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**UNITED STATES
GENERAL ACCOUNTING OFFICE**

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**Navy Should Reconsider Planned
Acquisition Of Two Multimission Ships**

Department of Defense

UNITED STATES
GENERAL ACCOUNTING OFFICE

The Military Sealift Command planned to enhance its sealift transportation capability by acquiring two dry-cargo multimission ships. These ships would cost an estimated \$100 million or more.

JUN 22 1976

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GAO recommends that the acquisition of the two ships be reconsidered and that other alternatives to providing sealift be carefully studied. GAO suggests several specific actions which should be included in any studies on the need for these vessels.

JUNE 21, 1976

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

LOGISTICS AND COMMUNICATIONS
DIVISION

B-181714

The Honorable
The Secretary of Defense

Dear Mr. Secretary:

This report discusses the Navy's planned acquisition of two multimission ships to enhance its sealift transportation capability. We recommend that the acquisition be reconsidered and that certain alternatives be studied.

As you know, section 236 of the Legislative Reorganiza-
tion Act of 1970 requires the head of a Federal agency to
submit a written statement on actions taken on our recommen-
dations to the House and Senate Committees on Government
Operations not later than 60 days after the date of the re-
port and to the House and Senate Committees on Appropriations
with the agency's first request for appropriations made more
than 60 days after the date of the report.

CI-24

7-15-70

7-13-70

We are sending copies of the report to the Director,
Office of Management and Budget; the Senate and House Commit-
tees on Government Operations, Appropriations, and Armed
Services; the House Committee on Merchant Marine and Fish-
eries and the House Committee on Interstate and Foreign Com-
merce; the Secretary of Commerce; the Secretaries of the Army,
Navy, and Air Force; and the Chairman, Federal Maritime
Commission.

CS

4-1-70

Sincerely yours,

A handwritten signature in cursive script, appearing to read "F. J. Shafer".

F. J. Shafer
Director

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ABBREVIATIONS

DOD Department of Defense
GAO General Accounting Office
LASH lighter aboard ship
MARAD Maritime Administration
MMS multimission ship
MSC Military Sealift Command
NATO North Atlantic Treaty Organization
NDRF National Defense Reserve Fleet
RORO roll/on-roll/off

D I G E S T

The Military Sealift Command, a major command of the U.S. Navy, is planning to enhance its sealift transportation capability by acquiring two dry-cargo ships of a specialized nature known as roll-on/roll-off (RORO) ships. These ships, capable of carrying outsized cargo, such as helicopters, tanks, trucks, and other cargo of unusual weight or dimensions, will cost an estimated \$100 million and possibly more. (See pp. 2 and 8.)

The need for the RORO ships appears to be founded on two basic premises: (1) peacetime operation of the ships will not preempt cargo normally carried by commercial shippers and (2) the ships are needed to meet contingency sealift requirements. (See p. 5.)

GAO believes that several issues and alternatives should be considered before the acquisition program is approved. For example:

- There is some question whether cargo will be diverted from commercial shippers. (See pp. 5 and 6.)
- In mobilization contingencies, the President can requisition any or all ships of the U.S. commercial fleet, including several RORO ships. For deployment in Europe, our allies have committed 300 of their ships, including some RORO-type ships. (See pp. 7 and 8.)
- In nonmobilization contingencies sealift requirements can be met by using privately owned ships pledged under the Sealift Readiness Program and those in the National Defense Reserve Fleet. (See p. 8.)

GAO recommends that the acquisition of the two RORO ships be reconsidered and that alternatives be carefully studied. GAO suggests several specific actions which it believes should be included in any studies made

concerning the need for the ships. (See p. 11.)

In commenting on GAO's recommendations, DOD asserted that the acquisition of the ships has been deferred. DOD suggested certain clarifications in the report and agreed to consider the GAO recommendations along with other pertinent factors in evaluating any further proposals for acquiring new cargo ships. (See app. II.)

CHAPTER 1

INTRODUCTION

1
2 The Military Sealift Command (MSC), a major command of 53
the U.S. Navy, is the single manager for Department of De-
fense (DOD) sealift requirements. Its mission is to (1) pro-
vide sealift capability for the Army, Navy, Marine Corps,
and Air Force in the event of war or contingency; (2) de-
velop plans and techniques which would enable expansion of
U.S. sealift capability in a contingency situation; (3)
arrange the worldwide, peacetime movement of all DOD ocean-
surface cargo; and (4) provide and operate ships for non-
transportation purposes, such as oceanographic survey ships
and ships supporting the National Aeronautics and Space Ad- 36
ministration space program.

MSC owns a fleet of 91 merchant-type ships of varying
classifications, including dry-cargo ships, tankers, and
special purpose ships; these ships are the MSC nucleus fleet.
For shipping dry cargo, MSC currently operates 11 ships in
its nucleus fleet and has 21 additional ships under charter
for varying time periods. This combination of nucleus and
chartered ships is referred to as the MSC dry-cargo con-
trolled fleet.

In fiscal year 1975 MSC had a total operating budget of
approximately \$1 billion, of which almost \$650 million was
for dry-cargo movements. MSC operations are paid from a
Navy industrial fund. The fund pays the cost of operating
the nucleus ships and obtaining commercial ships. Costs
are recovered by charging each shipper service a part of
MSC's total costs on the basis of their proportionate share
of cargo movements. MSC's financial goal is to have revenue
approximate costs.

4 The resources MSC uses to provide sealift services are 74
governed by the so-called Wilson-Weeks agreement. This 1954
agreement between DOD and the Department of Commerce defined
the complimentary interests of DOD and Commerce in the con-
trol and use of oceangoing merchant ships. It provided, among
other things, for the maintenance of a nucleus fleet by DOD.
The agreement specified that the nucleus fleet should be
comprised of various types of ships in sufficient number to

- carry out current logistic needs of the military de-
partments which cannot be met by commercial interests,
- provide immediate capability in an emergency, and
- provide an adequate base for necessary expansion to
meet emergency or mobilization requirements in support
of approved plans for national defense.

MSC planned to upgrade its sealift transportation capability by acquiring two dry-cargo ships of a specialized type known as roll-on/roll-off (RORO) ships. Such ships are broadly classified as multimission ships (MMSs). RORO ships are capable of carrying outsized cargo, such as helicopters, tanks, trucks, and other cargo of unusual weight or dimensions. The vehicles are usually driven under their own power directly onto the ships. Essentially the ships would be of a commercial design slightly modified to meet specific military requirements. Such ships, if acquired under a build- and-charter program, would become a part of MSC's dry-cargo nucleus fleet. A photograph of a RORO-type ship is included as appendix I.

The need for acquiring two MMSs for the MSC-controlled fleet was first identified in a DOD-sponsored interagency study of DOD's sealift procurement policies. The study group considered the economic desirability, based on improving the efficiency of peacetime cargo movement operations, of replacing Government owned or chartered ships through the acquisition of new ships for the MSC-controlled fleet. The group's conclusion was that MSC could operate two MMSs efficiently in the controlled fleet without preempting DOD cargo that would normally be moved by commercial ships. The ships recommended for acquisition, however, were not RORO ships but were a distinctly different type of MMS--the barge carrier.

In August 1972 the study group released the results of its study--the Sealift Procurement and National Security study. On September 20, 1972, the Deputy Secretary of Defense endorsed the recommendation to acquire two MMSs for MSC and directed that appropriate action be taken. Accordingly, on October 26, 1972, the Assistant Secretary of the Navy (Installations and Logistics) authorized the Commander, MSC, to acquire one seabarge ship and one lighter aboard ship (LASH).

Both LASH- and seabarge-type ships are designed to carry floating cargo containers that also serve as lighters. They can be taken off the ship and floated to the dock for unloading; loaded lighters can be floated to the ship and taken aboard. The advantage of these ships is that turn-around time is improved at ports where dock facilities are inadequate.

In 1973 MSC attempted to acquire the recommended barge carrying ships under a build- and-charter program, but no offers for construction were received. The chief reasons cited for the lack of shipbuilder interest were:

- The proposed single-ship buys could not compete with the multiple-ship buys characteristic of Maritime Administration (MARAD)-sponsored programs.
- The shipyards which had not constructed either LASH- or seabarge-type ships were reluctant to gear their shipyards for these relatively complex ships for a single purchase.
- A growing shortage of shipyard capacity for ships of this size.

The Assistant Secretaries of the Navy and Defense concluded that the best way to obtain ships under these circumstances was to add to production lines planned or already in existence. They decided that the most useful type of ship for contingency sealift purposes, other than seabarge and LASH, would be a RORO ship. At that time two shipyards either were planning to construct or were actively constructing such ships. The Assistant Secretary of the Navy asked the Commander, MSC, to determine the suitability of RORO ships as a substitute for the seabarge and LASH ships.

Since late in 1973 MSC has been developing plans to acquire two RORO ships as alternatives to the LASH and seabarge ships. Although MSC's plans are not final, certain aspects of their acquisition appear relatively firm. These aspects are that:

- The ships would be acquired under a build- and-charter program. Under this method, the construction of the ships would be privately financed and the ships would be chartered to MSC for 30 years, or essentially for their total estimated economic life. The amortization of the construction costs would be included in MSC's annual charter payments. Acquiring the ships under the build- and-charter method would require congressional approval. Legislation is expected to be introduced in the Congress to authorize this procurement method.
- MSC would operate the two RORO ships over a designated route between the east coast of the United States and the Far East. MSC contends that this particular route was selected to avoid any preemption of cargo from commercial operators.

SCOPE OF REVIEW

Our review consisted primarily of examining background material and documented justification for the proposed

acquisition of MMSs. We reviewed and analyzed MARAD and DOD projections on peacetime movement of cargo. We also met with representatives of various commercial shipping lines to ascertain their views on commercial cargo movements.

CHAPTER 2

NEED FOR RORO SHIPS QUESTIONABLE

The Military Sealift Command's need for the two roll/on-roll/off ships appears to be founded on two basic premises: (1) peacetime operation of the ships would not preempt cargo normally carried by commercial shippers and (2) the ships are needed to meet contingency sealift requirements. If the RORO ships are obtained, MSC plans to retire five old, break-bulk ships of approximately equal tonnage from the controlled fleet.

Our examination of MSC's justification has identified several issues and alternatives which should be considered before the acquisition program is approved. For example, we found that:

- There is some question whether cargo will be diverted from commercial shippers.
- In mobilization contingencies, the President can requisition any or all ships of the U.S. commercial fleet, which includes RORO vessels. For deployment in Europe, our North Atlantic Treaty Organization (NATO) allies have committed 300 of their ships, including some RORO-type ships.
- In nonmobilization contingencies, MSC has two sources of shipping available to meet sealift requirements; privately owned ships pledged to the Sealift Readiness Program and those in the National Defense Reserve Fleet (NDRF). Many of these are break-bulk ships; the type needed to handle outsize cargo.

SOME QUESTION ABOUT PREEMPTING CARGO

In determining the size of its controlled fleet, MSC must insure that such ships can be efficiently used without preempting cargo that would normally move by commercial carriers. Such determinations are based on projections of the outbound DOD cargo expected to be moved and the commercial shipping capability that is expected to be available. Shortfalls in the commercial capability will determine the capability required in the controlled fleet.

MSC officials contend that there will be insufficient commercial capability by 1980 on the route over which the new RORO ships will operate. Accordingly, MSC believes that cargo will not be preempted from commercial firms. Maritime Administration officials, however, disagree with MSC's

contentions and claim that the RORO ships will preempt cargo from commercial shippers.

VARIATIONS IN CARGO PROJECTIONS:

MSC AND MARAD

Long-range projections are inherently difficult, especially for DOD whose cargo requirements rise dramatically during wartime and decrease just as dramatically during peacetime. Sealift cargo movement has declined from 30.6 million measurement tons in fiscal year 1969 to 10.1 million measurement tons in fiscal year 1974.

The military departments give MSC an annual forecast of sealift cargo requirements. MSC estimates that the cargo to be moved over the east coast to Far East route during 1980 will remain largely at the fiscal year 1974 level. MARAD believes that DOD cargo movement over this route will revert to the fiscal year 1963 level before our military involvement in Southeast Asia. Our recent disengagement in South Vietnam, Cambodia, and Laos and our drawdown of forces in Thailand lends support to the MARAD belief. The effect of these different planning projections on 1980 cargo can be seen in the following table.

	<u>Total cargo</u>	<u>Cargo to be moved commercially</u>	<u>Cargo to be moved by controlled fleet</u>
	-----measurement tons-----		
MSC estimate	640,000	210,000	430,000
MARAD estimate	340,000	213,000	127,000

MARAD officials believe that the RORO ships will preempt cargo and will have a negative impact on commercial shippers. These officials imply that the impact would be long term since once acquired, prudent management would dictate that the ships be used to their fullest extent.

The then Chairperson of the Federal Maritime Commission was also opposed to MSC's acquisition of the two RORO ships. Although no specific analysis was provided, the Chairperson stated that a surplus of U.S.-flag, dry-cargo ships was expected and would be available to MSC for charter.

VIEWS OF COMMERCIAL SHIPPING COMPANIES

There are a number of commercial shippers that operate over the route proposed for the RORO ships. Discussions with

officials of these shippers indicated that they viewed cargo space that would be available to MSC as a function of the marketplace. One shipper specifically stated that if more DOD cargo were regularly offered to it, it would acquire additional shipping capability.

One of the shippers on this route is a container operator who last year offered 28 sailings totaling 700,000 measurement tons of capacity. Another shipper is a break-bulk operator which offered 17 sailings a year with 351,000 measurement tons of capacity.

MSC officials generally stated that only a small part of commercial capability is regularly offered them. They did not, however, support this view with specific data or studies. Our analysis of commercial cargo movements in prior years showed that commercial shippers had the flexibility to adjust to increases and decreases in DOD's demand.

ALL U.S. COMMERCIAL SHIPS AVAILABLE IN MOBILIZATION CONTINGENCIES

In a full mobilization situation the President, under existing legislation, is authorized to requisition any or all of the ships in the U.S. commercial fleet. Currently this fleet consists of 529 oceangoing ships--150 freighters; 218 tankers; 16 bulk carriers; 139 intermodal ships, such as containerships, RORO ships, and LASHs; and 6 passenger-cargo ships.

In the 1977-80 time frame, the commercial merchant marine will have in operation 16 new and modern RORO-type ships; including 12 presently being operated and 4 under construction.

There is no indication that DOD considers the projected 1977-80 RORO-ship fleet to be inadequate in a mobilization. In fact, the Secretary of Defense has stated that in a NATO mobilization the problem is not one of numbers but of early availability. Should MSC acquire and operate two RORO ships on the east coast to the Far East route, it is questionable whether these ships could be recalled from their normal trade and routed to a loading berth any sooner than ships in the commercial fleet.

The Secretary of Defense, in his latest annual report to the Congress, stated our NATO allies had committed 300 of their flag ships to assist in a U.S. deployment to Europe. These ships frequent American east and gulf coast ports and are earmarked in peacetime to facilitate their early availability upon the declaration of a NATO mobilization. The Secretary

of Defense has stated that the combined capacity of the U.S. commercial fleet with a "significant number of NATO flag-ships, could provide more than enough sealift to meet even the most demanding NATO contingency."

SHIPPING CAPABILITY ALSO AVAILABLE IN NONMOBILIZATION CONTINGENCIES

To meet cargo sealift requirements involving nonmobilization contingencies, MSC has two sources of shipping capability in addition to its dry-cargo controlled fleet. The first are privately owned vessels pledged under the Sealift Readiness Program. Under this program, commercial shipping firms that bid on DOD cargo commit themselves to making available 50 percent of the ships in their fleet for DOD cargo movement in the event of a contingency. At the present time there are 117 privately owned ships committed to MSC under the program. Half of these ships would be made available within 30 days and all 117 would be available within 60 days.

The second source of shipping capability available to MSC is the 130 ships in the NDRF, being held in a mothballed state for emergency and contingency purposes. This fleet is under the control of MARAD, and consists largely of World War II-type ships. The Secretary of Defense stated that a revitalized NDRF would greatly aid the Sealift Readiness Program since it would limit reliance on the commercial fleet to the few weeks it would take to place NDRF ships in service.

Congressional interest in a revitalized NDRF was evidenced by the passage of Public Law 93-605 in which newer dry-cargo ships would be taken into NDRF and preserved in exchange for an equivalent scrap tonnage of older ships.

COST OF RORO SHIPS

The sealift procurement study, which originated the requirement for MMSs, was concerned in part with the economics of modernizing the controlled fleet. An integral part of any economic analysis is the cost of constructing the two RORO ships. The construction cost of these ships, however, has not been sufficiently defined to permit such an analysis.

The official MSC cost estimate for constructing the two RORO ships, as published in a formal 1974 study, established a per ship cost of \$44.4 million, or a total cost of almost \$89 million. Two different MSC divisions, however, estimate the construction costs will be higher. One division believes that the cost of the two ships will be approximately \$98 million; the other sets the cost at about \$119.2 million.

The higher estimate is based on a construction contract's being awarded in fiscal year 1977 and assumes an annual inflation rate of 12 percent.

MARAD officials told us that they believed the cost of constructing the two ships would total about \$104 million. This estimate was based on a contract award in fiscal year 1976; the cost would increase if the award were delayed beyond 1976.

ALTERNATIVES TO ACQUIRING RORO SHIPS

The proposed build- and-charter program for the RORO ships will cost about \$100 million, perhaps more. There are, however, more economical means of meeting the objectives of the program. The alternatives to acquiring RORO ships are:

--DOD could purchase enough flat racks 1/ so that container ships could be more efficiently used in moving wheeled vehicles and outsized cargo. In considering the question of trade-offs between MMSs and flat racks, the sealift procurement study concluded that, although the procurement costs for 15,000 flat racks, or 2 sets, would be about \$50 million, without the racks 6 additional RORO ships or barge-carrying ships would be required to move the tonnage specified in the scenario the study group was considering. More than one set of racks would be needed to maintain ship turnaround time. Two major DOD studies recommended that DOD acquire flat racks to facilitate container-ship movement of wheeled vehicles and outsized cargo.

--DOD could purchase three C-4 break-bulk ships presently under charter to MSC from U.S. Lines. These are the newest break-bulk ships in the American-flag fleet and would approximate the lift capability of two RORO ships. DOD spokesmen have continuously stressed the need for a break-bulk capability in contingencies and mobilizations. These ships are not well suited to present liner trades. Should any of them be returned to U.S. Lines, the company might charter the ships for long terms to other interests with the probability of their being committed under the Sealift Readiness Program less likely.

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1/A modular, open-sided container for vehicles.

--A combination of the above alternatives is also a possibility. Such a combination could include purchasing one set of flat racks and one or two C-4-type ships.

CHAPTER 3

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The Military Sealift Command's plan to add two multimission ships to its controlled fleet requires further evaluation and study before program approval. The prospective high cost of acquiring roll/on-roll/off-ship capability and the effect on commercial shipping makes it essential that all alternatives be considered. The high, long-term investment that would be involved in operating the RORO ships must be thoroughly evaluated, with consideration given to the cyclical nature of DOD's sealift requirements and the capability of commercial shippers.

RECOMMENDATIONS TO THE SECRETARY OF DEFENSE

We recommend that the Secretary of the Navy reconsider and carefully study the acquisition of the two RORO ships. He should instruct MSC to:

- Develop a long-range forecast of the peacetime cargo that is likely to be moved over the proposed RORO-ship route during the early 1980s. The forecast should consider such factors as the estimated U.S. troop strength that will require logistics support, the expected support to be provided to our allies, and other relevant data.
- Establish a dialogue with MARAD and the private shipping industry on the commercial capability expected to be available during the 1980s and, if necessary, the prospects of increasing such capability.
- Determine whether RORO-ship capability could be met under the Sealift Readiness Program if the primary consideration is the availability of ships in the event of a contingency.
- Define more precisely the prospective cost of acquiring and operating these MMSs and analyze whether there are more economical alternatives.

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CHAPTER 4

AGENCY COMMENTS AND OUR EVALUATION

Although DOD believes our report is premature and that a few points should be clarified, it has agreed to consider our recommendations--along with other pertinent factors--in evaluating any further proposals for acquiring new cargo ships. (See app. II.)

Concerning the timing of our report, DOD stated that the Secretary of Defense's Annual Defense Report for fiscal year 1976 indicated that the program for acquiring two multi-mission ships had been deferred. Deferral of the program, however, rather than deleting it, means the program will probably be reconsidered at some future date and for that reason we do not believe our report is premature.

DOD wanted to clarify the comparative responsiveness of Military Sealift Command-controlled ships and those of the commercial fleet. DOD believes the controlled ships could be positioned in a precontingency alert, whereas commercial ships might be delayed.

DOD's argument would be valid if MSC ships acquired were just held in a standby status. However, economic considerations require that any newer ships MSC acquires be used to the maximum extent possible. This means they would be dispersed worldwide, and it is questionable whether they could be available for prepositioning any sooner than ships committed under the Sealift Readiness Program or those of the National Defense Reserve Fleet.

Another point DOD clarified concerned the Wilson-Weeks Agreement. DOD believes that it is important that our report recognize that the agreement provides that the MSC-nucleus fleet shall be adequate to provide immediate capability in an emergency. We have revised our report to show this aspect of the agreement.

We are aware that the agreement makes the provision DOD has cited, and we are not suggesting that high-response capability is unnecessary. We are, however, pointing out the various alternatives that should be considered to achieve the desired degree of responsiveness.

We also submitted the report to the Maritime Administration for comment. The basic position of MARAD is that the Government should not acquire ships for purposes that available commercial ships can serve economically and efficiently.

MARAD stated that since the report does not show a formal initiative by the Navy at this time, it appeared inappropriate for them to comment on the report.

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CONFIGURATION OF A RORO SHIP

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ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

INSTALLATIONS AND LOGISTICS

8 MAR 1976


Mr. Fred J. Shafer
Director, Logistics and
Communications Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Shafer:

This is in response to your letter of October 28, 1975, to the Secretary of Defense, Attention: Assistant Secretary of Defense (Comptroller), transmitting copies of your draft report, subject: "Navy Should Reconsider Planned Acquisition of Two Multi-Mission Ships," (OSD Case #4203). The draft report recommends that the acquisition of the two Roll-On/Roll-Off (RO/RO) ships be reconsidered and that alternatives be carefully studied.

We believe that this report is somewhat premature in that a recommendation has not been made to the Office of the Secretary Defense for acquisition of two RO/RO ships. Further, as indicated in the Secretary's Annual Defense Report for FY 76, the program for acquiring two multi-mission ships has been deferred. As to the report itself, we believe that a few of the points in the report should be clarified before it becomes a matter of permanent record, and our comments on these points are enclosed. Otherwise, the recommendations made in the draft report will be considered, along with other pertinent factors, in evaluating any further proposals for acquiring new cargo ships.

Sincerely,


JOHN J. BENNETT
Acting Assistant Secretary of Defense
(Installations and Logistics)

Enclosure
as stated

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