related FAA transfers, including Sections 516 and 519 FAA transfers. DSAA also grants general waivers allowing the recipient's national-flag vessels to participate in the ocean carriage of cargo within each program.

Forces in Europe Treaty Limited Equipment

P.L. 102-228, the Conventional Forces in Europe Treaty Implementation Act (CFE-TLE), was adopted on December 12, 1991. Approximately 2,968 tanks, howitzers, cargo carriers, and ground-mounted mortars are being donated by the United States to several North Atlantic Treaty Organization (NATO) recipient countries. The statute permits use of NATO facilities for transportation of the CFE-TLE transfers authorized therein. MARAD has determined cargo preference applies to the transfers; DOD has an opposing view.

Military Cargoes

The Division of Military Cargoes initiates and recommends regulations and procedures for DOD agencies to follow in the administration of cargo preference.

Program efforts concentrate on meetings and discussions with DOD contractors, suppliers, freight forwarders, and shipping companies to focus attention on the U.S.-flag requirements.

The Cargo Preference Act of 1904 is the primary law that concerns the DOD. This Act requires that items procured for, or owned by, the military departments or defense agencies must be carried exclusively (100 percent) by U.S.-flag vessels, if available at reasonable rates. The preponderance of DOD cargoes moves under the control of the MSC and MTMC. However, a significant amount of DOD cargo moves in the commercial sector. A brief description of the activity in each DOD branch follows.

Defense Logistics Agencies

There were fewer commercial ocean requirements awarded by Defense Logistics Agencies (DLA) in 1991 than in previous years. Many shipments were less than a container load in which U.S.-flag carriers were not interested. For some contracts, authorization was granted by MSC to ship foreign, based on U.S.-flag nonavailability.

The decline in contracts requiring commercial ocean transportation is based on the increase in DLA shipments that moved in the Defense Transportation system to support our troops during Operation Desert Storm. The cutback in defense over the next 5 years will result in a decline in DLA cargoes.

Air Force

The Air Force program has been in compliance with cargo preference laws during this calendar year. One contractor shipped a small amount of cargo on foreign-flag vessels; corrective action was taken. A decrease in total metric tons shipped is mainly due to fewer contracts being awarded by the Air Force.

Army/Corps of Engineers

In comparison with the previous year, the tonnage and revenues of the Army and Corps of Engineers (COE) programs decreased. Generally, the Army drawdown has decreased the amount of cargo available to U.S.-flag commercial shipping. The Persian Gulf war also rerouted what would have been commercial shipments through the Defense Transportation System. Additionally, problems with the submission of bills-of-lading from the Korean, Panamanian, and European contracting offices contributed to the downturn. Foreign-flag vessel use was principally due to AM General Corp.'s violations of the cargo preference laws. MARAD was working closely with the company to correct this problem at year's end.

Navy/Marine Corps

Many of the foreign-flag shipments resulted from violations of the law by major shipyards. These violations reflected the failure to pass down the preference requirements to subcontractors. Through action initiated by MARAD with contracting officers, these contractors are now in compliance.

The Marine Corps had an urgent requirement for container assets in Saudi Arabia during and after the Persian Gulf conflict. Many Marine Corps-procured containers were shipped as a result of a determination

by the MSC of nonavailability of U.S.-flag vessels. Additionally, a number of containers were shipped in violation of the contract based on an error by the Government contracting office. Procedures were taken by the Marine Corps to preclude a recurrence.

During Operation Desert Storm, U.S. carriers used their foreign-flag feeder vessels to transship containers to Saudi Arabia. While foreign-flag vessels were used, the revenue was derived by the U.S. carriers who own these feeders. As was previously mentioned, another reason for use of foreign-flag vessels was the lack of interest by U.S.-flag carriers to handle less-than-container-load shipments.

Preference cargo also moved on U.S.-flag vessels but occurred as a result of Cooperative Working Agreements (CWA) U.S.-flag carriers have with foreign companies. While U.S.-flag vessels were used, the cargo was booked on a CWA partner's bill-of-lading with the foreign partner receiving the revenue. U.S. carriers are striving to collect this revenue and correct the problem.

Certificates of Nonavailability were granted by MSC for shipments made to Antigua and Bermuda because no U.S.-flag service was available.

Troop Support Cargoes

Cargoes handled in the DTS by the MTMC and MSC are being provided in a separate section of Table 15. The preponderance of military-sponsored cargo is shipped under contracts and agreements MSC has negotiated with U.S.-flag carriers. The data provided were submitted by MSC, with no independent MARAD verification. Precise revenue figures were not available. Since MSC uses long tons and measurement tons in lieu of metric tons, data shown are estimates.

Agricultural Cargoes

The agricultural cargo preference programs are comprised of Titles I, II, and III of P.L. 83-480; Section 416 of the Agricultural Act of 1949; and Food for Progress. These programs have a 75 percent U.S.-flag shipping requirement.

- **Title I** provides for U.S. Government financing of sales of U.S. agricultural commodities to developing countries on concessional credit terms.
- **Title II** is a donation program administered by AID which generates approximately 2 million metric tons of packaged, processed, and bulk commodities for least developed countries.
- The **Title III, Food for Development Program** was established by the Food, Agriculture, Conservation, and Trade Act of 1990 (1990 Farm Bill). Under this bilateral grant program, agricultural commodities are donated to least developed countries. The implementation of the 1990 Farm Bill was effective February 25, 1991. Shipments under the Title III program began during Cargo Preference Year 1991/1992.
- Section 416 is a donation program which generates approximately 1.1 million metric tons of bulk grain and other surplus agricultural commodities annually for least developed countries.
- **Food for Progress** provides assistance on agricultural commodities to developing countries on a grant basis in exchange for development policy reforms.

Table 15: GOVERNMENT-SPONSORED CARGOES--CALENDAR YEAR 1991
(Note: These numbers do not include domestic shipments)

PUBLIC LAW 664 CARGOES:

Agency for International Development (AID):

Program	U.S.-Flag Revenue ($1,000)	Total Metric Tons	U.S.-Flag Metric Tons	Percentage U.S.-Flag Tonnage
Loans and Grants				
Liner	19,025	132,720	89,063	67.1
Bulker	9,948	251,432	103,357	41.1
Tanker	0	25,387	0	0.0
TOTAL	28,973	409,539	192,420	46.9[1]
P.L. 83-480 - Title II				
Liner	107,680	989,201	742,023	75.0
Bulker	80,641	983,845	864,375	87.9
Tanker	10,483	63,766	63,766	100.0
TOTAL	198,804	2,036,812	1,670,164	82.0
P.L. 83-480 - Title III				
Liner	2,086	15,031	15,031	100.0
Bulker	51,137	986,086	674,587	68.4
Tanker	18,794	305,169	292,653	95.9
TOTAL	72,017	1,306,286	982,271	75.2[2]
Population Division	2,445	3,313	3,269	98.7

Department of Agriculture:

P.L. 83-480 - Title I				
Liner	4,452	60,818	48,322	79.5
Bulker	92,101	2,290,425	1,746,906	76.3
Tanker	13,379	312,123	287,674	92.2
TOTAL	109,932	2,663,366	2,082,902	78.2[3]
Section 416				
Liner	1,584	19,575	8,279	42.3
Bulker	50,667	1,329,304	1,034,512	77.8
Tanker	3,542	92,997	92,997	100.0
TOTAL	55,793	1,441,876	1,135,788	78.8[2]
Food for Progress				
Liner	4,153	24,249	24,249	100.0
Bulker	24,163	556,151	400,751	72.1
Tanker	0	0	0	0.0
TOTAL	28,316	580,400	425,000	73.2[2]

Table 15: GOVERNMENT-SPONSORED CARGOES--CALENDAR YEAR 1991 (CONTINUED)
(Note: These numbers do not include domestic shipments)

Department of Energy:				
Bonneville Power Administration	2	93	3	3.2[4]
Strategic Petroleum Reserve	0	0	0	0.0
Department of Health and Human Services	58	87	67	77.0
Department of Justice Programs	55	74	56	75.7
Department of Interior Bureau of Reclamation	7	122	21	17.2[4]
Department of Treasury Bureau of Engraving	18	314	217	69.1
National Aeronautics and Space Administration	29	115	36	31.3[4]
National Science Foundation	4,199	26,335	26,287	99.8
General Services Administration	159	224	121	54.0
Department of Transportation Federal Transit Administration	1,515	6,484	2,586	39.8[4,5]
U.S. Information Agency	390	977	563	57.6
Voice of America	900	3,260	2,552	78.3
Department of State:				
Foreign Building Office	3,896	13,492	7,876	58.4
Other Agencies	1,403	1,712	1,303	76.1
Tennessee Valley Authority	17	165	142	86.1
Other Agencies[6]	164	266	102	38.3[4]

PUBLIC RESOLUTION 17 CARGOES:

	Total Metric Tons	U.S.-Flag Metric Tons	Total Freight Revenue	U.S.-Flag Freight Revenue	Percentage U.S.-Flag
Eximbank	110,914	77,168	35,116,887	25,388,492	72.3[7]

Table 15: GOVERNMENT-SPONSORED CARGOES--CALENDAR YEAR 1991 (CONTINUED)
(Note: These numbers do not include domestic shipments)

CARGO PREFERENCE ACT OF 1904 CARGOES:

	Total Metric Tons	Metric Tons Dry Cargo	Metric Tons Petroleum	Percentage
Department of Defense Troop Support Cargoes:[8]				
Military Sealift Command (MSC)				
U.S.-flag privately-owned vessels	2,258,635	2,258,635	0	17.4
U.S. Government-owned vessels	1,373,735	1,217,520	156,215	10.6
MSC chartered vessels	6,602,165	706,408	5,895,757	50.7
Foreign-Flag vessels	2,775,531	754,123	2,021,408	21.3
Total carriage of MSC Troop Support Cargo	13,010,066	4,936,686	8,073,380	100.0

Department of Defense Commercial Contractor Cargoes:	U.S.-Flag Revenue ($1,000)	Total Metric Tons	U.S.-Flag Metric Tons	Percentage U.S.-Flag Tonnage
Army Materiel Command	4,304	49,481	46,471	93.9
Air Force	2,167	2,470	2,467	99.9
Corps of Engineers	1,997	6,671	6,488	97.3
Defense Logistics Agency	925	4,646	4,451	95.8
Navy	6,415	167,833	160,405	95.6
Total U.S.-Flag carriage Department of Defense Commercial Contractor Cargoes	15,808	231,101	220,282	95.3

Defense Security Assistance Agency:

Foreign Military Financing and MAP Merger Programs	30,950	148,263	92,324	62.3
International Narcotics Control Act Section 517, FAA	1,945	8,132	8,132	100.0
Southern Region Amendment Section 516, FAA	2,673	2,718	2,649	97.5[9]
Section 519, FAA	738	1,236	1,236	100.0[9]

1. The U.S.-flag percentage figure reflects an overall noncompliance position. However, MARAD determined that U.S.-flag bulkers were not available for 12,477 metric tons nor tankers for 25,387 metric tons. Based on this determination the bulkers still do not meet the statutory requirement; however, the program overall did reach the required 50 percent.

2. U.S.-flag participation fell below the 75% requirement for the program and dry bulker totals. On a country by country basis some participating countries fell below the 75% requirement threshold.

3. Overall, U.S.-flag participation met the 75% requirement. Although on a Purchase Authorization (PA) basis some PAs were below the compliance requirement, USDA made up the shortfall in another PA.

4. This agency complied with the statute, as imbalance in favor of foreign-flag shipments was due to the non-availability of U.S.-flag service.

5. These programs' tonnages are reflected in metric tons for uniformity only. Cargo preference compliance for those programs involving high cube/low density cargo, is achieved on a gross revenue ton basis. Percentages reflected on a weight tonnage basis for such programs do not necessarily represent the exact extent of the programs' compliance with the statute.

6. Cargo of Government agencies that generated less than 25 metric tons of cargo in 1991.

7. Compliance is based on freight revenue only. U.S.-flag participation on a tonnage basis was 70 percent.

8. Data provided by the Military Sealift Command and does not include Foreign Military Sales or domestic shipments.

Chapter 6

Port and Intermodal Development

The Maritime Administration (MARAD) provides technical assistance in port and intermodal planning and operations to State and local port authorities, private industry, and foreign governments. It also develops contingency plans for the utilization of ports and port facilities to meet defense needs in time of national emergency or war. (See Chapter 9.) Port activities in the international arena are reported in Chapter 10.

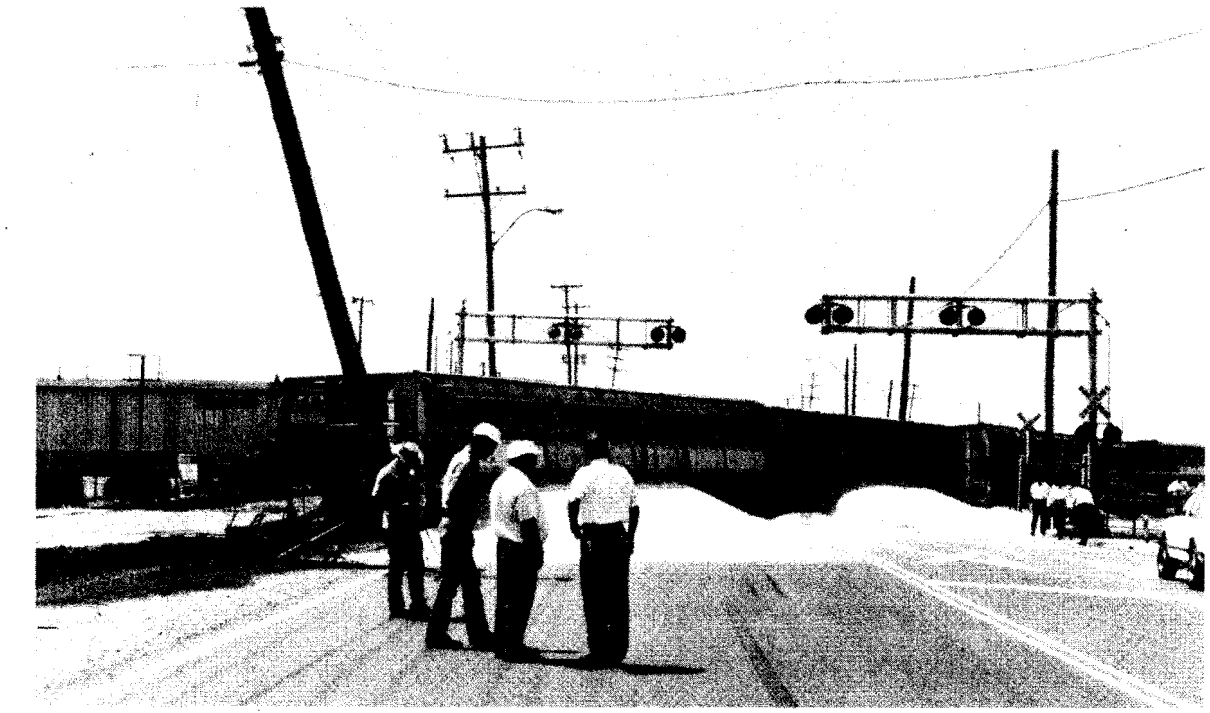
Congressional Report on Public Ports

The Secretary of Transportation is required by P.L. 96-371 to submit a report to the Congress on the status of public ports of the United States. The report for calendar years 1990 and 1991 examines the composition and financial status of the port industry, highlights issues and problems, and reviews the importance of U.S. ports to the Nation's economy and military security. The 1990-1991 report was completed in fiscal year (FY) 1992 and was scheduled to be transmitted to the Congress in November 1992.

Intermodal Surface Transportation Efficiency Act of 1991

Development of economical and environmentally efficient intermodal transport systems became a national policy with passage of the landmark Intermodal Surface Transportation Efficiency Act (ISTEA) in December 1991. MARAD initiated actions with other departmental operating administrations to assure that the connectivity needs of the maritime industry--its carriers, ports, terminal operators, and the freight and passengers they handle--are considered and funded in the state and regional transportation planning processes and management systems required by the ISTEA. Adequate landside access to ports plays an extremely important role in transportation today.

MARAD initiated an educational outreach program with public and private sector organizations to implement the port-related provisions of ISTEA. It includes training activities such as seminars, videos, courses, and demonstration projects for the benefit of State and regional transportation planners and public port authorities. These tools emphasize the important



Landside access problems such as hazards of at-grade rail/highway crossings as experienced by the Port of Memphis, TN.

intermodal role of ports to the governmental planning organizations charged with evaluating and funding transportation projects which can improve road and rail access to marine terminals.

Port Access

In cooperation with industry, MARAD continued to lead a multiagency research study of land transportation access impediments at coastal and inland river ports in the United States. Activities in FY 1992 included the release of the report, *Landside Access to U.S. Ports, Phase I: General Cargo Ports* by the National Research Council's (NRC) Transportation Research Board (TRB). The TRB continued to investigate access conditions at bulk cargo ports in Phase II of the study.

A final report by the TRB covering Phases I and II was scheduled for release in December 1992. The Agency also began preparation of an inhouse Departmental report on access to ports, as a supplemental document that will include more detailed material developed in the course of the TRB study.

Automated Tools for Improved Planning and Operations

In FY 1992, MARAD continued evaluating the use of geographic information systems (GIS) in terms of their potential application to intermodal planning and operations. MARAD also is participating in a multiagency effort to develop a GIS network for the inland waterways. A prototype is scheduled for completion in the second quarter of FY 1993. Investigation of the potential of utilizing video simulation technologies for port planning purposes began in FY 1992. This type of technology can model marine terminal, ship, rail, and truck operations using multimedia imagery and simulation techniques.

Technical Assistance

MARAD continued to provide technical assistance to the port and intermodal industry through two major programs and several projects dedicated to strengthening the role of U.S. ports and intermodal transportation companies in economic development and national defense. This involved the development of various analytical reports, methodologies, and data systems for improving planning, productivity, and the general efficiency of port management and marine terminal operations. These technical projects were cost-shared by MARAD and appropriate State or local port authorities and private sector organizations.

In addition, MARAD supported several local port dredging projects and dredged material disposal plans. In letters to the U.S. Army Corps of Engineers (COE) MARAD stressed the importance of adequate water depths in navigation channels and berthing areas to national trade competitiveness and intermodal transportation efficiency. It also pointed out the scientific research that supports the facts that over 95 percent of dredged material is harmless and that the small amounts of contaminated marine sediments can be safely disposed in the oceans using special care techniques.

Port and Intermodal Planning Program

MARAD's port and intermodal planning activities included cooperative landside access studies with public port agencies and associations, port planning information systems, port financial and economic analyses, and port governance research. Emphasis continued to be placed on developing generic methodologies for easy use by any port or region.

Projects under this program which were completed, continued, or initiated in FY 1992 are listed in the following sections:

Projects Completed	Description
Landside Port Access: Port Visits on Land Transportation Access	Chaired interagency, departmental working group visits and listening sessions at 16 port regions including Los Angeles, Long Beach, San Francisco, Oakland, Stockton, Sacramento, and Richmond, CA; Seattle and Tacoma, WA; New Orleans, LA; St Louis, MO; Memphis, TN; Chicago, IL; Toledo, OH; Charleston, SC; Hampton Roads, VA; New York/New Jersey; and Boston, MA.

National Port Access Survey	Analyzed and published results of data provided by over 50 general cargo ports to the American Association of Port Authorities (AAPA) concerning la transportation access problems and some solutions undertaken. Analyzed the results of data provided by over 60 dee and shallow-draft bulk ports and terminals to the TRI the Inland Rivers, Ports and Terminals, Inc., and the Pacific Northwest Waterways Association concerning land transportation access problems and some solutions undertaken.
Landside Port Access Studies	Published a Department of Transportation (DOT) and industry cost-shared study by the TRB titled, *Landsid Access to U.S. Ports - Phase I: General Cargo Ports* Completed Phase II of a DOT and industry cost-share assessment of land transportation access impediments at U.S. deep- and shallow-draft bulk ports and terminals by the TRB.
National Roundtable on Port Access	In cooperation with the Federal Transit Administration (FTA), published proceedings of a national roundtable of prominent experts on intermodal land use and environmental issues who discussed cargo and passenger access problems in waterfront areas and recommended solutions.
MARAD-Federal Highway Administration (FHWA) MOU	Signed a Memorandum of Understanding (MOU) with the FHWA committing both agencies to address growing land transportation bottlenecks that affect the movement of people and the flow of cargo throughout the Nation.
MARAD-FTA MOU	Signed a MOU with the FTA committing both agencies to find ways to improve passenger and freight mobility throughout the Nation. Emphasis will be on coordinating activities related to the planning, development, expansion, and improvement of ferry systems and services.
Dredging and Dredged Material Disposal	Responded to requests from the ports of the Delaware River, Los Angeles, Port of New York/New Jersey, and Oakland to support maintenance and improvement of dredging projects. MARAD stressed the objectives of the National Transportation Policy related to adequate intermodal connections at ports and the recognition of relevant scientific dredging research (i.e., London Dumping Convention Guidelines). Letters were forwarded to the COE District Offices and other regulatory agencies.

Report to Congress on the Status of U.S. Ports	Prepared the biennial *Report to Congress on the Status of the Public Ports of the United States: 1990-1991.* This overview of the public port industry documents its trade, facilities, investments, financial performance, and major issues.
Port Expenditure Survey	Prepared and distributed the *United States Port Development Expenditure Report,* which profiles the industry's 1990 capital expenditures for new construction, modernization, and rehabilitation.
Directory of Federal Agencies	Prepared and distributed the *1992 Directory of U.S. Federal Agencies with Port-Related Responsibilities.* The report identifies Federal agencies programs which impact on the U.S. port industry.

Ongoing Projects	**Description**
Access Study Groups	Continued to chair the steering and working groups of the Landside Port Access Initiative which include representatives from five departmental agencies and three nongovernmental associations.
Landside Port Access Study	Reviewed drafts of the TRB final report on land transportation access at U.S. ports which has been submitted to the NRC Council for approval and release. This report will include the results and recommendations of Phases I and II.
Public Port Financing	Continued cooperative efforts with the AAPA Finance Committee to update the MARAD report *Public Port Financing in the United States.*
Water Resource Legislation	Reviewed and responded to congressional authorization legislation on navigation projects and contaminated marine sediments and their impacts on U.S. port operations and development. Continued maintaining, operating, and updating MARAD's port facility inventory for ocean and inland river ports.
Port Facilities Data Base	Continued efforts to assist the COE in conducting a regional study of existing trade demands, cargo flow patterns, commodity forecasts, and expected effects on the ports of the South Atlantic coast.
Southeast Container Study Foreign Trade Data	Maintained active participation in the Bureau of Census' Foreign Trade Data Users Group, which seeks to improve the quality of data collected and published on international trade transactions.
Port and Intermodal Planning Textbook	Maintained active participation in the AAPA Planning and Research Committee's efforts to prepare and publish a textbook on port and intermodal planning.

Intermodal R&D Coordination	Continued to chair the Department's Research and Development (R&D) Coordinating Council's Intermodal Working Group, whose objective is to improve interagency coordination of intermodal R&D.
Air and Ferry Services	Continued to foster coordination with the Federal Aviation Administration and the FTA concerning improved access between air and ferry service facilities.
U.S. Stevedoring and Marine Terminal Industry	In cooperation with the National Association of Stevedores, continued the update of the MARAD report, *The U.S. Stevedoring and Marine Terminal Industry.*

Projects Initiated	**Description**
Freight Demand Study	Began participation in a National Cooperative Highway Research Program study, entitled *Characteristics and Growth of Freight Demand.* This research is being carried out under a cooperative agreement between the American Association of State Highway and Transportation Officials and the TRB.
Interagency Report on Land Transportation Access to U.S. Ports	Began departmental interagency analysis and evaluation of land transportation access to U.S. ports. The study will focus on the issue from the perspective of the various entities and organizations involved in, or impacted by, land transportation access to ports.
Regional Input-Output Model	Began efforts to update and revise the port industry sectors of the MARAD Regional Input-Output model. The model is used to identify the beneficial economic contributions the various sectors of the maritime industry make to the national economy.
Port Expenditure Survey	Began preparation of the *United States Port Development Expenditure Report* on the industry's 1991 capital expenditures for new construction, modernization, and rehabilitation.
Port Governance Study	Initiated a project with the NRC's Marine Board to conduct a preliminary examination of the current governance structures of the U.S. port industry and their impact on port management, planning, development, and performance.
Inland Waterway Geographic Information System (GIS) Network	Participated in the National GIS Waterway Design Committee which is developing a GIS network of the U.S. inland waterway system. A prototype network is scheduled for testing during the second quarter of FY 1993.

Federal Geographic Data	Participated in the Federal Geographic Data Committee's Ground Transportation Subcommittee, which is promoting the development of an intermodal ground transportation network and data base.

Port and Intermodal Operations Program

This program helps to improve productivity in the operation of facilities, equipment, and waterways. The program also provides planning for emergency operating conditions at ports in time of crisis or war. Projects completed, ongoing, or initiated in FY 1992 are described below:

Completed Projects	Description
Maritime Security Awareness	Conducted maritime terrorism and drug smuggling awareness seminars in Jacksonville, FL, which were videotaped as a training aid. In addition, held seminars at Los Angeles, CA; Mobile, AL; Norfolk, VA; and Corpus Christi, TX. Additional seminars are scheduled for Boston, MA, and Seattle, WA, in FY 1993.
Overweight Marine Containers	Participated in industry and Government discussions and various analytic efforts dealing with the issue of overweight marine containers and trailers moving on U.S. highways.
Intermodal Equipment Inventory	Completed the MARAD report, *Inventory of American Intermodal Equipment - 1991*. This is a comprehensive statistical review and classification of equipment owned by American vessel operators and container leasing companies.
Maritime Counterterrorism	Addressed the annual meeting of the tanker section of the American Petroleum Institute on maritime terrorism.

Ongoing Projects	Description
Port Automated Cargo Release System	Continued working on the cooperative agreement with the Golden Gate Ports Association to complete a generic cargo release system which can be adapted to the Automated Commercial System of U.S. Customs.

Projects Initiated	Description
Maritime Systems of the Americas	Initiated a study to identify the basic features and opportunities for expanding the use and efficiency of the Maritime Systems of the Americas along with new technologies and operating approaches needed to utilize these opportunities. This waterway system links the mid-U.S., Canada, Mexico, Central America, Caribbean Island countries, and northern rim of South America via the Great Lakes, the Mississippi River Basin, the Gulf of Mexico, and the Caribbean Sea.

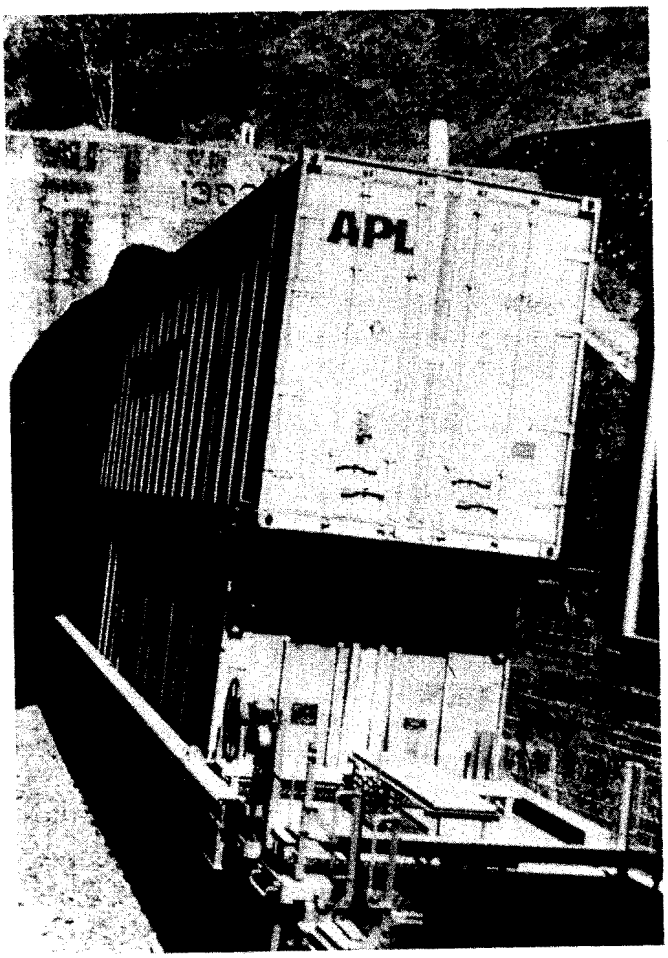
Chapter 7

Technology Assessment

The Maritime Administration's (MARAD) Technology Assessment program evaluates activities related to the development and use of water transportation technology and systems for commercial, economic, and national security purposes.

MARAD evaluates current maritime developments and future trends involving such interrelated areas as trade, markets, intermodal transportation, emerging technologies, economic developments, fuels and materials, and national defense requirements.

Technical and program studies, research and development contracts, interagency transfers, and cooperative agreements awarded in fiscal year (FY) 1992 are listed in Appendix III.



Innovative tunnel notching expands double stack train operation at the Port of Oakland, CA.

Cargo Handling Technology

The Cargo Handling Program assesses advanced materials handling, automation, data processing, and communications technologies to reduce cargo handling and documentation costs of intermodal shipments between water and rail or motor carrier transportation modes.

During FY 1992, MARAD continued to support industry research and development through the Cargo Handling Cooperative Program (CHCP). All American companies are eligible and have been invited to participate. Four U.S.-flag carriers, American President Lines, Ltd., Matson Terminals, Inc., Sea-Land Service, Inc., and Crowley Maritime Corp., carried out joint projects to increase cargo-handling productivity through new technology.

In projects designed to automate materials handling equipment in marine terminals, the CHCP completed testing the Position Location Systems (PLS). This technology gives the exact location of container-handling equipment, tracks its movement, and provides constant feedback on the location of containers.

Technology to assist tractor drivers to align containers under the cranes was tested in a basic form and development of an electronic security seal continued.

Other CHCP work included analysis and testing of emerging electronic clipboards, and research on alternative technologies for automatic guidance systems for container handling equipment.

Human Factors Research

The Human Factors Research Program examines effective manning, fatigue, boredom, training, and other human factors which affect shipboard operations. The program addresses human error causes of marine transportation accidents and focuses on design and operating improvements to reduce or eliminate those problems.

In FY 1992, MARAD initiated a study at the Volpe National Transportation Systems Center (VNTSC) to follow and assist an operator with the development of a computer model to help analyze and allocate shipboard manning resources as part of the planning process for start-up operations of a new shipping service. Tasks during normal operations and for emergencies will be analyzed using the computer model to provide a rational basis for manning. The process will be documented through initial ship trials and operations.

Work initiated in FY 1991 continued at VNTSC to assess the feasibility and applicability of using a fitness-for-duty test which deals with fatigue, drugs, and alcohol onboard ship. Rail and trucking modes also are investigating the possibilities of adapting these test procedures to monitor fitness as a control mechanism and as a feedback to the individual operator.

In conjunction with the U.S. Coast Guard (USCG), a study was undertaken with the Marine Board of the National Academy of Sciences to establish the present state of practice in the application of shiphandling simulation to maritime training and licensing. This project is intended to produce specific programs and research to establish marine simulation as an accepted and practical component of maritime professional development, certification, and licensing regimes. Background materials were being developed in preparation for an initial meeting of the study committee early in calendar year 1993.

Coordinated development of the 26th Annual Workshop on Human Factors in Transportation continued. Scheduled for January 10, 1993, the day-long series of workshops was planned to address service hours, workload transition, human-machine interface, attentional impairment, trends in performance measurement, and other human factors elements.

Marine Environmental Protection

The Marine Environmental Protection Program supports studies and issues reports to assist the maritime industry in effectively protecting the marine environment. During FY 1992, MARAD was involved in a number of significant developments:

o The Agency was an active participant on the "Interagency Coordinating Committee on Oil Pollution Research" and its subcommittees on prevention and grants. Chaired by the USCG, it was established by Title VII of the Oil Pollution Act of 1990 (P.L. 101-380) to coordinate Federal research encompassing innovative oil pollution technology and evaluation, oil pollution effects research, marine simulation research and environmental testing, demonstration projects, and a regional research program.

In April 1992, the interagency plan for oil pollution research was submitted to Congress by the Secretary of Transportation. This research plan represents the Committee's initial efforts at providing a comprehensive and coordinated oil spill research and development plan. In June 1992, the first International Oil Spill Research and Development Forum was held.

o MARAD prepared and distributed four quarterly issues of the "Report on Port and Shipping Safety and Environmental Protection." The reports summarized activities at the national and international levels concerning safety and environmental protection matters.

o MARAD and other Federal agencies continued their sponsorship of a study by the Marine Board of the National Research Council (NRC) on U.S. Implementation of MARPOL 73/78 Annex V (Garbage). This interagency study is scheduled for completion during calendar year 1994. Participating agencies are the USCG, Environmental Protection Agency, U.S. Navy, National Oceanic and Atmospheric Administration, and MARAD.

o MARAD initiated the Oil Pollution Act of 1990 Training Study at the Massachusetts Maritime Academy. Its goal is completion, in calendar year 1993, of a model training curriculum in oil spill prevention, response, and cleanup. This study constitutes MARAD's response to the congressional mandate contained in Section 4117 of the Oil Pollution Act of 1990.

o MARAD and USCG have initiated a multiyear research project at the USCG Research and Development Center on the Reduction of Air Pollution from Marine Engines. This research has as its objective the assessment of the environmental and safety impacts and the establishment of safety and emissions guidelines for the control of air pollution from marine engines. It is intended to support the development of national and international standards.

Maritime Operational Safety

The Maritime Operational Safety Program encompasses advanced ship design and operations features, vessel navigation and communication systems, operational procedures, maintenance, and

other initiatives. It is intended to enhance safety while enabling vessels to operate more efficiently and meet Federal standards for safety and for air, water, and noise pollution in port and at sea.

A study was initiated in FY 1992 to assess the technical and operational feasibility of a worldwide vessel locating and tracking system. It included a technology assessment of navigation, communications, and display technologies, and a user assessment to determine degree of need among the commercial and Government users. A final report is scheduled for completion in FY 1993.

A study on the applicability of freefall life boats on U.S. vessels was completed by C.R. Cushing & Co. Designs, operations, economics, and regulatory issues of such lifeboats, which are preferred on many foreign-built ships, were assessed. The study found that this technology provides faster and more efficient evacuation, launches the boat clear of the vessel, requires fewer tasks to launch, and is less expensive than a conventional installation.

Developmental work continues on the modular approach to analyzing ship controllability. The cooperative effort with the USCG has progressed to the testing of bare hull ship models. Model analysis will be useful as a design tool and will facilitate simulation of maneuvering for shiphandling training or research.

Work continued through the Society of Naval Architects and Marine Engineers on standardizing the exchange of hydrodynamic coefficients for modular mathematical models. An international workshop was held in November 1991 and an interim report summarizing the results of that meeting has been completed.

Maritime Technology Policy

Through the Maritime Technology Policy Program, MARAD participates in the basic activities of the Marine Board and the Transportation Research Board. It also utilizes the technical advisory role of the NRC on policy issues of national significance to both industry and Government concerning the water transportation community.

A Committee on Advances in Navigation and Piloting of the Marine Board continued its deliberations during FY 1992. The Committee was established to evaluate technological changes affecting the safety of ship navigation in U.S. pilotage waters. The Committee prepared an initial draft of its findings and will finalize the report in the early part of calendar year 1993.

Military Sealift Technology

Development of more efficient and effective transportation services for the carriage of military cargoes by commercial vessels is the focus of the Military Sealift Technology Program. During FY 1992, MARAD continued to work with the Naval Sea Systems Command to develop and execute a Technology Development Program for the Midterm Fast Sealift Ship (to be built after 1998). MARAD is responsible for work in the areas of economic viability, cargo handling, manning, and acquisition/operations strategies.

National Maritime Enhancement Institutes

Under P.L. 101-115, as amended, Congress authorized MARAD to designate National Maritime Enhancement Institutes at U.S. universities or university consortia with capabilities for providing leadership in the solution of maritime problems. The institutes are structured to provide interdisciplinary and intermodal teams to address transportation problems of national importance. There are four institutes located at the University of California at Berkeley, Louisiana State University, Massachusetts Institute of Technology, and Memphis State University.

During FY 1992, four projects were started. The first will investigate the feasibility of direct water between the United States, Canada, and Mexico using the oceans, rivers, and the Great Lakes. Another project will assess ship manning alternatives as an essential part of an overall maritime policy. The third will develop a centralized Inland Waterways Information System to assist Government and industry. The final project will investigate ship structural maintenance concepts.

Ship Operations Technology

The Ship Operations Technology Program focuses on the application of innovative technology to ensure productive deployment and utilization of ships and equipment to maximize shipper service and carrier competitiveness.

Development of an Expert Diesel Engine Diagnostic system for a low-speed diesel engine propulsion

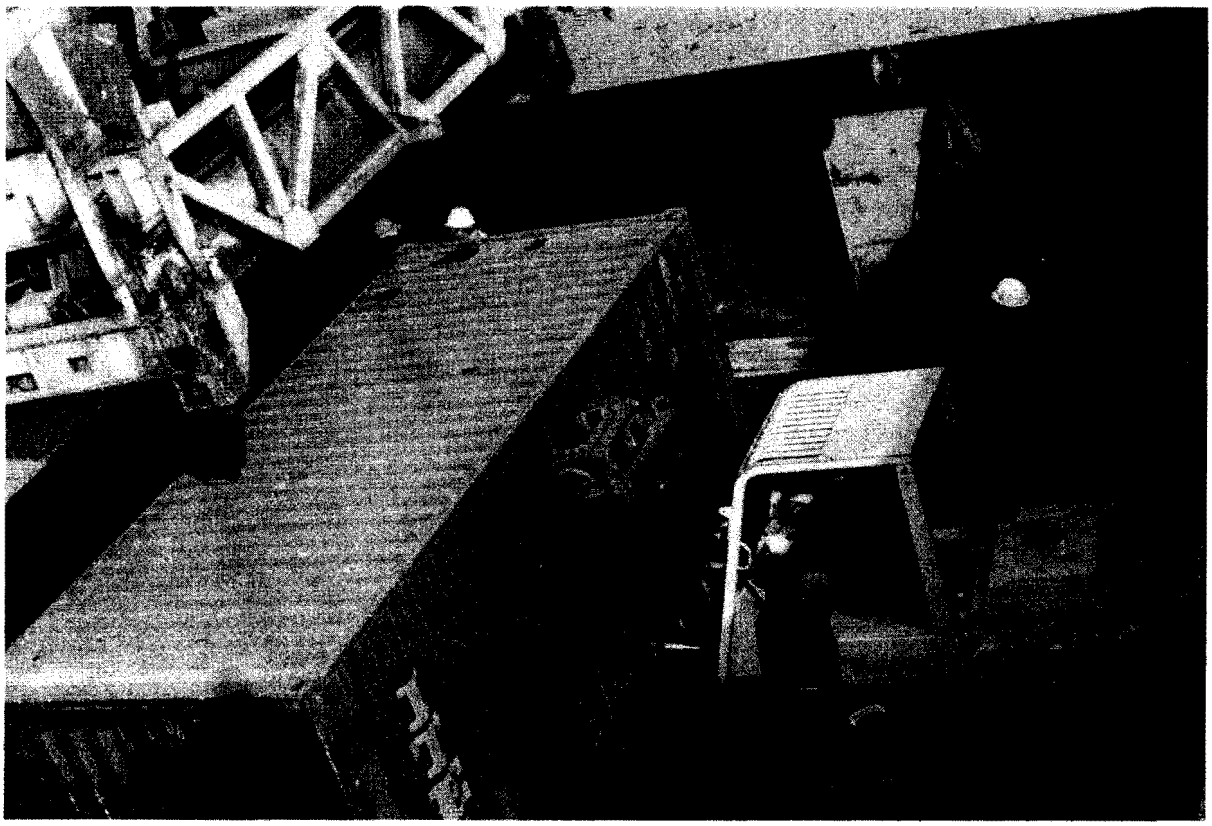
system was completed during 1992. The system, which is installed aboard four containerships operated by American President Lines, Ltd., evaluates engine performance and predicts potential engine failure before it occurs. A report describing the results of the project has been completed.

Development of the Shipboard Piloting Expert System continued during FY 1992. Software development of this knowledge-based system was completed and its installation aboard the EXXON BENECIA took place in August 1992. The system has been well received by ship's officers and the Southwest Alaska Pilots Association. Evaluation of the system will be completed during FY 1993.

Recent developments in the Global Positioning System (GPS) satellite navigation system have led to new capabilities in marine navigation. The development by the USCG of a Differential GPS (DGPS) communications link can provide more precise navigation accuracies within 5 meters in harbor and harbor approach areas. The differential GPS corrections to the standard GPS signal are to be transmitted over existing USCG radio beacons. These DGPS receivers should become a standard navigation system for future U.S.-flag merchant ships. The USCG hopes to have DGPS beacons operational around the contiguous United States within the next few years. Efforts were begun in FY 1992 to establish a joint partnership program between the Government and the vessel operating industry to perform research in ship operations technology. During this reporting period, a workshop was conducted to explore the concept and obtain support from the private sector as well as several other Government agencies. It is anticipated that a program of cost-shared, cooperative agreements will be established during FY 1993.

Ship Structures Research

MARAD participates in the activities of the Ship Structure Committee, an interagency group and research sponsor dedicated to the improvement of marine structures. Originally established in 1946, the committee advises the Government on improving the structural design, material, and construction methods for ships. The committee's major thrust is the development and introduction of probability and reliability methods into ship design to optimize safety and economy over full life cycles.



Working under the direction of the stevedore, a longshoremen's gang stows a container in the hold of a general cargo ship.

During the reporting period, the committee initiated projects on the grounding protection of double hull tankers, marine structural inspection and maintenance, determining the strength of pitted structure, and improved welding procedures.

Small Business Innovation Research

MARAD participates in the Department of Transportation's Small Business Innovation Research Program. The program supports small business concerns and is administered by the VNTSC.

During FY 1992, MARAD sought innovative industry proposals to improve ship and terminal productivity and two contracts were amended. One will develop a ship-maneuvering simulation software package for use aboard ship to evaluate maneuvering performance, assist in passage planning, and provide training opportunities. The second project, which is being conducted with the Federal Railroad Administration, will develop a model terminal for integrated marine/rail intermodal operation.

During FY 1992, work continued on the development of a neural network-based autopilot for improved ship control. The project is assessing the feasibility of replicating human shiphandling functions with an artificial intelligence neural network controller having the ability to automatically learn course-keeping and track-keeping functions for a particular vessel. The project will be completed in FY 1993.

Waterway Navigation Technology

The Waterway Navigation Technology Program applies advanced simulation methodologies to better understand the interaction of vessel maneuvering capabilities and channel configuration in harbors, rivers, and canals. MARAD owns the Computer-Aided Operations Research Facility (CAORF), a full bridge ship research simulator operated by a commercial operator. CAORF is located at the U.S. Merchant Marine Academy in New York. During FY 1992, MARAD and the USCG continued a project to collect man-in-the-loop performance data on the CAORF simulator to determine how an electronic navigation chart display information system might be used on a ship's bridge. The simulator would be used to evaluate situations in which the electronic chart would enhance navigation, and how it might be designed for wide-scale use in the maritime industry.

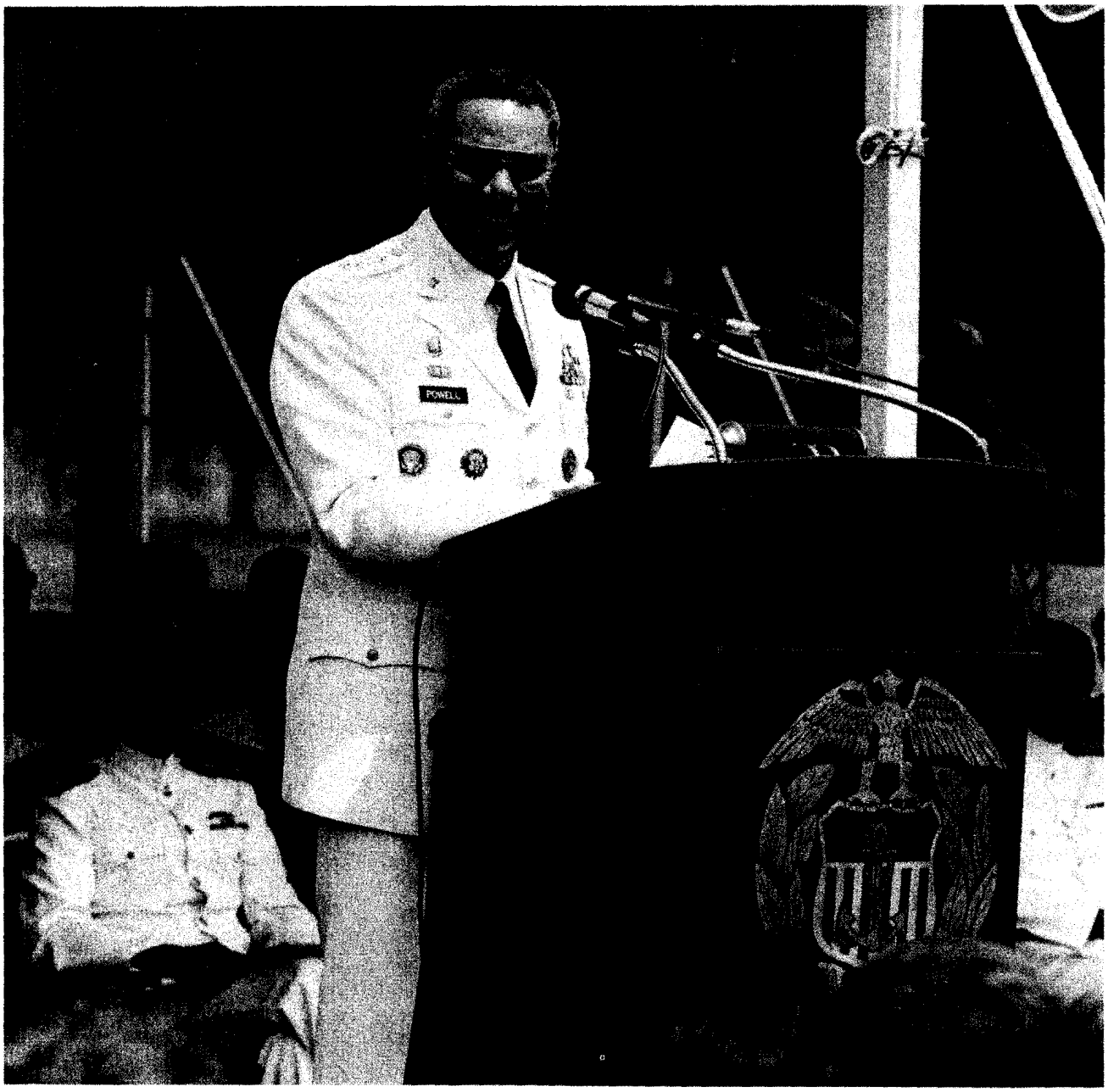
Chapter 8

Maritime Labor and Training

The Maritime Administration (MARAD) supports the training of merchant marine officers and supplemental training related to safety in U.S. waterborne commerce. MARAD also monitors maritime industry labor practices and policies in conjunction with national and international organizations, and promotes healthy labor relations.

U.S. Merchant Marine Academy

MARAD operates the U.S. Merchant Marine Academy at Kings Point, NY, which educates young men and women to become officers in the American merchant marine.



General Colin L. Powell, Chairman, Joint Chiefs of staff, addressing the Kings Point Class of 1992

Graduates receive U.S.Coast Guard licenses as deck or engineering officers, or both, and Bachelor of Science degrees. U.S. citizen graduates are obligated to apply for, and accept if offered, reserve commissions as officers in an armed service of the United States.

The Class of 1992 comprised 74 third mates, 78 third assistant engineers, and 7 graduates who completed the dual license deck/engine program. Ten women were among the graduates. Chairman of the Joint Chiefs of Staff, General Colin Powell, delivered the commencement address. Within 90 days after commencement, approximately 82 percent of the 159 graduates had already found employment in the maritime industry--aboard ship or ashore--or were serving on active military duty in the U.S. military services.

Average enrollment at the Academy during the year was 913.

At the beginning of the 1992-93 academic year, the regiment of midshipmen included 87 women, 14 of whom were scheduled to graduate in June 1993.

Members of Congress nominated 1,805 constituents for the Class of 1996 and a total of 281 appointments were made in fiscal year (FY) 1992. All classes of the Academy are under mandatory service obligation contracts to serve 5 years in the U.S. merchant marine or in maritime-related employment, maintain a Reserve Commission for 8 years, and renew their 5-year U.S. Coast Guard licenses at least once after graduation.

The Academy is accredited by the Middle States Association of Colleges and Schools. The Marine Engineering Systems curriculum is accredited by the Accreditation Board of Engineering and Technology.

In addition to classroom study, Academy midshipmen are assigned to U.S.-flag merchant ships for two 6-month periods for practical shipboard experience.

The Academy strives to keep its educational program current and responsive to the needs of America's maritime industry. In September 1992, it became the only institution of higher learning selected for induction in the Containerization & Intermodal Institute's Hall of Fame.

State Academies

MARAD provides financial assistance to six State maritime academies to train merchant marine officers by authority of the Maritime Education and Training Act of 1980. The six academies are: California Maritime Academy, Vallejo, CA; Great Lakes Maritime Academy, Traverse City, MI; Maine Maritime Academy, Castine, ME; Massachusetts Maritime Academy, Buzzards Bay, MA; State University of New York Maritime College, Fort Schuyler, NY; and, Texas Maritime College, Galveston, TX.

Last year, State maritime academy cadets who participated in the Student Incentive Payment Program received a maximum of $1,200 annually to offset school costs. For the FY 1993 budget, Congress increased the annual amount to $3,000 beginning in academic year 1993. Participating cadets are obligated to remain employed in the maritime industry for 3 years, to accept a reserve commission in the Navy or one of the other armed forces, and to renew or upgrade their U.S. Coast Guard merchant marine license at least once after graduation.

MARAD provides training vessels to five seacoast academies for use in at-sea training and as shoreside laboratories. The California, Maine, and Texas academies expressed concern over replacing their aging schoolships. Plans are underway for the recently decommissioned Navy Survey vessel CHAUVENET to replace the Texas Maritime Academy's TEXAS CLIPPER; the HARKNESS, a sistership to the CHAUVENET, is scheduled to replace the Maine Maritime Academy's STATE OF MAINE. The H. H. HESS has been identified as a replacement for the California Maritime Academy's GOLDEN BEAR.

At year's end, the Massachusetts Maritime Academy was scheduled to host the second annual "Women Underway" seminar at Buzzards Bay. This seminar was to be sponsored jointly by the Massachusetts Maritime Academy and MARAD. These conferences bring together the Nation's maritime leadership to learn and share the concerns of women employed at sea and ashore. The seminar also provides students from all of the maritime academies information about issues and career opportunities for women in the maritime industry.

Congress appropriated $1.2 million in matching funds in 1992 to purchase training simulators and related equipment for the maritime academies; an additional $800,000 was made available from the sale of obsolete scrap vessels from MARAD's National Defense Reserve Fleet. Under this system, each school selected the simulation equipment best suited to its programs, and was required to raise and commit one-half of the necessary funds prior to receiving a matching amount from MARAD. All of the State maritime schools participated.

RADM David Brown was appointed Superintendent of the Great Lakes Maritime Academy in April 1992.

Supplemental Training

MARAD provides supplemental training for seafarers in maritime fire fighting, diesel engineering, and defense readiness. In FY 1992, 1,804 maritime personnel were trained in ship and barge firefighting. Participants included U.S. citizen seafarers and others concerned with maritime fire safety, such as Coast Guard personnel and port city professional firefighters.

MARAD-sponsored basic and advanced firefighting training is offered at its fire school at Swanton, OH; the U.S., Navy-Military Sealift Command/MARAD fire training facility in Earle, NJ; and the U.S. Navy fire training installation at Treasure Island, San Francisco, CA.

In support of firefighting readiness in port cities, shipboard firefighting training is offered to municipal firemen from waterfront communities who may be called on to fight shipboard fires. Twenty-three firefighters participated in the 2-day training at the Toledo Marine Fire Training Center.

The Agency's Continuing Education Marine Diesel Program conducted at Kings Point, NY, provided industry personnel with special short courses on the operation and maintenance of diesel power plants. Fifty students completed studies during the reporting period.

MARAD initiated a 2-week National Sealift Training Program for Masters and Chief Mates at the U.S. Merchant Marine Academy in fiscal year 1992. It was developed to respond to the need to improve U.S.-flag strategic sealift support capability and reduce vulnerability to piracy and hostage threats. The current course combines the Master Mariners Readiness Course with new course modules in Defense Communications and Maritime Security. In FY 1992, 53 senior deck officers completed this new program. The Academy plans to offer the program at least six times per year.

Labor Data

In fiscal year 1992, average monthly U.S. seafaring employment in all sectors (private, Government contract, and Great Lakes) decreased to 14,446, down 11.4 percent from the FY 1991 average of 16,308. (See Table 16.) The total work force in selected U.S. commercial shipyards decreased 3.3 percent from 93,982 in FY 1991 to 90,890 in FY 1992. Average longshore employment decreased from 26,698 to 25,220.

Merchant Marine Awards

A ceremony was held on May 19, 1992, in Alexandria, VA, aboard the World War II Liberty ship JOHN W. BROWN at MARAD's Annual Merchant Marine Memorial Service. The Secretary of Transportation, who was the principal speaker, praise the valor and sacrifice of American civilian seafarers support of U.S. military services in wartime. He also announced the availability of newly authorized medal for civilian merchant seamen, in recognition of their service in World War II, Korea, Vietnam, and, most recently, in the war against Iraq.

Labor

An overall atmosphere of cooperation continued to exist between maritime labor and management. This climate benefits the development and coordination of actions to increase and improve the competitiveness of the U.S. maritime industry.

Improved service, increased productivity, controlled costs, and efficient investment in new technology persist as management's goals in future negotiations. Labor unions seek stability of employment, preservation of jobs and job jurisdiction, and comprehensive health and welfare benefits for their members. Safety issues are of great concern to both parties.

Both labor and management plan early discussions prior to the expiration of current agreements beginning in June 1993.

Longshore

Contention for representation among unions and between unions and nonunion labor continues at intermodal facilities. The International Longshoremen's Association (ILA) insists that its master contract with East Coast employers gives the ILA jurisdiction over new facilities. Newly opened facilities in Philadelphia, PA, are now represented by the Teamsters Union. Similarly, on the West Coast the International Longshoremen's and Warehousemen's Union (ILWU) lost over 300 jobs to a rail union at the Port of Los Angeles, CA. New intermodal facilities often are not located at the dock, making the distinction between

what a marine terminal, a rail yard, and a track facility is no longer obvious.

On the West Coast, the International Longshoremen's and Warehousemen's Union (ILWU) Pacific Maritime Association (PMA) agreements remain in effect until July 1, 1993. The ILWU continues its efforts to enlarge its labor force representation. PMA claims its member companies experienced labor shortages as a result of the system of requesting longshore personnel through dispatch halls, as well as antiquated work rules. PMA seeks reforms leading toward regular employees.

On the East Coast, the Port of New York reported a 10 percent drop from 1990 in the size of the work force. This was due to an early retirement program implemented to reduce the surplus of longshore workers. A 27 percent drop in Guaranteed Annual Income Program (GAI) expenditures paid to unemployed dockworkers was also reported. Reduced labor costs have enabled the port to lower its cargo assessment fee charged to ocean carriers for funding employee benefit plans three times in the last few years. The New York Shipping Association (NYSA) reports that GAI is down to about 15 percent of total outlays with health care costs now being the largest single cost items.

Cooperation between waterfront management and the ILA Southern District slowed the loss of stevedoring business to nonunion operators. Since 1986, employers have paid southern ILA workers less for handling breakbulk and bulk cargo than for container handling. The GAI program is scheduled to cease at the end of this year. The southern contract allows the union and employers to negotiate on a local basis. This contract flexibility enables employers who hire ILA labor to become more competitive in order to attract business.

The Masters, Mates, and Pilots training school at Linthicum Heights, MD, now has a container crane simulator and teaching laboratory to instruct longshoremen on sophisticated container crane equipment.

Labor and management have agreed to begin meeting early next year on a new contract to follow the one which expires in October 1994. Retraining and placing displaced workers in other jobs are the major union demands, and controlling costs for income security and health and welfare benefits is management's central demand.

Seafaring

Most seafaring collective bargaining agreements begin expiring after June 1993. The Sailor's Union of the Pacific (SUP) signed a new 7-year agreement with three tanker companies. The negotiated agreement was the first for the SUP since 1985. Old contracts have been extended in recent years. The SUP represents deck, engine, and stewards on tankers in West Coast service.

In May 1992, the executive council of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) established a special committee to review an internal dispute between two factions of the Marine Engineers Beneficial Association/National Maritime Union (MEBA/NMU). The dispute arose from the merger of the NMU and MEBA-District 1 (Pacific Coast District).

The National Labor Relations Board (NLRB) ordered Chevron USA, Inc., to recognize and bargain collectively with the SUP as the representative of the Launch Captains aboard the company's inland vessels operating in San Francisco Bay. An administrative law judge found Chevron guilty of violating the National Labor Relations Act after the SUP filed unfair labor practices charges. Chevron contended the Launch Captains were supervisory personnel and not entitled to representation.

Litigation and Legislative Proposals

The State Department added Japan, Germany, and Algeria to its list of nations with longshore labor rules that legally prohibit U.S. mariners from performing dock work in those countries. The list, first compiled in May 1991 incident to a 1991 amendment to the Immigration and Nationality Act, now numbers 50 countries. The amendment redefined "longshore work" and require the compilation of information about longshore laws, regulations, and practices of foreign countries. The U.S. District Court in Tampa, FL, issued an injunction against the ILA which sought an agreement from Japanese dockworkers. The NLRB was reviewing whether the ILA is guilty of an illegal secondary boycott by requesting that the National Council of Dockworkers Union of Japan refuse to handle citrus loaded by nonunion labor at Port Canaveral and Fort Pierce, FL. The Department of Labor is considering rewriting safety regulations for waterfront dock work. The proposed rules will be issued by the Occupational Health and Safety Administration and are expected to cover container and bulk cargo handling including safety

standards for container top work. Since the first rule in handling containers was issued in 1960, containers are now stacked up to six high on deck.

As a result of enactment of the Oil Pollution Act of 1990, the U.S. Coast Guard is expanding the list of reasons for which a mariner's license or merchant mariner's document may be subject to suspension and revocation. The chargeable offenses extend beyond offshore activities and include driving a vehicle while intoxicated.

A recently decided case with national implications involves a California Department of Industrial Relations ruling that workers aboard three oil cleanup vessels are eligible for overtime pay. This ruling overturned historic Federal admiralty law exempting seamen from overtime pay. The Justice Department, on behalf of the Labor Department, agreed that states had the right to impose their own rules on maritime workers. The decision was upheld by the Ninth U.S. Circuit Court of Appeals. Shipping associations have asked the Supreme Court to overturn the decision.

Table 16: MARITIME WORK FORCE AVERAGE MONTHLY EMPLOYMENT

	Average Monthly Employment in Fiscal Year	
	1992	1991
Seafaring Shipboard Jobs:	**14,446**	**16,308**
Shipyards:[1]	**90,890**	**93,982**
Production Workers	61,620	63,885
Management and Clerical	29,270	30,097
Longshore:	25,220	26,698

[1]Commercial yards in the Active Shipbuilding Base, constructing new ships and/or seeking new construction orders.

Chapter 9

National Security

The Maritime Administration (MARAD) is responsible for assuring the availability of merchant shipping in times of war or national emergency. While the Department of Defense (DOD) quantifies mobilization requirements for sealift, it is MARAD's responsibility to administer specific programs to meet those requirements. These programs are administered in accordance with statutory directives and the explicit principles of the National Security Sealift Policy.

MARAD also conducts specific national security activities. Inactive, Government-owned, vessels are maintained in the National Defense Reserve Fleet (NDRF), and in the Ready Reserve Force (RRF) component of the NDRF, to preserve an inventory of ships to meet requirements for additional shipping in times of emergencies.

The RRF was created to maintain a surge shipping and resupply capability available on short notice to support deployment of a multidivision force. MARAD also conducts national security planning and operations in other general areas including national emergency communications, war risk insurance, and port emergency operations. This chapter details MARAD activities in carrying out its national security responsibilities during fiscal year (FY) 1992.

National Security Sealift Policy

Oversight responsibility for monitoring implementation of the National Security Sealift Policy was assigned by the President to the National Security Council's Policy Coordinating Committee on Emergency Preparedness and Mobilization Planning. The Maritime Administrator serves as Chairman of the Sealift Subcommittee of the Policy Coordinating Committee. Its members represent the Departments of Transportation, State, and Defense, the National Security Council, and the Office of Management and Budget. It advises the full committee on a broad spectrum of sealift policy matters.

The National Defense Authorization Act for FY 1991 charged the DOD with determining future mobility requirements, including sealift, for the Armed Forces and development of an integrated plan. The first volume of the resulting Mobility Requirements Study (MRS) was published January 23, 1992. Among other recommendations, this volume proposed acquisition (through new construction and conversion) of additional sealift capacity equal to 20 large, medium-speed, roll-on/roll-off (RO/RO) ships; expansion by FY 1999 of the RRF from 96 ships to 142 ships; and increase in the readiness of the RRF.

The President's maritime reform policy was outlined to the Congress on June 17, 1992, and a proposed Maritime Reform Act (H.R. 5627) was introduced in Congress on July 21, 1992. (See Chapter 11.) The major proposal in the bill, with the greatest potential effect on the nation's sealift capacity, was the establishment of a Contingency Retainer Program to insure maintenance of sealift assets through 1999.

Reserve Fleet

Reserve Fleet ships serve as an inactive reserve which can be activated to help meet United States shipping requirements during national emergencies. These vessels are available for both military and nonmilitary emergencies, including commercial shipping crises. Inactive merchant ships and naval auxiliaries are maintained in three Reserve Fleet sites by MARAD personnel. Retention vessels are under preservation, which normally includes dehumidification of interior spaces and cathodic (anticorrosion) protection of the hull.

As of September 30, 1992, the total number of vessels in the NDRF was 306. (See Tables 18 and 19.) One-hundred fourteen were located at Ft. Eustis, VA; 59 at Beaumont, TX; 71 at Suisun Bay, CA; and 62 at other locations, including lay berths under contract in major U.S. port cities.

There were a total of 76 ships held for other government agencies or MARAD's Title XI program. These ships are maintained in various degrees of preservation depending on the requirements of the sponsor. Fleet site workers perform work on these vessels on a cost reimbursable basis.

At the end of this reporting period, 183 ships were being kept as NDRF retention assets, maintained under preservation, and available for activation.

Ready Reserve Force

The RRF is a specific component of the retention NDRF which was established in 1976 by a Memorandum of Agreement between the DOD and MARAD. At the end of the reporting period there were 97 ships in the RRF. The planned goal is to expand to 140 vessels. These ships are kept in a higher state of readiness to enable them to be activated in 5, 10, or 20 days to meet surge military sealift requirements in the event of war as was experienced in Operations Desert Shield and Desert Storm. Some of the higher priority vessels are maintained in a status which permits 4-day activation.

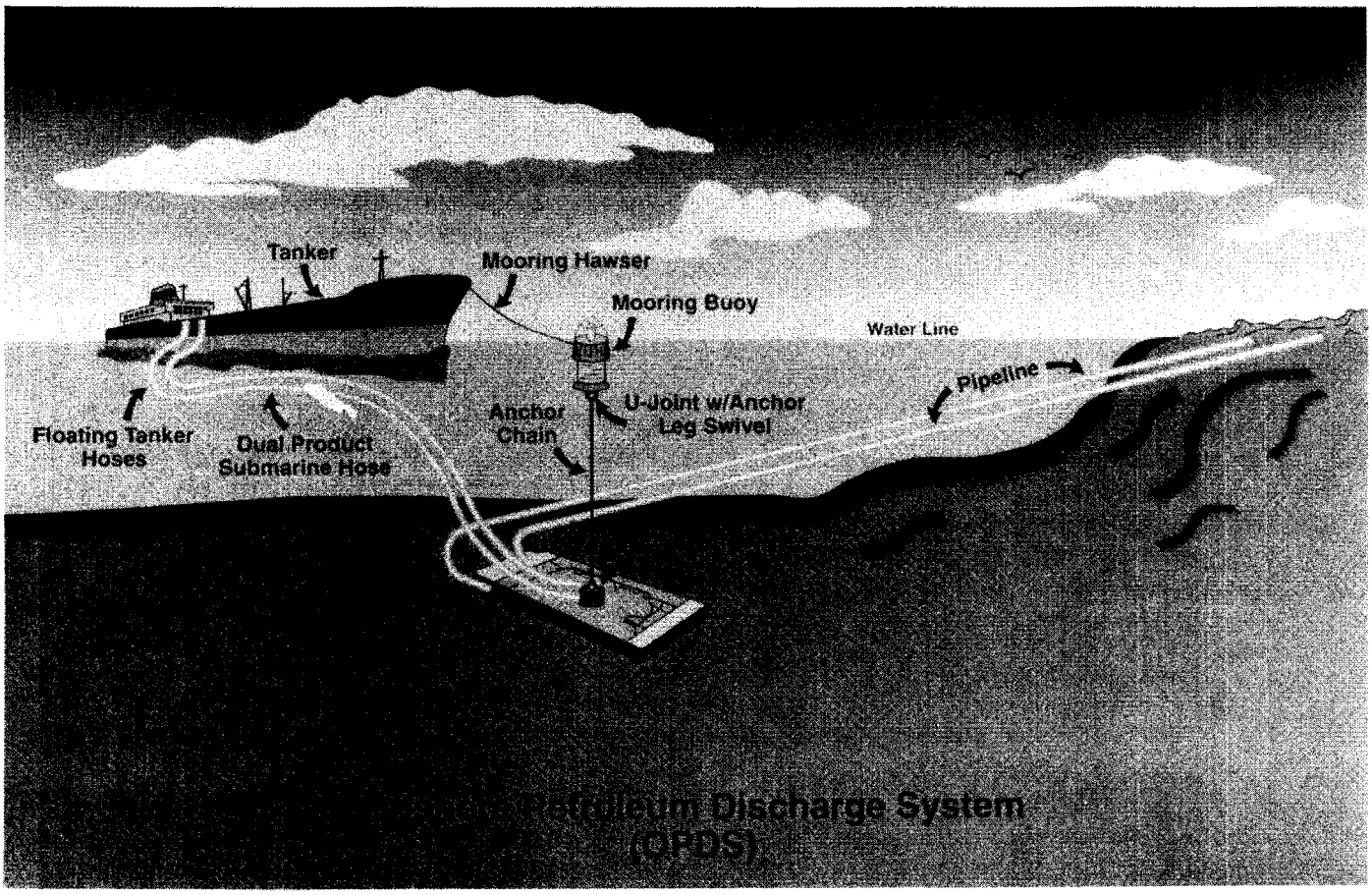
To meet RRF readiness demands of the Mobility Requirements Study, emphasis has been placed on the Outporting Program, which provides contracted lay berths for RRF ships near the expected loading ports for defense cargoes. At year's end, 50 RRF vessels were assigned to outport locations, with 20 on the East Coast, 12 on the Gulf Coast, 15 on the West Coast, and 3 in Japan. Chart 2 shows the status of the RRF vessels that participated in Operation Desert Storm.

Logistics

Implementation of MARAD's RRF Logistics Support System continues. During FY 1992, 25 RRF vessels received logistic overhauls necessary to improve their readiness conditions. The computer-based RRF Equipment Configuration and Spare Parts Management Information System is operational, and will ultimately provide users access through a worldwide network.

Shipyard and Ship Repair Agreement Program

Although activation of RRF vessels during the Persian Gulf conflict was successful and received substantial recognition, problems involving inoperative equipment and systems previously believed to be operational developed during RRF deactivation and layup. MARAD closely monitored activation and operation and determined that inadequate deactivation procedures on some vessels during prior layups caused these post-activation failures.



The OPDS system is designed to deploy up to 4 miles of conduit from ship to shore and begin delivering petroleum products within 48 hours.

To ensure that future RRF ship deactivations are adequate, MARAD began surveying shipyards and repair facilities capable of overhaul or repair work and categorizing contractors consistent with their industrial capability. This two-tier system of capacity and capability certification will provide MARAD with prequalified groups of primary contractors eligible to perform major overhauls, conversions, and reflaggings. It also will identify a secondary group of contractors more suited to routine repairs. The two resulting repair contract groupings are the Shipyard Agreement (SA) category, comprised of fully capable, full service shipyards, and the Ship Repair Agreement (SRA) category, comprised of industrial activities of limited capability. MARAD also expects this prequalification program to promote the broadest base of competition among qualified contractors.

This new program was patterned after a similar and successful U.S. Navy program begun in July of 1992. The first SA/SRA eligibility qualification survey of a ship repair activity was conducted on August 24, 1992.

Adoption of the SA/SRA Qualification Program will increase the probability of successful ship repair, overhaul, drydocking, deactivation, and layup. This new two-tier ship repair contract system is also expected to produce successful RRF vessel activations and operations in the future.

Sealift Enhancement Feature Program

Six RRF ships were selected for Modular Cargo Delivery System (MCDS) upgrades in FY 1992. MCDS systems, installed fore and aft, permit the RRF ship to send tensioned highlines to a naval ship and transfer cargo while both ships are underway. Installation of the six MCDS is projected to cost $27 million, with module costs of an additional $4.4 million per ship. MARAD, using funding provided by the Naval Sea Systems Command, is effecting handling the modifications.

Defense downsizing has reduced the projected requirements for RRF vessels outfitted with cargo delivery systems from 30 to 17. With the completion of the 6 upgrades, there will be 10 RRF ships capable of receiving tensioned highlines and 7 capable of sending tensioned highlines, 9 of which are also fitted with helicopter platforms.

Operations Desert Shield and Desert Storm substantiated the value of the program for modification of RRF ships to conduct underway replenishment operations with naval vessels.

RRF Retention and Maintenance Crews

As a result of analyses of crew availability and vessel readiness for Operation Desert Storm, it has been recommended that high priority RRF ships be partially crewed with maintenance personnel while in inactive status.

Two types of crews are envisioned under the program. The first type, a retention crew, would consist of two licensed marine engineers to oversee all maintenance and repair of the vessel while in layup and be the core members of the operating crew during activations and exercises. They would also conduct routine preventative maintenance on a year-round basis.

The second type, a Reduced Operating Status (ROS) crew, would live aboard and maintain the vessels in 4-day activation readiness. The projected 10-person ROS crew will consist of a mix of licensed and unlicensed personnel from all departments, who will conduct ongoing preventative maintenance year round, as well as provide the nucleus of an operating crew. ROS ships are to have sea trials annually, funds permitting.

Current plans are to have up to 17 ships with ROS maintenance crews living onboard by the end of FY 1993, and an additional 21 ships assigned 5-day readiness with 2-person retention crews.

Other RRF Operations

Other FY 1992 activities included a Joint Chiefs of Staff exercise, OCEAN VENTURE '92, involving three RRF vessels. Phase I of the exercise was held off the North Carolina coast in May 1992, and Phase II was held off the Florida panhandle in September 1992. Both phases emphasized the discharge of fuel and equipment from offshore to the beach area. Three different ship discharge methods were used for different types of vessels: the tanker, CHESAPEAKE; the Offshore Petroleum Discharge System (OPDS) heavylift SeaBee ship, CAPE MOHICAN; and the T-ACS crane ship, FLICKERTAIL STATE.

Coast Guard MOU Inspections and Trials

As a result of MARAD's expenses in Operation Desert Storm and an after-action report filed by the U.S. Coast Guard (USCG), MARAD and the USCG convened a working group to review and revise their Memorandum of Understanding (MOU) concerning the

RRF. The working group was charged to resolve issues pointed out in the after-action report, and to act on proposed Remedial Action Projects (RAP). These RAP dealt with communication, the chain of command, and material readiness of RRF vessels.

Major changes to the MOU included clarification of existing DOD requirements on the RRF, such as maintaining logistics and material readiness to sustain 180 days of continuous operation. The MOU now requires complete ship inspections, including operational and safety items, for issuance of a Certificate of Inspection (COI) at the time that it is completed.

Operational items may be deferred to a scheduled dock or sea trial within 365 days if the dock or sea trial is not accomplished at the time of the inspection. A USCG form is issued for the deferment and must be cleared prior to sailing on any mission assignment. If not cleared within the specified timeframe, the COI is revoked and the vessel's readiness is downgraded accordingly. The COI is key to the readiness of an RRF vessel to meet its national defense mission requirements.

Other major changes include the institution of a "no known material deficiency" policy. This means that there are no significant material deficiencies at the time of vessel layup and that known deficiencies are corrected while retaining the vessel in inactive status. Previously, known deficiencies were deferred until activation, unless funding was readily available. Repair of these deficiencies during activation can and did lead to delays in activating RRF vessels.

Finally, both agencies have improved communications and understanding which should prevent future problems.

MARAD/USCG command relationships and definitions of the responsibilities of the appropriate parties of both agencies were established. Annual meetings of these individuals are planned. However, communication between meetings will be used to minimize problems and their possible impact on the readiness and availability of an RRF vessel.

Ten-Year Drydocking

Under the MOU's between MARAD and the USCG, and MARAD and the American Bureau of Shipping (ABS), selected RRF vessels can extend their required drydocking surveys from the previously established 5-year interval to a maximum of 10 years. Vessels are being selected based upon projected life expectancy, ship type (i.e., tankers do not qualify), and capability of meeting requirements for a midterm underwater inspection.

Additionally, several possible extended-life coating systems are being examined as possible alternatives to the conventional antifouling paints in use now. A research project has been approved pending funding that would allow testing of some of these coatings.

The length of time between drydock inspections under the new program is variable, depending on operational time, as was the case with the previous MOUs. Currently, all "10-year" ships are considered experimental with respect to budgeting for drydocking. Since there has not been sufficient time to track all vessel histories, MARAD cannot determine qualification for the 10-year timeframe until the vessels have been subjected to their interim (5-year) underwater hull surveys.

Auxiliary Crane Ship Program

The Auxiliary Crane Ship (T-ACS) conversion program initially called for conversion of 12 containerships into crane ships capable of both self-sustaining load/discharge, and the load/discharge of nonself-sustaining containerships moored alongside. This number was reduced to 10 in FY 1992. On September 30, 1992, nine were in the RRF.

Two auxiliary crane ships were loaded with containers and flatracks and placed in sealift service for the Persian Gulf conflict during the reporting period. They were later positioned as port assistance platforms. Ultimately, five T-ACS vessels were deployed to support Operations Desert Shield and Desert Storm.

MARAD's T-ACS ships also have participated successfully in numerous military Logistics Over The Shore (LOTS) amphibious exercises.

Emergency Operations

MARAD issued advisories to mariners in FY 1992 on such topics as United Nations trade sanctions against Iraq, merchant shipping in the Persian (Arabian) Gulf, a naval control of shipping exercise, mandatory Automated Mutual Vessel Energy Rescue (AMVER) reporting, and the National Sealift Training Program.

The 2-week National Sealift Training Program is held six times each year at the U.S. Merchant Marine

Academy. It combines the Master Mariners Readiness Course with two newly-developed courses on Defense Communications and Maritime Security. The targeted participants are actively sailing Masters and Chief Mates. This program has been endorsed by the Navy as satisfying the annual 2-week reserve active-duty requirement.

Emergency Planning and Operations

Throughout this reporting period, MARAD representatives participated in several interagency workshops and exercises addressing reconstitution and mobilization issues, emergency preparedness, and implementation of the Federal Response Plan. MARAD also was represented at NATO Civil Emergency training sessions and symposia.

In cooperation with DOD, several MARAD staff members participated in the 3-week GLOBAL WAR GAME 92 conducted at the Naval War College in Newport, RI. Participants included members of most civil agencies of the Federal Government, as well as civilian and military representatives from Australia, Canada, and the United Kingdom.

As the National Shipping Authority, MARAD participated in the Naval Control of Shipping exercises, titled "EXPANDED SEA/SEA SUPPLY," sponsored by NATO's Supreme Allied Commander, Atlantic, and the U.S. Commander in Chief, Pacific Fleet. MARAD also participated in the annual meeting of the NATO Shipping Working Group which addressed post exercise issues and initial planning for this biennial series of exercises.

MARAD maintains an Emergency Shipping Information System (EMSIS) comprising programs and data related to U.S. and NATO vessel characteristics and movements to support its role as the National Shipping Authority. EMSIS also supports the activities of NATO's Planning Board for Ocean Shipping and its Civil Sealift Group. To capitalize on performance improvements in modern computer technology, EMSIS is being converted from an older minicomputer-based hierarchical data base to a modern relational data base on a highly capable workstation. The new system, called the Ship Tracking and Retrieval System (STARS), is scheduled to be in operation in FY 1993.

A terminal connected to the Joint Maritime Information Element Support System was installed in the MARAD Operations Center linking MARAD to an extensive, interagency data base containing vessel characteristics and movements. This data base will serve as an important complement to others associated with strategic sealift and other merchant vessel assets which also are maintained by MARAD.

Emergency Communications

During FY 1992, MARAD continued developing plans for emergency communications capability to eliminate vulnerability to commercial telephone disruptions. In FY 1991, a transportable INMARSAT Terminal was installed in MARAD's Operations Center. This terminal provides voice and TELEX communications directly between MARAD headquarters and ships at sea and earth stations around the world.

MARAD has also entered its U.S. Merchant Marine Academy High Frequency (HF) Radio station into an emergency communications network of HF radios under a Federal system called SHARES. The SHARES program consists of 36 Federal agencies operating a national network of HF radios to provide communications services during emergencies. The SHARES network was utilized during the Hurricane Andrew disaster in Florida.

Fast Sealift Ship Design

As a result of congressional interest in the Nation's strategic sealift capability and the appropriation of approximately $2 billion for sealift ships during FY 1990-1992 to DOD, the Navy has been developing alternative plans to increase its strategic sealift capacity.

MARAD works with the Navy on the development of sealift ship concepts. During FY 1992, MARAD completed the design study for a commercially viable sealift ship, which was initiated at the Navy's request. This design, the PD-337 container-RO/RO, could be employed commercially as a containership or container-RO/RO. Liftable decks carried onboard enable the ship to be converted into a pure RO/RO suitable for follow-on surge sealift. The Navy included the PD-337 design as Baseline 2a of the "Mid-Term Fast Sealift Options Paper" presented to Congress in April 1992.

Also at the Navy's request, MARAD sponsored two meetings with Navy and industry representatives to ascertain industry interest in commercial operation of RO/RO ships capable of meeting strategic sealift requirements. Late in FY 1992, the Navy requested that MARAD continue to work with industry to refine

this concept as a 20-knot, commercially viable RO/RO ship.

Aviation Logistics Support Ship Program

MARAD accepted custody of the Aviation Logistic Support Ship Program in 1986, in response to a request from the Chief of Naval Operations, Strategic Sealift Division. The SS WRIGHT (T-AVB 3) and SS CURTISS (T-AVB 4) are maintained in a high state of readiness by contract ship manager retention crews, in support of DOD rapid deployment requirements and to augment Maritime Preposition Forces. These ships furnish dedicated sealift for movement of Marine Corps aviation technicians, spare parts, and equipment from the United States to any international area of Marine Corps choice. They provide repair capability for Marine Corps aircraft in worldwide operational areas.

The CURTISS completed deactivation in August 1992, and is currently at her lay berth at Construction Battalion Center, Port Hueneme, CA. It is used periodically to train independent longshoremen and warehousemen on the use of ship's cargo handling equipment. At the end of this reporting period, the WRIGHT was undergoing major repairs and equipment upgrades. She will have a sea trial prior to deactivation and then proceed to her designated lay berth in Baltimore, MD, in 1993.

General Agency Agreement

In response to the possibility of urgent or compelling circumstances which would require the Director, National Shipping Authority, to rapidly expand national defense or other contingency sealift support services, and to provide the crew, ship's fuel, stores, and activation services from prequalified firms, MARAD revised and updated its General Agency Agreement (GAA) in FY 1992.

Members of the maritime industry interested in GAA participation were provided with copies of the revised terms and conditions to review before formally applying for a GAA. The GAA is a contract for the acquisition of supplies and services that becomes active once ships are assigned.

Readmeasurement of RRF Vessels

Over the next 2 years, MARAD must readmeasure all RRF vessels. Readmeasurement insures conformity in the measurement of a vessel's gross and net tonnage. These tonnage measurements are used to calculate taxes, fees, and other charges to vessels engaged in domestic and international trade.

The requirement is based on the 1969 International Maritime Organization (IMO) and International Tonnage Convention (ITC) findings and recommendations. MARAD has asked the ABS to perform the readmeasurement in accordance with its specifications. Now that contracting problems have been resolved, ABS readmeasurement surveys are progressing. To date, 25 RRF vessels are in the process of completing the technical tonnage calculation. Twenty-one vessels have completed calculation requirements and are in the process of undergoing onsite surveys by ABS surveyors. The remaining surveys of RRF vessels are scheduled to be completed during FY 1993.

Ship Manager Contracts

Nine maritime companies continue to provide maintenance and operational services to RRF ships as Ship Managers. Original Ship Manager contracts, awarded in February 1988, will continue until the projected award of new Ship Manager contracts in mid-1993. Ship Managers and General Agents provided valuable service which contributed to the success of Operations Desert Shield/Desert Storm.

Environmental Issues

On August 12, 1992, the USCG issued an interim final rule (57 FR 36222) on double-hull requirements for tankers which became effective on September 11, 1992. This ruling applies to tank vessels which were being constructed or undergoing major conversions under contracts as of June 30, 1992, or later. The intent of the rulings is to ensure that these oil-carrying vessels comply with the double hulls requirement timetable. Ships meeting specified size and age criteria must be in compliance beginning in 1995; all ships must be in compliance by 2015.

MARAD and the USCG continue monitoring the implementation of the Oil Pollution Act of 1990 (OPA' 90) with regard to tank vessel construction standards, oil spill contingency plans, and other requirements.

Nuclear waste from the NS SAVANNAH was deposited in the Maxey Flat, KY, nuclear waste disposal site during the ship's operations from 1961-1969. This site is being cleaned under the EPA

Superfund laws. MARAD was considered to be a *de minimis* contributor in this case, which is being addressed by the Department of Justice. Resolution was expected early in FY 1992; however, it appears that this case will remain unresolved for a number of years. The NS SAVANNAH charter was renewed for another 5 years by the Patriots Point Development Authority in South Carolina. It is being used as part of a maritime museum. MARAD has a joint license from the Nuclear Regulatory Commission with the State of South Carolina for "Possession Only" of the residual radioactive materials still contained in the defueled reactor pressure vessel. Annual audits are held to assure complete safety in the radioactive status of the ship. The NS Savannah will be considered for drydocking for hull maintenance next fiscal year.

As a mechanism for resolving environmental issues, MARAD formed an internal Environmental Coordinating Committee (ECC). The ECC meets biannually to review environmental problems and solutions within Agency facilities and operations and to assure environmental compliance through the use of facility audits of all of these MARAD facilities. Issues were resolved related to hazardous waste disposal requirements at MARAD Reserve Fleet sites this past year.

The U.S. Merchant Marine Academy, the Swanton Fire Training Center, and the three reserve fleet sites at James River, VA, Beaumont, TX, and Suisun Bay, CA, were audited last year. Recommended changes and necessary corrective actions were developed for each facility. These facilities will be audited again in FY 1993 and every 2 years thereafter.

War Risk Insurance

MARAD administers the standby emergency War Risk Insurance Program in accordance with the statutory authority of Title XII of the Merchant Marine Act, 1936, as amended. The program encourages the continued flow of U.S. foreign commerce during periods when commercial insurance cannot be obtained on reasonable terms and conditions. It protects vessel operators and seafarers against losses resulting from war or warlike actions.

As of September 30, 1992, the War Risk Revolving Fund (Fund) asset total was approximately $21,429,000. Binders issued during FY 1992 generated $2,600 in binder fees and the Fund earned $1 million in investment income. Program expenses for FY 1992 totalled $67,450.

As of September 30, 1992, 1,951 vessels and barges had been issued binders, providing eligibility for hull and protection and indemnity war risk insurances. Three hundred ninety-seven of these vessels also had second seaman's war risk insurance available under binder. No binders related to MARAD's standby war risk cargo insurance and builder's risk insurance programs have been issued. All binders are effective for 30 days following an automatic termination of commercial insurance.

MARAD continued to act as the claim agent for Government-owned vessels during fiscal year 1992. Consequent to Operations Desert Shield and Desert Storm, as of September 30, 1992, there were approximately 300 protection and indemnity administrative claims outstanding, and 46 were in litigation. Total settlement value of all potential claims is estimated to be approximately $36 million. MARAD assures that contract requirements are met on all insurance placed in commercial markets by mortgagors of vessels on which the Government guarantees, insures, or holds mortgages; by charters of Government-owned vessels; and by subsidized operators. Table 19 shows marine and war risk insurance approved in FY 1992.

Port Emergency Operations

In FY 1992, MARAD carried out the following preparations for the operation of U.S. ports in emergencies which threaten national security.

Completed Projects	Description
Federal Port Controllers	Completed another Federal Port Controller contract. Expanded and reissued the *Port Emergency Operations Handbook for Federal Port Controllers.*

Emergency Ammunition Ports	Published an unclassified study of potential commercial ports which could augment Government-owned and operated ammunition loading facilities in an emergency.

Ongoing Projects	Description
National Port Readiness Coordination	Participated in meetings of the National Port Readiness Steering and Working Groups comprised of representatives of MARAD, Military Traffic Management Command (MTMC), Military Sealift Command (MSC), U.S. Coast Guard (USCG), U.S. Army Corps of Engineers (USACE), Naval Control of Shipping Organization (NCSORG), Maritime Defense Zones (MARDEZ), and Forces Command (CINCFOR), in accordance with the existing Interagency MOU on Port Readiness.
Local Port Readiness Committees	Headquarters and regional personnel participated in meetings of local Port Readiness Committees held with local representatives of MTMC, MSC, USCG, NCSORG, USACE, MARDEZ, CINCFOR, and other local port members as part of the National Port Readiness Network.
National Defense Executive Reserve	Continued a program to obtain National Defense Executive Reserve membership for Federal Port Controllers.
Contingency Response	Continued to participate as a member of the MTMC's National Contingency Response (CORE) team to promote military mobilization and defense preparedness.
Port Plaques	Prepared and awarded plaques to honor all major U.S. ports which participated in Operations Desert Shield, Desert Storm, and Desert Sortie.

Initiated Projects	Description
Strategic Ports	Initiated meetings between MARAD, MTMC, and strategic U.S. ports to involve public port authorities in pre-planning for future mobilization nrequirements.

CHART 2: STATUS OF RRF VESSELS THAT PARTICIPATED IN PERSIAN GULF SEALIFT AS OF SEPTEMBER 30, 1992

	VESSEL	STATUS	TYPE
1.	CAPE INSCRIPTION	DEACTIVATING	RO/RO
2.	CAPE FAREWELL	DEACTIVATING	LASH
3.	CAPE FLATTERY	DEACTIVATING	LASH
4.	CAPE HENRY	ROS-4	RO/RO
5.	CAPE HUDSON	MSC OPCON/VOYAGE REPAIRS	RO/RO
6.	CAPE DOMINGO	DEACTIVATING	RO/RO
7.	CAPE LOBOS	DEACTIVATING	RO/RO
8.	CAPE HORN	ROS-4	RO/RO
9.	JUPITER	DEACTIVATING	RO/RO
10.	CAPE MOHICAN	DEACTIVATING	SEABEE
11.	CAPE ISABEL	DEACTIVATING	RO/RO
12.	CAPE MAY	DEACTIVATING	SEABEE
13.	CAPE DOUGLAS	DEACTIVATING	RO/RO
14.	CAPE EDMONT	MARAD OPCON/REPAIRS	RO/RO
15.	CAPE DUCATO	MARAD OPCON/AWAITING DEACTIVATION	RO/RO
16.	CAPE CLEAR	DEACTIVATED & OUTPORTED	BB
17.	METEOR	MARAD OPCON/AWAITING DEACTIVATION	RO/RO
18.	COMET	DEACTIVATING	RO/RO
19.	CAPE BRETON	MARAD OPCON/AWAITING DEACTIVATION	BB
20.	GULF BANKER	MARAD OPCON/AWAITING DEACTIVATION	BB
21.	ADM CALLAGHAN	ROS-4	RO/RO
22.	CAPE BORDA	DEACTIVATING	BB
23.	CAPE JUBY	DEACTIVATING	BB
24.	CAPE DECISION	DEACTIVATING	RO/RO
25.	WASHINGTON	DOWNGRADED TO NDRF, JRRF	BB
26.	CAPE CATOCHE	DEACTIVATED & OUTPORTED	BB
27.	CAPE ALEXANDER	DEACTIVATING	BB
28.	EQUALITY STATE	MARAD OPCON/AWAITING DEACTIVATION	T-ACS
29.	GULF TRADER	DEACTIVATING	BB
30.	CAPE ARCHWAY	DEACTIVATING	BB
31.	CAPE MENDOCINO	MARAD OPCON/AWAITING DEACTIVATION	SEABEE
32.	CORNHUSKER STATE	MARAD OPCON/AWAITING DEACTIVATION	T-ACS
33.	AMERICAN OSPREY	MSC OPCON, DEPLOYED WITH APF	TKR/OPDS
34.	CAPE JOHNSON	DEACTIVATING	BB
35.	MAINE	DOWNGRADED TO NDRF, BRF	BB
36.	CAPE NOME	MARAD OPCON/AWAITING DEACTIVATION	BB
37.	DEL VALLE	MARAD OPCON/AWAITING DEACTIVATION	BB
38.	CAPE GIRARDEAU	MCDS CONVERSION/DEACTIVATION	BB
39.	AUSTRAL LIGHTNING	MARAD OPCON/AWAITING DEACTIVATION	LASH
40.	CAPE GIBSON	MCDS CONVERSION/DEACTIVATION	BB
41.	CAPE LAMBERT	DEACTIVATING	RO/RO
42.	CAPE FLORIDA	DEACTIVATED	LASH
43.	CAPE ANN	DEACTIVATED	BB
44.	DEL MONTE	DEACTIVATED	BB
45.	GOPHER STATE	MARAD OPCON/AWAITING DEACTIVATION	T-ACS
46.	FLICKERTAIL STATE	MARAD OPCON/AWAITING DEACTIVATION	T-ACS
47.	CAPE BOVER	DEACTIVATING	BB
48.	CAPE BLANCO	MARAD OPCON/AWAITING DEACTIVATION	BB

CHART 2: STATUS OF RRF VESSELS THAT PARTICIPATED IN PERSIAN GULF SEALIFT AS OF SEPTEMBER 30, 1992 (Cont'd)

49.	CAPE BON	DEACTIVATING	BB
50.	CALIFORNIA	SEF CONVERSION	BB
51.	NORTHERN LIGHT	DEACTIVATING	BB
52.	CAPE CHARLES	MARAD OPCON/AWAITING DEACTIVATION	BB
53.	DIAMOND STATE	DEACTIVATING	T-ACS
54.	CAPE CARTHAGE	MARAD OPCON/AWAITING DEACTIVATION	BB
55.	CAPE DIAMOND	DEACTIVATING	RO/RO
56.	LAKE	DEACTIVATING	BB
57.	PRIDE	MARAD OPCON/AWAITING DEACTIVATION	BB
58.	SCAN	MARAD OPCON/AWAITING DEACTIVATION	BB
59.	BANNER	DEACTIVATED	BB
60.	COURIER	DEACTIVATED	BB
61.	CAPE CANSO	MARAD OPCON/AWAITING DEACTIVATION	BB
62.	CAPE CATAWBA	MARAD OPCON/AWAITING DEACTIVATION	BB
63.	CAPE COD	MARAD OPCON/AWAITING DEACTIVATION	BB
64.	SANTA ANA	DEACTIVATING	BB
65.	AGENT	MARAD OPCON/AWAITING DEACTIVATION	BB
66.	CAPE ALAVA	DEACTIVATING	BB
67.	POTOMAC	MSC OPCON, DEPLOYED WITH APF	TKR/OPDS
68.	CAPE AVINOF	DEACTIVATED	BB
69.	AMBASSADOR	MARAD OPCON/AWAITING DEACTIVATION	BB
70.	BUYER	MSC OPCON	BB
71.	CAPE CANAVERAL	DEACTIVATED	BB
72.	AIDE	DEACTIVATING	BB
73.	MISSION BUENAVENTURA	DEACTIVATED	TKR
74.	MISSION CAPISTRANO	DEACTIVATED	TKR
75.	AMERICAN EXPLORER	DEACTIVATED	TKR
76.	SHOSHONE	DEACTIVATING	TKR
77.	GULF MERCHANT	DEACTIVATED	BB
78.	GULF SHIPPER	DEACTIVATED	BB
79.	GEM STATE	DEACTIVATING	T-ACS
80.	CURTISS	DEACTIVATED & OUTPORTED	T-AVB
81.	WRIGHT	DEACTIVATING	T-AVB

Key:

BB	-	Breakbulk
RO/RO	-	Roll-On/Roll-Off
ROS	-	Reduced Operating Status
LASH	-	Lighter Aboard Ship Barge Carrier
OPDS	-	Offshore Petroleum Delivery System-Tanker
SEABEE	-	Heavylift Barge Carrier
TKR	-	Tanker
T-ACS	-	Auxillary Craneship
T-AVB	-	Aviation Logistics Support Ship

Table 17: NATIONAL DEFENSE RESERVE FLEET--SEPTEMBER 30, 1992

Home Port	NDRF Retention[1]	NDRF Non-Retention[2]	Custody Programs[3]	Totals
James River, VA	44	23	47	114
Beaumont, TX	41	8	10	59
Suisun Bay, CA	38	14	19	71
Other Locations	60	2	0	62
Totals:	183	47	76	306

[1] Vessels maintained under the fleet preservation program for emergency activations, including the RRF.

[2] Vessels pending disposal under Section 510(i) provisions or donation pursuant to statute.

[3] Title XI vessels in default, Navy, and other Government-owned vessels in MARAD reimbursable custody.

Table 18: NATIONAL DEFENSE RESERVE FLEET, 1945--1992

Fiscal Year	Ships	Fiscal Year	Ships
1945	5	1969	1017
1946	1421	1970	1027
1947	1204	1971	860
1948	1675	1972	673
1949	1934	1973	541
1950	2277	1974	487
1951	1767	1975	419
1952	1853	1976	348
1953	1932	1977	333
1954	2067	1978	306
1955	2068	1979	317
1956	2061	1980	303
1957	1889	1981	317
1958	2074	1982	303
1959	2060	1983	304
1960	2000	1984	386
1961	1923	1985	300
1962	1862	1986	299
1963	1819	1987	326
1964	1739	1988	320
1965	1594	1989	312
1966	1327	1990	329
1967	1152	1991	316
1968	1062	1992	306[1]

[1] Includes 76 vessels not owned by the Maritime Administration but in Maritime Administration custody.

Table 19: MARINE AND WAR RISK INSURANCE APPROVED IN FY 1992

Kind of Insurance	Total Amount	Percentage	
		American	Foreign
Marine Hull & Machinery	$3,396,066,734	50	50
Marine Protection and Indemnity [1]			
War Risk Hull and Machinery	$3,084,284,128	49	51
War Risk Protection & Indemnity	$3,048,284,128	49	51

[1] Protection and Indemnity insurance coverage is obtained principally from assessable mutual associations managed in the British market and is unlimited, thereby making it impossible to arrive at the total amount or percentage figures for American and foreign participation.

Chapter 10

International Activities

The Maritime Administration (MARAD) continued its efforts to obtain equitable treatment for U.S.-flag carriers' participation in world trade in fiscal year (FY) 1992. MARAD conducted discussions with China, Russia and the Ukraine, Korea, Taiwan, and Venezuela and took part in several multilateral conferences.

Negotiations and Agreement with China

In October 1991, the Maritime Administrator lead a U.S. delegation meeting with a Peoples Republic of China (PRC) delegation in Washington to seek removal of that nation's restrictions on U.S. carriers' operations that were the subject of a Federal Maritime Commission (FMC) investigation. At that meeting, the Maritime Administrator and his Chinese counterpart signed a Memorandum of Consultation (MOC) which included a PRC commitment to enable U.S. carriers to operate a full range of business activities in branch offices in China. The MOC also contains remedial action in other areas.

In September 1992, the Maritime Administrator again met with his Chinese counterpart in Beijing and negotiated an extension of the U.S.-PRC Bilateral Maritime Agreement through December 15, 1993. The two also signed Agreed Minutes dealing primarily with Chinese barriers to operations by U.S. carriers.

The FMC is continuing to monitor conditions in the China trade.

Negotiations with Russia and Ukraine

Following the collapse of the Soviet Union, the United States initiated the renegotiation of the 1990 U.S.-U.S.S.R. Maritime Agreement with the Soviet Union's maritime-oriented successor republics. In April 1992, in Moscow, the Maritime Administrator negotiated a draft amendment to the 1990 agreement that reflected the newly independent status and democratic character of Russia. In view of the improved political relations between the United States and Russia, the new draft agreement particularly focuses on enhanced vessel access to each country's ports.

In September 1992, in Washington, DC, the Maritime Administrator and his Ukrainian counterpart initialed a new maritime agreement which provides for improved vessel access to each country's ports and commits Ukraine to a free-market approach to shipping policy. Ukraine's ports are on the Black Sea and the Sea of Azov.

Consultations with Korea

During July and August 1992, in Washington, the Maritime Administrator held two rounds of consultations with his Korean counterpart. These meetings produced Agreed Minutes setting forth a timetable for the elimination of restrictions on U.S. shipping companies' ability to conduct trucking and consolidating businesses in Korea and clarifying U.S. carriers' access to rail contracting.

Consultations with Taiwan

MARAD officials met with Taiwan authorities in Washington and in Taipei in an effort to ensure equitable treatment for U.S. carriers serving Taiwan. Taiwan's commitments to remove restrictive trade conditions involving off-dock container terminals, inland trucking services, chassis registration, container leasing licenses and shipping agency licenses, as well as implementation of Taiwan's new Fair Trade Law, were at the center of these discussions.

Visits to Japan

The Maritime Administrator met with officials of the Japanese government, shipping industry representatives, and Japanese exporters in Tokyo in February and September 1992. During these visits, he discussed a full range of issues facing U.S. carriers in the Japan trade. These included the prohibition on Sunday cargo operations in Japan's ports, other port service problems, and double measurement of export cargo. The American side also sought greater use of U.S.-flag liner and car carriers, and the introduction of 45-foot containers.

Agreement with Venezuela

MARAD participated in negotiations that produced a U.S.–Venezuela Maritime Agreement in October 1991.

The agreement contributed to the resolution of a case before the FMC. The agreement provides for equal access by each country's national flag carriers to the other country's reserve cargo; hence, its implementation substantially depends on MARAD's implementation of U.S. cargo preference laws.

Multilateral Agreements

MARAD representatives participated in the negotiations on transportation which were a part of the North American Free Trade Agreement (NAFTA) negotiations. These talks between the United States, Mexico, and Canada, essentially excluded shipping from coverage by the NAFTA. By year's end, the overall agreement was not final but the parties had reached fundamental agreement on a detailed text.

Negotiation of an agreement on trade in services in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) continued during FY 1992. In that period, MARAD elaborated the U.S. position to exclude maritime services from coverage by the GATT. This U.S. position was formally presented to the GATT Secretariat in Geneva.

Organization for Economic Cooperation and Development (OECD)

MARAD assisted in negotiations aimed at a multilateral agreement under the OECD to eliminate government subsidies and other obstacles to competition in shipbuilding. When the negotiations deadlocked over key issues in April 1992, MARAD continued to participate in interagency discussion of alternative approaches.

MARAD also was represented on the U.S. delegation to regularly scheduled meetings of the OECD's Maritime Transport Committee. The Committee initiated a dialogue with Dynamic Asian Economies in December 1991 and conducted a second round of consultations in June 1992 with maritime officials from the newly independent states of the former U.S.S.R. and from Central and Eastern Europe.

Other Activities

MARAD participated in the Transport Canada–U.S. Department of Transportation Research and Development Cooperation Program review meeting in Ottawa, Canada. This is the only U.S. Department of Transportation cooperative program that covers all modes of transportation. MARAD also participated in the annual meeting of the Transport Canada–U.S. Department of Transportation Emergency Planning Committee for Civil Transportation during April 1992 in Montreal. MARAD was represented on the U.S. delegation to the International Maritime Organization's 23rd session of the Subcommittee on Standards of Training and Watchkeeping in February 1992, which focused extensively on safety, fatigue, and physical standards.

In cooperation with the Departments of State and Defense, MARAD devised procedures to facilitate the inspection of cargoes by the Multinational Interdiction Force enforcing U.N. sanctions against Iraq in the Strait of Tiran.

Additionally, MARAD participated in meetings and training sessions of various NATO subsidiary groups. Chief among these is the Planning Board for Ocean Shipping (PBOS), on which the Administrator serves *ex officio* as Washington Chairman. MARAD hosted the 44th Plenary Session of PBOS at the Department of State in September.

Other NATO activities in which MARAD is actively involved include the work of the Interallied Insurance Organization, the NATO Shipping Working Group, and the Defense Shipping Authority and its subsidiary planning group. Each of these bodies held an exercise or training session with extensive involvement by MARAD staff in organizing and executing sealift exercises.

MARAD also took part in selected activities of NATO's Senior Civil Emergency Planning Committee including the 1992 Civil Emergency Training Session held in Brussels, and the SHAPE Movements Conference at Fort Eustis, VA. MARAD hosted the inaugural meeting of the Tripartite Working Group, which examined transportation issues, at the World Trade Center in Baltimore.

MARAD continued to cooperate with the International Maritime Organization's World Maritime University by providing field training at MARAD Headquarters and arranging site visits to several U.S. ports. The visiting students this year were from Korea and Malaysia and are majoring in port and shipping administration.

Under sponsorship of the East-West Trade and Commerce Group, MARAD briefed port executives from the former Soviet republics on U.S. port development and practices. MARAD staff members also participated in an interagency working group designed to facilitate the transportation of humanitarian relief cargoes to the republics of the former Soviet Union.

Chapter 11

Administration

The administrative actions taken in support of the mission and programs of the Maritime Administration (MARAD) in fiscal year (FY) 1992 are summarized below.

National Transportation Policy/Maritime Policy

One of the primary maritime objectives cited in the Department of Transportation policy publication, *Moving America--New Directions, New Opportunities: A Statement of National Transportation Policy*, was development of a series of maritime program reform proposals aimed at providing commercial operators greater flexibility to compete in international trades and to be competitive in the acquisition of vessels. A maritime reform policy was formulated and outlined to Congress on June 17, 1992. The proposed Maritime Reform Act (H.R. 5627) was introduced on July 21, 1992, but was not passed before the end of the 102nd Congress.

The major proposal in the legislative initiative would have established a Contingency Retainer Program providing Federal assistance payments for up to 74 vessels for 7 years. Participating U.S. operators would have been required to keep vessels in active international commerce under the U.S. flag, improve their productivity and operating efficiency, and make them available in times of emergency.

Other major provisions of the bill would have allowed withdrawals from tax-deferred Capital Construction Funds to be used to acquire vessels worldwide for operation in international trades; eliminated the 3-year waiting period for foreign-built, U.S.-flag ships to be eligible to carry U.S. preference cargoes; and relaxed U.S. citizenship tests for ownership and control of U.S.-flag vessels in order to attract more foreign equity capital and make it easier for U.S. companies to enter into joint ventures with foreign companies.

As an outgrowth of National Transportation Policy implementation, MARAD contributed significantly to the development of recommendations for enhancing intermodal transportation. These recommendations served to assist in defining the mission of the Department's new Office of Intermodalism, which was created by the Intermodal Surface Transportation Efficiency Act of 1991.

Maritime Subsidy Board

The Maritime Subsidy Board (MSB), by delegation from the Secretary of Transportation, awards, amends, and terminates contracts subsidizing the construction and operation of U.S.-flag vessels in the foreign commerce of the United States. To perform its functions, the MSB holds public hearings, conducts fact-finding investigations, and compiles and analyzes trade statistics and cost data. MSB decisions, opinions, orders, rulings, and reports are final unless the Secretary of Transportation undertakes reviews of these actions.

The MSB is composed of the Maritime Administrator, who acts as Chairman of the Board, the Deputy Administrator, and MARAD's Chief Counsel. The Secretary of MARAD and the MSB acts as an alternate member in the absence of any one of the three permanent Board members.

During FY 1992, the MSB took a number of administrative actions to help strengthen the U.S. merchant marine. Of significance was approval to extend the subsidizable lives of five C5-S-37e Pacer class vessels are operated by Lykes Bros. Steamship Co., Inc. (Lykes) for 3 years. The approval to extend the subsidizable lives gives Lykes the use of five economically viable ships to serve the U.S. foreign trade, as well as maintaining the ships manned with trained and efficient personnel to meet active sealift requirements of the Department of Defense. In return for the extensions, Lykes agreed to terminate its subsidy contract on December 31, 1997, 1 year earlier than the original termination date.

The MSB and the Maritime Administrator worked to settle the Government's claims under certain debt obligations owed by Farrell Lines, Inc. (Farrell). This greatly stabilized the operator's financial position and minimized the Government's future obligations; Farrell agreed to reduce the term of its subsidy contract by 3 years. Additionally, in separate actions, the MSB approved the chartering of two C6-S-69c Seamaster vessels from American President Lines, Ltd. (APL) to Lykes. The additional vessels will aid Lykes in maintaining greater schedule integrity, and they are better suited to Lykes' Gulf/Atlantic trades than APL's trans-Pacific line-haul services.

The MSB met a number of times during the reporting period, and 38 notices in the *Federal Register* were published relating to required statutory hearings and to the development and adoption of rules and regulations in the implementation of the Merchant Marine Act, 1936, as amended.

MARAD's Secretary, as Freedom of Information Officer, received and processed approximately 268 Freedom of Information Act requests.

Legal Services, Legislation, Regulations, and Litigation

MARAD's Chief Counsel provides advice on all legal matters which involve the Maritime Administrator, the MSB, and the MARAD's various offices and divisions. Legal services provided for day-to-day operations include informal advice, legal memoranda, and contract documents. The Chief Counsel responds to inquiries from Washington Headquarters, regional offices, and the U.S. Merchant Marine Academy.

The volume of naval work in the shipbuilding and ship repair industry has fallen sharply, and the intensity of competition has risen. Significant time and effort were expended during the year on administrative disputes and protests involving vessel acquisitions. For example, the major procurement of ships for the Ready Reserve Force (RRF) generated several protests to the General Accounting Office, and decisions were pending as the year closed.

MARAD became the first party to utilize alternate means of dispute resolution before the Department of Transportation's Board of Contract Appeals. This board will be setting precedents on procedural matters that will apply to various other agencies.

Cargo preference continued to require legal support as program staff worked with other agencies and private firms to assure total coverage of cargoes reserved for U.S.-flag vessels.

For the first time since 1988, MARAD issued new loan guarantees under Title XI of the Merchant Marine Act of 1936. The participants were: Chilbar Shipping Co.; Central Gulf Lines, Inc.; American Commercial Lines, Inc.; Parker Towing Co. Inc.; and Ingram Barge Co. Ten defaults occurred during the reporting period totaling $112.4 million. The fund disbursed $106 million in these cases and began foreclosures and pursuit of claims in bankruptcy proceedings.

MARAD also approved a complex restructuring of Crowley Maritime Corp. and its 25 subsidiaries; four of the subsidiaries had Title XI obligations outstanding, secured by a fleet of nearly 100 vessels.

As a result of the role of vessels in the RRF during Operations Desert Shield/Storm/Sortie, MARAD's caseload of administrative claims and lawsuits grew. Administrative claims brought to conclusion under the Suits in Admiralty Act and the Public Vessels Act, with respect to MARAD-owned ships, have resulted in compensatory payments totalling $2.98 million to seamen in 113 claims for personal injuries. Many others remain under consideration.

MARAD was successful in two court cases which could have profoundly impacted on its programs. In the first, a challenge to MARAD regulations prescribing citizenship requirements for shipowners of American vessels (*Conoco, Inc. v. Skinner*, CCA3d, July 1992) was rebuffed. The second case hinged on the principle that financial assistance not be dispensed unless the private party to the agreement actually incurred a subsidizable expense (*Aeron Marine Shipping Company v. United States*, U.S. Claims Court, August 1992).

MARAD also participated in a variety of international activities, including drafting the maritime exception to the North American Free Trade Agreement; drafting the United States positions on the Hazardous and Noxious Substances Convention, and on the Convention on Maritime Liens and Mortgages; advising and assisting in negotiating maritime agreements with the Peoples Republic of China, the Republic of Korea, and the Ukraine; working on the United Nations Conference for Economic Development's protection of the oceans treaty; and assisting our delegation in the Organization for Economic Cooperation and Development ship subsidies negotiations.

In conjunction with the Bush Administration's initiative, MARAD developed no new regulations and did not significantly change existing regulations in the reporting period. Initiatives included publication of a final rule implementing significant statutory changes in the Ship Mortgage Act of 1920; this rule significantly reduces the regulatory burden of transfers of U.S.-documented vessels. Also, the regulations establishing procedures for calculating fair and reasonable rates for the carriage of less-than-shipload lots of bulk preference cargoes on liner vessels were amended. Its purpose was to harmonize provisions with those governing the carriage of preference cargoes on bulk vessels and to reflect more accurately the actual individual vessel operating and capital costs.

Management Initiatives

In FY 1991, the Secretary of Transportation's responsibility for revising agricultural price support and related programs including farm credit was assigned to the Associate Administrator for Marketing.

Additionally, MARAD revised the Office of Market Development's shipper rates procedure to reflect the liaison role rather than developing, calculating, and recommending Government shipper Agency rates. Recommendation of rates was transferred to the Office of Ship Operating Assistance.

Audits

In FY 1992, the Department of Transportation's Office of Inspector General submitted final principal internal audit reports to MARAD. They were:

- MARAD Capital Construction Fund Program;
- MARAD Capital Construction Fund Investments;
- Insurance Programs;
- Costs Incurred During the Activation of the Ready Reserve Force;
- MARAD's Controls Over Use of the Federal On-line Xchange (FOX) System;
- Audit of Management and Reporting of Accounts Receivable;
- Lobbying Activities;
- Office of Ship Operating Assistance;
- Assessment of Corrective Actions Under the FMFIA - FY 1991;
- Maritime Subsidy Board;
- Oversight of ODS/M&R Costs (Central Region);
- Beaumont Ready Reserve Fleet;
- Administrative Areas, MARAD North Atlantic Region; and
- Contracted Advisory and Assistance Services.

The General Accounting Office issued two final audit reports to MARAD during FY 1992. They were:

- MARAD's Management of NDRF; and
- Stronger Management Controls Needed Over Vessels in Title XI Custody.

Information Resources Management

MARAD's Information Resources Management (IRM) program changed its focus in FY 1992 to support MARAD's mission and major program initiatives.

MARAD reviewed it's Local Area Network (LAN) to determine ways to provide a more sophisticated support structure to meet MARAD's evolving needs. As a result, plans for improvements in five key areas were developed: a more user-friendly and robust LAN-based scenario; a more stable and reliable LAN (hardware and software) infrastructure; more headquarters technical support to regional and field office locations; Intra-Maritime (headquarters and field) communications and external gateway connectivity; and improved user support services.

Plans were underway to migrate MARAD's LAN-based systems to Microsoft Windows which will access to several sources of information simultaneously. This will also increase access to a number of standard reports, as well as some *ad hoc* query capability. Integration of all Information Resources Management information systems into one LAN-based Executive Information System is planned. When fully implemented, it will provide comprehensive data/information on virtually all MARAD programs.

Plans for upgrading MARAD's existing hardware and software were underway at year's end.

Region and field automation requirements received high priority during FY 1992 and mission-related field activities and routine operations are expected to be augmented to achieve increased productivity.

In conjunction with this upgrade scenario, MARAD's Electronic Mail Service is expected to be fully operational in FY 1993. These gateways and compatible systems, changes in format, structure, and content will enable more overall efficiency.

A formal help-desk function will be established to handle trouble calls and produce a rapid response to minor problems. Those more complex and

sophisticated user requests will be handled in a more methodical, structured, and complete manner.

Personnel

MARAD's employment totaled 1,118 at the end of FY 1992. The MARAD's percentage of female and minority employees, as well as their representation in supervisory positions, remained relatively stable during the period, as did the percentage of handicapped employees.

Five upward mobility positions were established in FY 1992.

Two positions were advertised for cross-training opportunities under the Career Enhancement Program.

Four Silver Medals, 13 Bronze Medals, and five Secretary's Awards for Excellence were approved for 22 MARAD employees in FY 1992.

Performance awards went to 790 MARAD employees. Ten quality Step Increases and 52 Superior Accomplishment Awards, which included 45 Spot Awards, were granted.

Safety Program

In FY 1992, MARAD continued to update its Safety and Health Program in order to provide its employees with safe and healthy work environments.

With a full-time safety and occupational health specialist assigned to each National Defense Reserve Fleet (NDRF) site, monthly occupational safety and health inspections are conducted at each workplace and identifiable hazards are promptly abated. Fleet employees are continuously instructed in safe work practices and fleet safety policies/regulations.

In order to provide immediate first-aid to its employees, each NDRF site continues to upgrade its volunteer Emergency Medical Technicians (EMT) with annual training which ensures State certification and also to provide them with current medical first-aid training.

In FY 1992, MARAD established a site-specific Bloodborne Pathogens Exposure Control Plan at each NDRF site, provided Bloodborne Pathogens training, and offered Hepatitis B vaccinations to each EMT.

With active participation and commitment by the employees to safety methods and procedures, MARAD continued its safety and health incentive program to lower the injury/illness lost-time accident rates at the NDRF sites. The Suisun Bay NDRF was the FY 1992 winner of MARAD's Safety Trophy for having the lowest lost-time injury/illness rate.

MARAD continued its Action Plan for the prevention of asbestos exposures. MARAD policy is to prohibit or stringently limit personnel exposure to airborne asbestos exposures and use of asbestos in any MARAD program. MARAD's ongoing asbestos survey, area, and personnel air-monitoring program determines, evaluates, and documents ambient concentrations of asbestos fibers in the NDRF workplace. The Action Plan is geared to eliminate asbestos material from MARAD programs. It encompasses the repair or replacement of such materials already installed, modified work procedures, and employee training.

MARAD's Medical Surveillance Program of the Asbestos Action Plan continues to provide periodic medical examinations to designated MARAD employees exposed or potentially exposed to hazardous substances or conditions in the workplace. This included employees assigned to MARAD's Headquarters, the Reserve Fleets, the region offices, and the U.S. Merchant Marine Academy.

MARAD also provides the NDRF sites and the U.S. Merchant Marine Academy with periodic industrial hygienist support to conduct surveys of the facilities and to target all safety and health hazards.

Installations and Logistics

Real Property

On September 30, 1992, MARAD's real property included NDRF sites at Suisun Bay, CA; Beaumont, TX; and James River, VA; and the U.S. Merchant Marine Academy at Kings Point, NY. Facilities for training maritime firefighters were operated at Freehold, NJ, and Treasure Island, CA, under MARAD agreements with the U.S. Navy, and in New Orleans, LA, at facilities operated by Delgado College. MARAD operates the Toledo, OH, marine fire-training facility.

Region Headquarters offices were maintained in New York, NY; Norfolk, VA; New Orleans, LA; Des Plaines, IL; and San Francisco, CA. Region Maritime Development Offices were maintained in Long Beach,

CA; Seattle, WA; Houston, TX; Portland, OR, and at the five Regional Headquarters. A new Region Maritime Development Office was established in Atlanta, GA. In addition to those located at Regional headquarters offices, Ship Management staffs were maintained in New York, NY; Cleveland, OH; Portland, OR; and Port Arthur, TX.

Marine Safety International of New York, NY, continued to manage and operate MARAD's Computer-Aided Operations Research Facility at Kings Point, NY, under a cooperative agreement.

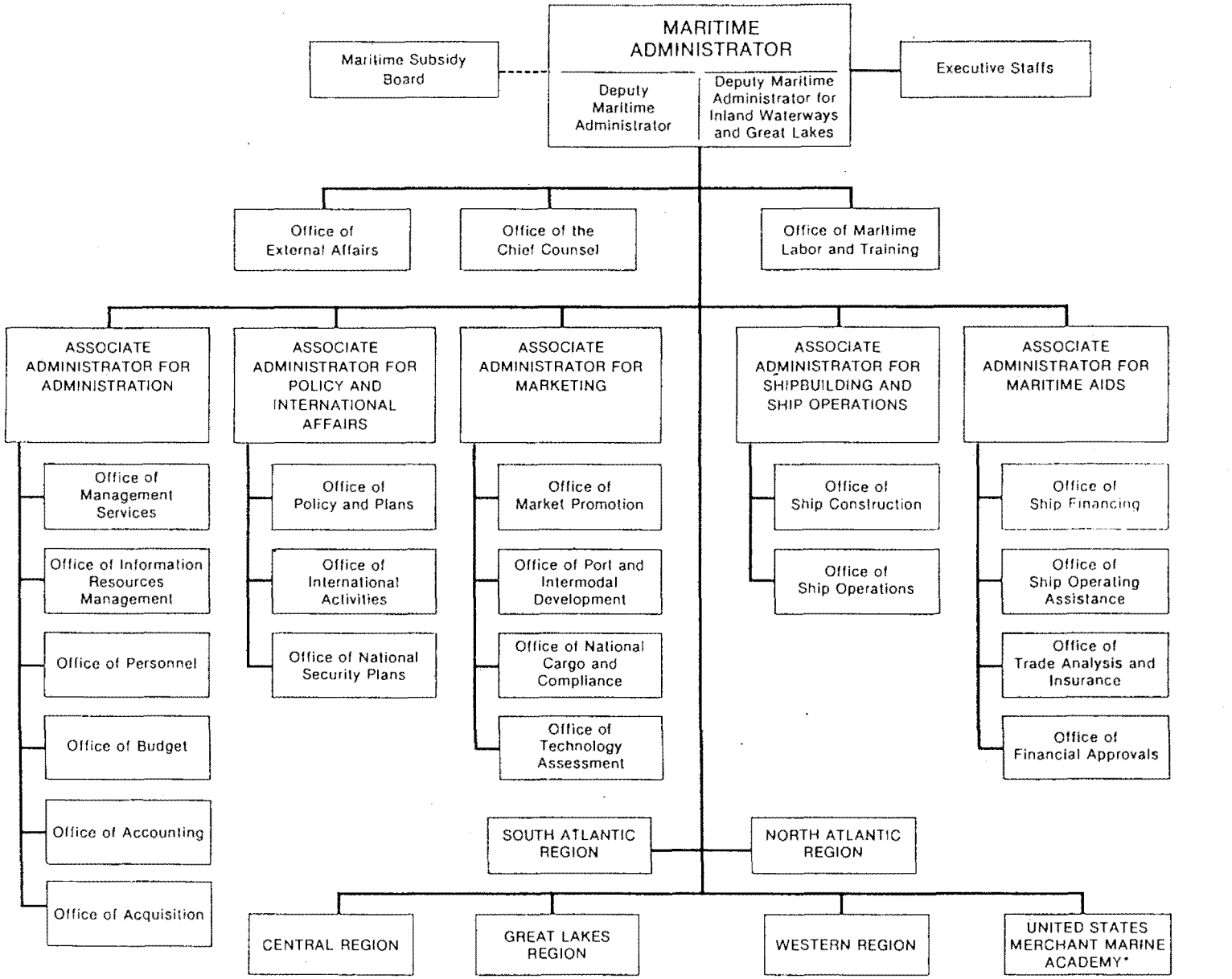
Accounting

MARAD's accounts are maintained on an accrual basis in conformity with generally accepted accounting principles and standards, and related requirements prescribed by the Comptroller General.

The net cost of MARAD's FY 1992 operations totaled $484.9 million. This included $269.9 million in operating and ocean freight differential subsidies; administrative expenses of $76.5 million; $116.1 million for maintenance and preservation of reserve fleet vessels; and $5 million for financial assistance to State Maritime academies.

MARAD incurred $17.4 million in other operating expenses net of income. Financial statements of MARAD appear as Exhibits 1 and 2.

MARITIME ADMINISTRATION

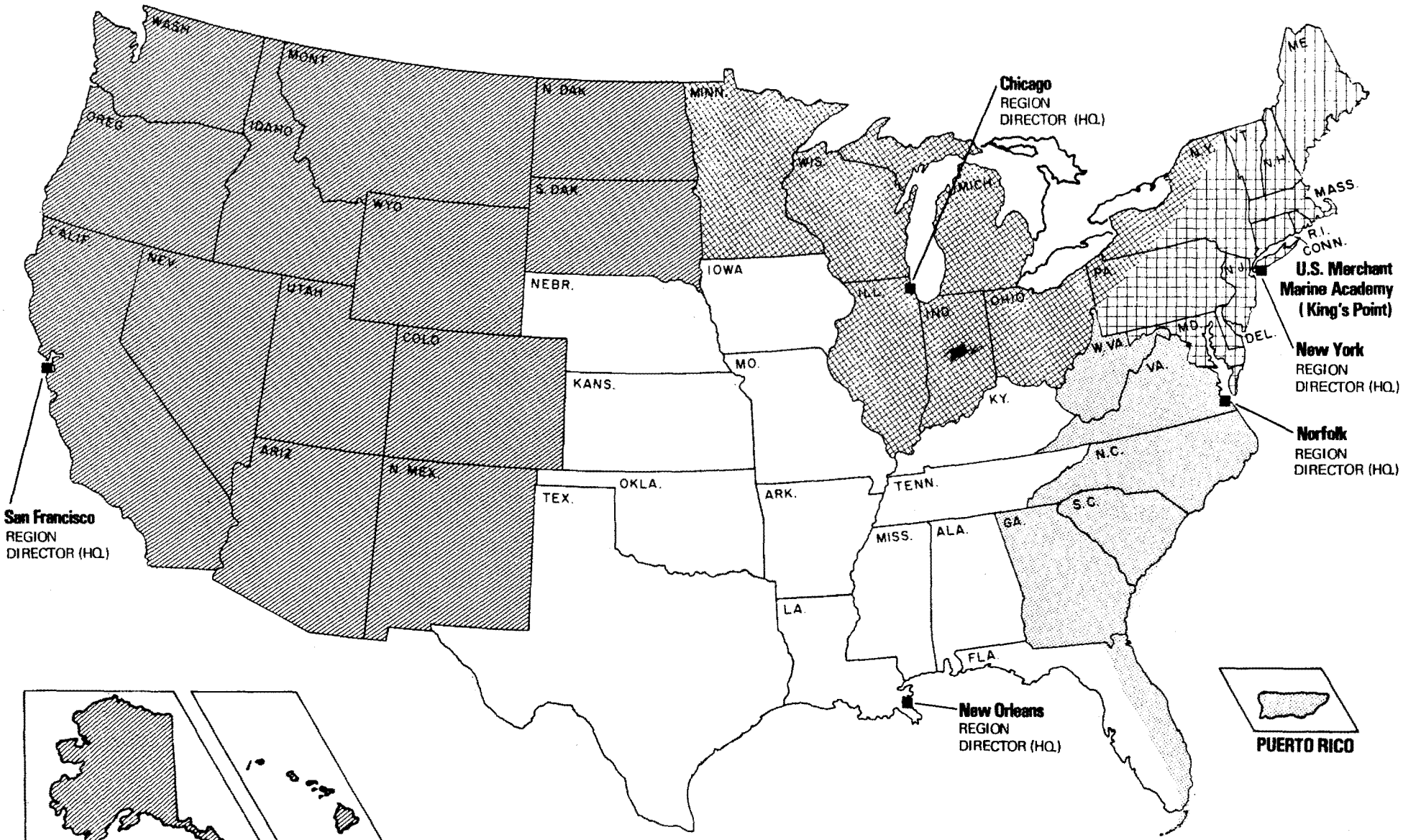


Kings Point, N.Y.

MARAD/Reg – (2-19-92) – chart-2

U.S. Department of Transportation
Maritime Administration

MARITIME ADMINISTRATION FIELD ORGANIZATION



U.S. DEPARTMENT OF TRANSPORTATION--Maritime Administration

Exhibit 1. Statement of Financial Condition
September 30, 1992, and September 30, 1991

ASSETS	September 30 1992	September 30 1991
Selected Current Assets		
Funded Balances with Treasury:		
Budget Funds	$ 399,035,084	$ 231,224,334
Deposit Funds	566,000	566,530
Allocations from Other Agencies		
Budget Clearing Accounts	0	6,754
	399,601,084	231,797,618
Federal Security Holdings	741,061,690	718,085,000
Accounts Receivable:		
Government Agencies	90,055,848	87,553,763
The Public	440,085	3,805,592
Allowances (-)	0	0
	90,495,933	91,359,355
Advances To:		
Government Agencies		
The Public	51,127	72,264
	51,127	72,264
Total Selected Current Assets	**$ 1,231,209,834**	**$1,041,314,239**
Loans Receivable:		
Repayment in Dollars	529,102,031	813,091,324
Allowances (-)	(400,102,032)	(647,322,111)
	128,999,999	165,769,213
Real Property and Equipment:		
Land	7,749,000	7,749,000
Structures and Facilities	204,176,225	59,025,693
Equipment and Vessels	305,029,376	829,454,173
Leasehold Improvements	199,429	172,175
Allowances (-)	(32,650,995)	(292,857,670)
	484,503,035	603,543,371
Other Assets:		
Works-in-Process--Other	0	18,897,471
Material and Supplies	27,541,706	3,439,962
Noncurrent Assets	0	0
Allowances(-)	0	0
	27,541,706	22,337,733
Total Assets	**$1,872,254,574**	**$1,832,964,254**

The notes to Financial Statements are an integral part of this statement.

U.S. DEPARTMENT OF TRANSPORTATION--Maritime Administration

Exhibit 1. Statement of Financial Condition
September 30, 1992, and September 30, 1991

LIABILITIES	September 30 1992	September 30 1991
Selected Current Liabilities (Note 2)		
Accounts Payable (Including Funded Accrued Liabilities):		
Government Agencies	$ 693,308	$ 10,190,853
The Public	77,870,425	72,212,110
	78,563,733	82,402,963
Total Selected Current Liabilities	**78,563,733**	**82,402,963**
Deposit Fund Liabilities	566,000	566,530
Unfunded Liabilities:		
Accrued Annual Leave	5,900,944	9,095,465
Debt issued under borrowing Authority:		
Borrowing from Treasury	0	0
Other Liabilities:		
Vessel Trade-in Allowance and Other Accrued Liabilities	0	0
Total Liabilities	**$ 85,030,677**	**$ 92,064,958**
Government Equity		
Unexpended Budget Authority:		
Unobligated	1,015,969,800	973,712,360
Undelivered Orders	1,788,810,087	2,129,928,775
	2,804,779,887	3,003,641,135
Unfinanced Budget Authority (-)		
Unfilled Customer Orders	(408,467,593)	(199,268,855)
Contract Authority	(1,261,120,000)	(1,746,100,000)
	(1,669,587,593)	(2,045,368,855)
Invested Capital	652,031,613	782,627,016
Total Government Equity	**$1,787,223,897**	**$1,740,899,296**
Total Liabilities and Government Equity	**$1,872,254,574**	**$1,832,964,254**

The notes to Financial Statements are an integral part of this statement.

U.S. DEPARTMENT OF TRANSPORTATION--Maritime Administration

Exhibit 2. Statement of Operations

	Years Ended September 30	
	1992	**1991**
OPERATIONS OF THE MARITIME ADMINISTRATION		
Net Costs of Operating Activities		
Reserve Fleet Programs:		
Maintenance and Preservation	$ 116,051,286	$ 164,658,034
Direct Subsidies and National Defense Costs:		
Operating-Differential	218,637,768	217,574,038
Construction-Differential	0	0
Ocean Freight Differential	50,929,000	34,202,000
	269,566,768	251,776,038
Administrative	76,450,000	73,555,783
Research and Development	0	0
Financial Assistance to State Marine Schools	5,000,000	4,603,830
	81,450,000	78,159,613
Other Operating Income Net of Expenses	(23,666,277)	9,660,661
Net Cost of Maritime Administration	$ 443,401,777	$ 504,254,296
OPERATIONS OF REVOLVING FUNDS (-Income):		
Vessel Operations Revolving Fund	15,512,617	55,568,111
War Risk Revolving Fund	-962,323	1,331,439
Federal Ship Financing Fund	26,948,007	-8,826,683
Special Studies	-45,986	533,594
	41,452,315	45,938,583
Net Cost of Combined Operations	**$ 484,854,092**	**$ 550,192,879**

The notes to Financial Statements are an integral part of this statement.

Notes to Financial Statements –

September 30, 1991, and September 30, 1992.

U.S. Department of Transportation
Maritime Administration

1. The preceding financial statements include the assets, liabilities, income, and expenses of MARAD; the Vessel Operations Revolving Fund, the War Risk Insurance Revolving Fund, and the Fund.

2. MARAD was contingently liable under agreements guaranteeing obligations or insuring mortgages and construction loans payable to holders or lenders totaling $2,284,589,433 on September 30, 1992, and $2,643,994,565 on September 30, 1991. MARAD had no commitments to guarantee additional obligations on September 30, 1992.

3. MARAD held cash of $843,000 and $5,344,000 million in securities on September 30, 1992, in escrow in connection with the guarantee of obligations under the Title XI Program. There were no conditional liabilities for prelaunching War Risk Builder's Insurance on September 30, 1992.

4. On September 30, 1992, the U.S. Government held $90,000 in securities which had been accepted from vessel owners, charterers, subsidized operators, and other contractors as collateral for their performance under contracts.

5. The Fund, a revolving fund, is currently self-supporting. As of September 30, 1992, the fund had investments (U. S. Treasury Securities) of $703.4 million. During FY 1992, the Fund incurred and paid out $113.4 million in mortgage loan defaults, no borrowing from the U.S. Treasury was necessary to cover these defaults.

6. MARAD wrote off loans receivable of $276.1 million for the Title XI Program during FY 1992.

7. MARAD adjusted its liabilities to $1,261,100,000 as of September 30, 1991, recognizing the estimated total of contractual liability outstanding on the current ODS contracts.

Appendix I: MARITIME SUBSIDY OUTLAYS--1936-1992

Fiscal Year	Reconstruction CDS	CDS	Total CDS	ODS	Total ODS & CDS
1936-1955	$248,320,942*	$ 3,286,888	$ 251,607,830	$ 341,109,987	$ 592,717,817
1956-1960	129,806,005	34,881,409	164,687,414	644,115,146	808,802,560
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	181,918,756	320,631,994
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	203,036,844	281,310,254
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	235,666,830	377,365,310
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
1975	237,895,092	1,900,571	239,795,663	243,152,340	482,948,003
1976**	233,826,424	9,886,024	243,712,448	386,433,994	630,146,442
1977	203,479,571	15,052,072	218,531,643	343,875,521	562,407,164
1978	148,690,842	7,318,705	156,009,547	303,193,575	459,203,122
1979	198,518,437	2,258,492	200,776,929	300,521,683	501,298,612
1980	262,727,122	2,352,744	265,079,866	341,368,236	606,448,102
1981	196,446,214	11,666,978	208,113,192	334,853,670	542,966,862
1982	140,774,519	43,710,698	184,485,217	400,689,713	585,174,930
1983	76,991,138	7,519,881	84,511,019	368,194,331	452,705,350
1984	13,694,523	-0-	13,694,523	384,259,674	397,954,197
1985	4,692,013	-0-	4,692,013	351,730,642	356,422,655
1986	-416,673	-0-	-416,673	287,760,640	287,343,867
1987	420,700	-0-	420,700	227,426,103	227,846,803
1988	1,236,379	-0-	1,236,679	230,188,400	231,425,079
1989	-0-	-0-	-0-	212,294,812	212,294,812
1990	-0-	-0-	-0-	230,971,797	230,971,797
1991	-0-	-0-	-0-	217,574,038	217,574,038
1992	-0-	-0-	-0-	215,650,854	215,650,854
Total	**$3,569,648,434**	**$264,904,682**	**$3,834,553,116**	**$9,285,616,426**	**$13,120,169,542**

* Includes $131.5 million CDS adjustments covering the World War II period, $105.8 million equivalent to CDS allowances which were made in connection with the Mariner Ship Construction Program, and $10.8 million for CDS in fiscal years 1954 to 1955.

** Includes totals for FY 1976 and the Transition Quarter ending September 30, 1976.

Appendix II: Combined Financial Statements of Companies With Operating-Differential Subsidy Contracts
Statement A - Balance Sheet for Years Ending in 1991 and 1990

	1991	1990
	(stated in thousands)	
CURRENT ASSETS:		
Cash	$ 93,152	$112,455
Marketable Securities	78,919	14,341
Notes Receivable	726	3,136
Accounts Receivable	347,799	828,467
Allowance for Doubtful Receivables	(3,684)	(4,157)
Other Current Assets	107,834	113,284
TOTAL CURRENT ASSETS	$ 624,746	$1,067,526
Noncurrent Assets:		
Restricted Funds	$ 13,774	$ 15,027
Investments	213	3,480
Property and Equipment (net of depreciation)	1,176,125	1,267,720
Other Assets	130,104	155,593
Deferred Charges	17,525	20,139
Goodwill and Other Intangible Assets	39,340	42,668
Total Noncurrent Assets	1,377,081	$1,504,627
TOTAL ASSETS	**$2,001,827**	**$2,572,153**
LIABILITIES & OWNERS' EQUITY		
CURRENT LIABILITIES:		
Notes Payable	$75,643	$59,393
Accounts Payable	122,181	107,096
Accrued Liabilities	348,618	330,624
Other Current Liabilities	37,198	530,157
Advance Payments/Deposits	2,410	7,325
Total Current Liabilities	$ 586,050	$1,034,595
Noncurrent Liabilities:		
Long Term Debt	$ 579,866	$ 793,440
Other Liabilities	122,128	133,518
Deferred Credits	126,318	97,081
Total Noncurrent Liabilities	$ 828,312	$1,024,039
Total Liabilities	$1,414,362	$2,058,634
Owners' Equity:		
Invested Capital	$186,340	$186,186
Treasury Stock	(2,441)	2,443
Retained Earnings	403,566	329,776
Total Owners' Equity	$587,465	$513,519
TOTAL LIABILITIES AND OWNERS' EQUITY	$2,001,827	$2,572,153

Appendix II: (continued)
Statement A - Income Statement for Fiscal Years Ending in 1991 and 1990

	1991	1990
	(stated in thousands)	
SHIPPING REVENUE	**$2,580,072**	**$2,311,322**
Other Shipping Operations Revenue	143,042	100,018
Total Revenue from Shipping Operations	$2,723,114	$2,411,340
Shipping Expense	$841,720	$805,142
Operating-Differential Subsidy	(195,571)	(227,031)
Shipping Port Call Expense	93,759	95,702
Cargo Handling Expense	1,259,781	1,158,191
Inactive Vessel Expense	33,874	22,083
Other Shipping Operations Expense	16,879	16,250
Total Expense of Shipping Operations	$2,050,442	$1,870,337
Gross Income from Shipping Operations	$672,672	$541,003
Other Revenue	26,919	51,081
Other Expense	18,786	17,270
General and Administrative Expense	367,109	376,236
Depreciation and Amortization Expense	123,895	129,256
Interest Expense	61,504	77,555
Net Income Before Income Taxes	$128,297	($8,233)
Provision for Income Taxes	39,849	3,487
Net Income After Income Taxes	$88,448	($11,720)
Effect of Change in Accounting Policy	0	0
Income or Loss from Extraordinary Items	(901)	(3,282)
NET INCOME	**$87,547**	**($15,002)**

(This data is from the Financial Report Form, MA-172, filed by 17 subsidized companies.)

APPENDIX III: TECHNICAL AND PROGRAM STUDIES PLAN--FY 1992

Project	Task	Vendor	Contract Number	Amount
Cargo Handling Technology:				
Cargo Handling Cooperative Program	Carry out research, development, test, and evaluation of new technologies, systems, and methods directed at increasing the cargo handling productivity of U.S.-flag carriers.	American President Lines, Ltd. Matson Terminals Inc. Sea-Land Service, Inc. Crowley Maritime, Corp.	MA-CA-10014	$200,000*
Human Factors Research:				
LNG Vessel Manning Studies	Cooperative project to follow and assist an operator with the development of a computer model to help analyze and allocate manning resources onboard ships as part of the planning process for start-up operations of a new shipping service.	Volpe National Transportation Systems Center, Cambridge, MA	MA-211	$ 75,000
Maritime Technology Policy:				
Marine Board FY 92	To continue support of the Marine Board of the National Academy of Sciences during FY 92.	Dept. of Interior Washington, DC	MA-1-A29	$150,000*
Transportation Research Board (TRB)	To provide for sponsorship of the annual technical program of the TRB.	National Research Council	MA-CA-90017	$ 50,000*
Marine Environmental Protection:				
Water Pollution	To develop a model training curriculum on oil spill prevention response and clean-up.	Massachusetts Maritime Academy	MA-CA-200085	$ 42,000
Air Pollution	To reduce air pollution from marine engines.	U.S. Coast Guard	MA-2-A63	$ 8,000*
National Maritime Enhancement Institutes:				
Competitive Manning of U.S.-Flag Ships	Develop realistic manning alternatives as a part of an overall maritime policy.	Massachusetts Institute of Technology	DTMA91-92-CA-200000	$ 75,000*
Development of an Inland Waterways Data Base	Develop a centralized source of industry data to assist Government and industry.	Memphis State University	DTMA91-92-CA-200095	$ 39,946*
Maintenance of Marine Structures: A State-of-the-Art Summary	Review and evaluate research on the maintenance of ship structures. Identify research needs.	University of California at Berkeley	DTMA91-92-CA-200096	$ 50,000**

*Cost Shared
**Cost Reimbursable from U.S. Coast Guard

APPENDIX III: TECHNICAL AND PROGRAM STUDIES PLAN--FY 1992 (con.)

Project	Task	Vendor	Contract Number	Amount
The Maritime System of the Americas and the Feasibility of Ocean/River/Lake Traffic	Investigate the feasibility of handling by direct water links part of the trade between the mid-U.S., Canada, Mexico, and other countries using the Great Lakes, Mississippi River Basin, Gulf Intracoastal Waterway, Gulf of Mexico and Caribbean Sea.	Louisiana State University	Cooperative Agreement DTMA91-92-CA-200094	$ 50,069*
Ship Operations Technology:				
Development of a Ship Operations Cooperative Program	Provide support to MARAD in the establishment of a joint industry/government cooperative program in ship operations technology.	PRC Inc.	92-C-200038	$ 81,500
Ship Structures Research:				
Ship Structure Committee	MARAD's share to participate in the Ship Structures Committee FY 92 Program.	U.S. Coast Guard Washington, DC	MA-2-A35	$ 75,000*
Small Business Innovation Research:				
Small Business Innovation Research Program	MARAD's support of the FY 92 Small Business Innovation Research Program.	Volpe National Transportation Systems Center, Cambridge, MA	MA-2-A34	$ 51,448
Waterway Navigation Technology:				
Boston Harbor Simulation Study at CAORF	The U.S. Army Corps of Engineers, New England Division requested CAORF services to conduct ship maneuvering simulations in the Boston Harbor to evaluate the effect of proposed channel improvements and to identify other needed improvements.	Marine Safety International Kings Point, NY	DTMA91-88-C-80024 Task #4	$383,584**
HYUNDAI NEW WORLD Stranding Study	The Defense Mapping Agency and the Justice Department requested CAORF services to conduct ship maneuvering simulations of the grounding of the bulk carrier HYUNDAI NEW WORLD in Brazil.	Marine Safety International Kings Point, NY	DTMA91-88-C-80024 Task #5	$ 31,680**
Port and Intermodal:				
Landside Access to U.S. Ports	Continue efforts to assess impediments and potential strategies for improving landside access to U.S. ports.	Transportation Research Board, Washington, DC		$101,585
GIS	Develop geographic information systems to improve port operations.			$ 25,000

*Cost Shared
**Cost Reimbursable from U.S. Navy