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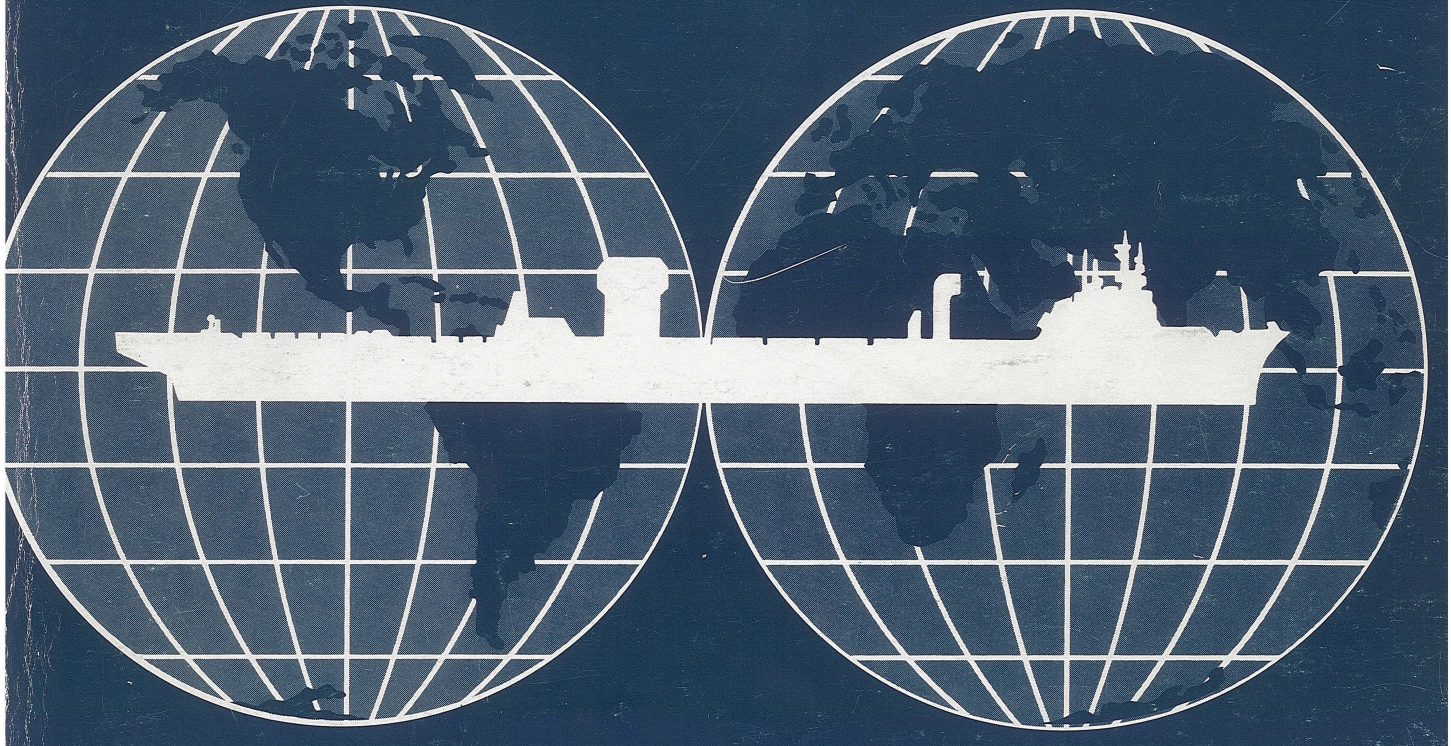
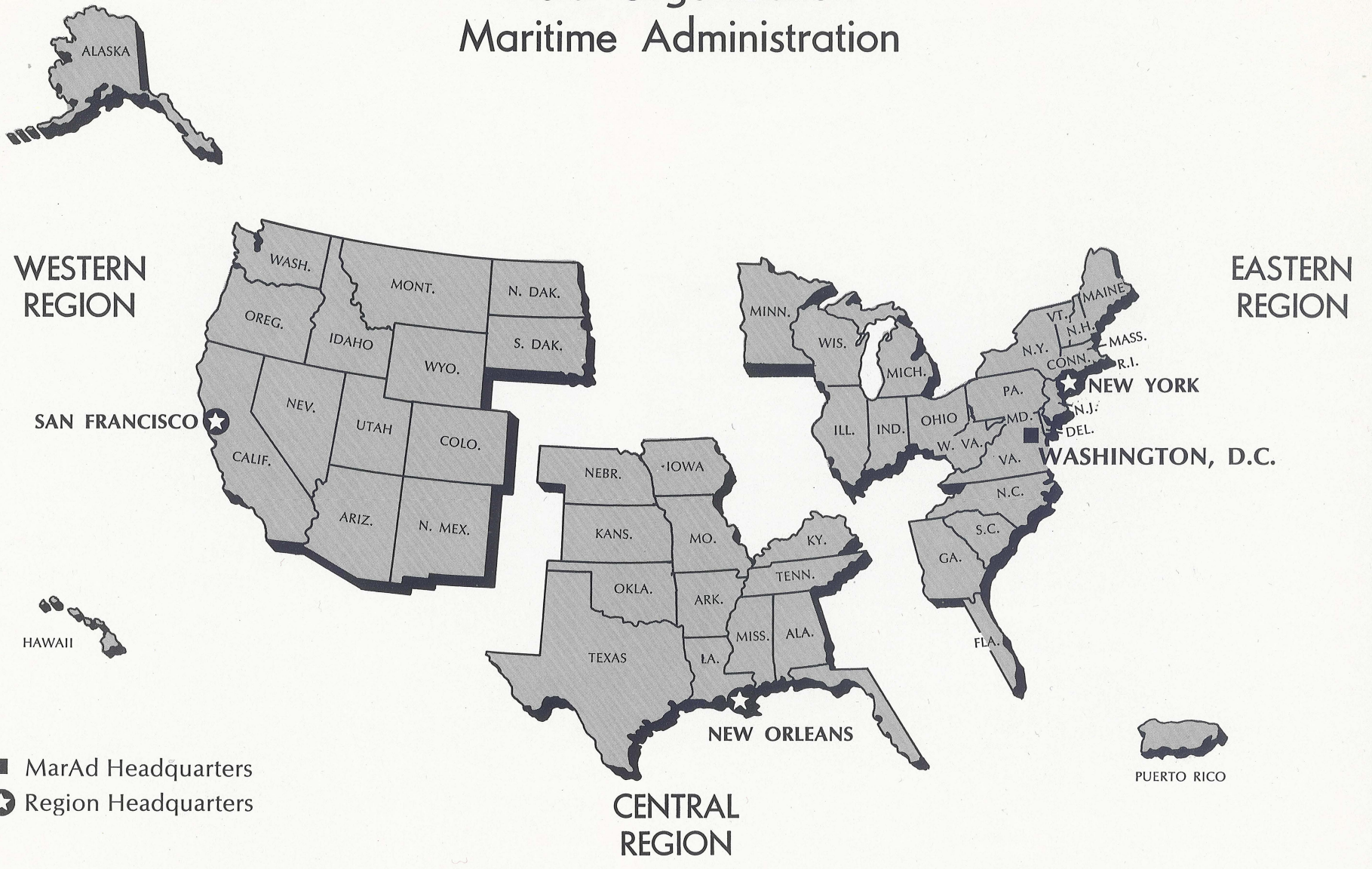


U.S. DEPARTMENT OF COMMERCE
MARITIME ADMINISTRATION

Field Organization
Maritime Administration



MARAD 1974

The Annual Report of the Maritime Administration for Fiscal Year 1974

U.S. DEPARTMENT OF COMMERCE
Frederick B. Dent, Secretary
John K. Tabor, Under Secretary

MARITIME ADMINISTRATION
Robert J. Blackwell,
Assistant Secretary
for Maritime Affairs

March 1975

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.
Price $1.90

Contents

THE SECRETARY OF COMMERCE
Washington, D.C. 20230

The President
President of the Senate
Speaker of the House of Representatives

Sirs:

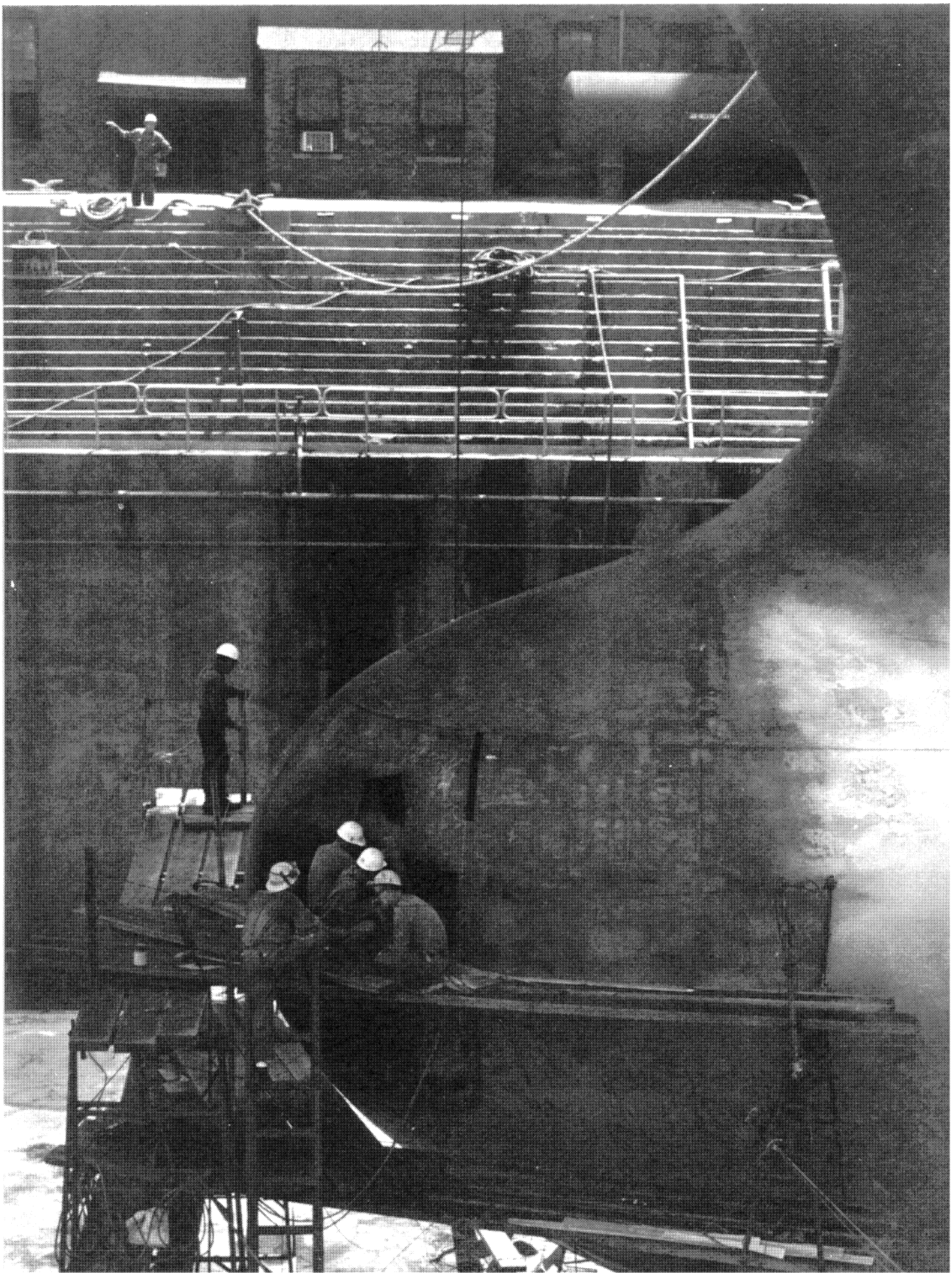
It is with great pleasure that I submit the Maritime Administration's report of its activities during fiscal year 1974.

Guided by the innovative programs of the Merchant Marine Act of 1970, the Maritime Administration and the maritime industry made substantial progress during the year.

This report reveals that the American shipbuilding and shipping industries are effectively responding to the challenges embodied in the 1970 Act and are improving their competitive position in world markets.

Respectfully,

Secretary of Commerce



The LASH vessel DELTA MAR was the first ship delivered under the Merchant Marine Act, 1970.

Introduction

By ROBERT J. BLACKWELL
Assistant Secretary of Commerce
for Maritime Affairs

The goal of the Merchant Marine Act of 1970—to restore the United States to the rank of a first class maritime power—moved closer to reality during fiscal year 1974.

A large number of subsidized and unsubsidized ship orders were placed in American shipyards, and the initial ships ordered under the 1970 program were delivered. Already these highly productive ships are improving the performance of the U.S.-flag merchant fleet, which, during calendar year 1973, dramatically increased its carriage of American export/import cargoes.

The varied financial incentives of the 1970 Act have resulted in planned, orderly growth in the American maritime industry. In addition, unprecedented cooperation between labor and management has provided the firm foundation for industry stability that is so essential to future growth.

Shipbuilding

American shipyards continued to upgrade their facilities and output as a result of the financial incentives provided by the Merchant Marine Act of 1970. New orders were placed for 38 large merchant ships—12 under the subsidized shipbuilding program and 26 with 100 percent private sector funds.

All 12 ships being built with the aid of construction-differential subsidy will be new, highly-productive tankers. Aggregating 1.9 million deadweight tons (dwt.), these ships have a contract value of $756 million. These contracts brought the total volume of subsidized shipbuilding activity under the 1970 Act to nearly $3.2 billion, covering the construction of 59 new ships and conversion of 16 conventional freighters into containerships. These orders represent 234,000 man-years of work for shipyard employees and those industries which supply the materials and components used in ship construction.

New ship orders for fiscal year 1974 included three tankers rated at 390,770 dwt.—the largest ships ever ordered from an American shipyard. The cargo carrying capacity of each of these mammoth vessels will be the equivalent of nearly 25 standard T-2 tankers built during the 1940s. The other tankers ordered under the subsidized program range in sizes from 38,300 dwt. to 225,000 dwt.

Under the 1970 Act shipyards are encouraged to upgrade their facilities and increase their productivity, to improve their competitiveness in the world market, and to reduce their dependence on Government subsidies. Series production of standardized ship designs is one way in which our yards are achieving major productivity gains. One U.S. shipyard, for example, developed a standard design for 89,700 dwt. tankers. Twenty-one of these San Clemente-class tankers, including five ordered during fiscal year 1974, are part of the current U.S. shipbuilding backlog.

The design of these ships incorporates some of the most advanced pollution abatement features in the world, including double bottoms and segregated ballast capacity. Attesting to American proficiency in turning out these vessels, the subsidy rate for all five San Clemente tankers ordered during the past year was more than 5 percent below the 39 percent construction-differential subsidy (CDS) guideline for fiscal year 1974.

The 1970 Act prescribes a descending scale of CDS rates until a 35 percent goal is reached in fiscal year 1976. All contracts awarded during fiscal year 1974 carried a subsidy rate below the applicable guideline of 39 percent.

The 28 merchant ships delivered by American shipyards last year constituted the largest

output of any fiscal year since 1963. Fifteen of these vessels were built with CDS.

As of June 30, 1974, 96 large merchant vessels, aggregating 7.9 million dwt., were under construction or on order in American shipyards. These vessels had a contract value of $4.2 billion.

Title XI Guarantees

Under Title XI of the Merchant Marine Act of 1936, as amended, MarAd guarantees the principal and interest of commercially placed mortgages and loans used to finance new ship construction or conversions. Title XI guarantees enable private ship operators to obtain the needed capital to replace and/or expand their fleets at reasonable interest rates.

Fiscal year 1974 was another record-breaking year for this program. Guarantees totaling some $1.3 billion were approved. These ship financing instruments covered 311 vessels and barges and 50 shipboard lighters.

During fiscal year 1974 Congress passed legislation raising from $3 billion to $5 billion the principal amount of Title XI mortgages and loans the Agency can guarantee. As of June 30, 1974, a total of 764 vessels and 2,221 lighters, with an outstanding principal balance of $3.8 billion was covered by contracts or commitments under the program.

Capital Construction Funds

Another financial incentive available to the American maritime industry is the Capital Construction Fund program which assists ship operators and owners in accumulating the large amounts of capital necessary for ship construction or conversion projects. Under this program eligible operators may deposit vessel and fund investment earnings and capital gains on a tax-deferred basis, provided these funds are used to acquire, construct, or rebuild vessels for U.S. foreign trade or the domestic Great Lakes or noncontiguous trades.

During fiscal year 1974 a number of corporations holding individual Interim Capital Construction Fund Agreements consolidated them into a single Agreement with their parent corporation. As of June 30, 1974, there were 63 such funds, which will generate approximately $3 billion in shipyard work over the next 10 years.

Operating Aid

Four new long-term operating-differential subsidy (ODS) contracts, covering nine tankers, were awarded during fiscal year 1974. When delivered, these vessels will be employed in worldwide bulk trades.

MarAd also approved the merger of two subsidized steamship companies.

As of June 30, 1974, there were 23 operators holding 26 ODS agreements. Thirteen comprised companies engaged in general cargo trades and 10 are operating, or will operate, in the foreign bulk trades. Additionally, 49 companies with 87 ships held special ODS contracts for grain shipments from the United States to the Soviet Union.

Cargo Movement

MarAd efforts to increase U.S.-flag participation in the carriage of foreign commerce are meeting with success. American ships carried 39.8 million long tons of cargo in calendar year 1973. This is the largest volume moved in U.S.-flag vessels since 1957. The 1973 tonnage, moreover, represents a 67 percent increase over 1972 shipments.

To upgrade the effectiveness of MarAd's activities in this area, the marketing program was reorganized into three general areas: commercial cargo promotion, national cargo promotion, and industry development.

The Commercial Cargo Division directs the "Ship American" program, which is designed to increase U.S.-flag penetration of commercial foreign oceanborne trade by strengthening the ship operators' marketing capabilities, maximizing fleet utilization, and by personal contacts with exporters and importers. Various cargo preference laws are monitored by the National Cargo Division. The activities of the National Maritime Council and other programs directed at enhancing the industry's image and improving communications between all maritime segments are the responsibility of the industry development group.

Research and Development

During the fiscal year MarAd awarded $24.3 million in R&D contracts. However, an additional $8.5 million was contributed to MarAd-sponsored

R&D projects by the maritime industry and other Government agencies. Sharing R&D costs with industry insures the practical application of new innovations and their relevancy to industry's needs.

During the past year a number of new equipment and operating systems, developed through MarAd R&D programs, were tested at sea aboard U.S.-flag ships. A highly-skewed propeller, which was designed to reduce vibration and improve propulsion efficiency, was installed aboard the combination ore/bulk/oil carrier SS ULTRASEA. The VIDEC (Vibration and Deviation Concept) System, which permits unmanned machinery operations and monitors normal wear and tear of equipment, began its second year of tests aboard the containership SS PRESIDENT JOHNSON. Another containership, the SS EXPORT FREEDOM, was equipped with a new centralized bridge conning system. An experimental antistranding sonar system was installed aboard the LASH vessel SS DELTA MAR.

MarAd's five-year program to develop an industrial gas turbine engine for marine propulsion is in the operational testing phase. A prototype engine which burns low-grade residual fuel oil and has a built-in reversing capability will be tested shoreside during more than 2,100 hours of full-power operation.

Numerous R&D projects during the year were focused on upgrading marine communications, including new systems for domestic operators. One project, which analyzed the communication requirements of inland waterway operators, concluded that a system of leased telephone lines would be the most economical and efficient method of communications. A Great Lakes VHF system, allowing ships to dial directly into commercial phone lines, also was tested during the 1974 shipping season.

Civil Rights

Minority employment in the maritime industry has grown significantly during the past five years. Minority group members now constitute 27.9 percent of shipyard employment as compared to 17.7 percent in 1968. Minorities account for 16.4 percent of U.S. shipping companies' shoreside work force. The comparable figure for 1969 was 10 percent.

Efforts to improve the quality of jobs held by blacks, Spanish-Americans, and other minorities have likewise been successful. In 1974 minority employees represented 30 percent of the skilled work force and 10.4 percent of the salaried positions in shipyards. In shipping companies 6.4 percent of the managerial positions and 10.3 percent of the professional jobs were held by minority group members.

Women also are moving away from traditional secretarial positions and are being hired for blue collar and managerial jobs in the maritime industry.

Another discriminatory barrier was removed in January 1974 when MarAd amended its regulations to permit women to attend the U.S. Merchant Marine Academy. When the Class of 1978 reported aboard in July 1974, there were 15 women among the 349 plebes.

U.S./U.S.S.R. Trade

The Maritime Agreement signed on October 14, 1972, has served as a catalyst for expanding the commercial ties and normalizing relations between the United States and the Soviet Union. The increased trade has particularly benefited the American maritime industry since the Agreement provides U.S.-flag vessels with access to at least one-third of all waterborne cargo shipments between the two countries.

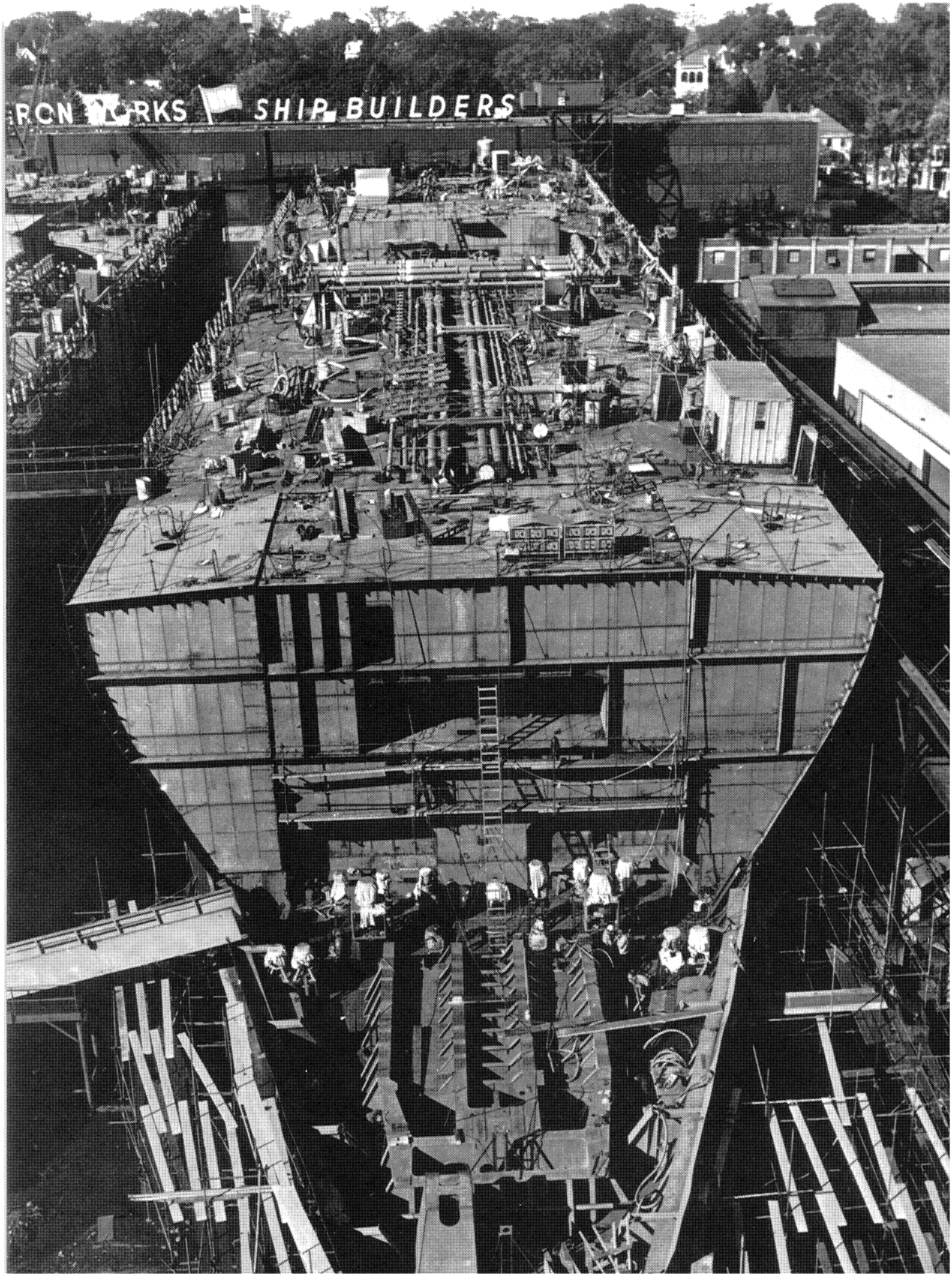
The American and Soviet maritime delegations met twice during the fiscal year to further implement the Agreement's provisions. At these sessions a system was developed to correct the revenue imbalance that had evolved in U.S./U.S.S.R. liner cargo shipments during 1973. Through joint efforts the revenue imbalance in favor of Soviet-flag vessels was cut in half by the end of June 1974 and was expected to be eliminated by November 1, 1974.

The Agency continued to monitor all U.S./U.S.S.R. trade movements to insure that U.S.-flag ships were moving a substantial share of the oceanborne commerce, measured in both tonnage and freight revenues.

Two American shipping companies inaugurated direct liner services between U.S. and Soviet ports.

Conclusion

The pages that follow document in detail the activities of the Maritime Administration and the progress made by the American maritime industry in improving its operations during fiscal year 1974.


RON WORKS
SHIP BUILDERS

Chapter 1

Shipbuilding

Contract Awards

Under the Merchant Marine Act of 1970, the Maritime Administration (MarAd) entered into construction-differential subsidy contracts (CDS) for 12 new highly productive vessels during fiscal year 1974 (see Appendix I).

Of their total contract price of approximately $756.1 million, $280.7 million in CDS will be paid by the U.S. Government to offset the cost difference in building the vessels in a United States shipyard and a lower cost foreign shipyard.

Three of the vessels on which CDS was awarded are rated at 390,770 deadweight tons (dwt.). These mammoth vessels will be the largest ever built in an American shipyard and each will have the cargo carrying capacity of 25 standard T-2 tankers which were built during the 1940s.

Unsubsidized private construction contracts were awarded during the fiscal year for 26 ships aggregating more than 1.6 million dwt. (see Table 1).

TABLE 1 Private Construction Contracts Awarded Fiscal Year 1974

Owner	Shipbuilder	Type	No.	Total Dwt. Tonnage	Estimated Completion Date	Total[1] Estimated Cost
American Steamship Co.	Bay Shipbuilding Corp.	Ore Carrier	1	42,000	1975	$ 22.0
Cherokee Shipping Corps.	General Dynamics Corp., Quincy	LNG	4	254,400[2]	1977/79	380.0
Cleveland Tankers, Inc.	SBA Shipyards, Inc.	Tanker	1	8,000	1974	4.5
Energy Tankers Corp.	Todd Shipyards Corp., San Pedro	Tanker	2	179,400	1977	68.0
Intercoastal Bulk Carriers	Southern Shipbuilding Corp.[3]	Tug-Barge	1	25,000	[4]	19.0
Pacific Lighting Marine Co.	Sun Shipbuilding & Dry Dock Co.	LNG	2	137,660[5]	1977/78	205.0
Pickands Mather & Co.	American Ship Building Co.	Ore Carrier	2	118,000	1976/78	70.0
Port Everglades Towing, Inc.	Kelso Marine, Inc.	Tug-Barge	1	40,000	1975	18.6
Shipmor Associates Tankers	National Steel & Shipbuilding Co.	Tanker	4	358,800	1976/78	119.6
Shipmor Associates Tankers	Todd Shipyards Corp., San Pedro	Tanker	2	179,400	1977/78	68.0
Undisclosed	Sun Shipbuilding & Dry Dock Co.	RO/RO	1	15,130	1974	24.0
Undisclosed	Sun Shipbuilding & Dry Dock Co.	Tanker	1	118,300	1975	30.0
Union Bank Co. & Lehman Bros.	FMC Corp.	Tanker	3	105,000	1976/77	52.0
United States Lines, Inc.	Todd Shipyards Corp., San Pedro	Tanker	1	89,700	1979	38.4
TOTAL PRIVATE CONTRACTS AWARDED, FY 74			**26**	**1,670,790**		**$1,119.1**

[1] Millions of dollars.
[2] 125,000 cubic meters.
[3] Barge contract was awarded to Maryland Shipbuilding & Drydock Co.
[4] Not available.
[5] 130,000 cubic meters.

On June 30, 1974, the number of deep-draft merchant ships under construction or on order in American shipyards totaled 96 vessels, aggregating 7.9 million dwt., as compared to 83 vessels of 5.4 million dwt. a year earlier.

Of these 96 new ships, valued at $4.2 billion, 52 were under construction with subsidy (see Appendix I) and the remaining 44 were being financed privately or with the aid of Title XI Federal Ship Financing Guarantees.

At the end of the year there were no ships undergoing major conversion in private shipyards.

The current urgent demand for oil has led to a rise in the construction of offshore oil drilling rigs. The major U.S. shipyards building rigs are Bethlehem Steel Corp., Beaumont, Tex.; Avondale Shipyards, Inc., New Orleans, La.; and Marathon LeTourneau Co., Houston, Tex. As of May 24, 1974, American shipyards had contracts for the construction or conversion of 42 drilling rigs. At current prices, this represents close to $1 billion worth of work and compares to 31 on order in 1971, 32 in 1972, and 35 in 1973.

Construction Subsidy

To remove the cost disparity which exists between United States and foreign shipbuilding prices, MarAd is authorized to pay a construction-differential subsidy. (See Appendix VI for CDS expenditures since 1936.) To be eligible for

TABLE 2 Pending Applications for CDS June 30, 1974

Ship Owner and/or Operator	No. of Ships	Ship Type	Carrying Capacity (Per Ship)
Aberdeen Shipping Inc.	6	Tanker	380,000 dwt.
American Shipholding Corp.	10	Tanker	380,000 dwt.
American Trading Transportation Co., Inc.	4	OBO	80,000 dwt.
"	4	Tanker	89,000 dwt.
Amoco International Oil Co.	2	LNG	125,000 m^3
Apollo Marine Shipping Co.	3	Tanker	38,300 dwt.
"	1	Tanker	89,700 dwt.
"	4	Tanker	380,000 dwt.
Atlantic Richfield Co.	2	Tanker	380,000 dwt.
Bernuth, Lembcke Co.	3	Tanker	270,000 dwt.
Buchanan Tanker Corp.	1	Tanker	225,000 dwt.
Central Gulf Lines, Inc.	6	Tanker	380,000 dwt.
Cities Service Tankers Corp.	2	Tanker	265,000 dwt.
Delta Steamship Corp.	1	Mini-LASH	11,000 dwt.
Ecological Two Corp.	3	Tanker	90,000 dwt.
Energy I, Inc.; Energy II, Inc.; Energy III, Inc.	3	LNG	125,000 m^3
Energy Carriers Corp.	1	Tanker	380,000 dwt.
Energy Corporation of America	12	Tanker	414,000 dwt.
Energy Feeders Corp.	1	Tanker	380,000 dwt.
Energy Shippers Corp.	1	Tanker	380,000 dwt.
Exxon Corp.	2	Tanker	400,000 dwt.
"	3	Tanker	37,000 dwt.
Farrell Tankers, Inc.	4	Tanker	89,000 dwt.
First Pennsylvania Tanker I, Inc.	1	Tanker	265,000 dwt.
First Pennsylvania Tanker II, Inc.	1	Tanker	265,000 dwt.
Fuel Transport, Inc.	2	Tanker	89,700 dwt.
Global LNG Shipping Inc.	1	LNG	125,000 m^3
Hedge Haven Farms, Inc.	3	OBO	80,500 dwt.

TABLE 2 (continued) **Pending Applications for CDS June 30, 1974**

Ship Owner and/or Operator	No. of Ships	Ship Type	Carrying Capacity (Per Ship)
Ingram Technologists Inc.	6	Tug-Barge	80,000 dwt.
Interstate Oil Transport Co.	1	Liquid Bulk Carrier	42,970 dwt.
Maryland Sun Shipping Co., Inc.	1	Tanker	129,000 dwt.
Methane Eta Co.	1	LNG	125,000 m^3
Methane Iota Co.	1	LNG	125,000 m^3
Methane Kappa Co.	1	LNG	125,000 m^3
Methane Lambda Co.	1	LNG	125,000 m^3
Methane Mu Co.	1	LNG	125,000 m^3
Methane Theta Co.	1	LNG	125,000 m^3
Methane Transport Inc.	1	LNG	125,000 m^3
Mobil Oil Corp.	2	Tanker	265,000 dwt. or 425,000 dwt.
Moore-McCormack Lines, Inc.	3	Partial Containership[1]	12,000 dwt.
Multi-Carriers Inc.	4	OBO Tug-Barge	105,000 dwt.
National Shipping Corp.	1	Hatchless Bulk Carrier	40,000 dwt.
Northern Sun Shipping Co., Inc.	1	Tanker	129,000 dwt.
Oceanic LNG Transport Inc.	1	LNG	125,000 m^3
Pacific Alaska LNG Co.	5	LNG	125,000 m^3
Pacific Lighting Marine Co.	4	LNG	130,000 m^3
Prudential Lines, Inc.[2]	2	LASH[1]	29,820 dwt.
Sealift Tankers, Inc.	7	LNG	125,000 m^3
Superport Tankers, Inc.	6	Tanker	380,000 dwt.
Suwannee River Lines, Inc.	4	Bulk Liquid Chemical Carrier	44,600 dwt.
Tankers Holding, Inc.	2	OBO	80,000 dwt.
Taylor Tanker Corp.	2	Tanker	265,000 dwt.
Texaco, Inc.	3	Tanker	383,600 dwt.
Transportation Techniques, Inc.	3	LNG	125,000 m^3
Trinidad Corp.	3	Tanker	383,600 dwt.
United States Lines, Inc.	5	Tanker	84,000 dwt.
Virginia Shipping Corp.	6	Tanker	380,000 dwt.
Western Bulkship Assoc.[3]	4	OBO	80,000 dwt.
TOTAL	**165**[4]		

[1] Reconstruction.
[2] Name changed from Prudential-Grace Lines, Inc., August 1, 1974.
[3] Western Bulkship application filed 12/04/73 replaces Waterman Marine Corp. application of 9/17/73.
[4] Excludes 5 ships to be reconstructed (listed above) for Prudential Lines, Inc. and Moore-McCormack Lines, Inc.

CDS a vessel must be built in an American shipyard, owned by an American citizen, operated under the U.S. flag, manned by an American crew, and employed in this Nation's essential foreign commerce.

On June 30, 1974, 52 vessels either under construction or on order were being built with the aid of CDS. Valued at $2.8 billion, of which the Government will pay $973 million, these orders include 33 tankers, nine liquefied natural gas (LNG) carriers, six Lighter-Aboard-Ship (LASH) vessels, and four roll-on/roll-off (RO/RO) vanships. When these ships are delivered, more than 5.6 million dwt. will be added to the U.S. fleet.

At the close of the fiscal year 56 applications for CDS were pending (see Table 2). They covered a total of 165 new vessels and five conversions. The applications for new construction included 102 tankers ranging in sizes from 38,300 to 414,000 dwt., 13 ore/bulk/oil (OBO) carriers, 33 LNGs, 10 tug-barges, six bulk carriers, and one mini-LASH. Conversion applications included two LASH vessels and three containerships.

Ship Deliveries

A total of 28 new vessels, aggregating nearly 1.3 million dwt., was delivered by American shipyards during fiscal year 1974 (see Table 3). Fifteen of these were built with construction-differential subsidy.

Nine of the subsidized ships delivered during the year were among the first vessels ordered under the Merchant Marine Act of 1970. The first to be launched was the LASH vessel DELTA MAR delivered on July 11, 1973, to Delta Steamship Lines, Inc., for the U.S. Gulf/South American service. The other eight vessels contracted for under the Merchant Marine Act of 1970 and delivered during fiscal year 1974 were:

- the LASH vessels DELTA NORTE and DELTA SUD to Delta Steamship Lines for U.S. Gulf/South American service;
- the LASH vessels ROBERT E. LEE and STONEWALL JACKSON to Waterman Steamship Co., Inc., for its U.S. Atlantic and Gulf/India, Pakistan, and Ceylon trade;
- the OBOs ULTRAMAR and ULTRASEA to Aries Marine Shipping Co. for worldwide bulk trade;
- the 38,300 dwt. tanker CORONADO to Margate Shipping Co. for worldwide operation; and
- the 225,000 dwt. tanker BROOKLYN to Langfitt Shipping Corp. for worldwide bulk trade.

The six other subsidized vessels delivered during the year were ordered prior to passage of the 1970 Act. All were containerships ranging from 18,700 dwt. to 32,300 dwt. and will be operated in the following trades:

- the EXPORT PATRIOT to American Export Lines, Inc., for its North Atlantic trade;
- the PRESIDENT PIERCE and PRESIDENT JOHNSON to American President Lines, Ltd., for its transpacific service;
- the AUSTRAL ENTENTE to Farrell Lines Inc., for its U.S. Atlantic/Australia trade; and
- the SEA-LAND CONSUMER and SEA-LAND PRODUCER to Reynolds Leasing Corp. for U.S. Gulf/Northern Europe trade.

The following 13 vessels, built without subsidy, were also delivered during the year:

- five bulk carriers for the Great Lakes Trade —one each for Edison Steamship Co., Franklin Steamship Co., and Fulton Steamship Co., and two for Kinsman Marine Transit Co.;
- one bulk carrier to Bankers Trust Co. (chartered to C&H Sugar Co.) for U.S. mainland/Hawaii service;
- one RO/RO vanship to Transamerican Trailer Transport, Inc., for New York/Puerto Rico service;
- two RO/RO vanships to United California Bank (chartered to Matson Navigation Co.) for U.S. Pacific Coast/Hawaii service;
- two 120,000 dwt. tankers—one each to Overseas Bulktank Corp. and Atlantic Richfield Co.;
- one deep sea mining vessel for Global Marine, Inc.; and
- one 53,000 dwt. tug-barge for Litton Industries Leasing Corp.

More new merchant vessels were delivered by American shipyards during fiscal year 1974 than during any fiscal year since 1963. Moreover, U.S. yards delivered more subsidized tonnage (756,000 dwt.) in 1974 than during the preceding four fiscal years combined.

Deliveries of oceangoing merchant vessels by the major shipbuilding nations during calendar year 1973 are shown in Appendix III.

Title XI Guarantees

Title XI of the Merchant Marine Act, 1936, as amended, authorizes the Secretary of Commerce to guarantee obligations made to finance the construction, reconstruction, and reconditioning of vessels and certain marine facilities or equipment. It is designed to assist ship operators in obtaining the private capital necessary to replace or expand their fleets.

TABLE 3 Deliveries From U.S. Shipyards FY 1974 [1]

Owner	Builder	Design	Deliveries
	SUBSIDIZED		
American Export Lines, Inc.	Bath Iron Works Corp.	Containership	1
American President Lines, Ltd.	Litton Systems, Inc.	Containership	2
Aries Marine Shipping Co.	National Steel & Shipbuilding Co.	OBO	2
Delta Steamship Lines, Inc.	Avondale Shipyards, Inc.	LASH	3
Farrell Lines, Inc.	Litton Systems, Inc.	Containership	1
Langfitt Shipping Corp.	Seatrain Shipbuilding Corp.	Tanker	1
Margate Shipping Co.	National Steel & Shipbuilding Co.	Tanker	1
Reynolds Leasing Corp.	Bethlehem Steel Corp.-Sparrows Point, Md.	Containership	2
Waterman Steamship Corp.	Avondale Shipyards, Inc.	LASH	2
	Total Subsidized Deliveries		**15**
	NON-SUBSIDIZED		
American Steamship Co.	Bay Shipbuilding Corp.	Bulk Carrier	1
Atlantic Richfield Co.	Bethlehem Steel Corp.-Sparrows Point, Md.	Tanker	1
Bankers Trust Co.	Lockheed Shipbuilding & Construction Co.	Bulk Carrier	1
Edison Steamship Co.	American Ship Building Co.	Bulk Carrier	1
Franklin Steamship Co.	Bay Shipbuilding Corp.	Bulk Carrier	1
Global Marine, Inc.	Sun Shipbuilding & Dry Dock Co.	Mining Ship	1
Kinsman Marine Transit Co.	American Ship Building Co.	Bulk Carrier	2
Litton Industries	Erie Marine/Halter Marine	Tug-Barge	1
Overseas Bulktank Corp.	Bethlehem Steel Corp.-Sparrows Point, Md.	Tanker	1
TTT, Inc.	Sun Shipbuilding & Dry Dock Co.	Roll-on/Roll-off	1
United California Bank	Sun Shipbuilding & Dry Dock Co.	Roll-on/Roll-off	2
	Total Non-Subsidized Deliveries		**13**
	TOTAL DELIVERIES FY 1974		**28**

[1] All new ships. No conversions were completed during FY 1974.

This program provides that the United States will guarantee the payment of the principal and interest on the obligation. All security, including any mortgage, is held by the Government as collateral for its guarantee. The lending institution's primary concern in the transaction is the terms of the bond or other financial instrument. The terms of the security arrangements are confined to the borrower and the Secretary of Commerce acting for the United States.

Title XI also authorizes refinancing of certain mortgages at any time, but only in the amounts outstanding and subject to statutory determinations by the Secretary of Commerce.

During fiscal year 1974 legislation was passed raising the amount of unpaid principal that can be guaranteed by the Government from $3 billion to $5 billion.

During the year applications were approved for guarantees totaling approximately $1.3 billion (see Appendix IV). These guarantees covered 33 deep-draft vessels, 32 ocean tugs or barges, 221 river tugs or barges, 23 drill service vessels, 2 miscellaneous types and 50 LASH lighters.

In addition, mortgages were placed on 77 vessels of various types and 567 lighters, based on commitments made in previous fiscal years (see Appendix III).

Title XI applications approved and contracts in force on June 30, 1974, covered a total of 764 vessels and 2,221 lighters, with a total outstanding principal balance of $3.8 billion.

Pending applications for ship financing guarantees encompassed construction or reconstruction of 446 vessels and 250 shipboard lighters at a total estimated actual cost to the applicants of $3.6 billion, of which $2.9 billion would be covered by financing guarantees (see Chart 1).

During the year the Title XI mortgage on the SS CANADA MAIL was paid off by the owner, American President Lines, Ltd.

The Federal Ship Financing Fund, Revolving Fund received $10.2 million in net income during the year making the Fund's retained income $55.3 million.

Capital Construction Funds

The Capital Construction Fund (CCF) program was created by the Merchant Marine Act of 1970 to aid operators in accumulating the large amounts of capital necessary to build or convert ships. Under Section 607 of the Act, any U.S. citizen owning or leasing an eligible vessel operated in the foreign or domestic commerce or in the fisheries of the United States may enter into an agreement with the Maritime Administration to obtain tax-deferral privileges on the earnings and capital gains of these vessels and on investments of the accumulated assets in the Fund, provided these funds are used to acquire, construct, or rebuild vessels to be operated in the U.S. foreign, domestic Great Lakes or noncontiguous trades, or in the fisheries.

During the year many corporations holding individual Interim Capital Construction Fund Agreements combined them into a consolidated Agreement under their parent corporation.

As of June 30, 1974, the Maritime Administration had executed 63 individual and consolidated agreements with eligible shipping companies (see Appendix X). As a result of these agreements, U.S. ship operators will acquire, construct or reconstruct vessels, barges and containers in American shipyards, at an aggregate cost of approximately $3 billion over the next 10 years.

Construction Reserve Funds

Eight construction reserve funds were established during fiscal year 1974.

As of June 30, 1974, there were 14 construction reserve funds with total resources of $4.3 million, as compared to six funds having total resources of $2.9 million on June 30, 1973, (see Appendix V).

Trial And Surveys

Sea trials and acceptance surveys were conducted on 12 subsidized ships and guarantee surveys were conducted on nine ships.

During the year MarAd construction representatives and engineers also attended sea or river trials on 42 vessels built under the Title XI program to ensure that the basic requirements of the construction contracts were met.

Ship Design

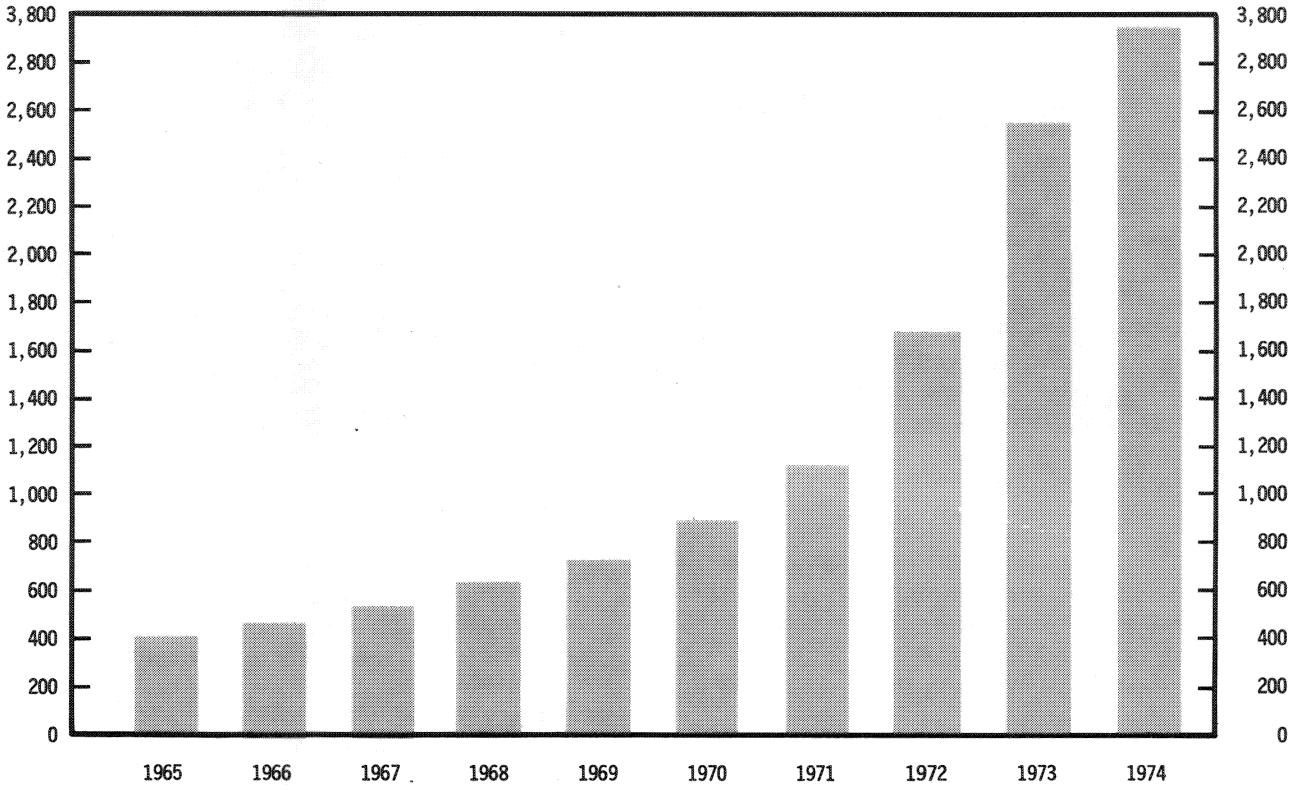
As part of a continuing cooperative effort with the U.S. Navy, MarAd completed a series of four preliminary designs of commercial tankers which meet military requirements for cargo transport and underway replenishment. The designs were developed to provide merchant tankers with the capability to serve as naval auxiliaries. These ships would be used to consolidate cargoes of fleet oilers and for point-to-point cargo transfer. Commercial standards were used whenever possible to assure the greatest possible construction cost savings.

In support of the Agency's nuclear ship program, a preliminary feasibility study was prepared

CHART 1. Federal Ship Financing Guarantee Program

(Title XI) Principal Liability (Statutory Limit $4.975 Billion)

(Millions of Dollars)



Outstanding Principal Amounts (in millions of dollars)

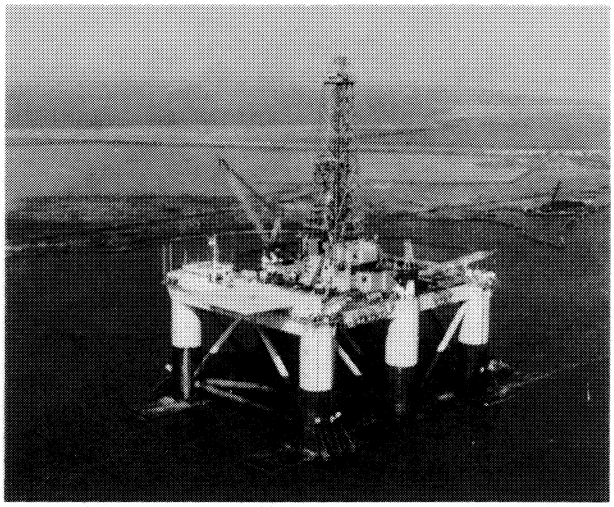
Principal Amounts	418.6	481.7	558.0	654.5	754.6	911.5	1,154.1	1,692.4	2,579.2	3,762.6
SHIPS	79	98	113	129	144	171	279	434	456	764
LIGHTERS					360	360	520	1,721	2,171	2,221

TITLE XI STATUS
June 30, 1974

Vessel Types	Contracts In Force		Applications Pending	
DEEPDRAFT VESSELS:				
Tankers	81	$1,212,830,129	23	$ 872,309,000
Cargo	171	835,100,398	—	—
LNGs	14	1,026,303,500	11	914,372,000
Bulk/OBOs	9	107,031,185	29	595,863,690
Total	**275**	**$3,181,265,212**	**63**	**$2,382,544,690**
OTHER TYPES:				
Ocean Tugs [1]	23	$ 54,412,752	22	$ 62,236,075
Ocean Barges	26	56,647,846	32	50,397,000
River Tugs	21	27,242,801	32	42,669,572
River Barges	342	68,222,251	255	37,154,000
Oil Drill [2]	19	194,719,744	18	210,443,740
Drill Service [3]	50	79,688,241	18	34,871,800
Miscellaneous	8	31,620,537	6	60,685,115
Total	**489**	**$ 512,554,172**	**383**	**$ 498,457,302**
TOTAL VESSELS	**764**	**$3,693,819,384**	**446**	**$2,881,001,992**
SHIPBOARD LIGHTERS	2,221	$ 68,833,280	250	$ 8,380,000
TOTAL		$3,762,652,664		$2,889,381,992

[1] Includes anchor handling tugs for drilling vessels.
[2] Includes semi-submersibles, jackups and drilling vessels.
[3] Includes tug/supply vessels and other miscellaneous service craft for oil drilling vessels.

The United States leads the world in the construction of offshore oil drilling rigs. This rig, built by Bethlehem Steel's Beaumont, Tex., yard, is enroute to the North Sea.



Artist's concept of a 900-ton gantry crane which is being erected as part of Newport News Shipbuilding and Dry Dock Co.'s capital improvement program. It is shown here superimposed over the yard's existing 310-ton crane.

for a 400,000 dwt. nuclear powered tanker. Differences between conventional and nuclear versions, the nuclear construction capabilities of U.S. shipyards, and design merits and disadvantages of the nuclear version are described in the study.

Value Engineering

MarAd's Value Engineering Program promotes the development and application of design and engineering studies which will result in lowering the cost of ship construction without impairing any of the essential design characteristics of the vessel.

The program produced savings of $2.6 million in fiscal year 1974. The cumulative program savings since its inception in 1957 totals $28.3 million.

Shipyard Improvements

Spurred by the Nation's maritime requirements and by the soaring demand for energy carriers, the U.S. shipbuilding industry spent in excess of $370 million for capital improvements in the past four years. Shipbuilders plan to spend an additional $350 million during the next two to three years for continued expansion and modernization of their facilities.

The following are examples of the investment programs that have been undertaken:

Newport News Shipbuilding and Dry Dock Co., Commercial Ship Div., Newport News, Va.

This firm has committed $150 million for the construction of an entirely new commercial yard. It will include a building basin 1,600 feet long, 230 feet wide, and 44 feet deep (the largest in the United States), and a 900-ton gantry crane. This new facility will permit Newport News to construct one Very Large Crude Carrier (VLCC) and part of a second simultaneously.

Bethlehem Steel Corp., Sparrows Point, Md.

During the year this yard completed a $30 million program to provide a large graving dock to accommodate tankers of up to 350,000 dwt. and a modern steel handling and fabricating facility.

Avondale Shipyards, Inc., New Orleans, La.

Avondale is in the midst of a $42 million expansion program that will enable the yard to build LNG carriers. One of the major improvements is the construction of a floating drydock 900 feet long and 225 feet wide.

General Dynamics Corp., Quincy Division, Quincy, Mass.

General Dynamics has committed $40 million to modernize the Quincy yard. This program, which is nearly half completed, centers primarily on conversion of two conventional shipways to building basins which can accommodate LNGs and VLCCs.

Sun Shipbuilding & Dry Dock Co., Chester, Penna.

Sun Ship's $40 million expansion program, which will be completed in 1975, will provide the yard with the capability of building ships of up to 400,000 dwt. The two major features of the program are the construction of a new floating drydock and a new level

"shipbuilding platform" on which a large ship can be build in two halves or two smaller ships can be built simultaneously.

National Steel and Shipbuilding Co., San Diego, Calif.

National Steel's current plans provide for increasing shipbuilding capacity to enable it to build 150,000 dwt. tankers or 125,000 cubic meter LNGs. This $20 million program, scheduled for completion in March 1975, includes construction of a new 1,000 foot long graving dock and additional steel fabrication facilities.

Todd Shipyards Corp., San Pedro, Calif.

Todd, San Pedro's present $20 million facilities improvement program, which is more than half completed, provides for reconstruction and enlargement of two shipways to accommodate vessels 900 feet by 132 feet.

These modernization programs do not represent the total investment committed by all U.S. commercial shipyards since enactment of the 1970 Act. They serve as an indication, however, of the determination of the American shipbuilding industry to improve its competitive position in the ship construction market.

Equal Opportunity

Since 1968 the Maritime Administration has been responsible for ensuring that Government contractors in the maritime industries located in coastal states provide equal employment opportunity (EEO) to all Americans without regard to race, color, religion, sex, or national origin.

To fulfill its responsibility MarAd, through its Office of Civil Rights, conducts compliance reviews of all contractors' facilities to audit and monitor the full spectrum of the contractors' recruitment and employment practices. During fiscal year 1974, 277 reviews were conducted. Where discriminatory practices were encountered, corrective programs were developed and instituted.

The Agency's data base for measuring progress in the shipbuilding and repair industry encompasses major shipyards which account for 80 percent of the industry's total employment. While overall shipyard employment increased by 5,609 persons to 114,111 from 1968 to 1974, minority employment rose by 12,618 persons to a total of 31,814. Minorities now constitute 27.9 percent of the industry work force compared to 17.7 percent in 1968. During this period black employment rose from 15.5 to 23.2 percent of the work force and Spanish-surname employees increased from 1.9 to 4.1 percent.

Minority representation in skilled jobs and white collar-salaried jobs also improved. Both are significant indicators of progress in the quality of jobs held. In 1974 minority employees represented 30 percent of the blue collar skilled work force, up from 15.9 percent in 1968. Minority white collar-salaried employment rose from 3.5 to 10.4 percent over the same period.

Virtually excluded from blue collar shipyard jobs since the late 1940s, women held 2,381 jobs and comprised 3 percent of the blue collar work force in 1974, compared to 158 jobs or 0.2 percent in 1968.

Overall, women held 7,287 jobs and accounted for 6.4 percent of all shipyard jobs in 1974, compared to 3.7 percent in 1968.

Minority Business

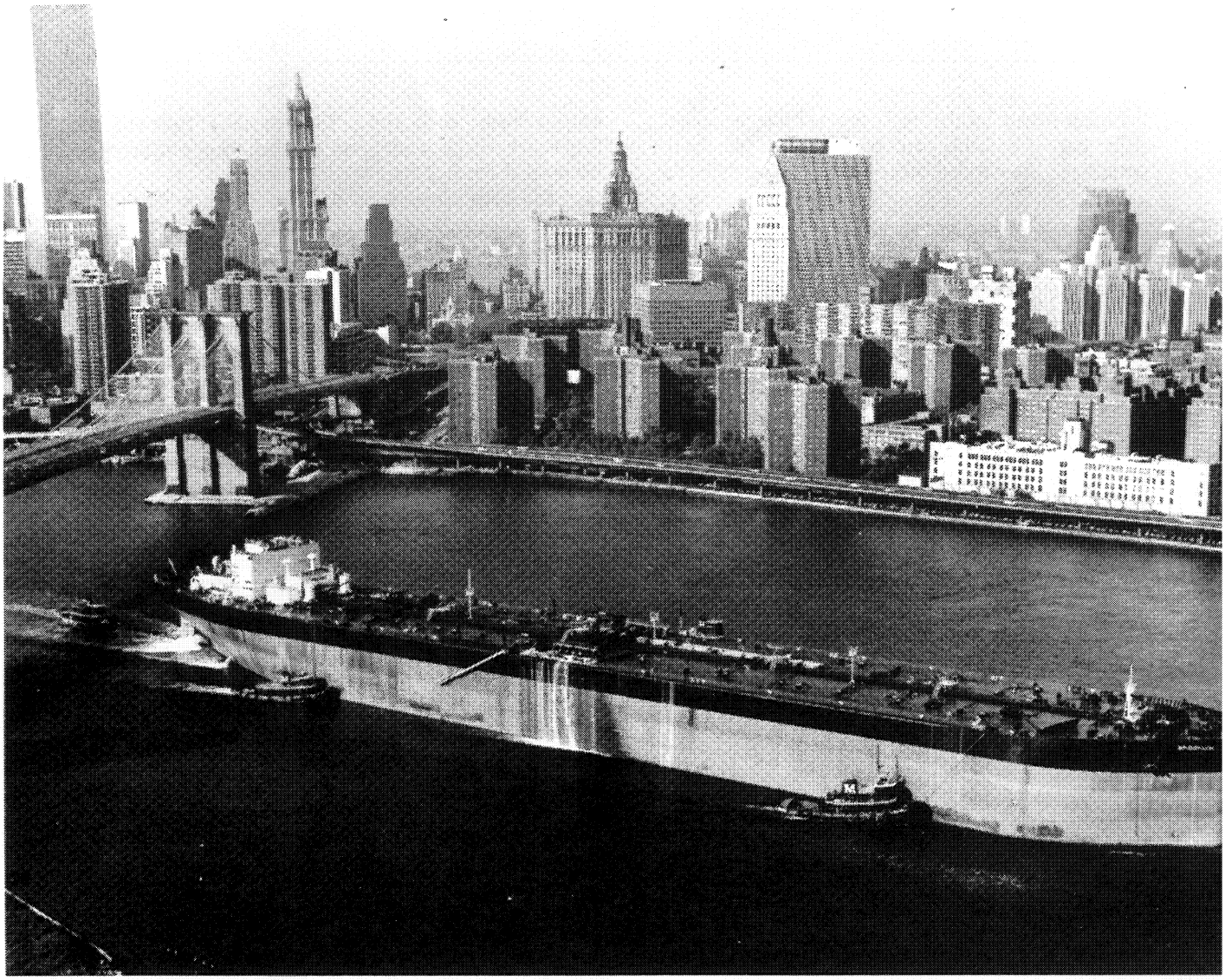
During fiscal year 1974 MarAd's Minority Business Enterprise Program was expanded from a regional pilot program to one national in scope.

A formal implementing agreement was concluded during the fiscal year with another U.S. Department of Commerce Agency, the Office of Minority Business Enterprise, to promote the use of minority contractors and sub-contractors by the maritime industries.

One of the first projects undertaken was the development of a Directory of Minority Entrepreneurs which lists minority firms with the capability of serving the maritime industry. The Directory, which was distributed to purchasing agents of all shipbuilding and shipping companies, consists chiefly of firms located in MarAd's Eastern Region (see inside cover for jurisdictions of the Agency's three region offices). During the year the Western Region completed a directory of minority firms located in its jurisdiction and the Central Region had a similar project underway. The listings of all three regions will be consolidated into a national directory during fiscal year 1975.

As a result of this new program, U.S. shipbuilders purchased goods and services valued at $2.5 million from minority contractors during the first six months of calendar year 1974.

During the fiscal year MarAd assisted in the creation of two minority-owned shipping corporations, and a third minority firm was formed to engage in barge building. The Agency is aiding other minority entrepreneurs to enter the maritime industry.



The 225,000-ton TT BROOKLYN is the largest vessel in the American merchant fleet.

The roll-on/roll-off vanship LURLINE was placed in operation during fiscal year 1974.

The 38,300-ton CORONADO was one of the first bulk carriers delivered under the Merchant Marine Act, 1970.

Chapter 2

Ship Operations

Status Of U.S. Fleet

On June 30, 1974, the active privately owned U.S. merchant marine consisted of 565 oceangoing ships aggregating approximately 13.4 million deadweight tons (dwt.). Included in this fleet were 169 freighters, 232 tankers, 21 bulk carriers, 138 intermodal vessels (containerships, LASH vessels, and RO/RO vanships) and five combination passenger/cargo ships (see Appendix VII).

Although 24 privately owned vessels were in an inactive status on June 30, 1974, only 13 of these were actually laid up. Two were stranded in the Suez Canal, and the other nine vessels were temporarily inactive, either awaiting cargoes or undergoing repairs.

Areas of employment of U.S. merchant vessels are presented in Appendix VIII.

At the close of the fiscal year there were 589 oceangoing vessels of 13.9 million dwt. in the privately owned U.S. merchant marine. This fleet had an average deadweight of 23,580 tons, an average age of 17 years, and an average speed of 18 knots.

A comparison of world merchant fleets as of June 30, 1974, appears in Appendix IX.

A composite picture of the financial status of U.S.-flag operators, both subsidized and unsubsidized, is presented in the Combined Condensed Financial Statements (Appendix XI).

Seven operators held Capital and Special Reserve Funds on June 30, 1974 (see Appendix XII).

Operating Subsidy

The Maritime Administration is authorized to pay operating-differential subsidy (ODS) to American ship operators to offset the higher cost of operating a vessel under the American flag than under a foreign flag. This form of aid generally covers wages, insurance, maintenance and repairs not compensated by insurance, and subsistence of officers and crews on passenger ships. All modern cargo carrying vessels, including bulk carriers, that operate in an essential foreign trade are eligible for ODS.

Total operating subsidy payments during fiscal year 1974 amounted to $257.9 million. (See Appendices XIII and XIV for ODS accruals and expenditures.)

Regular ODS

During fiscal year 1974 four new long-term (20-year) operating-differential subsidy agreements were executed and approval was given for a merger of two subsidized companies. At year's end there were 23 operators holding 26 ODS agreements with the Agency (see Appendix XV). Although 206 vessels were covered under these agreements, only 177 were in operation on June 30, 1974. The balance were either under construction or on order.

Payments during fiscal year 1974 pursuant to these regular ODS agreements totaled $227 million. ODS accruals from January 1, 1937, to June 30, 1974, totaled $4,188 million; recapture amounted to $239 million, leaving a net accrual as of June 30, 1974, of $3,949 million. Of the net accrual, $3,864 million has been paid out, leaving an estimated unpaid balance of $85 million at the end of the fiscal year (see Appendix XIII).

Contract Auditing

Prior to the enactment of the Merchant Marine Act of 1970, subsidized liner operators could not be paid their final 5 percent of accrued operating-differential subsidy until their annual accountings had been reviewed and approved by the Maritime Administration. During fiscal year 1974 such final-payment audits were completed

for eight liner operators, generally covering the period from 1969 through 1970.

The Merchant Marine Act, as amended in 1970, provided for payment on a monthly basis of 100 percent of the accrued wage subsidy, without awaiting final audit. During the fiscal year wages on a 100 percent basis were paid to 12 liner and three bulk operators under the provisions of the 1970 Act.

Audits completed during the fiscal year resulted in reduced billings of about $1.7 million to the Government.

Uniform Accounts

During the fiscal year major strides were made by the Maritime Administration in the development of Uniform Cost Accounting Standards (UCAS) and a Cost Information Reporting System (CIRS) that would benefit both MarAd and maritime regulatory agencies, as well as the industry in general. This program included revision of the Agency's General Order 22 which sets forth the uniform system of accounts for maritime carriers. While the new UCAS and CIRS programs were not expected to be fully operational before 1975, one West Coast company, Pacific Far East Line, Inc., working closely with the Maritime Administration, agreed to act as the pilot test company for the system. This implementation test began in fiscal year 1974 and will continue through the developmental period of the new system.

Contract Awards

New operating subsidy contracts were awarded to Aquarius Marine Co., Chestnut Shipping Co., Moore-McCormack Bulk Transport, Inc., and Spruce Shipping Co.

Aquarius will operate one of the three 89,700 dwt. tankers now under construction for Aeron Marine Shipping Co. Moore-McCormack Bulk Transport has on order three 38,300 dwt. tankers, while Chestnut has two 89,700 dwt. tankers, and Spruce Shipping has three 89,700 dwt. tankers on order. The nine vessels covered by these contracts will become operational during the period 1975–1979 and will be employed in the worldwide bulk service.

On September 6, 1973, the Maritime Subsidy Board authorized American President Lines, Ltd., to merge its operations with those of American Mail Line, Ltd., its wholly-owned subsidiary. The Board approved the continuation of the ODS contracts of both companies and required APL to assume all provisions and obligations of the AML contract.

Pending Applications

Nine ODS applications from non-subsidized operators were pending at the end of the fiscal year.

Erie Navigation Co. has applied for a bulk carrier operation between the United States and Canada. National Shipping Corporation's application covers a dry bulk carrier operation from the Canadian West Coast to the U.S. East Coast, and Suwannee River Lines' application is for a liquid bulk chemical service between the United States and the Soviet Union.

Filing applications for worldwide operations with ore/bulk/oil carriers or tankers were Hedge Haven Farms, Inc.; Multi-Carriers, Inc.; Ecology Two Corp.; Waterman Carriers, Inc.; Tankers Holding, Inc.; and Zapata Western Shipholding, Inc.

In addition to these applications from non-subsidized operators, six companies with existing ODS contracts have applied for operating subsidy for additional sailings or other services as follows:

- American Export Lines, Inc.—for service from U.S. North Atlantic ports to ports in the United Kingdom and Western Europe (Trade Route 5-7-8-9) and to Scandinavia (Trade Route 6); for service from U.S. South Atlantic ports to the United Kingdom and Western Europe (Trade Route 11); for service from U.S. Gulf ports to the United Kingdom and Western Europe (Trade Route 21); and for service from U.S. Gulf ports to the Far East (Trade Route 22).
- Pacific Far East Line, Inc.—for increased sailings on its Transpacific Far East service (Trade Route 29).
- States Steamship Co.—for increased sailings on its Transpacific Far East service (Trade Route 29).
- Delta Steamship Lines, Inc.—for service from U.S. Gulf ports to the Caribbean and the East Coast of Mexico (Trade Route 19); and also for increased sailings on its service from U.S. Atlantic/Gulf ports to West Africa (Trade Route 14).
- Lykes Bros. Steamship Co., Inc.—for service from U.S. North Atlantic ports to those in the United Kingdom and Western Europe (Trade Route 5–7–8–9); and U.S. South Atlantic to United Kingdom and Western European ports (Trade Route 11).
- Waterman Steamship Corp.—for services from ports on the U.S. North Atlantic Coast to those in the United Kingdom and Western Europe (Trade Route 5–7–8–9); from U.S. North Atlantic ports to Scandinavia

(Trade Route 6); and from U.S. South Atlantic ports to ports in the United Kingdom and Western Europe (Trade Route 11).

Waterman also has applications pending for new long-range ODS contracts for service on Trade Routes 21 and 22 to replace existing short-term agreements scheduled to expire in fiscal year 1975.

Several long-term ODS agreements which were executed in the late 1950s are due to terminate on various dates at the end of their 20-year contractual periods on December 31 of the years 1976 through 1979. During this fiscal year renewal applications (and amendments thereto) were received from four operators for extension or renewal of long-term contracts. American President Lines, Ltd., has applied for a two-year extension of its contract from December 31, 1976, to December 31, 1978—which is the termination date of its American Mail Line Division contract—in order to facilitate and coordinate the formulation of one long-term contract for the merged companies. It also filed for a renewal of its 20-year contract. Delta Steamship Lines, Inc., Moore-McCormack Lines, Inc., and States Steamship Co. have also submitted applications for long-term contract renewals.

Subsidy Index

The Subsidy Index System embodied in the 1970 Act provides for the payment of wage subsidies in per diem amounts. Since the collection of foreign cost data takes several months, the Maritime Subsidy Board establishes tentative per diem subsidy rates within 90 days of the beginning of each fiscal year. The tentative fiscal year 1974 rates for all subsidized vessels were completed in September 1973.

MarAd also completed all final 1970 subsidy rates, 47 of the 170 final rates applicable to cargo and passenger vessels in liner services for 1971, and 20 final rates applicable to the Soviet Grain program.

Proposed regulations for the subsidization of bulk cargo ships were published by MarAd in June 1974, and comments from interested parties were solicited. After the responses have been considered the regulations will be published in final form.

Soviet Grain ODS

Since the signing of the U.S./U.S.S.R. Maritime Agreement in October 1972, U.S.-flag ships have been able to participate in the carriage of over 22 million metric tons of U.S. grain purchased by the Soviet Union. American-flag ships carrying 4.65 million metric tons of grain have made 135 voyages to Soviet ports since October 1972.

As of June 30, 1974, 49 operators held short-term ODS agreements covering 87 vessels for the carriage of agricultural commodities from ports in the United States to ports in the Union of Soviet Socialist Republics (see Appendix XVI).

Payments during 1974 under the special Soviet Grain agreements totaled $31.4 million.

U.S. bulk carriers were fixed for 43 voyages during calendar year 1973 and accrued $17.6 million in operating-differential subsidy.

Since the program began in fiscal year 1973, operators have accrued $50 million. Of this accrual, $41 million was paid out, leaving an estimated unpaid balance of almost $9 million at the end of the fiscal year (see Appendix XIII).

In addition to exporting grain cargoes, these vessels were able to import over 4.7 million tons of crude oil and petroleum products on the return trip, helping to alleviate the Nation's energy shortages.

Contract Awards

Two new special ODS contracts were awarded during the year, one to a new subsidized operator with four ships and the other to an existing subsidized operator to enable him to add two ships to his service. Four companies, each with one ship, cancelled their ODS contracts and three other vessels were withdrawn from separate contracts during the year.

Grain Rates

MarAd instituted a new system, effective July 1, 1973, for computing the Soviet Grain ODS payments. The negotiated fixed freight rate, plus a premium over and above these fixed rates, was replaced with an index system based upon monthly average voyage charter rates for the carriage of heavy grains from U.S. Gulf ports to those in the Holland/Belgium range.

In addition, abatement provisions were introduced in the subsidy system which reduced the amount of operating subsidy paid to U.S. owners as the freight rate increased. Accordingly, the new index system enabled U.S. ship operators to receive from the Soviets current market freight rates that ranged from a low of $17.13 per long ton in August 1973 to a high of $31.54 per long ton in April 1974, while at the same time it reduced the amount of operating subsidy paid out by MarAd.

Grain Monitoring

Each of MarAd's three region offices monitored local activities of grain elevators and ship movements. As a result of their efforts, MarAd and other Federal agencies were able to minimize problems connected with the voluminous export program.

U.S./U.S.S.R. Liner Service

The Maritime Agreement between the U.S. and U.S.S.R. Governments has enabled the United States to expand its commercial relationship with the Soviet Union. Two American shipping companies inaugurated direct liner services between U.S. and Soviet ports during the fiscal year.

The SS MASON LYKES, loaded with some 800 tons of machinery, became the first U.S.-flag general cargo ship to call directly at a Soviet port in more than a decade. After an initial stop in New Orleans, the Lykes Bros. Steamship Co. ship sailed from Baltimore in December 1973 headed for the Black Sea port of Odessa.

American Export Lines' SS EXPORT CHAMPION sailed from New Orleans for Leningrad in February 1974. Its $10 million cargo included oil field and pipeline equipment, compressors, foundry machinery, and baled woodpulp.

Passenger Ships

The Passenger Ship Sales Act (Public Law 92–296), which was signed into law on May 16, 1972, authorized the sale of five U.S.-flag passenger vessels to foreign buyers. Three of the vessels were sold foreign prior to fiscal year 1974. The SS CONSTITUTION, formerly owned by American Export Lines, Inc., was sold on March 21, 1974, to Atlantic Far East Lines, Inc., a Liberian corporation. The remaining vessel, SS SANTA ROSA, owned by Prudential Lines, Inc., was laid up at the close of the year.

Public Law 93–330, signed on June 30, 1974, authorized the foreign sale of the SS INDEPENDENCE, owned by American Export Lines, Inc. At the close of the fiscal year sale of the vessel was pending.

The passenger liner SS UNITED STATES was acquired on February 5, 1973, by the Maritime Administration under Public Law 92–296 for the purpose of either selling or chartering the vessel to a qualified operator for operation under the American-flag, or laying up the vessel in the National Defense Reserve Fleet. In November 1973 the vessel was offered for sale by an Invitation for Bids, but all nine bids received were rejected as being unresponsive. At the close of the fiscal year proposals were pending for operating the vessel as a cruise ship, a trade ship, a stationary exhibit hall, and an arrangement for turning the vessel into floating condominiums.

MarAd's Eastern Region is responsible for maintaining the UNITED STATES, which is in temporary lay-up at the Norfolk International Terminal in Virginia.

On June 30, 1974, the active U.S.-flag passenger fleet consisted of the SS MARIPOSA and SS MONTEREY, operated by Pacific Far East Line, Inc., in the Pacific trade and three combination passenger/cargo vessels, SSs SANTA MARIA, SANTA MARIANA, and SANTA MERCEDES, operated by Prudential Lines, Inc., in the South American trade.

Sec. 804 Activities

Under Section 804 of the Merchant Marine Act of 1936, as amended, it is unlawful for any contractor receiving ODS or any holding company, subsidiary, affiliate, or associate of such contractor, directly or indirectly to own, charter, act as agent or broker for, or operate any foreign-flag vessel which competes with an essential American-flag service, without the prior approval of the Secretary of Commerce. The prohibition also applies to any officers, directors, agents, or executives of such an organization.

During fiscal year 1974 the following nine waivers were granted under section 804:

- Amerada Hess Corp.—to permit Amerada, which is affiliated with Amerada Hess Liberia, to participate in the Soviet Grain program under a special ODS contract;

- American President Lines, Ltd.—to permit APL to conduct direct mail campaigns soliciting passenger traffic only for steamship lines operating foreign-flag ships, and to book passengers for these foreign-flag ships when requested to do so as a result of the campaigns;

- American President Lines, Ltd.—to permit it to employ APL-Everett Agencies, S.A., which operates foreign-flag vessels, as its agent in the Far East area;

- Waterman Steamship Corp.—to cover operations of foreign-flag vessels by its affiliate United States Freight Co.;

- Lykes Bros. Steamship Co., Inc.—to permit Lykes to act temporarily as a general agent for Compagnie Nationale Algerienne de Navigation, a wholly owned steamship line of the Algerian government;
- Chestnut Shipping Co.—to cover the operation of two tankers, each of 89,700 dwt.;
- Aquarius Marine Co.—to cover the operation of one 89,700 dwt. tanker;
- Atlas Marine Co.—to cover the operation of one 89,700 dwt. tanker; and
- Spruce Shipping Co.—to cover the operation of three 89,700 dwt. tankers.

The last four waivers are essentially extensions of waivers previously granted to affiliates of Chestnut, Aquarius, Atlas, and Spruce. Chestnut and Spruce are both related to Margate Shipping Co., which has a Section 804 waiver because of five foreign affiliations. Atlas and Aquarius are related to Aries Marine Shipping Co., which has a Section 804 waiver because of its affiliation with Golden Eagle Liberian, Ltd.

In addition, 38 other companies received extensions of previously granted waivers to allow them continued participation in the special Soviet Grain ODS program.

Trade Routes

Several liner trade routes and liquid and dry bulk cargo trades were reviewed in connection with ODS applications or modification of areas to be served in existing ODS contracts.

The following services were found to be essential to the foreign commerce of the United States:

1. Worldwide liquid and dry bulk services in the foreign oceanborne commerce of the United States.
2. U.S.-flag bulk cargo service for the carriage of lumber from the Pacific Coast of Canada to U.S. Atlantic and Gulf ports and bulk fertilizers from U.S. Atlantic and Gulf ports to the Canadian Pacific Coast, as well as other bulk trades in the foreign commerce of the United States.
3. The round-the-world westbound service provided by American President Lines, Ltd., was modified. It was determined that a new feeder service provided in conjunction with ships operated on Trade Route 17 to certain areas (principally India, Bangladesh, and Sri Lanka) previously served by APL's round-the-world ships was an essential service.

Equal Opportunity

The employment of minority group members by major shipping companies has risen significantly since 1969 when MarAd assumed responsibility for monitoring the American lines' compliance with EEO statutes. In 1974 minority employment reached 1,339 persons or 16.4 percent of the total shoreside (non-casual) work force. This contrasts with 755 minority group members employed in 1969, or 10 percent of that work force. During this five-year period, while overall employment in this category increased by 663 persons, minority employment rose by 584 persons.

Minority participation in executive and managerial jobs increased from 3.1 percent in 1969 to 6.4 percent in 1974. Among professionals minority representation showed an increase in 1974 to 10.3 percent from 6.2 percent in 1969.

The status of women in the shipping industry has also improved, with more females being employed in nontraditional areas. In 1974 women constituted 4 percent of all executive and managerial positions and 15.4 percent of all professional employees. In all, 34.9 percent of the total work force in the shipping industry was made up of women.

Foreign Transfers

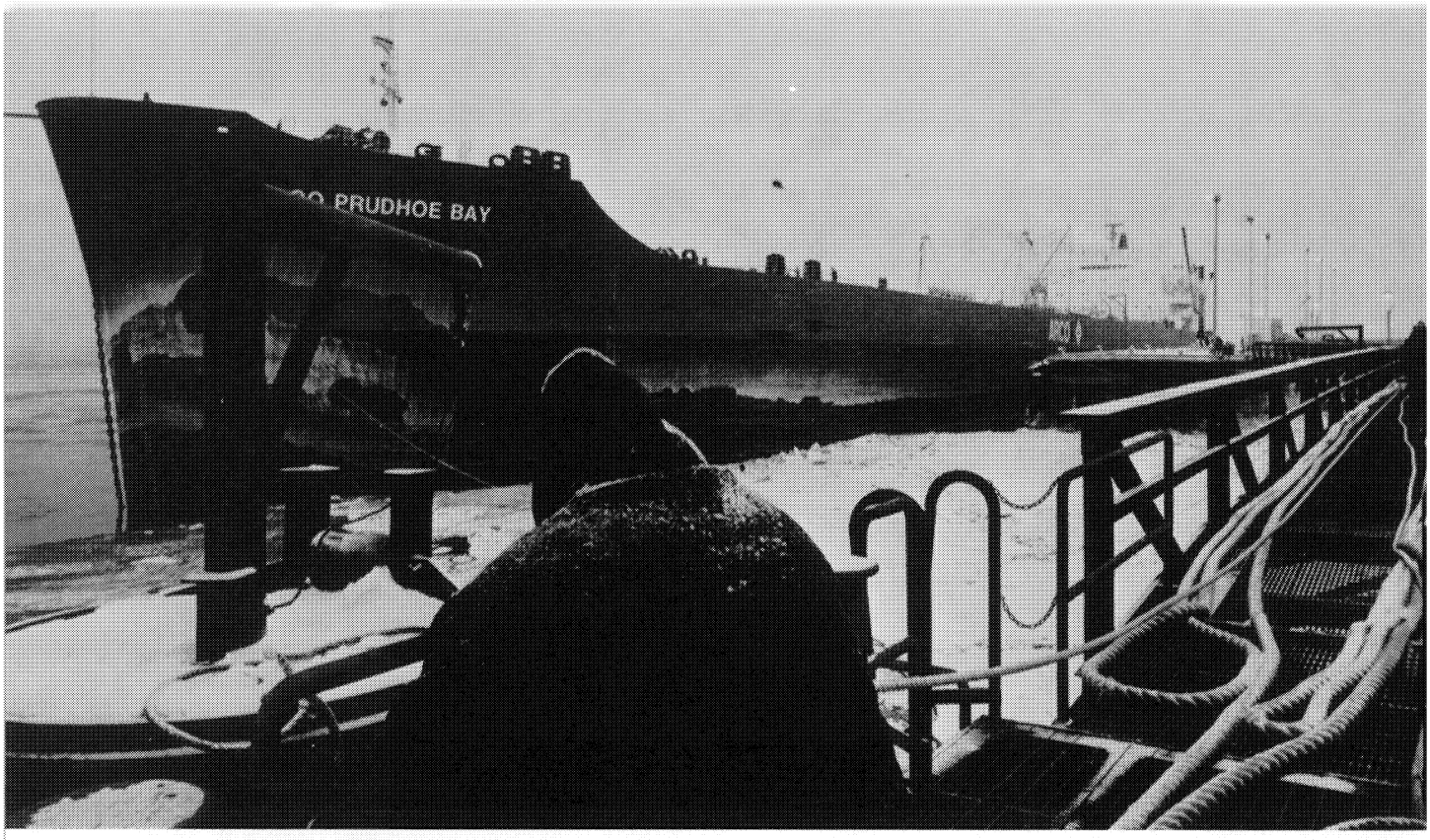
The Maritime Administration approved the transfer to foreign firms of 122 privately owned ships of 1,000 gross tons and over. More than 60 percent of these transfers were for scrapping abroad. Twenty-seven of the 122 ships were undocumented or registered under a foreign flag, although owned by a U.S. citizen (see Appendix XVII). Approvals were also granted for foreign transfer of 764 vessels of less than 1,000 gross tons, 624 commercial and 140 pleasure crafts.

Charters of U.S.-owned ships to aliens were approved for 80 ships of 1,000 gross tons and over, and 120 smaller ships.

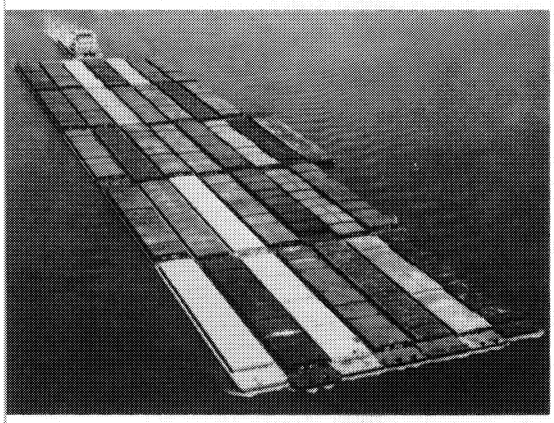
Approval also was granted for the transfer of two shipyards to domestic alien-controlled corporations.

Two new banks were approved as trustees and 41 banks were approved to continue on the Roster of Approved Trustees pursuant to Public Law 89-346 and MarAd General Order 107.

User charges for filing applications for foreign transfers and similar actions amounted to $42,955.



U.S.-flag tanker ARCO PRUDHOE BAY docked at Alaskan terminal.



A 7,500-horsepower towboat powers this 36 barge tow on the Mississippi River.

Tugs operating on the inland waterways system are equipped with sophisticated navigation and communications equipment.

Chapter 3

Domestic Operations

The Merchant Marine Act of 1936, as amended, mandates to the Maritime Administration the responsibility for forming national policies and conducting programs for the development and promotion of the domestic shipping industry. This industry includes inland waterways and Great Lakes operators, as well as those in the coastwise, intercoastal, and noncontiguous trades. See Appendix VIII for vessels employed in domestic ocean trade and Table 4 for the composition of the U.S. Great Lakes fleet.

TABLE 4 U.S. Great Lakes Fleet [1] June 30, 1974

	Vessels	Gross Registered Tons	Estimated Dwt.
TOTAL	**201**	**1,674,552**	**2,688,619**
Bulk Carriers	173	1,574,787	2,619,769
Tankers	13	39,275	68,850
Others	15 [2]	60,490	n.a.

[1] Self-propelled vessels of 1,000 gross registered tons and over.

[2] Includes railroad car ferries, auto ferries.

NOTE: Data supplied by the Lake Carriers Association.

Financial Aid

Several of the MarAd assistance programs available to vessel operators engaged in foreign trade are also available to domestic operators.

During fiscal year 1974 Title XI Ship Financing Guarantees were awarded to 24 domestic operators to aid them in financing the planned construction of 275 vessels valued at approximately $200 million.

By the end of the fiscal year domestic operators held Title XI Guarantees and commitments of approximately $785 million, as compared to $650 million on June 30, 1973.

In addition, 30 domestic operators have established Interim Capital Construction Fund Agreements with MarAd. These funds will result in the construction or acquisition of approximately 107 vessels.

Promotion

A Maritime Domestic Commodity Flow Data Bank was created from which information can be extracted to support the Agency's market development efforts on behalf of the domestic merchant fleet.

Future U.S. domestic waterborne commerce was analyzed in a study completed in January 1974. Prepared under contract for MarAd, it examined current traffic flow patterns of each of the domestic marine transportation segments and assessed the economic and competitive forces that are expected to influence their operations during the remainder of the century. The study projects that tonnage carried by domestic marine operators—which aggregated 892 million tons in 1970—will rise to 2.7 billion tons by the year 2000.

According to the study, water carriers now account for 17.6 percent of the domestic tonnage

movement, 26.9 percent of the total freight ton-miles, but only 2.3 percent of the freight revenues.

Inland Waterways

The Maritime Administration and the U.S. Coast Guard are jointly investigating alternative tank barge designs to minimize the discharge of oil and other pollutants into the Nation's waterways.

A study assessing the economic and safety merits of water transportation of hazardous materials in bulk as opposed to alternative overland modes was completed during the year. The study found that barges provide the least expensive and safest method of transporting nine out of ten hazardous commodities. Movement by barge usually involves less urban exposure than does truck or rail, and the recurrence level between spill-causing accidents is lower for barge than any other mode. In addition, the study found that the domestic water transportation industry undergoes more stringent safety inspections than either truck or rail.

Another study, the cost of which was shared by MarAd and the inland waterways industry, analyzed the industry's communications requirements. It led to the development of a system utilizing leased telephone lines to replace the traditional communications system of independent radio stations positioned along the river shore. Designated the Inland Waterways Communications System, it is designed to reduce costs, improve service and reliability, and conserve radio frequencies. Development of the total system is scheduled for completion by December 1974.

Great Lakes

As a result of shipbuilding programs generated by the Merchant Marine Act of 1970, the average age of Great Lakes ships has dropped from 45.5 years in 1973 to 43.5 years this fiscal year. Table 4 shows the size of the U.S. Great Lakes fleet.

During the year MarAd focused on programs that would extend the Great Lakes winter navigation season.

Demonstration of a precise laser navigation system was successfully completed during the winter of 1973. This system complements ongoing programs to extend operations during the winter when ice conditions necessitate the removal of conventional navigation aids. An improved, lightweight, portable system is now under consideration. Although designed for use on the Great Lakes and St. Lawrence Seaway, this portable system has applications in many other areas requiring precise navigation.

A Great Lakes VHF communications system, allowing ships to dial directly, without operator assistance, into commercial phone lines on land, was being tested during the 1974 shipping season. It will provide new services, such as facsimile transmission, and will enable storage of information in a memory bank which the home office can retrieve at any time.

Several firms have been awarded MarAd contracts to test various ship hull configurations designed to operate in ice conditions. A Great Lakes ship was outfitted with an air bubbler system that lubricates its bow thereby increasing its transit speed through mush ice.

A joint MarAd/U.S. Coast Guard project is testing the structures of Great Lakes vessels and their reactions to various load line limits. Data is now being collected from instruments aboard two ore carriers which will help determine safe load limits for Great Lakes vessels.

During fiscal year 1974 the Maritime Administration and the U.S. Navy analyzed the performance of sewage treatment units installed on more than 60 Great Lakes ships. MarAd is developing modifications which will improve the operation of these devices. This program is being conducted with the assistance and cooperation of the shipping industry and several other Government agencies. The modifications are expected to render ship generated sewage virtually pollution free.

The Maritime Administration intervened before the Interstate Commerce Commission (ICC) in a case to protect the Great Lakes fleet from discriminatory railroad rates. The case involved an application by railroads to institute a noncompensatory rate for the transportation of general commodities which was lower than the rate offered by water carriers. At year's end this case was awaiting a decision by the Commission.

Chapter 4

Cargo Movement

The Maritime Administration has underway an extensive marketing program that involves: (1) improving the sales efforts of U.S. shipping companies by providing timely reports on cargo movements and opportunities; and (2) informing shippers of the advantages of using American-flag ships. The Agency's goal is to make available sufficient cargo to fill vessels in the merchant marine to capacity and thus increase overall U.S.-flag carriage of the Nation's foreign trade. Development of more efficient ports and intermodal systems is a corollary activity, insuring that the increasing volume of U.S. commerce moves in the most efficient manner possible.

Market Development

MarAd continued its efforts to increase American-flag participation in the carriage of U.S. waterborne commerce. To upgrade its effectiveness the marketing program was reorganized into three general areas: commercial cargo promotion, national cargo promotion, and industry development.

Reflecting the success of the Agency's promotional activities, U.S.-flag ships carried 39.8 million long tons of cargo in calendar year 1973, a 67 percent increase over 1972 movement. See Appendices XVIII and XIX for tonnage and value of U.S. oceanborne cargoes from 1964 to 1973.

Staff initiatives in MarAd's three regions formed the basis of the market development program. MarAd's marketing representatives, located in seven major cities, made personal contacts with importers, exporters, forwarders, State purchasing officers, trade associations, and others controlling or influencing the routing of oceanborne cargo. Through these contacts the representatives made shippers aware of the benefits—both from a corporate and national perspective—of using U.S.-flag ships. Direct contact of this type also provided MarAd with the opportunity to discover obstacles interfering with shipper patronage of U.S.-flag carriers and to initiate steps to remove them.

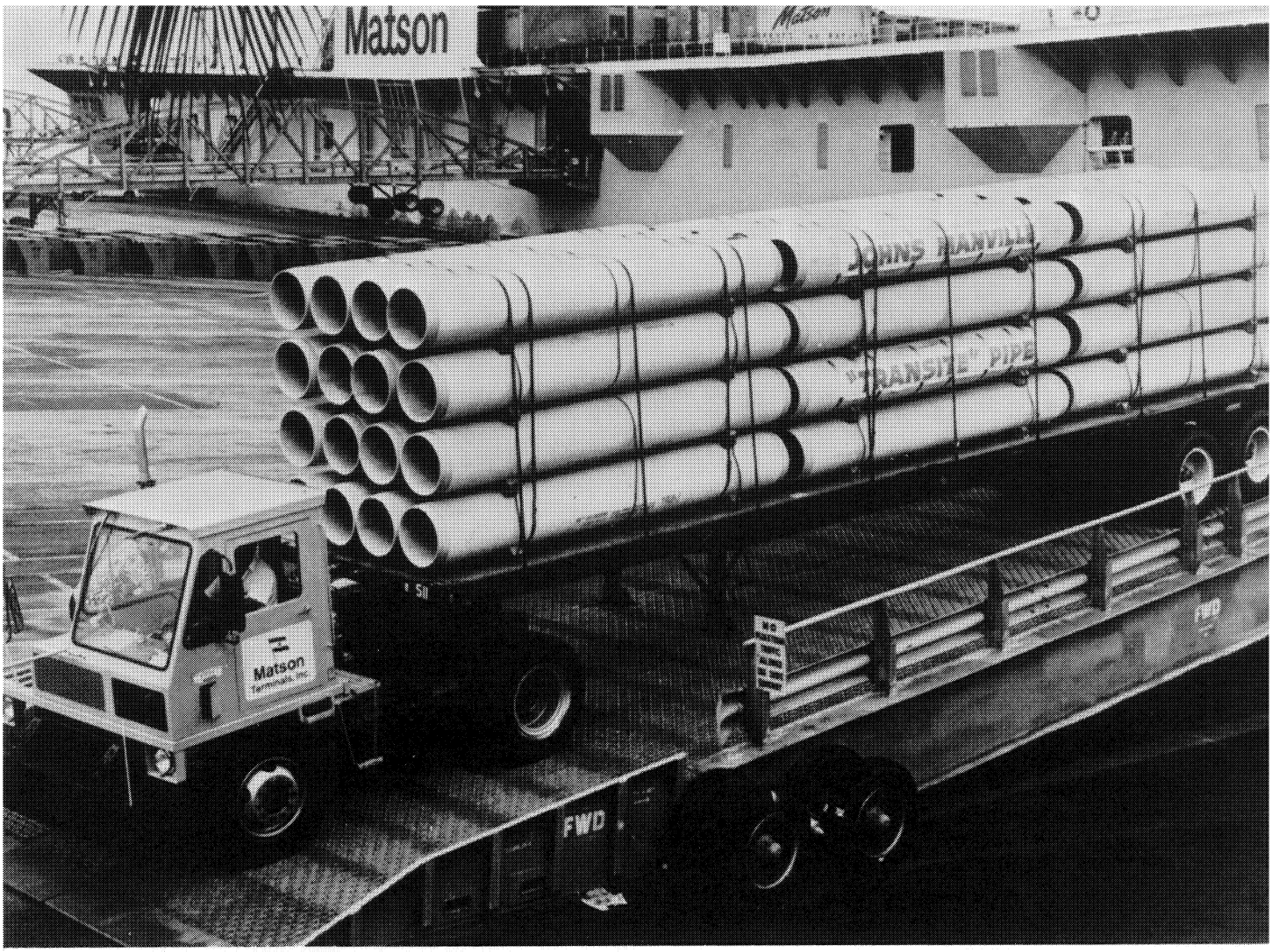
Direct contact was made with policy level executives of over 3,500 firms of all sizes engaged in international commerce, resulting in hundreds of firm commitments to support the "Ship American" program.

Over 11,000 cargo leads were provided to U.S.-flag shipping companies during the year. Unsolicited reports from 60 shippers indicate that some $25 million in revenue, which would otherwise have gone to foreign shipping concerns, was channeled to U.S.-flag operators as a result of the Agency's marketing program.

A computer-based Shipper Information System and a Market Lead Information System were initiated to identify and track intermediate and long-term business opportunities which will result in future cargo movements. Utilizing modern data processing technology, both systems will improve the lines of communications between shippers and U.S.-flag carriers and enable the carriers to better anticipate the service requirements of exporters and importers.

The response by the maritime industry to the Agency's marketing program has risen steadily since the program was initiated. During the year over 2,400 letters were received from maritime companies responding to cargo leads, requesting special marketing services, reporting the effectiveness of MarAd's marketing efforts, and citing specific examples of success.

Facilities of the U.S. Department of Commerce's field offices were also used by the Agency's marketing organization to increase its effectiveness nationwide. MarAd continued to join with other organizations to sponsor seminars, forums, and other programs that would generate useful information for the shipping public.



Roll-on/roll-off vessel discharging cargo at Honolulu.

National Maritime Council, comprised of representatives of all segments of the American maritime industry, conducts shipper seminars to promote greater use of U.S.-flag vessels.

Marketing representatives also provided exporters information on the tax benefits available to them under Domestic International Sales Corporation (DISC) regulations.

National Maritime Council

Comprised of all segments of the American maritime industry, the National Maritime Council (NMC) was formed to coordinate promotional and marketing efforts to increase shipper patronage of the American merchant marine.

In the three years of its existence, the Council has fostered a spirit of cooperation in the maritime industry. U.S.-flag steamship companies, maritime-related labor unions, shipbuilders, and Government officials are engaged in a nationwide program to generate cargoes for the U.S. merchant fleet.

A series of "Unity Dinners," panel discussions, seminars and luncheons sponsored by the NMC has brought the management of companies engaged in international trade in contact with maritime industry officials for a useful exchange of information.

Recognizing the need for a closer working relationship, the Council invited leading distribution executives of export/import firms to serve as Shipper Advisors, in order to keep the Council informed of the business community's service requirements. Currently, 62 foreign trade companies have executives serving in this capacity.

MarAd's Office of Market Development serves as executive secretariat for the NMC, both nationally and in each of the NMC's four regional divisions.

U.S./U.S.S.R. Liner Cargoes

The 1972 Maritime Agreement between the United States and the Soviet Union provides that U.S. and Soviet-flag ships will each have access to a substantial (defined as a one-third minimum of the total tonnage) share of the cargo moving between the two countries, and that parity (measured in dollar freight revenues) will be maintained in the cargo movement.

During 1973 the allocation of liner cargoes to and from the Soviet Union resulted in an imbalance in favor of Soviet-flag vessels. As a result, U.S.-flag liner vessels did not carry a "substantial" share, nor did they achieve parity in freight revenues with Soviet vessels. In November 1973 the Union of Soviet Socialist Republics agreed to offer all liner cargoes moving between the two nations to U.S.-flag liner ships until parity in carriage is achieved. The revenue imbalance, which as of December 31, 1973, amounted to $12 million in favor of Soviet-flag vessels, was reduced to $5 million as of June 30, 1974. It is anticipated that parity will be achieved by November 1, 1974.

Preference Cargoes

The Maritime Administration monitors the activities of all non-military Government agencies under the cargo preference laws of the United States. The Agency insures that U.S.-flag vessels participate in such shipments pursuant to applicable statutes. Table 5 presents U.S.-flag participation in non-military preference cargoes and Export-Import Bank-generated cargoes during calendar year 1973.

The Cargo Preference Act, Public Law 664, requires that at least 50 percent of all Government-generated cargo be shipped on U.S.-flag vessels. MarAd developed and operates a computer-aided system for processing the ocean bills of lading on this type of cargo and the data compiled by the system is used to analyze compliance with the Act.

As in the past, shipments by the U.S. Department of Agriculture (DOA) and the Agency for International Development (AID) comprise over 98.9 percent of all non-military cargoes moving under P.L. 664.

There has been, however, a substantial decline in DOA cargoes under P.L. 480, the "Food for Peace" program. This type of preference cargo dropped from 7.4 million tons in calendar year 1972 to 2.7 million tons in 1973. A scarcity of commodities available for the program, coupled with the high cost of those commodities, precipitated this decline.

Shipments by AID under their Foreign Assistance Program totaled approximately five million tons. Approximately one-half of these cargoes were bulk petroleum shipments to Vietnam which originated outside of the United States in an area where U.S.-flag services were not available.

The Maritime Administration administers Public Resolution 17 which requires all Export-Import (Ex-Im) Bank-generated cargoes to be shipped on U.S.-flag vessels, unless a waiver is granted by the Agency. Waivers are of two types:

TABLE 5 Government-Sponsored Cargoes Calendar Year 1973

Program		Total Tonnage or Freight Revenue	U.S.-Flag Carriage	Percent U.S. Carriage
Export-Import Bank	Freight Revenue	$93,594,612	$75,485,611	80.6
U.S. Department of Agriculture (P.L. 480)	Long Tons	2,701,635	1,419,780	52.6
Agency for International Development	" "	5,021,680	1,848,967	36.8
Inter-American Development Bank	" "	16,870	8,087	47.9
Tennessee Valley Authority	" "	5,310	4,137	77.9
Peace Corps	" "	16,847	4,160	24.7
U.S. Department of Commerce	" "	565	511	90.4
U.S. Department of Interior	" "	15,225	12,693	83.4
U.S. Department of State	" "	5,217	3,557	68.2
General Services Administration [1]	" "	23,910	13,212	55.3
National Aeronautics & Space Administration	" "	266	168	63.2
U.S. Information Agency	" "	3,869	3,526	91.1
Others	" "	583	422	75.8

[1] These GSA shipments are in connection with GSA's supply and support program, mainly for AID, and to a lesser extent to the Department of State and other civilian U.S. Government agencies overseas.

(1) Statutory waivers are permitted when U.S. vessels are not available at reasonable rates and schedules;
(2) General waivers are granted to permit recipient nations to carry up to 50 percent of ocean cargoes if they do not discriminate against U.S.-flag shipping.

Loans and guarantees by the Ex-Im Bank totaled $10.5 billion in calendar year 1973, as compared to $9.5 billion in 1972. The Bank's Cooperative Financing Facility Program, which ties together Bank and private financing, has brought the privately-financed portion of the transaction under P.R. 17 requirements and further increased the preference cargoes available to U.S.-flag ships.

Intermodal Systems

With the U.S. intermodal fleet among the world's largest, Maritime Administration efforts centered on maintaining American dominance in the face of rapidly developing international competition.

During the fiscal year the Agency attempted to bring about better utilization of existing intermodal vessels and equipment. Over 30 projects —aimed at alleviating the over-tonnaging problems on several foreign trade routes—were undertaken in the areas of management operations, equipment, design, and institutional constraints.

Much of the Agency's intermodal effort was directed toward bridging the gap between technology and in-service application as, for example, assisting in the evolution of an automatic identification system for containers.

The Agency funded a number of studies on various aspects of container transport economics that analyzed the benefits of container sharing, the coordination of land and sea transport of bulk commodities, and terminal productivity.

A study analyzing containerized transport of perishable commodities was published during the fiscal year.

The *Inventory of American Intermodal Equipment,* published by MarAd, has been expanded to include vessels, chassis and barges in addition to containers. The booklet provides Government and industry with a ready source of information on current U.S. intermodal capabilities, as well as providing U.S. shippers with data on intermodal equipment types, sizes, and capacities.

Recognizing the value of, and necessity for, international standards, the Agency continued to assist the American National Standards Institute and the International Organization for Standardization in the development of standards for both freight containers and shipborne barges, as well as the dimensions of shipping units and packages that are loaded into these containers. To help safeguard the large capital investments of American operators in intermodal ships and related equipment, MarAd represents U.S. interests at all international meetings on container standards.

Utilizing staff expertise and knowledge in the field of container construction, MarAd evaluated the effects of a severe containership fire to determine if container construction techniques could be improved to minimize such damage.

MarAd also developed the maritime position on the U.S. Department of Transportation's rail reorganization plan and recommended actions to insure full consideration of national and international marine transport requirements.

MarAd's region offices actively promoted U.S. intermodal capabilities and stimulated shipper interest in the advantages of the system.

The Central Region sponsored two seminars, one on refrigerated containers and one on dry and liquid bulk containers. It also provided support and practical information on marketing activities to an *ad hoc* group of bargeship operators. MarAd organized the first international conference of bargeship operators, which was hosted by the Central Region in New Orleans, La., July 10–11, 1974.

Working with Pacific Coast carriers, the Western Region completed a study to determine the feasibility of a Chicago container information service which could help eliminate empty container movements between Chicago and the West Coast. Other Western Region activities included arranging for U.S.-flag carriers to participate in test shipments of various perishable commodities in U.S. Department of Agriculture 40-foot experimental refrigerated containers and assessing terminal operation practices for handling LASH vessels.

A Marine Container Maintenance and Repair Conference was held in the Eastern Region to stimulate intra-industry dialogue in an attempt to reduce damage to marine intermodal equipment.

Recognizing that a smooth rail/marine interface increases the effectiveness and efficiency of the intermodal system, the region offices surveyed the terminal operations of four U.S. port cities. Rail and marine interface reports were prepared for Charleston, S.C.; Jacksonville, Fla.; New Orleans, La.; and the San Francisco Bay area. The comparative information developed in the reports and the suggested means for eliminating constraints should prove helpful to U.S.-flag ocean carriers and the rail industry.

American-flag containership at terminal in Port of Long Beach, Calif.

Port Development

Directly related to the expeditious movement of our Nation's commerce are efficient terminal operations at U.S. coastal, Great Lakes, and inland ports. The Maritime Administration supplements the development efforts of the American port industry through various technical and promotional programs.

Technical Assistance

The Agency provides advice, information, and research to the industry on matters beyond an individual port's readily available resources.

During the year MarAd, in cooperation with the American Association of Port Authorities (AAPA), concluded a survey of the financing methods of public ports. Entitled *Public Port Financing in the United States,* the study examined current port financing methods, port management practices in other countries, and selected Federal assistance programs which might be applicable to U.S. port needs.

The Agency continued to act as technical consultant on port projects to the U.S. Department of Commerce's Economic Development Administration (EDA). Since 1965 EDA grants and loans for port-related public works have totaled over $100 million. MarAd analyzes applications from ports and furnishes EDA with comments on the feasibility of the proposed improvement projects.

The Port Emergency Planning Program, aimed at enhancing the readiness of the U.S. port industry to react promptly and to maintain adequate operations during national emergencies, continued.

MarAd and the General Services Administration also initiated an inventory of the Nation's port facilities and cargo handling capabilities. To be completed by 1975, the data, which will encompass all ocean port facilities with a minimum depth of 20 feet, will be computerized and made available to interested parties.

As a result of the Water Quality Improvement Act of 1970, which made illegal any discharge of oil into or upon U.S. navigable waters, adjoining shorelines, or waters of the contiguous zone, the Agency assists U.S. ports in the development of adequate facilities to receive and dispose of vessel oily water wastes. A five-volume study on *Port Collection and Separation Facilities for Oily Wastes* was released. The contract for this study was extended during the year to consider disposal of ship-generated wastes at offshore deepwater oil terminals.

MarAd's Western Region joined with the Washington (State) Public Ports Association for a cost-shared regional port planning study involving ports in the States of Washington and Oregon. This project is aimed at harmonizing and rationalizing port facilities and investments. It will develop a regional port planning study methodology which will also be applicable to other geographic groupings of ports.

A Marine Fire Protection Study, which provides needed guidelines for port and municipal fire fighting units in combating shipboard fires in ports, was completed during the fiscal year. A contract was also awarded during the year to expand the study by developing an operational system consisting of pre-fire planning, marine fire assistance training for local municipal fire fighters, a cost-effectiveness study, and a national application seminar.

The Agency's advanced terminal development program continued to study construction and operating features of deepwater ports. The very large and ultra large tankers docking at future U.S. offshore terminals will have special requirements that are now being analyzed by MarAd. Improved floating hose systems, large diameter hoses with fast discharge rates, and a submerged breakwater to protect offshore ports are among the innovations under investigation.

Promotional Efforts

By acting as liaison between the ports and the many Federal agencies whose policies impact upon port operations and development, MarAd assists in improving the working relationship between the Government and the U.S. port industry.

In recognition of the vital contribution ports make to the U.S. economy, a Presidential Proclamation signed February 6, 1974, designated the last week in September as National Port Week.

Two major conferences were held in fiscal year 1974 in Washington, D.C., and San Francisco, Calif., to keep the port industry abreast of, and to obtain feedback on, MarAd's port programs. Future conferences are planned for New Orleans, La., and New York, N.Y.

MarAd serves as technical consultant to the National Oceanic and Atmospheric Administration (NOAA) on port matters. To insure the industry's interests are properly considered in coastal zone management programs, MarAd and NOAA have signed a joint "Memorandum of Understanding," whereby the Maritime Administration acts as technical assistant for the port and navigation development portions of coastal zone

management programs. Through the Agency's efforts the port industry gained a representative on a 15-man advisory committee established by NOAA.

As part of the marketing assistance made available to American ports by MarAd, an integrated computer bank on commodity flows and terminal facilities is being designed to develop a national statistics capability. The *U.S. Ports Foreign Trade Report,* which will be made available on a semi-annual basis, was issued for the first time during fiscal year 1974. This trade movement report breaks down import/export movements by cargo commodity type, port of entry or exit, tonnage, and value. The *Bargeship Report,* also released during the year, details the total movements of these vessels by commodity, port, tonnage, and value. This is the first publication to highlight the market penetration capability of these advanced ships.

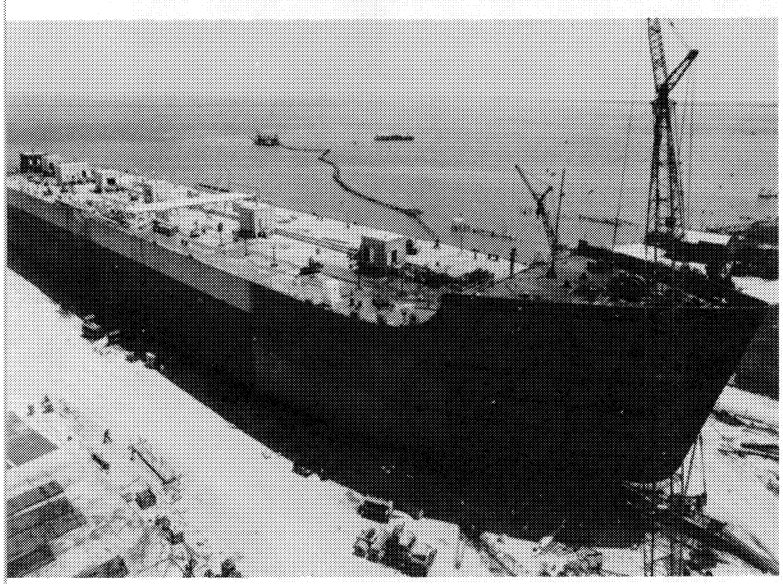
In addition, the *North American Port Development Expenditure Survey,* which summarizes actual port investments in capital improvements from 1966–1972 and projects expenditures through 1977, was completed. The study will be useful to individual ports in evaluating their port development progress and in planning future terminal expansion programs.

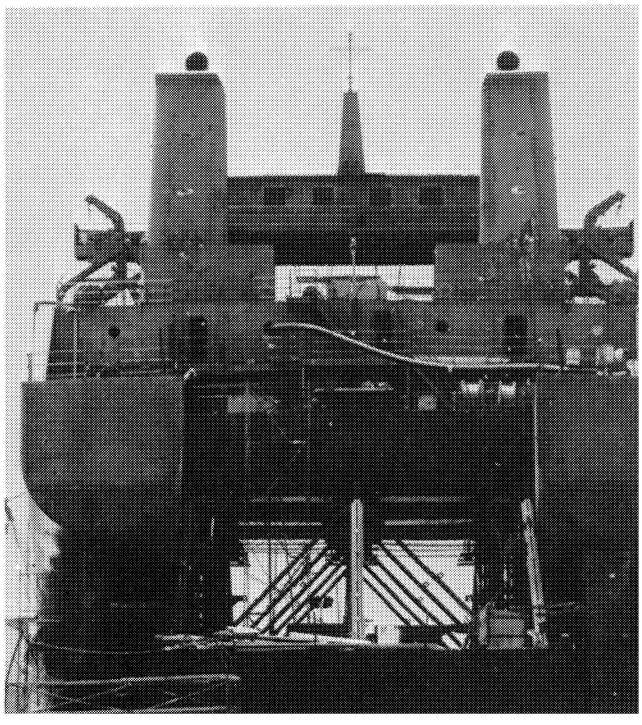
In another port-related project, MarAd's Eastern and Central Regions cooperated with the National Bureau of Standards in a project to collect wind velocity measurements during hurricane conditions. The wind stress data will be analyzed in order to improve design criteria for port structures enabling them to withstand extreme winds.

The Central Region made numerous studies on the acute silting at the mouth of the Mississippi River, which severely reduced the drafts of loaded vessels entering the Port of New Orleans.

Sea-Land's new 232-acre container terminal at Port Elizabeth, N.J.—the largest in the world—has a marshalling space for 6,600 containers and a berthing area of 4,519 feet.

Unit transporters, such as this one capable of hauling ship sections weighing up to 220 tons, make it possible for shipyards to employ assembly line techniques in modern ship construction.





An oceangoing catamaran tug under construction at Kelso Marine Inc., Galveston, Tex. Picture above shows the 35,000-ton barge. Photograph at right shows stern view of the catamaran tug. Several MarAd R&D projects in the area of advanced ship systems have focused on tug-barge systems.

Chapter 5

Research and Development

Passage of the Merchant Marine Act of 1970 enlarged the Agency's activities to include a vigorous, wide-ranging research and development (R&D) program. It was realized that a more productive, competitive merchant marine would evolve if American technology were applied to all phases of maritime operations.

The program aims to meet the national goal of rejuvenating the American merchant marine while, at the same time, reducing the need for subsidy payments to shipyards and ship operators.

R&D objectives were redirected to center on those projects that promised high benefits in the near future.

The Maritime Administration has encouraged the industry to expand its participation in R&D. This has insured practical application of innovations and has resulted in projects that are more responsive to industry requirements. Increased industry cost-sharing in MarAd projects is indicative of the coordination in research and development efforts.

During fiscal year 1974 the Maritime Administration committed $24.3 million to research contracts. Cost-sharing by various segments of the maritime industry and other Government agencies in 35 percent of these contracts provided an additional $8.5 million. Appendix XX provides a list of R&D contracts awarded by MarAd during the fiscal year.

Research Centers

MarAd's two National Maritime Research Centers (NMRC) are located at Kings Point, N.Y., and Galveston, Tex. The centers were established to provide laboratories and facilities to develop advanced marine systems for commercial shipping operations and to test and evaluate such equipment.

Emphasis at the Kings Point Center has been on analyzing ship, port, and crew operations with the goal of reducing shipping costs and associated Government subsidies. The Galveston Center provides facilities to test and evaluate hardware developed through MarAd's R&D programs.

Shipbuilding

To assist U.S. shipyards in meeting the challenge of decreasing subsidy rates, as prescribed by the 1970 Act, MarAd initiated a shipbuilding research program in 1971. Activities are directed at developing innovative technology to increase productivity and reduce manufacturing costs in American shipyards.

The Agency's shipbuilding R&D program is divided into three main areas: (1) facilities improvement—developing innovative production techniques and equipment for near-term applications; (2) ship producibility—developing technical data, management aids, and industrial standards; and (3) shipyard automation—developing advanced manufacturing technology. Additionally, factors affecting worker productivity and advanced marketing techniques are being studied to further increase the sales potential of U.S. shipyards.

Successful hardware developments during fiscal year 1974 included: a multi-pallet transporter with a 12,000-pound capacity; a welding flux which facilitates one-sided welding of plates up to 1.5 inches thick; a lightweight, portable power supply for welding; a semi-automatic wire-feed welding system; and a platform with water-lift bearings for moving large structural units.

Other projects in the area of shipbuilding R&D include:

- a study of the effect of weather on productivity;

- a manual on the use of scale models in ship designs; and
- a manual on the use of optical lasers as an alignment tool.

A major objective of the shipbuilding research program is the application of computer technology to the production process of shipbuilding. As of June 30, 1974, seven American shipyards were using computer-aided systems and two large shipyards and a number of smaller yards are expected to adopt these systems in the near future.

Ship Machinery

The ship machinery program has focused on two major research and development efforts: (1) development of a gas turbine engine for marine propulsion; and (2) development of compact, lightweight, high-performance marine planetary transmissions. Both of these projects are on a cost-shared basis with the hardware manufacturers.

This was the fourth in a five-year effort to adapt industrial gas turbines to marine transportation. To date, an engine has been perfected that burns low-grade residual fuel oil and has a built-in reversing capability. During fiscal year 1974 a contract was awarded for shoreside operational testing and performance evaluation of the gas turbine technology and hardware. Testing will encompass in excess of 2,100 hours of full power operation at firing temperatures ranging from 1650°F to 1850°F.

The planetary gear project, in the fourth year of a six-year program, will result in two planetary gear transmission systems, one a 40,000-shaft-horsepower (SHP) single-stage system and the other a 60,000-SHP single-stage system for use with a contra-rotating propeller. As a result of this program, the size and weight of the transmission gears required aboard ship will be reduced.

In addition to these projects, MarAd continued its efforts to improve propeller design and tanker tank cleaning procedures.

A highly skewed propeller was procured by MarAd and was installed aboard the SS ULTRA-SEA. It is expected to result in substantially reduced ship vibrations. Another project is underway to determine the corrosion and fatigue characteristics of different propeller materials. These tests are being conducted with the intention of reducing the high incidence of propeller failures.

During the year a project was initiated to evaluate and test at sea a device that dissipates the electrostatic charge generated during tank cleaning in large tankers.

Advanced Ship Systems

The diversified composition of international commerce requires innovative ship systems to insure that cargo moves quickly and economically. The Maritime Administration's Advanced Ship Systems Program defines future U.S. cargo characteristics and movements in order to establish the technology required to serve future shipping markets.

A significant rise in neobulk cargo was forecast in a *Neobulk Shipping Study* completed for MarAd. Neobulk commodities such as agricultural and forest products, iron, steel, rubber, textiles, and automobiles, noted the study, show an increasing trend towards movement by irregular service in less than hold-size up to shipload lots. According to the study, a series of wide-hatch, square-hold ships, ranging from 15,000 dwt. to 25,000 dwt. and equipped with a variety of loading devices, including gantry cranes, would meet the requirements of this specialized market.

A number of Agency projects in recent years have focused on the development of improved tug-barge systems, particularly high-powered tugs and large barges capable of operating in an ocean environment. NMRC-Galveston examined various linkage systems, including docked, cable-connected and pinned, deep-notch designs, rigid close-connected, cable or mechanical close-connected, and extended linkage. The analysis, published during the fiscal year, concluded that rigid system designs, although more expensive, are more suited to oceangoing tug-barges. Several contracts awarded during fiscal year 1974 will continue to explore optimum connection systems.

One possible ship system for the future being examined is a submarine tanker. A contract was awarded to study the technical, economic and operational feasibility of a commercial submarine transporting petroleum products from Arctic oil fields.

MarAd is also exploring the possibility of developing shallow draft bulk carriers. As envisioned, this system would incorporate the substantial deadweight carrying capacity of very large and ultra large bulk carriers with the shallow draft of conventional sized vessels. This would allow the vessels to enter U.S. ports without sacrificing cargo capacity.

Nuclear Technology

The Agency's nuclear ship program has made significant progress in laying the groundwork for the construction of a series of competitive nuclear merchant ships.

The power plant that is being designed for these candidate ships will undergo comprehensive testing and evaluation to assure safety, reliability, and performance before actual installation aboard a merchant vessel.

Besides research in the area of nuclear propulsion, MarAd has initiated studies of the economics of different nuclear ship configurations. Working with the U.S. Coast Guard and the Atomic Energy Commission, the Agency has formulated technical and regulatory guidelines.

Environmental impact studies are also in progress. To minimize the possibility of nuclear contamination, the Agency is developing a radioisotope monitoring system as a means of monitoring effluent radioactivity.

A research contract, which will study indemnification of future nuclear-powered U.S. merchant ships, was awarded during the year. No adequate protection against liability for U.S. builders and operators of these ships presently exists. When the study is completed, appropriate legislation will be recommended to Congress.

Another study underway will evaluate the probability and consequences of nuclear ship collisions in order to develop collision-resistant designs.

Ship Operations

Projects in this area are aimed at increasing the productivity of American-flag ship operators and reducing their dependence upon Government subsidies. Emphasis is on the development of improved cargo-handling equipment, automated bridge and machinery operations, and advanced communication and navigation systems.

CAORF

Construction of a Computer-Aided Operations Research Facility (CAORF) continued at NMRC-Kings Point. When completed in June 1975, it will be the world's most advanced center of its type.

The facility will be used to investigate vessel operational problems, evaluate innovative hardware and concepts, and facilitate the adoption of new developments by the maritime industry. Computerized equipment will simulate a wide range of ship operations and procedures using various bridge layouts, ship design characteristics, port and terminal configurations, and environmental and traffic situations, consequently bypassing expensive at-sea testing of new innovations.

Although designed primarily for research concerning proposed system and hardware improvements, CAORF will be a valuable training tool and will have the capability of providing advanced training for ship officers. The facility also will assist in the development of ship equipment and operating standards at sea and in harbors, which will result in more productive and safer operations.

In fiscal year 1974 contracts were let for preliminary research into collision avoidance on the open ocean and into factors affecting pilot performance in the Puget Sound area. Both studies will provide the basis for advanced research programs when CAORF becomes operational.

Shipboard Automation

The Agency has several programs in the area of shipboard automation that involve applying computer technology to shipboard controls associated with navigation, communications, machinery operations, ship maneuvering, cargo management, and ship administration.

During the past year the first phase of a project to demonstrate an integrated system of ship control was completed. A ship will be outfitted in the future with an automation package which combines many of the different equipment modules being developed. Detailed design of system hardware/software will be followed by installation, testing, and evaluation.

A series of modules is being developed for a wide variety of integrated systems. A centralized conning system completed its first year of operation aboard the SS EXPORT FREEDOM. Expansion of the system to include automatic steering and computer generated evasive maneuvering command is planned. An anti-stranding sonar system, developed to prevent vessel groundings, was scheduled to complete operational tests aboard the LASH vessel SS DELTA NORTE by the end of calendar year 1974.

During the past year design work was started on a hull status monitoring and surveillance system to aid ship personnel in making decisions necessary for safe and efficient operations. The prototype is to be installed aboard a United States Lines, Inc., Lancer-class containership.

The VIDEC (Vibration and Deviation Concept) system, permitting unmanned machinery

operations, completed its first year of tests aboard the containership SS PRESIDENT JOHNSON. The electronic system monitors critical performance variables associated with shipboard machinery. Readings are processed by a computer and displayed on a television-like console in the engineroom. In addition to indicating when variations occur, VIDEC makes it possible to monitor normal wear and tear. Further operational evaluation is scheduled during fiscal year 1975.

SOIS

The Shipping Operations Information System (SOIS) is a computer-based system which will improve the management of ships, equipment, and cargoes. Through a nationwide computer communications network, information on cargo movement and ship availability and demand will be distributed to U.S.-flag operators to enable them to respond to the needs of the export/import community. In addition, shoreside costs and documentation will be reduced.

During fiscal year 1974 significant areas of work were defined and a $7.5 million program plan was developed with three U.S.-flag ocean carriers. Industry is participating in SOIS on a cost-shared basis.

The core of the program is a system which will:

- report on current U.S.-flag cargo space availability;
- update information on services available from overland modes;
- support planning of fleet resources; and
- produce a reporting system that satisfies various Federal statutes.

The results of these efforts will be made available to all U.S.-flag carriers so that they can reduce shoreside costs and documentation expenses, increase fleet productivity, and provide more efficient services to exporters and importers.

As part of a program being conducted by MarAd, an antenna was installed aboard an American-flag vessel to test message receipt and transmission via satellite.

Navigation/Communications

The Maritime Administration is the world's leader in the application of space technology to marine communications, having initiated feasibility studies in this area as far back as 1968. Through utilization of existing technology developed by the National Aeronautics and Space Administration (NASA), MarAd is testing space satellites to improve the efficiency and dependability of communications between a vessel at sea and its owner or operator on shore. Other potential benefits include improved ship navigation and control, plus more efficient fleet management procedures for the shipping industry.

During fiscal year 1974 L-Band (a future commercial frequency) ship equipment was developed based on the results of previous navigation/communications tests conducted by MarAd. The new system will be tested in fiscal year 1975, using NASA's ATS-6 satellite. The satellite antenna, other shoreside hardware, and the control center for the system are located at the Maritime Coordination Center at NMRC-Kings Point.

Several experiments involving High Frequency (HF) communication were initiated. Almost all current maritime communications with ships are on the HF band. A Digital Selective Calling System—which allows selective signaling of a ship at any time, provides for automatic control of ship communication equipment, and vastly improves distress procedures—was developed and tested. This technique has been tentatively accepted as the international standard, and final definition and specification is continuing under MarAd leadership. In addition, error-correction teleprinter techniques are being evaluated and at-sea tests are contemplated in the future.

Feasibility tests on a radar transponder system which offers significant collision-avoidance potential were completed and continuing developments are planned.

Additional MarAd R&D projects are decribed in Chapters 3, 4, and 6.

Chapter 6

Marine Environment

During fiscal year 1974 the Maritime Administration continued its efforts at both the national and international levels to protect and preserve the marine environment from ship-generated pollution.

Conventions

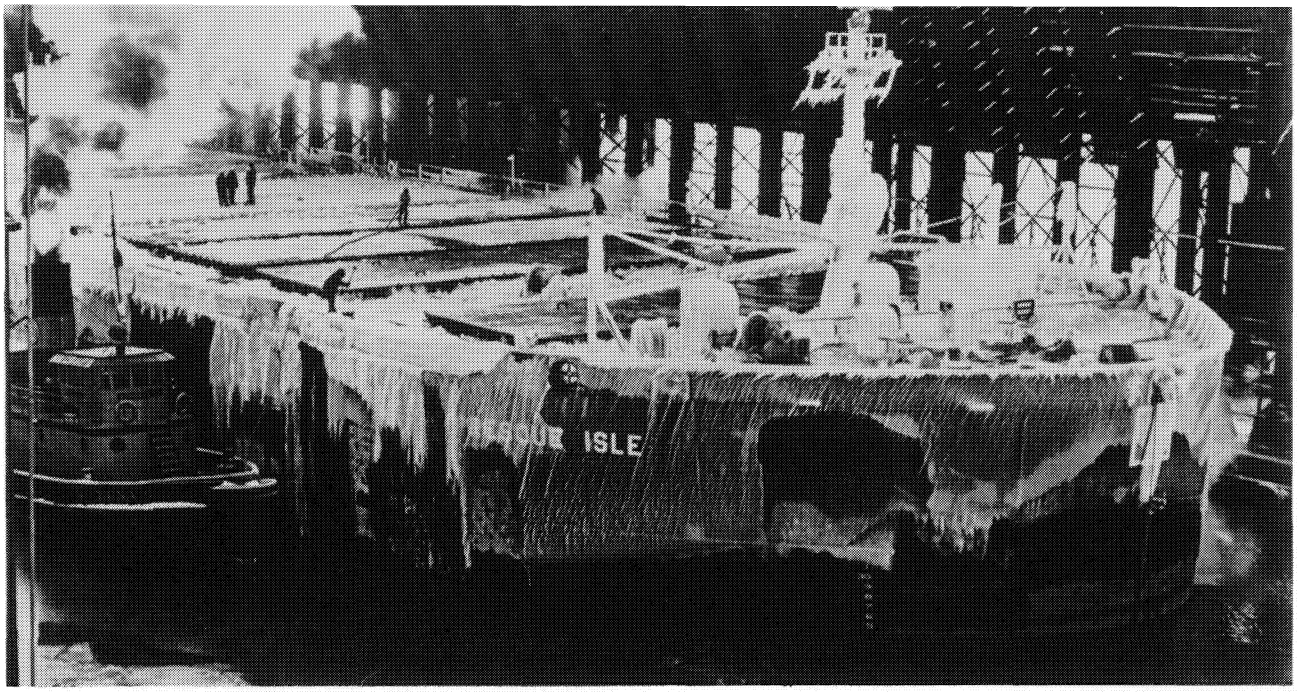
Of major significance was the Agency's representation on the U.S. delegation to the International Marine Pollution Conference which was held in London, England, October 8 to November 2, 1973, under the auspices of the Intergovernmental Maritime Consultative Organization (IMCO). The Marine Pollution Conference, attended by delegates from 79 countries, U.N. agencies, and intergovernmental and nongovernmental organizations, adopted the International Convention for the Prevention of Pollution from Ships, 1973; protocol relating to intervention on the high seas in cases of casualties involving marine pollution by non-petroleum substances; and 26 other recommendations and resolutions.

The Conference recommended a minimum level of segregated ballast capacity for tankers and combined carriers. Since the final level of ballast may have great economic impact on the cost of these ships, the Maritime Administration sponsored a model test program to investigate these effects on seakeeping and maneuvering capabilities of a 250,000 dwt. VLCC. The results were presented at a symposium in September 1973. Additional tests and studies are planned to obtain improved theoretical predictions of ship performance as well as correlations among theory, experiment, and full scale results. These additional studies are awaiting final approval by IMCO. They will serve to provide further information relating to the proper level of segregated ballast.

On November 23, 1973, the IMCO assembly established the Marine Environment Protection Committee (MEPC) as its permanent subsidiary body assigned to undertake all future IMCO work relating to the protection of the marine environment. MarAd representatives attended the First Session of MEPC, held in London March 4–8, 1974. An action plan was adopted initiating the work program which covered a list of 22 work projects. MarAd was assigned the lead tasks in developing the text of two U.S. Notes on oil discharge monitoring and control systems and on reception facilities in port for the treatment of oily wastes.

Based on the U.S./U.S.S.R. Agreement on Cooperation in the Field of Environmental Protection, MarAd actively participates in all functions of the Joint U.S./U.S.S.R. Working Group on Marine Pollution from Shipping. Other participating U.S. agencies are the U.S. Coast Guard and the Environmental Protection Agency. As a result of the second meeting of the Joint Working Group, held in the Soviet Union from August 19 to September 2, 1973, the following major points were agreed on:

- In addition to the continuing exchange of information, it was agreed to exchange technical information and data on the methods and facilities for treatment (neutralization and disinfection) of sewage and domestic waste water from non-seagoing vessels, such as river vessels.
- Specialists will be exchanged for the testing and evaluation of open ocean containment and recovery systems when suitable tests are developed.
- Joint programs are to be established to develop standard test procedures for evaluation of the chemical and physical effectiveness of dispersing and collecting agents.
- The feasibility of pursuing an exchange of information on the subject of vessel traffic management in each country will be examined.



The M/V PRESQUE ISLE, the world's largest self-unloading tug-barge combination, loads ore at Two Harbors, Minn., with the temperature at 30 degrees below zero. MarAd is working with other Government agencies to extend the winter navigation season on the Great Lakes.

MarAd is a member of the U.S. Technical Advisory Group to the International Standards Organization (ISO), Technical Committee on Water Quality. This Committee has a standardization program dealing with all aspects of water quality characterization; general methods for collecting water samples, sludges and bottom materials; and methods to test the measurement of water quality properties and characteristics. MarAd is primarily concerned with the standardization of methods used in determining the oil content of sea water, and in the measurement of oil in ship-generated waste water, such as bilge water and oily ballast water.

Environmental Impact Statements

During fiscal year 1974 MarAd developed or was in the process of developing several Environmental Impact Statements (EIS). These Statements are in compliance with Section 102 (2) (c) of the National Environmental Policy Act of 1969 (NEPA).

During the fiscal year a draft EIS on MarAd's financial assistance to private industry to aid in the construction and operation of a limited number of highly specialized bulk chemical tank vessels was prepared. The final EIS was released in August 1974.

An *Ad Hoc* Task Group was formed to provide combined and coordinated interagency and private industry input into an EIS on vessels, constructed under Title XI of the Merchant Marine Act, which engage in oil and gas drilling and service operations.

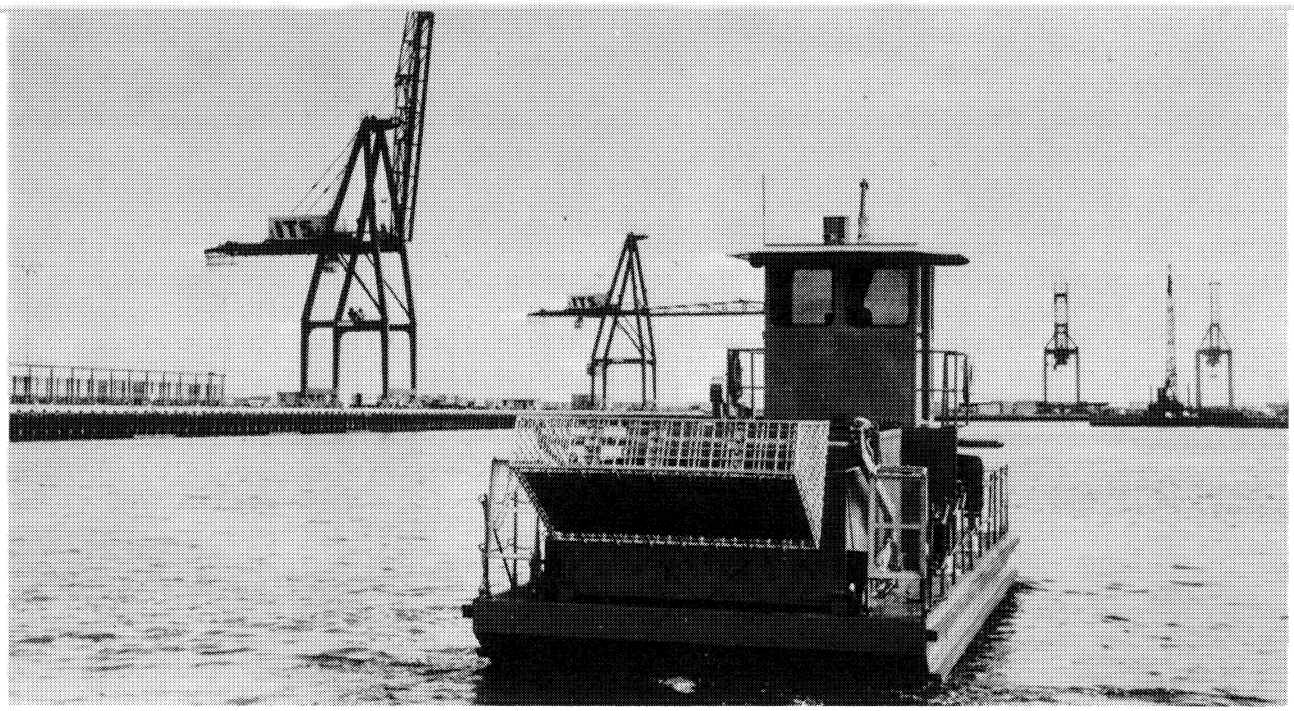
A Final Statement was issued on the proposed lease of the Yorktown, Va., Maritime Facility to the Commonwealth of Viriginia for use in processing oily water wastes from ship's tanks, bilges, and ballast operations.

Tanker Construction

The Maritime Subsidy Board, after review and consideration of the Maritime Tanker Construction Program and the related Final Environmental Impact Statement, issued its order in Docket A-75 on August 30, 1973, specifying certain construction features for tankers considered essential by the Maritime Subsidy Board to abate and control pollution. The Maritime Subsidy Board required, among other things, that future and present construction-differential subsidy contracts for tankers comply with the applicable tanker pollution abatement provisions of Section 70, Pollution Abatement Systems and Equipment, and Section 94–4, Collision Avoidance Radar System, of the *Standard Specifications for Merchant Ship Construction*.

MarAd has revised these sections to comply with the Board's decision, the requirements of the International Convention on the Prevention of Pollution from Ships, 1973, U.S. Coast Guard regulations issued under the Ports and Waterways Safety Act of 1972, and the 1972 Federal Water Pollution Control Act Amendments.

Contract changes for ships under construction or on order with Government financial aid have been initiated to assure compliance with these requirements.



Automated harbor clean-up craft, recently put into service by the Port of Long Beach, Calif., removes some 130 cubic yards of floating debris that accumulates each month in the four-square mile harbor area.

Training

MarAd developed a *Course Curriculum of Marine Pollution*. The curriculum is designed to provide a standardized means of instructing maritime personnel in marine pollution abatement and control. It fulfills the requirements of the Maritime Subsidy Board's Final Opinion and Order in Docket A–75 which directed the development of anti-pollution training manuals and course material.

The curriculum, based on a 40-hour minimum program, is designed for both unlicensed and licensed personnel. It will be distributed to schools operated by maritime unions and the Federal and State maritime colleges.

Reception Facilities

In cooperation with the U.S. Coast Guard and the Environmental Protection Agency, MarAd developed a U.S. Position Paper on Reception Facilities in Port for Treatment of Oily Wastes for submission to IMCO in November 1974. The paper provides background information on measures to implement the provisions of the 1973 Marine Pollution Convention which pertains to reception facilities at oil loading terminals, repair ports, and other ports at which ships discharge oily residues.

R&D

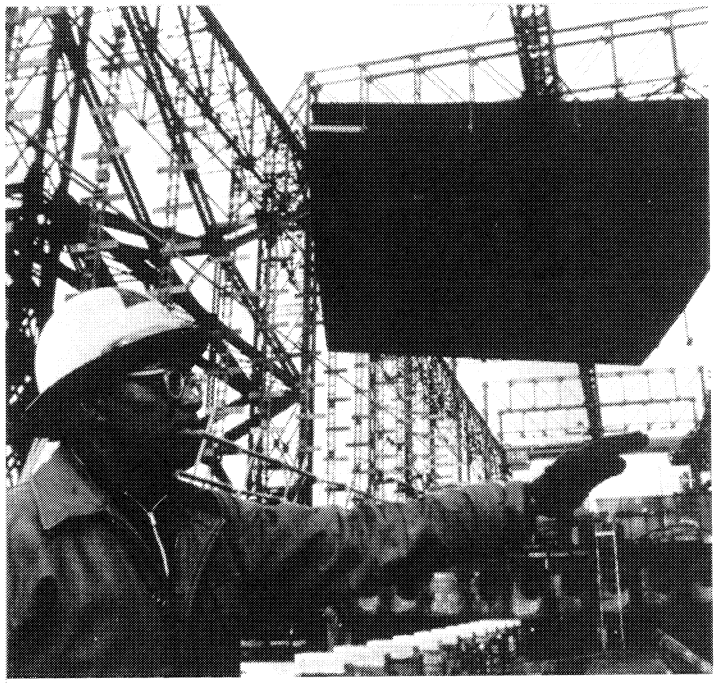
A study of tanker tank cleaning procedures was completed. It evaluated and analyzed tanker tank cleaning and related systems, techniques, and equipment and developed recommendations and guidelines to increase the safety of tank cleaning operations, reduce oil pollution of the oceans, and reduce the cost of tank cleaning.

The date for the implementation of proposed Coast Guard regulations requiring double skin oil barge construction to avoid pollution has been delayed, at MarAd's request, in order to evaluate the technical and economic feasibility of the proposed rules on inland barge transportation. A joint MarAd/Coast Guard tank barge study was initiated to develop a comprehensive tank barge fleet profile, to conduct tank barge drydock inspections, and to determine the life-cycle costs of various alternative tank barge designs. The study was completed in September 1974.

MarAd has undertaken extensive programs to develop shipboard pollution abatement equipment. The Agency has awarded contracts for the design and test of equipment to treat sewage, separate oil and water, monitor and control oil content, and detect oil/water interfaces.

MarAd also funds projects dealing with the fate and effects of oil in the marine environment. Specific tasks include collecting and analyzing ocean samples to determine background hydrocarbon levels, developing techniques for identification of crude oil fractions and specific chemical components, and determining acute and chronic effects of oil spills on marine life.

See Appendix XX for a list of pollution related research and development contracts awarded by MarAd during fiscal year 1974.



The U.S. Merchant Marine Academy is the only Federal Academy which accepts women for training as officers.

Chapter 7

Maritime Manpower

Seamen Training

During the fiscal year the Maritime Administration began charging a tuition fee for the radar, gyro compass, and loran training courses conducted by the three regions.

A total of 2,524 merchant seamen received training in navigational aids, including collision avoidance radar, in the three region schools. Additionally, 1,602 seamen completed the course in firefighting and damage control sponsored jointly by the Maritime Administration and the Military Sealift Command, Department of the Navy.

Industry training facilities, sponsored by management and certain labor unions to serve their individual constituencies, continued to deemphasize training directed exclusively toward preparing men for original officers' licenses due to a general over-supply of men in the active work force. Approximately 105 men obtained their original deck or engineering officers' licenses through industry training facilities or self-study. In the unlicensed seamen's group 1,250 trainees were graduated for entry ratings in offshore and inland waters. A total of 775 seamen upgraded their ratings during the year.

Merchant Marine Academy

The U.S. Merchant Marine Cadet Corps was established on March 15, 1938. When the Corps was formed, training was given aboard merchant ships and later at temporary shore establishments until permanent facilities were acquired. The Walter P. Chrysler Estate at Kings Point, N.Y., was selected as the permanent site for the Academy in March 1942 and construction was begun the following May. On September 30, 1943, the U.S. Merchant Marine Academy was dedicated.

The Academy offers courses not only in marine sciences, but also in the areas of oceanography, computer science, nuclear engineering, naval architecture, mathematics, chemistry, social sciencies, the humanities, business administration, and transportation. In addition to classroom training, midshipmen also spend a year at sea on American-flag vessels.

The Academy's June 1974 graduates included 83 third mates, 85 third assistant engineers, and 14 officers who had completed the dual deck/engine program. This was the sixth year the Academy graduated dual licensed officers. In addition to their licenses, all graduates received Bachelor of Science degrees and, if qualified, commissions as Ensigns in the U.S. Naval Reserve. During the year the Federal academy maintained an average enrollment of 925 students.

In January 1974 MarAd amended its regulations to permit women to be nominated and appointed to the U.S. Merchant Marine Academy, which thus became the first—and only—Federal service academy to admit women. When the class of 1978 entered the Academy in July 1974, 15 of the 349 plebes were women.

State Maritime Academies

A total of 370 merchant marine officers were graduated from the six State Maritime Academies located at Vallejo, Calif.; Castine, Me.; Buzzards Bay, Mass.; Traverse City, Mich.; Fort Schuyler, N.Y.; and Galveston, Tex. In addition to the Coast Guard license, each graduate received a Bachelor of Science degree (Associate of Science degree at the Michigan Academy) and, if qualified, a commission as Ensign in the U.S. Naval Reserve.

During the year the six State Academies maintained an average enrollment of about 1,900 students, most of whom received a Government

allowance of $600 per year toward the cost of uniforms, textbooks, and subsistence.

Federal assistance exceeding $1 million was provided to the six State Academies for maintenance and repair of their school ships.

Labor Data

Average monthly seafaring employment during fiscal year 1974 declined 5.3 percent to 25,219 jobs—compared to the fiscal year 1973 average of 26,633 (see Table 6). The reduced average seafaring employment reflects the net decline of 22 ships in the active oceangoing fleet.

The total work force in selected commercial shipyards increased by 8.1 percent due primarily to the inclusion in the selected base of six additional shipyards during the second quarter of fiscal year 1974. Without those shipyards added to the selected list, the total shipyard employment increase would have been 1.5 percent.

Average longshore employment improved by a slight margin due mainly to a minimum of disputes and work stoppages.

TABLE 6 Maritime Manpower Daily Average Employment

	NORMAL DAILY AVERAGE	
	1973	1974
SEAFARING		
Shipboard Jobs	26,633	25,219
SHIPYARD[1]	81,388	87,971
Production Workers	64,251	70,928
Management & Clerical	17,137	17,043
LONGSHOREMEN	64,708	65,113

[1] Commercial yards able to construct ships 475 by 68 feet.

Labor Relations

Fiscal year 1974 experienced a minimum of labor-management disputes or disruptions to normal productivity. The M/V SUGAR ISLANDER was subjected to sporadic picketing at several Gulf Coast ports over a three-month period caused by an inter-union dispute over representation rights for deck officers. While the operator, Pyramid Sugar Transport Co., encountered no difficulties in the latter half of the fiscal year, the representation issue remained unresolved.

Longshore disputes were also of a relatively minor nature. The most serious work stoppage was caused by a five-day strike at New Orleans, La., over eligibility of the various longshore locals to share in the benefits of the income guarantee. The dispute provoked a productivity loss of 9,000 man-days and 170 ship-days. Other longshore disputes were of one or two days' duration, the most serious of which affected all U.S. Pacific Coast ports as longshoremen initiated job action to win back the 30-cent hourly wage increase that the Cost of Living Council had ruled illegal in 1972.

Shipyard work stoppages were limited to one dispute caused by the expiration of labor contracts at the General Dynamics Corp., Quincy Shipbuilding Division. The shipyard ceased all operations from March 18 through July 18, 1974.

Merchant Marine Awards

The Merchant Marine Medals Act of 1956 authorizes the Secretary of Commerce to grant medals and service ribbons, under certain conditions, to seamen for meritorious actions or participation in national defense efforts.

The Vietnam Service Bar was authorized for 906 seamen during the year.

The Maritime Administration acts as the Secretariat of the American Merchant Marine Seamanship Trophy Committee, which also includes the U.S. Coast Guard, industry, labor, and management officials. The Committee awards the Seamanship Trophy, established in 1962, to U.S. citizens serving aboard a U.S. vessel to honor deeds exemplifying distinguished seamanship and professional competence.

The officer and crew of the New York City fireboat FIREFIGHTER were awarded the trophy in 1974 for outstanding professionalism and seamanship in combating a very serious fire that resulted from the collision of the container vessel SEA WITCH and the tanker ESSO BRUSSELS and in successfully rescuing the 30 survivors trapped aboard the SEA WITCH on June 2, 1973.

Chapter 8

National Security

Besides substantially contributing to the United States' economic well-being, the American merchant marine also strengthens our national security. In peacetime the American merchant fleet serves as a major supply line to U.S. defense forces throughout the world. During national emergencies merchant ships and seamen act as a naval auxiliary and provide logistic support to the military services by transporting goods, personnel, and materials.

Reserve Fleet

To provide an immediate source of merchant ships for military operations or commercial shipping crises, the Maritime Administration maintains the National Defense Reserve Fleet (NDRF).

TABLE 7 Ships in Reserve Fleets June 30, 1974

Fleet	Retention	Scrap and Cannibalized	Special Program	Total
James River, Va.	129	28	11	168
Mobile, Ala.	—	13 [1]	—	13
Beaumont, Tex.	50	19	1	70
Suisun Bay, Calif.	149	85	2	236
Total	328	145	14	487 [2]

[1] Custody accountability of 13 Liberty ships transferred to State of Alabama pending compliance with P. L. 92-402 (Artificial Fish Reef Program).

[2] Includes 134 vessels owned by the Navy Department but excludes 15 ships sold for scrap but not delivered.

The Fleet consists primarily of World War II tankers, cargo ships, Liberty and Victory types, and naval auxiliary vessels anchored at James River, Va., Beaumont, Tex., and Suisun Bay, Calif.

As of June 30, 1974, there were 474 ships moored at the three NDRF locations (See Table 7). Of this total 353 vessels were owned by MarAd and 134 Navy Department vessels were in the custody of the Reserve Fleet. In addition, 13 vessels moored at the former Reserve Fleet site in Mobile, Ala., are in the custody of the State of Alabama for use in the Artificial Fish Reef Program (P.L. 92-402).

During the year, 28 ships were placed in the Fleet and 101 ships were withdrawn.

Of the 101 ships withdrawn, 90 were sold for scrap or nontransportation use, five were turned over to States for use in the Artificial Fish Reef Program, four were turned over to the U.S. Navy, one was given to the New York State Maritime Academy, and one was sold for operation.

The size of the Fleet since its establishment in 1945 is shown in Table 8.

The number of ships in the fleet preservation program—which involves conventional preservation, dehumidification, and cathodic protection—increased from 325 to 328.

Materiel Control

During fiscal year 1974 marine equipment valued at $123,270 was loaned to steamship operators and other Government agencies. At year's end, the value of equipment out on loan was $141,732. Warehouse inventories are valued at $4.2 million.

Ship Sales

MarAd is authorized to sell NDRF vessels for scrap or nontransportation use. The Agency can

TABLE 8 National Defense Reserve Fleet 1945–1974

Fiscal Year	Total Ships in Fleets	Fiscal Year	Total Ships in Fleets
1945	5	1960	2,000
1946	1,421	1961	1,923
1947	1,204	1962	1,862
1948	1,675	1963	1,819
1949	1,934	1964	1,739
1950	2,277	1965	1,594
1951	1,767	1966	1,327
1952	1,853	1967	1,152
1953	1,932	1968	1,062
1954	2,067	1969	1,017
1955	2,068	1970	1,027
1956	2,061	1971	860
1957	1,889	1972	673
1958	2,074	1973	541
1959	2,060	1974	487

also transfer vessels from the Fleet to any Government agency or charter vessels to U.S. companies when privately owned U.S.-flag ships are not available for charter at reasonable rates.

Fourteen Liberty ships and 55 other types from Reserve Fleet anchorages were sold for scrap or non-transportation use during the year for an aggregate return to the Government of $22 million. Between 1958 and 1974, 1,463 Liberties and 467 non-Liberties were sold, bringing in a total return of $136 million.

The containership FLORIDIAN, built in 1960 with Title XI aid and acquired by the Government in 1970 through mortgage foreclosure proceedings, was sold for foreign-flag operation in January 1974 for a price of $250,100.

Additionally, 17 non-Liberty ships from non-Fleet locations were sold during fiscal year 1974 for scrapping or nontransportation use for an aggregate return of $5.8 million. The sale of 170 vessels from locations outside the NDRF from 1958 through 1974 brought a total return to the Government of $20.2 million.

In summary, 87 Government-owned ships were sold during 1974 for a return of $28.1 million. Between 1958 and 1974, $156.6 million accrued to the Government as a result of the sale of 2,101 ships for scrap or nontransportation use.

War Risk Insurance

The war risk insurance program administered by MarAd insures operators and seamen against losses as a result of hostile actions under circumstances in which commercial insurance is not available. During the fiscal year, the Maritime Administration continued to administer war risk and certain marine and liability insurance programs authorized by Title XII of the Merchant Marine Act of 1936, as amended.

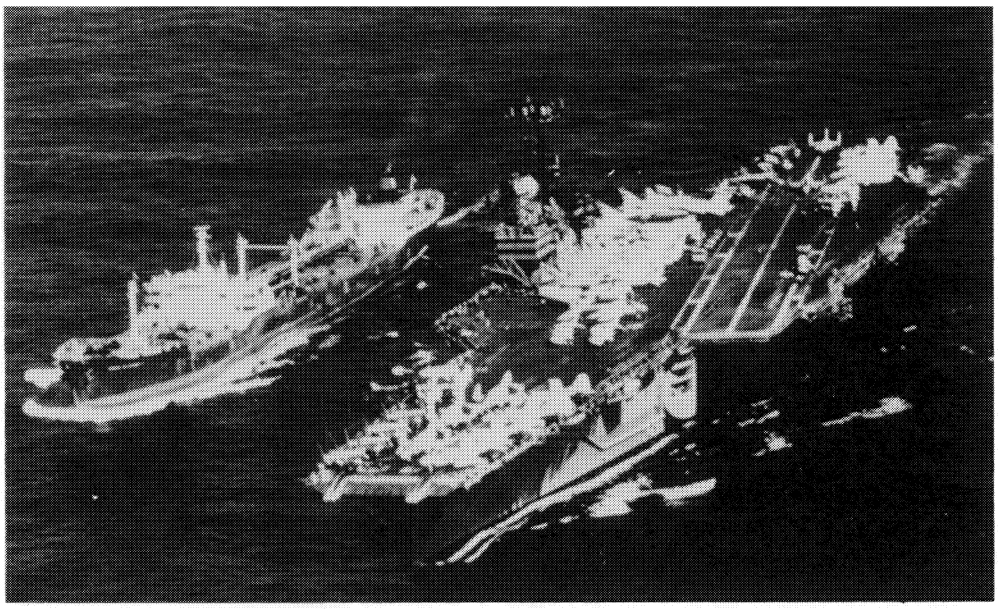
As of June 30, 1974, outstanding binders, covering shipowners from the time commercial war risk insurance terminates until 30 days after the outbreak of war involving the major powers, included 1,111 for war risk hull insurance, 1,046 for war risk protection and indemnity insurance, and 766 for war risk insurance of crew life and personal effects. From the inception of the program in 1952 to June 30, 1974, binder fees totaled $1.1 million and expenses totaled $983,007, of which $428,313 was paid as fees and expenses of the underwriting agent appointed by MarAd to process the binders.

War risk builder's risk insurance for the prelaunching construction period was written on 164 ships from the inception of the program in 1953 through June 30, 1974. Premiums totaled $3.5 million. From October 1962 through June 30, 1974, 52 policies were issued for war risk builder's risk insurance for the post-launching construction period, each with a service fee of $75 and each subject to attachment and premium assessment upon the automatic termination of commercial insurance resulting from outbreak of hostilities.

A standby war risk cargo insurance program was continued during the year. This program becomes effective when the Assistant Secretary of Commerce for Maritime Affairs finds that insurance adequate for the needs of U.S. waterborne commerce cannot be obtained on reasonable terms and conditions from companies authorized to sell insurance in a State of the United States. Commercial underwriting agents are employed to write this insurance and, as of June 30, 1974, 38 were under contract.

At the request of the U.S. Navy, war risk insurance was provided without premium charge but on a reimbursable basis for losses incurred, as authorized under Section 1205 of the 1936 Act. During the fiscal year, insurance coverage in effect was as follows:

1. Second seamen's war risk insurance was provided for the crews of 12 Government-owned tankers operated for the account of the Military Sealift Command (MSC).
2. Second seamen's war risk insurance was



Ongoing tests are being conducted in the use of merchant vessels and crews to support U.S. Navy combat operations. In this photograph a merchant tanker is refueling a Naval vessel.

provided on one privately owned U.S.-flag vessel and its crew while under bareboat charter to MSC.

3. Second seamen's war risk insurance was provided for the crews of 74 privately owned U.S.-flag tankers and dry cargo vessels chartered to MSC. The coverage provided is limited to the "Vietnam Combat Zone," referred to by commercial underwriters as an additional premium trading area.

Net premium savings to the Department of the Navy under the first two programs, from their inception in 1954 and 1964, respectively, to June 30, 1974, was estimated at $1.3 million, after deducting claims payments of $110,740. Net premium savings to the Navy under the third program, from its inception in 1968 to June 30, 1974, was estimated at $5.2 million, after deducting claims payments of $56,401.

Under Section 1208(a) of the 1936 Act, money in the war risk insurance revolving fund may be invested in U.S. securities or in securities on which the United States guarantees principal and interest. Since 1962, when the initial investment was made, interest earned totaled $2.4 million.

Marine Insurance

The Maritime Administration continued to self-insure Government-owned ships during fiscal year 1974. Claims outstanding of a marine and war risk insurance nature totaled 86, having an estimated settlement value of $1.3 million. Of this number, 50 marine protection and indemnity claims involved operations in Vietnam, with an estimated reimbursement value from commercial insurance (in effect during the Vietnam buildup) amounting to $1.1 million.

The Maritime Administration determines whether the insurance placed in commercial markets by mortgagors of ships on which the Government holds or insures mortgages, by charterers of Government-owned ships, and by subsidized vessel operators complies with contract requirements. The insurance amounts approved during fiscal year 1974 are presented in Table 9.

TABLE 9 Marine and War Risk Insurance Approved FY 1974

Kind of Insurance	Total Amount	Percentage	
		American	Foreign
Marine Hull	$2,764,312,000	67	33
Marine Protection and Indemnity	$2,583,765,000	41	59
War Risk Hull	$2,579,105,000	43	57
War Risk Protection and Indemnity	$2,579,105,000	43	57

MarAd/Navy Projects

The Maritime Administration continued to work closely with the Department of the Navy in order to further the Nation's capabilities at sea. The two agencies met regularly to discuss common areas of concern and to plan cooperative efforts whenever possible.

The availability of timely and accurate position reports of U.S. merchant ships, particularly during an emergency period, has been a matter of concern to defense strategists in both agencies. During the year a MarAd/Navy work group devised a "Merchant Vessel Locator Filing System," which will provide—via reports on the Department of Defense and U.S. Coast Guard communications systems—a continuous plot of the location of merchant ships in times of emergency. In fiscal year 1975 a test program will be undertaken prior to implementation of the system for U.S. oceangoing vessels engaged in foreign trade.

As of June 30, 1974, merchant ships on charter to the Navy had a total crew complement of 2,943.

Unified Seapower Symposiums, which brought together MarAd, Navy, prominent citizens and maritime industry officials to discuss national defense matters, were held in seven cities throughout the United States.

Emergency Readiness

In order to insure quick response to more likely contingencies, MarAd emergency planning during fiscal year 1974 placed increased emphasis on non-nuclear war requirements. Consequently, special attention was directed toward providing prompt and responsive emergency sealift at the outset of contingencies and, when necessary, before the opening of hostilities.

It was determined that Victory ships in the National Defense Reserve Fleet, a primary source of emergency shipping, will be available for sealift duties beyond 1977, a year once hypothesized as their disposal date. However, potential sources of ships to renew the dwindling Reserve Fleet are being investigated.

In addition to underlying the need for immediately available emergency sealift, the planning orientation toward non-nuclear contingencies highlighted the need to establish, in peacetime, operating procedures and organizational arrangements which will enable MarAd to effectively manage emergency operations without a major Agency realignment and resulting loss of momentum at critical times. To insure a coordinated, integrated effort, a MarAd Emergency Planning Committee was established in April 1974. Under the Committee's supervision, a comprehensive Emergency Planning Program (EPP) was prepared which will be published in early fiscal year 1975.

Responding to changes in the shipping environment brought about by the rapid introduction in recent years of high technology ships, EPP has recognized the necessity of maintaining the productivity of the merchant marine under emergency conditions, a consideration sometimes overlooked in the past. Among the critical planning areas defined by the program are provision of emergency sealift capabilities, development of a comprehensive automated operating system for emergency situations, establishment of a procedure for smooth conversion from peacetime to wartime conditions, revision and re-publication of emergency operating manuals, with particular attention to the functions that will be performed by field offices, and providing field offices the resources necessary to carry out their missions.

In the international planning area the Deputy Assistant Secretary for Maritime Affairs chaired the 26th Plenary Meeting of the NATO Planning Board for Ocean Shipping held in Washington, D.C., on April 22–25, 1974.

The agency participated in several tests and exercises to assess the effectiveness of emergency plans at the international, national, and regional levels. Activities included a NATO-wide exercise for control and protection of merchant shipping, a civil/military high level international crisis management exercise, and local testing of emergency communications systems and operating facilities. MarAd also assisted the Department of the Navy and NATO Naval Commands in the review and revision of military plans for the protection and control of merchant shipping in wartime and periods of increased international tension.

National Shipping Authority Orders were reviewed and revised during the year to reflect current conditions. The first set of orders was published during the year, with the remainder to be released during fiscal year 1975.

Three National Defense Executive Reserve (NDER) conferences were conducted, one in each of MarAd's regions, to advance the emergency readiness level of the MarAd NDER units and to evaluate current plans and procedures. This executive reserve organization is composed of officials recruited from the private port and shipping industries, who are trained to assume Federal assignments with the Maritime Administration under mobilization conditions. Active recruitment of qualified personnel continued throughout the year to fill operational NDER billets of the overseas organization.

Chapter 9

International Activities

Foremost among the international activities MarAd participated in were those related to the U.S./U.S.S.R. Maritime Agreement.

Others of note included constructive discussions related to bilateral maritime problems held in such places as Bangladesh, India, Australia, Africa, Venezuela, and the Scandinavian countries.

Maritime Administration officials also served on U.S. delegations such as the Intergovernmental Maritime Consultative Organization (IMCO), Organization for Economic Cooperation and Development (OECD), United Nations Conference on Trade and Development (UNCTAD), United Nations Economic Commission for Asia and the Far East (ECAFE), and the NATO Planning Board for Ocean Shipping (PBOS). MarAd also had representation at the Law of the Sea Conference (LOS) held in Caracas, Venezuela.

U.S./U.S.S.R. Maritime Agreement

The 1972 Maritime Agreement between the United States and the Union of Soviet Socialist Republics provides a broad framework and a clear set of ground rules for maritime activities between the two countries.

This Agreement, which remains in force until December 31, 1975, is an important step toward normalizing and expanding maritime and commercial relationships between the two nations.

Soviet and American maritime delegations met in Washington, D.C., during November 1973 and in Moscow, U.S.S.R., during May 1974 to negotiate the implementation of the Maritime Agreement. Assistant Secretary for Maritime Affairs Robert J. Blackwell and Igor Averin, Head of the Foreign Relations Department of the Soviet Ministry of Merchant Marine, led their respective delegations.

During these discussions decisions were made:

- to continue to use the current index system (based on rates in the U.S. Gulf/Holland-Belgium trade) for determining freight rates for grain shipments to the U.S.S.R. through December 31, 1974;
- to use a new index method for determining demurrage paid to owners of U.S.-flag vessels; and
- to expedite the settlement of U.S. operators' disbursement accounts in Soviet ports.

In addition, there were numerous technical and administrative problems resolved with respect to the handling and treatment of U.S.-flag ships and American seamen while in Soviet ports.

Details of U.S.-flag participation in the U.S./U.S.S.R. liner and bulk cargo movements under the 1972 Maritime Agreement are covered in Chapters 2 and 4.

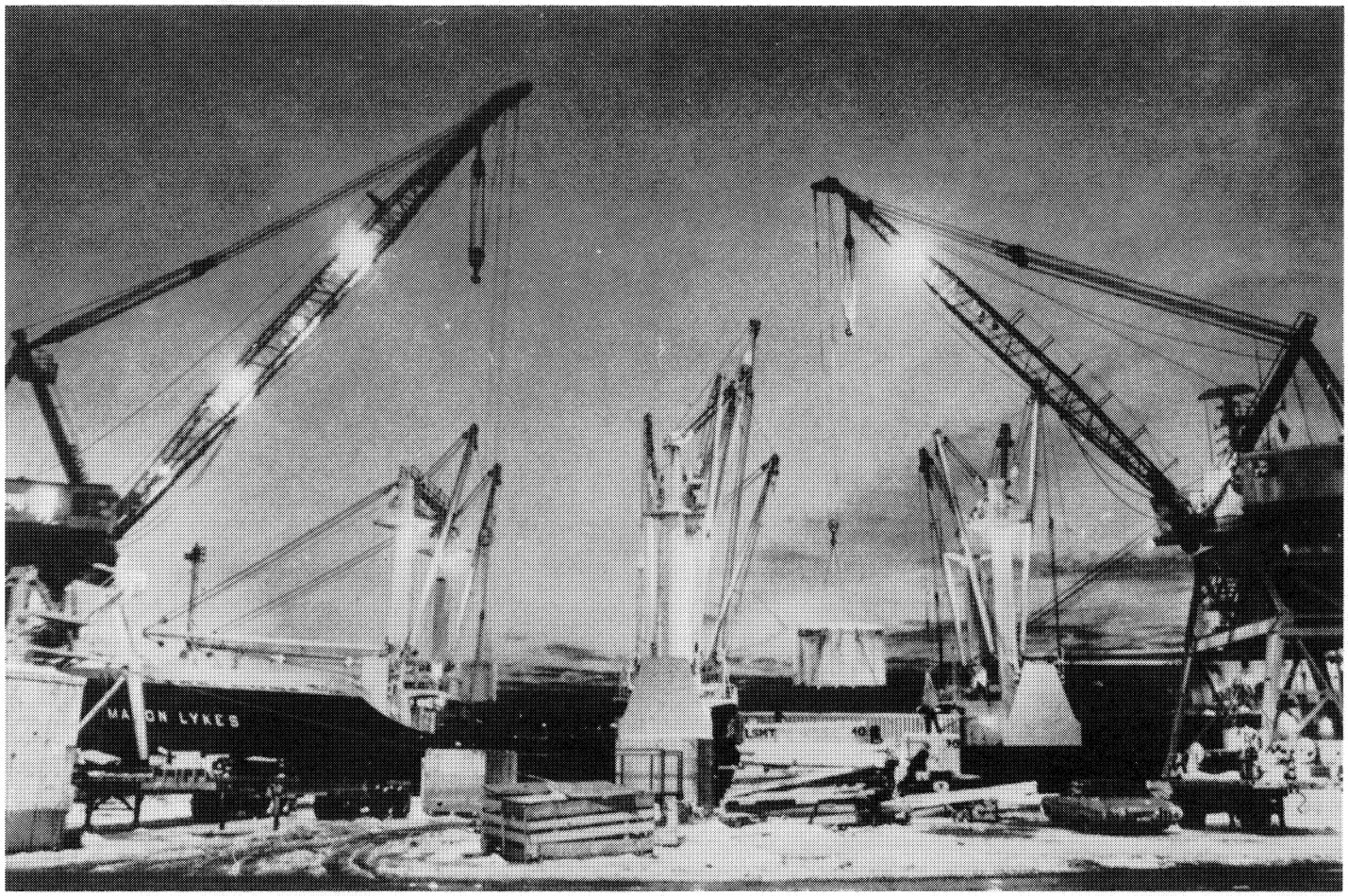
Foreign Representatives

MarAd Foreign Maritime Representatives are assigned to London, Brussels, Rome, Tokyo, and Caracas.

They are responsible for reporting to the Agency new developments in foreign merchant fleets and providing data on the operating and construction cost of vessels in their geographical areas of responsibility.

The Foreign Representatives actively promote the Agency's market development program by contacting foreign-based shippers and manufacturers and providing them information on U.S.-flag freight rates and cargo-flow data.

In addition, they facilitate the introduction of American technology into foreign countries, e.g., acceptance of the LASH concept in Venezuela. Other areas monitored are: preferential treatment of national flag vessels, changing trends in trade and cargo handling, development



SS MASON LYKES loads up at the Port of Baltimore before departing for the Soviet port of Odessa. The ship was the first U.S.-flag general cargo vessel to call directly at a Soviet port in more than a decade.

of intermodal systems, and benefits to maritime labor.

During the oil crisis, they assisted the Federal Energy Administration and Department of State by providing specialized maritime expertise in the areas of bunkering and oil transport requirements.

International Meetings

MarAd participated in several technical meetings dealing with containerships, LNG vessels, automation, and international shipbuilding questions.

Agency representatives participated in 45 international conferences, many of which were under the auspices of IMCO. Marine pollution abatement continues to be a significant topic in these forums (see Chapter 6). Questions regarding radio communications, maritime satellites, maritime safety, stability and load lines, standards of training and watchkeeping, and ship design were among those discussed at IMCO Conferences.

One of the most important and largest conferences in which MarAd participated was the Law of the Sea Conference in Caracas convened at the end of the fiscal year. It dealt with such matters as marine pollution, territorial waters, fishing rights, and navigation of straits.

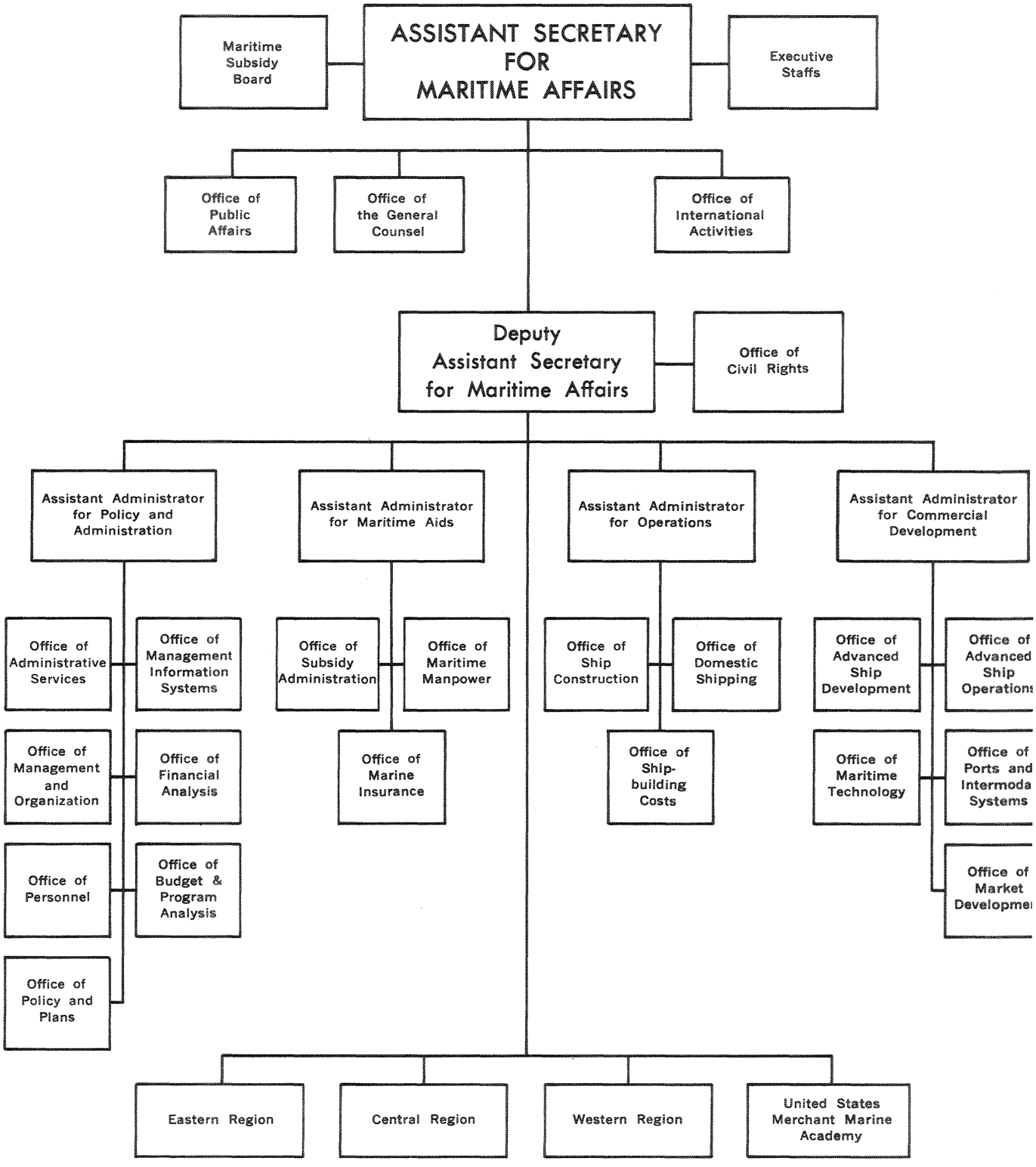
MarAd representatives participated in OECD groups, including the Maritime Transport Committee and the Working Party on Shipbuilding. Other delegates represented MarAd at ECE (Economic Commission for Europe) conferences concerned with container transport and inland water transport problems; at UNCTAD meetings dealing with a code of conduct for liner conferences; and at the Water Transport Subcommittee of the ECAFE Transportation and Communications Committee.

MarAd delegates attended several PBOS working groups as well as the PBOS Plenary Session held in Washington, D.C.

Robert J. Blackwell, Assistant Secretary of Commerce for Maritime Affairs, and Igor Averin, Head of the Foreign Relations Department of the Soviet Ministry of Merchant Marine, meet to negotiate implementation of the U.S./U.S.S.R. Maritime Agreement.

CHART II. Maritime Administration

ORGANIZATION CHART



June 30, 1974

Chapter 10

Administration

Maritime Subsidy Board

The Maritime Subsidy Board, by delegation from the Secretary of Commerce, exercises the authority vested in him to award, amend, and terminate subsidy contracts for the operation and construction of vessels for use in the foreign commerce of the United States. The Board's functions are implemented through fact-finding investigations, compilation of domestic and foreign trade statistics and cost data, and public hearings. Decisions, opinions, orders, rulings, and reports of the Maritime Subsidy Board are final unless the Secretary of Commerce, on his own motion or pursuant to a petition filed by an interested party, undertakes review of its action. Final actions by the Secretary may be appealed to the Federal courts.

The Assistant Secretary for Maritime Affairs, as *ex officio* Maritime Administrator, is Chairman of the three-member Maritime Subsidy Board. The Board also includes the Deputy Assistant Secretary and the General Counsel of the Maritime Administration. The Secretary of the Agency acts as an Alternate Member in the absence of any one of the three permanent members.

In fiscal year 1974 the Board convened 51 meetings in which it considered and acted on 502 items including the issuance of 27 formal opinions, rulings, and orders. It also published 153 notices in the *Federal Register* pertaining to required statutory hearings and development and adoption of rules and regulations in the implementation of the Merchant Marine Act, 1936, as amended. Actions of particular significance included the issuance and publication in May 1974 of changes in the Uniform System of Accounts.

In August 1973 the Board issued its final opinion and order in Docket No. A–75 relating to the Tanker Construction Program and action to be taken under the National Environmental Policy Act, including a review of MarAd's Final Environmental Impact Statement issued in May of 1973.

In October 1973 the Board issued its final opinion and order in Docket No. S–243 involving an investigation of alleged violations of Section 810 of the 1936 Act. The October decision, which supplemented a precedential April 1973 decision that certain carrier members of the Atlantic and Gulf American Flag Berth Operators (AGAFBO) had unfairly discriminated and competed against another U.S.-flag operator, found that, for such violations, operating-differential subsidy in the approximate sum of $2.4 million was recoverable and owed to the Government by five subsidized carriers.

Thereafter, in considering petitions for review of the Board Decision, "solely with respect to the mitigating circumstances and appropriate sanctions to be imposed on the trade respondents," the Secretary of Commerce in an Order dated September 9, 1974, stated that, "it is my conclusion that recovery from each of the trade respondents in the October 10, 1973, Final Order on Recoveries shall be modified by reducing the total amount of subsidy subject to recovery to $1,126,522.26," from the five subsidized operators.

In June 1973 the Board published Volume 2 of its reports covering Opinions and Orders from October 1964 to February 1969.

Administrative Law Judges

The functions of the Administrative Law Judges are to conduct public hearings necessitated by the various merchant marine and shipping statutes and thereafter to prepare initial or recommended decisions. They also maintain the official dockets of formal proceedings. Cases are referred by the Assistant Secretary of Commerce for Maritime Affairs or the Maritime Subsidy Board.

Members of the Maritime Subsidy Board during fiscal year 1974 were (left to right): Deputy Assistant Secretary Howard F. Casey, Assistant Secretary Robert J. Blackwell (Chairman), and General Counsel A. Reading Van Doren.

During fiscal year 1974 there were 27 proceedings pending before the Administrative Law Judges. Of these 14 involved operating-differential subsidy matters and 13 concerned appeals from final decisions of contracting officers in disputes between shipowners, shipyards, and MarAd.

During the year one Administrative Law Judge was borrowed from the U.S. Department of Interior to hear one operating-differential subsidy matter and one of MarAd's Administrative Law Judges was loaned to the Federal Reserve Board, Environmental Protection Agency, and Consumer Product Safety Commission.

Of the MarAd proceedings, two were withdrawn by the applicant, six were settled or were pending settlement negotiations, five hearings were completed and three initial decisions were issued. At the close of fiscal year 1974, 11 cases were listed as inactive or pending.

The proceedings initially decided by the Administrative Law Judges included the following:

1. *American Export Lines, Inc.,* Docket No. S-288, application to reinstate its operating-differential subsidy agreement for U.S. Atlantic/North European containership service.
2. *National Shipping Corp.,* Docket S-386, application for an operating-differential subsidy agreement to provide bulk transportation of lumber and fertilizer between Canada and Florida with one vessel under charter to a Canadian corporation.
3. *Grace Line, Inc., v. Bethlehem Steel Corp.,* Docket CA-61, appeal from the decision of the contracting officer regarding a deficiency in banana refrigerator capacity of four vessels.

Suits and Claims

The large number of maritime related pending cases in the United States District Courts, which resulted mainly from sealift support activi-

ties in the Southeast Asia conflict, was reduced during fiscal year 1974. These claims include seamen's and shore workers' injuries, ship collisions and property losses. The cases had been filed up to and for some time following cessation of general agents' operation of Maritime Administration vessels in early January 1971.

One significant District Court case was *American Ship Dismantlers, Inc. et al. v. Rauer H. Meyer et al.*, (D.D.C. Cir. No. 74-395, filed March 8, 1974), wherein five domestic shipbreakers and ferrous scrap exporters complained that the policies of the Office of Export Administration and the Maritime Administration had been unfairly and improperly applied to them in that the export control regulations on scrap metals denied them the citizen preference for surplus Government vessels. Decision was pending at the close of the fiscal year.

An important District Court decision was handed down in *American Maritime Association et al.* v. *Peterson et al.* (D.D.C. Civ. Nos. 1576-72 and 1667-72). The Court accepted the argument of a group of subsidized intervenors and held that the Maritime Subsidy Board has no authority to issue regulations requiring reduction of operating-differential subsidy due to the carriage of Government preference cargoes. The Court also rejected plaintiff's complaint that no operating-differential subsidy could be paid for the carriage of said preference cargoes. Both plaintiff and defendant are appealing the decision.

Several major cases were decided in the United States Court of Claims. They involved personnel, operating-differential subsidy, and construction-differential subsidy issues. A summary of the most noteworthy cases follows:

Drucker and Pearson v. The United States (Ct. Cl. No. 327-69) concluded a matter which the Court effectively had remanded in an earlier year. The subject was professorial grade levels assigned to plaintiff faculty members at the United States Merchant Marine Academy. The Court upheld MarAd's administrative determination of the appropriate grade levels.

In *Sea-Land Service, Inc. v. The United States* (Ct. Cl. No. 473-72) the Court also upheld the Agency's administrative determination that the trade-in values under a ship exchange contract were to be reduced by the cost of repairs found necessary when the vessel was physically delivered to the Maritime Administration. This was the first judicial test of a standard clause contained in most ship exchange contracts. Plaintiff filed a petition for *certiorari* in the Supreme Court of the United States in June 1974 (Docket No. 73-1891). As of June 30, 1974, the United States had not filed its opposition brief.

Farrell Lines Inc. v. *The United States* (Ct. Cl. No. 42-72) and *American Export Isbrandtsen Lines, Inc. et al. v. The United States* (Ct. Cl. No. 402-70) involved operating-differential subsidy and the claims of multiple contractors for subsidy reimbursement of expenses for training contributions and severance pay. In the former, the Court ruled that training contributions were eligible for operating-differential subsidy and remanded the case for Maritime Subsidy Board consideration and decision as to the fairness and reasonableness of the contractors' expenditures and the differential between those contractors' expenditures and the expenditures borne by foreign competitors. Notably, the Court did not find the results of collective bargaining to be conclusive. In the latter case, the Court appeared to hold that the collective bargaining results established the fair and reasonable character of severance pay expenditures by the contractors. Petitions for rehearing and reconsideration were pending at the close of the fiscal year.

In *Sun Shipbuilding and Dry Dock Company v. The United States* (Ct. Cl. No. 61-73), the Court denied a part of plaintiff's petition demanding that the United States pay United States Lines, Inc.'s share of an award by the Maritime Subsidy Board, as modified by the Secretary of Commerce, increasing the cost of construction contract work due to changes ordered by United States Lines, Inc., and approved by the Board. Plaintiff had claimed United States Lines, Inc.'s failure to pay its share constituted a default under the construction contract and the Board was obligated to assume this debt. United States Lines, Inc., maintained that the administrative award was excessive and sought to defend against plaintiff's claim. The Court *en banc* allower United States Lines, Inc., to "offer additional evidence on its own behalf and advance such legal contentions as it deems appropriate in the protection of its interest." This was a landmark extension of the Court's jurisdiction involving the rights of a third party in tripartite contractual arrangements. Plaintiff was expected to appeal both rulings.

Internal Management

A headquarters reorganization during the year brought together the administrative and policy planning functions of the Agency under a newly established Assistant Administrator for Policy and Administration. This change provides for more effective coordination and integration of policy and planning activities with the resource management functions.

The Office of Market Development was reorganized into three functional areas. The Immediate Office of the Director develops and administers shared market development programs with maritime industry and coordinates National Maritime Council activities as Secretariat to the Council. The Division of Commercial Cargo develops and carries out policies and programs to increase U.S.-flag participation in the oceanborne carriage of commercial cargo generated by exporters and importers. The Division of National Cargo monitors the cargo preference shipments of U.S. Government generated non-military cargoes and promotes the use of effective shipping procedures by Government agencies.

Also during the year a new Office of Shipbuilding Costs was established under the Assistant Administrator for Operations to handle the cost determination activities of the Agency's ship construction program. Responsibility for the technical aspect of this program was retained in the Office of Ship Construction.

MarAd's organizational structure is shown in Chart 2. Geographical areas of responsibility of the Agency's three region offices are presented on the front inside cover.

Internal Audits

During the year five internal audit reports were submitted by the U.S. Department of Commerce, Office of Audits. They were the Audit of Midshipmen Accounts at the U.S. Merchant Marine Academy; the Audit of the Cargo Preference Program; and separate audits on the implementation of MarAd's Financial Information System in the three region offices.

With minor exceptions, the Maritime Administration concurred in all of the recommendations contained in these audit reports and appropriate implementing actions have been taken or are in progress.

Management Information

During the year the Maritime Administration completed a major step in carrying forward its automatic data processing improvement program. A new computer was acquired which improves MarAd's access to and processing of information about the U.S. and world merchant fleets, domestic and oceanborne foreign trade, and maritime manpower resources. MarAd program offices and managers can request a wide range of information through terminals located remotely in or near their offices. All files are protected by security methods, and terminal users are able to update maritime information and develop new systems. The computer can also process administrative records such as personnel, payroll, and financial records.

Personnel

Employment

During the year total employment in the Agency remained stable at 1,566.

Minority group employees increased from 26 percent to 27 percent of the total work force.

The percentage of female employees remained constant at 30 percent.

The number of supervisory employees increased slightly from 188 to 189, with an increase in the percentage of minority supervisors from 14 percent to 15 percent of the total. While the number of female supervisors did not change, the percentage of female employees in grade GS-12 and above increased from 4 percent to 5 percent. The percentage of minorities at those grade levels remained constant at seven percent.

Training

A total of 1,360 employees received training supported by the Maritime Administration. Several new facets were added to an already varied education and training program.

A MarAd Video Tape System became operational which contributed significantly to increased training opportunities for headquarters, Region, and Academy employees, as well as providing for improved communications within MarAd.

MarAd, in conjunction with the University of Arizona, began to offer University of Arizona courses to Washington employees by use of the Video Tape System.

Installations and Logistics

Materiel Control

Rental of mobilization reserve machine tools and equipment to commercial concerns working on defense contracts or in support of merchant marine programs produced a revenue of $114,948.

Excess property having acquisition value of $370,867 was disposed of during the year, including property with an acquisition value of $312,742 which was donated or transferred to

other Government agencies. Property with an acquisition value of $58,125 was sold for $23,560.

Real Property

At year's end MarAd's real property included the Reserve Fleet sites at Suisun Bay, Calif., Beaumont, Tex., and James River, Va.; a warehouse at Kearny, N.J.; the U.S. Merchant Marine Academy at Kings Point, N.Y.; and the Wilmington, N.C., and Yorktown, Va., maritime facilities. Radar training schools are operated at Fort Mason in San Francisco, Calif., New Orleans, La., and New York, N.Y.

Energy Conservation

Between November 1973 and March 1974, when severe energy shortages were being experienced throughout the United States, MarAd sought to limit disruptions to the U.S. domestic and foreign waterborne commerce. The Agency urged the entire maritime industry to adopt stringent energy conservation programs.

MarAd initiated a series of regional meetings to impress upon top management the necessity for sound energy conservation measures. These meetings, which were held in New York, N.Y., New Orleans, La., San Francisco, Calif., and Cleveland, Ohio, laid the foundation for the concerted Government/industry effort which was the basis for the industry's overall successful energy conservation program.

Following these meetings, MarAd closely monitored the fuels and energy situation. Personnel in all three of the Agency's regions worked closely with ship operators and shipbuilders to make better use of available fuel supplies.

Other personnel from both the region and Washington offices were detailed to the Federal Energy Office (now the Federal Energy Administration) to assist in administering fuel allocation programs.

In mid-March 1974 Assistant Secretary Blackwell called a meeting of the leaders of 13 major maritime trade associations to reinforce and coordinate the industry's conservation efforts. At this meeting, procedures were established through which the Maritime Administration channels recommendations for energy conservation to the National Industrial Energy Conservation Council (NIECC), which advises the Secretary of Commerce on programs and problems relating to conservation within industry. Two representatives of the maritime industry are members of the Council.

Individually, shipyards, vessel operators, port terminals, and stevedoring companies organized resources, conducted energy audits, set conservation goals, and launched intensive conservation programs. These programs have been successful.

U.S. shipping companies examined ways to reduce fuel consumption without affecting a vessel's profitability or service. Several companies have conducted investigations to determine the optimum balance between vessel speed and fuel consumption. Other conservation practices initiated by vessel operators include careful planning of voyage itineraries, weather routing, better communications which will allow vessels at sea to slow down if berthing delays are anticipated, and improved maintenance and repair procedures.

By implementing extensive energy conservation management programs, one of the major shipyards reduced total energy consumption at one of its facilities by 18 percent. Another yard reports auditable fuel oil savings of 25 percent due to conservation techniques.

In addition to these activities, MarAd is sponsoring an active research and development program that could prove to be of even greater significance in generating long-term savings of energy within the maritime industry. Examples of R&D efforts are: projects examining nuclear propulsion of merchant vessels, efficient propulsion systems utilizing conventional fuels, alternative marine fuel for use with existing equipment, and lighter and more efficient marine structures.

At the U.S. Merchant Marine Academy an Energy Conservation Committee has been created. Composed of representatives from the major departments and the Midshipmen Regiment, the Committee conducts periodic inspections to insure that good conservation practices are not being violated by students or faculty.

Accounting

The accounts of the Maritime Administration were maintained on an accrual basis and in conformity with the principles, standards, and related requirements prescribed by the Comptroller General. The cost of combined operations of the Maritime Administration for the year totaled $455.2 million. This included $429.4 million for ODS and CDS, $20.3 million for research and development, $20.0 million for administrative expenses, $8.4 million for operation of the U.S. Merchant Marine Academy, $4.4 million for maintenance and preservation of reserve fleet vessels, $2.6 million for financial assistance to State marine schools, and $29.9 million for other operating income net of expenses.

Financial Statements of the Maritime Administration appear in Exhibits 1–4.

EXHIBIT 1. STATEMENT OF FINANCIAL CONDITION

	June 30	
	1974	1973
ASSETS		
SELECTED CURRENT ASSETS		
FUND BALANCES WITH TREASURY:		
Budget Funds	$ 858,895,138	$ 799,818,75
Deposit Funds	1,065,017	642,30
Allocation from Other Agencies	528,077	596,78
	860,488,232	801,057,84
FEDERAL SECURITY HOLDINGS	61,235,593	47,720,55
ACCOUNTS RECEIVABLE:		
Government Agencies	850,197	545,61
The Public	5,027,427	4,500,23
Allowances (—)	—171,216	—171,21
	5,706,408	4,874,63
ADVANCES TO:		
Government Agencies	82,584	82,58
The Public	60,959	198,08
	143,543	280,67
TOTAL SELECTED CURRENT ASSETS	927,573,776	853,933,71
LOANS RECEIVABLE:		
Repayable in Dollars	43,293,773	50,975,74
Allowances (—)	—11,408,197	—11,408,19
	31,885,576	39,567,54
INVENTORIES:		
Raw Material and Supplies	4,955,918	4,988,34
REAL PROPERTY AND EQUIPMENT:		
Land	9,069,657	9,119,50
Structures and Facilities	32,699,955	33,410,83
Equipment and Vessels	1,538,586,125	1,728,591,07
Leasehold Improvements	239,104	239,10
Allowances (—)	—1,485,715,160	—1,670,370,10
	94,879,681	100,990,34
OTHER ASSETS:		
Work-in-Process, Contractors	2,536,346	68,800,80
Material and Supplies—Other	528,561	552,21
Deferred Charges	747,248	747,24
Allowances (—)	—747,248	—747,24
	3,064,907	69,353,01
TOTAL ASSETS	**$1,062,359,858**	**$1,068,832,96**

The notes and schedules to financial statements are an integral part of this statement.

Maritime Administration

JUNE 30, 1974 and JUNE 30, 1973 (Note 1)

	June 30	
	1974	1973
LIABILITIES:		
SELECTED CURRENT LIABILITIES (Note 2)		
ACCOUNTS PAYABLE (Including Funded Accrued Liabilities)		
Government Agencies	$ 53,047	$ 6,166
The Public	126,642,921	140,700,102
	126,695,968	140,706,268
ADVANCES FROM:		
Government Agencies	2,412,126	2,406,950
TOTAL SELECTED CURRENT LIABILITIES	129,108,094	143,113,218
DEPOSIT FUND LIABILITIES	1,065,017	642,301
UNFUNDED LIABILITIES:		
Accrued Annual Leave	2,539,867	2,620,090
OTHER LIABILITIES:		
Vessel Trade-in-Allowances	6,817,225	17,417,147
Deferred Credits	1,084,835	898,246
Liabilities for Vessels under Construction	–0–	65,154,453
	7,902,060	83,469,846
TOTAL LIABILITIES	140,615,038	229,845,455
GOVERNMENT EQUITY		
UNEXPENDED BUDGET AUTHORITY:		
Unobligated	89,460,458	101,314,535
Undelivered Orders	798,552,614	688,378,225
	888,013,072	789,692,760
UNFINANCED BUDGET AUTHORITY (—):		
Contract Authority	—93,875,600	—82,562,310
INVESTED CAPITAL	125,428,990	131,811,080
RECEIPT ACCOUNT EQUITY	2,178,358	45,983
TOTAL GOVERNMENT EQUITY	921,744,820	838,987,513
TOTAL LIABILITIES AND GOVERNMENT EQUITY	**$1,062,359,868**	**$1,068,832,968**

The notes and schedules to financial statements are an integral part of this statement.

Financial Statements (continued)

EXHIBIT 2. STATEMENT OF EQUITY OF THE U.S. GOVERNMENT For Years Ended June 30, 1974 and June 30, 1973 (Note 1)

	Years Ended June 30	
	1974	1973
BALANCE, BEGINNING OF FISCAL YEAR	$ 838,987,513	$1,659,295,20
ADDITIONS:		
Funds Appropriated by Congress	575,342,000	750,464,77
Contributions Received for Chapel at United States Merchant Marine Academy, Kings Point, N.Y.	-0-	71
Property Capitalized without Use of Funds	-0-	18,066,78
	1,414,329,513	2,427,827,48
DEDUCTIONS:		
Net Cost of Combined Operations (Exhibit 3)	455,172,191	481,271,32
Payments into General Fund Receipts	37,699,657	21,768,94
Unobligated Balance Withdrawn or Restored (—)	—288,495	182,12
Appropriation Transferred Out	1,340	69,22
Unamortized Ship Construction Costs	-0-	1,085,548,34
	492,584,693	1,588,839,96
BALANCE, CLOSE OF FISCAL YEAR (Exhibit 1)	**$ 921,744,820**	**$ 838,987,51**

The notes and schedules to financial statements are an integral part of this statement.

Financial Statements (continued)

EXHIBIT 3. STATEMENT OF OPERATIONS
For Years Ended June 30, 1974 and June 30, 1973 (Note 1)

	Year Ended June 30	
	1974	1973
OPERATIONS OF MARITIME ADMINISTRATION:		
Net Costs of Operating Activities		
Reserve Fleet Program:		
Depreciation on Vessels	$ 5,034,949	$ 2,063,693
Maintenance and Preservation	4,384,206	3,572,318
	9,419,155	5,636,011
Maritime Training Program	8,416,593	7,554,546
Maintenance of Shipyards and Warehouses	31,782	222,632
	17,867,530	13,413,189
Direct Subsidies and Costs Attributable to National Defense:		
Operating-Differential Subsidies	255,828,290	252,691,090
Construction-Differential Subsidies	173,549,669	154,217,838
Cost of National Defense Features	1,290,483	302,887
	430,668,442	407,211,815
Administrative	20,048,085	21,913,378
Research and Development	20,280,791	29,874,922
Financial Assistance to State Marine Schools	2,626,586	2,092,963
	42,955,462	53,881,263
Other Costs (— Income)		
Depreciation on Vessels Applicable to Prior Years	1,461,268	25,401,363
Loss (— Income) on Sale of Obsolete Vessels	—24,560,662	—8,315,204
Loss (— Income) on Sale of Fixed Assets Other Than Vessels	—20,945	—4,239,869
Inventory and Property Adjustments	—3,553,908	—13,144
Interest Income	—938,606	—1,112,334
Miscellaneous (Net)	1,817,585	2,324,388
	—25,795,268	14,045,200
Net Cost of Maritime Administration Operations	465,696,166	488,551,467
OPERATIONS OF REVOLVING FUNDS (— Net Income or Loss):		
Vessel Operations Revolving Fund	125,993	75,750
War Risk Insurance Revolving Fund	—442,039	—365,520
Federal Ship Financing Fund, Revolving Fund	—10,207,929	—6,990,371
NET COST OF COMBINED OPERATIONS (Exhibit 2)	**$455,172,191**	**$481,271,326**

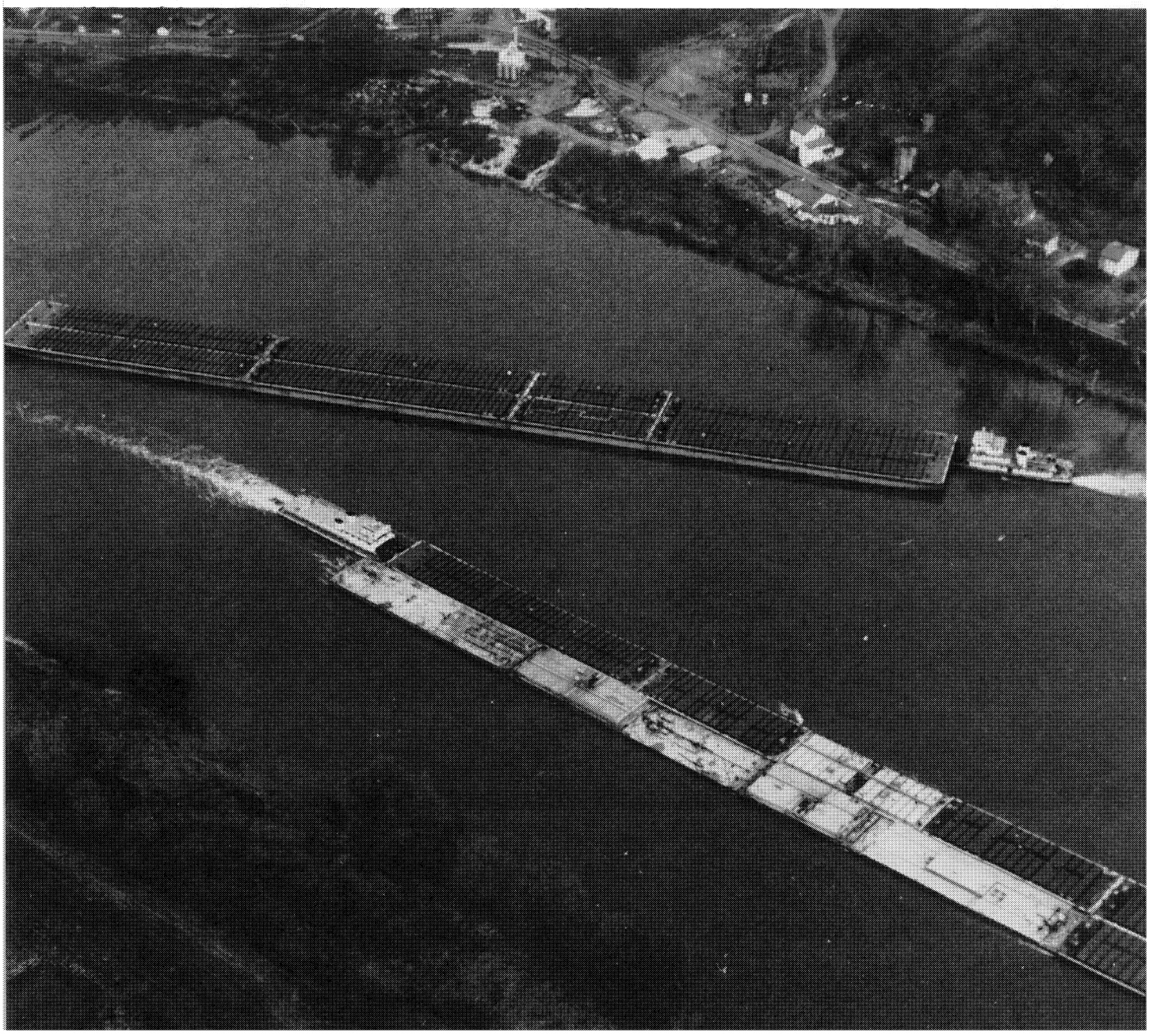
The notes and schedules to financial statements are an integral part of this statement.

NOTES TO FINANCIAL STATEMENTS—JUNE 30, 1974 and 1973

1. The preceding financial statements include the assets, liabilities, income and expense of the Maritime Administration; the Vessel Operations Revolving Fund; the War Risk Insurance Revolving Fund; and the Federal Ship Financing Fund, Revolving Fund.

2. The Maritime Administration was contingently liable under agreements insuring mortgages, construction loans and accrued interest payable to lending institutions totaling $1,665,923,624 at June 30, 1974, and $1,260,400,713 at June 30, 1973. Commitments to insure additional loans and/or mortgages amounted to $2,096,709,340 at June 30, 1974, and $1,318,872,357 at June 30, 1973. U.S. Government securities and cash of $148,661,118 at June 30, 1974, $97,104,901 at June 30, 1973, were held in escrow by the Government in connection with insurance of loans and mortgages which were financed by the sales of bonds to the general public. There were also conditional liabilities for pre-launching War Risk Builder's Risk Insurance of $21 billion at June 30, 1974, and $18 billion at June 30, 1973. The Maritime Administration was also contingently liable for undetermined amounts in connection with settlements to be made under 50 claims against the Administration aggregating $1,200,500 at June 30, 1974, and 166 claims aggregating $3,774,200 at June 30, 1973. Based on previous experience, it is anticipated that settlements of these claims will be made for amounts substantially less than the gross amounts of the claims. At June 30, 1974 and 1973, the U.S. Treasury held in safekeeping for the Maritime Administration $155,000 and $130,000 respectively, of U.S. Government securities which had been accepted from vessel charterers, subsidized operators, and other contractors as collateral for their performance under contracts.

Appendix



APPENDIX I Ships Under Construction-Differentic

Owner	Shipbuilder	Type of Ship
UNDELIVERED VESSELS UNDER CONTRACTS AWARDED DURING FY 1974:		
Moore-McCormack Bulk Transport, Inc.	National Steel & Shipbuilding Co.	Tanker T6-S-93a
Chestnut Shipping Co.	National Steel & Shipbuilding Co.	Tanker T8-S-100b
Hawaiian International Shipping Corp.	Todd Shipyards Corp.	Tanker T8-S-100b
Hawaiian International Shipping Corp.	Todd Shipyards Corp.	Tanker T8-S-100b
Hawaiian International Shipping Corp.	Todd Shipyards Corp.	Tanker T8-S-100b
Pierce Tanker Corp.	Seatrain Shipbuilding Corp.	Tanker T10-S-92a
VLCC I Corp.	Newport News SB & DD Co.	Tanker T11-S-116a
VLCC II Corp.	Newport News SB & DD Co.	Tanker T11-S-116a
Zapata Ocean Carriers, Inc.	Newport News SB & DD Co.	Tanker T11-S-116a
Total		
UNDELIVERED VESSELS UNDER CONTRACTS AWARDED IN PREVIOUS FISCAL YEARS:		
Prudential Lines, Inc.[2]	Avondale Shipyards, Inc.	LASH C8-S-81b
Waterman Steamship Corp.	Avondale Shipyards, Inc.	LASH C9-S-81d
Central Gulf Steamship Corp.	Avondale Shipyards, Inc.	LASH C9-S-81d
Margate Shipping Co.	National Steel & Shipbuilding Co.	Tanker T6-S-93a
Aeron Marine Shipping Co.	National Steel & Shipbuilding Co.	Tanker T8-S-100b
Boston VLCC Tankers, Inc. II	Bethlehem Steel Corp.	Tanker T10-S-101b
Boston VLCC Tankers, Inc. IV	Bethlehem Steel Corp.	Tanker T10-S-101b
Boston VLCC Tankers, Inc. VI	Bethlehem Steel Corp.	Tanker T10-S-101b
Boston Tankers Corp. I	Todd Shipyards Corp.	Tanker T6-M-98a
Boston Tankers Corp. II	Todd Shipyards Corp.	Tanker T6-M-98a
Boston Tankers Corp. III	Todd Shipyards Corp.	Tanker T6-M-98a
Boston Tankers Corp. IV	Todd Shipyards Corp.	Tanker T6-M-98a
States Steamship Co.	Bath Iron Works Corp.	RO/RO C7-S-95a
Tyler Tanker Corp.	Seatrain Shipbuilding Corp.	Tanker T10-S-92a
Polk Tanker Corp.	Seatrain Shipbuilding Corp.	Tanker T10-S-92a
Methane Alpha Co.	Newport News SB & DD Co.	LNG LG9-S-94a
Methane Beta Co.	Newport News SB & DD Co.	LNG LG9-S-94a
Methane Gamma Co.	Newport News SB & DD Co.	LNG LG9-S-94a
Cryogenic Energy Transport, Inc.	General Dynamics Corp.	LNG LG8-S-102a
LNG Transport, Inc.	General Dynamics Corp.	LNG LG8-S-102a
Liquegas Transport, Inc.	General Dynamics Corp.	LNG LG8-S-102a
States Steamship Co.	Bath Iron Works Corp.	RO/RO C7-S-95a
Methane Delta Co.	Avondale Shipyards, Inc.	LNG LG9-S-107a
Methane Epsilon Co.	Avondale Shipyards, Inc.	LNG LG9-S-107a
Methane Zeta Co.	Avondale Shipyards, Inc.	LNG LG9-S-107a
Third Group, Inc.	National Steel & Shipbuilding Co.	Tanker T8-S-100b
Gulf Oil Corp.	Bethlehem Steel Corp.	Tanker T10-S-101b
Gulf Oil Corp.	Bethlehem Steel Corp.	Tanker T10-S-101b
Fillmore Tanker Corp.	Seatrain Shipbuilding Corp.	Tanker T10-S-92a
Total		
TOTAL SHIPS UNDER CDS ON JUNE 30, 1974		

[1] Total contract cost including CDS and National Defense Features, but excluding engineering and change orders.
[2] Name changed from Prudential-Grace Lines, Inc. on August 1, 1974.
[3] 125,000 cubic meter liquefied natural gas carriers.

Subsidy, June 30, 1974

No. of Ships	Total Dwt. Tonnage	Estimated Completion Date	Total Estimated Cost [1]	Estimated Cost to Gov't of Construction-Differential Subsidy	Estimated Cost to Gov't of National Defense Features
3	114,900	1-31-77	$ 65,088,000	$ 22,840,737	$ 165,000
2	179,400	9-30-78	65,722,964	21,902,964	120,000
1	89,700	10-02-78	38,847,563	13,099,000	60,000
1	89,700	1-31-79	38,847,563	13,009,000	60,000
1	89,700	7-31-79	38,847,563	13,009,000	60,000
1	225,000	4-30-77	94,207,000	36,417,000	175,000
1	390,770	2-01-78	139,685,000	54,102,363	66,000
1	390,770	8-01-78	138,226,000	53,540,100	58,000
1	390,770	1-15-79	136,599,000	52,909,250	59,000
12	**1,960,710**		**$ 756,070,653**	**$280,739,414**	**$ 823,000**
2	59,640	10-11-74	42,652,000	22,462,376	26,000
1	39,100	7-16-74	27,929,000	12,335,778	20,000
3	117,300	12-30-74	82,200,000	35,649,984	60,000
2	76,600	3-17-75	36,443,400	15,623,362	110,000
3	269,100	7-03-75	83,566,461	35,814,000	166,461
1	265,000	4-30-75	71,234,000	30,566,000	133,000
1	265,000	9-30-75	71,234,000	30,566,000	133,000
1	265,000	3-31-76	71,234,000	30,566,000	133,000
1	35,000	7-01-75	19,865,000	8,530,000	—
1	35,000	10-01-75	19,865,000	8,530,000	—
1	35,000	1-01-76	19,865,000	8,530,000	—
1	35,000	4-01-76	19,865,000	8,530,000	—
3	58,629	3-28-76	114,129,477	48,744,000	729,477
1	225,000	12-15-74	62,929,700	27,017,500	57,700
1	225,000	9-15-75	62,929,700	27,017,500	57,700
1	63,460 [3]	2-15-76	106,577,000	27,291,000	17,000
1	63,460 [3]	7-31-76	96,837,500	24,792,000	17,500
1	63,460 [3]	4-15-77	94,238,000	24,125,000	18,000
1	63,600 [3]	12-31-75	89,575,000	21,231,535	20,000
1	63,600 [3]	3-31-76	89,575,000	21,231,535	20,000
1	63,600 [3]	3-31-77	89,575,000	21,231,535	20,000
1	19,543	6-19-77	35,337,647	14,134,000	204,647
1	63,170 [3]	10-15-76	106,020,000	17,495,000	20,000
1	63,170 [3]	4-15-77	103,020,000	17,000,000	20,000
1	63,170 [3]	10-15-77	100,020,000	16,505,000	20,000
4	358,800	7-09-76	112,760,000	41,040,000	240,000
1	265,000	10-31-76	81,459,200	33,285,250	151,000
1	265,000	4-30-77	81,459,200	33,285,250	151,000
1	225,000	3-30-76	70,603,500	28,800,000	63,500
40	**3,709,402**		**$2,062,998,785**	**$691,929,605**	**$2,608,985**
52	**5,670,112**		**$2,819,069,438**	**$972,669,019**	**$3,431,985**

APPENDIX II Ship Deliveries For Fiscal Year 1974

(Tonnage in Thousands)

For Registry in	Total Number	Total Dwt.	Japan Number	Japan Dwt.	Sweden Number	Sweden Dwt.	Germany (West) Number	Germany (West) Dwt.	Spain Number	Spain Dwt.	United Kingdom Number	United Kingdom Dwt.	France Number	France Dwt.
						BUILT IN								
SUMMARY—ALL TYPES														
Total	**1,012**	**54,564**	**419**	**28,105**	**37**	**4,631**	**57**	**3,377**	**60**	**2,506**	**50**	**2,234**	**22**	**1,907**
United States	24	1,093	—	—	—	—	2	57	—	—	—	—	—	—
United Kingdom	94	7,408	16	2,406	8	949	3	59	7	467	32	1,618	5	608
Denmark	27	900	4	95	—	—	5	18	—	—	—	—	—	—
France	24	1,836	8	815	—	—	2	303	—	—	—	—	10	656
Germany, West	34	1,646	—	—	1	3	25	1,528	—	—	—	—	—	—
Italy	19	1,899	—	—	2	448	—	—	—	—	—	—	—	—
Japan	125	6,272	125	6,272	—	—	—	—	—	—	—	—	—	—
Liberia	149	14,000	124	10,668	1	256	5	551	3	487	3	352	2	321
Norway	63	6,171	12	2,107	13	1,763	3	385	—	—	—	—	1	245
Sweden	26	1,722	—	—	8	923	4	282	—	—	—	—	4	77
U.S.S.R.*	74	526	—	—	—	—	—	—	—	—	—	—	—	—
All Others	353	11,091	130	5,742	4	289	8	194	50	1,552	15	264	—	—
FREIGHTERS														
Total[2]	**425**	**4,553**	**119**	**1,136**	**2**	**27**	**27**	**424**	**27**	**354**	**28**	**412**	**9**	**95**
United States	17	407	—	—	—	—	2	57	—	—	—	—	—	—
United Kingdom	33	407	2	22	—	—	2	52	1	2	16	237	—	—
Denmark	20	177	3	86	—	—	5	18	—	—	—	—	—	—
France	11	170	—	—	—	—	1	50	—	—	—	—	6	58
Germany, West	14	120	—	—	—	—	11	94	—	—	—	—	—	—
Italy	2	48	—	—	—	—	—	—	—	—	—	—	—	—
Japan	36	308	36	308	—	—	—	—	—	—	—	—	—	—
Liberia	26	327	22	243	—	—	1	30	1	27	1	15	—	—
Norway	13	91	—	—	1	22	—	—	—	—	—	—	—	—
Sweden	11	104	—	—	1	5	1	3	—	—	—	—	3	37
U.S.S.R.*	64	417	—	—	—	—	—	—	—	—	—	—	—	—
All Others	178	1,977	56	477	—	—	4	120	25	325	11	160	—	—
BULK CARRIERS														
Total[3]	**281**	**15,808**	**149**	**7,645**	**14**	**1,778**	**13**	**998**	**18**	**687**	**12**	**672**	**2**	**321**
United States	3	183	—	—	—	—	—	—	—	—	—	—	—	—
United Kingdom	28	1,970	7	483	5	645	—	—	5	189	8	522	—	—
Denmark	1	50	—	—	—	—	—	—	—	—	—	—	—	—
France	7	548	7	548	—	—	—	—	—	—	—	—	—	—
Germany, West	8	453	—	—	—	—	6	386	—	—	—	—	—	—
Italy	7	960	—	—	2	448	—	—	—	—	—	—	—	—
Japan	26	934	26	934	—	—	—	—	—	—	—	—	—	—
Liberia	63	3,484	57	2,737	—	—	—	—	—	—	1	72	2	321
Norway	22	1,647	6	593	3	308	3	385	—	—	—	—	—	—
Sweden	10	917	—	—	4	377	2	159	—	—	—	—	—	—
U.S.S.R.*	3	55	—	—	—	—	—	—	—	—	—	—	—	—
All Others	103	4,607	46	2,350	—	—	2	68	13	498	3	78	—	—

[1] The U.S.S.R., with 47 ships of 482,000 dwt., ranked 14th as a shipbuilder on a deadweight tonnage basis.
[2] Includes seven (7) combination passenger and cargo ships of 20,000 dwt. tons.
[3] Includes ore/bulk/oil (OBO) carriers and ore/oil carriers.

BUILT IN

Norway		Italy		Denmark		Netherlands		Yugoslavia		United States		Poland		All Others[1]	
Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.
SUMMARY—ALL TYPES															
42	**1,878**	**22**	**1,584**	**22**	**1,544**	**32**	**1,453**	**19**	**1,098**	**21**	**1,008**	**36**	**539**	**173**	**2,700**
—	—	—	—	—	—	1	28	—	—	21	1,008	—	—	—	—
8	183	—	—	2	102	9	966	—	—	—	—	2	24	2	26
3	95	—	—	14	688	1	4	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	62
3	22	—	—	—	—	1	32	—	—	—	—	2	24	2	37
—	—	17	1,451	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	64	—	—	2	576	1	228	2	301	—	—	—	—	4	196
20	1,455	—	—	1	50	2	13	—	—	—	—	2	54	9	99
3	47	—	—	—	—	—	—	2	267	—	—	1	55	4	71
—	—	—	—	—	—	—	—	—	—	—	—	—	—	74	526
3	12	5	133	3	128	17	182	15	530	—	—	29	382	74	1,683
FREIGHTERS															
10	**61**	**2**	**48**	**11**	**69**	**13**	**72**	**12**	**199**	**14**	**322**	**30**	**334**	**121**	**1,000**
—	—	—	—	—	—	1	28	—	—	14	322	—	—	—	—
3	31	—	—	—	—	5	13	—	—	—	—	2	24	2	26
—	—	—	—	11	69	1	4	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	62
—	—	—	—	—	—	—	—	—	—	—	—	2	24	1	2
—	—	2	48	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	12
4	18	—	—	—	—	1	10	—	—	—	—	—	—	7	41
2	9	—	—	—	—	—	—	1	2	—	—	—	—	3	48
—	—	—	—	—	—	—	—	—	—	—	—	—	—	64	417
1	3	—	—	—	—	5	17	11	197	—	—	26	286	39	392
BULK CARRIERS															
8	**270**	**8**	**586**	**6**	**304**	**4**	**42**	**7**	**899**	**3**	**183**	**6**	**205**	**31**	**1,218**
—	—	—	—	—	—	—	—	—	—	3	183	—	—	—	—
1	29	—	—	2	102	—	—	—	—	—	—	—	—	—	—
—	—	—	—	1	50	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	1	32	—	—	—	—	—	—	1	35
—	—	5	512	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	2	301	—	—	—	—	1	53
5	199	—	—	1	50	—	—	—	—	—	—	2	54	2	58
1	38	—	—	—	—	—	—	1	265	—	—	1	55	1	23
—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	55
1	4	3	74	2	102	3	10	4	333	—	—	3	96	23	994

* Source material limited.

Note: Excludes ships operating exclusively on the Great Lakes and inland waterways and special types such as tugs, ferries, cable ships, etc.

APPENDIX II (Continued)

For Registry in	Total Number	Total Dwt.	Japan Number	Japan Dwt.	Sweden Number	Sweden Dwt.	Germany (West) Number	Germany (West) Dwt.	Spain Number	Spain Dwt.	United Kingdom Number	United Kingdom Dwt.	France Number	France Dwt.
						BUILT IN								
						TANKERS								
Total	**306**	**34,203**	**151**	**19,324**	**21**	**2,826**	**17**	**1,955**	**15**	**1,465**	**10**	**1,150**	**11**	**1,491**
United States	4	503	—	—	—	—	—	—	—	—	—	—	—	—
United Kingdom	33	5,031	7	1,901	3	304	1	7	1	276	8	859	5	608
Denmark	6	673	1	9	—	—	—	—	—	—	—	—	—	—
France	6	1,118	1	267	—	—	1	253	—	—	—	—	4	598
Germany, West	12	1,073	—	—	1	3	8	1,048	—	—	—	—	—	—
Italy	10	891	—	—	—	—	—	—	—	—	—	—	—	—
Japan	63	5,030	63	5,030	—	—	—	—	—	—	—	—	—	—
Liberia	60	10,189	45	7,688	1	256	4	521	2	460	1	265	—	—
Norway	28	4,433	6	1,514	9	1,433	—	—	—	—	—	—	1	245
Sweden	5	701	—	—	3	541	1	120	—	—	—	—	1	40
U.S.S.R.*	7	54	—	—	—	—	—	—	—	—	—	—	—	—
All Others	72	4,507	28	2,915	4	289	2	6	12	729	1	26	—	—

[1] The U.S.S.R., with 47 ships of 482,000 dwt., ranked 14th as a shipbuilder on a deadweight tonnage basis.
[2] Includes seven (7) combination passenger and cargo ships of 20,000 dwt. tons.
[3] Includes ore/bulk/oil (OBO) carriers and ore/oil carriers.

APPENDIX III Ship Financing Guarantees Executed In FY 74

Name/Type of Vessel	Owner	Date	Amount
Deepdraft Vessels:			
PRESIDENT PIERCE	American President Lines, Ltd.	11/30/73	$ 7,498,000
PRESIDENT JOHNSON	American President Lines, Ltd.	1/04/74	9,614,000
ULTRAMAR	Aries Marine Shipping Co.	8/08/73	13,685,000
ULTRASEA	Aries Marine Shipping Co.	3/19/74	13,685,000
DELTA MAR	Delta Steamship Lines, Inc.	7/13/73	7,330,000
DELTA NORTE	Delta Steamship Lines, Inc.	9/12/73	12,970,000
DELTA SUD	Delta Steamship Lines, Inc.	11/29/73	13,100,000
AUSTRAL ENTENTE	Farrell Lines, Inc.	12/20/73	8,100,000
BROOKLYN	Langfitt Shipping Corp.	12/31/73	21,309,000
NOTRE DAME VICTORY	660 Leasing Co.	1/24/74	19,000,000
ROBERT E. LEE STONEWALL JACKSON	Waterman Steamship Corp.	6/25/74	25,251,548
ROGER M. KYES	Edison Steamship Co.	8/22/73	12,565,000
CHARLES E. WILSON	Franklin Steamship Co.	9/12/73	12,730,000
WILLIAM R. ROESCH PAUL THAYER	Kinsman Marine Transit Co.	7/06/73	11,200,000
OCEAN SUN	General Marine, Inc.	8/23/73	1,296,872
OCEAN WAVE	General Marine, Inc.	11/29/73	1,317,920
OVERSEAS JUNEAU	Overseas Bulktank Corp.	12/27/73	27,000,000
PRESQUE ISLE	Litton Leasing Corp.	12/13/73	26,250,000
20 Deepdraft Vessels			**$243,902,340**

BUILT IN															
Norway		Italy		Denmark		Netherlands		Yugoslavia		United States		Poland		All Others[1]	
Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.	Number	Dwt.
TANKERS															
24	**1,547**	**12**	**950**	**5**	**1,171**	**15**	**1,339**	—	—	**4**	**503**	—	—	**21**	**482**
—	—	—	—	—	—	—	—	—	—	4	503	—	—	—	—
4	123	—	—	—	—	4	953	—	—	—	—	—	—	—	—
3	95	—	—	2	569	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	10	891	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	64	—	—	2	576	1	228	—	—	—	—	—	—	2	131
11	1,238	—	—	—	—	1	3	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	54
1	5	2	59	1	26	9	155	—	—	—	—	—	—	12	297

* Source material limited.

Note: Excludes ships operating exclusively on the Great Lakes and inland waterways and special types such as tugs, ferries, cable ships, etc.

Committed In Previous Fiscal Year

Name/Type of Vessel	Owner	Date	Amount
Other Types:			
Ocean:			
8 Ocean Tugs & Barges	Central Marine Corp.	11/27/73	$ 3,012,500
8 Ocean Barges	World Services	6/12/74	1,790,000
			$4,802,500
River:			
5 River Tugs, 11 Barges	National Marine Service, Inc.	1/30/74	4,950,000
20 River Barges	Port City Barge Line	4/21/74	2,194,000
			$7,144,000
Drill:			
LTG—No. 4	La-Tex Gulf Shipping	6/06/74	825,789
PACESETTER I	Western Co. of North America	8/31/74	15,502,000
DIAMOND M CENTURY	Diamond M Drilling Co.	11/05/73	15,500,000
2 Drill Rigs	Mallard Well Service	8/21/73	1,246,000
			$330,073,789
Lighters:			
117 LASH Barges	Ohio Banclease (Pacific Far East Line, Inc.)	7/28/73	4,718,000
450 LASH Barges	Waterman Steamship Corp.	5/07/74	14,800,000
			$ 19,518,000
TOTAL			**$605,440,629**

APPENDIX IV Ship Financing Guarantees Approved In FY 74

Number	Name or Type	Company	Date Approved	Amount Guaranteed
Deepdraft Vessels:				
3	Tankers (38,300 dwt.)	Moore-McCormack Bulk Transport, Inc.	10/05/73	$ 35,460,000
3	Tankers (38,300 dwt.)	Margate Shipping Co.	10/17/73	24,906,041
2	Tankers (89,700 dwt.)	Chestnut Shipping Co.	12/17/73	38,070,000
4	Tankers (89,700 dwt.)	First Shipmor Assoc.	8/20/73	30,078,000
		Second Shipmor Assoc.	8/20/73	30,078,000
		Third Shipmor Assoc.	8/20/73	30,708,000
		Fourth Shipmor Assoc.	8/20/73	30,078,000
2	Tankers (89,700 dwt.)	Fifth Shipmor Assoc.	2/07/74	29,142,000
		Sixth Shipmor Assoc.	2/07/74	29,142,000
2	Tankers (89,700 dwt.)	Energy Corps.	2/07/74	57,372,000
1	Tanker (89,700 dwt.)	United States Lines, Inc.	6/07/74	36,300,000
3	Tankers (89,700 dwt.)	Hawaiian International Shipping Corp.	6/07/74	67,065,000
1	Tanker (225,000 dwt.)	Pierce Tanker Co.	6/29/74	49,965,000
1	Tanker (390,770 dwt.)	Zapata Ocean Carriers	6/29/74	74,206,000
4	LNGs	Cherokee I, II, III, IV Shipping Corps.	11/07/73	357,000,000
1	LNG	Cherokee V Shipping Corp.	5/21/74	93,992,500
2	LURLINE & MATSONIA	Matson Navigation Co.	8/16/73	49,360,000
1	AMERICAN ACCORD*	United States Lines, Inc.	1/05/74	2,635,000
1	Great Lakes Ore Carrier	Fulton Steamship Co.	5/29/74	9,958,313
2	Great Lakes Ore Carriers	Kinsman Marine Transit Co.	10/25/73	25,812,500
33		**Total Deepdraft Vessels**		**$1,100,698,354**
Other Types:				
Ocean:				
4	ROBIN V, VI, VII, VIII	Robin Towing Co.	7/31/73	$ 5,543,000
2	Tug & Barge	Arctic Liquid Gas Co.	10/31/73	8,304,056
4	Tugs	Nolty J. Theriot Co.	11/07/73	13,042,000
4	2 Tugs & 2 Barges	St. Philip Towing & Transportation Co.	2/12/74	23,382,000
13	Barges	Harbor Tug & Barge Co.	5/01/74	15,350,000
4	Tows	F & S Offshore, Inc.	6/20/74	5,231,000
1	Tank Barge	Bilcon Assoc.	6/05/74	1,983,000
32				**$ 72,835,056**
River:				
2	RTC-2001 and 2002	Richards Towing Co.	7/18/73	$ 900,000
20	Open Hopper Barges	Port City Barge Line	7/24/73	2,194,000
19	Dry Cargo Barges	General Intermodal Logistics Corp.	7/20/73	2,118,000
1	NATCHEZ 10TH	Robert E. Lee, Inc.	7/30/73	1,601,000
2	Towboats	Port Arthur Towing Co.	7/31/73	1,723,000
8	Inland Tank Barges	Port Arthur Towing Co.	7/31/73	2,231,000
78	3 Tows & 75 Barges	Alter Co.	10/09/73	12,113,000
52	2 Tows & 50 Barges	Wisconsin Barge Line	10/31/73	8,575,000
10	Barges	General Intermodal	11/30/73	1,086,611
2	Tows	Twin City Barge & Towing Co.	3/12/74	802,906
27	Barges	Twin City Barge & Towing Co.	3/12/74	4,218,236
221				**$ 37,562,753**

* Second Mortgage.

APPENDIX IV (Continued) Ship Financing Guarantees Approved In FY 74

Number	Name or Type	Company	Date Approved	Amount Guaranteed
Drill:				
4	Tug Supply Vessels	Offshore Island Boat Co.	7/05/73	$ 5,131,000
3	Cargo Barges	Gulf Completion Spec.	8/16/73	1,187,000
2	Drill Service Vessels	Gulf Completion Spec.	8/16/73	1,234,000
1	Semi-sub. Drill Vessel	Diamond M Drilling Co.	9/24/73	19,183,000
6	Drill Service	National Boat Corp.	10/05/73	8,925,000
4	Ocean Tugs/Drill	Henjen Corp.	3/19/74	6,860,000
2	Workover Drill Barges	D & A Construction Corp.	5/08/74	664,733
1	Drill Rig Reconstruction	Storm Drilling Co.	5/09/74	10,482,000
23				**$ 53,666,733**
Miscellaneous:				
1	Pass./Auto Ferry	New London Freight Lines, Inc.	10/29/73	$ 1,423,000
1	Dredge MOBILE	Atlantic, Gulf & Pacific Co.	2/21/74	1,005,804
2				**$ 2,428,804**
Lighters:				
50	LASH Lighters	Pacific Far East Line, Inc.	10/26/73	$ 2,358,000
		Total Other Types		**$ 168,851,346**
		TOTAL GUARANTEED		**$1,269,549,700**

APPENDIX V Construction Reserve Funds June 30, 1974

Operator	Cash	Securities	Total
Alaska-British Columbia Transportation Co., Inc.	$ 15,348	$ 498,722	$ 514,070
Central Gulf Lines, Inc.	2,436	339,918	342,354
Gulf Mississippi Marine Corp.	—	966,425	966,425
National Marine Service Inc.	—	65,121	65,121
NMS Chemical Corp.	2,939	425,000	427,939
Penn Export Co., Inc.	4,811	330,000	334,811
Penn Navigation Co., Inc.	2,219	590,000	592,219
Smith-Rice Co.	135,000	—	135,000
Smith-Rice Derrick Barges, Inc.	117,000	—	117,000
Tank Barge 8, Inc.	5,842	211,833	217,675
Nolty J. Theriot, Inc.	352,918	—	352,918
Tidewater Venice, Inc.	—	82,105	82,105
Kathleen Turecamo, Inc.	5,669	—	5,669
Vincent C. Turecamo, Inc.	3,007	130,000	133,007
Total June 30, 1974	**$ 647,189**	**$3,639,124**	**$4,286,313**
Total June 30, 1973	**902,871**	**1,995,615**	**2,898,486**
Net Increase (Decrease)	**$ (255,682)**	**$1,643,509**	**$1,387,827**

APPENDIX VI Maritime Subsidy Outlays

Fiscal Year	Construction-Differential Subsidy	Reconstruction-Differential Subsidy	Total Construction and Reconstruction-Subsidy (CDS)	Operating-Differential Subsidy (ODS)	Total ODS and CDS
1936					
1937					
1938					
1939	$ 131,571,571				
1940	(Reflects CDS adjustments covering World War II Period)				
1941					
1942				$ 16,601,213	
1943					
1944	plus				
1945	105,852,291	$ 3,286,888	$ 246,249,167		$ 471,968,043
1946	(Equivalent to				
1947	CDS allowances				
1948	made in connection with Mariner				
1949					
1950	ship construction			5,784,595	
1951	program)			14,018,284	
1952				41,437,567	
1953				62,838,704	
1954	5,538,417			85,038,513	
1955	5,358,663		5,358,663	115,391,111	120,749,774
1956	1,613,737	14,368,688	15,982,425	135,342,146	151,324,571
1957	16,379,076	3,909,695	20,288,771	108,292,274	128,581,045
1958	22,637,540	4,709,383	27,346,923	120,031,522	147,378,445
1959	21,345,034	7,065,416	28,410,450	127,693,052	156,103,502
1960	67,830,618	4,828,227	72,658,845	152,756,154	225,414,999
1961	100,145,654	1,215,432	101,361,086	150,142,575	251,503,661
1962	134,552,647	4,160,591	138,713,238	181,918,753	320,631,991
1963	89,235,895	4,181,314	93,417,209	220,676,685	314,093,894
1964	76,608,323	1,665,087	78,273,410	203,036,847	281,310,257
1965	86,096,872	38,138	86,135,010	213,334,409	299,469,419
1966	69,446,510	2,571,566	72,018,076	186,628,357	258,646,433
1967	80,155,452	932,114	81,087,566	175,631,860	256,719,426
1968	95,989,586	96,707	96,086,293	200,129,670	296,215,963
1969	93,952,849	57,329	94,010,178	194,702,569	288,712,747
1970	73,528,904	21,723,343	95,252,247	205,731,711	300,983,958
1971	107,637,353	27,450,968	135,088,321	268,021,097	403,109,418
1972	111,950,403	29,748,076	141,698,479	235,666,821	377,365,300
1973	168,183,937	17,384,604	185,568,541	226,710,926	412,279,467
1974	185,060,501	13,844,951	198,905,452	257,919,080	456,824,532
Total	**$1,850,671,833**	**$163,238,517**	**$2,013,910,350**	**$3,905,476,495**	**$5,919,386,845**

APPENDIX VII United States Oceangoing Merchant Marine[1] June 30, 1974

(Tonnage in Thousands) [2]

Type of Vessel	Privately Owned			Government-Owned			Total		
	Number Ships	Gross Tons	Deadweight Tons	Number Ships	Gross Tons	Deadweight Tons	Number Ships	Gross Tons	Deadweight Tons
ACTIVE FLEET:									
Combo Pass./Cargo	5	63	41	0	0	0	5	63	41
Freighters	169	1,796	2,281	17	134	181	186	1,931	2,462
Bulk Carriers	21	326	570	0	0	0	21	326	570
Tankers	232	4,491	7,946	6	51	79	238	4,542	8,025
Intermodal	138	2,515	2,522	0	0	0	138	2,515	2,522
TOTAL ACTIVE FLEET	**565**	**9,191**	**13,359**	**23** [3]	**185**	**260**	**588**	**9,377**	**13,619**
INACTIVE FLEET:									
Combo Pass./Cargo	3	43	25	88	798	548	91	841	573
Freighters	10	94	121	236	1,722	2,269	246	1,816	2,389
Bulk Carriers	0	0	0	0	0	0	0	0	0
Tankers	10	214	367	27	224	347	37	438	714
Intermodal	1	18	16	2	15	22	3	32	38
TOTAL INACTIVE FLEET	**24**	**368**	**529**	**353** [4]	**2,759**	**3,186**	**377**	**3,128**	**3,715**
TOTAL:									
Combo Pass./Cargo	8	106	66	88	798	548	96	904	614
Freighters	179	1,890	2,401	253	1,857	2,449	432	3,747	4,851
Bulk Carriers	21	326	570	0	0	0	21	326	570
Tankers	242	4,705	8,313	33	275	426	275	4,980	8,739
Intermodal	139	2,533	2,538	2	15	22	141	2,547	2,560
TOTAL AMERICAN FLAG	**589**	**9,559**	**13,888**	**376**	**2,945**	**3,445**	**965**	**12,504**	**17,334**

[1] Vessels of 1,000 gross tons and over, excluding privately owned tugs, barges, etc.
[2] All tonnage figures are preliminary and may not be additive due to rounding.
[3] Includes 6 vessels in bareboat charter and 17 vessels in custody of other agencies.
[4] National Defense Reserve Fleet. Excludes 134 vessels owned by the Navy Department which are in the custody of MarAd's Reserve Fleet.

APPENDIX VIII Employment Of U.S.-Flag Oceangoing

(Tonnage in Thousands)

Status and Area of Employment	Total No.	Total Gross Tons	Total Dwt. Tons	VESSEL TYPE: Combination Pass./Cargo No.	VESSEL TYPE: Combination Pass./Cargo Gross Tons
GRAND TOTAL	**965**	**12,504**	**17,334**	**96**	**9**
ACTIVE VESSELS	**588**	**9,377**	**13,619**	**5**	
Foreign Trade	300	4,995	6,673	4	
Nearby Foreign	29	495	790	—	
Great Lakes-Seaway Foreign	—	—	—	—	
Overseas Foreign	271	4,500	5,883	4	
Foreign to Foreign	5	132	236	—	
Domestic Trade	202	3,234	5,169	1	
Coastwise	149	2,510	4,236	—	
Intercoastal	1	17	25	—	
Noncontiguous	52	707	908	1	
Other U.S. Agency Operations	81	1,016	1,541	—	
MSC Charter	64	894	1,377	—	
Bareboat & Other Custody	17	122	164	—	
INACTIVE VESSELS	**377**	**3,127**	**3,715**	**91**	**8**
Temporarily Inactive	9	187	300	—	
Merchant Types	9	187	300	—	
Military Types	—	—	—	—	
Laid-Up (Privately Owned)	15	181	229	3	
National Defense Reserve Fleet[2]	353	2,759	3,186	88	7
Merchant Types	193	1,485	2,080	1	
Military Types	160	1,274	1,106	87	7

[1] Excludes vessels operating exclusively on the inland waterways and Great Lakes, those owned by the United States Army and Navy, and spec types such as cable ships, tugs, etc.
[2] Excludes 134 vessels owned by the Navy Department which are in the custody of MarAd's Reserve Fleet.

NOTE:
1. Tonnage figures may not be additive since the detailed figures have been rounded to the nearest thousand.
2. Nearby foreign includes Canada, Central America, West Indies, North Coast of South America, and Mexico.

Merchant Fleet June 30, 1974[1]

VESSEL TYPE						
Combination Pass./Cargo	Freighters			Tankers		
Dwt. Tons	No.	Gross Tons	Dwt. Tons	No.	Gross Tons	Dwt. Tons
614	**594**	**6,620**	**7,981**	**275**	**4,980**	**8,739**
41	**345**	**4,772**	**5,553**	**238**	**4,542**	**8,025**
34	238	3,523	4,046	58	1,424	2,593
—	11	148	176	18	347	614
—	—	—	—	—	—	—
34	227	3,375	3,870	40	1,077	1,979
—	3	36	36	2	96	200
7	53	701	800	148	2,518	4,362
—	20	273	341	129	2,237	3,895
—	—	—	—	1	17	25
7	33	428	459	18	264	442
—	51	512	671	30	504	870
—	37	405	527	27	489	850
—	14	107	144	3	15	20
573	**249**	**1,848**	**2,428**	**37**	**438**	**714**
—	3	40	41	6	147	259
—	3	40	41	6	147	259
—	—	—	—	—	—	—
25	8	72	96	4	66	188
548	238	1,736	2,291	27	225	347
16	185	1,376	1,952	7	71	112
532	53	360	339	20	154	235

APPENDIX IX

Merchant Fleets Of The World

(Tonnage in Thousands)

Country of Registry	Type of Vessel: Total Number	Total Gross Tons	Total Dead-weight Tons	Combination Passenger and Cargo Number	Combination Passenger and Cargo Gross Tons	Combination Passenger and Cargo Dead-weight Tons	Combination Passenge and Cargo, Refrigerate Number	Combination Passenge and Cargo, Refrigerate Gross Tons	Combination Passenge and Cargo, Refrigerate Dead weigh Tons
Total—All Countries	**21,917**	**289,404**	**472,020**	**761**	**6,062**	**3,250**	**24**	**361**	**2**
United States[2]	965	12,504	17,334	92	859	577	4	45	
Privately owned	589	9,560	13,888	4	61	29	4	45	
Government-owned	376	2,944	3,446	88	798	548	—	—	-
Reserve Fleet[3]	353	2,759	3,186	88	798	548	—	—	-
Other[4]	23	185	260	—	—	—	—	—	-
The British Commonwealth of Nations									
United Kingdom	1,596	30,934	50,723	29	485	193	4	120	
Australia	83	903	1,279	—	—	—	—	—	-
Bangladesh	11	52	78	—	—	—	—	—	-
British Colonies	92	1,467	2,413	5	19	17	—	—	-
Canada	73	316	395	15	41	17	—	—	-
Cyprus	570	3,359	4,885	9	72	58	—	—	-
Ghana	17	123	162	—	—	—	—	—	-
India	276	3,451	5,417	9	55	56	1	17	
Jamaica	2	12	9	—	—	—	—	—	-
Kenya	6	15	23	—	—	—	—	—	-
Malaysia	23	289	416	2	3	4	—	—	-
Mauritius	6	33	50	1	2	2	—	—	-
New Zealand	37	118	156	—	—	—	1	3	
Nigeria	16	103	150	—	—	—	—	—	-
Pakistan	58	499	664	7	69	58	—	—	-
Sierra Leone	2	3	5	—	—	—	—	—	-
Singapore	301	2,583	3,954	17	100	83	—	—	-
Sri Lanka (Ceylon)	5	33	46	—	—	—	—	—	-
Tanzania	3	24	34	—	—	—	—	—	-
Tonga	3	8	9	—	—	—	—	—	-
Trinidad-Tobago	3	6	5	1	3	2	—	—	-
Uganda	1	6	9	—	—	—	—	—	-
Western Somoa	1	2	2	—	—	—	—	—	-
Zambia	1	6	9	—	—	—	—	—	-
*Albania	10	50	69	—	—	—	—	—	-
Algeria	25	196	264	—	—	—	—	—	-
Argentina	164	1,284	1,751	9	52	39	1	13	
Austria	19	75	113	—	—	—	—	—	-
Belgium	75	1,127	1,734	2	24	25	—	—	-
Brazil	253	2,383	3,686	8	39	18	—	—	-
Bulgaria	112	818	1,193	4	22	8	—	—	-
Burma	10	58	73	2	5	3	—	—	-
Chile	45	372	552	3	9	5	—	—	-
China (Taiwan)	156	1,442	2,215	9	44	49	—	—	-
*China (Communist)	302	1,821	2,490	22	85	47	2	17	
Colombia	42	229	303	—	—	—	—	—	-
*Cuba	59	360	475	2	15	10	—	—	-
Czechoslovakia	12	123	181	—	—	—	—	—	-
Denmark	295	3,822	6,323	6	16	13	1	3	
Dominican Republic	4	8	11	—	—	—	—	—	-
Ecuador	13	108	154	—	—	—	—	—	-
Ethiopia	5	37	53	—	—	—	—	—	-
Finland	195	1,353	1,991	7	32	9	1	2	

June 30, 1974 (Oceangoing Steam and Motor Ships of 1,000 Gross Tons and Over)

Type of Vessel											
Freighters			Freighters Refrigerated			Bulk Carriers			Tankers (Including Whaling Tankers)		
Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons
11,238	**67,469**	**91,463**	**1,021**	**5,371**	**5,725**	**3,924**	**78,452**	**132,706**	**4,949**	**131,689**	**238,666**
566	6,261	7,374	7	33	37	21	326	570	275	4,980	8,739
318	4,424	4,939	—	—	—	21	326	570	242	4,704	8,313
248	1,837	2,435	7	33	37	—	—	—	33	276	426
232	1,711	2,261	6	25	30	—	—	—	27	225	347
16	126	174	1	8	7	—	—	—	6	51	79
647	4,943	6,195	129	1,161	1,381	333	7,932	13,426	454	16,293	29,471
36	251	275	—	—	—	34	477	730	13	175	274
10	51	76	—	—	—	—	—	—	1	1	2
33	159	226	4	4	4	27	483	785	23	802	1,381
27	85	103	—	—	—	9	59	84	22	131	191
440	2,166	3,128	7	25	27	60	486	728	54	610	944
17	123	162	—	—	—	—	—	—	—	—	—
185	1,399	1,981	1	9	13	60	1,423	2,432	20	548	927
—	—	—	2	12	9	—	—	—	—	—	—
4	12	19	—	—	—	1	2	2	1	1	2
14	108	128	—	—	—	6	176	282	1	2	2
4	29	45	—	—	—	—	—	—	1	2	3
24	78	104	3	15	18	9	22	32	—	—	—
16	103	150	—	—	—	—	—	—	—	—	—
49	407	575	—	—	—	2	23	31	—	—	—
2	3	5	—	—	—	—	—	—	—	—	—
208	1,119	1,574	13	57	64	26	660	1,114	37	647	1,119
5	33	46	—	—	—	—	—	—	—	—	—
3	24	34	—	—	—	—	—	—	—	—	—
2	6	8	—	—	—	—	—	—	1	2	1
1	1	1	—	—	—	—	—	—	1	2	2
1	6	9	—	—	—	—	—	—	—	—	—
1	2	2	—	—	—	—	—	—	—	—	—
1	6	9	—	—	—	—	—	—	—	—	—
7	41	57	—	—	—	3	9	12	—	—	—
16	59	82	—	—	—	3	25	36	6	112	146
69	446	595	16	88	87	13	139	218	56	546	803
17	52	79	—	—	—	2	23	34	—	—	—
29	289	385	7	37	36	20	485	816	17	292	472
153	839	1,121	8	39	51	32	565	1,003	52	901	1,493
58	245	354	3	18	16	28	244	358	19	289	457
8	53	70	—	—	—	—	—	—	—	—	—
29	194	272	1	2	2	7	81	133	5	86	140
94	549	765	9	40	43	30	461	752	14	348	606
218	1,332	1,863	2	3	4	24	130	182	34	254	384
40	208	271	—	—	—	1	2	2	1	19	30
40	262	361	8	29	25	2	2	2	7	52	77
8	41	54	—	—	—	4	82	127	—	—	—
181	1,107	1,440	18	77	97	32	569	932	57	2,050	3,840
3	7	9	1	1	2	—	—	—	—	—	—
5	32	41	2	13	13	—	—	—	6	63	100
3	14	17	—	—	—	—	—	—	2	23	36
116	475	628	9	20	27	13	75	107	49	749	1,219

APPENDIX IX (Continued)

Country of Registry	Type of Vessel: Total Number	Total Gross Tons	Total Dead-weight Tons	Combination Passenger and Cargo Number	Combination Passenger and Cargo Gross Tons	Combination Passenger and Cargo Dead-weight Tons	Combination Passenger and Cargo, Refrigerated Number	Combination Passenger and Cargo, Refrigerated Gross Tons	Combination Passenger and Cargo, Refrigerated Dead-weigh Tons
France	410	8,669	14,486	7	116	35	—	—	—
Gabon	4	32	43	—	—	—	—	—	—
Germany (West)	689	7,780	12,149	4	38	11	—	—	—
*Germany (East)	142	1,031	1,431	4	43	26	—	—	—
Greece	1,788	21,377	35,000	61	491	248	1	2	1
Guatemala	3	6	8	—	—	—	—	—	—
Guinea	2	14	19	—	—	—	—	—	—
Honduras	10	49	48	—	—	—	—	—	—
*Hungary	16	48	66	—	—	—	—	—	—
Iceland	26	48	71	—	—	—	—	—	—
Indonesia	148	518	635	30	126	95	—	—	—
Iran	26	254	347	—	—	—	—	—	—
Iraq	13	201	317	—	—	—	—	—	—
Ireland	16	161	243	—	—	—	—	—	—
Israel	59	581	802	—	—	—	—	—	—
Italy	639	8,795	13,661	54	665	223	1	14	8
Ivory Coast	17	124	170	—	—	—	—	—	—
Japan	2,097	34,871	58,250	32	122	73	—	—	—
Korea (South)	129	1,027	1,677	1	10	11	—	—	—
*Korea (North)	9	38	41	1	5	2	—	—	—
Kuwait	34	665	1,122	—	—	—	—	—	—
Lebanon	37	112	151	1	5	4	—	—	—
Liberia	2,292	55,750	103,386	24	250	161	2	41	30
Libya	6	152	274	—	—	—	—	—	—
Malagasy	11	53	80	—	—	—	—	—	—
Maldives	28	76	95	—	—	—	—	—	—
Mexico	46	415	629	—	—	—	—	—	—
Monaco	5	37	50	1	4	1	—	—	—
Morocco	16	44	62	—	—	—	—	—	—
Nauru	5	47	60	3	23	22	—	—	—
Netherlands	433	4,721	6,977	10	197	78	—	—	—
Nicaragua	8	18	26	—	—	—	—	—	—
Norway	1,063	24,484	42,100	34	339	79	1	18	9
Panama	1,241	10,589	16,838	33	332	192	1	5	4
Peru	38	291	421	—	—	—	—	—	—
Philippines	154	714	993	18	35	33	—	—	—
Poland	261	1,997	2,812	2	16	7	—	—	—
Portugal	113	1,162	1,712	15	152	92	—	—	—
*Rumania	71	552	810	1	7	2	—	—	—
Saudi Arabia	14	56	71	2	6	4	—	—	—
Senegal	4	8	11	—	—	—	—	—	—
Somalia	242	1,793	2,596	2	10	8	—	—	—
South Africa	52	412	519	—	—	—	2	58	32
Spain	434	4,164	6,815	36	206	136	—	—	—
Sudan	8	45	58	—	—	—	—	—	—
Sweden	321	5,981	9,758	5	74	17	—	—	—
Switzerland	26	249	363	—	—	—	—	—	—
Thailand	25	138	230	—	—	—	—	—	—
Trucial States	1	4	8	—	—	—	—	—	—
Tunisia	10	25	34	—	—	—	—	—	—

Type of Vessel											
Freighters			Freighters Refrigerated			Bulk Carriers			Tankers (Including Whaling Tankers)		
Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons
167	1,276	1,661	38	199	188	58	1,230	2,048	140	5,848	10,554
3	22	28	—	—	—	1	10	15	—	—	—
489	3,073	4,005	42	257	317	77	2,201	3,761	77	2,211	4,055
105	576	765	8	36	32	16	207	319	9	169	290
901	5,779	8,578	45	221	236	448	7,162	12,193	332	7,722	13,744
3	6	8	—	—	—	—	—	—	—	—	—
1	3	4	—	—	—	1	11	15	—	—	—
—	—	—	10	49	48	—	—	—	—	—	—
16	48	66	—	—	—	—	—	—	—	—	—
18	30	48	6	15	19	2	3	4	—	—	—
96	318	435	—	—	—	7	16	23	15	58	82
21	198	262	1	3	4	—	—	—	4	53	81
6	51	71	—	—	—	—	—	—	7	150	246
5	11	10	—	—	—	9	148	230	2	2	3
39	227	272	8	66	76	12	288	454	—	—	—
197	996	1,379	20	93	76	141	3,230	5,482	226	3,797	6,493
15	112	159	2	12	11	—	—	—	—	—	—
949	5,646	7,750	99	330	412	521	12,683	20,740	496	16,090	29,275
81	348	515	2	3	4	20	209	337	25	457	810
6	29	34	2	4	5	—	—	—	—	—	—
28	241	332	—	—	—	—	—	—	6	424	790
31	97	132	2	4	6	3	6	9	—	—	—
505	3,470	5,165	40	184	205	819	17,674	31,786	902	34,131	66,039
1	1	3	—	—	—	—	—	—	5	151	271
8	32	48	—	—	—	—	—	—	3	21	32
24	67	86	3	7	7	1	2	2	—	—	—
17	87	124	1	4	4	3	39	60	25	285	441
—	—	—	—	—	—	—	—	—	4	33	49
9	30	44	7	14	18	—	—	—	—	—	—
1	4	6	—	—	—	1	20	32	—	—	—
283	1,863	2,416	27	92	95	30	453	711	83	2,116	3,677
7	17	24	—	—	—	—	—	—	1	1	2
329	1,993	2,733	24	112	126	334	9,245	15,641	341	12,777	23,512
796	3,474	5,150	30	94	93	165	1,997	3,219	216	4,687	8,180
28	187	262	—	—	—	5	59	90	5	45	69
98	470	643	5	15	15	6	64	107	27	130	195
176	1,091	1,467	15	54	58	64	794	1,221	4	42	59
65	375	517	2	5	5	6	80	125	25	550	973
47	175	246	4	28	20	14	190	280	5	152	262
8	24	33	3	9	7	—	—	—	1	17	27
2	4	5	—	—	—	—	—	—	2	4	6
201	1,266	1,783	1	3	4	27	388	596	11	126	205
38	231	304	6	43	61	3	41	61	3	39	61
205	695	1,024	29	55	75	53	922	1,570	111	2,286	4,010
7	41	53	1	4	5	—	—	—	—	—	—
136	962	1,193	27	239	252	81	2,500	4,224	72	2,206	4,072
20	158	222	2	3	3	4	88	138	—	—	—
14	51	76	—	—	—	1	1	2	10	86	152
1	4	8	—	—	—	—	—	—	—	—	—
7	12	15	—	—	—	1	3	4	2	10	15

APPENDIX IX (Continued)

Country of Registry	Type of Vessel: Total Number	Total Gross Tons	Total Dwt.	Combination Passenger and Cargo Number	Combination Passenger and Cargo Gross Tons	Combination Passenger and Cargo Dwt.	Combination Passenger and Cargo, Refrigerated Number	Combination Passenger and Cargo, Refrigerated Gross Tons	Combination Passenger and Cargo, Refrigerated Dwt.
Turkey	99	793	1,146	15	71	32	—	—	—
United Arab Republic	47	216	281	7	43	40	—	—	—
Uruguay	17	156	240	1	8	10	—	—	—
*U.S.S.R.[5]	2,306	13,167	16,797	83	532	231	1	3	1
Venezuela	43	407	586	—	—	—	—	—	—
Vietnam (South)	10	24	38	—	—	—	—	—	—
Yugoslavia	201	1,699	2,487	11	61	60	—	—	—
Zaire	5	49	61	2	24	24	—	—	—

[1] Excludes ships operating exclusively on the Great Lakes and inland waterways, special types such as channel ships, icebreakers, cable ships, etc., and merchant ships owned by any military force.
[2] Excludes 69 non-merchant type ships which are currently in the National Defense Reserve Fleet.
[3] Excludes 134 vessels owned by the Navy Department which are in the custody of MarAd's Reserve Fleet.
[4] Comprised of vessels under general agency agreement, bareboat charter, and in the Departments of Defense, State, and Interior.
[5] Includes the following U.S. Government-owned ships transferred to U.S.S.R. under lend-lease agreements, 41 of which are still under registry; and 2 under North Korean registry:

U.S.S.R. (Lend-Lease)	43	298	439	—	—	—	—	—	—

* Source material limited.

APPENDIX X Interim Capital Construction Funds

Company	Contract No.	Company	Contract No.
ABC Marine, Inc.	MA/CCF-139	Cook Inlet Marine Co.	MA/CCF-151
Alaska British Columbia Transportation	MA/CCF-138	Crowley Maritime Corp. (4-20-73 consolidated 59, 62-88, 102-139)	MA/CCF-142
American Foreign Steamship Co.	MA/CCF-7	Ecological Shipping Corp.	MA/CCF-156
American Ship Building Co.	MA/CCF-56	Erie Navigation Co.	MA/CCF-94
Ashland Oil Co.	MA/CCF-45	Exxon Corp.	MA/CCF-149
Atlantic Richfield Co.	MA/CCF-168	Ford Motor Co.	MA/CCF-51
Bankers Trust Co.	MA/CCF-140	Foss Alaska Line, Inc.	MA/CCF-12
Boblo Co.	MA/CCF-163	Foss Launch & Tug Co.	MA/CCF-11
Central Gulf Lines, Inc.	MA/CCF-9	General American Transportation Corp.	MA/CCF-141
Cities Service Tankers Corp.	MA/CCF-60	Globe Seaways, Inc.	MA/CCF-52
Citimarlease (Burmah I) Inc.	MA/CCF-143	Great Lakes Towing Co.	MA/CCF-167
Citimarlease (Burmah II) Inc.	MA/CCF-144	Hannah Inland Waterways Corp.	MA/CCF-58
Citimarlease (Burmah III) Inc.	MA/CCF-145	Hawaiian Tug & Barge Co., Ltd.	MA/CCF-10
Citimarlease (Fulton) Inc.	MA/CCF-166	Inland Steel Co.	MA/CCF-150
Clemens Ships, Inc.	MA/CCF-92	Inter-Cities Navigation	MA/CCF-8
Cleveland-Cliffs Iron Co.	MA/CCF-49	Intercontinental Bulktank Corp.	MA/CCF-54

Type of Vessel											
Freighters			Freighters Refrigerated			Bulk Carriers			Tankers (Including Whaling Tankers)		
Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons	Number	Gross Tons	Dead-weight Tons
60	342	491	—	—	—	7	108	169	17	272	454
30	96	122	—	—	—	—	—	—	10	77	119
8	32	47	1	4	3	—	—	—	7	112	180
1,369	6,456	8,502	254	1,413	1,264	145	907	1,284	454	3,856	5,515
22	110	147	—	—	—	4	14	19	17	283	420
8	20	32	—	—	—	1	2	3	1	2	3
138	897	1,228	4	14	15	31	496	802	17	231	382
3	25	37	—	—	—	—	—	—	—	—	—
42	291	427	—	—	—	—	—	—	1	7	12

June 30, 1974

Company	Contract No.	Company	Contract No.
Interstate Marine Transport Co.	MA/CCF-16	Ocean Tankships Corp.	MA/CCF-53
Interstate Materials Transport Co.	MA/CCF-17	Ogden Bulk Transport, Inc.	MA/CCF-165
Interstate Towing Co.	MA/CCF-15	Oglebay Norton Co.	MA/CCF-18
Luedtke Engineering Co.	MA/CCF-89	O. L. Schmidt Barge Lines, Inc.	MA/CCF-46
Lykes Bros. Steamship Co., Inc.	MA/CCF-160	Overseas Bulktank Corp.	MA/CCF-55
Methane Alpha Co.	MA/CCF-96	Pacific Towboat & Salvage Co.	MA/CCF-13
Methane Beta Co.	MA/CCF-97	Penn Navigation Co.	MA/CCF-2
Methane Delta Co.	MA/CCF-146	TMT Trailer Ferry, Inc.	MA/CCF-6
Methane Epsilon Co.	MA/CCF-147	TTT, Inc.	MA/CCF-152
Methane Gamma Co.	MA/CCF-98	Union Oil Co. of Calif. (Collier Cargo & Chemical Corp. Ex-90)	MA/CCF-50
Methane Zeta Co.	MA/CCF-148	United States Lines, Inc.	MA/CCF-100
Mogul Towing Co.	MA/CCF-162	United States Steel	MA/CCF-161
Moore-McCormack Lines, Inc.	MA/CCF-57	United Tanker Corp.	MA/CCF-44
Nassau Towing Corp.	MA/CCF-101	Victory Carriers, Inc.	MA/CCF-48
Nolty J. Theriot, Inc.	MA/CCF-155	Young Brothers, Ltd.	MA/CCF-14
The Oceanic Steamship Co.	MA-6266		

APPENDIX XI Combined Condensed Financial Statements Of Subsidized And Unsubsidized Operators[1]

(See Notes)

Statement A—Combined Condensed Balance Sheets
December 31, 1973
(Amounts Stated in Thousand Dollars)

		Unsubsidized	
	Subsidized	Tanker	Cargo
ASSETS			
Current Assets:			
Cash	$ 17,223	$ 48,700	$ 9,349
Marketable Securities	36,338	7,564	42,933
Accounts Receivable	218,201	35,708	45,586
Other	69,651	22,014	16,128
Total Current Assets	$ 341,413	$ 113,986	$ 113,996
Special Funds and Deposits	155,799[2]	41,013	9,687
Investments	19,139	26,665	14,474
Deferred ODS Receivable (See Contra)	23,505[3]	-0-	-0-
Property and Equipment Less Depreciation:			
Vessels	954,660[1]	356,936[1]	243,509[1]
Other	204,737	597	58,222
Other Assets	44,483	61,547	28,494
Voyages in Progress—Net	-0-	251	107
Total Assets	**$1,743,736**	**$ 600,995**	**$ 468,489**
LIABILITIES AND NET WORTH			
Liabilities:			
Current Liabilities			
Accounts and Notes Payable	$ 231,023	$ 39,390	$ 53,555
Current Long-Term Debt	28,193	25,470	10,388
Other Current Liabilities	26,372	7,485	20,438
Total Current Liabilities	$ 285,588	$ 72,345	$ 84,381
Voyages in Progress—Net	53,082	10,823	7,725
Long-Term Debt	638,800[2]	302,704	172,310
Recapture ODS (See Contra)	23,505[3]	-0-	-0-
Operating Reserves	43,778	1,865	24,185
Other Liabilities	43,369	43,060	29,845
Total Liabilities	$1,088,122	$ 430,797	$ 318,446
Net Worth:			
Capital Stock	$ 108,598	$ 36,875	$ 28,796
Surplus:			
Capital	$ 265,837	$ 51,151	$ 129,929
Earned	281,179	82,172	(8,682)
Total Surplus	$ 547,016	$ 133,323	$ 121,247
Total Net Worth	$ 655,614[4]	$ 170,198	$ 150,043
Total Liabilities and Net Worth	**$1,743,736**	**$ 600,995**	**$ 468,489**

APPENDIX XI (Continued)
(See Notes)

Statement B—Combined Condensed Income and Surplus Accounts
Year Ended December 31, 1973
(Amounts Stated in Thousand Dollars)

		Unsubsidized	
	Subsidized	Tanker	Cargo
Shipping Operations:			
Revenue:			
Terminated Voyages	$ 907,943	$ 180,765	$ 373,244
Other Shipping Operations	19,888	4,419	12,201
Total Revenue	$ 927,831	$ 185,184	$ 385,445
Expenses:			
Terminated Voyage Expense:			
Wages, Payroll Taxes, Welfare Contributions	280,181	53,992	67,519
Subsistence	12,005	2,174	2,637
Maintenance and Repair	42,533	5,169	11,629
Insurance (Hull and P and I)	50,062	12,276	18,159
Total	384,781	73,611	99,944
Less: Operating-Differential Subsidy (ODS)	216,139	18,727[5]	1,225[5]
Total	168,642	54,884	98,719
Other Vessel Expense	93,214	31,671	27,323
Voyage Expense	432,690	15,667	150,521
Total Terminated Voyage Expense	694,546	102,222	276,563
Other Shipping Operations Expense:			
Overhead	110,960	9,300	40,254
Depreciation on Shipping Property	54,453	21,929	19,109
Other Miscellaneous Shipping Expense	56,442	3,971	25,422
Total Expense	916,401	137,422	361,348
Gross Profit from Shipping Operations	11,430	47,762	24,097
Interest and Other Income	20,990	4,709	8,756
Interest and Other Deductions	(49,562)	(22,572)	(18,954)
Net Profit from Shipping Operations	(17,142)	29,899	13,899
Non-Shipping Operations—Net Profit (loss)	(8)	117	65
Ordinary Income before Federal Income Taxes	(17,150)	30,016	13,964
Provisions for Federal Income Taxes	(41)	9,617	5,312
Ordinary Income After Taxes	(17,109)	20,399	8,652
Extraordinary and Prior Period Items:			
Extraordinary Items—Net Income (Net Expense)	(996)	176	(220)
Prior Period Items—Net Income (Net Expense)	10,094	(533)	-0-
Federal Income Taxes Thereon (Net Expense)	(1,718)	(542)	-0-
Total	7,380	(899)	(220)
Net Income (Loss)	(9,729)	19,500	8,432
Add: Surplus (Capital and Earned) Beginning of Year	553,424	117,918	118,613
Total Surplus Available	543,695	137,418	127,045
Surplus Changes:			
Cash Dividends	(671)	(2,666)	(5,818)
Other (Net)	3,992	(1,429)	20
Total	3,321	(4,095)	(5,798)
Surplus (Capital and Earned) End of Year	**$ 547,016**	**$ 133,323**	**$ 121,247**

APPENDIX XI (Continued)

NOTES TO STATEMENTS A & B
(Amounts Stated in Thousand Dollars)

[1] The data were obtained from Forms MA-172 filed (1) by the 11 subsidized operators owning 262 vessels and chartering 11 others, (2) by 33 unsubsidized tanker operators owning 53 tankers and one cargo vessel and chartering 8 tankers, and (3) by 10 unsubsidized cargo vessel operators owning 58 vessels and chartering 7 others. A few Forms MA-172 for unsubsidized operators cover 1973 fiscal years ending prior to December 31.

[2] $621,721 of mortgage indebtedness included in the $638,800 shown as the Long-Term Debt of subsidized operators is payable from Special Funds and Deposits.

[3] Represents Government's share of recapturable subsidy (ODS) deducted from subsidy payments pending settlement of completed 10-year subsidy recapture periods.

[4] Net Worth of the 11 subsidized operators includes earnings of $531,682 on which Federal income taxes have been deferred as of December 31, 1973, a decrease of $12,907 from the earnings on which Federal income taxes were deferred as of December 31, 1972.

[5] The amounts shown as Operating-Differential Subsidy for the unsubsidized operators represent (1) the special operating subsidy paid or accrued to 17 of the tanker operators for the carriage of Soviet grain purchases in the United States, and (2) adjustment of prior years' operating-differential subsidy for a cargo vessel operator who was formerly a subsidized operator.

APPENDIX XII Capital And Special Reserve Funds[1]

June 30, 1974

Operator	Capital Reserve Fund			Special Reserve Fund			Combined Total
	Cash	Securities	Total	Cash	Securities	Total	
American Export Lines, Inc.	$ 24,662	$ 7,775,000	$ 7,799,662	$–0–	$–0–	$–0–	$ 7,799,662
American President Lines, Ltd.	356,864	1,200,000	1,556,864	–0–	–0–	–0–	1,556,864
Delta Steamship Lines, Inc.	–0–	1,612,521	1,612,521	–0–	–0–	–0–	1,612,521
Farrell Lines Inc.	543,298	6,500,000	7,043,298	–0–	–0–	–0–	7,043,298
Pacific Far East Line, Inc.	29,379	–0–	29,379	–0–	–0–	–0–	29,379
Prudential Steamship Co.	19,250	–0–	19,250	688	–0–	688	19,938
States Steamship Co.	74,754	4,017,018	4,091,772	–0–	–0–	–0–	4,091,772
June 30, 1974	1,048,207	21,104,539	22,152,746	688	–0–	688	22,153,434
June 30, 1973	1,313,895	29,323,018	30,636,913	688	–0–	688	30,637,601
Decrease	$ 265,688	$ 8,218,479	$ 8,484,167	$ –0–	$ –0–	$ –0–	$ 8,484,167

[1] Cash, approved interest bearing securities and common stocks under approved common stock trust on deposit in the statutory capital and special reserve funds of subsidized operators.

Note: Accrued mandatory deposits at June 30, 1974, are not included in above; at December 31, 1973, the amounts accrued for deposit amounted to $56,276,554 applicable to the Capital Reserve Fund (depreciation).

Appendix XIII Operating-Differential Subsidy

Accruals and Expenditures
January 1, 1937 to June 30, 1974

Calendar Year of Operation	Accruals			Expenditures		
	Subsidies	Recapture	Net Subsidy Accrual	In Fiscal Year 1974	Total Amount of Net Accrual Paid	Net Accrued Liability
1937–46	$ 48,725,478	$ 32,695,537	$ 16,029,941	$ —	$ 16,029,941	$ –0–
1947	13,438,553	10,066,979	3,371,574	—	3,371,574	–0–
1948	28,077,303	13,794,768	14,282,535	—	14,282,535	–0–
1949	44,213,377	14,553,310	29,660,067	—	29,660,067	–0–
1950	57,874,056	9,265,433	48,608,623	—	48,608,623	–0–
1951	71,968,636	25,805,608	46,163,028	—	46,163,028	–0–
1952	89,361,880	26,108,608	63,253,272	—	63,253,272	–0–
1953	106,296,046	13,271,864	93,024,182	—	93,024,182	–0–
1954	107,357,156	1,069,909	106,287,247	—	106,287,247	–0–
1955	115,145,469	11,000,930	104,144,539	—	104,144,539	–0–
1956	128,189,900	25,483,596	102,706,304	—	102,706,304	–0–
1957	148,309,951	25,541,138	122,768,813	—	122,768,813	–0–
1958	147,008,266	6,336,805	140,671,461	—	140,671,461	–0–
1959	160,026,827	1,217,639	158,809,188	—	158,809,188	–0–
1960	167,895,154	5,176,231	162,718,923	—	162,718,923	–0–
1961	170,884,261	2,042,748	168,841,513	—	168,841,513	–0–
1962	179,748,676	4,947,848	174,800,828	—	174,470,225	330,603
1963	189,130,206	(1,388,903)	190,519,109	—	190,519,109	–0–
1964	217,933,606	674,506	217,259,100	—	217,259,100	–0–
1965	183,959,582	1,014,004	182,945,578	—	182,823,684	121,894
1966	202,927,346	3,229,471	199,697,875	—	199,697,875	–0–
1967	220,579,702	5,162,831	215,416,871	—	215,416,871	–0–
1968	222,763,009	3,673,790	219,089,219	—	219,089,219	–0–
1969	230,484,189	2,384,434	228,099,755	4,272,620	222,302,635	5,797,120
1970	231,454,700	(1,546,290)	233,000,990	22,266,905	222,579,713	10,421,277
1971	194,709,543	(2,821,259)	197,530,802	417,898	181,760,382	15,770,420
1972	192,326,591	–0–	192,326,591	1,127,137	175,457,285	16,869,306
1973	211,943,819	–0–	211,943,819	112,651,238	195,711,233	16,232,586
1974	105,703,295	–0–	105,703,295	85,768,029	85,768,029	19,935,266
Total Regular ODS	4,188,436,577	238,761,535	3,949,675,042	226,503,827	3,864,196,570	85,478,472
Soviet Grain Programs	50,047,381	–0–	50,047,381	31,415,252	41,279,923	8,767,458
Total ODS	**$4,238,483,958**	**$238,761,535**	**$3,999,722,423**	**$257,919,079**	**$3,905,476,493**	**$94,245,930**

Appendix XIV Operating-Differential Subsidy

Accruals and Expenditures By Lines
January 1, 1937 to June 30, 1974

Lines	Accruals			Subsidies Net Paid	Net Accrued Liability
	Subsidies	Recapture	Net Accrual		
American Banner Lines[1]	$ 2,626,512	$ —	$ 2,626,512	$ 2,626,512	$ —
American Diamond Lines[1]	185,802	28,492	157,310	157,310	—
American Export Lines, Inc.	569,322,544	10,700,587	558,621,957	546,740,852	11,881,105
American Mail Line, Ltd.[2]	155,647,859	7,787,255	147,860,604	136,354,250	11,506,354
American President Lines, Ltd.[2]	547,843,042	17,676,493	530,166,549	523,956,688	6,209,861
American Steamship Co.	111,751	—	111,751	76,462	35,289
Aries Marine Shipping Co.	946,722	—	946,722	548,083	398,639
Atlantic & Caribbean S/N Co.[1]	63,209	45,496	17,713	17,713	—
Baltimore Mail Steamship Co.[1]	416,269	—	416,269	416,269	—
Bloomfield Steamship Co.[1]	15,634,431	2,613,688	13,020,743	12,898,850	121,893
Delta Steamship Lines, Inc.	158,587,129	8,185,313	150,401,816	144,237,621	6,164,195
Ecological Shipping Corp.	900,629	—	900,629	592,746	307,883
Farrell Lines Inc.	202,727,351	1,855,375	200,871,976	196,579,417	4,292,559
Prudential Lines, Inc.[3]	409,229,269	24,223,565	385,005,704	377,205,402	7,800,302
Gulf & South American Steamship Co.[4]	34,440,736	5,271,674	29,169,062	28,050,714	1,118,348
Lykes Bros. Steamship Co.	488,837,539	52,050,599	436,786,940	423,935,785	12,851,155
Margate Shipping Co.	343,578	—	343,578	343,578	—
Moore-McCormack Lines, Inc.	431,697,447	17,762,445	413,935,002	407,678,623	6,256,379
N.Y. & Cuba Mail Steamship Co.[1]	8,090,107	1,207,331	6,882,776	6,882,776	—
Oceanic Steamship Co.[5]	111,192,631	1,171,756	110,020,875	108,915,657	1,105,218
Pacific Argentina Brazil Line[1]	7,963,939	270,701	7,693,238	7,693,238	—
Pacific Far East Line, Inc.	198,155,033	23,646,489	174,508,544	165,017,713	9,490,831
Prudential Steamship Co.[1]	26,098,640	1,680,796	24,417,844	24,417,844	—
Sea Shipping Co.[1]	25,819,800	2,429,102	23,390,698	23,390,698	—
South Atlantic Steamship Co.[1]	96,374	84,692	11,682	11,682	—
States Steamship Co.	174,122,188	5,110,997	169,011,191	165,422,002	3,589,189
U.S. Lines, Inc.[6]	584,674,698	54,958,689	529,716,009	529,716,009	—
Waterman Steamship Corp.	32,661,348	—	32,661,348	30,312,076	2,349,272
Total Regular ODS	4,188,436,577	238,761,535	3,949,675,042	3,864,196,570	85,478,472
Soviet Grain Programs[7]	50,047,381	—	50,047,381	41,279,923	8,767,458
Total ODS	**$4,238,483,958**	**$238,761,535**	**$3,999,722,423**	**$3,905,476,493**	**$94,245,930**

[1] No longer subsidized or combined with other subsidized lines.
[2] APL merged its operations with AML, October 10, 1973.
[3] Changed from Prudential-Grace Lines, Inc., August 1, 1974.
[4] Purchased by Lykes Bros. Steamship Co.
[5] Purchased by Pacific Far East Line, Inc.
[6] Ceased to be a subsidized line November 1970.
[7] Includes 49 subsidized operators.

Appendix XV Operating-Differential Subsidy Contracts In Force,

June 30, 1974

OPERATOR	ODS AGREEMENT Contract No. (Effective Date)	ODS AGREEMENT Contract Termination Date	Number of Subsidized Ships 6/30/74	SERVICE	ANNUAL SAILINGS Minimum	ANNUAL SAILINGS Maximum
A. LINER TRADES:						
American Export Lines, Inc.	FMB-87 (1-1-60)	12-31-79	22	U.S. Atlantic/Mediterranean (T.R. 10)	76	102
				U.S. Atlantic/Far East (T.R. 12)	20	30
				U.S. Atlantic/India (T.R. 18)	24	29
American President Lines, Ltd.	FMB-50 (1-1-57)	12-31-76	13	Trans-Pacific Service Freight (T.R. 29)	32	54
				Round-the-World (Westbound)	24 [1]	36
				Atlantic Straits (T.R. 17)	12 [1]	28
				CIP Feeder	—	(36)
				Djakarta	—	(36)
American President Lines, Ltd. for the American Mail Line Division	FMB-76 (1-1-59)	12-31-78	10	Trans-Pacific Service (T.R. 29)	54	80
Delta Steamship Lines, Inc.	FMB-63 (1-1-58)	12-31-77	11	U.S. Gulf/East Coast South America (T.R. 20)	43	Overall maximum not to exceed 79
				U.S. Gulf/West Africa (T.R. 14)	24	
Farrell Lines Inc.	FMB-64 (1-1-58)	12-31-77	13	U.S. Atlantic/South & East Africa (T.R. 15-A)	20	30
				U.S. Atlantic/West Africa (T.R. 14-1)	20	Overall maximum not to exceed 89
				U.S. Atlantic & Gulf/Australia (T.R. 16)	16	
Lykes Bros. Steamship Co., Inc.	FMB-59 [2] (1-1-58)	12-31-77	41	U.S. Gulf/U.K.-Continent (T.R. 21)	24	84
				U.S. Gulf/Mediterranean (T.R. 13)	42	48
				U.S. Gulf/Far East (T.R. 22)	48	60
				U.S. Gulf/South & East Africa (T.R. 15-B)	18	24
				U.S. Gulf/West Coast South America (T.R. 31)	30	36

OPERATOR	ODS AGREEMENT Contract No. (Effective Date)	ODS AGREEMENT Contract Termination Date	Number of Subsidized Ships 6/30/74	SERVICE	ANNUAL SAILINGS Minimum No. of Days	
Moore-McCormack Lines, Inc.	FMB-48 (Rev.) (1-1-58)	12-31-77	14	U.S. Atlantic/East Coast South America (T.R. 1)	50	86
				U.S. Atlantic/South & East Africa (T.R. 15-A)	20	30
Pacific Far East Line, Inc.	FMB-81 (1-1-59)	12-31-78	8	U.S. Pacific/Australia—Combination (T.R. 27)	12	16
				Freight (T.R. 27)	14	24
				California/Far East-Freight (T.R. 29)	20 [3]	36 [3]
Prudential Lines, Inc. [4]	FMB-49 (1-1-58)	12-31-77	16	U.S. Atlantic/West Coast South America (T.R. 2)	48	62
				U.S. Pacific/South America, Caribbean, Central America and Mexico (T.R. 23, 24, 25)	25	42
				U.S. Atlantic/Caribbean (T.R. 4)	24 [5]	30 [5]
				U.S. North Atlantic/Mediterranean (T.R. 10)	34 [6]	43 [6]
States Steamship Co.	FMB-62 (1-1-58)	12-31-77	9	Washington-Oregon/Far East (T.R. 29)	10	16
				Washington-Oregon-California/Far East (T.R. 29)	20	35
				California/Far East (T.R. 29)	22	33
Waterman Steamship Corp.	MA/MSB-115 (6-4-71)	6-3-91	16	U.S. Atlantic-Gulf/India-Pakistan, Persian Gulf and Red Sea (T.R. 18)	20	26
	MA/MSB-138 (5-8-72)	5-7-75		U.S. Gulf/Far East (T.R. 22)	18	30
	MA/MSB-253 (4-23-73)	12-31-74 [7]		U.S. Gulf/U.K.-Continent (T.R. 21)	20	35
TOTAL LINER TRADES			**173**		**890**	**1,317**

[1] American President Lines' combined minimum of 42 sailings on Round-the-World and T.R. 17 temporarily reduced to 20; Round-the-World Service temporarily suspended.
[2] Per Addendum No. 121 of Lykes Contract No. FMB-59 overall maximum not to exceed 246.
[3] Temporary minimum of 36 and maximum of 54 on delivery of seventh and eighth new freight ships.
[4] Name changed from Prudential-Grace Lines Inc., on August 1, 1974.
[5] Temporary minimum of 44 and a maximum of 54 for one year or period of charter of SANTA ANA.
[6] Increase to a minimum of 45 and maximum of 53 when 5 LASH vessels are assigned to service.
[7] Waterman Contract MA/MSB-253: Should the MSB determine on or before September 30, 1974, that it has the necessary authority to grant an extension, this agreement may be extended for a total contract period not to exceed three years from April 23, 1973.

APPENDIX XV Operating-Differential Subsidy Contracts In Force

(Continued) June 30, 1974

OPERATOR	ODS AGREEMENT		Number of Subsidized Ships 6/30/74	SERVICE	ANNUAL SAILINGS	
	Contract No. (Effective Date)	Contract Termination Date			Minimum	Maximum
B. BULK TRADES:						
Aeron Marine Shipping Co.	MA/MSB-166 (6-30-72)	[8]	0	Worldwide Bulk Trade	335	
American Shipping, Inc.	MA/MSB-272 (6-26-73)	[8]	0	Worldwide Bulk Trade	335	
Aquarius Marine Co.	MA/MSB-309 (5-30-74)	[8]	0	Worldwide Bulk Trade	335	
Aries Marine Shipping Co.	MA/MSB-129 (6-30-71)	8-8-93	2	Worldwide Bulk Trade	335	
Atlas Marine Shipping Co.	MA/MSB-274 (6-26-73)	[8]	0	Worldwide Bulk Trade	335	
Chestnut Shipping Co.	MA/MSB-299 (12-17-73)	[8]	0	Worldwide Bulk Trade	335	
Ecological Shipping Corp.	MA/MSB-275 (6-15-73)	6-18-78	1	Worldwide Bulk Trade	335	
Margate Shipping Co.	MA/MSB-134 (1-4-72)	12-28-93	1	Worldwide Bulk Trade	335	
Moore-McCormack Bulk Transport, Inc.	MA/MSB-295 (10-5-73)	[8]	0	Worldwide Bulk Trade	335	
Pacific Shipping, Inc.	MA/MSB-273 (6-26-73)	[8]	0	Worldwide Bulk Trade	335	
Sea Service Tankers, Inc.	MA/MSB-167 (6-30-72)	[8]	0	Worldwide Bulk Trade	335	
Spruce Shipping Co.	MA/MSB-310 (6-12-74)	[8]	0	Worldwide Bulk Trade	335	
Worth Oil Transport Co.	MA/MSB-271 (6-26-73)	[8]	0	Worldwide Bulk Trade	335	
TOTAL BULK TRADES			4			

[8] 20 years from the date of entry of the first vessel into its subsidized service.

APPENDIX XVI Operating-Differential Subsidy Contracts For Transportation Of Grain To U.S.S.R.

As of June 30, 1974

Company	Contract No.	Date	Ships
Academy Tankers, Inc.	MA/MSB-219	12-07-72	THOMAS A THOMAS Q THOMAS M
Albany River Transport, Inc.	MA/MSB-234	03-09-73	ALBANY
Amerada Hess Corp.	MA/MSB-249	07-17-73	HESS BUNKER HESS PETROL HESS TRADER HESS VOYAGER
American Eagle Tanker Corp.	MA/MSB-245	01-31-73	AMERICAN EAGLE
American Trading Transportation Co., Inc.	MA/MSB-221	12-14-72	VIRGINIA TRADER MARYLAND TRADER
Blackships, Inc.	MA/MSB-246	02-07-73	GULFKING GULFQUEEN GULFPRINCE GULFKNIGHT
Cities Service Tankers Corp.	MA/MSB-244	01-18-73	CANTIGNY CITIES SERVICE BALTIMORE
	Addendum	06-07-73	BRADFORD ISLAND FORT HOSKINS CITIES SERVICE NORFOLK CITIES SERVICE MIAMI
Connecticut Transport, Inc.	MA/MSB-191	11-24-72	CONNECTICUT
Chas. Kurz & Co., Inc.	MA/MSB-188	11-22-72	JULESBURG TULLAHOMA SANDY LAKE BIRCH COULIE FORT FETTERMAN BALDBUTTE GAINES MILL MILL SPRING NORTHFIELD
Eagle Terminal Tankers, Inc.	MA/MSB-210	11-29-72	EAGLE CHARGER EAGLE LEADER EAGLE COURIER EAGLE TRANSPORTER
Empire Transport, Inc.	MA/MSB-235	03-09-73	POTOMAC
Freighters, Inc.	MA/MSB-213	04-24-73	AMERICAN WHEAT
Globe Seaways, Inc.	MA/MSB-209	11-24-72	OVERSEAS ANCHORAGE
Hudson Waterways Corp.	MA/MSB-206	11-28-72	TRANSERIE TRANSPANAMA TRANSSUPERIOR
Intercontinental Bulktank Corp.	MA/MSB-216	12-05-72	OVERSEAS ALASKA
Interseas Bulk Carriers, Inc.	MA/MSB-229	01-22-73	OVERSEAS BULKER
James River Transport, Inc.	MA/MSB-236	03-09-73	JAMES
Keystone Shipping Co.	MA/MSB-189	11-22-72	PERRYVILLE

APPENDIX XVI (Continued)

Company	Contract No.	Date	Ships
Keystone Tankship Corp.	MA/MSB-190	11-22-72	KEYTANKER KEYTRADER GOLDEN GATE
Manhattan Tankers Co., Inc.	MA/MSB-204	11-28-72	MANHATTAN
Mathiasen's Tanker Industries, Inc.	MA/MSB-212	12-13-72	PRAIRIE GROVE SOHIO INTREPID SOHIO RESOLUTE
Meadowbrook Transport, Inc.	MA/MSB-237	03-09-73	MISSOURI
Mohawk Shipping Co., Inc.	MA/MSB-238	03-09-73	MOHAWK
Monticello Tanker Co.	MA/MSB-250	04-17-73	MONTICELLO VICTORY
Montpelier Tanker Co.	MA/MSB-247	02-20-73	MONTPELIER VICTORY
Mount Vernon Tanker Co.	MA/MSB-223	12-18-72	MOUNT VERNON VICTORY
Mount Washington Tanker Co.	MA/MSB-224	12-18-72	MOUNT WASHINGTON
National Transport Corp.	MA/MSB-186	11-15-72	NATIONAL DEFENDER
Nautilus Petroleum Carriers Corp.	MA/MSB-231	01-05-73	SISTER KATINGO
Newport Tankers Corp.	MA/MSB-248	03-05-73	ACHILLES
Ocean Clippers Inc.	MA/MSB-228	01-22-73	OVERSEAS TRAVELER
Ocean Tankships Corp.	MA/MSB-217 MA/MSB-187	12-05-72 11-15-72	OVERSEAS VIVIAN OVERSEAS NATALIE
Ocean Transportation Co., Inc.	MA/MSB-208	11-24-72	OVERSEAS ALEUTIAN OVERSEAS ULLA
Ogden Merrimac Transport, Inc.	MA/MSB-239	03-09-73	MERRIMAC
Ogden Sacramento Transport, Inc.	MA/MSB-240	03-09-73	SACRAMENTO
Ogden Sea Transport, Inc.	MA/MSB-241	03-09-73	COLUMBIA OGDEN YUKON
Overseas Bulktank Corp.	MA/MSB-218	12-05-72	OVERSEAS ARCTIC
Overseas Oil Carriers, Inc.	MA/MSB-207	11-24-72	OVERSEAS JOYCE
Penn Tanker Co.	MA/MSB-222	01-03-72	OGDEN CHAMPION OGDEN CHALLENGER
Platte Transport, Inc.	MA/MSB-242	03-09-73	PLATTE
Rio Grande Transport, Inc.	MA/MSB-243	03-09-73	YELLOWSTONE
Rye Marine Corp.	MA/MSB-251	04-17-73	THETIS
Sea Tankers, Inc.	MA/MSB-233	01-22-73	OVERSEAS EVELYN OVERSEAS ROSE
Sea Transport Corp.	MA/MSB-211	11-29-72	EAGLE TRAVELLER EAGLE VOYAGER
Texas City Tankers Corp.	MA/MSB-215	01-23-73	WILLIAM J. FIELDS WILLIAM T. STEELE
Transeastern Shipping Corp.	MA/MSB-203	11-28-72	TRANSEASTERN
Vancor Steamship Co.	MA/MSB-226	12-19-72	VANTAGE HORIZON
Wabash Transport, Inc.	MA/MSB-192	11-24-72	OGDEN WABASH
Willamette Transport, Inc.	MA/MSB-193	11-24-72	OGDEN WILLAMETTE

APPENDIX XVII Approvals For Foreign Transfers[1]

FISCAL YEAR 1974

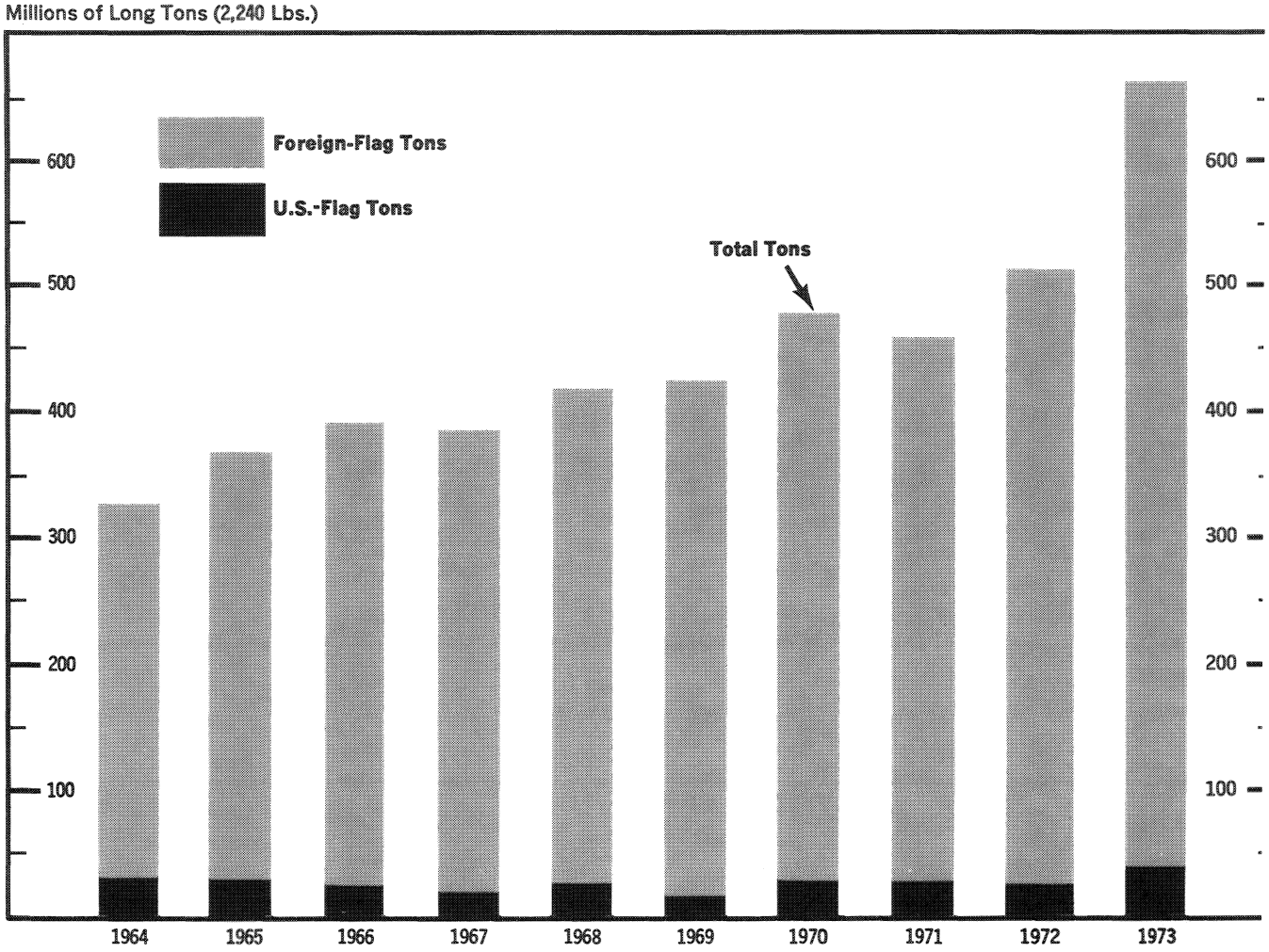
	Pursuant to Sections 9 and 37 (U.S. owned and U.S. documented)			Pursuant to Section 37 (Only) (U.S. owned, not U.S. documented)			Combined Totals		
	No. of Vessels	Gross Tons	Average Age	No. of Vessels	Gross Tons	Average Age	No. of Vessels	Gross Tons	Average Age
U.S. Privately Owned:									
Tankers	7	86,482	31.0	8	958,400	—	15	1,044,882	14.4
Cargo	63	520,699	38.0	5	12,820	26.8	68	533,519	37.2
Cargo/Passenger	2	23,820	36.0	—	—	—	2	23,820	36.0
Miscellaneous	23	100,788	24.6	14	32,195	26.2	37	132,983	25.0
TOTAL	**95**	**731,789**	**34.2**	**27**	**1,003,415**	**16.8**	**122**	**1,735,204**	**29.6**
U.S. Government-Owned:									
Cargo (For Scrapping)	9	43,965	28.9	20	138,138	30.1	29	182,103	29.8
Tankers (For Scrapping)	—	—	—	—	—	—	—	—	—
TOTAL	**9**	**43,965**	**28.9**	**20**	**138,138**	**30.1**	**29**	**182,103**	**29.8**

RECAPITULATION

	Sections 9 and 37		Section 37 (Only)		Combined Totals	
	Number	Gross Tons	Number	Gross Tons	Number	Gross Tons
U.S. Privately Owned Vessels Sold for Foreign Documentation						
Country of Registry:						
Argentina	—	—	1	4,800	1	4,800
Canada	4	13,184	—	—	4	13,184
Cyprus	1	14,640	—	—	1	14,640
Bahama	1	2,972	—	—	1	2,972
Liberia	1	4,680	7	837,400	8	842,080
Nicaragua	1	1,211	—	—	1	1,211
Panama	26	289,567	6	132,832	32	422,399
Peru	1	1,233	—	—	1	1,233
TOTAL	**35**	**327,487**	**14**	**975,032**	**49**	**1,302,519**
Sale Alien for Scrap or Non-documentation:	60	404,302	13	28,383	73	432,685
TOTAL PRIVATELY OWNED	**95**	**731,789**	**27**	**1,003,415**	**122**	**1,735,204**
U.S. Government-Owned:						
Transferred Foreign for Scrapping	9	43,965	20	138,138	29	182,103
TOTAL	**9**	**43,965**	**20**	**138,138**	**29**	**182,103**

[1] Approvals granted, pursuant to Sections 9 and/or 37 of the Shipping Act, 1916, as amended, to transfer foreign ownership and/or registry of vessels of 1,000 gross tons.

APPENDIX XVIII U.S. Oceanborne Foreign Trade: Commercial Cargo Carried (Tonnage)

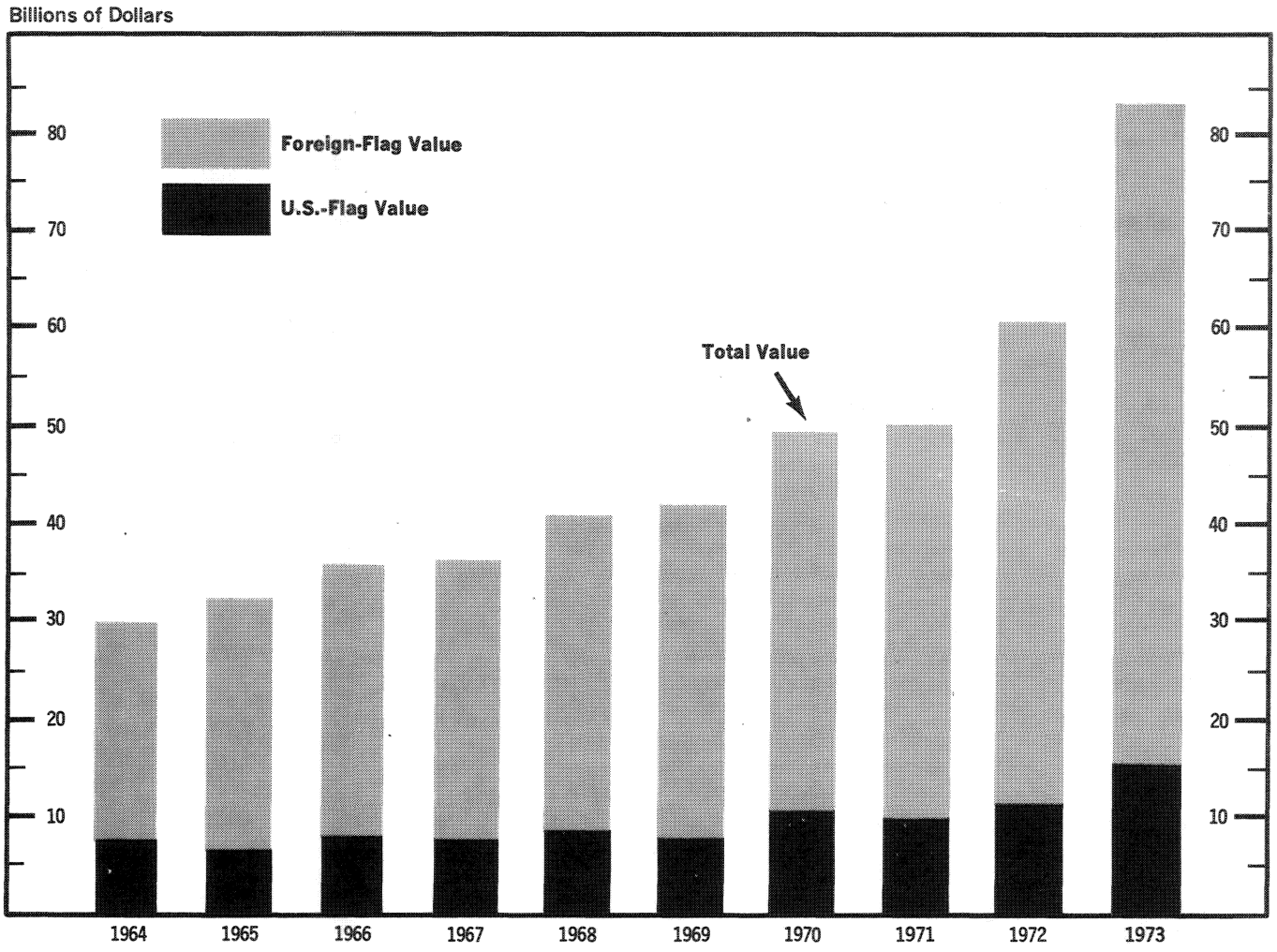


Calendar Year	1964	1965	1966	1967	1968	1969	1970	1971	1972	197
Total-Tons (Millions)	332.8	371.3	392.3	387.6	418.6	427.5	473.2	457.4	513.6	662
U.S.-Flag Tons	30.5	27.7	26.2	20.5	25.0	19.8	25.2	24.4	23.8	39
U.S. Percent of Total	9.2	7.5	6.7	5.3	6.0	4.6	5.3	5.3	4.6	6
Liner Total Tons	50.3	49.2	49.9	47.9	46.1	41.9	50.4	44.2	44.6	51
Liner U.S.-Flag Tons	14.2	11.2	11.4	10.6	11.1	9.7	11.8	10.1	9.8	13
Liner U.S. Percent	28.1	22.8	22.9	22.2	24.0	23.1	23.5	22.9	21.9	25
Non-Liner Total Tons	161.4	171.6	189.5	190.4	209.5	212.1	240.7	220.7	242.6	279
Non-Liner U.S.-Flag Tons	9.8	8.2	6.9	5.4	6.4	4.6	5.4	4.8	3.8	4
Non-Liner U.S. Percent	6.1	4.8	3.6	2.8	3.0	2.2	2.2	2.1	1.6	1
Tanker Total Tons	121.1	150.5	152.8	149.3	163.1	173.5	182.1	192.5	226.4	291
Tanker U.S.-Flag Tons	6.6	8.2	7.9	4.5	7.5	5.5	8.0	9.5	10.2	22
Tanker U.S. Percent	5.4	5.5	5.2	3.0	4.6	3.2	4.4	4.9	4.5	7

[1] Preliminary data subject to future revision.

Note: Includes Government sponsored cargo; excludes Department of Defense cargo and U.S./Canada translakes cargo.

APPENDIX XIX U.S. Oceanborne Foreign Trade: Commercial Cargo Carried (Dollar Value)



Calendar Year	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973[1]
Total Value ($ billions)	30.0	32.4	36.4	36.6	41.1	41.9	49.7	50.4	60.5	83.1
U.S.-Flag Value ($ billions)	7.7	6.9	8.2	7.9	8.5	8.1	10.3	9.9	11.1	15.7
U.S. Percent of Total	25.8	21.4	22.5	21.7	20.7	19.3	20.7	19.6	18.4	18.9
Liner Total Value	21.3	22.3	24.8	24.8	26.8	27.2	33.5	32.4	37.4	49.2
Liner U.S.-Flag Value	7.0	6.2	7.5	7.4	7.8	7.5	9.7	9.2	10.3	14.3
Liner U.S. Percent	32.8	27.8	30.4	29.8	29.0	27.6	28.8	28.4	27.7	28.9
Non-Liner Total Value	5.9	6.6	8.2	8.6	10.8	11.1	12.2	13.2	17.4	24.8
Non-Liner U.S.-Flag Value	.5	.4	.4	.4	.5	.4	.4	.4	.4	.6
Non-Liner U.S. Percent	8.6	6.3	4.9	4.5	4.6	3.6	3.3	3.1	2.4	2.6
Tanker Total Value	2.8	3.5	3.4	3.2	3.4	3.6	4.0	4.9	5.7	9.1
Tanker U.S.-Flag Value	.2	.3	.3	.2	.2	.2	.2	.3	.4	.8
Tanker U.S. Percent	8.8	8.2	7.7	4.8	6.6	5.6	5.6	5.5	6.2	9.2

[1] Preliminary data subject to future revision.

Note: Includes Government sponsored cargo; excludes Department of Defense cargo and U.S./Canada transiakes cargo.

APPENDIX XX Research & Development Contracts Awarded During Fiscal Year 1974

Project	Task	Vendor	Contract Number	Amour
Shipbuilding, Maintenance & Repair				
Welding Methods*	Develop improved welding techniques to reduce cost and increase shipyard productivity.	Bethlehem Steel Corp. Sparrows Point, Md.	2–36214	$ 270,(
Facilities Improvement*	Develop production aids in the ship outfitting areas which will reduce fabrication manhours and increase productivity in U.S. shipyards.	Todd Shipyards Corp. Seattle, Wash.	2–36233	340,(
Ship Producibility*	Develop technical data aids for management and industrial standards to help U.S. shipyards plan and build ships in less time and still satisfy commercial requirements.	Bath Iron Works Corp. Bath, Me.	3–36233	1,300,(
Computer-Aided Pipe Detailing*	Develop an interactive computer system including documentation for ship piping design and engineering resulting in an operating system.	Newport News Shipbuilding & Dry Dock Co. Newport News, Va.	4–37097	140,;
Surface Preparation and Coatings*	Develop a non-polluting, solvent free, liquid resin coating system to reduce coating costs, increase worker safety and provide ecological advantages.	General Dynamics Quincy, Mass.	2–36215	107,;
Shipbuilding Systems Management	Develop computer programs, seminars, software documentation, and technology related to computer aids to shipbuilding.	IIT Research Institute Chicago, Ill.	3–36235	41,(
Prelikon Development	Integrate existing ship design and engineering programs into an operating system.	Shipping Research Services, Inc. Alexandria, Va.	3–36306	35,(
Shipyard Marketing	Develop modern marketing techniques leading to production runs of standardized ships to improve shipyard productivity.	A. T. Kearney, Inc. Chicago, Ill.	4–37058	27,(
U.S. Ocean Technology Assessment	Determine alternate facilities for shipbuilding automation and determine which are applicable to the U.S. shipbuilding industry.	Futures Group Glastonbury, Conn.	4–37088	45,(
Hull Maintenance and Repair	Develop improved methods of preserving and maintaining ship's exposed hull and underwater fittings.	NMRC Galveston, Tex.	Task 420 MA–6562	104,(
Machinery Maintenance and Repair	Develop improved concepts for machinery preventive maintenance.	NMRC Galveston, Tex.	Task 421 MA–6562	45,(
Jet Hull Cleaning	Investigate and evaluate an operating system for various cleaning operations required during the maintenance and repair of ships in drydock.	NMRC Galveston, Tex.	Task 422 MA–6562	7,(
Cavijet Hull Cleaning (Phases I and II)	Design and construct a prototype jet cleaning suitable for field testing.	NMRC Galveston, Tex.	Task 423a MA–6562	149,(
Tank Barge Repair	Phase I of a joint Coast Guard, MarAd program to assist the tug-barge industry, specifically the identification of existing technology and methodology for emergency repair.	NMRC Galveston, Tex.	Task 423 MA–6562	52,
Shipyard Reporting and Information System	Provide computer services for specific modules consisting of current shipbuilding progress, key events, manpower, facilities and capabilities relating to commercial and mobilization purposes of the U.S. shipbuilding industry.	Naval Ordinance Systems Command Washington, D.C.	400–48055	5,

Project	Task	Vendor	Contract Number	Amount
Shipyard Simulation Model Development*	Develop a computerized procedure to estimate shipyard capacity and the impact of planned and existing Navy and MarAd ship construction programs.	U.S. Navy Arlington, Va.	400-48044	50,000
Ship Design				
Shallow Draft Bulk Carrier Technology	Assess future national/industrial requirements of large shallow draft bulk carriers.	M. Rosenblatt & Sons Hyattsville, Md.	3-36294	197,362
Assessment of Modern Sailing Ships in U.S. Bulk Trades	Assess economic, technical, and operational requirements of the modern commercial sailing ship applied to U.S. bulk trade.	University of Michigan Ann Arbor, Mich.	4-37110	18,035
Hydrodynamic Testing of Trans-Ocean Tug-Barge Systems	Collect data on powering trends and linkage stresses of oceangoing tug-barge systems.	Naval Ship R&D Center Carderock, Md.	400-28003	66,000
Seaworthiness of Bluff Forms	Determine seakeeping qualities of the MarAd bluff forms and validate MarAd seakeeping computer program for producing optimum safe ship designs and determine minimum ballast drafts for VLCCs and ULCCs to reduce fuel costs.	Hydronautics, Inc. Laurel, Md.	1-35587	118,300
Experimental Seakeeping	Correlate MarAd seakeeping computer model with a series of model tests to validate the computer program to produce safe optimum ship design and determine safe ballast drafts for VLCCs and ULCCs to reduce fuel costs.	Massachusetts Institute of Technology Cambridge, Mass.	3-36277	20,300
LNG Test Tanks—Liquid Sloshing	Investigate loads and resulting dynamic forces on tank walls and structural members by liquid sloshing in model tanks subjected to simulated ship motions. Results will be used in design of safer full scale LNG containment tanks.	Det Norske Veritas Oslo, Norway	3-36282	142,330
Submarine Transportation Conceptual Design	Determine economic and operational factors associated with a technically feasible commercial submarine to transport oil and other products from Arctic areas.	Newport News Shipbuilding & Dry Dock Co. Newport News, Va.	4-37032	411,424
Tug-Barge Computer Time	Prepare calculations in support of Ingram Tug-Barge Project relating to oceangoing tug-barge couplings.	Marshall Space Flight Center Huntsville, Ala.	400-28008	15,000
Barge Linkage Evaluation	Upgrade existing mathematics model of tug-barge linkage systems, and compare scale test data with that obtained by a full scale laboratory prototype test.	NMRC Galveston, Tex.	Task 411 MA-6562	116,510
Tug-Barge Maneuverability	Develop data base for performance of tug-barge maneuverability aids.	NMRC Galveston, Tex.	Task 412 MA-6562	57,000
Flexor	Prepare a plan for 1/10th scale testing of Flexor barge linkages.	NMRC Galveston, Tex.	Task 410 MA-6562	45,950
Nuclear Technology				
Nuclear Powered Arctic Ship—Offshore Oil Exploration	Engineering design and evaluation of nuclear power for Arctic supply drilling ships.	Global Marine Los Angeles, Calif.	3-36263	45,000

* Cost-shared contracts.

APPENDIX XX (Continued)

Project	Task	Vendor	Contract Number	Amoun
Nuclear LNG Tanker	Determine economics of nuclear and fossil fueled LNG carriers of 130,000 cubic meter capacity with 100,000 SHP and 160,000 cubic meter with 120,000 SHP on three trade routes: Sumatra to Los Angeles; Ecuador to Los Angeles; and Persian Gulf to Los Angeles.	Alexander Marine Assoc. New Orleans, La.	4-37112	97,0
Consolidated Nuclear Steam Generator (CNSG) Pump Bearing Test	Test and evaluate bearings for the CNSG canned motor pumps operated in a horizontal configuration.	Babcock & Wilcox Co. Lynchburg, Va.	1-35555	37,0
CNSG Pump Diffuser Tests	Develop diffusers for CNSG which provide acceptable fluid velocities in the CNSG tube ends without excessive velocity head losses.	Babcock & Wilcox Co. Lynchburg, Va.	1-35555	56,4
CNSG Vessel Model Flow Test*	Perform scale model tests to predict pumping horsepower requirements and assure that a satisfactory uniform primary flow distribution can be obtained.	Babcock & Wilcox Co. Lynchburg, Va.	1-35555	335,0
CNSG Environmental Tasks (Phase II)	Complete an environmental impact statement for the competitive nuclear ship program.	NUS Corp. Rockville, Md.	3-36273	78,0
CNSG First-of-a-Kind Engineering (Phase V)*	Develop a licensed nuclear power plant design for U.S. merchant ships.	Babcock & Wilcox Co. Lynchburg, Va.	4-37067	2,900,0
CNSG Fuel Assembly and Control Rod Drive—Mechanical, Hydraulic and Functional Life Test Evaluation*	Perform an accelerated life-time test of prototype control rod drive and fuel assembly under design temperature and pressure conditions.	Babcock & Wilcox Co. Lynchburg, Va.	1-35555	849,0
CNSG Helical Steam Generator Performance Test*	Test design calculations of CNSG steam generator.	Babcock & Wilcox Co. Lynchburg, Va.	1-35555	444,1
Nuclear VLCC Design Study	Develop VLCC design utilizing CNSG plant and forecast economic competitiveness of the ship in crude oil service. Produce bid plans and specifications for a standardized VLCC to assure advantages in series production.	Babcock & Wilcox Co. Lynchburg, Va.	2-36216	628,7
Government Indemnity for U.S. Nuclear Ship Program	Examine the issue of Federal Government indemnity as it applies to nuclear merchant ships.	Atomic Industrial Forum New York, N.Y.	4-37122	47,5
Radioisotope Monitoring System for Nuclear Powered Merchant Ships	Apply computer assisted high-resolution gamma-ray spectrometry aboard nuclear ships as a means of monitoring affluent radioactivity.	NMRC Kings Point, N.Y.		28,3
International Standards	Establish requirements of international standards for construction and operation of nuclear ships.	NMRC Galveston, Tex.	Task 442 MA-6562	65,0
Licensing Assistance	Prepare documentation for support in regulatory requirements, construction, and systems optimization for nuclear vessels.	NMRC Galveston, Tex.	Task 440.1 MA-6562	78,4
Flow Test Loop Preliminary Design	Verify flow distribution and identify vibration problems which may be encountered in the CNSG.	NMRC Galveston, Tex.	MA-6562	23,0
Nuclear Ship Collision Studies	Investigate and document ship collision studies.	NMRC Galveston, Tex.	Task 440.2 MA-6562	52,3

Project	Task	Vendor	Contract Number	Amount
Nuclear Quality Assurance Guidelines	Establish guidelines for shipbuilders, owners, operators and the public which will include recommendations for interface agreements between participating contractors for changes to existing quality assurance practices.	NMRC Galveston, Tex.	Task 440.3 MA-6562	42,340
N. S. SAVANNAH	Facilities and support required at Savannah, Ga., during inactivation.	Todd Shipyards Galveston, Tex.	3-36302	664,425
Model Tests of Twin Screw Bluff Form Nuclear Vessel	Determine the most efficient power range of nuclear plants that can be used in the transport of very or ultra large quantities of crude oil.	Hydronautics, Inc. Laurel, Md.	1-35587	54,745
Ship Operations				
Highly Skewed Propeller*	Test and evaluate a highly skewed propeller on a high-speed containership and investigate the phenomenon of cavitation erosion.	American Export Lines, Inc. New York, N.Y.	3-36288	647,906
Longitudinal Strength Instrumentation of Great Lakes Ore Carriers SS CHARLES M. BEEGHLY & M/V STEWART J. CORT*	Collect full scale stern data to investigate the phenomenon of springing on large ships.	U.S. Coast Guard Washington, D.C.	400-48050	36,000
LASH Ship Instrumentation Load Response of Ship Structure*	Collect full scale test data to investigate the phenomenon of springing on large ships.	Avondale Shipyards, Inc. New Orleans, La.	3-36264	136,169
Ship Structure Committee*	Research ship structures design and materials, and testing to improve overall reliability and safety of ships operating in a hostile marine environment.	Department of the Navy Hyattsville, Md.	400-48056	150,000
Operational Performance; Gas Turbine Technology*	Test and evaluate the industrial gas turbine developed by MarAd and GE for marine use.	General Electric Co. Schnectady, N.Y.	4-37123	400,000
Electrostatic Tanker Explosions*	Evaluate at-sea performance of an electromechanical devise which is designed to dissipate the electrostatic charges generated by tank cleaning equipment.	Cinco-Tech Corp. Los Angeles, Calif.	4-37065	243,691
Influence of Draft on Ice Resistance*	Test models of selected low configurations of a selected vessel.	Wartsila Helsinki, Finland	4-37094	92,000
Great Lakes Extended Navigation Film*	Document projects being undertaken to extend the navigation season on the Great Lakes.	University of Michigan Ann Arbor, Mich.	1-35487	12,500
Ice Transiting—Great Lakes	Test shipboard air bubbler system on the LEON FRASER and measure hull ice forces.	ARCTEC, Inc. Columbia, Md.	4-37064	129,297
Shipping Operations Information System (SOIS)	Provide program management services for the application of computer/communications technology to U.S. ocean transportation.	Computer Sciences Corp. Falls Church, Va.	2-36238	178,652
SOIS*	Develop a shipping management system which includes cargo space documentation, intermodal distribution coordination, and fleet resource management services.	U.S. Lines, Inc. New York, N.Y.	4-37053	300,000

* Cost-shared contracts.

APPENDIX XX (Continued)

Project	Task	Vendor	Contract Number	Amount
VIDEC (Phase III)*	Evaluate a prototype propulsion monitoring system aboard the SS PRESIDENT JOHNSON.	Raytheon Inc. Portsmouth, R.I.	4–37084	195,00
Shipboard Skills*	Accumulate operational data onboard two LASH type vessels by direct observation of shipboard operations.	Stanwick Corp. Norfolk, Va.	0–35505	150,60
Hull Status Monitoring and Surveillance*	Develop monitoring systems to aid ship personnel in making decisions about safe and proper ship operations.	U.S. Lines, Inc. New York, N.Y.	4–37119	307,81
Anti-Stranding Sonar (MASS)	Install, test, and evaluate sonar onboard ship.	Avondale Shipyards, Inc. New Orleans, La.	MA/MSB–106	14,62
VIDEC (Phase II)*	Design, develop and test hardware for ship power plant monitoring performance.	Raytheon Inc. Portsmouth, R.I.	2–36251	14,39
Integrated Conning System*	Improve operational realibility and maintainability of critical subsystems where excessive down time has been noted or where maintenance and repair is not practical or adequate and install a fully operational system on an American vessel.	American Export Lines, Inc. New York, N.Y.	4–37093	177,22
Computer-Aided Operations Research Facility (CAORF) Image Generation and Display Subsystem	Develop a facility to simulate a ship's control system and operating environment.	Sperry Marine Systems Great Neck, N.Y.	1–35515	2,790,95
Stress Instrumentation*	Instrument the M/V ROGER BLOUGH with strain gauges to determine the structural response to Great Lakes sea conditions.	U.S. Steel Corp. Duluth, Minn.	4–37075	32,50
Night Vision Improvement	Develop low cost commercial instruments which provide suitable night vision capabilities for oceangoing vessels and inland waterways barge and tows.	NMRC Kings Point, N.Y.		18,39
Modularization of Ships' Machinery	Investigate design components and systems of marine power plants to facilitate purchasing of packaged units for economical installation and maintenance.	NMRC Kings Point, N.Y.		30,00
Hull Damage Indicator	Design and develop an indicator that provides a calibrated readout on a ship's structural stress during heavy weather to enable the master to take proper steps to reduce stress and avoid hull and cargo damage.	NMRC Kings Point, N.Y.		28,37
Ships of Opportunity	Collect ocean science data for use in the Computer-Aided Operations Research Facility (CAORF).	NMRC Kings Point, N.Y.		20,11
Navigation and Communications				
Digital Selective Calling*	Develop and test at-sea selective calling devices which enable an unattended radio watch on ships, improved ship safety, and ship-to-coast station calling.	G.T.E. Sylvania, Inc. Mountain View, Calif.	3–36220	248,335
Maritime Satellite Experiments (Phase II)*	Establish a global operational satellite navigation and communications system for marine use.	All Systems, Inc. Moorestown, N.J.	1–35594	105,00

Project	Task	Vendor	Contract Number	Amount
Advanced Navigation/ Communications Technical Engineering	Analyze system alternatives of MarAd Fleet Management Program emphasizing communications/navigation.	Mitre Corp. McLean, Va.	4-37036	99,917
Navigation/Communications (Ship Equipment Stage)	Install and remove 10 shipboard antennas for the MarAd Satellite Navigation/Communications Program.	All Systems, Inc. Moorestown, N.J.	1-35594	35,000
Communications—Technical Support	Provide technical analysis and review of communications projects and test equipment performance on high frequencies ionospheric propagation simulator.	Office of Telecommunications Boulder, Colo.	400-48046	90,000
Radio Technical Commission—Marine (RTCM)*	Cross germination of requirements among Government agencies and industry involved in electronic navigation, marine communications and weather data.	Federal Communications Commission Washington, D.C.	400-48042	6,400
Maritime Navigation/ Communications System (Phase III)	Test ship and land based NASA ATS satellite hardware for L-band system.	All Systems, Inc. Moorestown, N.J.	4-37044	785,000
Shipboard L-Band Antenna	Modify existing shipboard antennas and integrate L-band transmitters/receivers into them.	All Systems, Inc. Moorestown, N.J.	4-37040	339,752
Satellite Support	Develop technical specifications and analyze test results of MarAd Satellite Program.	NASA Goddard Space Flight Center Beltsville, Md.	400-48048	60,000
Satellite Planning & Test Operations*	Develop the Maritime Coordination Center (MCC) and operate the MCC during tests.	Marine Management Systems Stamford, Conn.	4-37062	166,212
Preparation & Operation of Maritime Satellite Experiment System (Phase III)	Test and analyze technical data during operation of the ground transmitting facility and computer system at NMRC, Kings Point, N.Y.	All Systems, Inc. Moorestown, N.J.	4-37071	349,614
Maritime Satellite Modem	Provide digital telephony data modem for evaluation during tests on NASA ATS-F satellite.	Magnavox Research Labs Torrance, Calif.	4-37085	81,341
Inland Waterways Demonstration Communications*	Demonstrate the feasibility of an integrated communications system for vessels operating on the inland waterways.	ARINC Annapolis, Md.	3-36258	40,000
Improved Control Systems and Direct Digital Steering	Design of a computerized direct Digital Steering System for continuous all-weather steering of high-speed ships that can be coupled with automated Great Circle navigation.	NMRC Kings Point, N.Y.		73,997
TRANSIM Satellite Navigation System	Evaluate the TRANSIM System's ability to collect statistical data and test the hypothesis that the system would increase productivity.	NMRC Kings Point, N.Y.		23,275
Navigation/Communications Support	Provide engineering and design for the Maritime Control Center.	NMRC Kings Point, N.Y.		127,629
Handbook of Maritime Satellite Systems for Deck Officers	Develop a handbook for the deck officer of a modern U.S. merchant ship to enable him to understand theory and practice of available navigational communications satellite systems.	NMRC Kings Point, N.Y.		30,089

* Cost-shared contracts.

APPENDIX XX (Continued)

Project	Task	Vendor	Contract Number	Amount
Ports & Cargo Movements				
Offshore Deep Water Facilities—Submerged Breakwater*	Develop engineering design and cost estimate for a bottom-mounted wave attenuation system for a single point mooring in 100-foot water depth.	FMC Corp. San Jose, Calif.	4–37028	136,343
Marine Fire Protection System*	Prepare fire manuals for foreign and domestic vessels which call at State of Washington ports, familiarize city firemen with shipboard firefighting methods and develop cost/benefit analysis of firefighting techniques.	Washington State Coordinating Council Seattle, Wash.	4–37054	35,235
LASH Terminal Handling Requirements*	Identify methods of reducing cargo handling costs of the LASH system.	Waterman Steamship Corp. New York, N.Y.	4–37026	50,000
Automatic Container Identification*	Design, develop, test and evaluate an advanced cargo identification system for containers and provide improved ship/shore interface control of container movement.	Computer Identics & American Export Lines Westwood, Mass.	3–36255	640,593
Marine Data Systems	Develop a computer-assisted coding system for coding bills of lading and other related maritime documents.	Data Architects Waltham, Mass.	2–36278	33,800
Electronic Docking System	Design, develop and test an instrumentation system that displays a ship's docking status to provide the docking officer with essential information to safely approach a dock.	NMRC Kings Point, N.Y.		97,270
Cargo Handling and Management Techniques	Increase effectiveness of the management and transfer of cargo in loading, unloading and handling of Seabee and LASH barges and various containers.	NMRC Galveston, Tex.	Task 430 MA–6562	48,000
Single Point Moorings	Develop state-of-the-art documentation for a single point mooring system.	NMRC-Galveston, Tex. & Ocean Science & Engineering Co.	Task 231 MA–6562	37,200
Ports Planning—State of Washington*	Determine State of Washington ports' role in handling waterborne cargo to the year 2000. Establish a guide for policy decisions on construction of new ports, expansion of existing ones, etc.	Washington Public Ports Association Olympia, Wash.	4–37068	100,000
Marine Environment				
Ocean Sampling Program*	Develop scientific data base on the quality of oceans in terms of hydrocarbon concentration and determine the effects or impact of shipping on these background concentrations.	National Oceanic & Atmospheric Administration Rockville, Md.	400–48047	100,000
Port Collection and Separation Facilities	Define requirements for port facilities to handle expected oily-waste loads and assess the impact of probable deepwater oil terminals on coastal port facility requirements.	Frederic R. Harris, Inc. Great Neck, N.Y.	2–36202	93,388
Fate and Effects of Oil in the Sea*	Develop analytical techniques to measure and trace small concentrations of hydrocarbons in ocean waters and various species of fish. Data will be used to determine the levels of oil discharge from ships which are harmful to the marine environment.	National Bureau of Standards Gaithersburg, Md.	400–48049	190,000

Project	Task	Vendor	Contract Number	Amount
Oil/Water Separator	Test oil/water separator.	Hydronautics, Inc. Laurel, Md.	0–35467	3,355
Great Lakes Pollution Abatement—Ship Sewage*	Analyze the performance of biogest and macerator-chlorinator sewage treatment units installed on over 60 Great Lakes ships.	U.S. Navy Annapolis, Md.	400–48051	100,000
Oil/Water Separator	Test and evaluate oil/water separators.	NMRC Galveston, Tex.	Task 400 MA–6562	125,000
Oil/Water Monitor	Establish oil/water monitoring testing and evaluation capability.	NMRC Galveston, Tex.	Task 402 MA–6562	125,000
Environmental Impact Capabilities	Prepare environmental impact listings of policy and legislation pertinent to the maritime industry.	NMRC Galveston, Tex.	Task 403 MA–6562	61,500
Transportation of Hazardous Substances	Analyze present and future characteristics of transporting hazardous materials on U.S. inland waterways, specifically the economic and safety (human, property, environment) impact of moving these materials by water as compared to other modes.	Arthur D. Little Washington, D.C.	4–37025	99,800
Biological and Chemical Research for Proposed Cheatham Annex Waste Facility	Perform bio-assays of marine organisms to determine the effect and lethal doses of oil water and monitoring the York, Va., river to determine if plant effluent degrades the river environment.	Virginia Institute of Marine Science Norfolk, Va.	4–37039	82,527
Manpower				
Manpower Motivation*	Develop guidelines for shipbuilding managers to improve motivation of human resources in the shipbuilding industry.	Newport News Shipbuilding & Dry Dock Co. Newport News, Va.	4–37055	100,000
Bridge Personnel*	Determine potential sources of human error by pilots and ferry operators maneuvering in restricted waters.	Oceanographic Institute of Washington Seattle, Wash.	4–37090	71,795
Licensed U.S. Merchant Marine Officers	Improve efficiency and quality of human resources in the maritime industry with the objective of increasing job satisfaction and morale and reducing the psychological causes of accidents and grievances through improvements in vessel design, management development, accepting changes in technology, etc.	NMRC Kings Point, N.Y.		155,705
Unlicenced U.S. Merchant Marine Seamen	Increase productivity and efficiency of personnel who sail American-flag ships while increasing job satisfaction and morale and reducing the psychological causes of accidents and grievances, development of a viable pool of personnel to meet the changing needs of the industry and assessment of the skills of the existing work force through improvement in vessel design, training, management development, acceptance of changes in technology, etc.	NMRC Kings Point, N.Y.		91,313

* Cost-shared contracts.

APPENDIX XX (Continued)

Project	Task	Vendor	Contract Number	Amount
Study of Human Errors	Provide data to the *Ad Hoc* MTRB panel to aid them in rationalizing the concept of human error and suggesting a program to reduce the incidence of merchant marine casualties caused by human error.	NMRC Kings Point, N.Y.		53,000
Applied Marine Electronics Handbook for Deck Officers	Develop a handbook for the deck officers of a modern U.S. merchant ship which explains improved operational marine electronic systems.	NMRC Kings Point, N.Y.		35,000
Trade Analysis				
Domestic Shipping Market Analysis	Analyze market and forecast trade for the three segments of the domestic shipping industry.	A. T. Kearney, Inc. Chicago, Ill.	2-36258	9,500
Maritime Transportation Research Board (MTRB)*	Joint agency research investigation of metrification, essential trade routes, growth opportunities, bulk imports and future trade requirements.	Department of the Navy Hyattsville, Md.	400-48053	150,000
Development of LASH Cargoes (Phase II Intermodal Shipments)	Pinpoint commodities which can most economically be moved by LASH/Seabee ships.	NMRC Kings Point, N.Y.		30,000
Shipping Productivity	Identify and analyze pricing and market conditions which can lead to more efficient operation of the maritime industry and analyze market penetration by American container carriers.	NMRC Kings Point, N.Y.		73,692
Refrigerated Containers	Resolve basic economic issues in container sharing.	Manalytics, Inc. San Francisco, Calif.	4-37076	28,969
Computer Model for U.S. International Commerce in Bulk Commodities	Design computerized model to analyze the movement of bulk commodities through U.S. ports.	Ernst & Ernst Washington, D.C.	4-37081	49,152
Bulk Movement Information Systems	Design computer model of movement of U.S. bulk shipments.	Marine Management Systems Stamford, Conn.	3-36211	6,000
U.S./U.S.S.R. Cargo Information System*	Collect, calculate and record cargo and revenue data required to account for sharing of cargo in U.S./U.S.S.R. liner trade.	GRC Data Corp. New York, N.Y.	4-37066	60,362
Ocean Bulk Shipping Requirements	Prepare reports on worldwide ocean bulk shipping for use by MarAd in its bulk program.	Jones, Bardelmeier & Co., Ltd. Nassau, Bahamas	4-37083	50,000
Miscellaneous				
Maritime Research Information System	Collect and disseminate information on maritime technology.	National Academy of Sciences Washington, D.C.	0-35498	191,800
Modular Cabin Accommodation as Applied to a Coastwise Ferry*	Develop conceptual design and cost estimate for overnight ferry for service between New York City and Portland, Me.	Nickum & Spaulding Assoc. New York, N.Y.	4-37037	20,000
Shipboard Automated Oceanic Observing System*	Develop an automated or semi-automatic collection and reporting system to provide data on improved predictions and advice related to future sea and weather conditions, to reduce hull and cargo damage, voyage delays and possible pollution.	National Oceanic & Atmospheric Administration Rockville, Md.	400-48059	75,000

Project	Task	Vendor	Contract Number	Amount
Wave Height Indicator	Develop and test a disposable indicator that provides wave height and period measurements to a ship at sea for transmission to a weather data center so that accurate sea state data will be available in re-routing ships to by-pass heavy weather to avoid ship delays and damage.	NMRC Kings Point, N.Y.		19,635
Maritime Industry Responses to Fuel Shortages	Provide the maritime industry with a survey and evaluation of feasible responses to potential restrictions in fuel supplies and determine optimum strategies to be followed under various assumed situations.	NMRC Kings Point, N.Y.		40,000
Maritime Research Information Service (MRIS)	Abstract selected journals and publications for input into the MRIS system.	NMRC Kings Point, N.Y.		16,652
Technology Forecasting	Explore technological frontiers and, if feasible, include in planned MarAd budgets.	NMRC Kings Point, N.Y.		91,615
Maritime Operational Data Center (MODC) Data Bank II—Hull Casualty Data	Combine vessel hull casualty data from a worldwide data input in an effort to determine the causes of hull casualties.	NMRC Kings Point, N.Y.		64,274
Maritime Industry Technology Transfer and Institutional Consortia	Provide a quick and efficient means of locating specialized expertise related to R&D programs for MarAd, maritime community, and the NMRC.	NMRC Kings Point, N.Y.		4,048
Digest Technical Publications	Condense comprehensive research reports in a form suitable for technical periodicals or publications.	NMRC Kings Point, N.Y.		53,062
Information Exchange and Maritime Research Information Service	Provide the Maritime Research Information Service (MRIS) with maritime related abstracts.	NMRC Galveston, Tex.	Task 453 MA-6562	65,000
Standards Program	Provide guidance for the U.S. maritime industry in developing a more comprehensive, functional and effective marine standards system.	NMRC Galveston, Tex.	Task 460 MA-6562	45,000
Marine Insurance Information System	Provide computer services related to Marine Insurance Information System Project for development of a central data base for use by the industry and MarAd.	Military Traffic Management Command Falls Church, Va.	400-48061	50,000
Merchant Marine Policy	Evaluate national maritime policies and programs being conducted by MarAd. Identify and assess the impact of direct and indirect foreign maritime subsidies on the competitive position of the merchant marine and utilize the results for alternative approaches to revitalize the American merchant fleet.	Collett, Gatenby and Hatfield, Inc. Arlington, Va.	4-37046	92,100
Merchant Marine Policy	Evaluate subsidized and unsubsidized U.S.-flag steamship companies and identify factors which account for performance difference.	Booz-Allen Bethesda, Md.	4-37045	87,196

* Cost-shared contracts.

APPENDIX XXI Shipping Studies And Reports

The following studies or reports were released by the Maritime Administration during fiscal year 1974. Where prices are not included, a limited number of copies are available from the Office of Public Affairs, Maritime Administration. Publications marked [GPO] are available from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Those labelled [NTIS] may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, Va. 22161.

GENERAL

Index of Current Regulations of the Maritime Administration, Maritime Subsidy Board, National Shipping Authority, Revised as of January 1, 1974, 43pp $.90 [GPO]

The Panama Canal in U.S. Foreign Trade—Impact of A Toll Increase and Facility Closure May 1974, 15pp [MarAd]

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Complete Report	COM–73–12001	$15.00
Report	COM–73–12002	7.25
Appendix	COM–73–12003	6.50
Executive Summary	COM–73–12004	3.00

Advanced Ocean Tug-Barge System: A Review of the State-of-the-Art of Ocean Barge Design and Operation, prepared by MarAd, 55pp. COM–73–10121 $3.50 [NTIS]

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A Study of Export Shipments of Selected Agricultural Perishables, prepared by TRC-Development, Inc., 124pp. COM–74–10792 $4.75 [NTIS]

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Inland Waterways Communications Study, prepared by ARINC Research Corp. [NTIS]

Executive Summary	COM–74–11105/AS	$3.00
Study Report	COM–74–11106/AS	$5.50
Appendixes	COM–74–11107/AS	$7.25

Leak Detection in Underwater Oil Pipelines, prepared by NMRC-Galveston, Tex., 38pp. COM–73–11776/AS $3.00 [NTIS]

LNG Tank Designs, prepared by NMRC-Galveston, Tex., 71pp. COM–74–11859/AS $3.50 [NTIS]

LNG Research and Facility Requirements at NMRC, Galveston, Tex., 18pp. COM–74–11578/AS $6.25 [NTIS]

Maritime Satellite Navigation/Communication Program, Phase II, prepared by All Systems, [NTIS]

Executive Summary	COM–74–10689	$ 5.50
Experimental System Description	COM–74–10690	15.50
Experiment Results	COM–74–10691	12.75

Domestic Waterborne Shipping Market Analysis, prepared by A. T. Kearney, Inc., 11 Volumes [NTIS] [1]

Complete Set	$59.00
Executive Summary	3.25
Inland Waterways Trade Area Report	7.25
Domestic Ocean Trade Area Report	9.00
Great Lakes Trade Area Report	6.75
Financial Analysis of Inland Waterways Carriers	4.00
Financial Analysis of Domestic Ocean Carriers	4.75
Development of the Forecasting Data Base	5.00
Forecasting Methodology	3.25
Modal Split Analysis	4.75
The Data Base for Marine Marketing	19.00
Inland Waterways and Domestic Carriers	4.50

NOTE: Order numbers are COM–74–10410 thru COM–74–10421.

A Modal Economic and Safety Analysis of the Transportation of Hazardous Substances in Bulk, prepared by Arthur D. Little, Inc., [NTIS]

Executive Summary	COM–74–11270	$3.25
Final Report	COM–74–11271	6.50

Research Prospectus for Maritime Pollution Control in the Great Lakes, prepared by A. T. Kearney, Inc., 204pp. COM–73–10677 $6.75 [NTIS]

Seakeeping Tests of a 250,000 Dwt. Tanker Model in Various Ballast Conditions, prepared by J. T. Dalzell and W. E. Klosinki, 43pp. COM–73–11468/AS $4.25 [NTIS]

State-of-the-Art Review of Oil Containment Barriers for Use at Offshore Terminals, prepared by Cargo Handling/Offshore Terminals Program, 86pp. COM–74–10212 $6.50 [NTIS]

Shipbuilding Manpower Study, Executive Summary, prepared by Mark Battle Associates, Inc., 76 pp. COM–74–11004/AS $4.00 [NTIS]

ACKNOWLEDGEMENT

The Maritime Administration acknowledges with appreciation the courtesy of the following in supplying photographs for this report:

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Atlantic Richfield Co.
Baltimore Sun (photographer William Hotz)
Bath Iron Works Corp.
Bethlehem Steel Corp.
Delta Steamship Lines, Inc.
Dravo Corp.
Kelso Marine Inc.
Keystone Shipping Co.
Litton Industries, Great Lakes Division
Matson Navigation Co.
Mobil Oil Corp.
Newport News Shipbuilding and Dry Dock Co.
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PRESIDENT JEFFERSON

Assistant Secretaries Of Commerce For Maritime Affairs And Maritime Administrators

	Tenure	
	Began	**Ended**
Maritime Administrators:		
E. L. Cochrane	Aug. 1, 1950	Oct. 1, 1952
Albert W. Gatov	Oct. 2, 1952	Jun. 30, 1953
Louis S. Rothschild	Jul. 1, 1953	Feb. 25, 1955
Walter C. Ford*	Feb. 26, 1955	Mar. 15, 1955
Clarence G. Morse	Mar. 16, 1955	May 1, 1960
Walter C. Ford*	May 2, 1960	Jun. 30, 1960
Ralph E. Wilson	Jul. 1, 1960	Feb. 22, 1961
Thomas E. Stakem	Feb. 23, 1961	Aug. 11, 1961
Thomas E. Stakem*	Aug. 12, 1961	Oct. 8, 1961
Donald W. Alexander	Oct. 9, 1961	Oct. 31, 1963
Robert E. Giles*	Nov. 1, 1963	Mar. 1, 1964
Nicholas Johnson	Mar. 2, 1964	Jun. 30, 1966
James W. Gulick*	Jul. 1, 1966	Mar. 24, 1969
Andrew E. Gibson	Mar. 25, 1969	[1]
Assistant Secretaries for Maritime Affairs:		
Andrew E. Gibson	Dec. 8, 1970	Jul. 7, 1972
Robert J. Blackwell	Jul. 7, 1972	Present

[1] The position of Assistant Secretary of Commerce for Maritime Affairs (*ex officio* Maritime Administrator) was created on October 21, 1970.

* Interim Appointee.