Industry and the requirement to acquire the MPS capability as soon as possible.

#### **4. The Maritime Industry**

Much has already been said about the poor state of the U.S. shipbuilding industry and declining merchant marine. However, to understand their relevance as a stakeholder, it is vital to understand the Maritime Industry's issues, concerns, and stakes. Issues include the economics of the industry, the relationship to national security, and the influence with Congress. Economics of the industry was the most important issue for the Maritime Industry. Disapproval by Congress of the Navy lease program would put several thousand shipbuilding and merchant marine jobs at stake. Therefore, it was imperative for the industry to form a coalition with the Navy to pressure Congress to support the program. The Shipbuilders Council of America expressed the following in a letter to the Chairman of the House Committee on Armed Services:

...Presently our naval shipbuilding workload is seriously diminishing as verified by recent Navy Department testimony before your Committee, and since 1979, employment rolls in this sector of our industry have been dropping at the disturbing rate of some 6,000 workers per year. These are, for the most part, skilled craftsmen who cannot be economically retained on the basis of projected future employment which may or may not materialize. These are journeymen who once lost to the shipyards can only be replaced at a cost of about \$25,000 each in terms firstly of severance and unemployment benefits followed by costly recruitment and training of substitutes when work volume is resumed (Contract Award hearing, 1982, p. 32).

The shipbuilding industry is also vital to national security. A long-standing goal of the Maritime Administration has always been sufficient intermodal shipping capacity for use by the Department of Defense in time of national emergency. The Shipbuilding Council felt it was important to remind Congress of this maritime goal in the following excerpt from the same letter:

By every indicator, the infrastructure of the shipbuilding base which has long been considered essential for mobilization purposes in the event of a national emergency is not being preserved, and positive action is imperative to reverse this disintegration of a necessary resource (Contract Award hearing, 1982, p. 33).

The reality was that the Navy MPS program would provide approximately 6,000 jobs in the shipbuilding, ship materials, and merchant marines. Also, the seafaring unions supported the program because it increased jobs that had been steadily declining.

## **5. Congress**

The federal government has long relied on leases as one way to obtain the use of buildings, equipment, and other forms of capital (<http://www.cbo.gov/showdoc.cfm?index=4035&sequence=0>). George Sawyer, Assistant secretary of the Navy for Shipbuilding and Logistics points to how leasing is quite common in government in testimony provided to the Readiness Subcommittee:

...The final point I want to make is that in terms of our ship operations and certain other areas, such as computers, buildings, even aircraft, chartering or leasing is not uncommon. It is a rather established practice in fact in the defense establishment. For example, in the case of MSC alone in terms of ship charters, build and charter programs or long term charter of 5-year intervals, there are numerous precedents dating back to the early 1960s (Contract Award hearing, 1982, p. 20).

With the lease option, the Navy presented an attractive, viable, cost effective method for acquiring prepositioning ships. The structure of the lease was particularly attractive because 70% of the debt was financed through the Federal Financing Bank (FFB), a wholly owned corporation of the U.S. that was created to make low-cost loans to federal agencies as well as non-federal borrowers whose loans were guaranteed against default. The Navy charter agreement was considered to be equivalent to guaranteeing the loan (<http://www.cbo.gov/showdoc.cfm?index=4035&sequence=0>). The FFB provided lower cost financing than a private sector bank could. However, Congressional leaders were concerned about the fact that the lease circumvented the normal Congressional authorization/appropriation process. The authorization/appropriation process is what provides Congress with much of its power. Dan Daniel, Chairman Readiness Subcommittee, House Committee on Armed Services, voiced this concern about long-term leasing in his opening statement of testimony on the prepositioning ships program:

Obviously, existing legislative procedures are not adequate for effective review of any future long-term leasing programs and new statutory mechanisms will have to be enacted to insure congressional involvement

prior to the release for proposal. Drafting and enacting such a legislative proposal will be a priority matter for this subcommittee in the next session of Congress (Contract Award hearing, 1982, p. 1).

Additionally, Congress was concerned about paying for the lease out of the O&M account. In testimony, senior Navy officials George Sawyer, and Everett Pyatt addressed Congressional concerns. The financial analysis, testimony, and the coalition formed by the Navy consisting of the Secretary of Defense, White House officials, the Shipbuilding Council of America, and several Congressional supporters were persuasive enough to gain final approval for the lease. Ultimately, the decision came down to weighing national security requirements and industrial based concerns against the Congressional concern over leasing and legislative review. The Navy presented a persuasive argument that the MPS lease represented a critical capability that was required to transform our national defense. Congress could not ignore the fact that the lease would bring jobs to Representatives' districts, and it would breathe life into the suffering shipbuilding industry.

#### **6. Government Accounting Office (GAO) and the Congressional Budget Office**

In 1982, budget authority and outlays for lease-purchase were recorded incrementally according to the terms of the lease and limited guidance was in place for performing detailed lease versus purchase analysis. Because lease payments could be spread over the useful life of the asset, leasing became an attractive option for costly capital assets. The testimony and cost analysis presented by the Navy in support of the lease quelled concerns from CBO and Congress. However, the GAO voiced their concerns after Congressional approval. The GAO contends that the lease was more costly than purchasing the vessels. As discussed in Chapter III, the difference between the Navy analysis and the GAO analysis centers on the discount rate used and residual values of the assets. As early as 1984, Congress, the GAO, and CBO implemented controls on leasing; however, the MPS lease was specifically exempted. Below is an excerpt from the 1984 Defense Authorization Act:

Prohibits the Secretary of a military department from contracting for the lease of an aircraft or naval vessel if the contract is for a long term or the termination liability of the United States is large. Requires any requests for such a leasing to be submitted to Congress by the Secretary of Defense and accompanied by an analysis of cost, including tax consequences, of leasing rather than direct procurement.

Requires the Director of the Office of Management and Budget (OMB) and the Secretary of the Treasury to evaluate such analysis within 30 days and report to Congress within 45 days of such analysis being submitted to Congress.

Directs the Director of OMB and the Secretary of the Treasury to issue joint guidelines to the Department of Defense setting forth the circumstances under which the Department may lease or charter rather than procure.

Directs the Secretary of Defense to report to the Armed Services and Appropriations Committees concerning a list and terms of all leases or charters entered into for a period of more than one year which comprise major items of defense equipment. Requires the report to also include funding levels and sources for each lease or charter.

Prohibits the use of funds for leasing or charter agreements of three years or more duration with an estimated termination liability in excess of 50 percent of the original purchase value of the vessel, aircraft, or vehicle involved. Exempts the acquisition by the Navy of the use of 13 T-AKX maritime prepositioning ships and the use of five new T-5 tankers. (<http://thomas.loc.gov/cgi-bin/bdquery/z?d098:SN00675:@@D&summ2=m&>)

#### **D. CONCLUSIONS ON STAKEHOLDERS INTERESTS**

This chapter has illustrated that the strategic environment in the early 1980s set the stage for the Navy to propose and gain approval for leasing MPS ships. The Navy proposal supported the Reagan Administration and the Secretary of Defense's goal for strategic mobility improvements. With their support, along with the support of the Maritime Industry, the Navy presented a convincing case to Congress for approval of the lease. Stakeholders' concerns were addressed by the Navy in testimony before Congress. Additionally, tax laws and limited guidance on lease versus purchase analysis ultimately favored the lease proposal. The lease also allowed MPS vessels to be delivered to the

Navy much quicker than the ordinary procurement process, and it provided thousands of jobs to the Maritime Industry. These factors convinced opponents to ultimately support the lease, which was a non-traditional financing method at the time.

## **V. A COMPARISON OF PROCUREMENT AND MANUFACTURING TIMELINES BETWEEN MARITIME PREPOSITIONING SHIPS AND TRADITIONAL UNITED STATES SHIPS**

In 1982, the U.S. Congress formally aligned with the Department of the Navy on the subject of the necessary acceleration to make MPS ships available to the armed forces. The hearings before the House of Representatives Committee on Appropriations Subcommittee on the Department of Defense stated that, “in view of the significant importance of the MPS program to a viable national military strategy, we are taking steps to accelerate its development while reducing near-term costs by relying on the U.S. Merchant Marine” (1982, pp. 86-87).

### **A. CATEGORIES OF SHIPS**

The purpose of this chapter is to analyze the timelines from the time a ship was awarded a contract by Congress to be built or leased to the time that it was available to the Navy or MSC for duty. There are differences in the way that the timelines are viewed, but on the aggregate, the message of the comparison is similar. For this topic, there are three categories of ships: the United States Ship (USS), United States Naval Ship (USNS), and Maritime Vessel (MV).

The first category is a United States Ship (USS), ships owned and operated by the Navy. The second category is a United States Naval Ship (USNS), ships owned by the Navy but under the cognizance of and operated by Military Sealift Command (MSC). The third category is the Maritime Vessel (MV), ships owned and operated by a private company or companies. The MV, while not owned by the government, is leased to the government and is under the operational control of MSC. One distinction between the three categories is that USS ships have to be commissioned to be ready for duty within the Navy, which normally takes a month or two longer for the ship to be available to the Navy to complete a mission. USNS and MV ships are not commissioned and only have to be delivered to be put into service.

## **B. PROCUREMENT VS. LEASE DATES**

Because the manufacturing of the ships, whether bought or leased, is the same, the assumption is made that any shipyard producing the same types of ships manufacture them at relatively the same speed. But the process of awarding contracts for procurement or lease is different. Table 5 illustrates the timelines between Award Date and Keel Laid Date in the case of the USS, USNS, and five of the MV class ships (T-AK 3008 – 3012) and the Award Date and the start of Conversion Date in the case of T-AK 3000 – 3007. One assumption that cannot be made is that all ships take the same amount of time to prepare to build and actually to be built. For this reason, two of every ship in class listed in Table 5 is presented as a comparison of like vessels that were awarded contracts at approximately the same time that the MPS ships were awarded.

### **1. Award Date to Keel Laid or Conversion Start Date**

These dates are significant because they show the amount of time that it took for the government process to award the contract and begin actual production of the ship. For most of the MV ships, the lease process from Award Date to Keel Laid or Conversion Start Date was much quicker for the Navy than was the procurement process of the USS and USNS ships. Table 6 shows the expeditious rate that many of the MV ships were started after their Award Date. The Conversion ship T-AK 3006 was started only 2 months after, the T-AK 3000 and 3001 were started only 4 months after, and T-AK 3005 and 3007 were started only 6 months after their Award Date.

While the other Conversion ships and New Construction ships were not started as quickly as those referred to above, with few exceptions, the rate at which they were started was still faster than the USS and USNS ships. Even starting from laying the Keel for the New Construction ships, T-AK 3008 and 3009 were started only 12 months after their Award Date. The Conversion ships T-AK 3002, T-AK 3003, and T-AK 3004 were started 13, 16, and 19 months after their Award Date respectively. The New Construction ships T-AK 3010, T-AK 3011, and T-AK 3012 were started 18, 21, and 26 months after their Award Date. To illustrate the overall quickness of the lease award process, Table 6 shows that USS and USNS ships ranged from 18 to 61 months with outliers of 5 months and 13 months from Award Date to Keel Laid Date.

The rapid award of all leased ship contracts was critical during this period with the need to get so many auxiliary ships into the fleet in so little time. The lease process was a much faster with better resolution to the problem of getting MPS ships in the fleet than could have been possible if the MPS ships were procured.

## **2. Conversion Start Date to Delivery Date (MPS only)**

This section is provided to illustrate the rapid production of ships and the ability of using commercial ships already in existence, and industry resources and expertise in shipbuilding, to deliver what the U.S. Navy needed at the time. Provided in Table 6, the total time between the Award Date and actual Delivery Date (MV or USNS) or Commission Date (USS) was much less for leased ships that were already in existence than for ships that had to be built from the keel to be ready to complete a Navy mission. The Conversion ships ranged from 17 to 26 months to be converted.

## **3. Keel Laid Date to Delivery or Commission Date**

This section is provided to illustrate the time that the shipyards took to build each type of ship. While there can not be direct comparisons of combatant ships and MPS ships built, the information in Table 6 does provide a comparison of the MPS ships and Oilers built from the keel. The time in which the shipyards built the MPS ships was more than seven months less in the samples provided in Table 6. The maximum time from Keel Laid to Delivery Date for MPS ships was the T-AK 3009 and 3011 each at 21 months while the Keel Laid to Delivery Date of T-AO 187 and 188 was each 28 months. This is not to say that all MPS ships were built faster than similar ships, but it is an example of how quickly they were able to be built from the keel compared with other Navy procured ships of a similar type, and arguably not as complex (Oiler vs. MPS).

Even the MPS ships that had to be built from the keel for the lease were available for duty much quicker than others with anywhere between 17 and 21 months to be built and delivered. While the building of a submarine, aircraft carrier, or any combatant ship, is expected to take longer than the building of a cargo-RO/RO ship, it should be recognized that even the Oilers procured by the Navy, that are similar in design to MPS ships, took longer through the entire process at 28 months from Keel Laid to Delivery Date, than did the MPS ships.

Perhaps the reason that they took longer was because of *how* the Navy told the shipyards that they had to be built rather than telling the shipyard *what* they wanted and then allowing the shipyard to provide the product. (See Chapter V Section B.5.)

#### **4. Total Months from Award to Delivery or Commission Date**

This section is provided to show the overall timelines from the Contact Award Date to the time that the ship was Delivered (MV or USNS) or Commissioned (USS). It provides little data for comparison across all classes of ships, but it does provide an overall idea of the amount of time that it takes for a ship to be authorized and built. As mentioned in the section 3 above, there is a small advantage in overall time for the ship to be built between the MPS ships and the USNS ships that were built from the keel. From Award Date to Delivery Date, the longest time for an MPS ship was 44 months while the longest time for a USNS ship was 51 months, a difference of 7 months.

#### **5. Advantages of Industry**

As referred to in section 3 of this chapter, when the MPS ships were built, they were built under a different set of plans or through different guidance. The Navy did not specify *How* the ships were to be built. The Navy only specified *what* needed to be built in the ship. This is a different strategy than what was used in that period. In the 21<sup>st</sup> century, DOD is moving much more in this direction. DOD is now telling industry *what* they want built instead of *how* to build it. This allows industry to use components and systems that are already produced, for example MPS ships that were previously built, which reduces both time and costs. The MPS ships were perhaps one of the first experiments to provide this process. To further emphasize this point, the 97<sup>th</sup> Congress, Second Session, stated in the Hearings before the House of Representatives Committee on Appropriations, that, “for once we are telling industry what it is we want done – not how to do it. We are relying on the private sector for proposals that are imaginative both in terms of ship design and financial management” (1982, p. 87). Without the leasing process and the cooperation and assistance of private industry, the speed at which the ships were built and delivered could not have happened.

Owner/ Lessee	Type	Ship Name	Hull	Award Date	Keel Laid	Launched	Start Conversion	Delivered / In service	Commission
Navy	USS	ALASKA *	SSBN 732	27 Feb 1978	09 Mar 1983	12 Jan 1985		26 Nov 1985	26 Jan 1986
Navy	USS	NEVADA *	SSBN 733	07 Jan 1981	08 Aug 1983	14 Sep 1985		07 Aug 1986	16 Aug 1986
Navy	USS	FIRE *	DD 991	15 Jan 1975	06 Mar 1978	01 Mar 1979		05 Mar 1980	31 Mar 1980
Navy	USS	FLETCHER *	DD 992	15 Jan 1975	24 Apr 1978	16 Jun 1979		16 Jun 1980	12 Jul 1980
Navy	USS	THEODORE ROOSEVELT *	CVN 71	30 Sep 1980	31 Oct 1981	27 Oct 1984		17 Oct 1986	25 Oct 1986
Navy	USS	ABRAHAM LINCOLN *	CVN 72	27 Dec 1982	03 Nov 1984	13 Feb 1988		30 Oct 1989	11 Nov 1989
Navy	USS	CHICAGO *	SSN 721	13 Aug 1981	05 Jan 1983	13 Oct 1984		09 Oct 1986	27 Sep 1986
Navy	USS	KEY WEST *	SSN 722	13 Aug 1981	06 Jul 1983	20 Jul 1985		04 Sep 1987	12 Sep 1987
Navy	USS	VALLEY FORGE *	CG 50	28 Aug 1981	14 Apr 1983	23 June 1984		02 Dec 1985	18 Jan 1986
Navy	USS	THOMAS S. GATES *	CG 51	20 Mar 1982	31 Aug 1984	14 Dec 1985		22 Jun 1987	22 Aug 1987
Navy	USS	REUBEN JAMES *	FRG 57	22 Mar 1982	19 Nov 1983	08 Feb 1985		03 Mar 1986	22 Mar 1986
Navy	USS	SAMUEL B. ROBERTS *	FRG 58	22 Mar 1982	21 Mar 1984	08 Dec 1984		01 Apr 1986	12 Apr 1986
MSC	MV	CPL LOUIS J HAUGE, JR **	T-AK 3000	07 Sep 1982		3 Aug 1979	Jan 1983	07 Sep 1984	Non USS
MSC	MV	PFC WILLIAM B BAUGH ***	T-AK 3001	07 Sep 1982		1979	Jan 1983	30 Oct 1984	Non USS
MSC	MV	PFC JAMES ANDERSON, JR **	T-AK 3002	07 Sep 1982		23 Mar 1979	Oct 1983	26 Mar 1985	Non USS
MSC	MV	1st LT ALEX BONNYMAN **	T-AK 3003	07 Sep 1982		3 Aug 1979	Jan 1984	26 Sep 1985	Non USS
MSC	MV	PVT FRANKLIN J PHILLIPS **	T-AK 3004	07 Sep 1982		12 Oct 1979	Apr 1984	12 Sep 1985	Non USS
MSC	MV	SGT MATEJ KOCAK **	T-AK 3005	07 Sep 1982		14 Mar 1981	Mar 1983	05 Oct 1984	Non USS
MSC	MV	PFC EUGENE A OBREGON **	T-AK 3006	07 Sep 1982		01 Nov 1982	Nov 1982	15 Jan 1985	Non USS
MSC	MV	MAJ STEPHEN W PLESS **	T-AK 3007	07 Sep 1982		14 Mar 1983	Mar 1983	01 Mar 1985	Non USS
MSC	MV	2nd LT JOHN P BOBO **	T-AK 3008	07 Sep 1982	Sep 1983	19 Jan 1985	New Const	14 Feb 1985	Non USS
MSC	MV	PFC DEWAYNE T WILLIAMS **	T-AK 3009	07 Sep 1982	Sep 1983	18 Mar 1985	New Const	06 June 1985	Non USS
MSC	MV	1st LT BALDOMERO LOPEZ **	T-AK 3010	07 Sep 1982	Mar 1984	26 Oct 1985	New Const	20 Nov 1985	Non USS
MSC	MV	1st LT JACK LUMMUS **	T-AK 3011	07 Sep 1982	Jun 1984	22 Feb 1986	New Const	06 Mar 1986	Non USS
MSC	MV	SGT WILLIAM R BUTTON **	T-AK 3012	07 Sep 1982	Nov 1984	17 Mar 1986	New Const	18 May 1986	Non USS
Navy	USNS	HENRY J KAISER *	T-AO 187	12 Nov 1982	22 Aug 1984	05 Oct 1985		19 Dec 1986	Non USS
Navy	USNS	JOSHUA HUMPHREYS *	T-AO 188	20 Jan 1983	17 Dec 1984	22 Feb 1986		03 Apr 1987	Non USS
Navy	USS	FORT MCHENRY *	LSD 43	27 Jan 1983	10 June 1983	01 Feb 1986		24 Jul 1987	08 Aug 1987
Navy	USS	GUNSTON HALL *	LSD 44	21 Nov 1983	26 Mar 1986	27 Jun 1987		24 Feb 1989	22 Apr 1989
Navy	USS	ARLEIGH BURKE *	DDG 51	02 Apr 1995	06 Dec 1988	16 Sep 1989		29 Apr 1991	04 July 1991
Navy	USS	BARRY *	DDG 52	26 Mar 1987	26 Feb 1990	10 Mar 1991		19 Oct 1992	12 Dec 1992

Table 5. Procurement and Manufacturing Dates for all Leased Maritime Prepositioning and various U.S. Navy ships  
Sources: Award Dates for Maritime Prepositioning Ships (T-AK) from, Mr. Knutsen, Associate Counsel, MSC

\* Naval Vessel Register (<http://www.nvr.navy.mil/nvrships/NAME.HTM>)  
\*\* The Naval Institute Guide to the Ships and Aircraft of the U.S. Fleet, 17<sup>th</sup> Ed by Polmar.

Table 5 provides contract award and manufacturing dates for all Leased MPS ships and various United States Ships of comparable shipbuilding dates.

Owner/ Lessor	Type	Ship Name	Hull	Months between award date and keel laid or conversion start date	Months between conversion start date and delivery date	Months between keel laid date and delivery or commis- sion date	Total months
Navy	USS	ALASKA *	SSBN 732	61		34	95
Navy	USS	NEVADA *	SSBN 733	30		36	66
Navy	USS	PIPE *	DD 991	38		26	64
Navy	USS	FLETCHER *	DD 992	39		27	66
Navy	USS	THEODORE ROOSEVELT *	CVN 71	13		60	73
Navy	USS	ABRAHAM LINCOLN *	CVN 72	23		60	83
Navy	USS	CHICAGO *	SSN 721	16		44	60
Navy	USS	KEY WEST *	SSN 722	23		50	73
Navy	USS	VALLEY FORGE *	CG 50	18		33	51
Navy	USS	THOMAS S. GATES *	CG 51	27		36	63
Navy	USS	REUBEN JAMES *	FFG 57	20		28	48
Navy	USS	SAMUEL B. ROBERTS *	FFG 58	26		23	49
MSC	MV	CPL LOUIS J HAUGE, JR **	T-AK 3000	4	20		24
MSC	MV	PFC WILLIAM B BAUGH **	T-AK 3001	4	21		25
MSC	MV	PFC JAMES ANDERSON, JR **	T-AK 3002	13	17		30
MSC	MV	1st LT ALEX BONNYMAN **	T-AK 3003	16	20		36
MSC	MV	PVT FRANKLIN J PHILLIPS **	T-AK 3004	19	17		36
MSC	MV	SGT MATEJ KOCAK **	T-AK 3005	6	19		25
MSC	MV	PFC EUGENE A OBREGON **	T-AK 3006	2	26		28
MSC	MV	MAJ STEPHEN W PLESS **	T-AK 3007	6	24		30
MSC	MV	2nd LT JOHN P BOBO **	T-AK 3008	12		17	29
MSC	MV	PFC DEWAYNE T WILLIAMS **	T-AK 3009	12		21	33
MSC	MV	1st LT BALDOMERO LOPEZ **	T-AK 3010	18		20	38
MSC	MV	1st LT JACK LUMMUS **	T-AK 3011	21		21	42
MSC	MV	SGT WILLIAM R BUTTON **	T-AK 3012	26		18	44
Navy	USNS	HENRY J KAISER *	T-AO 187	21		28	49
Navy	USNS	JOSHUA HUMPHREYS *	T-AO 188	23		28	51
Navy	USS	FORT MCHENRY *	LSD 43	5		49	54
Navy	USS	GUNSTON HALL *	LSD 44	30		35	65
Navy	USS	ARLEIGH BURKE *	DDG 51	32		31	63
Navy	USS	BARRY *	DDG 52	33		34	67

Table 6. Months between Award Date and Delivery or Commission Date  
Source: Table 5.

This chapter has demonstrated that the MPS lease process from the inception of the Award Date to the final Delivery of the ship was faster than any other ship built, including USNS auxiliary ships. This innovative process provided the Navy with an immediate solution to putting many ships into the fleet two years earlier than could have

otherwise been performed. This achievement is monumental because of the long lead-time that is typically needed for Congressional approval and the actual building of a procured ship. Additionally and indirectly, as will be discussed in Chapter VI, the lease process provided the U.S. shipbuilding industry a way of keeping the shipyards vibrant and thousands of people employed. Due to the DOD and Congressional mindset during the 1980s about additions of such ships to the Navy fleet, it simply would not have been possible for the critically necessary 13 auxiliary ships to enter the fleet at that time without use of the leasing arrangement.

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## **VI. LESSONS LEARNED AND THE FUTURE OF LEASING**

### **A. LESSONS LEARNED**

The purpose of this project was to research, evaluate, analyze and provide a written document of the details of how and why the U.S. Congress, the Department of Defense, and the Department of the Navy supported and appropriated funds for the leasing of MPS ships that would be used to position critical combat equipment in strategic areas of the world. Through our research it has become evident that during the early 1980s elements in world events and politics lead to the requirement that the U.S. military change its more defensive posture and become more forward deployed. A prepositioning force became an operational requirement to provide inter-theater mobility and reduce response time for the delivery of urgently needed military equipment and supplies to a theater of operations during a war or contingency. To acquire this capability, the Department of the Navy proposed entering into contracts involving long-term leases for 13 vessels. The vessels would carry equipment and supplies for three marine amphibious brigades.

The strategy to lease was proposed because available procurement funds were needed for higher priority combat ships, and leasing arrangements allowed the Navy to acquire the support ships without a large, up-front obligation of procurement funds. In 1981, the Navy issued a request for proposal (RFP) that contemplated a build or convert and charter program to meet the 13-vessel requirement. Subject to Congressional approval, the Navy selected three offerors to convert and build vessels: General Dynamics Corp., Maersk Lines Ltd., and Waterman Steamship Corp. The Navy hired the Argent Group Ltd. to perform a thorough financial analysis to compare the costs of leasing versus purchasing the ships. Using cost data provided by the offerors, the Argent Group Ltd. examined prices, lease structures, tax incentives, depreciation, discount rates, and using a present value analysis concluded leasing to be a significant cost savings over purchasing. In 1999, the GAO would later question the methodology used to perform the lease versus purchase analysis stating that using a lower discount rate would have changed the result of the analysis in favor of purchasing. Nevertheless, the GAO report

states that, “The Navy complied with DOD requirements to perform lease versus purchase cost analysis in support of its long-term leasing decisions” (April 1999, p. 6)

Industrial base concerns were another factor in the decision to lease. Shipbuilding is vital to national security and the Maritime Industry was in decline during the early 1980’s. The MPS lease represented the prospect of approximately 9,600 jobs in the shipbuilding, ship materials, and merchant marine industries. The lease would generate approximately \$930 million in supporting businesses in 25 states. The Navy received support for MPS from the Shipbuilders Council of America who pressured Congress to approve the lease. Using the lease option, the three offerors could meet the requirement of converting and building the 13 vessels 2 years faster than the normal procurement process.

The Navy strategy of building a coalition and persuading key Congressional members was another factor which led to the approval of the lease option. Even though leasing has been used before for buildings and aircraft, barriers existed in Congress over its use to acquire capital assets, like ships. Congress was particularly concerned about how leasing skirts the normal authorization/appropriation process. Furthermore, Congress was concerned about using O&M funds to pay for the lease payments. This was a valid concern because O&M funding is discretionary and only good for one-year and these funds can be diverted if higher priorities arise. The Navy, with the support of the White House, Secretary of Defense, and key leaders in the Maritime Industry, presented a compelling case for approval of the lease. Congressional concerns over leasing were valid and Congress would in the future enact mechanisms that would ensure Congressional involvement prior to requests for proposal. However, the Navy overcame initial resistance and succeeded in persuading Congress to approve the MPS lease.

Since the early 1980s, strategic mobility has become the focus of the DOD. The acquisition of prepositioning ships was a major step in increasing the U.S. capability to deploy forces to contingencies around the world. The Marine Corps deployment in the Gulf War was a confirmation of the efficacy of maritime prepositioning ships. The MPS squadron at Diego Garcia was ordered underway on 10 August, and it arrived in the port of Al Jubayl on the 16<sup>th</sup> (<http://www.globalsecurity.org/military/systems/ship/sealift->

[mps.htm](#)). Personnel from the 7<sup>th</sup> Marine Expeditionary Group (MEB) flew to meet their equipment and were in defensive positions in four days. During the Gulf War build-up, General Schwarzkopf remarked “When this war is over, the record must show that maintenance of our scarce national sealift assets is crucial if we are going to maintain a credible contingency force for the future” (Mears & Kim, 1994, p. 41). Afloat prepositioning continuous to be a key element in strategic mobility. The Marine Corps and the Army are planning to acquire additional ships to support prepositioning. The Marine Corps plans to expand the role of its Maritime Prepositioning Force. In the future, the Marine Prepositioning Force (Future) MPF(F) will enable sea based operations. The MPF(F) will expand its role by being more than a floating warehouse. The MPF(F) will provide at sea arrival and assembly, direct support of the assault echelon of the amphibious task force, indefinite sea-based sustainment of the landing force, and at sea reconstitution and redeployment of the force (<http://www.exwar.org/Htm/4020.htm>).

## **B. THE FUTURE OF LEASING**

Few will argue the necessary emphasis on enhancing strategic mobility through afloat prepositioning. With the Army and Marine Corps planning additional acquisitions of prepositioning ships, the question becomes is leasing still a viable option today?

Guidelines that existed in 1982 for conducting lease versus cost comparisons were not detailed and specific. Since the Navy decision to lease MPS ships, several changes have occurred. Congress has increased its visibility of and control over leasing decisions (GAO, April 1999, p. 7). Another change was the Deficit Reduction Act of 1984, which reduced the tax advantages available to owners of assets leased to the government. Budget scoring guidelines have increased the emphasis on up-front budget authority by providing Congress with a mechanism to assess the cumulative impact of long-term leasing decisions prior to the obligation of funds. Congress has established a number of statutory conditions and requirement for entering into long-term leases.

10 U.S.C. 2401 requires that:

- (A) The Secretary has been specifically authorized by law to make the contract;

(B) Before a solicitation for proposals for the contract was issued the Secretary notified the Committee on Armed Services and the Committee on Appropriations of the Senate and the Committee on Armed Services and the Committee on Appropriations of the House of Representatives of the Secretary's intention to issue such a solicitation; and

(C) The Secretary has notified those committees of the proposed contract and provided a detailed description of the terms of the proposed contract and a justification for entering into the proposed contract rather than providing for the lease, charter, or services involved through purchase of the vessel or aircraft to be used under the contract, and a period of 30 days of continuous session of

Congress has expired following the date on which notice was received by such committees.

#### Specific Provisions.1

Long-term lease or charter authority for certain double-hull tankers and oceanographic vessels

(A) Authority. The Secretary of the Navy may enter into a long-term lease or charter for any double-hull tanker or oceanographic vessel constructed in a United States shipyard after the date of the enactment of this Act using assistance provided under the National Shipbuilding Initiative.

(B) Conditions on obligation of funds. Unless budget authority is specifically provided in an appropriations Act for the lease or charter of vessels pursuant to subsection (a), the Secretary may not enter into a contract for a lease or charter pursuant to that subsection unless the contract includes the following provisions:

(1) A statement that the obligation of the United States to make payments under the contract in any fiscal year is subject to appropriations being provided specifically for that fiscal year and specifically for that lease or charter or that kind of vessel lease or charter.

(2) A commitment to obligate the necessary amount for each fiscal year covered by the contract when and to the extent that funds are appropriated for that lease or charter, or that kind of lease or charter, for that fiscal year.

(3) A statement that such a commitment given under paragraph (2) does not constitute an obligation of the United States (<http://www.marad.dot.gov/publications/complaw03/DOD%20Lease%20Authority.html>)

The implementation of these regulations has limited the use of leases as a means of financing capital assets. The key sections of the regulation requires the Secretary of the Navy to gain Congressional approval for leases and that lease contracts are subject to annual appropriations from Congress. These appropriations are subject to change based on Congressional funding priorities. OMB and GAO continue to support the concept that full funding, accounting for entire acquisition price up front, to be a best alternative for capital acquisitions. It may be observed that if the full funding approach is preferred as the most valid, then pricing of assets to be acquired in net present value terms should be undertaken -- but neither OMN nor GAO recognize this fact -- at least not at this time. However, this is not to say that leasing will never be a viable alternative for ship financing again. Leasing is currently being used by DOD to speed the replacement and renovation of its aging housing units through public-private ventures. The Veteran Administration received permission from Congress to enter into leasing contracts for land and buildings. However, the reality is that Congress and OMB have erected many barriers that inhibit the use of leases.

The Navy has continued to explore innovations in funding ship requirements. The Navy has been leasing foreign-built ships for 59 months, just one month shy of the five-year limit, and then initiating another lease deal for 59 months to meet long-term requirements. The short-term leases are less expensive, and this approach means the Navy has no need to seek funding authorization for the entire cost of the lease in the first year ([http://www.navyleague.org/sea\\_power/jun\\_04\\_06.php](http://www.navyleague.org/sea_power/jun_04_06.php)). The House of Representatives recently passed a bill that would limit foreign leases to one year, and the DOD is seeking to repeal the limit, stating the restriction would increase costs exponentially.

Were it not for the expeditious process of leasing the MPS ships, the U.S. would not have been as prepared for its then future conflicts such as Operation DESERT STORM. The very fact that the ships were leased provided the DON and DOD to have

the strategic lift capability in a matter of no more than three years. Chapter V illustrated that without the lease process, all 13 of the ships would not have been built as rapidly as they were. Furthermore, because of the budget constraints and competition of other combat vessels for dollars, they quite possibly would not have been built at all. The MPS lease provided the U.S. with a solution that has arguably had the most profound impact on a solution to its mission of global warfare. It is necessary that the leasing process continue to be available to DOD as the face of global warfare changes. The flexibility, security, and economic viability gained through the lease process should be contained within the U.S. government as an option for shipbuilding.

Additionally, advance appropriations and incremental funding are now being used in place of leases. The Navy is currently using the Navy Defense Sealift Fund, a revolving fund, for advance procurement of an \$80 million new construction large medium speed roll-on/roll-off (LMSR) ship. To meet the sealift requirements for today's National Security Strategy, the Navy must continue to explore innovative funding strategies to ensure the viability of the sea forces of tomorrow and the survival and competitiveness of the U.S. shipbuilding industry.

## APPENDIX A

### A. MARITIME PREPOSITIONING SHIPS (T-AK) (CONTAINER AND ROLL-ON/ROLL-OFF SHIP)

This appendix contains a description of the 13 leased MPS ships, their mission, photographs, specifications, and facts about each class of ship as well as a listing of ships in each class. “The MPSs have temperature and humidity controlled spaces for long-term cargo preservation. The mission of the MPS ships is to preposition vehicles, equipment, and supplies to provide support to the Marine Expeditionary Forces of the United States Marine Corps and be able to move that cargo to anywhere in the world. Each ship is RO/RO configured and capable of a self-sustained offload alongside a pier or in-stream” ([http://www.nvr.navy.mil/stat\\_23.htm](http://www.nvr.navy.mil/stat_23.htm)).

#### 1. The CPL. LOUIS J. HAUGE, JR. Class

“The CPL. LOUIS J. HAUGE, JR. class is the original class of MPS ships chartered by Military Sealift Command. The five ships are Maersk Line ships converted by Bethlehem Steel. During conversion, the ships gained an additional 157 feet amidships and a helicopter landing pad, among other things.” (<http://www.chinfo.navy.mil/navpalib/factfile/ships/ship-tak3.html> )

#### **Ships in the CPL. LOUIS J. HAUGE, JR. class:**

MV Cpl. Louis J. Hauge, Jr. (ex-MV Estelle Maersk) (T-AK 3000)  
MV PFC William B. Baugh (ex-MV Eleo Maersk) (T-AK 3001)  
MV PFC James Anderson, Jr. (ex-MV Emma Maersk) (T-AK 3002)  
MV 1st Lt. Alex Bonnyman (ex-MV Emilie Maersk) (T-AK 3003)  
MV Pvt. Franklin J. Phillips (ex-Pvt. Harry Fisher, ex-MV Evelyn Maersk) (T-AK 3004)

This class of “converted MPSs are generally similar to the KOCAM class but with two 36-ton cranes and four 30-ton cranes.” ([http://www.hazegray.org/worldnav/usa/aux\\_seal.htm](http://www.hazegray.org/worldnav/usa/aux_seal.htm))

#### **General Characteristics of MV Cpl. Louis J. Hauge, Jr. (T-AK 3000):**

**Builder:** Odense Staalskibsvaerft A/S, Lindo, Denmark

**Propulsion system:** 1 Sulzer 7RND76M diesel; 16,800hp; 1 shaft; bow thruster

**Propellers:** one

**Length:** 755 feet (230.1 meters)

**Beam:** 90 feet (27.43 meters)

**Draft:** 33 feet (10 meters)

**Displacement:** approx. 46,550 tons full load

**Speed:** 17.5 knots (20.14 mph)

**Aircraft:** helicopter platform only

**Armament:** none

**Capacity:**

120,080 sq. ft. vehicle

1,283,000 gallons petroleum

65,000 gallons water

332 TEU

**Crew:** 32 civilians, 10 technicians

**MV Cpl. Louis J. Hauge, Jr. (T-AK 3000)**



Figure 4. MV Cpl. Louis J. Hauge, Jr. (T-AK 3000)  
Source: <http://navysite.de/ak/ak3000.htm>

**1. MV CPL. LOUIS J. HAUGE, JR. (EX-MV ESTELLE MAERSK) (T-AK 3000)**

The CPL LOUIS J. HAUGE JR is operated by Maersk Line.

**Specific Characteristics of MV Cpl. Louis J. Hauge, Jr. (T-AK 3000):**

**Delivered:** October 1979

**Purchased by MARAD:** January 1983

**Conversion yard:** Bethlehem, Baltimore, Md.

**Conversion started:** January 1983

**Delivered:** September 1984

**Homeport:** Guam

## MV PFC William B. Baugh (T-AK 3001)



Figure 5. MV PFC William B. Baugh (T-AK 3001)

Source: <http://navysite.de/ak/ak3001.htm>

### 2. MV PFC WILLIAM B. BAUGH (EX-MV ELEO MAERSK) (T-AK 3001)

The PFC WILLIAM B. BAUGH is operated by Maersk Line.

#### **Specific Characteristics of MV PFC William B. Baugh (T-AK 3001):**

**Delivered:** April 1979

**Purchased by MARAD:** January 1983

**Conversion yard:** Bethlehem, Beaumont, Tx.

**Conversion started:** January 1983

**Delivered:** October 1984

**Homeport:** Mediterranean



Figure 6. MV PFC James Anderson, Jr. (T-AK 3002)  
Source: <http://navysite.de/ak/ak3002.htm>

### **3. MV PFC JAMES ANDERSON, JR. (EX-MV EMMA MAERSK) (T-AK 3002)**

The PFC JAMES ANDERSON JR is operated by Maersk Line.

#### **Specific Characteristics of MV PFC James Anderson, Jr. (T-AK 3002):**

**Delivered:** June 1979

**Purchased by MARAD:** October 1983

**Conversion yard:** Bethlehem, Baltimore, Md.

**Conversion started:** October 1983

**Delivered:** March 1985

**Homeport:** Guam



Figure 7. MV 1st Lt. Alex Bonnyman (T-AK 3003)  
Source: <http://navysite.de/ak/ak3003.htm>

#### **4. MV 1ST LT. ALEX BONNYMAN (EX-MV EMILIE MAERSK) (T-AK 3003)**

The 1ST LT ALEX BONNYMAN is operated by Maersk Line.

##### **Specific Characteristics of MV 1st Lt. Alex Bonnyman (T-AK 3003):**

**Delivered:** January 1980

**Purchased by MARAD:** January 1984

**Conversion yard:** Bethlehem, Beaumont, Tx.

**Conversion started:** January 1984

**Delivered:** September 1985

**Homeport:** Guam



Figure 8. MV Pvt. Franklin J. Phillips (T-AK 3004)  
Source: <http://navysite.de/ak/ak3004.htm>

**5. MV PVT. FRANKLIN J. PHILLIPS (EX-PVT. HARRY FISHER, EX-MV EVELYN MAERSK) (T-AK 3004)**

The PVT FRANKLIN J. PHILLIPS is operated by Maersk Line.

**Specific Characteristics of MV Pvt. Franklin J. Phillips (T-AK 3004):**

**Delivered:** January 1980

**Purchased by MARAD:** January 1984

**Conversion yard:** Bethlehem, Baltimore, Md.

**Conversion started:** January 1984

**Delivered:** September 1985

**Homeport:** Diego Garcia

## 2. The SGT. MATEJ KOCAK Class

“The SGT. MATEJ KOCAK class, the second class of MPS ships chartered by MSC, also gained 157 feet amidships and a helicopter landing platform after conversion. These ships, delivered to MSC in the mid-1980s, are National Steel and Shipbuilding, San Diego, conversion ships owned and operated by Waterman Steamship Corp.”  
([www.chinfo.navy.mil/navpalib/factfile/ships/ship-tak3.html](http://www.chinfo.navy.mil/navpalib/factfile/ships/ship-tak3.html))

### **Ships in the MV SGT. MATEJ KOCAK class:**

MV Sgt. Matej Kocak (Ex-SS John B. Waterman) (T-AK 3005)

MV PFC Eugene A. Obregon (ex-SS Thomas Heywood) (T-AK 3006)

MV Maj. Stephen W. Pless (ex-SS Charles Carroll) (T-AK 3007)

### **General Characteristics of Sgt. Matej Kocak (T-AK 3005) class:**

**Conversion yard:** National Steel and Shipbuilding, San Diego, CA

**Propulsion system:** Steam turbines (, 2 boilers

**Propellers:** one

**Length:** 821.5 feet (250.4 meters)

**Beam:** 105.6 feet (32.2 meters)

**Draft:** 33.1 feet (10.1 meters)

**Displacement:** approx. 48,750 tons full load

**Speed:** 20 knots (23.02 mph)

**Aircraft:** helicopter platform only

**Armament:** none

### **Capacity:**

152,524 sq. ft. vehicle

1,544,000 gallons petroleum

94,780 gallons water

540 TEU

**Crew:** 34 civilians, 10 technicians



Figure 9. MV Sgt. Matej Kocak (T-AK 3005)  
Source: <http://navysite.de/ak/ak3005.htm>

#### **6. MV SGT. MATEJ KOCAK (EX-SS JOHN B. WATERMAN) (T-AK 3005)**

The SGT. MATEJ KOCAK is operated by the Waterman Steamship Co.

**Specific Characteristics of MV Sgt. Matej Kocak (T-AK 3005):**

**Delivered:** March 1981

**Builder:** Pennsylvania SB Company, Chester, Pa.

**Purchased by MARAD:** December 1982

**Conversion started:** August 1983

**Delivered:** October 1984

**Homeport:** Diego Garcia



Figure 10. MV PFC Eugene A. Obregon (T-AK 3006)  
Source: <http://navysite.de/ak/ak3006.htm>

#### **7. MV PFC EUGENE A. OBREGON (EX-SS THOMAS HEYWOOD) (T-AK 3006)**

The PFC. EUGENE A. OBREGON is operated by the Waterman Steamship Co.

##### **Specific Characteristics of MV PFC Eugene A. Obregon (T-AK 3006):**

**Delivered:** November 1982

**Builder:** Pennsylvania SB Company, Chester, Pa.

**Purchased by MARAD:** February 1983

**Conversion started:** January 1984

**Delivered:** January 1985

**Homeport:** Mediterranean

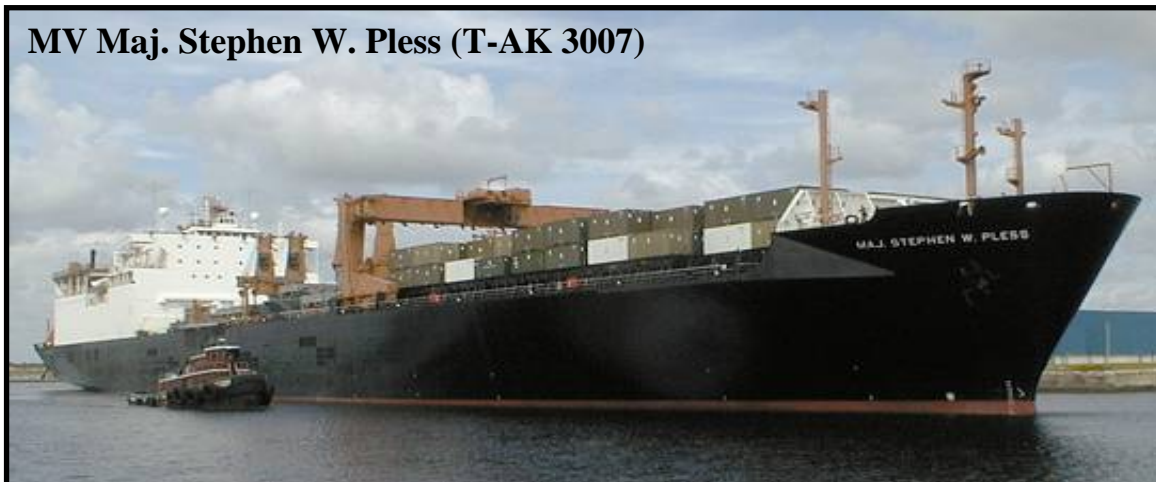


Figure 11. MV Maj. Stephen W. Pless (T-AK 3007)  
Source: <http://navysite.de/ak/ak3007.htm>

#### **8. MV MAJ. STEPHEN W. PLESS (EX-SS CHARLES CARROLL) (T-AK 3007)**

The MAJ. STEPHEN W. PLESS is operated by the Waterman Steamship Co.

**Specific Characteristics of MV Maj. Stephen W. Pless (T-AK 3007):**

**Delivered:** March 1983

**Builder:** General Dynamics, Quincy, Mass.

**Purchased by MARAD:** May 1984

**Conversion started:** May 1984

**Delivered:** May 1985

**Homeport:** Guam

### 3. The 2<sup>ND</sup> LT. JOHN P. BOBO Class

“The 2ND LT. JOHN P. BOBO class ships are new construction ships delivered to MSC in the mid-1980s from General Dynamics, Quincy, Mass.”  
(<http://www.chinfo.navy.mil/navpalib/factfile/ships/ship-tak3.html>)

#### **Ships in the MV 2ND LT. JOHN P. BOBO class:**

MV 2nd Lt. John P. Bobo (T-AK 3008)  
MV PFC Dewayne T. Williams (T-AK 3009)  
MV 1st Lt. Baldomero Lopez (T-AK 3010)  
MV 1st Lt. Jack Lummus (T-AK 3011)  
MV Sgt. William R. Button (T-AK 3012)

“The Purpose-built MPS [are] generally similar to the other MPS classes. They have 5 39-ton cranes.” ([http://www.hazegray.org/worldnav/usa/aux\\_seal.htm](http://www.hazegray.org/worldnav/usa/aux_seal.htm))

#### **General Characteristics of 2nd Lt. John P. Bobo (T-AK 3008) class:**

**Builder:** General Dynamics, Quincy, Massachusetts

**Propulsion system:** 2 Stork-Wartsilia Werkspoor 16TM410 diesels; 27,000 hp sustained;  
1 shaft, bow thruster; 1,000 hp

**Propellers:** one

**Length:** 672.6 feet (205 meters)

**Beam:** 106 feet (32.3 meters)

**Draft:** 29.5 feet (9 meters)

**Displacement:** approx. 44,330 tons full load

**Speed:** 18 knots (20.71 mph)

**Aircraft:** helicopter platform only (certified to land up to CH-53E helicopters)

**Armament:** none

#### **Capacity:**

162,500 sq. ft. vehicle

1,605,000 gallons petroleum

81,700 gallons water

522 TEU

**Crew:** 8 US Navy personnel, 30 civilians and 25 civilian maintenance



Figure 12. MV 2nd Lt. John P. Bobo (T-AK 3008)  
Source: <http://navysite.de/ak/ak3008.htm>

### 9. MV 2ND LT. JOHN P. BOBO (T-AK 3008)

The 2ND LT. JOHN P. BOBO is operated by American Overseas Marine Corp.

**Specific Characteristics of MV 2nd Lt. John P. Bobo (T-AK 3008):**

**Keel laid:** September 1983

**Launched:** January 1985

**Delivered:** February 1985

**Homeport:** Mediterranean

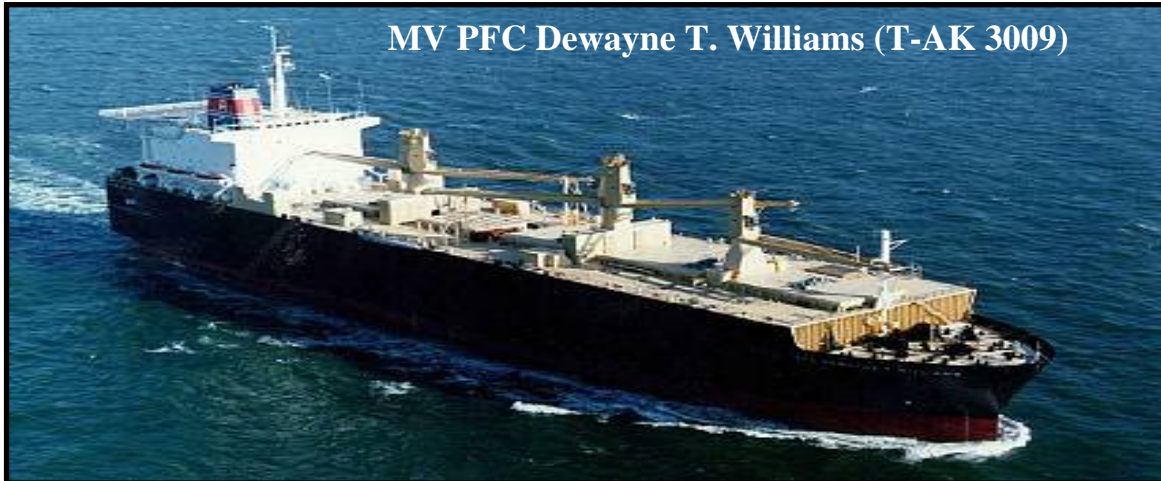


Figure 13. MV PFC Dewayne T. Williams (T-AK 3009)  
Source: <http://navysite.de/ak/ak3009.htm>

#### **10. MV PFC DEWAYNE T. WILLIAMS (T-AK 3009)**

The PFC DEWAYNE T. WILLIAMS is operated by American Overseas Marine Corp.

##### **Specific Characteristics MV PFC Dewayne T. Williams (T-AK 3009):**

**Keel laid:** September 1983

**Launched:** May 1985

**Delivered:** June 1985

**Homeport:** Mediterranean



Figure 14. MV 1st Lt. Baldomero Lopez (T-AK 3010)  
Source: <http://navysite.de/ak/ak3010.htm>

### **11. MV 1ST LT. BALDOMERO LOPEZ (T-AK 3010)**

**The 1ST LT. BALDOMERO LOPEZ** is operated by American Overseas Marine Corp.

**Specific Characteristics of MV 1st Lt. Baldomero Lopez (T-AK 3010):**

**Keel laid:** March 1984

**Launched:** October 1985

**Delivered:** November 1985

**Homeport:** Diego Garcia



Figure 15. MV 1st Lt. Jack Lummus (T-AK 3011)  
Source: <http://navysite.de/ak/ak3011.htm>

## 12. MV 1ST LT. JACK LUMMUS (T-AK 3011)

The 1ST LT. JACK LUMMUS is operated by American Overseas Marine Corp.

### **General Characteristics of MV 1st Lt. Jack Lummus (T-AK 3011):**

**Keel laid:** June 1984

**Christened:** February 22, 1986

**Delivered:** March 6, 1986

**Homeport:** Guam

**MV Sgt. William R. Button (T-AK 3012)**



Figure 16. MV Sgt. William R. Button (T-AK 3012)  
Source: <http://navysite.de/ak/ak3012.htm>

**13. MV SGT. WILLIAM R. BUTTON (T-AK 3012)**

The SGT. WILLIAM R. BUTTON operated by American Overseas Marine Corp.

**Specific Characteristics of MV Sgt. William R. Button (T-AK 3012):**

**Keel laid:** November 1984

**Christened:** May 1986

**Delivered:** June 1986

**Homeport:** Diego Garcia

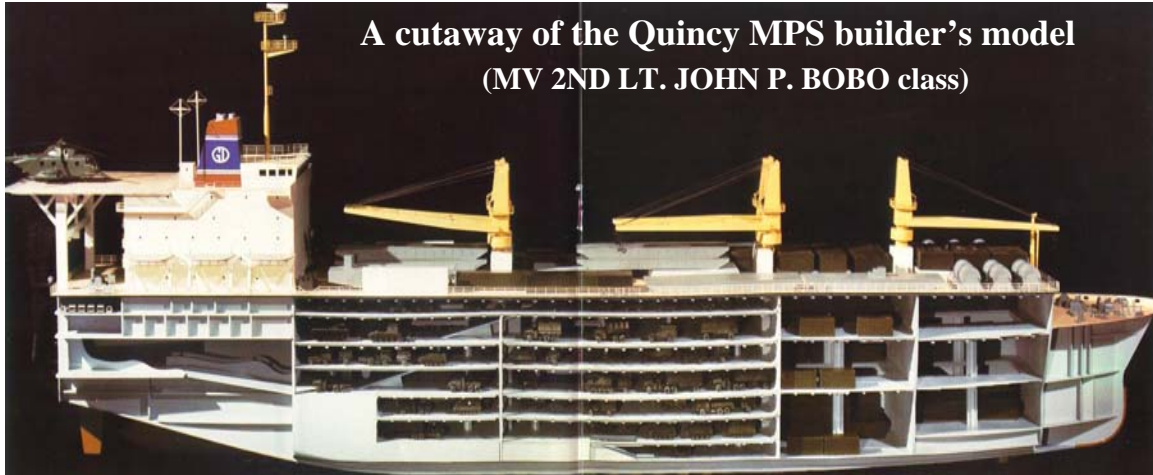


Figure 17. A cutaway of the Quincy MPS builder's model  
Source: <http://www.hazegray.org/shipbuilding/quincy/mps/concept.htm>

“The model shows seven vehicle decks filling the aft two-thirds of the ship, providing 150,000 square feet (approximately four acres) of space for vehicles. Forward of the vehicle decks, there are large holds for container stowage, which are supplemented by weather-decks container stowages. In addition, the ships carry over 1.6 million gallons of cargo fuels - gasoline, diesel, and jet fuel.”  
(<http://www.hazegray.org/shipbuilding/quincy/mps/concept.htm>)

## APPENDIX B

### A. DEFINITIONS, TONNAGES, AND EQUIVALENTS

**ACTIVE** - Ships currently in use or in an operating/readiness status.

**BALE CUBE** - The space available for cargo measured in cubic feet to the inside of the cargo battens, on the frames, and to the underside of the beams.

**BARREL** - 42 gallons, 5.615 cubic feet in volume.

**CARGO DEADWEIGHT** - Capacity is determined by deducting from total deadweight the weight of fuel, water, stores, dunnage, crew passengers, and other items necessary for use on a voyage.

**DEADWEIGHT** - The total lifting capacity of a ship expressed in tons of 2240 lbs. It is the difference between the displacement light and the displacement loaded.

**DISPLACEMENT, LIGHT** - The weight of the ship excluding cargo, fuel, ballast, stores, passengers, crew, but with water in boilers to steaming level. Displayed by default.

**DISPLACEMENT, LOADED** - The weight of the ship including cargo, passengers, fuel, water, stores, dunnage and such other items necessary for use on a voyage, which brings the ship down to her load draft.

**FOS** - Full Operating Status. Ships are fully operational, with complete crews aboard. Ships are FOS after they have been fully activated.

**GRAIN CUBE** - The maximum space available for cargo measured in cubic feet, the measurement being taken to the inside of the shell plating of the ship or to the outside of the frames and to the top of the beam or underside of the deck plating.

**\*GROSS TONNAGE** - The entire internal cubic capacity of the ship expressed in tons of 100 cubic feet to the ton, except certain spaces which are exempted, such as: (1) peak and other tanks for water ballast; (2) spaces above the uppermost continuous deck, such as: open forecastle, bridge and poop, certain light and air spaces, domes of skylights, condenser, anchor gear, steering gear, wheel house, galley and cabins for passengers.

**INACTIVE** - Ships identified are laid-up (non-operating/non-readiness status). The Reserve Fleet Inactive Summary includes ships under Headings for Title XI, MARAD and Navy.

**LONG TONS** - One long ton is equal to 2,240 pounds; used to measure petroleum products.

**LONG TON MILES** - One long ton transported one mile.

**MEASUREMENT TON** - Bale cubic in units of 40 cubic feet to the ton. A capacity of 10,000 M/T is the same as 400,000 cubic feet.

**MEASUREMENT TON MILES** - One measurement ton transported one mile.

**\*NET TONNAGE** - The tonnage most frequently used for the calculation of tonnage taxes and the assessment of charges for wharfage and other port dues. Net tonnage is obtained by deducting from the gross tonnage, crew and navigating spaces and an allowance for the space occupied by the propelling machinery.

**ROS** - Reduced Operating Status. Ships in ROS have a small crew onboard to assure the readiness of propulsion and other primary systems if the need arises to activate the ship.

**\*\* TEU** - Twenty-Foot Equivalent Unit, the standard measure of container capacity. One TEU is a 20x8x8 foot standard intermodal container.

**WEIGHT TON** - Calculated as long ton (2,240 lbs.) Abbreviated W/T.

*\* Also referred to as Gross Register and Net Register Tonnage*

#### **Equivalents Used in Determining Capacities**

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<b>Fuel Oil</b>	37.23	cu. ft.	(15 API)	278.47 gals	6.63 bbls =	1 ton
<b>Diesel</b>	41.02	cu. ft.	(30 API)	306.90 gals	7.31 bbls =	1 ton
<b>Gasoline</b>	48.679	cu. ft.	(60 API)	364.17 gals	8.67 bbls =	1 ton
<b>Fresh Water</b>	36.0	cu. ft.	(10 API)	269.28 gals	.... bbls =	1 ton
<b>Salt Water</b>	35.0	cu. ft.	....	261.80 gals	.....	1 ton
<b>Coal</b>	45.0	cu. ft.	....	.....	.....	1 ton

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<http://www.msc.navy.mil/inventory/glossary.htm>

**\*\*** [http://www.hazegray.org/worldnav/usa/aux\\_seal.htm](http://www.hazegray.org/worldnav/usa/aux_seal.htm)

## APPENDIX C

### A. CLASSIFICATIONS/PREFIXS USED IN THE SHIP INVENTORY

MSC ships carry the prefix "T" before their normal hull numbers. SECNAV Instruction 5030.1L, dated 22 Jan 1993, provides classification for all naval ships and craft. Paragraph 3b, Special Instructions, states that "Letter prefixes shall be used in conjunction with classification symbols as follows: T -- To indicate that a government-owned or bareboat-chartered ship is assigned to Commander, Military Sealift Command (MSC) as a type commander.

**ACS** - Auxiliary Crane Ship  
**AD** - Destroyer Tender  
**AE** - Ammunition Ship  
**AF** - Refrigerated Cargo/Store Ship  
**AG** - Miscellaneous  
**AGDS** - Deep Submergence Support Ship  
**AGFF** - Auxiliary Fast Frigate  
**AGM** - Missile Range Instrumentation Ship  
**AGOR** - Ocean Research Ship  
**AGOS** - Ocean Surveillance Ship  
**AGR\*** - Radar Picket Ship  
**AGS** - Surveying Ship  
**AH** - Hospital Ship  
**AK** - Dry Cargo Ship  
**AKD** - Bulk Cargo Ship (Ore, Grain, Phosphate, etc.)  
**AKE** - Advanced Auxiliary Dry Cargo Ships  
**AKR** - Vehicle Cargo Ship  
**AKS\*** - General Stores Ship (fitted with bins)  
**AKTB** - Integrated Tug and Barge (Dry Cargo)  
**AKV** - Aircraft Cargo Ship  
**ANL\*** - Net Laying Ship  
**AO** - Oiler  
**AOE** - Fast Combat Support Ship  
**AOG** - Gasoline Tanker  
**AOT** - Tanker  
**AOTB** - Integrated Tug and Barge (Tanker)  
**AP** - Passenger, Comb. Passenger/Cargo Transport  
**AR** - Repair Ship  
**ARC** - Cable Repairing Ship  
**ARG** - Engine Repair, Internal Combustion Engine  
**ARS** - Salvage Ship

**ARV** - Aircraft Repair Ship  
**ARVH** - Aircraft Repair Ship (Helicopter)  
**AS** - Submarine Tender  
**ATF** - Fleet Ocean Tug  
**AVB** - Aviation Intermediate Maintenance & Supply  
**AW** - Distilling  
**FSS** - Fast Sealift Ship  
**GTS** - Gas Turbine Ship  
**HSV** - High Speed Vessel  
**IX** - Misc (Special Products: Wine, Liquefied Petroleum Gas, Chemicals, etc.)  
**LCC** - Amphibious Force Flagship  
**LKA** - Amphibious Cargo Ship  
**LMSR** - Large Medium Speed RO-RO  
**LPA** - Amphibious Transport  
**LST** - Tank Landing Ship  
**MCM** - Mine Countermeasures Ship  
**MPS** - Maritime Prepositioned Ship  
**MS** - Motor Ship  
**MV** - Motor Vessel  
**SS** - Steam Ship  
**USNS** - United States Naval Ship  
**YAG** - Miscellaneous Auxiliary

*\* Classification/Prefix no longer in use.*

<http://www.msc.navy.mil/inventory/glossary.htm>

## LIST OF REFERENCES

- (AFSE) Allied Forces Southern Europe. (2004). *Exercise Dynamic Mix 2002*. Retrieved November 17, 2004 from <http://www.afsouth.nato.int/exercises/Dynamic%20Mix%2002.htm>
- (APDFS) Asia-Pacific Defense FORUM Staff. (2004) *The Maritime Prepositioning Force and the U.S. Marines*. Retrieved November 17, 2004, from <http://forum.apan-info.net/spring99/mpf2.html>
- Argent Group LTD. (1982). *TAKX Maritime Prepositioning Ships, Relative Costs of Charter and Purchase, Supplemental Report*. Report presented to the House of Representatives, Committee on Armed Services, Readiness Subcommittee, Washington D.C., September 17, 1982.
- Brewer III, David L., U.S. Navy VADM. (2003). *Commander's Perspective. MSC Annual report 2003*. Retrieved November 17, 2004, from <http://www.msc.navy.mil/annualreport/2003/perspective.htm>
- Congressional Budget Office. (2003). *The Budgetary Treatment of Leases and Public/Private Ventures*. Retrieved November 17, 2004, from <http://www.cbo.gov/showdoc.cfm?index=4035&sequence=0>
- Congressional Budget Office. (1983). *Rapid Deployment Forces: Policy and Budgetary Implications*. Retrieved November 30, 2004 from <http://www.cbo.gov/ftpdocs/50xx/doc5057/doc07a.pdf>
- Contract Award Hearings. (1982). *Contract Awards for the Charter and Conversion of TAKX Prepositioning Ships Program: Hearings before the House of*

*Representatives, Committee on Armed Services, Readiness Subcommittee. 97<sup>th</sup> Congress. Testimony of Department of the Navy. U.S. Government, Washington DC. 1982.*

Department of Defense Authorization Act. (1984). *Bill, Summary, and Status of the 98<sup>th</sup> Congress*. Retrieved November 30, 2004, from <http://thomas.loc.gov/cgi-bin/bdquery/z?d098:SN00675:@@D&summ2=m&>

Expeditionary Warfare Directorate. (2004). *Transforming the Naval Expeditionary Warfare for a New Strategic Environment*. Retrieved November 17, 2004, from <http://www.exwar.org/Htm/4020.htm>

Federal Reserve. (November 2004). *Federal funds rate data*. Retrieved November 17, 2004, from <http://www.federalreserve.gov/releases/h15/data/a/fedfund.txt>

GlobalSecurity.org (2004). *Cobra Gold 02*. Retrieved November 17, 2004, from <http://www.globalsecurity.org/military/ops/cobra-gold.htm>

GlobalSecurity.org. (2004). *Maritime Prepositioning Ships (MPS)*. Retrieved November 17, 2004, from <http://www.globalsecurity.org/military/systems/ship/sealift-mps.htm>

GlobalSecurity.org. (2004). *Sealift*. Retrieved November 17, 2004, from <http://www.globalsecurity.org/military/systems/ship/sealift.htm>

Hazegray.org. (2003). *World Navies Today US, Navy Sealift Ships*. Retrieved November 17, 2004, from [http://www.hazegray.org/worldnav/usa/aux\\_seal.htm](http://www.hazegray.org/worldnav/usa/aux_seal.htm)

Hazegray.org (2003). *The MPS Program at Quincy Shipbuilding*. Retrieved November 17, 2004, from <http://www.hazegray.org/shipbuilding/quincy/mps/concept.htm>

Kim, T., Mears G.H. (1994). *Logistics: The Way Ahead*. Joint Force Quarterly, 4, 38-44.

Retrieved November 17, 2004, from

[http://www.dtic.mil/doctrine/jel/jfq\\_pubs/spring94.htm](http://www.dtic.mil/doctrine/jel/jfq_pubs/spring94.htm)

Klamper, A. (2004). *Just Ahead: A Tussle on Ship Leasing Practices*. Sea Power

Retrieved November 17, 2004, from

[http://www.navyleague.org/sea\\_power/jun\\_04\\_06.php](http://www.navyleague.org/sea_power/jun_04_06.php)

Maritime Administration. (2004). *DOD Lease Authority*. Retrieved November 17, 2004,

from

<http://www.marad.dot.gov/publications/complaw03/DOD%20Lease%20Authority.html>

McGlew, C. (April 2003). *MSC prepositioned forces get results*. Retrieved November 17,

2004, from <http://www.msc.navy.mil/sealift/2003/April/prepositioned.htm>

Mckay, M. R. (2004). *AMO played major role in sealift during Operation Iraqi Freedom*.

Retrieved November 17, 2004, from [http://www.amo-](http://www.amo-union.org/Newspaper/Morgue/5-2003/Sections/Views/Index.htm)

[union.org/Newspaper/Morgue/5-2003/Sections/Views/Index.htm](http://www.amo-union.org/Newspaper/Morgue/5-2003/Sections/Views/Index.htm)

Military Sealift Command. (2003). *2003 in Review, Commander's Perspective*. Retrieved

November 17, 2004, from

<http://www.msc.navy.mil/annualreport/2003/perspective.htm>

Military Sealift Command (2004). *2003 in Review, Prepositioning*. Retrieved November

17, 2004, from <http://www.msc.navy.mil/annualreport/2003/pm3.htm>

Military Sealift Command. (October 2004). *Fact Sheet, Maritime Prepositioning Ships*.

Retrieved November 17, 2004, from <http://www.msc.navy.mil/factsheet/apf.asp>

Military Sealift Command. (2004). *MPSRON One, Maritime Prepositioning Ship, Squadron One*. Retrieved November 17, 2004, from <http://www.msc.navy.mil/mpsone>

Military Sealift Command. (2004) *MPSRON One, The Maritime Prepositioning Force*. Retrieved November 17, 2004, from <http://www.msc.navy.mil/mpsone/factfile.asp>

Military Sealift Command. (2004). *MPSRON Three, Maritime Prepositioning ship, Squadron Three*. Retrieved November 17, 2004, from <http://www.msc.navy.mil/mpsthree>

Military Sealift Command. (2004). *MPSRON Two, Maritime Prepositioning ship, Squadron Two*. Retrieved November 17, 2004, from <http://www.msc.navy.mil/mpstwo>

Military Sealift Command. (April 2003). *MSC Prepositioned Forces get Results*. Retrieved November 17, 2004, from <http://www.msc.navy.mil/sealift/2003/April/prepositioned.htm>

Military Sealift Command. (2004). *Ship Inventory, Definitions, Tonnages, and Equivalents and Classifications/Prefixes Used in the Ship Inventory*. Retrieved November 17, 2004, from <http://www.msc.navy.mil/inventory/glossary.htm>

Naval Vessel Register (2004). *Maritime Prepositioning Ships (MPS)*. Retrieved November 17, 2004, from [http://www.nvr.navy.mil/stat\\_23.htm](http://www.nvr.navy.mil/stat_23.htm)

Naval Vessel Register (2004). *Naval Vessel Register*. Retrieved November 17, 2004, from <http://www.nvr.navy.mil/nvrships/NAME.HTM>

Navysite.de. (2004). *All leased Maritime Prepositioning Ships as listed in Appendix A.*

Retrieved November 17, 2004, from: <http://navysite.de/ak/ak3000.htm>;

<http://navysite.de/ak/ak3001.htm>; <http://navysite.de/ak/ak3002.htm>;

<http://navysite.de/ak/ak3003.htm>; <http://navysite.de/ak/ak3004.htm>;

<http://navysite.de/ak/ak3005.htm>; <http://navysite.de/ak/ak3006.htm>;

<http://navysite.de/ak/ak3007.htm>; <http://navysite.de/ak/ak3008.htm>;

<http://navysite.de/ak/ak3009.htm>; <http://navysite.de/ak/ak3010.htm>;

<http://navysite.de/ak/ak3011.htm>; <http://navysite.de/ak/ak3012.htm>

Office of Management and Budget. (2004). *OMB's Mission*. Retrieved November 30,

2004, from <http://www.whitehouse.gov/omb/organization/role.html>

OSC Comptroller i Center. (2004). *Department of Defense, Budget Titles, Operations*

*and Maintenance*. Retrieved November 17, 2004, from

<http://www.dod.mil/comptroller/icenter/budget/budgtitles.htm>

Pokrant, Marvin. (1999). *Desert Shield at Sea: What the Navy really did*. Westport,

Conn. Greenwood Press.

Polmar, Norman. (2001). *The Naval Institute Guide to the Ships and Aircraft of the U.S.*

*Fleet, 17<sup>th</sup> Edition*. Naval Institute Press, Annapolis, Maryland.

Roberts, N. (2003). *Strategic Environment Map, PAED Seminar*.

Roberts, N., King, P. (1989). *The Stakeholder Audit Goes Public*. Organizational

Dynamics. 63-79.

Schweizer, P. (1986). *Victory*. New York: Atlantic Monthly Press.

(SCDOD) Department of Defense Appropriations for 1983. (1982). *House of*

*Representatives Committee on Appropriations, Hearings before the Subcommittee*

- of the Department of Defense. 97<sup>th</sup> Congress, Second Session, Part 4. U.S. Government, Washington: 1982.*
- United States General Accounting Office. (June 1999). *Defense Acquisitions, Historical Analysis of Navy Ship Leases*. (GAO/NSIAD-99-125). Retrieved November 17, 2004, from <http://www.gao.gov/archive/1999/ns99125.pdf>
- United States General Accounting Office. (April 1999). *Defense Acquisition, Historical Insights Into Navy Ship Leasing*. (GAO/T-NSIAD-99-141). Retrieved November 17, 2004, from <http://www.gao.gov/archive/1999/ns99141t.pdf>
- United States Navy Office of Information. (2004). Maritime Prepositioning Ships - T-AK. Retrieved November 17, 2004, from <http://www.chinfo.navy.mil/navpalib/factfile/ships/ship-tak3.html>
- (USOCNO) United States Office of the Chief of Naval Operations. (1991). *The United States Navy in "Desert Shield" "Desert Storm" / Department of the Navy, Office of the Chief of Naval Operations*. Washington, DC: Washington.
- (VAMOSOC) Naval Visibility and Management of Operating and Support Costs. (28 February 2004). *Military Sealift Command (MSC), Users Manual*. Retrieved November 17, 2004, from [http://www.navyvamosc.com/docs/MSC\\_User\\_Manual\\_2004\\_02\\_28\\_Final.pdf](http://www.navyvamosc.com/docs/MSC_User_Manual_2004_02_28_Final.pdf)
- Vergun, D. (2002). *On-Scene Report: Outfitting the Operating Force Blount Island Command Equips Marines for Battle*. Retrieved November 17, 2004, from [http://www.navyleague.org/sea\\_power/may\\_02\\_13.php](http://www.navyleague.org/sea_power/may_02_13.php)

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