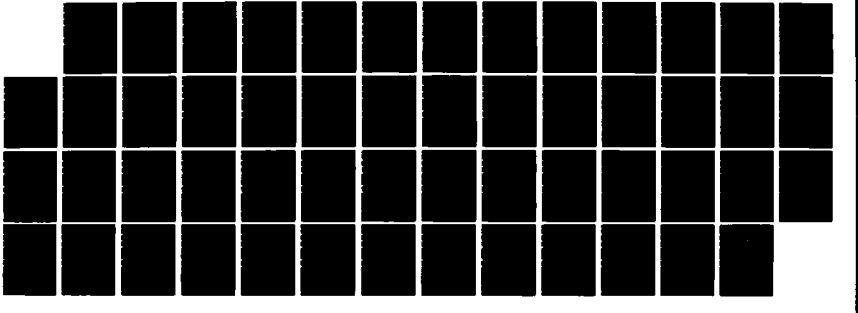
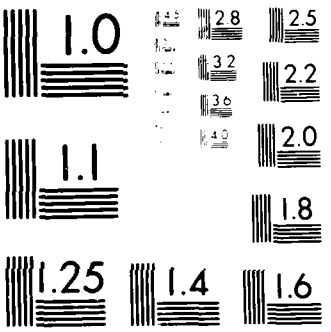
AD-A170 491 MANNING THE FOURTH ARM OF DEFENSE: TIME TO RESURRECT 1/1
THE US MARITIMNE SERVICE?(U) NAVAL WAR COLL NEWPORT RI
ADVANCED RESEARCH PROGRAM J A PESCHKA MAY 86
UNCLASSIFIED NWC/ARP-86-14 F/G 5/9 NL





(2)

MANNING THE FOURTH ARM OF DEFENSE: TIME TO RESURRECT THE U.S. MARITIME SERVICE?

by
Jerome A. Peschka, Jr.
Captain, U.S. Navy

NAVAL WAR COLLEGE
Newport, Rhode Island

30 May 1986

LASSIFIED

URITY CLASSIFICATION OF THIS PAGE

A170491

REPORT DOCUMENTATION PAGE

1a REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b RESTRICTIVE MARKINGS
2a SECURITY CLASSIFICATION AUTHORITY	3 DISTRIBUTION/AVAILABILITY OF REPORT Distribution unlimited
2b DECLASSIFICATION/DOWNGRADING SCHEDULE	
4 PERFORMING ORGANIZATION REPORT NUMBER(S) 86-14	5 MONITORING ORGANIZATION REPORT NUMBER(S)
6a NAME OF PERFORMING ORGANIZATION Advanced Research Program 6b OFFICE SYMBOL (If applicable)	7a NAME OF MONITORING ORGANIZATION
6c ADDRESS (City, State, and ZIP Code) Naval War College Newport, RI 02841-5010	7b ADDRESS (City, State, and ZIP Code)
8a NAME OF FUNDING/SPONSORING ORGANIZATION 8b OFFICE SYMBOL (If applicable)	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c ADDRESS (City, State, and ZIP Code)	10 SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO / PROJECT NO / TASK NO / WORK UNIT ACCESSION NO.

11 TITLE (Include Security Classification)
Manning the Fourth Arm of Defense: Time to Resurrect the U.S. Maritime Service?

12 PERSONAL AUTHOR(S)
Peschka, Jerome A., Jr., CAPT, USN

13a TYPE OF REPORT	13b TIME COVERED	14 DATE OF REPORT (Year, Month, Day)	15 PAGE COUNT
FINAL	FROM _____ TO _____	86, May,	50

16 SUPPLEMENTARY NOTATION

17 COSATI CODES			18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	US Merchant Marine, Ready Reserve Force, Merchant Mariners, Seafarers, US Maritime Service, Merchant Marine Manpower,

19 ABSTRACT (Continue on reverse if necessary and identify by block number)

This article addresses the subject of how to acquire, train, and administer merchant marine manpower. It recognizes that the current size of the merchant marine provides too few jobs to support expanded shipping requirements, such as the RRF, in a national emergency. The paper gives a brief description of trends in the industry, and explains how those trends have adversely affected manpower. It also points out the shortfalls with the proposed solutions not bing discussed in government, the industry, and labor. It closes by making the recommendation to use the US Maritime Service which is authorized in the Merchant Marine Act, 1936, and explained in Title 46, CFR. Proposed changes to update Title 46, CFR are also suggested.

20 DISTRIBUTION/AVAILABILITY OF ABSTRACT	21 ABSTRACT SECURITY CLASSIFICATION
XX UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS	UNCLASSIFIED
22a NAME OF RESPONSIBLE INDIVIDUAL Head, Advanced Research Program	22b TELEPHONE (Include Area Code) (401) 646-1444
	22c OFFICE SYMBOL 308

DD FORM 1473, 84 MAR 83 APR edition may be used until exhausted
All other editions are obsolete

SECURITY CLASSIFICATION OF THIS PAGE

☆U.S. Government Printing Office: 1988—638-012

20. Abstract (continued):
Key words cont: Merchant Marine Act, 1936, Title 46, Code of Federal Regulations

EXECUTIVE SUMMARY

The cornerstones of the National Strategy are Forward Deployment and Forward Defense. Men, equipment, supplies, and fuel will have to be transported to various parts of the globe for this strategy to be effective. Although troops can be expected to travel by air, 95% of the dry cargo requirements and 99% of the fuel requirements must still travel by sea. Thus, in order for a Forward Strategy to be a sound strategy, the nation must possess sufficient sealift to meet defense, industrial, and domestic war time needs.

Unfortunately economic forces in the market place have adversely affected the U.S. merchant marine so that it has been declining in size--and it continues to do so rapidly. To meet defense needs for shipping, several significant events have occurred, one of the most important being the establishment of an inventory of militarily useful ships, ready for sea on short notice. This force is called the Ready Reserve Force.

One of the effects of the declining U.S. flag fleet is that there are not now enough jobs available to maintain the pool of skilled people needed to fulfill Ready Reserve Force and other maritime manpower requirements in the event of a major conflict. As job opportunities have dwindled, more and more seafarers have sought stable employment ashore. One can mothball ships--but not seafarers.

This paper proposes a recommended means for acquiring, training, and administering a source of manpower to augment

union seafarers in order to meet national defense shipping needs. The paper is written so that those unfamiliar with the industry may understand the problem and the recommended solution. The first three chapters provide background material that describes trends in the industry and the impact of those trends on manpower. Chapter IV discusses many of the alternatives that are being considered for ensuring the availability of seafarers, and it concludes with this writer's recommendation to resurrect the U.S. Maritime Service. Chapter V recommends broad revisions to the 1940's version of the U.S. Maritime Service (Title 46 CFR) in order to make it compatible with today's circumstances.

Implementing an updated version of the U.S. Maritime Service as proposed in this paper makes sense for several reasons:

- It will provide a pool of readily available, skilled seafarers to augment the union workforce.
- It emphasizes recruitment among individuals with prior experience.
- It capitalizes on existing training facilities in the government, unions, industry, and maritime academies.
- It provides an organization capable of rapid expansion.
- It can be accomplished without interfering with union employment.

- It will not adversely affect labor-management efforts to reduce U.S. flag personnel costs.
- It provides a mechanism to maintain obsolete skills, such as yard and stay cargo rig operations and maintenance, cargo stowage and dunnaging, and nonautomated steam plant operations, which are no longer needed on modern ships but which are necessary to man the RRF ships.

A-1

PREFACE

This paper is the product of an academic effort conducted in the Advanced Research Program, Naval War College, Newport, Rhode Island.

Research resources are extensive at the Naval War College. However, when one addresses a topical subject, research can provide background, but one requires exposure to people actively engaged in issues to provide current insight.

Therefore, I would like to acknowledge the contributions made by several people who kindly assisted me in the development of this paper. I am particularly indebted to RADM John F. Aylmer, USMS, President, Massachusetts Maritime Academy; Captain E. V. Kelly, USNR-R, Special Assistant to the President, Marine Engineers Beneficial Association District 2; Mrs. Michelle Lewis, Director of Manpower and Personnel Management, Military Sealift Command; Mr. Robert Nevel, the President's Commission on the Merchant Marine and National Defense; Mr. Arthur Freiberg, Director, Office of Maritime Labor and Training, U.S. Maritime Administration; Mr. Frank Quarto, Deputy Director, Strategic Sealift Division, Office of the Chief of Naval Operations; and Mr. John Mason, Dean of Vocational Education, Seafarers Harry Lundeberg School of Seamanship.

I am particularly appreciative for the time, patience, and effort expended by my advisor, Professor Robert K. Reilly, Emory S. Land Chair of Merchant Marine Affairs, Naval

War College. He was instrumental in educating me in one of the often overlooked elements of sea power--the U.S. merchant marine.

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

An historical review of the conflicts in which the United States has been involved will consistently reveal the vital role played by the nation's "Fourth Arm of Defense"--the U.S. Merchant Marine.

The importance of the Merchant Marine is no less significant today than it was in the past. As long as the National Strategy is based on Forward Deployment and Forward Defense, shipping will be required. While most manpower may well travel by air, at least 95% of the cargo and 99% of the petroleum requirements must still travel by sea. Therefore, an adequately sized fleet of the proper characteristics must be readily available to surge initial supplies and equipment. Once in place, combat forces must be reinforced and resupplied. It is anticipated that merchant shipping will also be required to augment U.S. Navy Amphibious and Mobile Logistics Support Forces. And finally, economic shipping will be required to feed the nation's industrial base as well as to meet civil economic requirements.

The rapid decline of the U.S. flag merchant fleet has raised doubts as to the adequacy of the merchant marine to meet national defense requirements. The importance of the role of the merchant marine in defense is signified by the drastic action taken over the last several years to ensure the availability of sealift. For example, in 1984 the

Secretary of the Navy designated Strategic Sealift as the third function of the Navy. A new division, the Strategic Sealift Division (OP-42) with primary responsibilities for fulfilling the Strategic Sealift function, was established on the staff of the Chief of Naval Operations. Hundreds of millions of dollars are being expended to establish the Ready Reserve Force--a fleet of 136 militarily useful merchant ships that will be used to fulfill defense commitments.

Building a fleet of sufficient ships with the right characteristics and maintained in a status that permits immediate use is only part of the equation. In order to be of use, they must be manned by skilled seafarers. Unfortunately, the size of the active merchant marine has declined to a level at which the number of jobs available in the industry is insufficient to maintain an inventory of manpower adequate to meet all of the maritime requirements anticipated in a major conflict.

The size of the manpower shortfall is, as of this writing, unclear, although in most circles it is agreed that there are insufficient seafarers, in either numbers or skills. Significant effort is being expended to identify and validate manpower requirements, as well as to establish the number of active seafarers, so that the shortfall can be quantified. The current study, being conducted in Washington D.C., will tentatively conclude this summer.

In the meantime, of equal if not greater importance, is the issue of what to do once the manpower shortfall is

quantified. It is this topic that this paper will address. In so doing we will briefly review the state of the maritime industry, describe pertinent aspects of merchant marine manpower, address several alternatives, and finally, examine a recommended solution, the goal of which is to increase the available manpower pool without adversely affecting current employment opportunities or labor-management initiatives to reduce the high overhead costs characteristic of the U.S. Merchant Marine.

CHAPTER II

THE CURRENT STATE OF THE U.S. MERCHANT MARINE

There are many reasons for the present decline of the U.S. flag fleet. In today's worldwide market there is much more carrying capacity then there is cargo to be carried. This overtonnaging is true in all trades. Thus, the merchant fleets of all developed countries, whose standards of living directly impact on ship operator overhead costs, are the first to feel the effects of a shipping supply that is greater than demand. Overtonnaging causes ocean freight rates to fall drastically, and those operators who cannot financially keep their ships afloat, either lay-up ships, sell them, or reflag them. Because of high capital costs, rules, regulations, and standards, personnel costs, and tax considerations, many U.S. operators have for years registered their ships under Flags of Convenience.

The U.S. Merchant Marine is competing in a world market not characterized by free market principals. Competition ranges from companies whose parent nations provide strong direct and indirect subsidies to merchant fleets that are fully owned and operated by their governments. The Soviet state run merchant marine, for example, is challenging world shipping by offering freight rates in some trades below those established by conferences--perhaps below the point at which a profit can be made.

Third World countries seeking sources of hard currency, improved balance of payments, and jobs for their citizens have entered the industry. Not only do their lower operating costs allow them to continue to operate in a depressed freight rate environment, but the addition of their ships to a trade contributes to the circumstance in which cargo carrying capacity exceeds the amount of cargo available to be carried.

Today's ships are significantly larger than their predecessors, and therefore one ship can now carry what several ships used to carry. The introduction of fast turn around ships such as container ships, LASH, RO-RO, and SEABEE further reduces the number of ships required to participate in any particular trade. The commercial benefits of ships like these are directly opposed to defense needs. While much military cargo can be shipped in containers and barges, a significant amount must still travel in break-bulk ships, a class of ship that is no longer competitive in commercial trade. Therefore, the vast majority of ships inducted into the Ready Reserve Force has been, by necessity, dry cargo break-bulk ships. Twelve crane ships have been acquired to enable discharging container ships in forward areas without container crane facilities. About forty tankers will be included in the RRF to mitigate the lack of sufficient tankers with militarily useful characteristics in the U.S. merchant fleet.

It is these factors, working in consonance with one another, that have driven the size and constitution of the active U.S. Flag merchant fleet--a fleet inadequate in size and utility to meet U.S. forward defense requirements.

CHAPTER III

U.S. MERCHANT MARINE MANPOWER

TRENDS IN JOB AVAILABILITY

The shape of the U.S. Flag fleet has a direct bearing on the availability of skilled manpower necessary to man inactive ships. As the active fleet declines in size, the military requirement for the RRF increases. At the same time, there are fewer jobs in the active commercial fleet through which to rotate seafarers, which in turn reduces the pool of manpower from which one would draw seamen to man idle ships. To compound the problem, the majority of the RRF ships are of the older, more manpower intensive types that require many skills no longer used in the modern merchant marine. In order to meet all manning requirements anticipated in a national emergency, the available manpower pool must not only be sufficient in numbers, but it must also be constituted of men who are familiar with today's technology as well as yesterday's more basic skills. Consider for example the modern container ship manned with perhaps two dozen men. Her freight is stuffed into a container at a Container Freight Station remote from the ship's berth. The container may have been stuffed long before the ship arrived on berth to load. In a few hours, the containers will be loaded aboard ship into computor predetermined container cells by longshoremen operating technically advanced container cranes. Once underway, the fully automated steam or diesel plant will likely be

unattended except to perform corrective or preventive maintenance. Contrast this with an older break-bulk ship which might be manned with forty or more seafarers. Throughout her loading, the Chief Mate will be concerned with the proper rigging and operation of the ship's cargo booms and winches. He will strive to distribute his cargo in order to require equal off-loading time at each hatch at the port of discharge. He will be continuously concerned with the compatibility of the various types of cargo and with their proper stowage and dunnaging. When finally loaded, he and his deck force must then ensure that all cargo gear is secured for sea. Once underway, the Chief Engineer will preside over a watch organization made up of a licensed engineer and the several unlicensed engineers required to fire the steam plant. The engineer will also have to perform preventive and corrective maintenance.

In addition to technology, there are other factors that reduce the number of available jobs. Realizing that the U.S. merchant marine was rapidly being priced out of existence, labor unions have worked with management to reduce that part of overhead attributed to personnel costs in order to preserve maritime jobs. Not only have wages been reduced in some cases, but of greater importance to the issue at hand has been labor's willingness to negotiate reduced vacation times as well as smaller crew sizes. These efforts to help make the U.S. merchant marine more competitive are most admirable from a commercial view point; however, from a

defense point of view the effect is to reduce the number of people who cycle through a shipboard billet, and therefore the number of people available to be mobilized to meet national defense merchant marine requirements.

EMPLOYMENT IN THE INDUSTRY

The Merchant Marine is unique among industries in that it is an industry whose laborers are not directly employees of the firms for which they perform services. With the exceptions of the Masters and Chief Engineers, employment aboard ship is controlled by labor unions and administered in union hiring halls. Seniority plays a dominant role, not only in obtaining employment, but in acquiring the more favorable berths. As a result, accession into, and advancement within, the seagoing profession is relatively difficult. Furthermore, unlike the Armed Forces, there is neither an "up or out" policy nor mandatory retirement. Since an individual is not required to be promoted, he or she can continually serve at a level of their choice as long as they keep their certificates current, remain in favor with their union, and pass a physical examination. It is not uncommon to find individuals who are content to make a career as a particular level, such as Second Mate. It is also not uncommon to find people sailing at one level although they hold documents certifying their capability to sail at a higher level, e.g. a Second Mate who holds a Master's ticket. The practical effect of this stagnation is that upon mobilization, there is a ready

pool of people who are certified to be advanced to, and employed as senior deck officers and engineers, but there is no corresponding reservoir of experienced people available to move into entry level Second or Third Engineer or Mate berths. This is not to say that employment or advancement policies in the industry are wrong, but to point out that they tend to form a fairly static workforce in quantities sufficient to man tne active fleet but insufficient to man large numbers of the idled ships needed in the early stages of a major conflict. Constricted employment opportunities mean that few unlicensed seafarers enter the profession each year. Unions generally limit new membership to match anticipated losses due to retirement, death, and job change. Newly licensed officers, who are virtually all graduates of one of the six state maritime academies or the federal academy at Kings Point, encounter similar employment difficulties. The most persistent new entries who want to pursue seafaring as a vocation rather than just a job will ultimately find a berth. However, they will rarely walk out of school into a mate's or assistant engineer's berth. It is more common for them to have sailed several voyages in unlicensed positions before getting their first crack at a licensed job. One young man, a licensed Third Mate, is known to have made two voyages as an able-bodied seaman (AB) and one voyage as Boatswain before landing his first Third Mate's berth. Many other graduates opt to accept commissions in the Armed Services or to work in shoreside related jobs. But, for both licensed and

unlicensed personnel, as time passes and job opportunities remain tenuous, the desire for steady employment, family obligations, and the desire to advance ultimately draw many ashore never to sail again.

REVIEW

Sealift is integral to the National Strategy. As it became apparent that the U.S. Merchant Marine could neither provide the numbers of ships nor ships with military characteristics, the RRF was established. Because the fleet has contracted, employment opportunities have been reduced so that manning the RRF, as well as other wartime seafarer requirements, with the extant manpower pool is impossible. How should the nation deal with this problem? In Washington the wheels continue to turn to establish and refine requirements and to quantify the true extent of the shortfall. A final report detailing this information is expected this summer. We will concern ourselves with how to eliminate the shortfall. In the chapters that follow we will examine several alternatives and then consider in detail the recommended proposal for acquiring, training, and administering the manpower necessary to meet strategic and economic sealift requirements.

CHAPTER IV

SOME ALTERNATIVES FOR THE ESTABLISHMENT OF A SOURCE OF SEAFARERS TO AUGMENT THE ACTIVELY SAILING WORK FORCE

INTRODUCTION

The manpower problem is broader than just manning the Ready Reserve Force. The sum of personnel in the actively sailing work force and any augmentation pool must be of the size and quality to fill a broad range of requirements. To illustrate, consider these demands for seafarers. First, the U.S. flag fleet must be manned. This requirement does not stop at manning just the ocean going fleet because industrial, military, and civil demands will necessitate maintaining services on the Great Lakes, inland waters, coastwise trade, and in harbors. Secondly, Military Sealift Command ships must be manned. Third, manning the Ready Reserve Force must be accomplished in relatively short order. Additionally, manning at least some of the National Defense Reserve Force (NDRF) ships must be planned, and many authorities believe that the Effective United States Controlled (EUSC) fleet will have to be manned, at least to some extent, by U.S. citizens. Augmentation requirements, a touchy subject, must be considered. However touchy, there is no doubt that there are augmentation requirements. Merchant ships with two dozen or fewer in the crew must be augmented to provide additional lookouts, allow steaming the propulsion plant in the event that automation is lost or damaged, and to

permit some level of fire fighting and damage control effort. Loss of the large amount of cargo carried by today's ships due to a crew size insufficient to save a ship from fire or flooding might bear critically on the theater being supported. The Merchant Ship Naval Augmentation Program (MSNAP), a U.S. Navy program to equip selected merchant tankers and dry cargo ships with modular underway replenishment units to offset the current inadequate inventory of fleet oilers, ammunition ships, and stores ships will also serve to raise the requirement for merchant seamen competent in these uniquely military seafaring skills. Finally, consideration must be given to augmenting the Military Sealift Command's Naval Fleet Auxiliary Force (NFAF). NFAF performance in peacetime and limited contingencies is proven and unquestioned. However, if it is envisioned that NFAF ships and crews will operate continuously in high op-tempo environments, additional seafarers must augment the existing crews.

Manning to meet these requirements must be skilled and readily available. It is this writer's opinion that an adequate source of manpower, in numbers and skills, should exist to man all assets perceived to be required from the initiation of hostilities to the point at which a wartime manpower acquisition and training base has been organized and is producing seafarers. Existing shipping, both active and idle, and manpower, both active and standby, are the bridge that will permit sustaining the national military effort

until full mobilization can be attained. Anything less jeopardizes the National Strategy and, therefore, termination of the conflict on terms favorable to the United States.

Not all of these requirements need be met at the onset of hostilities. However, in order to man Ready Reserve Force ships categorized as available in five, ten, and twenty days, and Military Sealift Command Ships in five day Reduced Operating Status, skilled manpower must be immediately at hand. To meet even a portion of the other requirements previously described means that even more seafarers must be ready in a short period of time. The following paragraphs will discuss several of the alternatives that have been proposed for addressing the problem. The chapter will close with a recommendation to acquire, train, and administer the manpower necessary to meet the requirements previously discussed.

RETIRED MILITARY PERSONNEL

One oftenly cited source of manpower has been the rolls of personnel retired from the Armed Services. While it is true that there is a large number of people who are retired from the military, given the skills required aboard ship, only retirees from the U.S. Navy, U.S. Coast Guard, U.S. Army (watercraft experienced in the Transportation Corps), and the National Oceanographic and Atmospheric Administration (NOAA) are really valid candidates. However, only those with seagoing backgrounds as electricians, engineers, quartermasters, boatswains mates or experienced in cargo or

fuel handling, amphibious and Mobile Logistics Support Force operations, or some facet of marlinespike seamanship such as towing and salvage will truly be of value in building an augmentation force to man merchant type ships. Retired Navy commissioned officers are primarily Captains, Commanders, and Lieutenants Commander, with some numbers of Warrant Officers and Limited Duty Officers. Most retired enlisted men are Master Chief Petty Officers, Senior Chief Petty Officers, and Chief Petty Officers. Despite the large number of retired officers, few will possess the requisite backgrounds that lend themselves to rapid assimilation into the merchant service. Similar inhibitions occur among retired Navy enlisted men. Few Chief Petty Officers will take kindly to performing the duties of an AB or serving as a watertender or a burnerman on a boiler front. There is no doubt that there are some people and skills existing on the retired rolls that will be of value. However, their services could be better used aboard ships in the NDRF such as fleet oilers. Designating the retired military as the source of manpower to augment the active merchant marine work force would require extensive training subsequent to retirement. Such an action implies significant ramifications to the terms under which servicemen have heretofore retired. Probably the most compelling reason for not using retired military is that in the event of a major conflict requiring the mobilization of the nation's sealift assets, it is likely that retired military personnel would be recalled to active duty to serve in capacities that

capitalize on their skills and previous military experience. Those who are infirm or too old to be called to active duty are not serious candidates for manning the merchant marine.

U.S. NAVAL RESERVE

There are many who advocate using the Naval Reserve to man those ships that the active merchant marine labor work force cannot man. There is precedent for the Naval Reserve manning ships and moving oil and freight in support of the national defense. However, the circumstances that fostered that decision were different from today. In World War I, the United States was dragged into a war that had already been underway for three years. When it became apparent that the nation might become embroiled, merchant ships were assimilated into the Navy as an emergency measure becoming units of the Naval Overseas Transport Service (NOTS) and bearing the title "USS" before their names. Moreover, some of the merchant mariners became Naval Reservists on active duty. These men, and officers and men from the regular Navy, were augmented by graduates of hastily established deck, engineer, and stewards schools to fill out the force.[1] While NOTS transported a significant amount of tonnage in support of the allied effort, the vast majority of war material and economic support traveled in foreign flag ships due to the small U.S. Flag fleet. The nation now neither has the luxury of waiting until war is imminent to create an emergency fleet, nor of supporting an expanded peacetime Naval Reserve program with

its long term financial obligations for pay and pensions in this time of fiscal constraint.

Assigning this role to the Naval Reserve would involve a significant expansion of the present Reserve mission. While a basic infrastructure exists, little of the training required to man the merchant marine is common to the Navy. This would require the establishment and development of an entirely new training structure. Moreover, assigning this task to the Naval Reserve would cause an increase in the DOD budget as well as the necessity to seek Congressional approval for an increase in end--strength. Since at least a part of the required merchant marine manpower augmentation can be expected to be needed to man ships that must be ready for sea on a moments notice, there would be an impact on the 100,000 reservists that the President can call-up. Either legislation would have to be pursued to increase that number, or a reevaluation of the assignment of the reservists who makeup the 100,000 would have to be made.

No matter what program is ultimately selected to ensure adequate manning of the merchant marine, it is going to cost some money. At this time there are no totally free solutions. However, given the current interest in reducing the DOD budget, it would seem unwise to pursue an initiative, such as using the Naval Reserve to build a merchant marine manpower augmentation force, that would increase both the DOD budget and military end-strength.

INCREASE MILITARY SEALIFT COMMAND SEAFARER TO BILLET RATIO

Presently the Military Sealift Command (MSC) seafarer to billet ratio is about 1.25:1. This ratio allows an employee to come ashore following a period of sea service for the purposes of vacation, education, and training. It has been proposed that MSC hire more seagoing employees, thereby increasing the number of men who would cycle through a billet annually.

At first glance this alternative may seem attractive; however, there are several aspects of MSC's operations that mitigate against it. As the DOD Single Manager for Ocean Transportation, MSC is essentially a large steamship company that operates broad categories of ships in support of DOD customer demands. MSC's responsibilities are not limited to merely providing services: it must do so as economically as possible. While MSC is not in the profit making business, neither may it operate at a loss. Thus, MSC calculates rates for various services performed to maintain the MSC Naval Industrial Fund corpus. MSC's customers pay for services from appropriated funds. Therefore, increasing MSC seagoing manpower beyond the level necessary to efficiently perform operations will cause a requirement for increased rates charged the service customers, and thus increase the transportation portion of their Operations and Maintenance budgets. Moreover, to be effective the seafarer to billet ratio must be increased to a point where the extra seamen employed equals the shortfall. There is a problem with the

degree to which the seaferer to billet ratio can be increased. A merchant seamen is only paid for the actual time he is employed at sea. A reduction in sea time is a reduction in pay. Most people who repetitively seek employment with MSC do so because they enjoy the life and feel they receive adequate recompense for their services. There is likely a point, then, below which their sea time, and their wages, cannot be reduced before they seek more stable employment ashore. Since MSC seamen are union members, they could compete for commercial employment during their enforced time off and defeat the basic objective of increasing the seafarer to billet ratio which is to increase the overall pool of actively sailing mariners. Some form of legislation prohibiting MSC mariners from sailing in the civil industry during their off time would need to be enacted.

INCREASE COMMERCIAL SHIPPING SEAFARER TO BILLET RATIO

Many of the objections to increasing the MSC seafarer to billet ratio applies to the commercial world. In industry, the seafarer to billet ratio is somewhat greater than MSC's, varing from about 1.8:1 to 2.4:1 depending on the union. While commercial firms are not NIF funded, they are in business to make a profit. Increasing crew sizes means increased shipping rates, and therefore increased costs to the shipper, all of which contributes to reducing U.S. flag competitiveness in the world market. This type of job creation is the antithesis of current labor-management efforts to reduce

labor costs and would be strenuously resisted by industry unless the cost differential was assumed by the Federal government. This would be the equivalent of an Operating Differential Subsidy, a concept which is rejected by the present administration.

READY RESERVE FORCE SKELETON CREWS

There are several who advocate placing a permanent two to three man skeleton crew aboard all RRF ships. This alternative does create jobs; however, in this writer's view, it is not a viable alternative. If an RRF of 136 ships were manned following the current union practice of sharing available work among the union membership, 1224 four month jobs could be created. However, as previously discussed, limited pay might serve as a disincentive. Union members employed in these jobs would perform preservation and maintenance while developing familiarity with the class of RRF ship to which they were assigned. Wages and benefits would be paid by the federal government, and skills and qualifications attained could be recorded in union personnel data bases for use in assigning personnel in the event of an RRF breakout. In the short term unions would benefit by being able to increase membership, easing somewhat the strains on declining membership and pension funds. From the defense viewpoint the net salutary effect of this alternative on the manpower pool is viewed to be insufficient to meet the broad range of manpower requirements.

THE MERCHANT MARINE RESERVE/U.S. NAVAL RESERVE

One of the most commonly offered solutions to the manpower shortfall is the Merchant Marine Reserve/U.S. Naval Reserve (MMR/USNR). Unfortunately, advocates of this alternative are not familiar with the limitations of the MMR/USNR. The MMR/USNR is not a mobilization asset. As currently established, this program is neither intended to increase the merchant marine nor the U.S. Navy manpower pools in a national emergency. Its primary purpose is to provide qualified merchant marine officers with knowledge of U.S. Navy organization, administration, and operations in order to enhance coordination between the merchant marine and the Navy. To be eligible to join the MMR/USNR, an officer must be actively sailing on his or her license (unlicensed personnel are not eligible for participation). With the exception of a few industry related jobs, if a member of the MMR/USNR elects to seek shoreside employment, he or she must request a designator change since they would no longer be actively sailing seafarers--a primary criterion for eligibility. In the event of mobilization, with the exception of about 30 Selected Reservists (who would report to MARAD) MMR/USNR officers will not be mobilized; they will continue sailing in their industry capacities. Thus, the purpose of the MMR/USNR program is fulfilled by exposing Merchant Marine officers to areas of concern where there is potential for mutual operations with U.S. Navy operating forces, such as underway replenishment,

amphibious operations, Naval tactics, Naval Control of Shipping, and Naval logistics and repair operations.[2]

The Merchant Marine Reserve/U.S. Naval Reserve is an excellent organization to meet the purposes intended; however, as currently structured, it contributes not one additional seafarer to the pool of manpower needed to meet requirements, and therefore, it is not really germane to the problem.

THE U.S. MARITIME SERVICE

The U.S. Maritime Service was established by the Merchant Marine Act of 1936 and codified in Title 46 CFR. Although long dormant, the U.S. Maritime Service still exists in law. A review of Title 46 CFR will reveal a complete structure for providing a trained source of manpower to augment the actively sailing pool of seafarers. The Code spells out entry requirements, conditions of service, pay and allowances, clothing and uniforms, training, and rank structure. The U.S. Maritime Service as currently established was developed to meet conditions of over fifty years ago. Its value was proven during the Second World War. Though today's conditions differ from those of the 1940's, it is perceived by this writer that resurrecting and updating the U.S. Maritime Service will prove the best alternative for addressing the manpower shortfall. The wording of Title 46 CFR may be outdated, but the basic ideas contained in the Code are valid

today. The following chapter will discuss broad proposals for updating the U.S. Maritime Service to meet modern needs. The suggestions proposed in the next chapter are intended to plant seeds for thought. There will undoubtedly be problems, and more ideas will likely be forthcoming; however, it is believed that this fresh approach, founded on an old idea, holds the best promise for meeting the nation's merchant marine manpower needs.

SUMMARY

Given a manpower shortfall, we need to do something about it. The best alternative is the one that will provide a central pool of readily available, skilled manpower at the least cost. Ideally the plan elected will lay the foundation for rapid expansion in the event of mobilization. The best solution will neither be "make work" nor disadvantageous to the government, the unions, the industry, or the seaman. Any action taken must ultimately increase the pool of available seafarers without an adverse impact on present union employment or labor-management efforts to reduce U.S. flag costs. The only alternative that has the potential for providing the manpower within these constraints is a refurbished U.S. Maritime Service--and that alternative is strongly recommended for further consideration and ultimately, implementation.

CHAPTER V

THE SOLUTION: ACTIVATION OF THE U.S. MARITIME SERVICE

Background.

With the passage of the Merchant Marine Act, 1936, sweeping legislation went into effect, the intent of which was to develop and maintain an adequate American merchant marine for the purposes of promoting the commerce of the United States and aiding in the national defense.[1] In the Act's "Declaration of Policy," the Congress stated its intention that the Merchant Marine would be ". . . manned with a trained and efficient citizen personnel."[2] Further language in the body of the law permitted the Secretary of Commerce to establish and maintain the U.S. Maritime Service--a voluntary organization for training U.S. citizens to serve in the merchant marine.[3] During World War II, it was the U.S. Maritime Service that rapidly mobilized to provide the vast quantities of trained licensed and unlicensed seafarers who, in conjunction with their union brethren, manned the thousands of merchant ships required to win the war.

Little has been written about the mechanics of the U.S. Maritime Service, however, the regulations for its operation can be found in the Code of Federal Regulations (46 CFR Chapter II). At the current time the U.S. Maritime Service is dormant, there being only a handful of individuals at the various merchant marine academies who hold U.S. Maritime Service commissions. Although written to accommodate

circumstances of almost fifty years ago, it is the thesis of this paper that proper revision, and subsequent activation of the U.S. Maritime Service could provide the basic structure that would ensure adequate numbers of readily available, trained seafarers as well as an in place organization capable of rapid expansion in event of national emergency. Moreover, if properly executed, this can be done at minimal federal expense without adverse impact on union employment as well as without inhibiting on-going labor-management efforts to improve U.S. flag competitiveness by reducing manpower costs.

Responsibilities.

The pool of active mariners readily available to man U.S. flag shipping is made up of those seafarers who are currently on the job at sea, and those who have sailed in the past year. The size of that pool changes in response to many variables, all of which may be summed up as the health of the industry. As the U.S. merchant marine expands, more billets are available, thus the size of the manpower pool grows. The converse is likewise true. Of significance is that at some point, the active merchant marine becomes so small that the number of seafaring billets is inadequate to generate the pool of trained seafarers needed to man vessels in lay up, waiting activation for national emergency requirements. That is the case now. The revitalization of the U.S. Maritime Service is intended to address this problem. In a suggested rewriting of the Code of Federal Regulations, broad

responsibilities for the U.S. Maritime Service would be assigned as follows:

A. In keeping with the Navy's Strategic Sealift function, the Secretary of the Navy would be made responsible for determining, and periodically reviewing, the size and makeup of the force required to fulfill direct national defense requirements. This should include the U.S. flag fleet, the RRF, balance of the NDRF, and where applicable, those ships in the EUSC fleet. Among commitments to be considered are surge and sustaining shipping requirements, Amphibious Follow-on Echelon requirements, Mobile Logistics Support Force augmentation, salvage ship, and all Afloat Prepositioning requirements.

B. The Maritime Administration, under the Secretary of Transportation, would be made responsible for determining shipping requirements for the Great Lakes, inland, coastwise, and harbor waters, as well as economic shipping requirements.

C. Based on the total shipping requirements, the Maritime Administration, after consultation with the Office of the Secretary of the Navy, would be made responsible for determining the size and makeup of the U.S. Maritime Service, having considered all manpower requirements versus the active manpower pool. Due consideration would be given to additional war time requirements such as augmenting lookouts, watchstanders, and the Merchant Ship Naval Augmentation Program (MSNAP).

D. The Maritime Administration would determine the requirement for maintaining skills such as the ability to operate and maintain yard and stay cargo rigs, break bulk cargo stowage, crane operators, steam and diesel plant operations, computer assisted cargo POL loading, underway replenishment, and amphibious operations.

E. The Maritime Administration would prescribe the courses and duration of training, capitalizing on extant union, industry, Navy, and MARAD training facilities.

F. The Maritime Administration would act as the executive agent for the administration, training, and operation of the U.S. Maritime Service.

Establishing the Manpower Pool.

The task at hand is to increase the pool of manpower available to man the merchant marine. Additionally, it is highly desirable to do so at the least cost. Thus, recruiting personnel with previous experience is preferable to forming a U.S. Maritime Service of new entrants. The following suggestions are offered as possible approaches to recruiting.

A. With the decline of the merchant marine, labor unions have experienced declining rolls as some members have moved ashore to assume steady, though non-industry related, employment. Labor unions should review their records and solicit participation from this source of manpower.

B. The Maritime Administration should review MARAD/USCG records to identify those merchant mariners who have not

sailed in the last year but who have been active in the last five years, and seek their participation.

C. A review of DOD records to identify honorably discharged Navy, Coast Guard, and Army (watercraft experience in the Transportation Corps) who elected not to reenlist, would provide another possible source of U.S. Maritime Service participants.

D. A fourth pool of candidates may be identified by reviewing U.S. Coast Guard records to identify individuals whose licenses have lapsed and/or were not renewed because they did not have the at sea time required by regulation to update their licenses.

E. Strong support should be provided to the various Maritime Academies in order to continue the wellspring of licensed deck and engineering officers. It may be that in exchange for a nominal stipend that an individual would agree to enter the U.S. Maritime Service should he or she be unable to find regular seagoing employment after graduation. Continued satisfactory association with the U.S. Maritime Service would be sufficient basis for the U.S. Coast Guard to renew the officer's license

F. Finally, should all of these sources prove inadequate to meet manpower requirements, a recruiting program similar to those used by business or the Armed Services might be considered.

Since the goal of the U.S. Maritime Service is to increase the pool of manpower available, one must take care

to eliminate those factors that might deplete the active pool. Thus, those military retirees who are now actively sailing in the merchant marine should be exempted from recall to active duty in event of mobilization. Moreover, active mariners who affiliate with the Armed Forces Reserves should not be assigned mobilization billets.

Obligations and Incentives.

In any conversation concerning the manning of merchant shipping, there is always some discussion about how willingly seafarers will respond when called upon. A review of the past will reveal that merchant mariners will be no more reluctant than the citizenry at large to answer a call to the colors. Indeed, the history of the merchant marine in wartime is one of courage and valor. History not withstanding, the prudent planner wants some assurance that manpower will be readily available if required. In the absence of a draft, no greater lever is available, nor should be needed, than that that can be applied to young men and women who currently voluntarily affiliate with Armed Forces Reserve components. Therefore, a revision of the U.S. Maritime Service should provide for spelling out obligations, incentives, and penalties so that both the individual and the government know what is expected of each other. The following suggestions form a partial list of obligations and incentives that might be considered.

A. The Maritime Administration would enter into a formal contract with an individual in much the same fashion as the Armed Forces enters into enlistment agreements.

B. A period of service, specified in a renewable contract, as well as entry training to be undergone, the annual training scheme required of the individual, and an agreement to serve if activated should be spelled out.

C. A pay plan, keyed to various merchant marine skill levels and possibly keyed to an aggregate of the prevailing union scale should be specified. Moreover, appropriate allowances and expenses should be addressed. The scheme would be less expensive than a Naval Reserve program as there would not be a long term retirement obligation. Pay and allowances would accrue annually only for the active services performed.

D. A stipend for work clothing, appropriate to that worn aboard merchant ships, might be payed to unlicensed candidates while licensed officers might be provided uniforms appropriate to their billets and level of service.

E. The U.S. Coast Guard should modify regulations to allow satisfactory association with the U.S. Maritime Service to be sufficient basis for license renewal for those holding a valid license, and for reinstatement for those with lapsed licenses.

F. Labor unions might be prevailed upon to permit preferential union membership to satisfactory U.S. Maritime

Service participants when the health of the merchant marine takes a swing for the better.

G. Draft exemption should be provided for all actively sailing merchant mariners and satisfactory participants in the U.S. Maritime Service.

H. Job security guarantees similar to those extended to Reserve and Guard participants should be provided to U.S. Maritime Service enrollees in order to encourage their agreement to subject themselves to periodic training and possible involuntary activation.

Organization and Training.

The broad variety of demands for trained manpower in excess of the current actively sailing pool dictates two parallel approaches to organizing the U.S. Maritime Service: men affiliated with discrete units and individual members.

It appears that over fifty RRF ships will be outported around the United States. These ships provide an ideal center point about which a U.S.M.S. unit might form. Moreover, the locations of the outported ships will virtually all be in areas where eligible manpower is available. In forming the U.S.M.S. unit, it would not be necessary to limit the size of the unit to the complement of the RRF ship. Individual RRF ships are maintained in an unmanned state, locked and alarmed. A change could be made to the Agency Agreements to allow limited access to the ships for training purposes, or the ships could be made available for a limited annual

training period. In addition to familiarization with, and training on, the assigned RRF ship, members could also be able to take advantage of the opportunity for additional training and experience at the various state maritime academies, union schools, Navy training facilities, and industrial simulators as well as in other classes of ships in the RRF. The revamped U.S. Maritime Service could also accommodate individuals not assigned to units. Their training scheme might provide for qualifying them for specific tasks such as general merchant ship watchstander augmentation in the deck and engineering departments, Merchant Ship Naval Augmentation (Underway Replenishment), small boat operation in support of amphibious operations, container crane operations and maintenance, and diesel plant operation on those unique plants characteristic of those RRF ships purchased foreign. If it is the government's intent to man a portion of the Effective U.S. Controlled Shipping fleet, individuals could be identified and trained to fill specific billets aboard specific ships.

In regard to training, as previously mentioned, it is proposed that the Secretary of Transportation, in the person of the Maritime Administrator, be made responsible for identifying the size of the U.S. Maritime Service, the skills required, and the training scheme to be followed. Moreover, MARAD would identify the various training capabilities available, and issue orders to U.S. Maritime Service participants for their periodic training requirements.

The objective is twofold: increase the pool of skilled seafarers, and do so at least possible cost. Maximum effort in recruiting licensed and unlicensed personnel with prior experience must be emphasized. It will be much more cost-effective to renew and upgrade the skills of personnel with prior experience than it will be to try to generate a skilled mariner from a new entrant. The cost of the training itself should be limited to three broad areas of expenses: first, gearing up MARAD to administratively support issuing orders, paying participants, and recording their skills and qualifications; second, the pay and travel allowance for U.S.M.S. participants; and third, the cost of training itself, which would likely be on a contract basis between MARAD and a union school, an industry school, a state academy, or the Department of Defense. More than adequate training facilities, capable of expanded use, exist now; therefore, the requirement for capital investment in physical plant assets is virtually nonexistent.

Existent training facilities are broad and extensive. As merely one example in the labor union sphere is the Seafarers Harry Lundeberg School of Seamanship at Piney Point, Maryland. In addition to a stringent entry level program, and license upgrading programs, education and training in electrical, electronics, pumps, refrigeration, and automation is offered. Similar facilities for training and upgrading deck department members exists, and the school offers a course to train members of the stewards department across the broad

spectrum. Moreover, the school has developed a training program titled the "Sealift Operations and Maintenance course." Lectures and practical application train students in basic underway replenishment, vertical replenishment, crane operation on the Haaglund crane (the same crane used aboard RRF T-ACS crane ships), fork lift operations, damage control, fire fighting and safety. In addition, the school's new ship handling simulator not only provides training in basic ship handling, bridge to bridge communications, and piloting and rules of the road situations, it allows simulation of underway replenishment scenarios. These examples are only a partial listing of the training capabilities at the Harry Lundeberg School. Virtually all of the major maritime unions, representing licensed and unlicensed personnel in all disciplines, operate training and education facilities which might well be used in a training program for the U.S. Maritime Service.

The primary sources of new officers to the licensed ranks are the six state and one federal maritime academies. This is as it should be, for despite the conditions that have adversely affected the U.S. Flag fleet, there is still a demand for young people who want to go to sea as a vocation. Moreover, many academy graduates opt to accept orders to active duty in the armed forces. Of those who do not continue at sea, many are employed in related industries. For example, of the 1985 Kings Point graduating class, 20% are reported to have seagoing jobs, while 14% are on active duty,

and 51% are employed ashore in marine related jobs.[4] Those graduates who ultimately quit sailing on their licenses are an outstanding source to fill the pool of U.S. Maritime Service licensed officers. The demonstrated willingness of academy graduates to sail in unlicensed positions in anticipation of fleeting up to officer billets is of great value in filling any shortage among critical unlicensed positions, such as Boatswain, during the first days of an RRF breakout. Of additional importance are the training facilities available at the academies. For example, besides purely academic facilities, Massachusetts Maritime Academy has a sophisticated radar simulator, and a modern diesel simulator, as well as small craft training facilities. The school's training ship, Patriot State, permits training with the yard and stay cargo gear, and the steam plant provides an opportunity for hot plant training and watchstanding. The U.S. Merchant Marine Academy at Kings Point also has a radar simulator as well as other extensive training facilities. These schools, and their sisters, could prove valuable sources for keeping current the skills of U.S. Maritime Service participants, or upgrading the skills of those participants whose licenses have lapsed, thereby warranting USCG issuance of a valid license and permitting participation in the U.S.M.S. The schools' effectiveness could be further expanded by assigning them an additional RRF ship of a class different from that of their school ship. A crane ship (T-ACS) or a diesel propelled ship are examples of ships that, having been situated

at a maritime academy, would provide a valuable training adjunct to the U.S. Maritime Service as well as the school's full time student body.

Finally, government facilities such as MARAD's radar observer schools and U.S. Navy facilities for fire fighting, damage control, underway replenishment, and amphibious warfare might likewise be capitalized on in training both licensed and unlicensed U.S. Maritime Service personnel.

This listing of facilities is by no means all inclusive. It is provided to establish the idea that adequate resources to properly renew and upgrade the skills of U.S. Maritime Service seafarers exists now. It is not necessary to build facilities and to establish training programs. What is required is for the Maritime Administration to identify specifically what is available, determine what training should be received, develop a mechanism for funding the training, and establish a means whereby service and skills are permanently recorded.

New Entrants.

Thus far the discussion of recruiting potential members into the U.S. Maritime Service has intimated attracting personnel with prior sailing experience. It may be that at the low end of the skill spectrum that adequate numbers may not be available. In this event new entrants might be recruited and provided basic training and skills before assuming an inactive status in the U.S. Maritime Service. The Seafarers Harry Lundeberg School of Seamanship Shipboard Trainee

Program is a good example of the regimen that might be pursued. Twenty weeks of shoreside training include exposure to basic engineering, deck, or stewards skills, first aid, alcohol and drug awareness, and the Sealift package--underway replenishment, vertical replenishment, damage control, cranes, forklifts, and cargo handling. This shoreside experience is followed with twenty-six weeks of shipboard employment. In the case of the U.S. Maritime Service trainee, this twenty-six weeks could be performed as a member of a crew in excess of the ship's complement, and paid for by the Maritime Administration rather than by the company. The purpose for this approach is to avoid occupying a job filled by actively sailing mariners, and to preclude inflating company costs. On completion of this sea phase, a final eight week course designed to upgrade skills is pursued. Thus, using the Harry Lundeberg example, following completion of a fifty-four week curriculum, one would have transformed a greenhorn into a skilled U.S. Maritime Service member. It may be, of course, that the government might wish a shorter training and qualification course. Such a course could be developed; however, the point is that the basic facilities, lesson plans, and instructors, capable of providing entry level training, exist and need not be developed from scratch.

Summary.

The nation must have on hand sufficient seafarers with the requisite skills to man the existing fleet until either the conflict is terminated, or, in the event of a long war,

new ships are built and more manpower can be recruited and trained. The skills required range from those associated with operating modern machinery such as container cranes, new diesel propulsion plants, and computer controlled POL loading and discharging systems to older, sometimes obsolete skills associated with the break-bulk ship, such as working a yard and stay cargo rig, determining cargo compatibility, cargo stowage and dunnage, and firing nonautomated steam plants. Training facilities exist now that can be applied to ensuring that members of the U.S. Maritime Service have these skills so that, when called on to augment the active force of seafarers, ships can promptly put to sea and perform their role in supporting the National Strategy.

CHAPTER VI

CONCLUSION

Resurrecting the U.S. Maritime Service as broadly outlined in Chapter V may not be the exact answer--however, the idea is offered as a point of departure from which a more specific, workable approach may emanate. Surely jurisdictional considerations must be hammered out. For example, in a limited war, it might be desirable to call out a part of the RRF rather than to disrupt trade in which the U.S. Flag fleet is then participating. At what point should the U.S. Maritime Service begin to play a role? On the one hand, it is desirous to avoid using U.S. Maritime Service personnel when union halls can fill the jobs. Yet it is likewise desirous for ships to get on berth, load, and sail on time. Issues like these require careful consideration on the part of all concerned and should be resolved before the fact.

In reinstituting the U.S. Maritime Service, the broad goal is to ensure that the National Strategy is not inhibited by a lack of sealift. If sufficient and properly manned shipping is not available for the surge and subsequent sustaining of forward deployed forces, then a strategy based on forward defense is a defunct strategy.

Thus, a program based on a revitalized U.S. Maritime Service as proposed in this paper is highly recommended.

CHAPTER VII

EPILOGUE

One should not view establishing the U.S. Maritime Service, and for that matter building a Ready Reserve Force, as end-alls. They are in fact at the same time symptoms and band-aids. Symptoms in that they directly reflect the present health of the U.S. Merchant Marine. Band-aids in that they mitigate the impact of the shortfalls in today's Merchant Marine on national defense requirements.

There are those who question the need for a merchant marine; they would allow the existence or absence of a merchant marine purely as the result of circumstances in the market place. Although economies have grown to exhibit global dimensions and national economies are becoming interdependent, nations still define their borders in physical terms and establish national interests considered to be of importance. In a world free of conflict and free of potential conflict, allowing industries to respond solely to free market principles may well be a desirable course of action. The present world is not free of conflict. Thus, a nation, the economy of which significantly relies on foreign trade, a nation which must import large amounts of a wide variety of strategic resources, and a nation, the foreign policy and national defense of which relies on unfettered use of the seas, cannot afford to allow her commercial shipping capability to be met solely in the market place. The United States is one of these nations.

It is not the purpose of this paper to propose a solution to the industry's dilemma. However, in the long term, it is greatly to the nation's benefit to arrive at an approach to sustain a merchant marine. Ideally, the size and characteristics of a U.S. flag fleet will be such that the only ships in the Ready Reserve Force are those with characteristics that have no commercial value but which are required for the national defense. If we maintain a healthy merchant marine in peacetime, we will have the shipping and manpower base we will need in war.

NOTES

Chapter IV

1. Lewis P. Clephane, History of the Naval Overseas Transportation Service in World War I. (Washington D.C.: U.S. Government Printing Office, 1969).

2. U.S. Navy Dept., Merchant Marine Reserve, United States Naval Reserve Program, OPNAVINST 1534.1 (Washington: 1983).

Chapter V

1. U.S. Statutes, The Merchant Marine Act, 1936, The Shipping Act of 1984, and Related Acts, 99th Congress, 1st sess. (Washington: U.S. Govt. Print. off., 1985), p. 1.

2. Ibid.

3. Ibid., sec 1306, p. 132.

4. Lane C. Kendall, "U.S. Merchant Marine in 1985," U.S. Naval Institute Proceedings, May 1986, p. 309.

BIBLIOGRAPHY

Clephane, Lewis P. History of the Naval Overseas Transportation Service in World War I. Washington: U.S. Government Printing Office, 1969

Code of Federal Regulations, Title 46--Shipping. Washington: Office of the Federal Register, National Archives and Records Administration, 1 October 1985.

Hall, Paul. "A Union Leader Looks at the Merchant Marine." U.S. Naval Institute Proceedings, May 1974, pp. 178-189.

Heine, Irwin M. The U.S. Maritime Industry In the National Interest. Washington: National Maritime Council, 1980.

Kendall, Lane C. The Business of Shipping. Centerville, MD: Cornell Maritime Press, 1983.

_____. "U.S. Merchant Marine in 1985." U.S. Naval Institute Proceedings, May 1986, pp. 56-59 and 304-309.

Lawrence, Samuel A. United States Merchant Shipping Policies and Politics. Washington: The Brookings Institution, 1966.

Lundsford, Everett P., Jr. "Our Merchant Mariners and Their Unions." U.S. Naval Institute Proceedings. May 1975, pp. 66-85.

Morris, James M. Our Maritime Heritage: Maritime Developments and Their Impact on American Life. Washington: University Press of America, 1979.

The American Merchant Marine Problem. New York: National Industrial Conference Board, Inc., 1929.

U.S. Congress. House of Representatives. Committee on Merchant Marine and Fisheries. Special Subcommittee on Maritime Education and Training. Maritime Manpower Shortage. Hearing. Washington: U.S. Govt. Printing Officer, 1966.

U.S. Navy Department. Merchant Marine Reserve, United States Naval Reserve Program. OPNAVINST 1534.1. Washington: 1983.

U.S. Statutes. The Merchant Marine Act, 1936, The Shipping Act, 1984, and Related Acts. 99th Congress, 1st Session. Washington: U.S. Government Printing Office, 1985.

END

DTIC

8—86