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93-3 MARITIME AUTHORIZATION—F.Y. 1974

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HEARINGS

BEFORE THE

COMMITTEE ON MERCHANT MARINE

OF THE

COMMITTEE ON

MERCHANT MARINE AND FISHERIES

HOUSE OF REPRESENTATIVES

NINETY-THIRD CONGRESS

FIRST SESSION

ON

H.R. 5449

A BILL TO AUTHORIZE APPROPRIATIONS FOR THE FISCAL
YEAR 1974 FOR CERTAIN MARITIME PROGRAMS OF THE
DEPARTMENT OF COMMERCE

MARCH 13, 14, 1973

Serial No. 93-3

Printed for the use of the Committee on Merchant Marine and Fisheries



U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1973

93-550

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MARITIME AUTHORIZATION—F.Y. 1974

TUESDAY, MARCH 13, 1973

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
SUBCOMMITTEE ON THE MERCHANT MARINE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:10 a.m., in room 1334, Longworth Office Building, the Honorable Frank M. Clark (chairman of the subcommittee) presiding.

Mrs. SULLIVAN. The meeting will please come to order.

This morning the Subcommittee on Merchant Marine opens hearings on what I consider to be one of the most important pieces of legislation to come before the committee each year. Section 209 of the Merchant Marine Act of 1936 requires that the Maritime Administration of the Department of Commerce submit an annual authorization request to the Congress. As you know, funds cannot be appropriated for the operation of that agency until authorization legislation has been enacted.

For fiscal year 1974, the Maritime Administration has requested over \$500 million in funds. Under the direction of the Honorable Frank M. Clark, chairman, the Subcommittee on Merchant Marine will make careful inquiry so that the members of the full committee will be in a position to pass on the merits of this request.

I will now turn the meeting over to the chairman of the Subcommittee on Merchant Marine, the Honorable Frank M. Clark.

Mr. CLARK. Thank you, Madam Chairman.

This morning we begin hearings on the bill, H.R. 5449, to authorize appropriations for the fiscal year 1974 for certain maritime programs of the Department of Commerce.

The bill was the subject of an executive communication from the Department of Commerce, and without objection, I will enter the bill and the executive communication into the record at this point.

[H.R. 5449 and the executive communication follows:]

[H.R. 5449, 93d Cong., 1st sess.]

A BILL To authorize appropriations for the fiscal year 1974 for certain maritime programs of the Department of Commerce

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That funds are hereby authorized to be appropriated without fiscal year limitation as the appropriation Act may provide for the use of the Department of Commerce, for the fiscal year 1974, as follows:

(a) acquisition, construction, or reconstruction of vessels and construction-differential subsidy and cost of national defense features incident to the construction, reconstruction, or reconditioning of ships, \$275,000,000:

Provided, That the appropriation Act may provide that unobligated balances previously appropriated for purchase of modern or reconstructed United States-flag vessels for lay-up in the National Defense Reserve Fleet, may also be used for construction-differential subsidy;

(b) payment of obligations incurred for ship operation subsidies, \$221,515,000;

(c) expenses necessary for research and development activities (including reimbursement of the vessel operations revolving fund for losses resulting from expenses of experimental ship operations), \$20,000,000;

(d) reserve fleet expenses, \$3,773,000;

(e) maritime training at the Merchant Marine Academy at Kings Point, New York, \$8,600,000; and

(f) financial assistance to State marine schools, \$2,427,000.

SEC. 2. In addition to the amounts authorized by section 1 of this Act, there are authorized to be appropriated for fiscal year 1974 such additional supplemental amounts for the activities for which appropriations are authorized under section 1 of this Act as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

[Executive Communication 549]

THE SECRETARY OF COMMERCE,
Washington, D.C., March 6, 1973.

HON. CARL ALBERT,
Speaker of the House of Representatives,
Washington, D.C.

DEAR MR. SPEAKER: Enclosed are four copies of a draft bill to authorize appropriations for the fiscal year 1974 for certain maritime programs of the Department of Commerce, together with a statement of purposes and provisions in support thereof.

We have been advised by the Office of Management and Budget that there would be no objection to the submission of our draft bill to the Congress and further that its enactment would be in accord with the program of the President.

Sincerely,

FREDERICK B. DENT,
Secretary of Commerce.

Enclosures.

(Committee note.—The bill is now H.R. 5449.)

STATEMENT OF THE PURPOSES AND PROVISIONS OF THE DRAFT BILL TO AUTHORIZE APPROPRIATIONS FOR THE FISCAL YEAR 1974 FOR CERTAIN MARITIME PROGRAMS OF THE DEPARTMENT OF COMMERCE

Section 209 of the Merchant Marine Act, 1936, provides that after December 13, 1967 there are authorized to be appropriated for certain maritime activities of the Department of Commerce only such sums as the Congress may specifically authorize by law.

The draft bill authorizes specific amounts for those activities listed in section 209 for which the Department of Commerce proposes to seek appropriations for the fiscal year 1974, and reflects the continuing Department efforts to provide the essential resources required to accomplish the objectives of the Merchant Marine Act of 1970.

“(a) Acquisition, construction, or reconstruction of vessels and construction-differential subsidy and cost of national defense features incident to the construction, reconstruction, or reconditioning of ships, \$275,000,000: *Provided*, That the appropriation act may provide that unobligated balances previously appropriated for purchase of modern or reconstructed United States-flag vessels for lay-up in the National Defense Reserve Fleet, may also be used for construction-differential subsidy.”

The fiscal 1974 ship construction program will provide multi-year funding of some ship construction contracts. It is anticipated that 1974 funding will cover unfinanced balances for 2 ships under fiscal 1973 contracts. Construction subsidy contracts for 17 ships are planned in 1974, with 13 vessels being financed with 1974 funds and multi-year financing being utilized for the remaining four. Fiscal 1974 activity is designed to continue the pace of shipbuilding under the 1970

Program which accelerated sharply in 1972 and is anticipated to reach record levels in 1973.

"(b) Payment of obligations incurred for ship operation subsidies, \$221,515,000."

Operating subsidy funds requested for FY 1974 would provide for payment of subsidy on 2 passenger ships, 185 general cargo liners, and 9 bulk carriers during the year. Additionally the request includes funds for settlement of final subsidies determined to be due subsidized operators for operations in prior years, including 1973 Russian grain carriage; for payment of normal escalation of subsidizable costs for continuing operations; and subsidy for new ships to come into subsidized operation. Included among the new ships will be three bulk carriers, the first of such ships to be built and operated under government subsidy as part of the new bulk program. It is anticipated that the requested funds will be supplemented by an estimated \$25,485,000 of unused appropriation to be carried into FY 1974.

"(c) Expenses necessary for research and development activities (including reimbursement of the Vessel Operations Revolving Fund for losses resulting from expenses of experimental ship operations), \$20,000,000."

The 1974 program provides funding for the continuation of research and development activities in support of the President's Maritime program. Industry cost-sharing in these R&D projects helps to assure that emphasis is placed upon near-term, high pay-off projects which will assist in modernizing the American fleet and its operations. Efforts in FY 1974 are planned in the areas of shipbuilding methods improvements, competitive nuclear propulsion systems and automated shipping systems. The improvement of shipbuilding methods is designed to bring about increased competitiveness in the American shipbuilding industry and a reduction in construction subsidy. In the area of competitive nuclear ships, the major effort will consist of the final design engineering and related test and evaluation of advanced nuclear propulsion systems. The efforts in the area of advanced ship operations will include development of automated ships, advanced navigation/communication systems, pollution abatement systems, advanced tug-barge systems, shipping operations information systems and other activities designed to increase efficiency and reduce operating costs.

"(d) Reserve fleet expenses \$3,773,000."

Funding provides for the preservation and security of ships held for national defense purposes, distributed among three active fleet sites. Periodic represervation of hulls, machinery, and electrical components, combined with continuous application of cathodic protection to the bottoms, are methods employed in maintaining the ships for further service.

In fiscal 1974, funds will be used for the care of approximately 323 ships retained for national defense purposes. Custody is also provided for about 138 ships scheduled for disposal.

"(e) Maritime training at the Merchant Marine Academy at Kings Point, New York, \$8,600,000."

This requested authorization is for the operation of the Merchant Marine Academy at Kings Point to train cadets as officers for the U.S. merchant fleet in both peacetime and national emergencies. Approximately 200 officers graduate each year. This requested authorization includes funds for the planned modernization of the Academy electrical system.

"(f) Financial assistance to State Marine Schools, \$2,427,000."

Under the provisions of the Maritime Academy Act of 1958, as amended, (72 Stat. 622-624), this program provides for training of cadets at State marine schools for service as officers in the United States merchant marine. The six participating State schools, Maine, Massachusetts, Michigan, New York, Texas, and California, prepare officers to man our merchant ships in times of peace and national emergency.

The funding level of \$2,427,000 will provide for grants in the amount of \$75,000 to each of the participating State schools, allowances not to exceed \$600 to cadets for uniforms, textbooks and subsistence, and funds for the maintenance and repair of the training ships used by the schools.

Section 2 of the draft bill would authorize additional supplemental amounts for fiscal 1974 for the activities specified in section 1 of the draft bill to the extent necessary for increases in salary, pay, retirement or other employee benefits authorized by law. The purpose of this section is to avoid having to amend the fiscal 1974 authorization act if supplemental appropriations for fiscal 1974 are sought for this purpose.

Mr. CLARK. The authorization of funds for the Maritime Administration of the Department of Commerce is one of the most important functions this committee has to perform. It is a matter of vital concern not only to the committee, but to the maritime industry and the country as a whole.

As we all know, the Merchant Marine Act of 1970 was landmark maritime legislation. That act provided for the new maritime program to be administered by the Maritime Administration of the Department of Commerce. The bill before us this morning would authorize funds for the Maritime Administration to carry forward the new maritime program and related responsibilities in fiscal year 1974.

The importance of this authorization legislation requires that we thoroughly explore each item in the bill. To assist in this regard, I have included in the members' folders the brief analysis of requested funds that was previously forwarded to each member. By the time we finish, I want to be assured not only that the Maritime Administration is carrying out the intent of the Congress set forth in the Merchant Marine Act of 1970, but also that the Administration has budgeted sufficient funds to carry forward the new maritime program.

Because of the importance of these matters, I have scheduled 2 days of hearings on H.R. 5449. Today we will hear from the Maritime Administration and witnesses representing the Federal Merchant Marine Academy and the State marine schools. Tomorrow we are scheduled to hear from the American Institute of Merchant Shipping, the Shipbuilders Council of America, and the American Maritime Association.

Our first witness this morning is the Honorable Robert J. Blackwell, Assistant Secretary of Commerce for Maritime Affairs.

Before Mr. Blackwell starts I would like to use the 5-minute rule on questioning for the members.

Bob, you may proceed.

STATEMENT OF HON. ROBERT J. BLACKWELL, ASSISTANT SECRETARY FOR MARITIME AFFAIRS, DEPARTMENT OF COMMERCE

Mr. BLACKWELL. Thank you, Mr. Chairman, and members of the committee.

I appreciate this opportunity to testify in support of H.R. 5449 which authorizes funds for merchant marine activities for the fiscal year 1974 in the amount of \$531,315,000. This includes the following:

- Ship construction and reconstruction, \$221,515,000;
- Operating-differential subsidy, 221,515,000;
- Research and development, \$20 million;
- Reserve fleet expenses, \$3,773,000;
- Maritime training at Kings Point, \$8,600,000; and
- State marine schools, \$2,427,000.

This budget is geared to continuing efforts to aid the maritime industry under the Merchant Marine Act of 1970 which this committee did so much to help frame and enact.

That program, the Merchant Marine Act of 1970, was designed to transform the U.S. merchant marine into the most modern and efficient in the world, one requiring reduced levels of Federal subsidy, not only today, but in the years ahead.

The new program is aimed at fulfilling two broad national goals, to develop an adequate and balanced fleet, and to carry a substantial portion of the U.S. foreign trade.

We are aiming at 17 percent U.S.-flag penetration of our total trade by the end of this decade.

We also use this fleet to serve as a military auxiliary in times of national emergencies or in case of war.

The need for the merchant fleet as a defense auxiliary was recently emphasized by a statement by Admiral Zumwalt, the Chief of Naval Operations.

In that statement, some weeks ago, Admiral Zumwalt indicated that over 96 percent of the sealift of all military supplies for the Vietnam war arrived in Vietnam by ship.

In that same statement, Admiral Zumwalt mentioned that if all the aircraft currently being procured and planned by the Department of Defense are, in fact, procured, still in any future war, some 94 percent of the total military requirement will also have to be lifted by ships of the U.S. merchant marine.

We are convinced that, in the Merchant Marine Act of 1970, the Congress and the President have provided us at the Maritime Administration with all the basic tools needed to restore the U.S. fleet to its former preeminence.

The program, indeed, provides a long-term Federal commitment needed for ship builders and operators to modernize their operations, to increase their efficiency, and at the same time, lessen their support from direct Federal assistance.

We believe that a sound start in implementing this program has already been made.

The construction differential subsidy rate before the program was enacted averaged 53.6 percent.

In 1972, the construction differential subsidy rate, the amount we pay for ships built under the program, averaged only 42.9 percent, compared to 43.6 percent in the prior year.

In the current fiscal year, 1973, we are meeting in every instance the 41 percent construction differential subsidy guideline and on the LNG ships, the subsidy rate is 25 percent, the lowest in the history of the maritime program.

Indeed, because of the increasing competitiveness of the U.S. shipyards and also because of the recent dollar devaluation we predict that the Maritime Administration and the shipbuilding industry will surely be able to meet their 39 percent CDS goal established by the Merchant Marine Act for the fiscal year starting this July 1.

It is interesting to note that 24 of the 37 ships that are ordered, or have been ordered, under the maritime program, are bulk carriers. These include the first VLCC's, the largest crude carriers, ever built in this country, the first liquid natural gas ships ever built in this country and the first OBO's, ships of considerable versatility, capable of carrying oil, bulk commodities and grain. These are the first OBO ships ever built in this country as well.

We have concentrated on the bulk carrier program for basically two reasons. I think all the members of this committee recognize the impending energy shortages facing the United States, and the resulting need to carry crude oil to this country.

In addition to that, some 90 percent of the foreign trade of this country is in the area of bulk commodities. Only 10 percent of our foreign trade is capable of being carried in our liner ships. The bulk trades are the area where U.S. participation has been historically low, some 2 percent; and we think that it is consequently this area that provides us the greatest opportunity for making a significant market penetration for U.S. carryings.

Now, as a result of the ships that we have let under the program, and as a result of vessel orders placed in American yards for the Jones Act trades, for other trades without the Federal assistance, there is currently building or on order in American shipyards some 80 vessels, aggregating over 4 million dead weight tons, and valued at \$2.5 billion.

Mr. Chairman, this is by far the largest peacetime order book in the history of the United States. These numbers can be compared with the figures of 3 years ago when our total orders were for 1.8 million dead weight tons, valued at \$1.1 billion.

We have more than doubled the orders in our yards in the last 3 years, Mr. Chairman. The shipyards also have responded favorably to the program. The American shipbuilding industry has invested significant amounts of capital to improve its equipment and production techniques.

Since 1969, the American shipbuilding industry has spent about \$100 million in capital investments to improve their yards and we expect that that pace will not only continue but will grow in the years ahead. In fact, there are three shipyards in the country at the present time that are planning to spend over \$350 million in yard expansion. This expansion, in effect, will create new shipyards for approaching orders for the LNG ships and the VLCC's, the so-called supertankers. One such yard would be located in Galveston; and one other would be at Newport News, Va.

We think there has been other progress in implementing the Merchant Marine Act as well.

For instance, U.S. container ships are now operating on the North Atlantic without any direct Federal assistance, that is, no operating differential subsidy, saving the U.S. taxpayers some \$25.6 million annually.

In addition to that, one of our subsidized operators has abandoned the subsidized service, Federal assistance, in the trade from the North Atlantic to the Far East.

We have made considerable progress in reducing the manning of ships currently being employed in the U.S. fleet.

As a result of actions taken by the Maritime Subsidy Board, crews on some 86 ships have been reduced by an average of 4.2 crewmembers per ship. This amounts to a saving of more than \$110 million in operating differential subsidy cost over the lives of these vessels.

The Maritime Administration has also considerably enlarged and redirected its research and development efforts toward lower cost, short term goals and industry cost sharing.

The industry now shares some 30 percent of its projects with the Maritime Administration in the research and development area.

Now, with the committee's permission, I would like to turn to specific funding authorizations requested.

For ship acquisition construction differential subsidy, our request is \$257 million.

As I have indicated, I think we have made good and steady progress in the program. We have built 37 new ships and converted 16 other vessels into modern container ships, all under the provisions of the Merchant Marine Act of 1970.

For 1973-74, for those fiscal years, we have plans to contract for 25 additional new ships.

Now, to some members of the committee, this building rate may seem somewhat below the 30 ships per year forecast when the program was originally submitted to Congress.

Actually, in terms of productivity equivalents, we are passing the productivity standard or the productivity generated by the 30 ships a year that we would have built under the program.

What really has happened is that we are building larger ships for different trades than we contemplated when the program was prepared in early 1969 and submitted to Congress in 1970.

We are concentrating on the larger highly productive, extremely expensive vessel, such as the VLCC's, and the LNG's.

I doubt, Mr. Chairman, that we will meet the 30-ships-a-year goal, but we will build ships that have more total productive capacity than the 30 that we envisioned some 3 or 4 years ago.

I indicated that the shipyards have done their job. Their order books are full. They have made considerable investments in new equipment and they are becoming more competitive. They have met in every instance the CDS guidelines established by the act.

One of the elements of the new program that permits them to do this is the ingredient of negotiated procurement where the proposed purchaser of the ship is not required but can enter into a competitive bidding system or a negotiated procurement system with the yard.

The negotiated procurement system permits the shipowner and the proposed purchaser to sit down, to go over a vessel, to go over its designs, to cut out costly features, and to plan vessels that are capable of being built in series construction.

We believe that negotiated procurement has worked in this respect. It will continue to work and in the years ahead we will have significant flights of series construction on almost any of the ships that we are currently building under the program.

I might give the committee one small example of the benefits of negotiated procurement.

Not too long ago we signed a contract with Bath Iron Works at Bath, Maine, for four roll-on, roll-off van ship type vessels. They were an outright purchase of three with an option to purchase the fourth within a prescribed time period.

The cost of each of the first three ships was \$37 million. When States Steamship, the proposed purchaser of these vessels, exercised its option to purchase the fourth ship sometime later, the fact it was an add-on vessel of similar type allowed the cost to drop to \$35.1 million from the \$37 million that ship had cost earlier. That \$2 million saving accrued directly to the taxpayer. In other words, the U.S. Government was the beneficiary of that reduction in price.

We have also been using what we call a multiyear financing technique in which we contract for ships in one year and pay for them out of the next year's appropriations.

This is a technique, Mr. Chairman, that is new to the Maritime Administration, although the Navy has used it for a considerable period of time. Seven of the ships that we contracted for in 1972 were funded out of the 1973 levels, and some of the vessels that we will contract for in 1974 will be funded out of moneys appropriated in 1975.

Mr. Chairman, this allows a purchaser and a yard to gear up to produce not only to a standard vessel but multiples of ships. They could not do this if we had to pay for all those ships out of current appropriations.

It is quite evident to the committee, Mr. Chairman, that the \$275 million that we are requesting for construction differential subsidy is below the total of the two requests for the current year by some \$180 million. However, this \$275 million is by far the largest single construction differential appropriation ever requested by the Maritime Administration since the program began in 1936.

This amount, with the planned \$50 million carryover from fiscal year 1973 will permit our contracting for 17 vessels in fiscal year 1974.

Our present ship mix looks something like this: three VLCC's, the large tankers; six liquid natural gas carriers; two OBO's; three tankers up to 100,000 dead weight tons, which will probably range about 37,000 to 89,000 tons, and three dry bulk carriers.

Again, this ship mix demonstrates that our focus is on obtaining ships for our fleet and building them in this country to help move to the United States vital energy supplies, primarily liquid petroleum. We think this gives us a balanced shipbuilding program and a good mix of ships.

As I indicated, we are confident that the 39-percent CDS rate prescribed by the Merchant Marine Act to commence on July 1 will indeed be met by our shipyards and as far as the LNG carriers are concerned we have executed contracts for three LNG carriers at as low a percentage as 23.7 percent.

We expect that the LNG ships that we will be building in 1974 will at least meet that level and perhaps come in at a lower CDS level.

Now, for operating differential subsidy, the Maritime Administration requests \$221,515,000. This is \$10,485,000 below the 1973 request of \$232 million, but that amount will be augmented by a carryover from prior year funds of \$25.5 million, to provide us with an ODS program in 1974 of \$247 million.

This increased funding level reflects several things, first, a rise in the number of general cargo ships we will subsidize, second, the entry of three new bulk carriers into the operating differential subsidy program, third, the wage-cost escalation under the subsidy index system, and finally, increased payments for prior year approvals of operating differential, notably the operating differential subsidy for 1973 on ships moving grain to the Soviet Union.

An offset in this fund will be operating differential subsidies that we formerly paid to the passenger vessels, the *Cleveland* and the *Wilson* which operate in the Pacific which will cease operations. One has ceased operations and one will shortly cease.

Now, as you can see by the budget request, no funding is provided for 1974 for the Soviet grain movements.

The reason for that is that we cannot at this time estimate the magnitude of the Soviet purchases. Most of us believe that the Soviets will again purchase either wheat or feed grains in the United States after the current shipping year ends on June 30, but we are unable to ascertain the dimensions or the size of those purchased at the present time. If there is an opportunity for Americans to carry that grain under an operating differential subsidy program when those purchases materialize, we will be pleased to submit to the Administration and to the Congress a supplemental budget request for that purpose.

As you know, the prime objective of the new program is to aid our ship operators in becoming more competitive with less dependence on direct Federal assistance.

Now, the need for operating differential subsidy on U.S. ships arises primarily from the high cost of American and other expenses.

The problem confronting the American Merchant Marine, particularly the subsidized segment, has been compounded by two factors: (1) the operation of old and inefficient ships most of which we have been fortunate to phase out of our fleet and (2) unstable labor conditions that injured our carriers in the past.

In an effort to reduce the amount of subsidy that the Government does pay, the Maritime Administration has placed major emphasis on cost reduction. Wages and expenses related to wages account for some 86 percent of the total operating differential subsidy payments made to American companies.

The wage index that was first made part of the Merchant Marine Act of 1970 now relates to wage gains in the maritime community as well as to wage gains at large in the industrialized sector of our economy.

We think that the subsidy index, when it finally is implemented, will hold down wage costs to levels approximating those in other industrial area activities in the United States for a large number of years.

For a considerable number of years, wage gains at sea have very significantly outpaced wage gains in comparable activities ashore.

Mr. Chairman, this has driven the cost of American ships up and has driven the operating differential subsidy payments up.

As I indicated, that wherever possible we have terminated operating differential subsidy, as in the case of the North Atlantic, and in the case of the North Atlantic trades to the Far East.

Both the VLCC's and the LNG's that we have built and are contemplating building are large productive ships. These ships will operate without operating differential subsidy.

The only support we will pay is to the shipyards for the differential in building the ship here as contrasted to a foreign shipbuilding center abroad.

As I have indicated, we have reduced manning and the net effect is to benefit the taxpayer by some \$110 million.

We have also, I think, achieved significant savings by eliminating the substantial backlog in ODS payments that confronted us. Several years ago, the backlog dated back to 1960 through 1965. We have cleaned almost all of that up and made the payments to the companies and now we have effective rates on all components of operating subsidy through 1968 and we are getting even more current.

In addition to attempting to reduce operating costs of U.S. carriers, our second major concern is obtaining full employment for U.S. operators, including the previously neglected bulk carrier segment of the American merchant marine.

On October 14, 1972, the U.S. Government executed a maritime agreement with the Soviet Union which we believe will help normalize commercial relations between our two countries.

That agreement, Mr. Chairman, had two basic objectives. First, it opened maritime commerce by opening some 40 ports in both the countries to the respective vessels of both countries; second, it affords United States and Soviet ships the opportunity for each to carry not less than one-third of all the cargoes moving between those two countries for the next 3 years.

More immediately, the agreement allows U.S. ships to carry one-third of the 19.2 million tons of grain purchased in the last year by the Soviet Union.

In order to permit U.S.-flag ships to participate in that trade, the Maritime Administration developed a special subsidy formula and negotiated satisfactory rates with the Soviet Union for use of U.S.-flag vessels, enabling our ships to participate rather significantly in that trade.

We believe that agreement has contributed substantially to the industry's general health.

When the agreement was signed last October, 22 tankers totaling over 6,000 deadweight tons, were in layup in various U.S. ports. The very next month, in November, the number of ships in layup increased to 29, involving approximately 870,000 tons of laid-up tonnage.

At about that time, the industry predicted that more than 1 million tons would be laid up in the United States by midwinter of last year.

At the present time, there is virtually no laid-up tonnage capable of carrying grain to the Soviet Union.

As of March 1, 1973, the Maritime Administration has executed some 48 subsidy contracts with companies interested in carrying grain to the Soviet Union. These cover some 76 individual vessels.

Mr. Chairman, of these vessels, 40 have been fixed to carry over 2.8 million tons of grain on 82 voyages. This amount of shipping activity has generated over 210,000 mandays of work for American seamen.

Put in another way, it has created 1,660 jobs for American seamen.

In addition to the grain program and to increased vessel employment in the bulk carrier fleet, we are interested in increasing the U.S. flag participation in all sectors of our trade by all segments of the fleet.

In this respect, we have developed an intensified market developing program in the Maritime Administration. This program has several aims. First, it is aimed at helping operators, particularly the liner segment of our fleet, strengthen their own marketing efforts to attract more cargo.

Second, we attempt through elaborate computer runs of statistical data obtained from the Census Bureau to pinpoint lucrative cargoes that U.S. flagships are not carrying.

We take that information to the carriers, thereby giving them a market opportunity. We do not do their soliciting for them. That is

not the job of the Government. That is the job of the private sector, as you well know.

In addition to that, in the past, many individual shippers have complained about U.S.-flag service, such as they do not pay their claims, lack of frequency of service, cargo has been delayed, various types of disputes, not enough port coverage.

What we attempt to do is to elicit from the users and potential users of U.S.-flag service what their complaints and legitimate criticisms might be and take that information to the carriers involved, or to that segment of the fleet involved. We then see if we can determine whether these are legitimate grievances and if they are, if we can have them eliminated.

Another significant development within this effort has been the creation of the National Maritime Council which is a concerted effort by management, labor, and government, to increase shipper patronage of U.S.-flag lines and to assure potential customers of U.S.-flag lines that U.S.-flag service is dependable and reliable.

Now, through various meetings which include representatives of Government, labor, both offshore and longshore and shipping management, we create a forum where we can have frank and free discussions of our problems, where management can hopefully use the forum to indicate to labor some of its particular problems so labor will have a better understanding of them. We also find that management often does not have that much sensitivity to the legitimate problems that labor has. These meetings, which basically serve to bring people together and are educational, have created a better understanding about the maritime industry, and have induced a type of motivation to support the totality of the American Merchant Marine.

These councils have only been recently formed, but we think significant progress has been made.

Now, for our R. & D. request, we request \$20 million. This request is \$9 million less than last year, but because of a carryover of \$5 million in funds we will be able to operate in 1974 at a program level of some \$25 million in the R. & D. area which is about the same level of program activity that we have in the current year.

That R. & D. program, incidentally, is aimed at increasing industry competitiveness by concentrating on near term projects that show high-benefit cost ratios and projects that the industry will cosponsor and share with the Maritime Administration.

The 1974 R. & D. program concentrates on programs dedicated to nuclear propulsion for high-powered ships, pollution abatement systems, advanced LNG systems, increasing U.S. shipyard productivity and advancing automation in U.S. vessel operation.

The nuclear propulsion program, we believe, offers a major opportunity for an economic breakthrough for U.S. operators.

We have a cost shared program with several industrial complexes in the United States to develop nuclear plants for ships in the horsepower range of 100,000 shaft horsepower.

We have studies underway and others initiated to develop plans for medium-sized ships as well.

We are working on other ship propulsion activity, such as the gas turbine, the contrarotating propeller and improved power transmission systems for U.S. ships.

We believe that the total R. & D. system will also contribute to the efficiency of our yards and allow them better to meet the 35% CDS goal which has to be reached in fiscal year 1976.

Now, for the national defense reserve fleet, we request \$3,773,000. This is a decrease of \$127,000 from last year due to the fact that we are maintaining a smaller number of vessels in the fleet.

For the next year, we intend to keep under preservation some 323 ships, and we intend to dispose of, through scrapping, some 138 ships presently in that fleet.

For the U.S. Merchant Marine Academy, we request \$8.6 million.

The class that will graduate this year approximates 200 and is about the same number that is graduated over the last several years.

There is an increase in that amount over last year and that increase is primarily for the renovation of an extremely inadequate and, I think, dangerous 30-year-old electrical circuit system that serves the King's Point Academy and was placed there sometime during World War II.

For the State maritime schools, we request \$2,427,000. This is an increase of \$137,000 over the request last year.

By and large, that increase stems from the fact that the Maritime Training School in the State of Massachusetts, at Buzzard's Bay, has converted from a 3-year to a 4-year course and will not be losing any students this year.

We are simply picking up those students that will carry over to the fourth year and increases the allowance that we pay to the institution. These allowances incidently, are a \$75,000 grant to each of these six State schools and a \$600 allowance to each cadet. The allowances are at the same level as 1973.

We also provide financial support in our budgets for the repair and maintenance of the training ships that these various schools use, Mr. Chairman.

Mr. Chairman, in my opinion, the level of funding that we requested will maintain the momentum that we have achieved in the new maritime program and will move us just one more step forward to the building of a U.S. merchant marine that we all desire.

I thank you, Mr. Chairman.

That concludes my statement. I will be happy to answer any questions that you or the committee may have.

Mr. CLARK. Without objection, we will insert your full prepared statement in the record at this point.

[The statement of Mr. Blackwell follows:]

STATEMENT OF ROBERT J. BLACKWELL, ASSISTANT SECRETARY FOR MARITIME AFFAIRS, DEPARTMENT OF COMMERCE

Mr. Chairman and members of the committee, I appreciate this opportunity to testify in support of H.R. 5449 which authorizes funds for merchant marine activities for the fiscal year 1974 in the amount of \$531,315,000. This sum includes the following:

A. Ship construction and reconstruction-----	\$275, 000, 000
B. Operating-differential subsidy-----	221, 515, 000
C. Research and development-----	20, 000, 000
D. Reserve fleet expenses-----	3, 773, 000
E. Maritime training (Kings Point)-----	8, 600, 000
F. State marine schools-----	2, 427, 000

The broad purpose of the new maritime program embodied in the Merchant Marine Act of 1970, which this Committee helped to frame and pass, is the development of strong, competitive and economically viable U.S. shipping and shipbuilding industries which will provide this nation with the necessary merchant shipping capability for economic growth and well being, for participation in international trade, and for national security.

The Administration's effort is predicated on transforming the U.S. merchant marine into one of the most modern and efficient in the world by the end of this decade—a fleet that can be built and operated with reduced levels of Federal support.

The general objectives of the new maritime policy are aimed at two broad national maritime goals:

(1) to develop an adequate and well-balanced American merchant marine capable of carrying a substantial portion of this nation's international trade, and

(2) to provide military shipping support in times of national emergencies.

Significant increases in U.S. trade participation is a prime target of the new program efforts. Overall U.S.-flag participation is expected to triple during this decade to about 17%.

A significant contribution to our national defense and emergency planning is also a prime target of our program efforts. Demonstrating further the national need for a merchant marine, Admiral Zumwalt has recently emphasized the merchant marine defense-related posture—he pointed out that 96% of all supplies sent during the Vietnam war went by sea, and that when all the various aircraft presently contemplated are built, we will still need to send 94% of the supplies for any major war by vessels of the U.S. merchant fleet.

The new Maritime policies and programs are also intended to improve the productivity and competitiveness of the shipbuilding and ship operating industries by providing incentives to encourage the application of advanced technology, innovative management and aggressive marketing programs. Our commitment to a long-term merchant marine revitalization program will help eliminate the uncertainties that have in the past clouded the future of these industries, and thus provide a firm foundation for industry growth and stability.

We strongly believe that the 1970 amendments to the Act provide us with basically all the tools we need to help restore the U.S.-flag fleet to its former position. The President and the Congress both recognized that major long-term Federal commitments were needed to encourage U.S. shipyards to modernize for greater productivity and less expensive construction, and for ship operators to invest in modern general and bulk cargo ships during the 10-year program. It was understood by all parties that Federal support would continue if the industry showed real gains and gave some indication it would move toward decreased dependence on Federal subsidy. A good, sound start has been made, and we have seen many examples of progress thus far:

CDS rates have dropped from an average 53.6 percent in FY 1969 to 42.9 percent in FY 1972, meeting the statutory goals. The 41 percent rate of FY 1973 is being met, and CDS rates on LNG carriers have averaged under 25 percent—the lowest rate ever. We expect to meet the 39 percent guideline in FY 1974.

Twenty-four of the 37 new ships awarded so far have been bulk carriers to meet our energy resource deficiencies and satisfy our other raw resource requirements. The first LNG's, large crude carriers and ore/bulk/oil carriers ever built in the United States have been contracted for.

Currently, commercial shipbuilding is at the highest level in U.S. peacetime history. There are presently on order or under construction 80 ships in excess of 4 million deadweight tons, and valued at \$2.5 billion. This compares with orders of 1.8 million tons worth \$1.1 billion three years ago.

U.S. shipyards have committed over \$120 million in investments since 1969 in order to expand and improve facilities and to gain in productivity. Yards intend to continue this program if ship contracts are reasonably likely over the next few years. It is estimated that some \$350 million in expansion for LNG and large tanker construction has been planned by three yards.

U.S.-flag vessels are operated on the North Atlantic without ODS, representing \$25.6 million in savings annually. Manning scales on 86 ships have been reduced by an average of 4.2 men per ship, which provides long-term savings of more than \$110 million to the Government over the economic lives of the vessels.

The Maritime Research and Development Program has been enlarged in terms of both funding and substance. It has also been redirected to achieve near-term

results and to provide for extensive cost sharing of R&D projects by industry. The industry's share now represents about 30 percent of our annual R&D appropriation.

Mr. Chairman, we expect to continue this progress.

The specific funding authorizations for the new maritime program requested for 1974 are as follows:

A. Acquisition, construction, or reconstruction of vessels and construction-differential subsidy and cost of national defense features incident to the construction, reconstruction or reconditioning of ships, \$275,000,000.

Progress has been made in rebuilding the U.S. merchant fleet. Thirty-seven new ships and 16 conversions have already been contracted for under the new program. During the remainder of FY 1973 and FY 1974, contracting is planned for 25 additional new ships. While this number of ships may appear to fall short of the goal of 30 ships per year, the productive capacity of these ships exceeds that of the 30 ships per year envisioned at the time of passage of the Act. Furthermore, actual subsidy contract awards since passage of the 1970 Act have resulted in the largest peacetime order book for commercial shipbuilding in the nation's history. The unprecedented volume of ship construction activity was accomplished simultaneously with a reduction of effective construction subsidy rates.

The negotiation of contracts between the shipyard and shipowner provided for in the 1970 Act involves the shipyards in design work on new vessels. This has encouraged the construction of standardized ship types which can be built at reduced construction costs due to economies inherent in quantity purchasing and the use of experienced labor. For example, the price of each of three roll-on/roll-off vessels awarded to Bath Shipyard in June 1972 was \$37.8 million. By exercising its option in December of that year, State Steamship Company purchased a fourth ship at a total cost of \$35.1 million and at a decreased subsidy rate which provided a substantial savings for the American taxpayers.

The multi-year financing of ship construction contracts has been particularly effective in obtaining benefits of quantity procurement and standardized production. For example, the funding during FY 1973 of seven ships which were contracted for in FY 1972 allowed the yards to schedule production contingent upon funding in the subsequent year. We will continue to employ this method, when appropriate, on future ship construction contracts.

The awards of construction-differential subsidy for liquid and dry bulk cargo ships since the enactment of the 1970 Act has extended the expansion of modern American flag shipping into a new and vital area. Bulk cargoes constitute nearly 90 percent of the volume of this nation's foreign trade cargoes. Operator interest in this area is indicated by the fact that two-thirds of the new ships ordered since the inception of the new maritime program were bulk cargo ships.

Although the 1974 request of \$275,000,000 for construction-differential subsidy is a decrease of \$180,000,000 below the total funds appropriated for 1973, it is the largest regular appropriation request for construction subsidy in maritime program history. This amount, together with \$50,000,000 of unobligated 1973 funds carried forward will allow contracting for 17 ships in 1974. The shipbuilding plan supporting this request, while a balanced one, emphasizes ships which will carry petroleum, petroleum products and liquefied natural gas to the United States. Shipbuilding activity and shipyard employment will be maintained at high levels.

I am confident that all of the ships contracted for in fiscal year 1974 will be below the reduced subsidy rate of 39 percent mandated by the Act. Indeed, the subsidy rate for construction of liquefied natural gas (LNG) carriers is expected to be at least as low as the 23.7 percent achieved in contracts awarded in September 1972. Contracts for three VLCC's, six LNG's, two OBO's, three tankers (up to 100,000 DWT), and three dry bulk carriers are projected to be awarded during FY 1974. The authorization bill also provides that unobligated balances appropriated last year for the purchase of modern or reconstructed United States-flag vessels for lay-up in the National Defense Reserve Fleet, may also be used for construction-differential subsidy. This is included in the \$50 million carry-forward to which I previously referred.

B. Payment of obligations incurred for operating-differential subsidy, \$221,515,000.

The 1974 request of \$221,515,000 reflects a \$10,485,000 decrease from the 1973 appropriation of \$232,000,000. The amount requested for 1974 will be augmented by estimated appropriation carryover balances of \$25,485,000, thus providing funding for a total spending level in 1974 of \$247,000,000.

This increase in the spending level of \$32 million over 1973 represents an increase in general cargo ship years, entry into subsidized service of three new bulk ships, wage cost escalation under the wage subsidy index system, and increased payments for prior years accruals—mainly for 1973 Russian grain shipments. The overall increase is partially offset by the termination of service by the passenger ships CLEVELAND and WILSON. The request does not include funding for subsidy to carriers of 1974 Russian grain purchases due to the difficulty of estimating the magnitude of such purchases at this time. Should such funds be required, a supplemental budget request will be made.

The prime objective of the new program with respect to U.S. ship operators is to help them become more competitive and enable them to move towards less dependence upon the Government.

The major reason for U.S. operators' dependence upon subsidy is that U.S. operating expenses, particularly wage and related costs, are high by world standards. This competitive disadvantage had been accentuated by generally unsatisfactory labor-management relations in the past which resulted in disruptive work stoppages and wage settlements comparatively more costly than those experienced in most other segments of U.S. industry.

Not only had this competitive disadvantage in operating costs not been offset by increased productivity of the U.S.-flag fleet compared to its foreign counterparts, but for a major portion of the industry it had in fact been compounded by the progressively older, inefficient and uneconomical vessels in operation under American registry. The foregoing factors have caused adverse trends in profits, fleet capacity and employment.

The Maritime Administration has placed major emphasis on achieving cost savings in fleet operations. The major item of operating subsidy is for wages and wage-related costs for seafaring personnel, which account for 86 percent of the aggregate annual operating subsidies. Under prior law the wage subsidy was paid for the difference between U.S. and foreign costs of operation. Therefore, any increase in American operating costs, regardless of its relation to general U.S. wage rates, without a corresponding increase in foreign cost, was paid by the U.S. Government.

To correct this deficiency, a wage subsidy index system was included in the new maritime program of 1970. This subsidy wage index relates the payment of wage subsidy to the general trend of wage movements throughout the economy. If the increase in wages paid to seafaring personnel exceeds the increase in the index, the operator receives no subsidy on such excess. If on the other hand, the increase is less than the index, the ship operator retains the difference between the subsidy and the actual wage, thereby providing an incentive to keep his costs down.

Where possible, operating subsidies have been completely eliminated. Payment of operating-differential subsidy on a fully containerized service on the U.S. Atlantic-Far East trade route has been terminated. Also, two long-standing U.S. operators in the North Atlantic relinquished subsidy after having shifted to containerized service.

These actions help validate a basic premise of the New Maritime Program that efficient, high technology American-flag ships can compete effectively against lower cost foreign competition without subsidy on many trade routes. The six Very Large Crude Carriers and six LNG carriers that have been contracted for to date will also be operated without operating subsidies.

Another cost saving which has been realized is reduced manning scales for new and modernized vessels of subsidized operators. These reductions, affecting 86 ships, offer long-term savings of more than \$110 million to the Government over the economic lives of the vessels.

Substantial cost savings have been realized in improved administrative processing of operating-differential subsidy payment due to the U.S. ship operators. Much of the prior backlog has been eliminated. The backlog included 521 individual operating-differential subsidy rates covering voyages terminated during the years 1960 through 1965. All operating-differential rates through calendar year 1968 have now been computed and accepted by all operators.

A second area of major concern in improving ship operations is the effort to obtain full employment for all U.S. ship operators. The program aims at obtaining wider employment for all segments of the U.S.-flag fleet including the development of employment opportunities for the previously neglected U.S. bulk carrier fleet.

On October 14, 1972, the U.S. signed a major maritime agreement with the Soviet Union to extend through December 31, 1975. This agreement contributes to the establishment of an expanding commercial relationship with the Soviet Union.

By providing a broad framework and a clear set of ground rules for maritime activities between the two countries, the agreement represents an important step toward normalizing and expanding commercial relationships between the United States and the Soviet Union.

Basically, the agreement has two objectives: first, to open the channels of maritime commerce between the two nations by opening major U.S. and Soviet commercial ports to calls by specified kinds of U.S.-flag and Soviet-flag vessels; and, second, to afford to U.S.-flag vessels and Soviet-flag vessels the opportunity to participate equally and substantially in the carriage of all cargoes moving by sea between the two nations. The agreement provides that the U.S.-flag vessels and Soviet-flag vessels will each have the opportunity to carry not less than one-third of all cargoes moving by sea between the two nations. Recognizing the policy of both the U.S. and U.S.S.R. with respect to third-flag participation in their trade, the agreement provides for the final third of the cargo to be open for competition by all flags.

The agreement immediately provided American-flag ships with access to one-third of approximately 19.2 million tons of grain that have been purchased by the Soviet Union. To facilitate the participation of American-flag vessels in this movement we have developed a special operating subsidy formula for ships engaged in this grain trade and negotiated a satisfactory rate structure with the Soviet Union.

The significant contribution of this agreement to the economic health of the U.S. shipping industry is evidenced by the fact that in October 1972, at the time of the signing of the Maritime Agreement, 22 U.S.-flag tankers, or over 600,000 DWT, were laid up essentially for lack of cargo. By November 1, 1972, idle U.S. tanker tonnage had increased to 27 ships of over 870,000 DWT. The industry predicted that laid-up tonnage would exceed last year's figures and total more than one million DWT by midwinter. This situation was averted and today there is virtually no laid-up U.S.-flag tonnage. As of March 1, 1973, 48 operating subsidy contracts covering 76 American-flag vessels have been approved, and 36 vessels covering 78 voyages have been fixed to carry over 2.7 million tons of grain to the Soviet Union. In terms of actual employment this means over 210,000 man-days of seafaring employment. We believe, even though other additional employment prospects are now being made available to shipowners, the extent of U.S. participation in the Russian grain movements will still be significant.

As a major aid to obtaining more employment and better utilization of the U.S.-flag fleet, we have established an intensive marketing program to promote the use of U.S. export and import shipping services. The prime objective of these efforts is to strengthen the marketing capabilities of U.S.-flag steamship companies, thereby generating U.S. shipper patronage of their services in order to help achieve more profitable operating results and increased U.S. export and import trade participation. Work in this area has resulted in the development of an extensive body of information on foreign trade movements which is provided on a regular basis to the American-flag carriers. Analysis of the data is aimed at identifying situations where lucrative cargoes are not being carried in U.S.-flag vessels. The Maritime Administration also regularly contacts U.S. shippers and carriers involved in order to identify and resolve problems that have inhibited U.S.-flag carriage.

Another important program established to promote the use of U.S.-flag ships is the National Maritime Council. Maritime unions have joined with the U.S. steamship companies to form the Council and there is emerging a new spirit of management/labor/Government cooperation.

C. Expenses necessary for research and development activities (including reimbursement of the vessel operations revolving fund for losses resulting from expenses of experimental ship operations), \$20,000,000.

The 1974 request for Research and Development of \$20,000,000 represents a decrease of \$9,000,000 from the 1973 appropriation. The 1974 program is set at a \$25,000,000 level consisting of \$20,000,000 in new funding requested in 1974 plus \$5,000,000 from 1973 unobligated funds which resulted from 1973 program reductions and deferrals.

The 1974 program is directed towards near-term projects. The projects chosen take into account benefit-to-cost ratios and the continuation of coordination and cost sharing with the maritime industry. In addition to the substantial progress already made in the area of ship construction technology and subsidy rates, MarAd research and development efforts are under way which show promise for substantial future benefits to the maritime industry.

The primary R&D objective is the development of technological advances which will enable the U.S. merchant fleet to become fully competitive in all aspects of shipping.

The requested 1974 funding will provide for:

Development of a new generation of nuclear propulsion system designed for economic operation in high-powered ships.

Development of pollution abatement systems for the elimination of ship generated oil pollution and wastes and the development of new techniques and facilities for shoreside waste retention and separation.

Development of advanced ocean transportation systems for liquefied natural gas (LNG).

Improved methods for achieving increased productivity in ship construction including the use of computerized systems to reduce construction subsidies.

Advanced automated controls and operations systems to aid in improving ship machinery, cargo handling and management, advanced equipment and procedures for navigation and communication, and safe ship handling and maneuvering.

The major effort in the development of new advanced and more productive ship systems in the MarAd research and development effort for a Competitive Nuclear Merchant Ship Program. R&D resources have been directed into this program to provide the opportunity for a productivity break-through, with emphasis on a workable economic system which American shipping can use for profitable trade operation. This is one of the many efforts where cost sharing with industry is being used to achieve greater results at minimum federal cost. The current program has a goal of providing safe, economical nuclear power plants for use in ships with 100,000 and above shaft horsepower range. In addition, studies are being initiated for the development of nuclear power plants in the medium size range of ships, those under 100,000 horsepower.

While the major effort has been towards development of nuclear propulsion, other types of advanced propulsion systems are not being overlooked. Gas turbine propulsion system studies have been conducted and they are directed towards the achievement of an improved heavy duty gas turbine system with a high power output for marine applications. We are striving to develop a system with lower capital and operating costs, and with the capability of operating on regular marine fuel oil. Studies relating to the development of contra-rotating propellers and the improvement of marine transmission materials and equipment are also under way.

Research and development is one of the tools used to support the goal of reduction of shipbuilding subsidies to a maximum of 35 percent by FY 1976. Efforts are being conducted not only on developing new systems, but also to lower shipbuilding costs for conventional ships.

Improvement in construction procedures through the standardization of design and the greater use of preassembled units are being developed. All of these developments are expected to help foster ship construction in U.S. yards and at the same time provide for a more efficient and competitive United States merchant fleet.

D. Reserve fleet expenses, \$3,773,000.

Funding at \$3,773,000 is requested for expenses to be incurred in the preservation and custody of ships in the National Defense Reserve Fleets. The request reflects a decrease of \$127,000 below the 1973 level due to the declining number of ships in the reserve fleet.

In 1974, preservation is anticipated for approximately 323 ships retained for national defense purposes at three active fleet sites. Custody will also be provided for about 138 ships scheduled for disposal.

E. Maritime training at the Merchant Marine Academy at Kings Point, N.Y., \$8,600,000.

The \$8,600,000 requested authorization is for the operations of the Merchant Marine Academy at Kings Point, New York to train cadets for service as officers in the U.S. merchant marine. The 1974 program anticipates a graduation rate of 200 officers, approximately the same level for the past few years. The requested authorization includes funds for the planned renovation of the deterior-

rating and inadequate 30-year old electrical distribution system at the Academy.

F. Financial assistance to State marine schools, \$2,427,000.

The requested 1974 authorization for this program reflects a \$137,000 increase over the 1973 level of \$2,290,000. The request provides for the continuation of the program of financial assistance to six State Marine Schools as authorized by the Maritime Academy Act of 1958. Grants in the amount of \$75,000 to each participating State school, allowances not to exceed \$600 to cadets for uniforms, textbooks and subsistence, and funds for the maintenance and repair of training ships used by the schools are included in the request. The level of cadet enrollment is essentially the same as in 1973.

This concludes my statement, Mr. Chairman. I will now be happy to answer any questions that you or members of the Committee have concerning our 1974 authorization request.

Mr. CLARK. Thank you, very much.

It was an excellent statement and, Bob, as always you do a terrific job.

What percentage of our energy requirements can be carried in U.S.-flag vessels at the current ODS and CDS subsidy level, and do you feel this is adequate?

Mr. BLACKWELL. Hardly any. We really do not have a fleet of U.S. tankers that can gainfully be employed today in carrying crude oil to the United States.

Most of the ships are too small and most of the oil comes from too far away, particularly the Persian Gulf, to enable these ships to operate economically in these trades. However, we have taken the 18 tankers, which includes the 2 OBO's, that we have under construction, and we have determined their annual carrying capacity in terms of crude oil and we have assigned each, depending on the size of the ship, to a trade route. For instance, the small 89,000-ton vessels we calculated would serve from Libya or Algeria to the Atlantic.

The larger VLCC's, we assume would be put in service from the Persian Gulf to the United States. The carrying capacity of those ships, if those ships had been available in 1972, would have increased U.S.-flag participation in liquid bulk cargo from something like 2.2 to 23.1 percent. That is in just liquid bulk cargo.

If we just used that capacity and included the aggregate of everything moving in and out of the country, that additional capacity would have raised total U.S.-flag participation on all trades and all routes from 5.3 to 8.9 percent, almost a doubling.

You see, the effect of building these highly productive ships is readily apparent.

Now, Mr. Chairman, I am not going to say that when those ships are delivered we are going to get that penetration of the market, because, as we all know, what is happening particularly in your liquid bulk area, particularly with crude, the amount of imports that we obviously are going to need is staggering. And, despite the fact that several years ago we made projections, the projections today are outpacing the projections we made several years ago by 3 or 4 percent.

What is happening is as we are offering the trade more capacity, the total movement in the trade is increasing and we are trying to play catchup.

The fact is that it does take between 2 and 2½ years for these ships to come off the ways.

However, they are going to allow us to carry a very substantial portion of the oil that we need.

Now, I cannot say honestly that the total will aggregate 5.6 or 7.9 simply because we still do not know what amount of oil will move to this country and that will largely depend on the President's energy program when it is announced shortly.

Mr. CLARK. Bob, why did not the Maritime Administration go forward with the fiscal year 1973 program to purchase a number of modern, break-bulk vessels for layup in the national defense reserve fleet?

In this regard, I note the Department of Commerce and the Office of Management and Budget cut your construction funds by \$33 million, so that you cannot go forward with this program in fiscal year 1974. Why is this?

Mr. BLACKWELL. That results from a policy decision within the administration, Mr. Chairman. It has been concluded that while the Maritime Administration has a role to play and has considerable expertise in valuing ships, in keeping them under preservation, and in maintaining national defense reserve fleets, the exercise of which is indeed critical in breaking these ships out, the national defense consideration involving how many ships and of what type has been concluded to be a Department of Defense prerogative. It has been decided that the funding for these ships should come out of the Department of Defense budget.

What has happened, as you have indicated, is that we did spend, out of that \$33 million, approximately \$5 million to purchase the SS *United States*, \$4.6 million, the difference between the mortgage that was written off and the book value of the ship and the remaining difference between \$4.6 and \$5 million was the amount that we considered necessary to move the vessel from its present mooring at the Norfolk International Terminal to a mooring spot made available by the Navy which is near Yorktown, Va.

In last year's hearings, I expressed a desire to upgrade national defense reserve fleets. I still maintain that that should be done, but I cannot quarrel too much with the fact that that really requires a military input and possibly military funding.

What we have done, however, so that we do not lose that money, is that additional \$25 million that is carried over, we have requested that that be added to our 1974 construction differential subsidy money, so we can get the benefit of that \$25 million in terms of new ships rather than old ships.

Mr. CLARK. Why was your construction subsidy request of \$350 million cut by the Department of Commerce and the Office of Management and Budget?

Mr. BLACKWELL. The reduction in the Maritime Administration's ship construction budget request by the Department of Commerce is a consequence of stringent budget ceilings necessitated by the President's desire to hold down Federal spending. The resultant level of \$275 million, augmented by \$50 million brought forward from fiscal year 1973, will sustain recently generated momentum and allow the shipbuilding program to proceed at an orderly pace.

Mr. CLARK. Do you believe that the American shipbuilding industry will be able to meet the 39 percent construction-differential subsidy level that will go into effect on July 1, 1973? If not, what will happen

to the new maritime program provided by the Merchant Marine Act of 1970?

Mr. BLACKWELL. I certainly believe that the 39 percent construction-differential subsidy level will be met.

Mr. CLARK. I understand that \$25,485,000 in operating-differential subsidy funds were carried over from fiscal year 1973? Were these funds impounded by the Administration? If not, why were they carried over?

Mr. BLACKWELL. \$25,485,000 in operating-differential funds has been carried over from fiscal year 1973. This represents an accumulation of ODS funds not spent in previous fiscal years that have been applied to the fiscal year 1974 budget. The funds were not impounded, but rather have been used to reduce the fiscal year 1974 appropriation since the funds are already available.

Mr. CLARK. I understand that Aries Marine and Margate Shipping will receive operating differential subsidy for the first time in fiscal year 1974. What and where will they operate?

Mr. BLACKWELL. Aries shall operate the two OBO's now under construction for a minimum of 335 days in world-wide carriage of liquid and dry bulk cargo in the foreign oceanborne commerce of the United States and in the carriage of such cargoes between foreign ports; provided that said vessels shall carry exclusively commercial liquid and dry-bulk cargoes not subject to the cargo preference statutes of the United States including, but not limited to, 10 U.S.C. 2631, 46 U.S.C. 1241 and 15 U.S.C. 616a.

The description of the route or service for Margate Shipping Co. is identical with that contained in article 1-2 of the Aries Marine Shipping Co. ODS contract which I have just discussed except in lieu of the operation of OBO's it refers to the operation of a tanker and to only the carriage of cargo (with no mention made to the carriage of dry-bulk cargo as in the case of the OBO's).

Mr. CLARK. Thank you.

Mr. Downing, any questions?

Mr. DOWNING. Thank you, Mr. Chairman, and thank you, again, Mr. Blackwell, for an excellent statement.

Overall, considering the carryovers of both years, is this year's request larger than last year's?

Mr. BLACKWELL. I think overall it is just short of what was requested last year, but, Congressman Downing, I think it is going to be necessary for us to come in with a supplemental for Russian grain and if that materializes, I would think that the total budget for 1974 will, in fact, exceed the total budget for 1973.

Mr. DOWNING. Do you foresee a request for a supplemental for construction of LNG carriers?

Mr. BLACKWELL. No, sir.

Mr. DOWNING. Do you think that you have them pretty well in line?

Mr. BLACKWELL. We have applications for more than 24 LNG ships presently pending before the Maritime Administration.

Obviously, we cannot construct all those ships either today or even next fiscal year, or perhaps even the next.

We have had to use a subjective judgment with some objective criteria to weigh those applications, to look at those that appear to be viable, those ships that are locked into projects where the financing

looks good, where the construction of the liquid facilities seem to be on target, where Eximbank financing appears in some cases to be assured.

At least two of those ships, incidentally, will not require construction differential subsidy.

We do have an applicant that is interested in building ships for the Jones Act trade that would possibly be two ships to move gas from Alaska to the west coast.

These ships would not require a nickel of CDS, but very likely would require a significant amount of title XI money.

Mr. DOWNING. Of the \$20 million which you have allocated to R. & D. how much goes to nuclear vessels?

Mr. BLACKWELL. I believe that now is about \$5 million, and what we did is we staged the program over the years in terms of its moving forward to a point where we could implement the program.

It started relatively small. It has been increased each year and I believe this year there is an increase in that budget.

Mr. DOWNING. Last year, you projected \$8.7 million for nuclear development, and I suppose you are on target.

Mr. BLACKWELL. That is not entirely right. The budget provides \$5 million. Incidentally, as the price of fossil fuel increases, aside from the pure economics and efficiency of a nuclear propulsion system, each day that passes with the price of fuel oil increasing, makes the nuclear powerplant for merchant ships look better.

Mr. DOWNING. Do you have any predictions as to when we will have this second generation of nuclear propulsion?

Mr. BLACKWELL. We have indicated in informal discussions with the Office of Management and Budget that we would be moving forward probably in the 1975 budget submission to build a prototype powerplant.

Mr. DOWNING. In the Russian grain deal, as you know, there are several U.S. ports which are sensitive as there are several ports in Russia, and which do not permit Red bloc ships to enter harbor.

Are there any arrangements being made so that they will get the preference of American-flag ships so they will not be unduly penalized because they do not have the facilities?

Mr. BLACKWELL. I am sorry, but I do not understand your question.

Mr. DOWNING. I am afraid I did not put it too well.

There are several ports in this country that are sensitive from the national security standpoint. They have grain elevators. Due to the security, they cannot permit Red bloc ships to load grain in these ports.

Now, are they being penalized in any way? In other words, can you send American-flag ships instead of Red bloc ships so these people will not be penalized?

Mr. BLACKWELL. No, sir, it is theoretically possible. I think I know the port you are talking about. There are at least two grain elevators there and both of those companies, though, own those elevators and have, in fact, sold wheat to the Soviet Union.

Most of the Soviet grain purchasers of wheat, particularly, are moving out of the gulf ports. The reason they did that was basically economic because of favorable rail rates, storage charges, charges at the elevators, and also because the gulf is the primary area for handling bulk commodities in this country.

If it were possible to divert some of the shipments to nongulf ports, yes, it would be quite possible for U.S. ships in the grain program with the Soviet Union to make calls at those ports, but it would not be possible for U.S. ships engaged in pure commercial carryings unrelated to the Soviet grain program and unrelated to the Public Law 480 program to move into those ports, simply because they cannot do it economically.

Mr. DOWNING. Who allocates American-flag ships for the grain shipment?

Mr. BLACKWELL. No one really allocates. The wheat is moved by barge or rail to the port. It is stowed in the elevator. A decision is made to move it. The bookings, the actual bookings, are conducted out of an office in New York between an agent or an employee of the Soviet Chartering Agency. He deals with the American ship brokers and the foreign ship brokers, or directly with the lines themselves, and they make the fixing there.

Mr. DOWNING. My 5 minutes have expired, Mr. Chairman.

Thank you.

Mr. CLARK. Mr. Downing, I am glad you asked that last question. It is very important, I think, to the shipping industry in the future.

Mr. Mailliard?

Mr. MAILLIARD. Thank you, Mr. Chairman.

Pursuing for a moment the question of upgrading the quality of the reserve fleet, a year ago Mr. Gibson discussed this at the hearings on the comparable authorization bill and made the same point that you have that this sort of policy decision is a defense problem.

However, I have not seen anything in the Defense Department budget, which means it is nobody's problem, I guess; is that right?

Mr. BLACKWELL. Well, it is somebody's problem, but I think that somebody is not facing up to it, Mr. Congressman.

The Navy has manifested an interest in upgrading the national defense reserve fleet.

We have a number of mariners in this country operated probably by subsidized lines which are technologically obsolete for service today in the liner trade, and they cannot compete very effectively even in the Public Law 480 movements.

We do have a number of companies with surplus mariners. These are excellent ships for the reserve fleet which is really the type of ship we were targeting on when we requested that authority.

The Navy and the Military Establishment have their own problems as well. I am sure their problems are more acute, budgetwise. They have to make decisions in terms of priorities, how to spend their money.

The Chief of Naval Operations, and others, have indicated they want to spend the primary amounts of their budget in terms of shipbuilding on combat ships, where we have woefully fallen behind the Soviet Union.

Consequently, while the Navy has demonstrated and manifested an interest in upgrading the fleet, other priorities at this time seem to place that in a secondary role.

Mr. MAILLIARD. What is happening to the fleet?

I think Mr. Gibson said last year there were 135 ships.

Mr. BLACKWELL. That is right. We have, actually, more than that, Mr. Congressman. We have 323 ships that we say are under retention. They are under various forms of preservation, but to be perfectly candid with you, in my opinion, except for the Navy auxiliaries that were also taken care of, only about 130 of those ships, those victory ships, are capable of ever being called back, and I am not so sure of those.

Mr. MAILLIARD. What are your plans? Are you scraping more ships out of the reserve fleet, or have you hit bottom?

Mr. BLACKWELL. We intend to hold 130 ships as an absolute bottom.

In other words, we think the national security would be impaired if we let those ships go. We intend to scrap almost everything else.

Mr. MAILLIARD. What is happening to the postwar ships that are becoming obsolescent or maybe obsolete for commercial purposes? Are they going foreign, being bought by other American operators?

Mr. BLACKWELL. No; very few of them have gone foreign from the latter segment. What is happening? It depends on when they were built.

Mr. MAILLIARD. Starting with the first mariner.

Mr. BLACKWELL. A significant number of mariner's have been converted for one thing.

Mr. MAILLIARD. Yes.

Mr. BLACKWELL. U.S. Lines covered a significant number. Most of the west coast companies have converted mariner's or improved mariner's, but they reached the point of now going almost into full-scale containerization, or the rollaway operation on the west coast.

They are literally struck with conventional ships that are fine, maintain very well. I do not believe that they can get on the market what the book value of those ships are today. We have checked this out. Now, there is a way, quite frankly, that we can take those ships.

Mr. MAILLIARD. On a trade-in?

Mr. BLACKWELL. Yes; you are absolutely right.

I have had a policy when the construction differential subsidy funds are rather acute and we are trying to maximize new ship construction, I have been reluctant to take trade-ins because that trade-in money, the money we pay for trade-in, comes out of our construction differential subsidy program and limits the number of ships we can buy.

I would like, if I could, and it was sound policy, to relieve some of the U.S. subsidized lines of the burden of these ships that they cannot really practically use.

However, in terms of making the decision whether I would rather build new ships or take in old ships, I have opted for building new ships and many of them are very angry with me.

Mr. MAILLIARD. Well, I can see it presents a problem, but it disturbs me that we do not seem to have, either in commerce or defense, any plan to retain these ships which have very, very substantial defense value, and in some instances would be more valuable for defense than the modern container ships that we are building.

Mr. BLACKWELL. There seems to be a lack of interest in maintaining some type of defense capability once the war is over. People say that is the last war we will ever fight. But we have broken those ships out since 1946, at least nine times. They served admirably in Korea. We broke 176 out for Vietnam.

They were broken out when Europe was almost starving in the post-war period. They were broken out for that purpose and they were broken out when the Suez Canal was closed.

Mr. MAILLIARD. We know the history of this, but what bothers me in a national emergency, maybe not involving a war, but some other requirements, our flexibility is not going to be there.

Mr. BLACKWELL. In fact, you know, we called most of those general agency ships about 2 years ago and put them back in the reserve fleet. Only 4 or 5 months ago, during the height of the intensive bombing of North Vietnam, we came very close to breaking some of those ships out again to carry vital war supplies to Vietnam, and we were fortunate that we were able to have them, the fact that they were *Mariner's* from west coast companies who took them off subsidized service and allowed them to make one or two runs for the military.

Mr. Mailliard, you can see we were that close again to breaking out a handful of ships.

Mr. MAILLIARD. One other question, if I may, on a little different subject.

As I recall, in the 1970 act, the authority for direct negotiations for shipbuilding contracts was for a limited period.

Mr. BLACKWELL. That is right.

Mr. MAILLIARD. Why have you not requested that that be extended in this bill?

Mr. BLACKWELL. We have it in the Executive communication which should be up in a day or two.

Mr. MAILLIARD. Do you want to put it in this bill or another bill?

Mr. BLACKWELL. It is in a separate bill. It will be here, perhaps, tomorrow.

Mr. MAILLIARD. Why not in here?

Mr. BLACKWELL. Well, we did not think it was really an appropriate part of the authorization process which basically amounts to an amendment of the Merchant Marine Act, and quite honestly, we thought we might have some difficulty getting it cleared, and I gave the first priority to the budget.

Mr. MAILLIARD. Would you see any objection to including it in an authorization bill?

Mr. BLACKWELL. No, sir.

Mr. MAILLIARD. Thank you.

Mr. DOWNING (presiding). Mr. Ginn?

Mr. GINN. Mr. Chairman, as a new member of the committee, I want to thank the witness for his statement.

I imagine in view of your post you get a lot of brickbats. I had occasion recently to call you involving a matter in my district and you handled it very well.

Can you tell me how many State marine schools there are and where they are located?

Mr. BLACKWELL. There are six. One is located at Travis City, Mich., which basically trains young men for employment at sea on the Great Lakes.

There is one in Maine, Buzzard's Bay, Mass., New York State Academy, the Texas Academy at Galveston, and the California Academy close to Vallejo, Calif.

Mr. GINN. Thank you.

With respect to the Russian wheat deal, I understand from your statement that the maritime agreement guarantees U.S.-flag vessels the opportunity to carry one-third of the cargoes moving between the United States and Russia.

Are U.S.-flag vessels availing themselves of the full one-third provided by this agreement?

Mr. BLACKWELL. Congressman Ginn, the agreement provided the flag operators the opportunity to carry one-third of the cargo and it is quite clear that they will not carry one-third of the 19.2 million tons. The reason is that there have been other attractive types of employment for U.S. ships that are capable of carrying grain to the Soviet Union.

For instance, just shortly after we concluded the agreement with the Soviets, and were negotiating the freight rates with them, there were a significant number of idle U.S. ships.

Just at about that time, the Agriculture Department announced a heavy grain movement to Bangladesh. The rates on that movement are quite favorable. In fact, they give the operator a better economic return than our subsidy system, plus the Soviet payment of rates to them, so they opted to go into the Public Law 480 program, and I cannot blame them for that. They are obviously profit motivated. That is what the game is all about.

At the same time, as you remember, we had a fairly cold winter. New England was confronted with a fuel crisis in terms of some types of fuel and what that served to do was reactivate fairly dormant U.S. Gulf, north of Hatteras, U.S. tanker movements.

The rates went up rather significantly and tankers which are basically carrying this grain for us to the Soviet Union opted to go into that trade rather than carry grain to the Soviet Union.

Again, it is a decision that I cannot fault them for. If I were running a ship, I would make the same decision. They plotted the rates and they determined which trade was most profitable.

What the Soviet grain movement has done has really serve as a foundation for employment. It was kind of the last available choice, and if these carriers are able to attract a backhaul, they can make some money and the rates are rather marginal, to tell you the truth, but not marginal enough that we have not attracted over 80 voyages in that trade and so far booked over 2.8 million tons.

I would anticipate that before all the Soviet grain moves, we will carry between 3½ to 4 million tons.

I would like to think that would be more appreciable, that would be a significant movement.

What really is important, I think, is that the U.S. fleet is fully employed, not particularly where they are employed, and that fleet is employed totally today because there is not a single bulkier or tanker in layup.

Mr. GINN. Would you submit for the record the amount of subsidy paid by vessel for the shipment of the Russian wheat?

Mr. BLACKWELL. Be pleased to.

[The information follows:]

SUBSIDY PAYMENTS PER VESSEL, ON WHEAT SHIPMENTS TO RUSSIA

Willamette Transport, Inc., <i>Ogden Willamette</i> , voyage No. 43----	\$187, 675. 48
National Transport Corp., <i>National Defender</i> , voyage No. 106----	469, 589. 71
Ooverseas Oil Carriers, Inc., <i>Overseas Joyce</i> , voyage No. 62-----	316, 107. 00
Hudson Waterways Corp., <i>Transsuperior</i> , voyage No. 47-----	206, 057. 37
Ocean Transportation Co., Inc., <i>Overseas Aleutian</i> , voyage No. 20--	344, 274. 00

Total payment to date (Mar. 8, 1973) ----- 1, 523, 703. 56

Mr. GINN. Thank you, Mr. Chairman.

Mr. DOWNING. Mr. du Pont?

Mr. DU PONT. Thank you, Mr. Chairman.

Mr. Blackwell, are there included in the budget that you have presented this morning, any funds for construction or for engineering or R. & D. on the superport?

Mr. BLACKWELL. Nothing for construction or engineering. The R. & D. budget provides for \$300,000 for port development studies.

Mr. DU PONT. If you were to begin an effort of that kind, how would you obtain this money? Would you come back with a separate bill?

Mr. BLACKWELL. I believe so.

Mr. DU PONT. Well, you have done a substantial study on the one superport, and I am merely curious as to what your plans are for implementing that?

Mr. BLACKWELL. As I indicated to you, Congressment du Pont, when we had our radio conversation that was broadcast back to your State, in the study that the Maritime Administration conducted, it was not a plan that was really intended to be implemented.

What we attempted to do, we first conducted an in-house study as to whether it was feasible in terms of what were the economic benefits of building a superport anywhere, and we concluded that it was a project of a type worth undertaking because it would basically benefit the consumer, because we could materially reduce the prices, the landed cost of almost all bulk commodities moving to the United States.

We also ran studies, incidentally, as to what it would do for our export trade, particularly coal, if coal could be handled in ships larger than the 80,000- to 100,000-ton ship that occasionally comes into the Hampton Roads area. Here again, we determined that the U.S. competitive position on U.S. exports of coal would be considerably enhanced if we could move it out of this country in larger vessels.

What we then did, as we did some preliminary work in selecting potential sites around the United States, mostly the Atlantic gulf where the water levels were such and the tides were such and the wind conditions were such as to have those areas considered as candidates.

We then undertook additional surveys to see whether it was prudent to build these ports inside certain estuaries, for instance Delaware Bay, which is prohibited by the statutes of the State, and offshore terminals as well.

We did the study on that larger artificial island. We did studies of other systems, deepwater systems, much less sophisticated than that. It was at that time that the energy problem began to reach the attention of the general public and was of particular concern to the administration. A special task force was convened to work under the Domestic Council in the White House. To my knowledge, the role for superport development has not yet been determined. Of course, a num-

ber of agencies have some cognizance over this activity; for example, the Department of the Interior, the Bureau of the Budget, obviously, the Corps of Army Engineers, NOAA, and the Maritime Administration.

They, in turn, have come up with studies that indicate that a superport, not necessarily an artificial island, brings a substantial economic return to the United States.

Mr. DU PONT. But you have no specific program within this budget for superport development?

Mr. BLACKWELL. That is right. There are funds only for general studies. I am not sure that even if we requested development funds that we have the basic authority to develop a superport.

Mr. DU PONT. I would like to ask a related question to that.

You testified concerning the development of LNG's and made some comment about VLCC's and so forth. With the tremendous increase in LNG's, for example, is there attention being given to developing shore-side facilities for utilizing these vessels?

Mr. BLACKWELL. We have approved the contract for six LNG's, one for the east coast project in New England, Staten Island, Jersey, and one for El Paso Natural Gas that would use a facility at Savannah, Ga., and Cove Point in the Chesapeake Bay. That is the El Paso project.

The projected sites for the LNG terminal for the east coast project would be Staten Island, Providence, R.I., and likely Boston.

Mr. DU PONT. But are there funds contemplated for developing the necessary techniques or facilities for shoreside operations?

Mr. BLACKWELL. That is not a matter within the cognizance of the Maritime Administration.

Mr. DU PONT. That will be taken care of by private funding?

Mr. BLACKWELL. Yes, the environmental impact statement, if one would be required, would be a matter for the Federal Power Commission when it decides upon the application to import gas, and it would be the local regulatory agency in the State and perhaps even in the municipality.

Mr. DU PONT. Are the people who were contracting for LNG's willing to go ahead and build them without the assurances of shore-side facilities?

Mr. BLACKWELL. No, they have their site selection. It is a totally private sector decision that they are making. They have acquired the land. In some cases the construction is underway.

Mr. DU PONT. Thank you.

Thank you, Mr. Chairman.

Mr. CLARK [presiding]. Mr. Eckhardt?

Mr. ECKHARDT. I was very interested in Mr. du Pont's questions. I am a little disconcerted by his use of the word "superport."

I understand you are considering the superport question with respect to the gulf as well as the Atlantic, and ultimately, I assume, the Pacific as well.

Mr. BLACKWELL. We have looked at the possibilities of the superport in the gulf, the loop off new Orleans, or the mouth of the Mississippi, as well as the one that is proposed in the area of Galveston, Tex.

I am delighted to say that it looks like those two facilities might go forward without any Federal funding.

To that extent, our involvement is minimal, although our interest is high.

Mr. ECKHARDT. Well, now, there is some question, though, about proceeding with that Federal funding, as to the type of superport that you might ultimately get, if it is geared totally to present needs as, for instance, crude oil in the gulf area.

Mr. BLACKWELL. I know in the gulf one of the policy issues that they have had to resolve is building for crude oil specifically, or building a more elaborate structure that would import the importation in these large ships of various types of bulk commodities that are needed there, either to a deepwater area, where those dry bulk commodities would be transferred to a ship, or some sluice system, where water would be added to the bulk component, and it would be moved in the sluice form through a pipeline.

Mr. ECKHARDT. Of course that would work with sulfur but not with grain, for instance.

Mr. BLACKWELL. I agree since we do not import grain, and I do not think we will see grain moving. Grain, traditionally, moves on much smaller vessels. About the largest sized ship that carries grain in a commercial endeavor is the ship of about 35,000 tons, and it is basically a bulker. It is not a tanker.

Mr. ECKHARDT. Actually, rather large ships can still use the various grain elevators in the Houston area, which is about 39 feet.

Mr. BLACKWELL. We put a fairly large tanker in the Houston under the grain tanker in Houston, and it carried 60,000 tons.

We fixed another tanker, a fatter ship that draws less water. That ship will carry 70,000 tons out and give us a very low effective operating differential subsidy rate per ton, around \$7.

Mr. ECKHARDT. One reason I ask these questions about the superport is because I think in the long run it might have something to do with shipbuilding subsidy.

It is my understanding that at such time as we may develop a new generation of ships, much larger ships, it is quite likely that many of them will be built in U.S. shipyards.

Do you understand that to be a possibility?

Mr. BLACKWELL. Well, it is more than a possibility. In fact, we are building a ship close by here at Sparrows Point, Md., which is a 265,000-ton tanker. That is by far the largest ship ever built in the United States.

We have letters of intent signed by prospective purchasers with the Todd Shipyard. The Todd people intend to build a shipyard in Galveston which would build vessels of 385,000 tons.

I frankly do not think that we will be building ships in this country much larger than that. There may be some somewhat larger, and the efficiencies in a ship tend to trail off at about 385,000 tons, although the Japanese are building ships of 500,000 or more tons.

Mr. ECKHARDT. With respect to superports, or perhaps something that might be considered a little less than the superport concept, have you given any consideration to some of the modern dredging procedures used by the Dutch companies and the British companies? I think they have done a good deal in the Netherlands and in the North Sea and in the Brazil area.

Mr. BLACKWELL. I understand the Dutch have developed a system where, if it is not a traditional dredge, it is really a ship that goes out and sucks up sand and spoil and is capable of moving that inland and depositing it almost like we turn over hopper cars with that type of efficiency.

I know people are looking at that, but we are aware of that development.

Mr. ECKHARDT. Thank you.

Mr. CLARK. Mr. Lott?

Mr. LOTT. Thank you, Mr. Chairman.

Mr. Secretary, I too, as a new member, would like to thank you for your statement this morning.

I have a series of questions. I notice on page 6 you say during the remainder of fiscal year 1973 and 1974 you will contract to build 25 additional ships.

How many shipyards do we have around the country that are capable of performing these contracts, do you have any idea?

Mr. BLACKWELL. I can run them off rather quickly. We have Bath, Maine, General Dynamics of Quincy, Seatrain yard at the old former Brooklyn Navy Yard in New York, Sun Ship, Bethlehem Steel, Newport News, Avondale, and National Steel in San Diego, the San Pedro yard of Todd in California, Lockheed up in the Northwest, and we have other smaller yards that are capable—even some repair yards are capable of building fairly large vessels.

Mr. LOTT. I noticed that you left out the Ingalls shipyards.

Mr. BLACKWELL. It was not intentional.

Mr. LOTT. I am from Pascagoula.

Mr. BLACKWELL. I might say that we had a significant number of container ships built in that yard. We did have problems with them, but we were able to work out with the yard and the operator and the Maritime Administration agreements that I think were satisfactory to all parties.

Mr. LOTT. They are working on one right now, I believe.

Mr. BLACKWELL. Some are delivered, and two of those ships are in operation by Farrell Line, and I believe at least one by American Presidents.

Mr. LOTT. Is there any specific guidance in the Merchant Marine Act of 1970 or in the legislative history which speaks in the terms of productive capacity in relation to the stated goal of 30 ships per year?

Mr. BLACKWELL. There is nothing in the act itself, Congressman. There was considerable colloquy on the 30-ship concept on the productive capacity in the supporting papers to justify the passage of that act.

Mr. Gibson so testified on that, and many of our working papers, preparing the legislation we thought in both terms of 30 ships per year or their productive equivalent.

To be perfectly frank, we believed we were going to build 30 ships a year, but events have overtaken us, the energy crisis, the tremendous demand for the large ships.

The large ship happens to make us more competitive because where we are mostly noncompetitive is in the operating end, and the operat-

ing cost on a large ship really is quite insignificant compared to the capital invested in the ship and the system.

With these larger ships we are that much more competitive and we are closing the gap.

Mr. LOTT. Again, with relation to the Russian grain shipment on pages 9 and 12, you mentioned that there are some 40 ports handling this grain.

Of course, there at Pascagoula we have the Navy contracts, but I was once again curious. Are you going to expand the number of ports that are going to be handling this?

Mr. BLACKWELL. Incidentally, I have distributed to the members of the committee the maritime agreement with the Soviet Union and have annexed the exchange of letters that relate, in any form or fashion, to the maritime agreement.

In that agreement is the list of the 40 U.S. ports and the 40 Soviet ports.

Incidentally, these are not necessarily grain ports. That game was essentially played on a tit-for-tat basis. The Russians proffered 40 ports, and we attempted to match them in terms of security considerations, in terms of water depth, in terms of traffic density moving through the area, and in terms of the types of cargo that those respective ports handle.

It is a rather subjective judgment, but we think it is the best job we could do.

Mr. LOTT. Do you not have a system whereby a port which is not one of these ports can be used, say, on a 14-day notice?

Mr. BLACKWELL. That is right. There is no port in the United States except ports closed for security reasons, which the Soviets or an Eastern bloc ship cannot enter if it gives the requisite notice.

Mr. LOTT. Do you plan to expand this list of 40? I got the idea that, maybe, you thought there would be need for more.

Mr. BLACKWELL. I would rather go off the record.

[Discussion off the record.]

Mr. LOTT. Let me change direction, if I could. I will change the question now to Liberty ships. What is the status of the reserve ships under the fiscal year 1973 authorization? I know there are a number of these Liberty ships stored there at Mobile.

Mr. BLACKWELL. Oh, yes.

Mr. LOTT. Have any of those actually been taken over by any of the States?

Mr. BLACKWELL. No; they have not. This is the fishing reef bill.

Mr. LOTT. Yes.

Mr. BLACKWELL. These are ships that States have manifested an interest in, particular States in the Gulf, whereby they would take those ships out and sink them to attract fish and marine life.

We have no objection to that program. We think it is a rather worthwhile one, and we have set aside a number of ships, and not only in our Mobile fleet site, but in the fleet site that we maintain at Beaumont, Tex., for that purpose.

Alabama and Mississippi and, to some extent, Florida have indicated an interest. I do not think Louisiana and Texas have, but what we have done is move those ships out of our reserve fleet and we have worked out a special arrangement with the State of Alabama, par-

ticularly in terms of the retention and the cost of those ships that we are keeping.

We wanted to absolve ourselves from the cost of keeping a bunch of junk, if you will permit me. We have worked out a very satisfactory arrangement. We are delighted with it.

The ships do have some residual fuel oil in them, and will have to be cleaned before they are sunk, because of the environmental problems. But we would like to see the program get moving, and see them sunk.

Mr. LOTT. I think Alabama is moving right ahead.

Mr. BLACKWELL. Yes, and we are delighted with their attitude and the very efficient way they have worked with us on this problem.

Mr. LOTT. Thank you, Mr. Chairman.

Mr. CLARK. Mr. Studds?

Mr. STUDDS. Mr. Blackwell, you know of my particular concern with the yard at Quincy, and there is a great streak of optimism that runs through your statement with regard to the future of the Merchant Marine.

We have talked privately, and I know we will again.

Is there anything you want to say at this point—the optimism in your statement that would bring a little halo of light to the workers at that yard, who have been out of work for 6 to 8 months? Can you say something that will cheer them up?

Mr. BLACKWELL. We have executed three contracts for LNG's at the Quincy facility, and they have been negotiating with El Paso for the second three El Paso ships for the Algerian project.

That project has been delayed because of difficulties involved with the financing of the liquid gathering lines in Algeria. The Algerians have to purchase, and have indicated an interest in purchasing that equipment here. It is rather expensive. They have been negotiating the terms of the agreement and for a long time they were at an impasse.

I understand that they have somewhat closed the gap in terms of their differences, and there is some degree of optimism about the Eximbank concluding financial arrangements with the Algerians for that equipment.

If that is a fact, it will trigger a need for the second three ships. There is a good chance that the ships could go to Quincy.

The El Paso people might be negotiating with other yards. I do not know that they have certain design problems. El Paso has certain preferences for features in their three ships which are not incorporated in the first three ships, and that has posed a problem. I think it can be worked out.

It is a problem of design and costs, possibly costs to us, and we are taking a look at it. But I think there is a reasonably good chance that additional work will flow to General Dynamics.

Mr. STUDDS. It is more than simply a parochial concern. It is one of the larger concerns we have.

I would like to ask you about the State maritime academies. As I read the brief statement you have made and as I look at the funding in the past years for those schools, I wonder if reading between the lines some of our States, Massachusetts in particular, and I suspect some of the others, may be going in a different direction from the Federal Government on that basic assumption.

It seems to me, and I am going to get specific in a moment, that Federal encouragement for and participation in those State schools is actually substantially declining over the years and I was wondering if you are trying to tell us something.

For example, in Massachusetts, the State budget for the maritime academy in 1964 was \$528,000. This year it is \$1.4 million, and it is going to be approximately \$2 million next year.

In addition to that, we have had a capital outlay in excess of \$12 million for a fairly dramatic new campus. The enrollment has gone from 180 to 460, and is going up to 800, I believe.

At the same time, the cost for supporting a student has risen from \$3,200, roughly, in 1964 to \$9,500 now.

The Federal subsidies and allowances, as you know, have remained the same, which means, as a percentage, they have declined substantially.

The cadet subsidy in 1964 paid for over half of the cost of the cadet, and today it is approximately one-fifth of the cost.

The annual maintenance and support allowance in 1964 paid for up to 14 percent of our cost, and now it is less than 4 percent.

As I see it, again as I understand what you have said, you are not asking once again for any increases.

I wonder if I could ask you a couple of specific things. That \$600 subsidy, which is based on \$50 a month, do you think we can make an analogous case to the move Congress made last year by doubling that subsidy for NROTC Cadets, with respect to these State maritime academies?

Mr. BLACKWELL. First of all, there is a slight increase in the amounts payable to the State schools this year, basically as a result of the Massachusetts academy going to a 4-year instead of a 3-year system. There are no graduates and there are more students there, and we are covering them.

You know the question you pose is really a delicate one. In a sense, the State maritime schools are being penalized for reacting rather affirmatively to a national crisis.

When the Vietnam war started, and particularly the heavy demands in sealift capacity, we were not only short on licensed personnel but were short of other personnel as well.

What happened was that the union schools had increased their enrollments and particularly the State schools. Almost all the State schools had dramatic increases in their enrollments. This necessitated expanding the plant, and largely funded, I imagine, through the State legislatures.

On the other hand, the Kings Point Academy did not expand its enrollment. We continue to turn out roughly the same number of young men a year between 190 and 200, but in some cases the State academies doubled, tripled, and I think in some instances quadrupled their enrollment.

All of a sudden we pull back out of Vietnam, our GAA ships, 176 ships. There was no longer employment for these. There were serious cutbacks in our military support systems. The numbers of men going to sea today are considerably lower than they were.

We lost a lot of ships by scrapping, and the new ships have lesser crew members than the ones they are replacing, and are much more productive.

What occurred was that there was a very significant over-capacity of young officers trained for both deck and engine emerging from all our academies. There were five State schools then, and the Kings Point Academy.

Some attempt was made to bring the need for officers and the capacity of these schools to turn out officers into somewhat more of a balance, and consequently, the Maritime Administration and this Administration resisted efforts to maintain higher levels of support for State schools.

It was felt that something should be done to bring the balance of officers and need for them into a closer relationship.

That is why the Maritime Administration and I personally testified against increasing various types of support for the State schools.

We still have an overbalance, although it is not in the dimensions that it was 2 years ago.

It is my view that given another year or so, when the ships we are building now have to have people put on them, and particularly the types of men that these schools are turning out, they are very fine officers, and the ships are very expensive, these men are highly professional and the new fleet is going to need these young men.

I would think in a year or so it may be appropriate to do something to encourage increased attendance at these schools or even keep enrollment where it is now.

I am not authorized to speak for the Administration on this point at this juncture. I would think the position would be to wait a while.

Mr. STUDDS. Do I have time for one more question, Mr. Chairman?

Mr. CLARK. Yes.

Mr. STUDDS. You mentioned, Mr. Blackwell, that you have an increase for Massachusetts next year, but am I correct that you are keeping that 75 per class?

Mr. BLACKWELL. Yes.

Mr. STUDDS. Now, that is based on the entering class of 1965.

Mr. BLACKWELL. Yes, which was the date that we selected, again rather arbitrarily, but as the date that seemed to us a normal period of normalcy.

It was after that date when the significant increases in the State academy enrollment occurred.

Mr. STUDDS. But they have occurred very unevenly.

We are now entering classes of 250 and receiving subsidies for only 75 of those cadets. By that rationale, the Great Lakes would receive nothing. They were not even in existence.

Mr. BLACKWELL. The material effect of that program was impacted most gravely on the Massachusetts academy. There is no question about that.

Mr. STUDDS. Thank you, Mr. Chairman.

Mr. CLARK. I recognize Mr. Treen.

Mr. TREEN. Thank you, Mr. Chairman.

Mr. Secretary, I am from Louisiana, the Louisiana Gulf Coast, and like Mr. Eckhardt, I am very interested in the superport, but more specifically in an oil port facility, and as you have learned from the

oil companies, they have offered to build one off the coast of Louisiana, and that is the monobuoy system that they propose.

I have several questions along that line, Mr. Chairman. In response to Mr. du Pont's questions, you said you are not requesting any funds for studying the construction of such an import facility.

My question is, where did you get the funds that you did get? Did you ask for them in 1973?

Mr. BLACKWELL. We funded the study out of our fiscal year 1972 program. I understood the purport of Mr. du Pont's question to be whether we really planned a program implementation, and the answer to that is distinctly "No."

Mr. TREEN. Do you plan any further studies? Is there anything on-going within the Department now, within MARAD with respect to the facility?

Mr. BLACKWELL. We will be working with the Corps of Army Engineers and NOAA and the Department of the Interior to provide to them at their request, as a result of these various committees that we sit on, inputs where we think we have some expertise or knowledge.

Mr. TREEN. Well, I would just like to say for the record that Louisiana would very much like to be approved for one of these ports.

All of our people and the officials and companies involved are quite interested in having that facility located there, and I do not see any real environmental opposition in that area at this time.

The six very large crude carriers you have under contract now, will any of these carriers require, or perhaps I better state it this way—are there any ports that now exist, that can handle this size crude carrier? You have one that is 265,000 tons.

Mr. BLACKWELL. There is no port in the United States that can handle them at the present time.

Mr. TREEN. So none of the six can even operate on the west coast?

Mr. BLACKWELL. No.

Mr. TREEN. What trade do you intend to place these in?

Mr. BLACKWELL. There is sufficient water in Puget Sound for these vessels to enter into significant portions of the Sound, but there is not enough water alongside the dock at the present time.

Mr. TREEN. These six carriers cannot be used in the U.S. trade?

Mr. BLACKWELL. These carriers will be subsidized under what we call a port holiday.

They would be permitted to go into other trade until such ports in the United States are developed capable of serving these ships.

Mr. TREEN. Would be correct to say, moving into this program, these very large crude carriers which, of course, I approve and anticipate that we are going to develop the ports in the United States shortly to use these vessels?

Mr. BLACKWELL. In my own view it is an absolute national necessity.

Mr. TREEN. On another subject altogether, has the Maritime Administration made any prediction or study on the effect of the 1972 amendments to the Longshoremen and Harbor Workers Act on shipbuilding costs, now that the shipbuilding industry in general will be covered by these increased compensation benefit requirements?

How is that going to affect our competitive position in the world, and how is it going to affect the subsidy program?

Mr. BLACKWELL. We have made an evaluation not only of that new legislation, but some legislation relating to occupational health hazards, where there is an assessment on the yards as well as increases in social security.

To the extent that those costs, or similar type costs, are not incurred in foreign yards in Europe or Japan, it will make us that much less competitive.

We have run some numbers on what this means in terms of an ordinary \$10 billing for a shipyard, in those three categories, the one you mentioned, plus the two I mentioned, will increase the cost per \$10 by \$1.38.

Mr. TREEN. Well, that is a 13.8-percent increase.

Mr. BLACKWELL. That is right.

Mr. TREEN. One final question, and you can provide an answer for the record, if you please.

Will you give us a breakdown of each research and development project funded in 1973 with a status report on the basis of percent of completion and provide the same information for each R. & D. project requested in fiscal year 1974 authorization?

Mr. BLACKWELL. I will be pleased to do that.

Mr. TREEN. Thank you.

[The information follows:]

R. & D. PROJECTS AND STATUS

	Fiscal year 1973 basis \$24,900,000	Percent complete fiscal year 1973	Total fiscal year 1974	Percent complete 1974
Advanced ship development.....	\$14,070		\$12,900	
Institutional programs.....	540	(1)	400	(2)
Advanced propulsion.....	1,700	50	1,300	60
Competitive nuclear ships.....	2,580	40	5,000	60
Competitive shipbuilding.....	5,800	(1)	2,500	(2)
Advanced ship systems.....	1,500	(1)	1,500	(2)
Shipping systems analysis and requirements.....	0	(1)	0	
Technology support.....	1,950	(1)	2,200	(2)
Advanced ship operation.....	10,530		11,800	
Automated ships.....	3,610	25	3,000	50
Advanced navigation/comm.....	1,825	30	2,700	50
S.O.I.S.....	1,400	20	1,500	30
Ice transiting.....	480	90	500	100
Ships of opportunity.....	0		0	
Pollution abatement.....	1,275	75	1,000	85
Advanced tug/barge.....	0	20	500	40
Competitive M. & R.....	0	20	0	30
Shipping systems analysis and requirements.....	0	(1)	0	(2)
Technology support.....	1,940	(1)	2,600	
Advanced terminal operations system.....	300		300	
Advanced ports.....	300	(1)	300	(2)
Total.....	24,900		\$25,000	

¹ Continuing level of effort.

² Same.

³ \$20,000,000 appropriated plus \$5,000,000 carryover.

Mr. CLARK. Mr. Cohen?

Mr. COHEN. Thank you, Mr. Chairman.

Mr. Blackwell, I would like to follow up a bit on the line of questioning that Mr. Studds was on and express my concern also that it

seems that the Federal attitude has shifted considerably in recent years, that actually Federal support for the State academies has dropped nearly one-third from 1959 down to around 20 percent.

Mr. BLACKWELL. I would accept your figure.

Mr. COHEN. How many students are there at Kings Point?

Mr. BLACKWELL. About 800.

Mr. COHEN. How many in the other six State academies?

Mr. BLACKWELL. About 1,000.

Mr. COHEN. Yet the budget for Kings Point is roughly four times more than that for the State schools.

I think there is some question about the validity of the statement that there is an overcapacity on the part of the academies. Have not statistics shown that while there may have been a decrease in the amount of job placement for these officers, there has also been a rather substantial record as far as competing with other graduates in other schools in the job market.

Mr. BLACKWELL. That is absolutely true. Kings Point as well as the other six State maritime academies probably place in the private job sector more graduates, a higher percentage of graduates employed at the time of graduation, perhaps, than any school in the country. These are very highly sought after young men.

Most of the interest is from the maritime community, depending on the school, but about 18 percent of the men go to sea, and many more of them would like to go, but the opportunities are not there. About 29 percent go into some aspect of domestic shipping and about 40 to 50 percent of them end up in some marine-oriented private sector industry, and again, depending on the schools, from 6 to 12 percent end up as officers commissioned in the Navy or Coast Guard and some go into NOAA.

Mr. COHEN. Despite the fact that you suggest we delay our efforts in this area a year or two, there seems to be at least a solid basis for continuing our efforts in supporting the academies right now in terms of their employment. They are not simply graduating from the academies and going unemployed, for the most part.

Mr. BLACKWELL. That is right. You have a fairly critical policy judgment to make here, and we might as well bring it out, and this applies to all seven schools, and that is the primary mission of the academy.

For years, it has been considered the primary mission of all these schools to turn out men capable of passing the Coast Guard licensing examination and becoming qualified deck or engine officers in the U.S. Merchant Marine.

Now, it is a simple fact that there are not enough jobs for these young men in that particular category.

The Federal Academy, as well as the six State schools have recognized this point. They have modified their curriculum. They have worked more closely with the industry than ever before, and reacting to the industry's needs.

There is no question that these young men graduating from these schools are of benefit to the country. Every school turns out a first-class young man. They are highly motivated, give us very little trouble in terms of discipline. They are men who like a quasi-military system: each man is in one of these academies by his own choice.

There is the question in terms of Federal maritime support as to whether this broader mission, which I think is a very genuine and appropriate mission, should be funded by the Maritime Administration or some other arm of Government or some State or municipal agency.

Now, there has been a program for years of sea grants that has assisted a lot of these schools, but this is really the critical problem, and it is the problem that really confronts the administration.

Mr. COHEN. Just one final question along these lines.

I believe your Department has indicated that you are actually going to reduce the amount of training ships available to the academy.

Mr. BLACKWELL. Yes.

Mr. COHEN. Is that not somewhat inconsistent with the Maritime Academy Act of 1958, which at least endorsed the principle of providing one ship for each of these schools?

Mr. BLACKWELL. Well, the history of that is that most of these schools have very old ships, and, incidentally, we not only provide the ship but we pick up all the maintenance and repair cost of those vessels, and they have been running higher and higher each year.

In order to cut down on those costs, we have given considerable thought to instituting a three-ship rather than a six-ship program.

This creates significant problems. It means every school does not have a ship. These are sometimes used for classrooms, and I think it is important that the young men who sail become familiar with them, and they cannot have that luxury if the ship is someplace else, but it is a pleasure to announce that there is a ship coming around the coast to replace the school ship in the State of Maine. It is a relatively new ship, in a good state of repair, and will be a significant upgrading for that vessel.

Mr. COHEN. Thank you.

Mr. CLARK. Mr. Pritchard?

Mr. PRITCHARD. Thank you.

You gave us a very optimistic report here this morning. Maybe I, as a new man, was led to believe that things were worse than they are.

There are just several things I would like to know.

You are saying today that we are closing the gap in the difference between our operating cost of ships with American flags and those that we are competing with?

Mr. BLACKWELL. Yes.

Mr. PRITCHARD. Are we closing the gap in our shipbuilding also?

Mr. BLACKWELL. Yes, we are, and we have just had a tremendous assist a month ago when the President announced that the dollar would be devalued.

Mr. PRITCHARD. Now, part of this is our technology and part of it is inflation running even faster, or their wage rates going up even faster than ours.

Mr. BLACKWELL. Their wage rates are going up faster than ours, but the gap was so wide open we are closing it, but it takes time.

Can I just mention a point?

Mr. PRITCHARD. Please do.

Mr. BLACKWELL. There has been a good deal of criticism directed at the American shipyards for not being more competitive. I think it is largely unjustified.

I would like to indicate the dilemma that the American yard has. Fifty percent of the total cost of a vessel goes into the procurement of equipment that the yard has nothing to do with. It buys its turbines, propellers, propulsion equipment, much of the piping, electric system off site from other American companies. It has literally no control over those prices, so when we are asking an American shipyard to become, as the act does, become more competitive by 2 percent a year, we are really asking them to become more competitive on 4 percent a year, because they can really only control basically the fabricating of the steel process. That is the only real item that they control, and it is a real burden to them.

Mr. PRITCHARD. You said here, to its former position. What do we mean by bringing the American-flag fleet back to its former position? Is this 1940 or 1920, or is this a percentage of ships?

Mr. BLACKWELL. Most of us recall the period in the postwar era, in the early 1950's. We had a fairly well-balanced fleet. It carried about 40 percent of our cargo and in almost all categories, including bulk and liquid bulk as well as liners. We had 1,200 ships. About every seaman who wanted to work had a job, and the shipyards were active in conversion work mostly in those days and, you know, I think 40 percent today is quite unrealistic, but I think we need a modern fleet.

We also need a significant number of ships to make the penetration that we desire, about 17 percent, which would be triple where we are now, and we need a sufficient number of ships in every maritime segment, tankers, bulkers, LNG's, big ships, small ships.

This is what I really mean, and something that we can be proud of.

Mr. PRITCHARD. Just one quick question. When we get the super-ports, did your study also include Puget Sound?

Mr. BLACKWELL. No, we did not cover Puget Sound. There is no question that Puget Sound has very deep water, that the big ships that ultimately and hopefully move from Valdez to Cherry Point, there is no real problem in Puget Sound in physically handling, even today, a 120,000 tonner, and I think they can almost go to unlimited range.

Mr. PRITCHARD. That is all.

Mr. CLARK. I recognize the chairman, Mrs. Sullivan.

Mrs. SULLIVAN. Thank you, Mr. Chairman.

Mr. BLACKWELL. I apologize for not being here earlier, but I had three other meetings to attend this morning and could not get here.

I have several questions I want some very brief answers to now, and if you can enlarge upon your answers, please do so when you get the transcript.

I understand that the North Atlantic trade has too many vessels competing for the available cargo.

What is the Maritime Administration doing to obtain more cargo for U.S.-flag vessels in this trade?

Mr. BLACKWELL. Well, we mentioned the National Maritime Council activities, where we are attempting to upgrade the marketing ability of our carriers. Many people, quite honestly, Mrs. Sullivan, have shied away from American-flag ships because they felt they were unreliable.

These ships have been struck more than the ships of any other nation in the world. That is changing. The union, as well as management, recognizes this is a real problem in attracting patronage. We are try-

ing to sell service and dependability. There will still be some tieups, but it will be much less than in the past. Once there is a public consciousness in this country and amongst consignees in Europe and the Far East that you can depend on American-flag ships, most of the trade moves at the same rates, so there is no reason not to use the American flag if the ultimate user has some confidence that his cargo will arrive on time.

Mrs. SULLIVAN. May I say that the priority item of this committee in this Congress will be to keep our ships running. If it is the last thing we do, it will be attempted.

Mr. BLACKWELL. I will be delighted to work with you.

Mrs. SULLIVAN. Can you tell us briefly why the Office of Management and Budget dropped the passenger service on the M-class Combos, and how many vessels were involved?

Mr. BLACKWELL. The budget contemplates that Prudential-Grace Lines, Inc., will discontinue passenger services on its three Magdalena-class combo ships currently providing cargo and passenger service on trade routes 23, 24, and 25 (Pacific coast to South America). The ships would continue to operate in the subsidized service as cargo vessels.

We had considerable doubt whether that operation was viable and, about 7 or 8 months ago we permitted them to operate, to really institute passenger service from the west coast for the first time on those ships.

What we told them was that if the pro forma that we submitted to the Maritime Administration were not complied with within the year of operation, we would consider terminating subsidy for passenger service on those routes, because it runs \$1 million or \$2 million a year.

Now, the fact is they started off very slowly, and it is difficult to start a new passenger service, but my reports are in the last several voyages they have had bookings of up to 100.

These are combination ships, which is just about capacity, and if they keep that up, there is a good chance they will be able to maintain that subsidy.

In the event Prudential-Grace decides to maintain the passenger services it would be necessary to reprogram the budget to provide the additional subsidy. Approval for subsidy on this service is contingent upon substantial realization of the financial results projected by the operator. If this condition is met, the Maritime Administration is legally obligated to provide subsidy under the terms of the agreement.

Mrs. SULLIVAN. What comment have you as to the effect of the dollar devaluation on the payment of construction differential subsidy and operating differential subsidy?

Mr. BLACKWELL. It is going to essentially raise the price of ships in Japan and Europe by at least 10 percent.

We cannot determine the amount now because it depends on the flow of foreign currencies against the dollar, the yen, and the deutsche mark. It will make U.S. shipbuilding much more competitive. It will close the gap considerably on all types of ships and might make the LNG available in this country at about the same cost it is in Europe.

Mrs. SULLIVAN. I would hope so. Why has construction subsidy been limited to energy and bulk vessels in fiscal year 1974?

Mr. BLACKWELL. Well, we do react to the private sector in providing subsidy.

We have 100 applications for ships today for subsidy. Not a single one concerns a liner ship. The demand has been in the bulk area, the energy crisis which exists. That is where the market is, that is where we can make the biggest penetration and can compete most effectively.

Mrs. SULLIVAN. Do you have any feel for future projections concerning whether the need for this type ship will continue for 10 or 15 years?

Mr. BLACKWELL. We have run numbers out to 1985 on oil and LNG, and our projections are that there is going to be just staggering quantities of petroleum needed in this country, energy supplies.

You know, what we import largely depends on our domestic energy policy, in terms of pricing and many other things.

The President's message could possibly change that. We will have to see what he says.

Mrs. SULLIVAN. This is one reason I asked, because at the moment I do not think we have gotten any kind of a policy on what the future is going to be on oil imports.

Mr. BLACKWELL. We now know, under current policies, what the needs are, and the needs for ships are absolutely staggering.

What the new energy program of the United States does in terms of cutting down on imports is, at this moment, really beyond my knowledge, but it is my view that we will need ships even if the total amount of imports is reduced.

Mrs. SULLIVAN. What is the significance of the following language in your construction subsidy authorization request: "*Provided*, That the appropriation act may provide that unobligated balances previously appropriated for purchase of modern or reconstructed U.S.-flag vessels for layup in the National Defense Reserve Fleet, may also be used for construction-differential subsidy?"

Mr. BLACKWELL. Of the \$30 million appropriated in fiscal year 1973 for purchase of ships for the National Defense Reserve Fleet, approximately \$5 million has been committed to the purchase and layup of the SS *United States* in the reserve fleet.

The remaining \$25 million of the \$30 million has been reserved and the Maritime Administration is requesting language which will also permit these unobligated balances remaining at the end of fiscal year 1973 to be used in fiscal year 1974 for ship construction subsidy.

Mrs. SULLIVAN. I notice that the Marad request and the Department of Commerce allowance for subsidy for the Russian grain program were both \$55,127,000, but the Office and Management and Budget allowance was \$27,327,000. At the same time, it was stated that there was no subsidy payment for fiscal year 1974 for the carriage of Russian grain purchases. Am I correct in assuming that the \$27,327,000 figure is for subsidy for the carriage of Russian grain purchases for the remainder of fiscal year 1973?

Mr. BLACKWELL. The Office of Management and Budget approved the full Marad request for fiscal year 1973 budget authority of \$55,127,000. While these funds will be applied to voyages initiated in fiscal year 1973, only \$27,800,000 will be paid during this fiscal year. The remaining \$27,327,000 will be paid during fiscal year 1974. This carryover is due to the fact that about one-half of the voyages will be terminated too late for subsidy vouchers to be submitted, processed, and paid during fiscal year 1973. However, no new funds have been

requested to subsidize the carriage of Russian grain purchases during fiscal year 1974 due to the uncertainty of the Russian requirements. When Russian requirements and plans become known with greater accuracy, we will initiate a supplemental request for any additional funds that may be needed.

Mrs. SULLIVAN. The total figure for operating subsidy for fiscal year 1974 is \$221,515,000. I do not believe it was ever brought to light how this sum will be allocated for ODS. I would be most interested in knowing how this money will be allocated. In other words, could you set down for me how much of this total will be used for each specific subsidy contract, for which vessels, and for which company?

Mr. BLACKWELL. May I supply that information for the record?

Mrs. SULLIVAN. Yes, that will be fine.

[The information follows:]

OPERATING DIFFERENTIAL SUBSIDIES

[Dollar amounts in thousands]

Company ¹	Planned payments by operator, fiscal year 1974			
	Estimated ship-years, 1974	Payments		1974 total payments
		For 1974 accruals	For prior year accruals	
American Export Lines	17.5	\$18,544	\$3,905	\$22,449
American Mail Line	9.2	11,904	2,020	13,924
American President Lines	18.9	25,761	4,171	29,932
American Steamship	1.0	628	45	673
Aries Marine Shipping	1.3	885	0	885
Delta Steamship Lines	9.9	8,232	1,356	9,588
Farrell Lines	11.0	11,713	2,172	13,885
Gulf and South American	0	0	135	135
Lykes Brothers Steamship	37.8	34,070	6,026	40,096
Margate Shipping	.5	255	0	255
Moore-McCormack Lines	11.0	10,150	2,188	12,338
Oceanic Steamship	0	0	589	589
Pacific Far East Lines	9.6	19,202	2,287	21,489
Prudential-Grace Lines	16.6	17,542	3,243	20,785
States Steamship	12.0	16,595	2,031	18,626
United States Lines	0	0	173	173
Waterman Steamship	14.7	13,192	659	13,851
Russian grain carriage operators	0	0	27,327	27,327
Total	171.0	188,673	58,327	247,000
Financing:				
From carryover funds				25,485
From 1974 appropriation request				221,515
Total, funds				247,000

¹ Because of the difficulty of estimating subsidy reductions due to Military Sealift Command charter sand idle time, estimates of subsidy payments are made by company and not by individual vessel.

Mrs. SULLIVAN. Could you discuss to what extent, if any, funding for the construction of liquefied natural gas vessels preempts funding for the construction of vessels under the maritime program?

Mr. BLACKWELL. The funding of the construction of liquefied natural gas vessels has not preempted the funding of the construction of any other type vessels.

The planned construction contracts for six LNG's during fiscal year 1974 are part of a shipbuilding program which, while balanced, does emphasize the carriage of petroleum, petroleum products and liquefied natural gas. This emphasis is due to the increasing importance of imports of these commodities to the U.S. economy and national security,

as well as the relatively low trade penetration that exists for the U.S. flag in the bulk trades.

The concentration of the shipbuilding program on bulk vessels, including LNG's, is also due to the fact that there is either adequate or surplus tonnage of the various types of general cargo ships on U.S. foreign trade routes. Further, no replacement obligations of subsidized operators will fall due in the coming fiscal year. Therefore, the construction of LNG vessels and other bulk carriers will not only produce ships for national needs, but will also sustain shipyard employment levels. This stability is necessary both to achieve productivity increases and to preserve the readiness of the shipyard mobilization base to respond to emergency requirements.

While no supplementary funding requirement is anticipated for fiscal year 1974, I should also point out that no conflicts due to funding priorities are expected in the fiscal year 1973 shipbuilding program due to the willingness of the Merchant Marine and Fisheries Committee and the other cognizant congressional committees to authorize and appropriate an additional \$175 million for ship construction. This supplemental was required principally due to the strong demand for LNG ships that materialized subsequent to the regular budget request.

Mrs. SULLIVAN. Last June, the Maritime Administration awarded contracts for 16 vessels. Some of these vessels will be owned by foreign companies and this raises a question with respect to the use of subsidy funds to construct vessels which will be at least partially owned by foreign corporations. In this same vein, there was an article in the March issue of *Fortune* magazine about a Bermuda-based subsidiary of the British owned Burmah Oil Co. building six tankers with U.S. subsidy. I would appreciate it if you could discuss this matter since it raises some questions in my mind about the wisdom, or even the propriety, of U.S. subsidy funds being used to construct vessels at least partially owned by foreign interests.

Mr. BLACKWELL. None of the vessels which were contracted for last June, or which will otherwise be constructed under the maritime program, will be owned by foreign companies. The Merchant Marine Act, 1936, permits construction subsidy to be paid to U.S. shipyards only in the case of vessels which will be owned by U.S. citizens who satisfy the citizenship requirements contained in section 2 of the Shipping Act, 1916.¹

Vessels constructed under this program will be owned by U.S. citizen companies, documented under the U.S. flag, manned by crews consisting of U.S. citizens, and their management and navigation will be controlled by U.S. corporations. It may be helpful to demonstrate this point by examining two of the recent transactions involving the payment of construction; the First National Massachusetts very large crude carriers (VLCC's) project, and the Eascogas liquid natural gas carriers (LNG's) project.

¹ Under sec. 2, Shipping Act, 1916, as amended, and sec. 905(c), Merchant Marine Act, 1936, as amended, no corporation is deemed to be a citizen of the United States unless (1) it is organized under the laws of the United States or of a State, territory, district, or possession thereof; (2) its president or other chief executive officer, and the chairman of its board of directors are citizens of the United States, and no more of its directors than a minority of the number necessary to constitute a quorum are noncitizens; and (3) the controlling interest therein is owned by citizens of the United States.

In the First National Massachusetts project, the purchasers of the three 265,000 deadweight tons VLCC's are U.S. citizen subsidiaries of First National Massachusetts Corp. the parent holding company of the First National Bank of Boston. Eighty-two percent of the stock of these purchaser corporations will be owned by a subsidiary of the New England Bank Holding Co.; and 18 percent of their stock will be owned by Maritime Fruit Carriers, Ltd., an Israeli corporation. After delivery, the three VLCC's will be bareboat chartered to Interstate Oil Tankers, a wholly owned U.S. citizen subsidiary of Interstate Oil Transport, Inc., an established U.S. citizen corporation with substantial experience in the transportation of petroleum who will operate the vessels. The ships will thereupon be time chartered to a Delaware corporation, fully subject to U.S. taxation, the stock of which, however, owned by Maritime Fruit Carriers. It is expected that the time charterer will subcharter the three vessels to commercial users of ocean transportation.

In the Eascogas project, the three 125,000 cubic meter LNG vessels will be transferred from the original nominee corporation purchasers, to Wilmington Trust Co., as owner-trustee who will hold the vessels for the equity investors, Citicorp Leasing, Inc., a subsidiary of First National City Corp., the parent holding company of First National City Bank, and General American Transportation Corp., two U.S. corporations. Wilmington Trust Co., as owner-trustee will bareboat charter the vessels to Summit Marine Operations, Inc., a Delaware corporation. Summit Marine Corp., will, in turn, time charter the vessels to Burmah Oil Inc., a Delaware corporation subject to U.S. taxation, which is a wholly owned subsidiary of Burma Oil Co., Ltd., a United Kingdom corporation. The vessels will be used by Burmah Oil Inc., the Delaware corporation, to satisfy the obligations of Burmah Oil Tankers Ltd., a Bermuda corporation, under a transportation agreement with two American importers of LNG, Public Service Electric & Gas Co. and Algonquin Gas Transmission Co. Thus, in this transaction the owners and the bareboat charters of the vessels will be U.S. citizens and the time charterer will also be a U.S. corporation subject to U.S. taxation, although it is a subsidiary of the British corporation.

In summary, all of these vessels will be: (1) owned by U.S. citizens; (2) manned by U.S. citizens; and (3) operated by U.S. citizens. In addition the LNG vessel will be dedicated to a project to bring vitally needed LNG to the United States and it is expected that the VLCC's will be used to transport petroleum to the United States when suitable port facilities are available. Under these circumstances the construction of these vessels satisfies the requirements contained in the Merchant Marine Act, 1936, and implements the policies of our maritime program in what we believe to be a wise and appropriate fashion.

Mrs. SULLIVAN. In the January 26, 1973, volume 38, No. 17, issue of the Federal Register, the Coast Guard had an advance notice of proposed rulemaking for proposed construction requirements for tank ships. The rulemaking, of course, is pursuant to title II of the Port and Waterways Safety Act of 1972. This advance notice of proposed regulations postulates the construction of tank ships with segregated ballast and double bottoms. The advance notice indicates that

these construction features would be required on (1) tank ships delivered after January 1, 1976; and (2) tank ships delivered before January 1, 1976, when the building contract is placed and when construction is begun after January 1, 1974.

In your testimony, you stated that contracts for three VLCC's, six LNG's, two OBO's, three tankers, up to 100,000 deadweight tons, and three dry bulk carriers are projected to be awarded during fiscal year 1974. My question is, if the Coast Guard goes forward with the construction requirements set out in its advance notice, would this inhibit the construction of vessels just mentioned which will be funded under the authorization of H.R. 5449?

In this connection, I would also appreciate your frank comments and opinion as to the effect of the suit filed by the three environmental groups against MarAd's vessel construction program on the construction of the vessels authorized for fiscal year 1974 and future vessel authorizations. I know that the parties to that suit agreed with the court that MarAd would make a study regarding their construction requirements. I also know that MarAd's study has indicated that if those construction requirements are imposed, it will adversely affect the construction of tankers under the construction subsidy program because of the increased cost for these features. What concerns me is, where do we go from here, and what is the point of all our effort in authorizing funding for the construction of vessels for the U.S.-flag merchant fleet if this construction is going to be inhibited, if not totally prevented, by the environmentalists' suit against the construction subsidy program, or by the construction requirements which may be imposed by the Coast Guard under the aegis of title II of the Port and Waterways Safety Act of 1972.

Mr. BLACKWELL. The U.S. Coast Guard has published its double bottom and segregated ballast construction requirements for tank ships on a tentative basis for comment by interested parties. If the Coast Guard were to go forward unilaterally with the tanker construction requirements as presently proposed, it would be necessary to reevaluate the amounts projected for CDS awards during fiscal year 1974 since these features would significantly increase the cost of the vessels.

It is not clear at this point whether all of the proposed standards in the "Advance Notice of Proposed Rulemaking" of January 26, 1973, will be promulgated as final regulations. We have discussed these proposals with the Coast Guard at some length and fully expect that any rules which are ultimately issued will take account of the economic as well as environmental soundness of the particular design feature which may be adopted. In our conversations with the Coast Guard on this matter, we have stressed the current international efforts through the aegis of IMCO for multilateral action on improving the marine environment. MarAd vigorously supports a strong and effective International Convention of Marine Pollution which would meet U.S. marine environmental goals. The Coast Guard also intends to continue pressing for solutions to marine pollution from vessels at the international level.

Both the economic viability analysis and the environmental impact statement which are being prepared in response to the recent legal action by certain environmental groups have been released for com-

ment. The final drafts of these documents will be issued by midspring and we anticipate that the timetable established in the stipulation approved by the court in this case will be met before the close of the current fiscal year. It would be improper for me to prejudge the outcome of this action prior to my giving full consideration to the final economic viability analysis and environmental impact statement. I am hopeful, however, that our overall program will not be significantly impaired as a result of these activities. Statements have been made by various environmental groups both in the context of this lawsuit and in the course of hearings preceding the adoption of the Ports and Waterways Safety Act that they do not desire to bring this program to a halt and that they are sensitive to the fact that the imposition of additional burdens solely upon American shipping may adversely affect our competitive position vis-a-vis foreign shipping.

I would reiterate that we must press for international regulation of ship pollution. Measures applied unilaterally to U.S. operators, or even those only using U.S. waters will make our efforts to be competitive all the more difficult.

Mrs. SULLIVAN. What is the function of the Federal Merchant Marine Academy?

Mr. BLACKWELL. The U.S. Merchant Marine Academy trains young men to become officers in the U.S. merchant marine and to assume responsible positions in the domestic shipping industry and in other maritime-related industries ashore. Its graduates are an excellent source for industry-oriented management personnel. Furthermore, they also serve in the U.S. Navy and Coast Guard. It should be observed that they also serve as a Reserve cadre of trained officers in the event of national emergencies.

Mrs. SULLIVAN. What are the employment opportunities for graduates of the Federal Merchant Marine Academy? If graduates do not serve in the U.S.-flag merchant marine, what benefit does the country receive from the expenditure of these Federal funds?

Mr. BLACKWELL. The employment opportunities for graduates encompass the entire maritime industry. A total of 12 percent of the class of 1972 were employed by U.S.-flag operators in foreign trade, 22 percent by the domestic shipping industry, 46 percent by other maritime-related industries ashore and 10 percent joined the Navy or Coast Guard.

In regard to the second half of your question, the entire maritime industry benefits from the expenditure of these funds, based upon the widespread distribution of graduates throughout the maritime field. Furthermore, the remainder of the graduates constitute an excellent source for management personnel for non-maritime-related industries. It should be observed that the graduates also serve as a reserve cadre of trained officers for use in time of national emergencies.

Mrs. SULLIVAN. What is the function of the State marine schools? How many State marine schools are there?

Mr. BLACKWELL. The State marine schools train cadets to become officers in the U.S. merchant marine and to assume responsible positions afloat in domestic shipping and in other maritime-related industries ashore which offer graduates opportunities in management and engineering. Graduates also serve in the U.S. Navy and Coast

Guard. Furthermore, they serve as a reserve cadre of trained officers in the event of emergencies.

There are currently six State marine schools. They are located in California, Maine, Massachusetts, Michigan, New York, and Texas.

Mrs. SULLIVAN. What is the difference between a graduate of the State marine schools and the Federal Merchant Marine Academy?

Mr. BLACKWELL. As a general rule, students at the State marine schools complete a somewhat more technical program as opposed to the more academic curriculum at the U.S. Merchant Marine Academy. However, both graduates are in demand in all segments of the maritime industry and all receive U.S. Coast Guard licenses as either third mates or third assistant engineers. The Great Lakes Maritime Academy and California Maritime Academy offer 3-year courses whereas the other State schools and Kings Point have a 4-year curriculum. Kings Point and the State academies in Texas, New York, and Maine are regionally accredited as colleges.

Mrs. SULLIVAN. What number and types of vessels were contracted for in fiscal year 1973, and what number and types of vessels do you anticipate contracting for in fiscal year 1973? Do you feel that this is consistent with the mandate of the Merchant Marine Act of 1970?

Mr. BLACKWELL. With your permission, I will submit that information later.

Mrs. SULLIVAN. Permission granted.

[The information referred to follows:]

NEW SHIPS AND CONVERSIONS FOR F.Y. 1973 AND 1974

FISCAL YEAR 1973

	Fiscal year 1973 to Date		Balance left Re 1973		Totals for 1973	
	Contract awards	To be funded	Contract awards	To be funded	Awards	Funded
New ships:						
Ro/Ro.....	1	2			1	2
Tankers (up to 40,000 dwt).....		3				3
Tankers (up to 100,000 dwt).....		2				2
VLCC.....		1	2	1	2	2
LNG.....	6	6	6	5	12	11
Total new ships.....	7	14	8	6	15	20
Conversions: C-6.....	3	3			3	3
Total new ships and conversions.....	10	17	8	6	18	23

FISCAL YEAR 1974

	Contract awards	To be funded
New ships:		
OBO.....	2	2
Tankers (up to 100,000 dwt).....	3	2
VLCC.....	3	3
LNG.....	6	6
Dry bulk carriers.....	3	2
Total new ships.....	17	15
Conversions.....	0	0
Total new ships and conversions.....	17	15

It is evident from this summary that our program is indeed consistent with the mandate of the Merchant Marine Act of 1970.

Mrs. SULLIVAN. I understand that the North Atlantic trade has too many vessels competing for the available cargo. What is the Maritime Administration doing to obtain more cargo for U.S.-flag vessels in this trade? What is the Maritime Administration and the maritime industry in general doing to generate more commercial cargoes for our vessels?

Mr. BLACKWELL. Madame Chairman, in the interest of time, may I submit a statement for the record, pertaining to that?

Mrs. SULLIVAN. Yes; that will be fine.

[The statement follows:]

OVERTONNAGE ON THE NORTH ATLANTIC

Containerization was first introduced on the North Atlantic trade routes in 1966. The container movement trade has since grown tremendously, with the period of major growth extending to 1971. At the present time, about 80% of all trade on the North Atlantic will be moving in a containerized mode.

However, the persisting problem is that there are too many ships operating on the route for the cargo available. The North Atlantic is traversed by about a dozen berth line operators, conference and nonconference, which can be described as "established" carriers, each having a substantial investment in ships and supporting service organizations.

Due to the advantages of container shipping over traditional break-bulk movements, such as cargo security, swiftness of movement, and reduced labor costs, all of the North Atlantic operators have made heavy investments in container systems. During this period of growth and investment, the North Atlantic Trade has been characterized by claims of overtonnage and ruinous rate reductions.

Even in the days of break-bulk operations, which began to fade out a few years ago with the advent of containerization, the route was characterized by intense competition. The rivalry was usually between conference and independent operators but the pressure to obtain cargo sometimes reached within conference organizations.

Entry of the big, fast and costly new containerships on the route during the past year or two greatly magnified the competitive elements already present.

The new containerships, designed especially for North Atlantic service, are not easily diverted to other operations as were the redundant break-bulk carriers of past years.

Under pressure to keep the vessels filled with revenue-producing freight, operators have been reaching far out for business, in some instances severely stretching the limitations set forth by conference rules and U.S. shipping statutes.

These activities had a snowballing effect, inviting retaliation from competitors which further affected rate structures and the legal framework under which ocean carriers engage in the nation's foreign trade.

Two major steps have been implemented by conference lines in order to attempt to correct the situation:

- (1) Establishment of the Associated North Atlantic Freight Conference—a self-policing organization, and
- (2) Formation of a North Atlantic Revenue Pool.

ASSOCIATED NORTH ATLANTIC FREIGHT CONFERENCE

This European based conference was set up two years ago by the ship lines involved, on their own initiative, but with the active encouragement of the Federal Maritime Commission.

Based in London, the organization is charged with investigating possible violation of conference rules and to impose fines on transgressing operators. The association has reportedly investigated and taken action in numerous instances.

As a peripheral activity, the association is also charged with investigating ways and means of developing more simplified tariffs and assembling data on shipping movements and trends that might bring about more equitable rate structures.

Success of the association's activities has been such as to spur establishment of a counterpart organization in New York.

NORTH ATLANTIC REVENUE POOL

As proposed, the pool would allocate to participating carriers a fixed amount of the total revenue generated by all the lines.

The allocations would be in exchange for the limitations on sailing frequencies, ports of call and, in general, the services each line would provide.

The proposed pool agreement is currently under review by the Federal Maritime Commission, which is the federal agency with authority to approve or disapprove agreements.

The U.S. operators are hopeful that the new pooling agreement when approved will prove beneficial. Prior to containerization, U.S. share of the North Atlantic trade centered in the 20-25% range. Because containerization was an American innovation, carriage in U.S.-Flag ships reached a high of 65%. Presently, the U.S.-Flag ship share is about 55%. And it is hoped that the new agreement will help stabilize the U.S. share.

In addition, there are other significant problems affecting the North Atlantic, namely:

- (1) Alternative routings diverted to South Atlantic ports; and
- (2) Competition from independent carriers.

SOUTH ATLANTIC DIVERSIONS

In the case of South Atlantic ports, regional maritime interests have been aggressively seeking container cargo business after having been overshadowed by ports in the North Atlantic for many years offering ocean carriers first class terminal facilities and services.

The diversions pose a problem to the future effectiveness of the proposed North Atlantic port pool should carriers elect to shift import portions of their operations outside the North Atlantic range.

The impact of cargo diversions to South Atlantic ports could ultimately be corrected with the establishment of Europe-South Atlantic conferences, more or less as counterparts of the existing North Atlantic rate organizations.

These new conferences could bring about a standardization of operational practices by berth line carriers along the entire Atlantic seaboard and in particular a parity of ocean rates.

At present there is an FMC approved "48-hour Agreement" applying to South Atlantic ports but the creation of an all-out conference has not yet reached the talking stage.

COMPETITION FROM INDEPENDENT CARRIERS

Besides the intra-conference problems, berth line carriers are currently confronted with serious competition from independent carriers. These are unaffiliated lines whose rates generally average 10 percent below the non-contract rates of conference operators.

It has been estimated by industry members that the combined operations of independent carriers in the U.S. North Atlantic-Europe trade is draining upwards of \$50 million per year from the potential revenue of the proposed conference revenue pool.

Mr. CLARK. Mr. Leggett?

Mr. LEGGETT. Thank you, Mr. Chairman.

Mr. BLACKWELL. I want to compliment you on a very comprehensive posture statement that you have given to the committee.

Also, I think that the statistical analysis that you have submitted supplementary to your statement, indicating very frankly what has been funded in the past and what is currently impounded is going to be very helpful to the committee, and I think that if we can start off our sessions like this every year it is going to help us address ourselves to important legislative bills, subject to the jurisdiction of this committee.

I am concerned with the great number of things that you have related to. I am concerned that the administration has cut your R. & D. request by about \$10 million, and I would suspect that you had in mind studying in a more generous fashion than you will currently study the future of our American shipbuilding program and all of its aspects, and I would presume that you might justify that increased expenditure because it appears that the direction of the shipbuilding

program has not gone precisely in the direction that we thought it was going to go in when we enacted the 1970 bill.

Mr. BLACKWELL. I think that is a fair statement.

Mr. LEGGETT. And I think all of us are pretty much concerned as to whether or not we have enacted essentially a bulk tanker ship construction subsidy program, or whether or not the original projections of getting back into the liner traffic are still viable concepts.

I notice in your material there is no more comparison with the Russians for a great number of years, but of course I guess we still do over in the Defense committee hear in our posture statements how the Russians are coming in a great number of different facets. We do not see anything mentioned here about the Russians, other than the fact that we are going to be trading with them, and that it is using our surplus capacity in rather a large extent.

I would like to ask you, is the gap closing with the Russians on the types of ships that they are constructing, or is the gap still widening?

Mr. BLACKWELL. The Russian fleet, in terms of units, is larger than our own.

In terms of ship types, it is still rather a rudimentary type fleet. The vessels are rather small, basically general cargo carriers, small bulk carriers and small tankers.

A large part of the Russian fleet is really reserved to serve Russian home commerce, but the Russians are changing. The Russians are building container ships. They are building highly automated ships, expensive ships; but I do not think at this juncture these vessels represent a real threat to the United States.

Mr. LEGGETT. Let me ask you this. If this committee gave you your original request to the Department of Commerce and to OMB for research funds, do you think that you would be able to do a better job figuring out how we might better compete with the Soviets and with the Japanese and with some of the other people that have swiped our commerce since World War II?

Mr. BLACKWELL. We have a sufficient amount of funding to run a very effective R. & D. program.

Mr. LEGGETT. So I understand.

Mr. BLACKWELL. And I think that might be a very helpful program. We will have to be more careful in the programs that we designate.

Mr. LEGGETT. Do you think there was fat in the request?

Mr. BLACKWELL. No, but every program manager has a spectrum of activity from a low point to a maximum point and all through the budget process we aim for the optimum for the program.

This is a very manageable budget. In fact, the 1974 budget funding level is precisely the same level as it was in 1973, with a \$5 million carryover.

Mr. LEGGETT. When we enacted the 1970 act, we projected that we would be constructing 30 ships a year.

I believe the figures you submitted indicate we will probably be constructing or perhaps funding 14 to 17 ships in fiscal 1974.

Mr. BLACKWELL. Seventeen.

Mr. LEGGETT. So we will not be constructing the kind of ships that we originally contemplated, but we will not be constructing the number of ships, either, that we contemplated.

Mr. BLACKWELL. Not in every case, but some of the ships we will be building in 1974 are precisely the ships we contemplated building 4 years ago.

I speak particularly of the 89,000-ton tanker and OBO. We can get a series run of about 12 runs of those ships in 1 shipyard.

Mr. LEGGETT. Let ask one more question. How does it happen that we subsidized the LNG's at only the 23-percent-plus rate?

Does that indicate we are getting much more competitive in the United States?

Mr. BLACKWELL. That indicates that on that type of ship we are much more competitive because it is a high technology ship, and that that technology cost here is almost as it is in Europe.

Mr. LEGGETT. Thank you.

Mr. CLARK. Mr. Ruppe?

Mr. RUPPE. Thank you, Mr. Chairman.

Will the very large petroleum vessels be used in American ports or used strictly on the international trade routes?

Mr. BLACKWELL. Likely to be used in the carriage of crude oil from the Persian Gulf to the Bahamas, where the oil will be transshipped, hopefully in smaller American ships.

Mr. RUPPE. Under the construction program you have entered into, can they use the vessels anywhere in the world and if they chose, strictly for foreign trade?

Mr. BLACKWELL. No; they cannot. These ships are operating under what we characterize as a port holiday, and that is they are permitted to serve outside the United States until such time as facilities are built in the United States capable of receiving them.

Mr. RUPPE. And at that point you would have a call on the vessels?

Mr. BLACKWELL. That is right.

Mr. RUPPE. How many voyages to Russia are involved in the Russian grain sales of last year?

Is there any way of anticipating future number of voyages and vessels?

Mr. BLACKWELL. Right now we have fixed 80 American ships for that trade, and will probably have that number up to approximately 100 before the shipping season is over.

Mr. RUPPE. That is 80 trips or 80 ships?

Mr. BLACKWELL. Eighty voyages, United States.

Mr. RUPPE. How much will the operating subsidy for the voyages be? How much will it be above normal use?

Mr. BLACKWELL. If they were not used, they would all be laid up.

Mr. RUPPE. They could be used in other trades?

Mr. BLACKWELL. The subsidy, per ton, we calculated about \$10.76 per ton. That is on a complete mix of different types of ships. We have just fixed a ship about 6 days ago, very large ship, limited-draft, that is going to carry 70,000 tons of grain from the gulf, and the subsidy rate on that will be about \$10.76 a ton.

Mr. RUPPE. How many tons are you carrying this year?

Mr. BLACKWELL. We have already carried or fixed 2.8 million tons, and I think that we will carry between 3.5 to 4 million tons.

Mr. RUPPE. So that the operating subsidy will be about \$350 or \$400 million?

Mr. BLACKWELL. It will not be that high at all. Fifty-five million dollars is what we assume in the budget.

Mr. RUPPE. Have you had any request from Great Lakes shippers for construction subsidy?

Mr. BLACKWELL. No, we have not. We have a number of Great Lakes shippers that are parties to what we call capital construction fund, in which they deposit earnings and depreciation and gains from capital gains into a fund which receives essentially a deferred tax condition.

A number of our Great Lakes are, in fact, either building or modernizing their ships out of the moneys in the fund.

Mr. RUPPE. Were those funds established under the 1970 act?

Mr. BLACKWELL. They were. There was a similar system that was only available to subsidized operators before that, and the 1970 act made it universally available.

Mr. RUPPE. Last year Congress authorized and appropriated \$30 million for acquisition of modern ships for the Reserve Fleet. This sum had been requested originally by the then Assistant Secretary for Maritime Affairs, Mr. Gibson, but was rejected by the Office of Budget and Management. The current authorization request seeks to reprogram those funds for construction subsidy. Do you not see now any need to retain a nucleus Reserve Fleet of post-World War II ships? Given the high level of shipyard activity at this time, could that \$30 million be better invested in upgrading the Reserve Fleet than in constructing possibly one more bulk carrier? Your statement sheds no light on this at all.

Mr. BLACKWELL. The Office of Management and Budget recognizes that MarAd is charged by law with maintaining and preserving our NDRF and has the expertise required to appraise the retention value and expected life of the Reserve Fleet ships. However, OMB has taken the position that replacement of ships in the NDRF is a Department of Defense responsibility and should be included in that agency's budget where it would compete with other defense requirements. Because of our concern with the declining size and increasing age of the NDRF, MarAd and the Department of Defense are currently engaged in a joint study of the national need for Reserve sealift capability and means to meet that need. Depending upon the outcome of that study, we may request reconsideration of OMB's decision on budgeting for NDRF replacement.

Mr. RUPPE. Negotiated bidding between shipyards and potential operators as a practice authorized for a 3-year period by the Merchant Marine Act of 1970 expires this year. Do you intend to seek an extension on this authority which has been so extensively utilized?

Mr. BLACKWELL. Yes, the Maritime Administration intends to submit legislation in this regard shortly. The proposed legislation has been approved by the Office of Management and Budget and will be the forthcoming subject of an executive communication from the Secretary of Commerce.

Mr. RUPPE. When will the report of the Commission on American Shipbuilding be due? Will the Commission's report be prepared independently of the Maritime Administration or will you have an input in the drafting of this report?

Mr. BLACKWELL. The report will be ready on October 21, 1973. The substance of the report—its conclusions, recommendations to the President, and so forth—is being prepared independently of the Maritime

Administration. However, the Maritime Administration has furnished various statistical data and studies as requested by the Commission.

Mr. RUPPE. On January 29, 1973, there appeared in the Federal Register a notice of proposed rulemaking concerning the establishment of regulations allowing bulk vessels built with CDS to trade between foreign ports. This development of these regulations seems to be one of the slowest aspects of implementation of the 1970 act. Why has this taken so long and when do you expect final regulations to become effective? Please also explain the thrust and purpose of the latest draft regulations.

Mr. BLACKWELL. There have been a number of technical impediments regarding the provisions for bulk vessels to trade between foreign ports. In addition, the applicable operators themselves have been calling for less stringent regulations.

For example, prior to the enactment of the Merchant Marine Act of 1970, section 905(a) of the Merchant Marine Act of 1936 has defined commerce or foreign trade as "commerce or trade between the United States, its territories or possessions or the District of Columbia, and a foreign country." This definition was always interpreted to permit certain foreign-to-foreign carriage believed to be incidental or related to the U.S. export-import carriage of subsidized liner vessels.

The Merchant Marine Act of 1970, however, amended the prior definition "to permit liquid and dry bulk carriers built with construction-differential subsidy to trade between foreign ports in a manner which would permit such vessels freely to compete with foreign-flag bulk-carrying vessels." This new definition was in recognition of the fact that in order to effectively compete in the bulk cargo trades, a U.S. vessel would sometimes be required to carry full shiploads of cargo from one foreign port to another, depending upon the nature of the vessel's operations, its economic requirements, and terms of the charter contracts.

It was stated at the time of the 1970 act that the intent was not for these vessels to become engaged exclusively or principally in foreign-to-foreign carriage. However, this restriction has been a substantial impediment to the construction of bulk-cargo vessels. With a choice between an American vessel with burdensome trading restrictions as compared to a foreign vessel with operational flexibility, ship operators and charterers will clearly prefer the latter even if the dollar price of construction is the same as a result of construction-differential subsidy.

An additional technical impediment in the 1970 act was that it did not explicitly apply to the capital construction fund program under section 607. Since any bulk vessel built with construction-differential subsidy will also almost invariably be built with capital construction funds, this adjustment to prior provisions was likewise needed.

Public Law 92-402 (August 22, 1972) provided new language to adjust for much of the aforementioned technical impediments. However, since there still remains certain restrictions on the length of the charter that operators may seek for bulk vessel operations between foreign ports—the U.S. bulk shipping operators are still asking for less restrictive regulations.

Therefore, this question has involved considerable discussions, and it has in fact been a slow implementation process. We do hope that final regulations may be settled by mid-year 1973. Our aim is to have

the regulations in such a form that will attract the U.S. bulk cargo operators into our program. In turn it should be sufficiently regulated in the public interest to accomplish the objectives of the President's new maritime program concerning the bulk trades area.

Mr. RUPPE. On what do you base your assessment that the U.S.-flag share of our trade will increase to 17 percent during this decade—does this figure include oil and other bulk commodities? What increase has taken place if any, since the 1970 act?

Mr. BLACKWELL. This level of U.S.-flag participation in the Nation's oceanborne foreign trade is premised on the 1970 maritime program. The overall U.S. trade participation target of 17 percent was set by analyzing 10-year projections for total U.S. trade, and determining the amount of that trade expected to be carried by U.S.-flag ships. The annual productive capacity of the U.S. ships was based upon trade route reviews of the business to be achieved, using various factors such as expected levels of ship speeds, port turnaround, voyage mileage, and average vessel utilization.

The construction of the new vessels called for under this program is expected to provide sufficient additional carrying capacity to meet the long-range goal of transporting 17 percent of America's trade by 1980. This figure includes oil, and other bulk commodities, and general cargo movements.

The ships contracted for thus far under the 1970 act are still under construction. Since these vessels are not in operation, the program has not yet had an impact on total tonnage of U.S.-foreign trade carried by U.S.-flag ships. Thus, the share was 5.3 percent both in 1970 and 1971. As the vessels constructed under the program begin operation, however, this share will increase, reaching the level projected above by the end of this decade.

Mr. RUPPE. To what degree has the series construction of standardized ships been achieved? Your one cited example of the States Ro-Ro design involves only one purchaser and only a total of four ships. I thought the concept was to achieve long production runs for more than one purchaser. How can four ships for one owner be considered a standardized type? In this context, what happened to the design competition which received so much attention a few years ago?

Mr. BLACKWELL. To date, series production has started in 6 other cases in addition to the LASH series of 20 ships. The designs of the six ships are being marketed by the shipyards at present with intentions to repeat these for as long as the technology and market permits. The designers and owners for series production are as follows:

LASH Avondale:

	<i>Contract date</i>
6 PFEL.....	November 14, 1967.
5 Prudential-Grace Lines.....	November 14, 1967.
Delta Steamship Lines, Inc.....	May 17, 1971.
3 Waterman Steamship Corp.....	June 4, 1971.
3 Central Gulf Lines, Inc.....	March 22, 1972.

The prospects for the continuation of this series could be continued with military build charter contracts and unforeseen CDS applications before the current contracts are completed in 1975.

Basic 86,000 dwt bulk ship at NASSCO:

	<i>Contract date</i>
2 OBO (configuration), Aries Marine Shipping Co.....	June 30, 1971.
3 tankers, Aeron Marine Shipping Co.....	June 30, 1971.
4 tankers, Aeron Marine Shipping Co.....	Application pending.

This basic 86,000 deadweight tons bulk ship is an attractive design which the shipyard is actively marketing and has the potential for developing into a good series run. The tankers have identical ship lines and machinery as the OBO's, thereby achieving a degree of standardization while serving two distinctly different trades.

225,000 dwt tanker at Seatrain:	<i>Contract date</i>
3 Langfitt—Tyler—Polk	June 30, 1972.
3 (Seatrain, parent corporation)	Application pending.

The continued operation of this shipyard relies to a large extent on Seatrain's ability to keep this series going.

265,000 dwt tankers at Bethlehem Sparrows Point:	<i>Contract date</i>
3 MFC-Boston Tankers, Inc. II, IV, VI	June 30, 1970.

Application for additional ships of this design have been discussed with the shipyard. At this point additional ships of this design are being considered for subsequent budgets.

LNG (spherical) General Dynamics:	<i>Contract date</i>
3 (Burmah) group	September 30, 1972.

As in the case of Seatrain, the continued operation of this shipyard weighs heavily on a continuing series of these ships.

LNG (membrane) Newport News:	<i>Contract date</i>
3 El Paso	September 30, 1972.

Newport News is now actively constructing a new shipyard to build LNG ships. This fact and the continued new LNG proposals offer the opportunity for a series run of these ships.

35,000 dwt tankers at Todd:	<i>Contract date</i>
4 Sea Service	June 30, 1972.

This size tanker is extremely popular and liable to have considerable future demand for domestic as well as foreign trade. The design, in many respects, is identical to four ships being built by Todd for the Military Sealift Command which will permit partial learning curve advantages even though their cargo capacities differ.

With respect to the design competition of a few years ago, referred to as the CMX designs, that effort consisted of five tasks.

1. Forecast of cargo movements and definition of service requirements.

2. Analysis of vehicle and fleet characteristics and development of performance specifications.

3. Preliminary designs.

4. Development of management and production plans.

5. Cost estimates.

The data developed has been helpful in subsequent planning and, of the designs developed, the OBO's tankers, and the LASH ships have become part of the program. No interest in the multipurpose break bulk ships or the containerships has developed to date. That study specifically excluded energy imports beyond the then existing quotas and North Slope domestic trade as ground rules of the study. Hence, it naturally extended VLCC's and LNG ships which have become a part of the present shipbuilding program.

Mr. RUPPE. Thank you, Mr. Chairman.

Mr. CLARK. Thank you, Mr. Ruppe.

You have made an excellent statement in support of funds essentially for the new maritime program. Would these funds be used and the program carried forward if, for some reason, your title XI guarantee program should be unavailable to U.S.-flag operators? How do you stand with respect to the title XI program for fiscal year 1974?

On page 2 of your statement you say that significant increases in U.S. trade participation is a prime target of the new maritime program, and that you expect U.S.-flag participation to triple during this decade to about 17 percent. What is this percentage at the present time: (a) by volume, and (b) by value?

On page 5 of your statement you mention that manning scales on 86 ships have been reduced by an average of 4.2 men per ship. How many subsidized vessels do we have today? On what vessels are these reductions taking place?

On the bottom of page 13, you say that "As of March 1, 1973, 48 operating subsidy contracts covering 76 American-flag vessels have been approved" for Russian grain. Some of these vessels must have been built without construction-differential subsidy. In this case, do the operating subsidy agreements give any recognition to this?

Why didn't the Maritime Administration go forward with the fiscal year 1973 program to purchase a number of modern, break-bulk vessels for layup in the National Defense Reserve Fleet? In this regard, I note that the Department of Commerce and the Office of Management and Budget cut your construction funds by \$33 million so that you cannot go forward with this program in fiscal year 1974? Why is this?

Why was \$50 million in construction subsidy funds impounded in fiscal year 1973? Why was this done, when you were permitted to come in for a \$175 million supplemental request for construction subsidy funds for that same year?

Mr. CLARK. I note that for a total construction subsidy of \$275 million, you anticipate to contract for and fund a greater number of vessels than your original request that would have cost \$350 million. What was the change in the vessel mix that permitted a greater number of vessels to be contracted for and funded for a lesser amount of construction funds?

Mr. BLACKWELL. The original request of \$350 million reflected contracting for 15 ships and funding for 14 ships in 1974. By use of multiyear financing and construction of less expensive ships maritime estimates that a total of 17 ships will be contracted of which 15 will be funded in fiscal year 1974 within the budget request of \$275 million plus an anticipated carryover of \$50 million. This mix increased the number of dry bulk ships and smaller tankers in lieu of very large crude carriers originally planned.

Mr. CLARK. What funds were used for the purchase of the SS *United States*?

Mr. BLACKWELL. The 1973 appropriation for "Ship construction" contained an additional \$30 million for purchase of modern or reconstructed ships for the National Defense Reserve Fleet. Pursuant to the Passenger Vessel Sale Act (Public Law 92-296) approximately \$5

million of these funds were spent to purchase and lay-up the SS *United States*.

Mr. CLARK. Is American-Export Isbrandtsen budgeted to receive operating-differential subsidy for their North Atlantic service in fiscal year 1974?

Mr. BLACKWELL. American Export Lines is not budgeted to receive operating-differential subsidy for their North Atlantic service during fiscal year 1974.

Mr. CLARK. Could you inform me what United States-flag operators are presently operating without operating-differential subsidy? How can they do this?

Mr. BLACKWELL. The larger percentage of U.S.-flag operators are not currently receiving operating-differential subsidy. Probably the largest group of non-subsidized operators are those carrying proprietary cargoes. These are the oil and ore companies. Such companies are able to absorb the higher cost of employing U.S. crews in their operations by establishing compensatory revenues for their products. Many companies also own or charter foreign flag vessels engaged in the carriage of import and export trade, and do not wish to divest themselves of these properties as they would be required eventually to do in order to qualify for operating subsidy. Another group are the "independents. When there are shortages of vessels to carry U.S. foreign cargoes, the independents are able to fix their ships at remunerative rates. In periods of low market conditions, these operators seek MSC charters or Public Law 480 cargoes. Currently, some of the independents are engaged in the carriage of Russian grain because the Public Law 480 market has fallen off. This segment of the industry is not healthy; the average age of such vessels is about 20 years. A few independents have been able to construct vessels on the basis of long term charters. Finally, there are companies engaged in berth line service utilizing large, fast container vessels. This is by far the smallest group of companies. An example would be Sea-Land. This type of operation involves substantial capital investment. The cost of wages is a relatively insignificant part of overall operating costs. These operators are participating in the carriage of military cargoes and providing vessels for MSC charter so they are to some extent receiving Government subsidy indirectly.

Mr. CLARK. I understand that there has been some thought given to providing operating-differential subsidy to qualified U.S.-flag operators in place of premium freight rates paid for the carriage of Government sponsored, nondefense cargo. What are the advantages and disadvantages of this approach?

Mr. BLACKWELL. We believe that an American-flag ship should be competitive and should not be dependent on a U.S. Government cargo in order to exist. We want the U.S. merchant marine to compete successfully in what is essentially an international business.

Dry bulk cargoes constitute nearly 50 percent of U.S. overseas foreign trade. As of the present less than 4 percent of this trade moves in U.S.-flag ships. This small U.S. portion is almost exclusively that cargo which is reserved to U.S. ships under the "at least 50 percent" provision of our cargo preference law (P.L. 664).

The great bulk of the U.S. movement is the grain cargo generated under Public Law 480 administered by the Department of Agriculture.

The cargo preference law requires the allocation of these cargoes to available U.S.-flag ships at premium rates. These rates cover all costs plus a reasonable profit. The cost of such transportation to the Department of Agriculture has ranged from \$60 to \$80 million per year over the last decade.

Despite the premium cargo rates, no new U.S. ships have been or are being built for this trade. The very few U.S. dry bulkers that exist average 27.2 years of age. Accordingly, the Public Law 480 trade is relying almost exclusively on U.S. tankers. While tankers will be built irrespective of cargo preference, future petroleum commitments may preclude the availability of such ships for grain cargoes.

The 1970 maritime legislation extended the provisions of both construction-differential and operating-differential subsidies to bulk carriers.

The new legislation has not yet stimulated new construction of dry bulk ships. However, MarAd is currently reviewing the legislative as well as the management provisions of the cargo preference policy with the purpose of strengthening elements of the policy in support of the fleet expansion objectives of the new legislation.

The ultimate goal is a directly subsidized fleet of modern dry bulk carriers which will not only permit the preference cargoes to move at world rates—at a savings to agriculture alone of millions of dollars annually—but will also permit the U.S. carriers to compete in the world market for those U.S. commercial cargoes now carried entirely by foreign flags.

Mr. CLARK. In the Merchant Marine Act of 1970, we provided for a wage subsidy index system in order to calculate subsidizable U.S. wages. Has this system been effective in holding down wage costs on U.S.-flag vessels?

Mr. BLACKWELL. The subsidy index system has been effective in holding down wage costs on U.S.-flag vessels. The first base period, as specified in the Merchant Marine Act of 1970, is fiscal year 1971. At that time the industry was working under 1969-72 collective-bargaining agreements which terminated on June 15 of 1972. The annual increases in wages under those contracts were 18 percent, 11 percent, and 12 percent, respectively. The first labor contracts to be negotiated under the subsidy index system were effective for 3 years from June 16, 1972, and the annual wage increases were 9.5 percent, 6.8 percent, and 7.1 percent, or substantially lower than the previous contracts. (During calendar years 1971 and 1972 the BLS indexes were 9.6 percent and 9.15 percent, respectively.) The unions have also exhibited an interest in the new subsidy system and apparently for the most part are attempting to negotiate within the Presidential anti-inflation guidelines.

Mr. CLARK. As I understand the wage subsidy index system: (a) if the increase in wages paid to seafaring personnel exceeds the increase in the index, the operator would receive no subsidy on such excess; (b) if, on the other hand, the increase was less than the index, the shipping operator would retain the difference between the subsidy and the actual wage. In this regard, what has our experience been to date with the index system?

Mr. BLACKWELL. As stated in response to your previous question, at the time the subsidy index system was instituted the operators were working under the 1969-72 collective-bargaining agreements which

required rather substantial wage increases in each year. These wage increases generally exceeded the BLS index since January 1, 1971, so the operators were not fully reimbursed for their wage costs after that date. If, on the other hand, the operators are able to negotiate wage increases which are lower than the national trend in wages, they are able to keep the differential between their actual costs and the indexed subsidizable wage costs. I believe Congress intended this as an incentive.

Mr. CLARK. How are the Russian grain shipments that move on U.S.-flag vessels presently subsidized?

Mr. BLACKWELL. The U.S.-flag vessels participating in the Russian grain movement are subsidized under provisions of General Order No. 116. The subsidy program as set forth in General Order No. 116 is a true party systems for the operating costs of wages and subsistence of officers and crews, maintenance and repairs, vessel insurance, fuel, stores, supplies and expendable equipment, and other miscellaneous voyage expenses, based upon costs of a typical foreign-flag vessel which has participated in that trade, and a differential compensation for interest and depreciation costs of the subsidized vessel to compensate for higher U.S. construction costs, based on constructing the subsidized vessel in a foreign shipyard.

Mr. CLARK. If fiscal year 1974 operating subsidy for Russian grain was eliminated by the Office of Management and Budget, what is the \$27,327,000 element for? It would appear that the administration's budget provides for this?

Mr. BLACKWELL. This is the pay out in fiscal year 1974 of balances due operators for carrying grain in fiscal year 1973. No funds are budgeted for fiscal year 1974 Russian grain carriage.

Mr. CLARK. Why was \$5 million in research and development funds impounded in fiscal year 1973?

Mr. BLACKWELL. This action was not understood to be singularly aimed at the Maritime Administration's Research and Development program, but was in accordance with the administration's desire to maintain fiscal responsibilities by limiting the total U.S. budget.

Mr. CLARK. Why did the Department of Commerce cut Marad's Research & Development request for fiscal year 1974 by \$10,350,000? Why did the Office of Management and Budget further cut Marad's R. & D. request for fiscal year 1974 by \$16,590,000? In this regard, what is the present status of (a) the domestic shipping program, (b) offshore ports and shipping, and (c) systems analysis and requirements?

Mr. BLACKWELL. The original submittal by MarAd provided for advanced phases of ongoing programs with major expansions of nuclear systems, offshore terminals, growth and operation of research centers and initiation of major R. & D. domestic shipping programs.

The reduction by the Department of Commerce was to provide for continuation of ongoing programs at 1973 levels with modest increases in selected programs but with no major expansion or acceleration of the offshore terminals or domestic research programs so as to meet the administration's overall budget guidelines of that time.

The OMB reduction from \$36,590,000 to \$20 million does not represent a reduction of \$16,590,000 since there is a \$5 million carryover from impounded fiscal year 1973 funds. Consequently, the program is maintained at an effective level of \$25 million in both fiscal year 1973;

and fiscal year 1972. This has necessitated a stretchout in any expanded domestic shipping program and major reductions in the offshore port development, together with a more restricted system analysis and requirements program. However, it is noted that the offshore program initially was predicated on a follow-on to our original study in this area. The program significantly became one element in a larger program undertaken by the White House Office of Domestic Affairs and was incorporated in the President's energy program. Our agency will play a supporting role in this program. It is not anticipated that large funds will be required to carry out our responsibilities in this regard.

Mr. CLARK. Please give me a number of concrete benefits to the maritime industry that resulted from the fiscal year 1973 research and development program?

Mr. BLACKWELL. (a) *Shipbuilding research*.—During fiscal year 1973 contracts were initiated with five major shipyards to utilize advanced computer aided design and fabrication techniques. Such automation will provide for a major reduction of the cost of building and subsidizing modern merchant vessels. Similar techniques abroad have resulted in halving the man-hours per ton of fabricating steel. During fiscal year 1973, MarAd R. & D. programs with the shipbuilding industry have resulted from a jointly funded research and development program. These have resulted in lowering costs in welding, materials, handling, coding, and general shipyard operations and management control.

(b) *Nuclear ships*.—The first of a kind engineering of a highly powered commercial competitive marine nuclear reactor development is nearing completion and a preliminary safety analysis report has been submitted to the Atomic Energy Commission and an environment impact statement initiated. Joint studies with industry are underway in this area regarding potential applications to high-speed liners, giant tankers, and Arctic ice-transiting commercial maritime systems.

(c) *Human factors*.—Joint studies have been made with industry and labor with regard to the labor organizations and on the subject of human factors in advanced marine operations with the viewpoint of lowering grievances and work stoppages and avoiding accidents caused by human error. These are major factors in lowering cost and casualty losses at sea.

(d) *Ship safety*.—A prototype antistranding device has been developed to avoid strandings and groundings of commercial vessels. Tests have been made at sea to investigate collision avoidance devices, advanced navigational systems, and advanced pollution abatement measures.

(e) *Cargo handling*.—An analysis has been made jointly with 15 operating companies of the application of computer sciences to shore-side operations of marine cargo to lower the costs incurred in these operation and minimize documentation requirements for fiscal year 1973.

(f) *Offshore terminal*.—A study was completed to deepwater offshore terminals which was a major input to the administration's energy program.

(g) *Liquefied natural gas (LNG systems)*.—Studies are underway in the LNG transport system utilizing advanced American cryogenic technology.

(h) *Marine coordination center.*—A marine coordination center has been established at the NMRC, Kings Point, for the purpose of effecting experimental satellite communications and navigation experiments with commercial vessels at sea. Nine commercial vessels are participating in the experiment and transport terminals will be installed in fiscal year 1973 for initiation of tests. This can give the United States an important advantage in commercial fleet operation.

Mr. CLARK. Will your advanced ship development and construction program be successful in permitting the amounts of construction-differential subsidy to remain within the levels provided by the Merchant Marine Act of 1970?

Mr. BLACKWELL. The advanced ship development and construction program has as its principal thrust the shipbuilding research effort described in my testimony. This is the near-term support to reducing CDS in accordance with the 2 percentage points per year stated in the Merchant Marine Act of 1970. About 150 items related to shipyard and shipbuilding improvement have already been identified and are being implemented. Significantly automation of five shipyards is already underway and four additional ones will be implemented before the end of the year. These projects are expected to make significant contributions to reduction of shipbuilding costs.

Mr. CLARK. I understand that certain research and development programs are funded on a cost-sharing basis with the maritime industry. Can you give me some examples of this cost-sharing program? Do you consider it to be effective? Also, about what percentage of R. & D. funding comes from the maritime industry?

Mr. BLACKWELL. Examples of R. & D. programs funded on a cost-sharing basis with the maritime industry are as follows:

Our cost-sharing program which represents approximately 30 percent of our contracts and approximately 40 percent additional to our R. & D. budget is considered to be singularly effective. We have had cost-sharing operations in equipment, ship prototype, shipyard research, space communications, ships of opportunity, and other programs. Cost-sharing is highly desirable in that it insures, through industry participation, an additional screening to that of the Government; effects a corporate commitment to the R. & D. program and, as a result of this sharing, highly increases the probability of successful implementation. Our experience has been that the industry, in sharing our research programs, will carry the processes further into their organization and in general upgrade the technical development of their products, often leading to increased performance and exports.

Mr. CLARK. What functions do the National Maritime Research Centers at Galveston and New York serve? Do you consider the productivity of these centers to be on a par with your other R. & D. activities?

Mr. BLACKWELL. The NMRC's at Galveston and Kings Point, N.Y., serve three functions.

(a) They provide an independent test and evaluation facility to establish standards and evaluate advanced marine developments onshore;

(b) They provide a broadening of the R. & D. program into the regional resources to establish new concepts and advanced developments; and

(c) They provide specific program support for headquarters programs, where required.

Missions assigned to NMRC, Kings Point, are consistent with the nature of the maritime industry in that area and are primarily aimed at the important problems of ship control with emphasis on collision avoidance and pollution avoidance. Human factors, communications, and navigation are also major functions of the Kings Point center.

Galveston's operations tend to support the bulk trades and emphasize advanced tug-barging, advanced M. & R., pollution control, and advanced cargo transfer and handling. Galveston contains the only support capabilities for commercial nuclear propulsion. Both centers are newly organized. Kings Point is completing its second year in operation and Galveston is completing its first. Despite the short time, output has been high at Kings Point. The Galveston program is well underway, but results as yet have not been achieved to any significant degree.

Mr. CLARK. What research and development support is being given to U.S. shipyards in order that they may be better able to meet the declining scale of construction-differential subsidy rates?

Mr. BLACKWELL. R. & D. support given to the U.S. shipyards includes the national automation programs referred to earlier and shipyard research programs aimed at lessening the cost of constraining regulations and improving the operation and lowering the cost of installing ships machinery. R. & D. programs in this latter area include advances in ships propulsion, power trains, and propulsors. Major system analysis have been undertaken to identify future market requirements and convert these to technical criteria and advance ship designs suitable for American shipyards.

Mr. CLARK. What is the function of the National Defense Reserve Fleet?

Mr. BLACKWELL. The function of NDRF is to preserve and maintain viable ships to supplement the Active Fleet in time of war or national emergency.

Mr. CLARK. How did you acquire the vessels now in the National Defense Reserve Fleet?

Mr. BLACKWELL. Vessels are, with few exceptions, World War II-built ships. They are dry cargo and tankers, plus merchant-type ships converted to naval auxiliaries.

Mr. CLARK. How many National Defense Reserve Fleets are now maintained by the Maritime Administration? How many reserve fleets are maintained by the Navy? Why couldn't the Maritime Administration take over these operations, or consolidate both reserve fleets?

Mr. BLACKWELL. There are three National Defense Reserve Fleets programed for fiscal year 1974: (1) James River, Va.; (2) Beaumont, Tex.; and (3) Suisun Bay, Calif. We currently have a fourth fleet at Mobile, Ala., which will be closed on April 30, 1973.

The Navy have seven reserve fleet facilities (called inactive ship maintenance facilities) located at Philadelphia, Norfolk, Va., Boston, Mass., Vallejo, Calif., Bremmerton, Wash., San Diego, Calif., and Orange, Tex.

The Maritime Administration is reviewing the possibility of consolidating both reserve fleets and has indicated willingness to take over operations.

Mr. CLARK. Why did the Administration impound \$105,000 of your fiscal year 1973 funds appropriated for the National Defense Reserve Fleet?

Mr. BLACKWELL. The Administration assigned 1973 program reductions and deferrals target for program administration costs in the Maritime Administration is \$750,000. MarAd has taken action in several program areas to reach this target. Earlier-than-planned closing of the Mobile reserve fleet site and downgraded additional reserve fleet ships for scrapping will result in a spending reduction of \$105,000 in this program.

Mr. CLARK. How will the Office of Management and Budget cut of \$302,000 be absorbed by the Maritime Administration with respect to the NDRF?

Mr. BLACKWELL. By accelerating the consolidation of reserve shipping capacity into three National Defense Reserve Fleet sites and by downgrading and disposing of ships with marginal emergency shipping capability it will be possible to reduce reserve fleet administrative and maintenance costs. The Maritime Administration is initiating these actions in fiscal year 1973. In line with their full implementation, the estimate of funding requirements for fiscal year 1974 is \$3,773,000, or \$302,000 less than estimated prior to the time the implementation decision was made. These actions and similar cost reduction actions in other programs are the result of a careful examination of all agency activities to identify areas where steps could best be taken to meet Administration objectives for limiting Federal spending in fiscal year 1973 and fiscal year 1974.

Mr. CLARK. What will be done to preserve the SS *United States* in layup?

Mr. BLACKWELL. This vessel will be preserved by dehumidification of all internal spaces, including the engine rooms, and the use of a cathodic hull (underwater) protection system (to minimize the deteriorating effects of salt or brackish water on hull).

Mr. CLARK. How long does it take to break out a vessel in the NDRF; how long for the SS *United States*?

Mr. BLACKWELL. To break out a dehumidified Victory ship for cargo service will take 15 days and cost \$500,000. The SS *United States* will require:

	Millions
(a) For emergency service, as is, 30 days-----	\$1. 8
(b) For passenger service, 90 days-----	3. 6
(c) For 5,000 troops, 150 days-----	9. 5
(d) For 14,918 troops (mix capacity), 240 days-----	14. 0

In April 1972 we tested our activation procedure by running an exercise which partially activated a Victory ship. We raised steam and turned over the propellor at slow speed in 10 days. The limiting factor in activating dehumidified Victories will be shipyard capacity to do the work.

Mr. CLARK. Why didn't you go forward with the fiscal year 1973 program to purchase a number of modern break-bulk vessels for layup in the National Defense Reserve Fleet?

Mr. BLACKWELL. Since the NDRF is maintained primarily for defense purposes, it was determined it would be more appropriate for the Department of Defense to fund this program. While the Mari-

time Administration can judge the worth of a ship in terms of value, capability, and useful life, the Defense Department must determine their requirement for these ships.

Mr. CLARK. What is the average Federal cost to graduate each student from the Federal Merchant Marine Academy? Does any non-Federal body contribute in any way to defray the cost of the Federal Merchant Marine Academy? If yes, to what extent?

Mr. BLACKWELL. Each U.S. Merchant Marine Academy student in calendar year 1972 cost an average of \$27,000. This represents the total cost for a student for the years 1969 through 1972. In reference to the second half of your question, the Merchant Marine Academy cost per graduate as I have just noted is entirely funded by the U.S. Government.

Mr. CLARK. What is the average Federal cost to graduate each student from the State marine schools? Does any non-Federal body contribute in any way to defray the cost of the State marine schools? If yes, to what extent?

Mr. BLACKWELL. At our current level of expenditure the average Federal cost to graduate a student from the State marine schools is approximately \$5,300.

In answer to the second part of the question, non-Federal sources actually account for about 78 percent of the State marine school funding. Their primary source of support are actually the States themselves. In addition, students bear the expense for such items as tuition, room and board.

Mr. CLARK. What are the employment opportunities for graduates of the State marine schools? If graduates do not serve in the U.S.-flag merchant marine, what benefit does the country receive from the expenditure of these Federal funds?

Mr. BLACKWELL. Employment opportunities for graduates of the State marine schools encompass the entire maritime industry. For example, 21 percent of the graduates sailed aboard oceangoing vessels, 34 percent were employed in some sailing capacity in the domestic shipping industry, and 29 percent served in other maritime related industries ashore and 6 percent in the Navy and Coast Guard.

The benefits to the country are rather significant in that the entire maritime industry benefits from the expenditure of these funds. For example, of the last graduating class in addition to those who sailed aboard U.S.-flag vessels, 34 percent were employed in a sailing capacity in domestic shipping, 29 percent in other maritime related industries ashore, and 6 percent with the Navy and Coast Guard. Furthermore, the graduates serve as a reserve cadre of trained officers in times of national emergencies. It should also be observed that the remaining portion of the graduates are an excellent source of management and engineering personnel for nonmaritime related industries.

Mr. CLARK. What role do the maritime unions play with respect to training officers and men to serve on U.S.-flag vessels?

Mr. BLACKWELL. There exists no significant input of new men through industry funded training programs at the present time. All major seafaring unions have negotiated industry contributions which provide training facilities for their membership, however, only two unions, MEBA and SIU are engaged in training designed to bring new men into the industry on a limited scale.

Major industry-financed training facilities are the following:

(a) Maritime Institute of Technology and Graduate Studies. Located in Linthicum, Md., south of Baltimore, provides upgrade training in navigation, tanker loading, and other subjects to members of the MMP. Approximate current throughput is 450 members per year in 1-month courses.

(b) Calhoun MEBA School of Marine Engineering, Baltimore, Md., offers a 3-year program for new marine engineers—planned output about 90 per year—and short upgrade courses in welding, electronics, electricity, and automation to existing MEBA members.

(c) Harry Lundeberg School of Seamanship, Piney Point, Md., provides presea training for young men desiring to go to sea, as well as upgrade courses for SIU members.

(d) MEBA District 2 School of Marine Engineering, Brooklyn, N.Y., offers upgrade training including courses to prepare for raise in grade of licenses to members of the MEBA District 2.

(e) MEBA District 2-AMO also offers courses for raise in license for its Great Lakes deck and engine officer membership in schools located in Toledo, Ohio and Duluth, Minn.

Aside from support to union schools, the industry also contributes to midshipmen training, particularly during the year spent at sea. Various shipyards also provide training for workers in various trades, such as welders and shipfitters.

Mr. CLARK. Your explanatory statement with respect to section 2 of the bill is something less than comprehensive. For example, what sort of pay raises are we talking about and for whom? Please be specific.

Mr. BLACKWELL. Funds for the pay of MarAd employees at the reserve fleets and at the U.S. Merchant Marine Academy are included in the authorization request. Past history demonstrates that subsequent to the authorization enactment, the President and Congress periodically approve additional pay increases for these employees. Since such increase are not included in the original authorization bill, they require an amendment to the act. Salaries for general schedule employees and the faculty at the U.S. Merchant Marine Academy are affected by this action. Section 2 of the proposed bill would automatically provide authorization for such executive and legislative action.

A recent example is the pay increase effective January 7, 1973, pursuant to Executive Order 11692. The 1974 authorization request does not contain any additional funding authority for this purpose.

Mr. CLARK. In the appendix to the Budget of the United States (p. 261), it would appear that the appropriations for "Salaries and expenses" (part of which is for reserve fleet expenses), have been combined into a single appropriation for "Operations and training" for fiscal year 1974. In the authorization bill, H.R. 5449, on the other hand, there are separate and distinct authorized sums for reserve fleet expenses, Maritime training and the State marine schools. Why have the appropriations been combined in this manner? I am particularly interested in what effect, if any, could this have on your authorization request set forth in H.R. 5449? Does this mean that the Maritime Administration could shift funds between "reserve fleet expenses," "maritime training at the Merchant Marine Academy * * *," and "financial assistance to State marine schools," even though we author-

ized specific amounts for each? I think you should furnish the committee with a legal opinion on this point.

Mr. BLACKWELL. Items formerly funded for the National Defense Reserve Fleet under "Salaries and expenses," under Maritime training and under State marine schools are combined for fiscal year 1974 in the budget appendix under the "Operations and training" heading. This is part of a Government-wide effort to reduce the number of appropriation headings consisting of lesser amounts in the budget. The objective of this effort is to reduce the administrative burden associated with the preparation of the annual budget.

The combination of the items in the appropriation bill does not affect the authorization bill which is before the Congress. The Maritime Administration intends to consider authorizations for the National Defense Reserve Fleet, Maritime training and the State marine schools as controlling the amounts available within the "Operations and training" appropriation for these programs.

Mr. CLARK. Mr. Secretary, I would like to say that we appreciate your coming up here and giving us the benefit of your knowledge of these matters. I just wish that everyone could hear you, so that the full committee will have a better understanding of the maritime industry, the problems they have, and what we can do.

I do thank you very much for taking your time and coming up here today.

Mr. BLACKWELL. Thank you, Mr. Chairman.

Mr. CLARK. The meeting is recessed until 2:15 this afternoon.

[Whereupon, at 12:25 p.m., the subcommittee recessed, to reconvene at 2:20 p.m. of the same day.]

AFTERNOON SESSION

Mr. CLARK. The Subcommittee on Merchant Marine will please come to order.

We have with us this afternoon Arthur B. Engel, rear admiral, U.S. Coast Guard, retired, Superintendent, U.S. Merchant Marine Academy.

Admiral Engel, you may proceed.

STATEMENT OF REAR ADM. ARTHUR B. ENGEL, U.S. COAST GUARD (RETIRED), SUPERINTENDENT, U.S. MERCHANT MARINE ACADEMY

Admiral ENGEL. Mr. Chairman and members of the committee, I appreciate the opportunity to testify in further support of H.R. 5449 which authorizes funds for maritime training at the U.S. Merchant Marine Academy at Kings Point, N.Y.

As Assistant Secretary Blackwell has previously stated, our Academy budget authorization request for fiscal year 1974 is \$8.6 million. This represents an increase of \$746,000 over the current year's appropriation of \$7.854 million. The additionally requested funds will be used primarily for two purposes: To upgrade an old and dangerous electrical distribution system, basically unrenovated for the past 30 years, at a projected cost of \$958,000; and to upgrade classroom facilities and laboratories at a projected cost of \$294,000. The necessary

increases are being partially offset by cost reductions in other areas. For example, payroll costs will be reduced with a reduction of 22 billets, and certain renovation programs will have been completed.

The value of the U.S. Merchant Marine Academy:

My testimony today will be chiefly devoted to a general discussion of the value to the taxpayer and the Nation of the U.S. Merchant Marine Academy.

Over one-quarter of the vessels in the U.S. merchant fleet have masters and chief engineers who are Academy graduates. Many graduates are serving as senior officers on active duty in the U.S. Navy and a large number of graduates, having made their mark at sea, are now serving with distinction in almost every major steamship company.

Kings Point graduates are presidents of at least six major U.S.-flag shipping companies and others hold responsible positions in every area of marine transportation.

A 1972 survey of Kings Pointers who were graduated in classes 1965 through 1972 revealed that a total of 72 percent were employed in maritime pursuits of whom 36.4 percent were still at sea, 27.3 percent worked in the maritime industry ashore, and 8.2 percent were serving on active duty in the Coast Guard and Navy.

Historically, the demand for licensed officers soars during wartime, and there tends to be an oversupply of officers when peace is achieved. The Vietnam war was no exception; during this conflict many graduates of Kings Point served the Nation on our merchant marine ships, operating in support of our military establishment in carrying more than 96 percent of our wartime cargo. Many opportunities at sea are now evaporating along with the decommissioning of older reserve ships. However, this initial slack in the employment market should be absorbed by accelerated attrition and retirements, as well as to the increased number of grain vessels due to the trade agreement.

Moreover, job opportunities in industry management and emergence of a larger domestic shipping industry should substantially reduce any employment market oversupply in the future.

The advantages of a federally controlled institution:

Federal control over the policies of the U.S. Merchant Marine Academy has important advantages. For example, we can exercise quality control over the Academy's curriculum. In fact, Kings Point is now broadening the scope of its curriculum to adjust to recent market and industry changes. Current reforms include course offerings in the growing U.S. domestic shipping industry. These include areas like the tug-barge system, Great Lakes, and offshore drilling industries, and also in new high technology subjects like liquified natural gas, LNG carriers and nuclear propulsion.

The academic reform effort is only part of a general plan to modernize the Academy's curriculum, facilities, and administration, so that it will conform with and support the spirit of the President's new maritime program.

A second advantage of Federal control is that the output of licensed officers can be expanded or contracted more readily in accordance with national economic and defense needs. A State or union school, whose policies are not subject to control of the Federal Government, might not respond as readily to manpower demands generated by occasions of national emergency. At the height of the Vietnam crisis,

for example, Kings Point was uniquely able to graduate its senior class 6 months early when a critical shortage of maritime manpower arose. Federal control also permits close monitoring of our equal opportunity recruitment program, which has been successfully implemented. The professional staff at the Academy now includes six women and six other minority members. The classes of 1974 and 1975 include 22 and 18 minority students, respectively, or approximately 5.7 percent in each class. Virtually none were in the program before.

It will be these students, and those that follow them to the Academy, who will be called upon to fill the void of minority leadership in the industry's managerial level onboard ships and in maritime companies ashore.

Other maritime-related activities located at Kings Point:

Other federally sponsored activities are located on campus, the most important of which is the National Maritime Research Center, established in June of 1971. This is the first research center in the United States to be specifically devoted to improvements in commercial shipping operations.

The research center is uniquely suited to play an important role in the expanded research effort of the Maritime Administration. It will provide the opportunity for a continuing interchange of personnel, projects, instruction and information among the research center, the faculty and cadets of the Academy, and industry and labor representatives. In this way, the faculty and cadets of the Academy will not only participate in the center's research activities but, more importantly, become better attuned to new, emerging technology.

This will broaden and upgrade the education of cadets and, in turn, better prepare the Academy graduates to assume future leadership roles in an industry which is rapidly becoming more technologically complex.

In summary, the Academy at Kings Point has not only become one of the world's foremost centers for maritime education, but represents a prudent economic investment of our maritime resources.

This concludes my statement, Mr. Chairman.

I shall now be happy to answer any questions that you or members of the committee have concerning the U.S. Merchant Marine Academy.

Mr. CLARK. Thank you very much, Admiral.

I am going to ask a number of questions now, and then I will submit the rest for the record.

What is the function of the Federal Merchant Marine Academy, as such?

Admiral ENGEL. Primarily to graduate third mates and third assistant engineers with a Coast Guard license, and a bachelor of science degree.

Mr. CLARK. What is the average Federal cost to graduate each student from the Federal Merchant Marine Academy?

Does any non-Federal body contribute in any way to defray the cost of the Federal Merchant Marine Academy? If yes, to what extent?

Admiral ENGEL. Roughly I would say about \$27,000 a graduate.

Our graduates do receive compensation while they are at sea; they are paid by the companies with whom they sail.

Mr. CLARK. What are the employment opportunities of graduates from the Federal Merchant Marine Academy? If graduates do not

serve in the U.S.-flag merchant marine, what benefit does the country receive from the expenditure of these Federal funds?

Admiral ENGEL. Well, first, I would like to say that any graduate is a national asset. Our graduates tend to go into areas they are trained for, so the majority of them go into the maritime industry and even though they are not actually sailing at sea, they are in the maritime industry.

We do have some graduates that go into the Coast Guard, and some go into the Navy. All of them are Naval Reserve officers for 6 years if trained maritime people are needed in a national emergency.

Mr. CLARK. What is the function of the State marine schools? Also, how many State marine schools are there?

Admiral ENGEL. The State marine schools train cadets to become officers in the U.S. merchant marine and to assume responsible positions afloat in domestic shipping and in other maritime related industries ashore which offer graduates opportunities in management and engineering. Graduates also serve in the U.S. Navy and Coast Guard. Furthermore, they serve as a reserve cadre of trained officers in the event of emergencies.

There are currently six State marine schools. They are located in California, Maine, Massachusetts, Michigan, New York, and Texas.

Mr. CLARK. Mr. Studds?

Mr. STUDDS. Thank you, Mr. Chairman.

Admiral, this may be my imagination, but I sense a somewhat defensive tone in here, vis-a-vis the State academies.

You mention on page 2, when you are speaking of the historic tendency for decrease in employment opportunities during peacetime, you say, however, that this initial slack in the employment market should be absorbed by accelerated attrition and cutbacks in the State and industry schools' supply of officers.

Do you know something that we do not?

Admiral ENGEL. I did not read it that way, sir. I changed that in my reading because I did not feel that we really had the facts exactly as they might be.

Mr. STUDDS. You are not suggesting that you are aware of a cutback in the supply of officers from the State academies?

Admiral ENGEL. Say that again, please.

Mr. STUDDS. Let me quote it exactly, because I do not want to misquote. You say: "However, this initial slack in the employment market should be absorbed by accelerated attrition and retirements and cutbacks in the State and industry schools' supply of officers."

Admiral ENGEL. Well, that is where I changed my testimony. However, I am not personally familiar with the cutbacks of the other academies.

Mr. STUDDS. I am not, either. That is why I was asking you if you knew something that we were not sure of; but I understand you did not read it verbatim, and I wanted to make sure you did not mean that.

I hope you are not referring to women as minority members. You say, "six women and other minority members."

Could you tell us, sir, what the number of students enrolled in the Academy is at the moment?

Admiral ENGEL. Presently, at the moment it is about 940.

We usually start out around 1,000 in the fall and we have a little attrition. We have about 800 in residence at the Academy.

Mr. STUDDS. Right.

Admiral ENGEL. And the others were at sea.

Mr. STUDDS. And how many would you expect to graduate, roughly?

Admiral ENGEL. We expect to graduate this year, around 194.

Mr. STUDDS. Has that number remained fairly stable over the last few years?

Admiral ENGEL. Two hundred, plus or minus. I recall a few years ago we graduated 213.

Mr. STUDDS. But it has been more or less stable?

Admiral ENGEL. Just about 200.

Mr. STUDDS. Did I understand you to say in response to the chairman that your cost per graduate to the government is roughly \$27,000?

Admiral ENGEL. Yes, sir, that is what I answered.

Mr. STUDDS. I will ask obviously for equivalent figures from State academies, but my understanding is it is a good deal less than that in terms of cost to the Federal Government for graduates of the State academies, and you say you are devoting your testimony chiefly to the value to the taxpayer and to the Nation of the Merchant Marine Academy.

I do not want to suggest, certainly I am not hostile to the Academy, but I think we ought to focus some attention on precisely that point on the relative value for the taxpayer's money from the State academies.

Admiral ENGEL. Yes, I am not hostile to the State academies, either.

Mr. STUDDS. Peace is at hand. Thank you.

Mr. CLARK. Mr. Lott?

Mr. LOTT. Thank you, Mr. Chairman.

Admiral, what is the amount of funds in the 1974 authorization for the research center?

Admiral ENGEL. The research center is paid out of the Marad research and development funds, and does not come through the Academy. They are just tenants at Kings Point.

Mr. Austin informs me it is \$1.5 million.

Mr. LOTT. I would like to get for the record the program listings for which these funds would be allocated.

Admiral ENGEL. The fiscal year 1974 work program of the National Maritime Research Center is as follows:

	<i>Thousands</i>
Shipping productivity-----	\$100
Advanced ship systems-----	60
Automated shipping systems-----	150
Port management-----	10
Ships of opportunity-----	60
Marine operational data center-----	160
Personnel study of licensed U.S. Merchant Marine Academy officers-----	250
Personnel study of unlicensed seamen-----	180
Shipboard testing-----	230
Institutional-----	150
Technology support-----	150

Total ----- 1,500

Mr. LOTT. I understand that the men that attend the Academy are strictly on competitive nomination, is that not so?

Admiral ENGEL. Yes, sir.

Mr. LOTT. Although we have quite a few graduates in our area of your fine institution, I have been very disappointed in the number of young men from Mississippi Gulf Coast and southern Mississippi that show an interest in it.

I wonder maybe if we have not made proper information available to them. I am interested in your recruitment efforts. Do you have that, what your recruitment efforts are?

Admiral ENGEL. Like all small schools, we have a limited amount for recruitment and, of course, we depend on you, sir, and all the Congressmen to recruit for us.

It is competitive within your State, and we have a lot of alumni from the gulf area.

Mr. LOTT. Yes, sir, quite a few of them, but I worked for my predecessor for 41½ years, and I notice this year, I do not understand the small number that we have, that shows an interest in it. And I do want to try to remedy that.

Admiral ENGEL. We are working on that all the time.

Last Friday in this hearing room, my admissions officer and the assistant admissions officer met with all your aides, to pass out information on the Academy. We mailed all this information to you. However, I note that there are a number of Congressmen who never send anybody to the Academy. They are mostly in States in the Midwest, North Dakota, South Dakota.

Mr. LOTT. All those landlocked areas.

Admiral ENGEL. But we get a few from your State.

Mr. LOTT. I just want you to know, sir, I expect to have a few more from Mississippi in the future.

Thank you, Mr. Chairman.

Mr. CLARK. Thank you very much.

Thank you, Admiral, for coming here and bearing with us this morning.

Admiral ENGEL. It was an honor to be here, sir.

Mr. CLARK. Our next witness is Edward A. Rodgers, Rear Admiral, U.S.M.S., representing all six State Maritime Schools.

You may proceed.

STATEMENT OF REAR ADM. EDWARD RODGERS, SUPERINTENDENT OF THE MAINE MARITIME ACADEMY, ACCOMPANIED BY CAPT. WHEATLEY HEMMICK, DIRECTOR OF THE GREAT LAKES MARITIME ACADEMY; REAR ADM. LEE HARRINGTON, PRESIDENT, MASSACHUSETTS MARITIME ACADEMY; REAR ADM. SHELDON KINNEY, PRESIDENT, STATE UNIVERSITY OF NEW YORK MARITIME COLLEGE; AND REAR ADM. JOHN SMITH, SUPERINTENDENT, TEXAS MARITIME ACADEMY

Admiral RODGERS. Mr. Chairman and members of the committee, I am Rear Adm. Edward Rodgers, superintendent of the Maine Maritime Academy, speaking for all the State maritime academies. Also present are Capt. Wheatley Hemmick, director of the Great Lakes Maritime Academy; Rear Adm. Lee Harrington, president, Massachusetts Maritime Academy; Rear Adm. Sheldon Kinney, president, State University of New York Maritime College; and Rear Adm. John

Smith, superintendent, Texas Maritime Academy. Rear Adm. Joseph Rizza, superintendent of the California Maritime Academy, was unable to be in Washington today, but has participated in the preparation of our statement. Following my presentation, we will be pleased to respond to any questions you may care to direct to us.

Thank you for inviting us to appear. We believe that this is the first time the State maritime schools have been given a voice when the annual budget authorization concerning us is considered. We are pleased to present a coordinated statement and request permission to submit for the record individual school statements highlighting features and challenges that are unique.

With respect to H.R. 5449, the State maritime academies strongly support the need for authorization of the appropriations for State marine schools. We are pleased that the committee will hear our positions, for we consider the amounts recommended by the Department of Commerce significantly inadequate. We appreciate the opportunity to present facts which substantiate that these sums are not only in the interests of the citizens of the United States, but that the student aid and operating funds return unusual value on the State and Federal investment.

The State marine academies are, as their designation implies, integral units of the higher education systems of the respective States. They are supported by revenues appropriated by the State legislatures and their students contribute to the cost of their education in varying degrees in accordance with State and school policy, for such charges as tuition, fees, housing, and subsistence.

The current level of Federal support was established by the Maritime Academy Act of 1958, which, in combination with General Order 87 of the Maritime Administration, governs the Federal interest in the operation of the State maritime academies. The level of Federal support stipulated by the act, including payment to the academies and the subsidy payment to eligible students enrolled as cadets, U.S. Maritime Service, has not been changed since the initial passage of the act.

In addition to the fixed payment to each academy, and the fixed subsidy paid to each eligible student, the Maritime Administration provides the training vessels for the practical training of the cadets. The major maintenance of these vessels, particularly that accomplished in shipyards, is provided through the budget of the Maritime Administration. Operation of the vessels on annual cruises and routine upkeep is the responsibility of the individual academy.

The Maritime Academy Act of 1958 gave substance to the conception of a partnership between the State academies on the one hand and the Federal Government on the other, for the attainment of a national objective: the training of a suitably large body of expert maritime officers for service on American ships, and as a guaranteed source or reserve officers for the U.S. Navy in time of war and national emergency.

State maritime schools have been in existence for over a hundred years. They have enjoyed a modicum of Federal support over much of that time. All but two of the present academies have been in existence since before the entry of the United States into World War II. In the years since the passage of the Maritime Academy Act, however, the

academies have turned from being primarily vocational schools, dedicated to turning out practical seamen, toward becoming accredited colleges, producing technically qualified ship's officers, and maritime specialists to cope with the diverse, complicated equipment of a modern ship; and yet, at the same time, qualified to take their place in the highly competitive field of maritime commerce and administration.

The academies have broadened their curriculums to include ocean engineering, ocean science, business administration, and naval architecture, among others. We are also expanding the use of our training ships in oceanography, trade promotion, and goodwill ventures. The Maritime Administration has encouraged this expansion of role, and the results have been welcomed by all those we serve.

Unfortunately, Federal support has not kept pace with the ever-increasing costs of operating the academies. In 1959, Federal support represented approximately one-third of the operating budget with the balance shared about equally between the State and the students. The Federal share today is slightly below 20 percent, while State shares have advanced to between 40 and 50 percent.

During the past decade the State support has increased by 400 percent, and the costs to our students have risen nearly 300 percent. During the same period, the Federal grant of \$750,000 per year and student subsistence payments of \$600 per year has remained fixed.

Actually, this past year a restriction was placed on the number of cadets to be eligible for subsidy payments, based upon 1965 enrollments, with a resultant decrease in Federal support. Despite this relative decline in Federal support, this support has been, and continues to be, a vital element in the continued well-being of the State academies.

State support depends in large measure on the secure knowledge of continuing Federal interest in, and need for, the services these academies provide. All of our academies have made strides in meeting Federal requirements for the provision of adequate shoreside facilities for training, housing, and recreational facilities, at considerable capital cost to the States and ourselves.

These facilities are, in a sense, hostage to a future which is only secure so long as the Federal Government remains constant in its interest and support. In order to support adequate instructional staff, secure needed equipment, and finance long-term construction debt, the academies must be able to depend on a stable student body.

In this they are not unique, as I am sure is readily appreciated; no educational institution with a widely fluctuating student body can long endure.

Unfortunately, in the past 3 years there has been a marked turn-about in the attitude of the Federal Government relative to the level of support it is willing to give to the State academies. Based on a projection of reduced positions for licensed officers in a declining fleet, publicity was given to a limitation on the numbers of students to be eligible for Federal subsidy, simultaneous with announcement of future ship sharing by the academies.

Although we cannot measure the impact of these trends absolutely, nor can we discount the relative attractiveness of other schools without military discipline, there is no doubt that there was a decline in student interest in our schools, which has not been entirely eliminated. This

has compounded our problems in attempting to carry out our plans for modernization at the very time that inflation has made its most severe impact.

The decline in student interest was also, I am sure, at least partly due to the experience of the graduating class of 1971, in which less than half found seagoing jobs. Yet experience has shown that, as a group, the graduate of the State maritime academies did as well, or better, than the general college graduate in that recession year, in finding employment in the area of his professional training.

The situation today has improved markedly, as indicated by the return to our campuses of industry recruiters, and the listings of employment possibilities, which we are not able to fill. Our efforts to expand our programs are paying off, as our graduates with their maritime licenses find it possible to qualify for a wider range of employment opportunities in marine related transportation companies, management positions, shipyards, and in the towing, barging and intermodal companies.

Our specialized campuses and programs are a great national asset readily available in time of emergency. With the exception of Michigan, the Academies provide facilities for naval science departments, and cadets are required to take the naval science courses and apply for a Naval Reserve commission upon graduation.

Thus, our graduates constitute an essential component of the Naval Reserve. Many of our graduates have entered active service with the Navy and the Coast Guard, and have had distinguished careers. The Navy has increased interest in the relationships existing between itself and the State academies, and recently has indicated an increased desire to accept graduates for active duty.

As our academies increasingly meet rigid academic requirements, the Navy is willing to consider the installation of NROTC units on our campuses, as was the case with Maine Maritime Academy this past year.

I cite all the above, not in a sense of braggadocio, but rather to demonstrate that these academies are not a negligible part of our educational endowment, but rather are viable, growing institutions which the Federal Government should consider and utilize to their full capacity in partnership with the States toward the most rational and equitable division and exploitation of available resources.

It is a tenet of our philosophy of education that a well rounded man, thoroughly grounded in his profession shall possess a basic knowledge of his tools and capacities. Our program of instruction is grounded in the concept of learning by doing. In a day when educators are decrying past tendencies to escape from the practical into the theoretical pursuit of knowledge, our State maritime academies remain a bulwark of solid professional technical expertise.

We have, as I noted earlier, expanded our horizons academically, as well as professionally, in order to produce a man who has a better knowledge of and appreciation for the world around him. But our students still begin at the bottom, learning the operation of a ship the hard way. Living in a disciplined environment, they progress in experience to positions of authority on shipboard and in their daily lives. By the time they graduate they are ready to assume the responsibility

for a multi-million-dollar ship, a responsibility which we know from our experience they have handled well.

Our students are not wards of the Government. Their attendance at a State maritime academy is a voluntary and expensive experience accomplished in many cases by considerable self-sacrifice.

Our 11-month program means a very minimum of vacation or opportunity for outside employment. Limitations on personal life and desires make the 4 years a sometimes difficult experience, yet we are convinced that we are following the right course. We are supported in this conviction by hundreds of our graduates who have benefited from the experience. We are supported by the leaders of the maritime industry, who know and appreciate the qualities of our graduates first hand, and finally we are supported by the parents of the great majority of our students, who see and approve of the beneficial effect our academy programs have on their sons.

We submit that a young man who pays and perseveres through this program has demonstrated a high motivation for the maritime profession. These are the men who are capable of providing responsible leadership in our maritime industry.

We do not ask that you take our unsupported word for the good reputation enjoyed by our State maritime academy graduates in the maritime industry and the Armed Forces. It is our hope that this committee of the Congress will investigate thoroughly the opinions of responsible officials in these fields.

We would welcome visitations by Members of the Congress, and we strongly urge an in-depth study of the role, performance, and contributions of these academies to the industry and to the Nation at large.

Considering now our recommendations on the fund authorizations in order of priority, we respectfully submit and request:

1. That \$600 annual subsidy—or \$50 per month—set in 1958, as the cadet's "allowance for uniforms, textbooks and subsistence" be increased to reflect current costs for these items. As a yardstick the Congress in the last session raised the corresponding stipend for college NROTC midshipmen and ROTC cadets from \$50 per month to \$100.

We submit that cadets of the U.S. Maritime Service in the State academies merit the same consideration. We earnestly request that Public Law 85-672 of the 85th Congress, August 18, 1958, be amended to provide "a rate of \$1,200 per academic year per student" vice \$600.

2. That the number of subsidies allocated each school by the Maritime Administration not be arbitrarily fixed at the number of that school's 1965 entering class. This current practice disregards a school's growth. This growth is the product of significant State capital investments and development of attractive programs to meet the needs of the maritime industry.

We earnestly request a review and updating of the number of subsidies and their allocation. We propose an alternate interpretation of "too many graduates" which some statements imply. We are dealing with a marketable product with a 4-year leadtime. No matter how this graduate serves, he is of intrinsic value to the industry with which this committee is concerned. Our graduates do not have placement problems.

3. We have been informed by the Department of Commerce that budgetary constraints will force within 2 years the withdrawal of the schoolship from the schools and the assignment of a reduced number of ships to service all the academies. The States provide excellent colleges ashore for the education and training of the cadets, but they cannot provide the schoolship.

We expressly urge that the Congress affirm and continue to honor the principle specified in the Maritime Academy Act of 1958 that each State academy will be provided a training ship by the Secretary of Commerce.

In conclusion, gentlemen, we request that this committee authorize and support appropriations in the manner we have described for State maritime education at a level that will reflect the Federal Government's true interest and belief. The State schools constitute a valuable national asset. They have been strengthened, enriched in curriculum, and endowed with splendid physical plants with the encouragement of the Federal Government to help meet the national need.

The Federal sums required to assist in realizing their full potential are modest. We are confident that if we have presented the facts adequately, the committee and the Congress will support the State maritime academies. To do less will endanger their existence.

Mr. Chairman, the other superintendents and I are grateful for this opportunity to present the viewpoint of the State academies, and we invite your questions. With your permission, we submit our individual supplements for the record.

I would like to introduce my colleagues, and perhaps with your permission, they could take a place at the table, and you could direct your questions to any of us.

Mr. CLARK. Thank you very much for your statement, Admiral.

What is the difference between a graduate of the State maritime schools and the Federal merchant marine schools?

Admiral RODGERS. There is no essential difference in qualification between graduates of the Federal academy and the State maritime academies. The curriculum varies in some degree because of the lack of an assigned training vessel at Kings Point, requiring each cadet to have 1 year's sea experience aboard operating vessels. Cadets at the State schools, with training vessels assigned, are required to spend only 6 months of the three-fourth year program on training cruises, the vessel serving as a training laboratory during the rest of the student's attendance.

It should be stressed that both types of institutions graduate a student who qualifies for the third mate and third engineer license, as well as the commission in the merchant marine component of the Naval Reserve. Both sources provide a high caliber academic experience, as well as practical training. The graduates of both sources are welcomed in the marine industry at large, as well as the ships of the merchant marine.

Mr. CLARK. What is the average Federal cost to graduate each student from the State marine schools? Does any non-Federal body contribute in any way to defray the cost of the State maritime schools? If yes, to what extent?

Admiral RODGERS. The latest compilation available on a per graduate cost basis has been made available from the Department of Com-

merce for the graduating class of 1971. This chart shows that total payments to the State academies for the students graduating and the average cost per graduate in that year were:

	Total payments per graduate	Federal payments per graduate
California.....	\$19,111	\$5,487
Maine.....	15,091	4,039
Massachusetts.....	14,450	5,131
New York.....	¹ 26,000	4,322
Texas.....	23,869	7,877

¹ Estimated due to insufficient data.

During the same period the Federal payment per graduate at USMMA, Kings Point, was \$27,250, which represented the total payment per graduate received by that institution.

The difference in cost per student graduating is met by either grants from the revenues of the individual States or tuition fees paid by the individual student.

Mr. CLARK. What are the employment opportunities for graduates of the State maritime schools? If graduates do not serve in the U.S.-flag merchant marine, what benefit does the country receive from the expenditure of these Federal funds?

Admiral RODGERS. The first part of this question has been dealt with at length in the statement. To review briefly we have been able to place the majority of our graduates in sea-going licensed berths in American-flag ships in every year except 1971. The attraction of alternative employment fluctuates in inverse relation to the availability of sea-going positions. Because of uncertainty of the future of sea-going employment in recent years, we have sought out alternative employment in shipyards, shore-based transportation companies, engineering positions in public service companies. We have placed graduates in areas of sea-going employment in the Great Lakes and towing and barging companies, the seaborne oil exploration and extraction industries. Each of our graduates is required to apply for, and if qualified, accept a reserve commission as ensign in the U.S. Naval Reserve. Hence, even if he doesn't pursue a career at sea in the merchant service, he has the obligation to reserve service in time of emergency. Likewise any qualified graduate with initial license is potentially available for emergency service in the merchant marine, if the President decrees the existence of an emergency in the maritime service.

Finally, the Nation benefits in the same sense from the social contribution of a graduate from one of the State maritime academies not in a seaborne position, as from a graduate of any of the national service academies who elects not to pursue the career for which he was trained, except that the original Federal investment being smaller, the potential for return is greater.

Mr. CLARK. I recognize Mr. Studds.

Mr. STUDDS. Thank you, Mr. Chairman.

I am intrigued by the decision of last year to limit the number of students to be eligible and base it arbitrarily on the 1965 enrollment figure.

Is that an administrative decision in the Maritime Administration?

Admiral RODGERS. You are correct, sir, and Mr. Blackwell confirmed that this morning.

Mr. STUDDS. I guess it is not fair to ask you off the top of your head, but could you submit some statistics in terms of the numbers of students and the numbers of graduates at the various State academies.

Admiral RODGERS. First, if you are talking about the number of students, there are approximately 1,750 cadets enrolled in all six academies at the present time. Did you want the total number of graduates?

Mr. STUDDS. There are 1,750 enrolled at the moment?

Admiral RODGERS. Yes.

Mr. STUDDS. And you will be graduating approximately how many, combined?

Admiral RODGERS. In the combined, approximately 400 in the 1974 year we are talking about.

Mr. STUDDS. That must mean that the Massachusetts academy is the largest in numbers.

Admiral RODGERS. The Massachusetts academy right now actually is slightly smaller than Maine.

Maine is a little smaller than New York.

Mr. STUDDS. Really?

Admiral RODGERS. The Massachusetts academy, you see, it is going from a 3- to a 4-year school, and will increase next year rather rapidly.

Mr. STUDDS. Do you have the comparable cost to the Federal Government per graduate figure?

Admiral RODGERS. I have some figures here that I think are certainly appropriate. These actually came from the Maritime Administration, and they refer to the year 1970, and in that particular year, just coming down the line the Federal contribution, and it lists Kings Point first, was roughly \$30,000, California was \$4,600, Maine was \$4,300, New York, \$4,000, Texas was \$8,000, and our computations indicate that the Federal contribution to the State academies is roughly one-seventh of the comparable support to the Federal Academy per graduate.

Mr. STUDDS. Could you elaborate a little bit on what you said, the relative ease you are having in placing your graduates in terms of other than jobs directly at sea, where they tend to be going?

Admiral RODGERS. Yes, sir, I am sure that each one of us would be happy to have the opportunity to talk on that particular subject.

I happen to have in front of my latest alumni news listing where the 1972 graduates are, and it is rather impressive.

I also have a list of all the different companies my graduates are working with, and I can assure you that in 1972 the graduates are working, and having no problems finding jobs.

I can further assure you that the 1973 graduates, still a few months to go, are being sought after by industry representatives.

I had a reading just before I came down, and 50 percent of the deck graduates already have jobs promised, and 25 percent of my engineering graduates.

Now, this is well before graduation, and I think perhaps the others would like to address themselves to that.

Admiral KINNEY. Our experience at New York will have an offer of at least one job. It will vary, but academic disciplines with the marine.

engineers and nuclear scientists is being offered the most, but no graduate will lack for a job.

Of course, some will elect to go on for graduate work before they go into industry.

Captain HEMMICK. I might say as a young school when you start from zero it makes it easy, but we graduated very few this year. We will graduate another 16 in the next few months.

One hundred percent of this number are already assigned to vessels.

Admiral SMITH. In Texas we have the same situation. We can place our graduating class, and many more like it. The jobs on ships constitute about 70 percent of the bank we have, but on the other hand, there are a good 30 percent. I am speaking in the neighborhood of 100 positions in the various seagoing positions in industry.

We are in the heart of the petroleum chemical industry down there, and other major shipping efforts and really, these young men have a lucrative profession to go into.

We can place as many as we can get right at the moment in Texas.

There are only 8 percent of all our graduates that are not at sea or a seagoing related industry.

Mr. STUDDS. Your colleagues in liberal arts institutions, if they were to hear you, I think they would burst into tears.

I am sorry to hear that Admiral Harrington had to leave. Can you say something about your problems about student recruitment? Are you finding it still difficult to get your message across in spite of this, and what is happening?

Admiral RODGERS. I am happy to report that my applications this year are running considerably ahead of last year, and I mean by 50 percent.

Last year was a terrible year. It was bad for all of us.

Massachusetts did a little better, and put on a recruiting campaign, but there was a period in there largely attended with the publicity and the doubts as to whether the State maritime academy was going to be able to survive with all these cuts, and the possibility of losing training ships, with a resultant loss of student faith in the program.

Admiral Kinney can talk further on that.

Admiral KINNEY. All the 4-year colleges in the United States are suffering decreased enrollments this year. They vary up to as high as 18 percent in the normal liberal arts colleges.

In New York our recruiting is about the same as last year, but last year, as Admiral Rodgers indicated, was a relatively lean year.

The industry got some bad publicity, and the impression in the minds of young men was bleak, when this is not the case.

The second thing is that the expenses have risen considerably. Our students, for example, go over the costs of 4 years, and have an out-of-pocket expense of about \$10,000, of which the subsidy now defrays an average of about \$2,000 considering it is a day-to-day payment, and many times they are on leave or a vacation of some type, and are not paid.

This means for many it is financially impossible for them to undergo the expense.

Admiral SMITH. In Texas we have made a couple of major steps in recruitment. We are affiliated with the Texas A. & M. University.

The university there has just authorized us to offer the same tuition rate we have had for in-State students.

We are in the throes of a construction program. We do not have a dormitory now. We feel this is a drawback. We hope that we are going to have a dormitory within the calendar year. When we get it, this will add considerably.

We go out and do a lot of talking. We can do it a little more readily than Kings Point, because we do not have the same area to cover. We do a lot of talking, and send campaign material out as far as the program goes, and we feel that the recruiting down there this year in Texas is going to enable us to increase our enrollment by hopefully 50 percent. We are small right now.

Mr. STUDDS. One more question, if I may.

As I understand it, the Massachusetts academy, by virtue of a singular piece of ill-fortune, is stuck with the 75 cadet subsidies, because that was their entering class in 1965.

Am I correct in understanding the allotment of subsidies to other State academies is pretty adequate in covering the numbers of students you have?

Admiral RODGERS. Here again, speaking for Maine, we introduced 200 new freshmen 2 years ago. We were cut back to 150 subsidies, and that affected us last year in our enrollment.

Mr. STUDDS. You have 150?

Admiral RODGERS. Yes, the introduction of the NROTC program at Maine will eventually help to make up for that.

In the meantime, we lost considerable income. I think once the job opportunities open up the students will once again find these academies very attractive, but we have to increase the support, because it is getting increasingly difficult for them to finance it and go there 11 months.

Mr. STUDDS. May I just ask for an equivalent number of academy subsidies?

Admiral KINNEY. At New York we are in good condition because of the year selected. In 1965 New York was already a good size, about 700 cadets, where we are today.

However, the State university in the interim has undertaken a building and expansion program so that our present capacity is 900.

Therefore, as we grow toward that 900, we like Massachusetts, would be limited.

Mr. STUDDS. How many are you getting at the moment?

Admiral KINNEY. At the present time we are entering classes that average 200 to 230 cadets.

Mr. STUDDS. How many cadet subsidies are you getting?

Admiral KINNEY. We have for each year, 231.

Mr. STUDDS. May I ask for the others?

Admiral SMITH. Texas is 35, and at the moment that is about what we have.

Mr. STUDDS. And the others?

Captain HEMMICK. Ours is 50.

Mr. STUDDS. You are the one exception to the 1965 rule.

Captain HEMMICK. We made a survey through the Coast Guard, and lake carriers, the companies on the lakes, and MARAD, and came up with the basis of roughly a total student body of about 150 to meet the requirements on the lakes. So we are satisfied with our present situation.

Mr. STUDDS. I appreciate that. I apologize for my parochial observation at the end, and as you probably heard Mr. Blackwell, he had to confess that Massachusetts, because of the arbitrariness of that year, we are taking in 275, and are still stuck with 75.

I appreciate your testimony.

Mr. CLARK. Mr. Lott?

Mr. LOTT. Thank you, Mr. Chairman.

Admirals, I would like to commend you on your statement. I like your positive approach at the end saying what you think your needs are.

I would like to say I support your views. One thing I was a little interested in, you say here at the end on the last page that your graduates do not have placement problems, and then back on the second page, you say in 1971 there was some placement problems.

Has that problem been remedied?

Admiral RODGERS. To a large extent, it has.

In 1971, both major unions closed their books. In other words, it was not possible for a graduate in that year to join those unions, MMP has now opened up their books. We still have a little problem with MEBA, but in the meantime we have branched out into the domestic shipping area and found a considerable number of additional job opportunities for them.

I can honestly say I think the problem has been remedied.

Mr. LOTT. Now I am going to sound a little parochial. You mean Texas does not have the biggest enrollment? That worries me because especially again I think it is very interesting that these schools are all up in the Northeast, one in the Far West, and one in Texas, and Texas is a world of its own.

What about the Deep South? We have the Gulf of Mexico down there, and an ocean over there on the eastern seaboard. I think we should have a lot of interest in these academies. Maybe I am not asking a question, I am just citing some frustrations.

You say your school is new, sir?

Captain HEMMICK. The first one. This is our first year.

Mr. LOTT. I wonder what consideration was given in opening up new schools.

Captain HEMMICK. There was a new one down in your neighborhood in Arkansas, which is strictly a rivers academy, and I might say we have two new students coming in from Louisiana this June.

Mr. LOTT. Well, I want you to know that you are going to be hearing from Mr. Treen, myself, and the Governor of Mississippi in this regard.

Thank you very much.

Mr. CLARK. Thank you very much, gentlemen. We do appreciate your coming here and being able to be with us this afternoon.

We hated to delay you, but we had to, because of matters on the floor.

Thank you again.

The subcommittee stands in recess until tomorrow morning at 10 a.m.

[Whereupon, at 3:30 p.m., the subcommittee recessed, to reconvene at 10 a.m., Wednesday, March 14, 1973.]

MARITIME AUTHORIZATION—F.Y. 1974

WEDNESDAY, MARCH 14, 1973

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
SUBCOMMITTEE ON THE MERCHANT MARINE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:15 a.m., in room 1334, Longworth Office Building, Hon. Frank M. Clark (chairman of the subcommittee) presiding.

Mr. CLARK. The Subcommittee on Merchant Marine will please come to order.

This morning we continue our hearings on H.R. 5449, to authorize appropriations for the fiscal year 1974 certain maritime programs of the Department of Commerce.

As you know, yesterday the Assistant Secretary of Commerce for Maritime Affairs, Robert J. Blackwell, testified with respect to these maritime programs.

Yesterday we also heard from Rear Adm. Arthur Ingral, Superintendent of the U.S. Merchant Marine Academy, in support of that activity.

Finally, testimony was received from Rear Adm. Edward Rodgers on behalf of the State Marine Schools.

Because of the importance of this authorization request, I have scheduled a second day of hearings on the subject of H.R. 5449.

This morning, we will hear from the Shipbuilders Council of America, Mr. Edwin M. Hood, president; Mr. William Moody, administrator, AFL-CIO Maritime Trades Department; Albert E. May, vice president, American Institute of Merchant Shipping; Alfred Maskin, executive director, American Maritime Association, and Earl W. Clark, codirector, Labor-Management Maritime Committee.

We are pleased at this time to hear from Mr. Edwin M. Hood.

You may proceed as you see fit.

STATEMENT OF EDWIN M. HOOD, PRESIDENT, SHIPBUILDERS COUNCIL OF AMERICA

Mr. Hood. Mr. Chairman and members of the subcommittee, I am Edwin M. Hood, president and chairman of the board of directors of the Shipbuilders Council of America, a national trade association composed of shipbuilders and ship component manufacturers in all sections of the country. On their behalf, the following statement in support of the shipbuilding and research aspects of H.R. 5449, the Maritime Administration authorization bill for fiscal year 1974, is most respectfully submitted.

Because of a variety of reasons, demands for new merchant ships and thus prospects for merchant ship construction, in the immediate years ahead, are increasingly difficult to forecast with any kind of exactness.

Capital costs, cargo movements, national policy, budgetary considerations, labor-management stability, shipper confidence in U.S.-flag shipping and investor interest—together and in combination—will in the final analysis govern.

In particular, Federal directions with respect to the energy crisis, still in a formative stage, will have a distinct bearing on the construction of tankers for the importation of oil and liquefied natural gas to supplement domestic resources. But, here also, there are problems: the scope of national policy, the adequacy of existing port facilities, the feasibility of offshore deepwater terminals, the effects of pollution control standards, and the share to be transported in U.S.-flag, U.S.-built vessels. Answers may not be easy, nor prompt, just as a final decision pertaining to the Trans-Alaskan Pipeline System (TAPS) has been virtually in a comatose state for more than 2 years.

Other factors have a bearing on market opportunities for U.S. shipbuilders: poor earnings of American-flag operators and consequent financing problems, decline in the volume of cargoes carried by U.S. shipping, lack of clarity as to a national energy policy, waterfront work stoppages, lack of full parity for subsidized shipping operations, depressed world shipping conditions only now beginning to improve, indecisions as to pollution control and abatement standards, and the ease by which foreign-built ships are eligible for the carriage of defense cargoes immediately after documentation under the American flag.

Under these circumstances, we, the members of the Shipbuilders Council of America, believe that the funds requested in the proposed budget for fiscal 1974 to cover merchant ship construction under Federal auspices will accommodate shipbuilding prospects now in various stages of negotiation. Our confidence is fortified by the availability of funds from previous years' authorizations and appropriations and by the authority for commitment to multiyear contracting contained in the Merchant Marine Act of 1970. For these reasons we urge approval of H.R. 5449.

It is our judgment that the circumstances to which I have referred could well stabilize within the next 12 months and that a larger merchant shipbuilding authorization in terms of fiscal 1975 appropriations could be justified.

At this moment, pending or expected CDS applications total nearly \$5 billion.

Of this amount, \$2 billion would involve LNG vessels on which a CDS rate of 20 to 30 percent would apply.

By virtue of enactment of the 1970 act, a legislative milestone reflecting the intensive endeavors of this distinguished committee, and by virtue of the adequacy of subsequent congressional authorization and appropriations, the shipbuilding industry of the United States has reached an unprecedented level of peacetime activity, and as noted by Secretary Blackwell yesterday, the declining CDS scale as prescribed by the 1970 act has been and is being met by American shipyards.

More than \$3 billion in new contracts for the construction of merchant and naval vessels were placed with American shipyards in 1972, and at yearend the combined industry backlog was estimated at \$5.7 billion, a record peacetime high. The aggregate value of shipbuilding and shiprepairing performed by privately owned and commercially operated shipyards during 1972 approximated \$3 billion. Another \$1.1 billion U.S. Navy shipwork was done in Government-owned and Government-operated naval shipyards.

Since enactment of the 1970 act in October 1970, approximately \$1.7 billion in merchant shipbuilding and conversion contracts have been awarded U.S. yards with Federal support. These have involved 15 separate contracts (40 ships total), averaging less than three (2.7) ships per contract, placed with a total of eight shipyards. Four of these contracts, awarded a single shipyard, covered nine lighter aboard ship (LASH) vessels of nearly common design, and only in this instance has the concept of series construction, envisioned by the 1970 act, been utilized.

It might be timely to note that all of the above contracts have been negotiated between shipbuilder and ship buyer under section 502(a) of the Merchant Marine Act of 1936, as amended by the 1970 act. This provision, now scheduled to expire June 30, 1973, was not originally advocated by the administration and was included in the 1970 act on a trial basis, principally as a result of the vision of this committee. Subsequent events have, we believe, validated the Congress' wisdom in permitting the alternative of negotiated contracting and we hope that legislation to extend this provision will again merit the committee's approval.

U.S. shipbuilders are not unappreciative of the high volume of contracts awarded in the past 2½ years. On the other hand, they contend that the primary emphasis at this point in time should be on the movement of cargoes aboard U.S.-flag ships rather than on ship construction. It is their view that as a greater share of U.S. trade and commerce is transported by U.S.-flag shipping, requirements for new, modern ships will expand and the output of U.S. shipyards will accordingly expand. In the process, it is their conviction that lower unit costs and prices will govern and that basic shipbuilding objectives of the 1970 act will follow in sequence.

As to costs and prices, the economics of U.S. shipbuilding, now and in the recent past, have been subject to the same variables mentioned earlier and more. The effects of inflation are inescapable: Costs for wages, materials and services continue upward. Profits continue to leave much to be desired. Prospectively, devaluation of the dollar will in all likelihood narrow the gap between U.S. and foreign shipbuilding prices, but any gains in this respect will probably be more than offset by increased overhead costs in this country resulting from new occupational health and safety requirements, shipyard workmen's compensation rates and environmental standards. By 1976, it is estimated, these same statutory requirements together with proposed ship construction standards for pollution abatement could escalate U.S. shipbuilding prices by at least 15 percent.

Our membership is firmly and unequivocally pledged to national clean environment goals, but it should be understood that attainment of these goals, especially as they relate to ships and other floating

equipment, will involve premium costs and will further distort the differential between U.S. and foreign shipbuilding prices.

Finally, I would like to comment on another item in H.R. 5449: \$20 million requested for research and development. The Maritime Administration, as you know, is embarked on a well-organized research and development program in support of advanced ship development and improved construction techniques. This effort was stimulated by the 1970 act, and its purpose is to develop designs and methods whereby U.S. shipbuilding costs can be effectively reduced. On certain projects, shipbuilders are participating on a cost-shared basis, and we steadfastly believe that funds to extend this program should be approved.

In these brief paragraphs, I have touched on the progress and concerns of American shipbuilders pertaining to merchant ship construction under the 1970 act. To us, the tremendous task of restoring the United States as a maritime power has been soundly initiated. For fulfillment, it needs the certainty of continuing support and encouragement by the Congress; and to this end we earnestly hope that the committee will recommend H.R. 5449 for early enactment.

Thank you for granting me the privilege of presenting the views of our members with regard to this legislation.

I will do my best to answer any questions you might have.

Mr. CLARK. Thank you very much, Ed, for a very good statement.

I would like to ask your four questions:

To what extent are American shipbuilders participating on a cost-sharing basis in the Maritime Administration's research and development program in search of advanced ship development and improved construction techniques?

Mr. HOOD. I believe Secretary Blackwell in his statement yesterday indicated a ratio of 85 percent Government, 15 percent shipbuilders.

Mr. CLARK. On page 3 of your statement you say that, and I quote:

The shipbuilding industry of the United States has reached an unprecedented level of peacetime activity.

Are you turning away business at the present time?

In other words, would you be in a position to handle increased construction activity if these funds were increased?

Mr. HOOD. The answer to the first part would be, no; and to the second part, yes.

We estimate our industry is now operating at about 60 percent of capacity, and a number of yards are aggressively soliciting business at this moment.

Mr. CLARK. Have you heard a lot about lack of labor stability in the maritime industry?

Does this apply to the shipbuilding industry and can you give me examples where a vessel delivery date has been delayed because of work stoppages?

Mr. HOOD. My impression is that labor stability on the shipbuilding side has been fairly good in recent years.

Mr. CLARK. Will the American shipbuilding industry meet the challenge of the new maritime program and be able to construct new U.S. flag vessels at the 39 percent construction differential subsidy rate that will go into effect on July 1 of this year?

Mr. HOOD. In my opinion, yes. However, as indicated in my statement, the economics of shipbuilding today is subject to many variables. So far, the industry has met the declining CDS scale, and we are confident it will continue to do so if the volume of work is available.

Mr. CLARK. Mr. Downing?

Mr. DOWNING. Thank you, Mr. Chairman.

Thank you, Mr. Hood, for another excellent statement and an optimistic one. I share that optimism.

You mentioned something that I had almost forgotten about and that was the construction of ships in series. This was supposed to be a main part of the new maritime program and the example which you mentioned, the LASH concept, is that the only one we have had thus far in the program?

Mr. HOOD. Thus far, yes, Mr. Downing.

But if the LNG program and the VLCC program develop as expected, you will see more opportunity for series construction, nevertheless, the LASH incident is the only one to date wherein series of production has applied.

Mr. DOWNING. Has this series concept met with favor among the shipping industry?

Mr. HOOD. I would not say it has met with disfavor.

I think probably the economics of shipping in the past several years have precluded a consolidation of individual shipowners requirements into single shipbuilding contracts.

Mr. DOWNING. You mentioned in your statement a decline in the volume of shipping.

Did that hold true last year?

Mr. HOOD. Yes, sir, it is my understanding the figure last year was in the vicinity of 5.7 percent, by volume.

The pattern of the trend has been steadily downward in recent years as you so well know. This is why the shipbuilders believe that the emphasis in the near-term future should be on the movement of more cargoes aboard American-flag ships and if that volume improves then we believe shipbuilding will also improve in this country.

Mr. DOWNING. Will the Russian wheat deal reverse this trend?

Mr. HOOD. No, sir, I do not think so.

Mr. DOWNING. Thank you for a very fine statement.

Mr. CLARK. Mr. Eckhardt?

Mr. ECKHARDT. Thank you, Mr. Chairman.

Mr. Hood, I note on page 5 you refer to two factors which you say tend to offset the lessening of the competitive disadvantage, I suppose, of U.S. shipbuilding that is occasioned by the devaluation of the dollar.

One of those is shipyard workmen's compensation. I suppose that is as a result of the bill passed toward the end of the last session.

Mr. HOOD. Yes.

Mr. ECKHARDT. Now, that bill applied, I assume, to shipbuilding as well as to stevedoring work, longshoremen work.

Mr. HOOD. It extended, as I understand it, the coverage of the Longshoremen and Harbor Workers Act to virtually all employees in the shipyard.

Mr. ECKHARDT. You say that does have a scope which covers the operations of the shipyards altogether?

Mr. HOOD. Yes.

Mr. ECKHARDT. And, of course, with respect to that enlargement of jurisdiction, it was a total additional cost without the offsetting cost that the stevedoring companies had in getting out from under the warranty of seaworthiness.

Mr. HOOD. Yes, in that context.

[The above question and answer merit further explanation as follows:]

AMENDMENTS TO LONGSHOREMEN'S AND HARBOR WORKERS' COMPENSATION ACT

Extensive amendments to the Longshoremen's and Harbor Workers' Compensation Act affecting shipyard workers—embodied in Public Law 92-576 became effective November 27, 1972. From that date until September 30, 1973, compensation limit increases from \$70.00 per week to \$167.00 per week. Coverage is expanded to include "any adjoining pier, wharf, terminal, building way, marine railway or other area adjoining . . . navigable waters customarily used by an employer . . . repairing or building a vessel." This action is being broadly interpreted to extend to shipyards' perimeters on shore.

Additionally, these same amendments also eliminated liability claims against shipyards based on unseaworthiness, putting an end to the flood of litigation that followed the U.S. Supreme Court ruling in the now famous 1946 Sieracki case. The termination of this legal liability, peculiar to the United States, should be of considerable benefit to ship repairers.

Mr. ECKHARDT. So in the case of your industry there was no payoff in order to gain the higher compensation. There was no balance in this respect, is that right?

Mr. HOOD. Not insofar as shipbuilding is concerned.

The problem is compounded by the fact that these increased compensation rates apply to many shipyards that have fixed price contracts with no opportunity for escalation.

Mr. ECKHARDT. So, of course, I suppose formerly you were under State compensation?

Mr. HOOD. Yes. We now have Federal jurisdiction.

Mr. ECKHARDT. Which I suppose on the whole was much less than the Federal compensation?

Mr. HOOD. In many cases.

Mr. ECKHARDT. Now, you also mentioned occupational health and safety requirements and cost of environmental standards so two of these factors have to do with matters related to employment and employees. The other has to do with equipment.

Do you have any kind of breakdown as to the percentage of costs of a ship which is as a result of wages?

For instance, in a production of gasoline, I have heard it said that about 1 cent per gallon is the wages and the rest is with respect to other costs.

Mr. HOOD. The standard rule of thumb has been that about 50 percent of the cost of the ship is represented by materials that the shipyard purchases.

Another 40 to 50 percent would represent labor costs and all other costs.

Mr. ECKHARDT. You mean 40 or 50 percent in addition to the 50 percent?

Mr. HOOD. That is right.

Mr. ECKHARDT. You do not have 5 percent for amortization?

Mr. HOOD. Five to ten percent would cover all other factors involved.

Mr. ECKHARDT. Do you really mean to say that?

Of course, this 50 percent materials would be partially labor costs and partially other costs.

Mr. HOOD. Yes.

Mr. ECKHARDT. And you do not know what that breakdown would be because that is outside of your ken?

Mr. HOOD. That is right.

Mr. ECKHARDT. But you say with respect to your own direct costs other than the cost of the material you buy, 40 to 50 percent is labor?

Mr. HOOD. Yes.

Mr. ECKHARDT. Is it not true that a ship built today has some rather large and heavy equipment in it?

Mr. HOOD. Yes, ship designs in recent years have been becoming increasingly more sophisticated; they reflect the latest in technology.

Mr. ECKHARDT. Now, when you give this 40 to 45 percent over and above the 50 percent for materials as labor costs, you say that is the rule of thumb.

Is that the present breakdown or is that what has traditionally been considered to be the breakdown?

Mr. HOOD. What it has traditionally been considered to be and if you wish, I will be happy to provide for the record a memorandum that spells it out specifically.

[The material follows:]

BREAKDOWN OF SHIPS' COSTS

Fixed costs, including taxes on real property, depreciation, insurance, rentals and interest, plus profits and the income taxes paid on them, which are allocable to a given ship vary widely from yard to yard. For these reasons, published ship cost analyses usually are confined to "material costs" and "all others," the latter including labor, overhead burden and whatever profit is realized. A recent study analysis made for typical Ore/Bulk/Oil (OBO) carriers, containerships and barge (LASH/SEABEE) carriers was so presented.

In the same time frame, an industrywide cost survey made under sponsorship of the Shipbuilders Council of America contains information which permits a composite presentation. Adjusting the combined OBO, Containership, LASH/SEABEE data by returns from this survey, and assuming a two percent net profit on sales (this is higher than Renegotiation Board returns for all companies whose business is subject to renegotiation), the following approximate percentages result:

	Percent
Material	41
Labor	51
Other	8
Total	100

In the event of series construction of near-identical ships, it is estimated that this distribution of ship cost elements would prevail:

	Percent
Material	49
Labor	43
Other	8
Total	100

Mr. ECKHARDT. In most industries as heavy equipment and automation tends to enter the picture, there has been a decrease in the proportion of labor costs; is that true in your industry?

Mr. HOOD. Shipbuilding is a very labor-intensive operation.

Mr. ECKHARDT. I understand.

You are tailormaking a ship, so to speak.

Mr. HOOD. Yes; but there has been substantial movement in the direction of automation, if you will use that word, or mechanization in terms of shipbuilding.

Mr. ECKHARDT. Now, for instance, as you enter into perhaps a new phase of shipbuilding and the ships approach a 100-foot draft, will there be a tendency to increase the competitive position or the advantageous competitive position of American shipbuilding?

I would assume that this will require the construction of relatively new plants and equipment and I would think that what we have always called Yankee ingenuity would put us in pretty fair competitive position if we were building a plant now.

I understand that one of the advantages, say, of Japan and the Netherlands, and certain other countries, has been that their shipbuilding activities have dated from a more recent time than ours and this has given us a disadvantage.

Mr. HOOD. Right.

Let me comment on that in this way, Mr. Eckhardt. We are slowly inching toward an improved competitive position.

Over the past 5 years, we estimate that approximately \$500 million have been spent in capital improvements in American shipyards.

Another \$300 million we estimate is already committed to new or expanded facilities.

Specifically in terms of your reference to the large supertankers, we have 225,000 deadweight and 265,000 deadweight tankers presently under construction or on order in American shipyards.

There is a pending negotiation which would involve six 380,000 deadweight tankers. These would be constructed, if the contract materializes, in a new facility to be built at Galveston, Tex.

Mr. ECKHARDT. Thank you.

Mr. CLARK. Mr. Mills?

Mr. MILLS. Thank you, Mr. Chairman.

I want to join my distinguished colleague in commending Mr. Hood on an excellent statement.

I was interested in the report on present construction and I wanted to ask how does it relate to our world position in the merchant marine? Are we sliding back?

Mr. HOOD. No; as a matter of fact, we are slightly improved.

We moved up one notch. We are now 10th on the world scale in terms of vessels of 1,000 gross tons and over.

Mr. MILLS. Are you satisfied with this position?

Mr. HOOD. No, sir.

Mr. MILLS. If H.R. 5449 becomes law as fully funded, how will this improve that position?

Mr. HOOD. I suspect it will, as a result of H.R. 5449, remain at about the same level.

Mr. MILLS. About 10th?

Mr. HOOD. Yes.

Mr. MILLS. Thank you, Mr. Hood.

Thank you, Mr. Chairman.

Mr. CLARK. Mr. Studds?

Mr. STUDDS. Thank you, Mr. Chairman.

Mr. Hood, among your component membership is General Dynamics, is that not so?

Mr. Hood. General Dynamics is what we call a regular member. They own and operate two shipyards, one at Quincy, Mass., and one at Groton, Conn.

Mr. STUDDS. Right. I wonder, given the tenor of optimism that runs throughout your statement, if you could say something about the yard at Quincy?

As you know, we were told over the long run it looks good, but we are in the midst of very substantial layoffs, as you know, and people don't eat in the long run.

Mr. Hood. It is not my responsibility to assess the condition in any individual shipyard. This really should come from the management of the yard, but I can say that the General Dynamics organization is among those that are aggressively marketing their facilities and expertise at this moment.

Mr. STUDDS. Fair enough. One other subject, if I may.

To your knowledge have any of your member shipbuilders participated in recent years in construction of fishing vessels?

Mr. Hood. I believe two trawler ships were built, yes, in recent years, but the present status of those ships, I do not know.

Mr. STUDDS. I was wondering and, for example, you know many of our smaller fishermen, whose boats are among the smaller ones, are pressing for a revision of the couple-of-centuries-old law that requires those ships to be built in the United States.

Would your organization have objections to their proposal that at least for smaller vessels we permit them to be constructed abroad?

Mr. Hood. The Shipbuilders Council has had a consistent position for a good many years in support of preserving the integrity of the so-called Jones Act, and to answer your question, I would have to say we would oppose such a proposal.

Mr. STUDDS. Do you have any suggestion, given that position, as to how we might build some fishing vessels?

Mr. Hood. This is not my particular field, but I would note that over the past 5 years the administration has not requested nor has the Congress appropriated any funds to support the construction of fishing vessels in American yards.

Mr. STUDDS. Our fleet reflects that, as I am sure you know. I was talking last week with a gentleman who was going out fishing in day trips on a boat that is 70 years old. He cannot get insurance and he could not afford it if he could and his only hope in this case, and he was a relatively small entrepreneur, was to purchase a ship that is constructed out of this country, and I am trying to see how you people feel, and how unions feel, about the smaller vessel that probably will not be constructed in this country.

Mr. Hood. Our policy has been consistent over the years, and I see no change in attitude within our industry.

Mr. STUDDS. Thank you.

Mr. CLARK. Mr. Pritchard?

Mr. PRITCHARD. No questions.

Mr. CLARK. Mr. Anderson?

Mr. ANDERSON. Thank you, Mr. Chairman.

Mr. Hood, I, too, want to commend you for an excellent statement. On page 5 you refer to increased costs resulting from new environ-

mental standards. What are some of these environmental standards that the foreign builder escapes?

Mr. HOOD. As a general statement, I would say that enforcement of regulations affecting noise, sandblasting, heat stress, and so on, is less severe in foreign countries than they are in the United States.

We have recently conducted, Mr. Anderson, a survey in support of a broader study of the impact or effect of U.S. requirements on shipyard overhead costs and, if the committee wishes, I will provide a summary of that report for the record.

Mr. ANDERSON. Are not similar pollution standards becoming the requirement in most of the major foreign shipbuilding countries also?

Mr. HOOD. Yes, I believe the trend is there.

Mr. ANDERSON. The same thing on noise and sandblasting?

Mr. HOOD. But, again, not as rigidly as in this country.

Mr. ANDERSON. You can show that?

I had been led to believe that similar environmental movements were taking place in Western Europe and Japan and other locations.

Mr. HOOD. They are.

Mr. ANDERSON. But you would feel the demand of the environmentalists in Western Europe and in Japan are less than they are here in this country?

Mr. HOOD. Yes.

Mr. ANDERSON. Now, how much of a percentage would you feel that that would reflect in the cost of the shipbuilding?

Mr. HOOD. Combining these three items?

Mr. ANDERSON. I was trying to separate them.

Mr. HOOD. I do not recall the exact figures.

Mr. ANDERSON. Because I was wondering if the charge to environmental standards would be really as high as we might think they were.

I had been led to believe that requirements almost identical to ours were being fought for in those same areas. If I am wrong, I would like to know so.

Mr. HOOD. I would like to have you look at this study. It sets forth a specific percentage for the increase in cost resulting from environmental requirements.

Let me reiterate that our industry is not opposing these requirements. We are committed and dedicated to the clean environmental goals of our Nation.

As I say in my statement, it must be recognized that in many cases added costs will result.

Mr. ANDERSON. When you lump these three groups together, then you give them a figure of a 15-percent increase in building.

Mr. HOOD. Those three, as I recall the study, represent an increase of about 6 percent in shipbuilding selling prices.

The difference between 6 and 15 percent relates to construction standards now being proposed for pollution abatement.

Mr. ANDERSON. In your report, I would like to have a little better breakdown as to how much of it is actually different between this country and other countries, their requirements and environmental standards as well as their health and safety so we know what we are talking about.

Mr. HOOD. To the best of my ability I will do that.

[The information follows:]

SUMMARY OF REPORT ON "THE IMPACT OF RECENT GOVERNMENTAL LEGISLATION ON
THE U.S. SHIPBUILDING INDUSTRY"—FEBRUARY 1973

The intent of this summary is to present rationally the dimensions to which recent legislation covering environment, occupational safety, health and worker related benefits have encroached upon the posture of the shipbuilding industry in the United States.

Inputs for the study were obtained from major shipyards in the United States and from a spectrum of leading global shipbuilding countries. A comprehensive research effort was made to ensure that all relevant inter-related facets associated with the factors of ecology, safe work place/practices and industry funded worker welfare aspects was made internationally and domestically to the limits of the time allotted for the study.

All three prime elements discussed in this report economically impact the shipbuilding and ship repair industry in the United States. A fourth factor not as complex as the environmental, industrial safety and workmen's compensation aspects but of significance and with relevant impact is the United States Social Security Acts employers' contributions requirements. The known current and the impending prospective cost burdens, operating constraints and administrative impediments imposed by the legislation enacted for these programs are generally within the time-frame in which the U.S. shipbuilding industry is to reduce the percentage of Constitution Differential Subsidy (CDS).

Conversely, analysis of the philosophy, practices, related laws and standards of the three leading shipbuilding nations in the world, and others who are ahead of the United States shipbuilding industry in tonnage on orders, etc., indicate that they are not now adversely impacted or competitively disadvantaged in the world market place by legislation parallel to that which has affected the United States. Globally the United States has promulgated the most stringent and demanding policies for environmental considerations, and the related worker protection/welfare assistance programs that impair our ability to have a parity with our foreign counterparts.

The estimated prospective impacts on the United States shipbuilding industry as a result of this study effort are as follows:

Hourly billing rate (add-on):	Percent
For environmental legislation.....	5.4
For safety and health.....	5
For workmen's compensation.....	3.18
For social security contributions.....	.30
Total (to assumed \$10 average base billing rate).....	18.88

The consensus of the shipyards responding to a survey is that considering all four factors, i.e., environment, OSHA Workmen's Compensation and Social Security, they would currently add 6.34% to their selling price to recover the impact of these elements. Prospectively by 1976 the shipbuilding industry estimates their selling prices will escalate on the average by 12.57%.

Compounding the individual impacts cited in the foregoing, and the cumulative average prospective impacts ranging from 12.57% to 13.88% is the cost burden passed on by the shipbuilding industry's principal supplier—the steel industry—which in itself will increase the cost of steel by 3.4% to 3.7% between 1972 and 1976 for environmental considerations only.

The Merchant Marine Act of 1970 stipulates the CDS level is to be reduced to 35% by 1976. It can only be concluded that this level was prematurely established since the then unknown economic impacts of the legislation then in process before Congress or coincidentally being amended were not and could not be assessed. Time phasing related to the four factors evaluated in this report have to a degree already nullified the cost effective actions taken by the United States shipbuilding industry.

The full report of 99 pages includes comments on the environmental philosophy which today exists in other shipbuilding nations (pages 17-25 inclusive) and leads to a conclusion, as stated on page 25, that "existing environmental legislation in the countries studied appear to represent more of a statement of ideals and goals rather than realized programs."

Mr. ANDERSON. Thank you, Mr. Chairman.

Mr. CLARK. Mr. Ginn?

Mr. GINN. Thank you, Mr. Chairman.

Mr. Hood, on page 5 you state the Maritime Administration has embarked on a well-organized research and development program in support of advanced ship development and improved construction techniques.

You go on to say on certain projects shipbuilders participate on a cost-sharing basis.

My question is, What is being done researchwise with regard to nuclear energy?

Mr. HOOD. Secretary Blackwell in his testimony yesterday indicated that one of the projects within the Marad R. & D. program at the present time related to nuclear research and development, I believe in answer to a specific question he further indicated the possibility that the fiscal 1975 budget request would include funds for the construction of the second nuclear merchant ship.

Mr. GINN. Well, my question then should be, I guess, Does the Council have any views on this?

Mr. HOOD. Yes; we support this objective very much.

Mr. GINN. Thank you. Thank you, Mr. Chairman.

Mr. CLARK. Mr. Lott?

Mr. LOTT. No questions.

Mr. CLARK. Mrs. Sullivan?

Mrs. SULLIVAN. Thank you, Mr. Chairman.

Mr. Hood, I am sorry I did not hear your testimony, but I am going to do some questioning on one item that I think is of vital interest and I may as well start with you.

As I have often said before, the first priority of this committee in the 93d Congress is labor-management stability and I am sure I can count on your full cooperation.

I would like to know in what specific areas you feel we can expect genuine progress in achieving such stability in the near future?

If you would like to enlarge upon your answer later and just answer briefly now, I would be happy to have you do it.

Mr. HOOD. Well, Mrs. Sullivan, I will make one or two observations.

Mrs. SULLIVAN. Please do so.

Mr. HOOD. First of all, I truly believe there is a genuine desire on the part of both labor and management in the maritime community to improve the tone of labor-management relations as they affect American-flag shipping.

I am a member of the National Maritime Council which you may recall was established by the Department of Commerce to encourage more cargoes for American ships.

The National Maritime Council includes representatives of labor as well as representatives of management.

I have been greatly impressed by the rapport back and forth at these meetings, and again, the evidence of a real desire to get this problem behind us, in my judgment, is there.

Mrs. SULLIVAN. Good.

Do you feel this Council is representative of all three segments: labor, industry, and Government?

Mr. HOOD. I feel it has a good cross section representation, yes.

Mrs. SULLIVAN. Do representatives of men who will operate a vessel have a voice in the planning of so-called automated features during the vessel's design stage?

Mr. HOOD. I really do not know the answer to that question.

Mrs. SULLIVAN. In other words, all that goes into the building of the ship has been discussed in advance?

Mr. HOOD. Generally, that is true.

However, if the real series construction potential of the 1970 act is to be realized, shipyards will be a party to the design of ships.

Mrs. SULLIVAN. Well, this is my belief, in other words, there has to be something done before they even design them.

What kind of ships do you need? What is going to be the cargo? How are they to be shipped, in containers or bulk, or whatever? This point of the planning of the design is what I am interested in.

Are the men who are to operate these ships later involved in the discussions of the design and so forth?

I know you cannot answer this, but I want to pose the question.

I have heard stories of multi-million dollar tankers being constructed and put into operation only to find that something as basic as deck lines were incorrectly so positioned that cargo could not be loaded or discharged.

Now, do representatives of the men who will operate a vessel have an opportunity to comment on its design during the planning stages, or if this is before your interest starts, can you find out something about it?

Mr. HOOD. The point is well taken, and I would hope that my colleagues from the ship operating side could give a more positive answer to your question, Mrs. Sullivan.

Mrs. SULLIVAN. Even before they get that ship off the ways and into operation, they should possibly be involved in the designing of it.

Mr. HOOD. Yes.

Mrs. SULLIVAN. You are just in the ship construction?

Mr. HOOD. Yes.

Mrs. SULLIVAN. I understand that the budget makes no provision for the construction of liner-type vessels in fiscal year 1974.

Do you have any comment to make in respect to this?

Mr. HOOD. My comment would go to the point made in the statement, that the earnings of many American-flag operators, including liner operators, have been poor.

Secondly, as stated, we believe that the primary emphasis in the near-term future should be on the carriage of a greater volume of cargoes by American-flag shipping, ship construction will expand as cargoes expand.

Mr. SULLIVAN. Is it not enough to make a profit.

Mr. HOOD. The chicken and the egg kind of proposition.

Mrs. SULLIVAN. You mentioned a variety of reasons why the prospects for merchant ship construction in the immediate years ahead are increasingly difficult to forecast.

In this regard, does the shipbuilding industry engage in any sort of long-range planning as to the type and number of vessels that will be required by the U.S.-flag merchant marine and if not, do you not think this would be one way to assist our merchant marine?

Mr. HOOD. We are engaged constantly, Mrs. Sullivan, in looking into the crystal ball and attempting to forecast the demand for ships.

In recent years, particularly since enactment of the 1970 act, this has been more and more important to the marketing departments of

our shipyard and, of course, they individually, depending upon their types of facility, their management philosophies, and their marketing objectives are also making a great many forecasts and predictions, long term and short term.

Mrs. SULLIVAN. I was going to ask who supplies this information, or forecasts the need for specific types of cargo. Does maritime supply it?

Mr. HOOD. Basically, it comes from Government sources, and I would assume also that shipping companies, shippers, and so on, have a vast wealth of data in this connection.

Mrs. SULLIVAN. This is what I have been trying to find out and I am not sure where it comes from because I never get a direct answer concerning who is doing this forecasting. I realize we have Government agencies that are supposed to do this, but how it is used when they do get it, we do not know.

Mr. HOOD. We use to a very heavy extent, Government forecasting, including those that come from the Department of Commerce and other agencies such as the National Petroleum Council.

They, as you may recall, in the past several years, have engaged in some very extensive forecasts of future requirements for oil and gas. They have also equated these forecasts to numbers of ships, and it represents hundreds of ships.

Mrs. SULLIVAN. You state the primary emphasis at this point in time should be on the movement of the cargoes, rather than on the ship construction.

Is your segment of the maritime industry able to project over the next 5, 10, or 20 years the types and volumes of cargoes which will be available and relate this information to your shipbuilding plans?

Mr. HOOD. The National Maritime Council is doing some very effective work in this endeavor. Moving from 5 percent to 10 percent by volume could mean a tremendous stride forward for the entire American merchant marine and for the entire American shipbuilding industry.

I have been going around the country in recent months urging a long-term objective of 30 percent. I certainly do not believe that figure, no matter how desirable, could be accomplished overnight or even within a matter of 5 years.

It would seem to me that somewhere in this vast maze of Government, there has to be a coordinated effort with some kind of a specific program with specific milestones that the American-flag merchant marine is going to carry 10 percent by 1980, 15 percent by 1985, that certain numbers of ships are to be built, and so on. Then the resources of the country, the resources of the Government should be marshalled behind that kind of a program.

This has never taken place.

Someone sent me an article the other day that appeared in one of the Australian newspapers commenting on the fact that I was urging 30 percent for American-flag shipping, and it was noted that the policy in Australia is 40 percent.

Then the article went on to say there is no coordinated policymaking, no policy-implementing organization that is making it work.

Mrs. SULLIVAN. Well, this is exactly what I have been saying and thinking over the past 15 years. I do not think we have ever had any

real good salesmen go out and sell American bottoms to the industry or the shippers of this country.

I was delighted to find out just recently that two shipping firms have opened offices in the Midwest, in my own city, to get out and see the people who produce the cargo, and if they do not sell to them they are certainly not just going to sell to the brokers. I think this is where we have been mistaken all these years, to let the shippers just deal through the broker and say, "I want my goods to be sent over there to XYZ."

The other problem that I have heard from my own shippers is: "We want our cargo to move and when we say ship in such and such a place, we want to know that that ship is going to sail." This is why I said I have made it a priority and I am going to do everything humanly possible to keep our ships sailing. I think it should be done without legislation. If we do this, we will fill our quota of some 30 percent that we should have.

Thank you very much, and I am sorry I took longer than I should have.

Mr. CLARK. Mr. Mailliard?

Mr. MAILLIARD. No questions.

Mr. CLARK. Thank you very much, Mr. Hood.

Our next witness is Mr. O. William Moody, administrator, AFL-CIO Maritime Trades Department.

STATEMENT OF O. WILLIAM MOODY, ADMINISTRATOR, AFL-CIO MARITIME TRADES DEPARTMENT

Mr. MOODY. My name is O. William Moody. I am the administrator of the AFL-CIO Maritime Trades Department, a constitutional arm of the AFL-CIO, composed of 44 international unions representing over 8 million American workers.

Many of these unions and thousands of their members are directly involved in the maritime industry, as shipbuilders, seafarers, dockworkers, and employees in allied industries.

We are pleased to have this opportunity to present our views and to testify before the House Merchant Marine and Fisheries Committee on H.R. 5449, the fiscal year 1974 budget authorization for the Maritime Administration. We feel that this budget proposal represents a realistic compromise between the rise in demand for U.S. ship construction and operating subsidies and the need expressed by the Congress and the administration for fiscal restraint. We are thus confident that this budget provides sufficient funds to enable the Maritime Administration to continue all of its maritime assistance programs at a level that will sustain the momentum gained by these programs in the last 12 months.

In the last year, the U.S. maritime industry has seen the promise of the 1970 Merchant Marine Act begin to be realized. The last 12 months have produced a number of significant achievements in the U.S. maritime industry.

Since June of 1972, subsidy contracts for 23 ships have been let under the Merchant Marine Act of 1970. These include the first U.S. supertankers and the first U.S. cryogenic tankers.

These awards, coupled with record private ship construction, have produced the largest shipbuilding backlog in peacetime U.S. history.

The first ship built with subsidies provided by the 1970 act was recently launched. Most fittingly it was a lighter aboard ship (LASH) vessel, a modern cargo concept pioneered in the United States.

Employment generated by shipbuilding awards in the last 12 months under the 1970 act, amounted to 25,000 man-years of shipyard employment. In addition over 1,500 jobs aboard ship will be available once these ships are built, based on $1\frac{1}{2}$ men per shipboard job.

And title XI loan guarantees, which were greatly expanded under the 1970 act, now exceed \$2 billion and include loans made for inland waterway towing vessels.

These and other milestones are the concrete results produced in the past year by the Maritime Administration under the mandate provided by Congress in the Merchant Marine Act of 1970.

The fiscal year 1974 budget authorization for the Maritime Administration will enable the U.S. maritime industry to continue its efforts to once again become one of the world's great maritime nations.

The construction differential subsidy request of \$175 million represents the highest initial authorization request made under the 1970 Merchant Marine Act. This funding will enable Marad to sign contracts for as many as 17 vessels in fiscal year 1974.

Among these will probably be six LNG vessels and five or more large tankers.

In terms of modern ship equivalents (MSE), this projected ship construction for fiscal year 1973 equals almost 32 MSE's. Thus, the goal set in 1970 of 30 ships per year continues to be met.

Modern ship equivalents are defined by Marad as follows: general cargo, 23 knots, 17,000 DWT; dry bulk carrier, 17 knots, 65,000 DWT; and tanker, 17 knots, 70,000 DWT.

Thus, the larger vessels being built today, which were not envisioned when the 1970 act was signed, each equal two or more of the ship equivalents of 1970. For instance, a modern 125,000 cubic meter LNG vessel equals 2.1 ship equivalents.

While it is true that the requests for construction subsidy now exceed available funds for fiscal year 1974, the construction subsidy authorization does allow the Maritime Administration to assist those programs of most importance to the Nation's economic and security interests. These LNG and petroleum tankers will increase U.S. shipping capacity, enabling U.S. vessels to increase their share of America's energy imports and at the same time, reduce our dependence on foreign-flag vessels.

The operating differential subsidy authorization for fiscal year 1974 of \$213 million also will provide adequate funding to meet projected subsidy needs of U.S. merchant vessels.

However, we would urge the committee to place within both the construction and operating subsidy section of the authorization the specific proviso that the Maritime Administration can request a supplemental appropriation to cover either of these areas, should U.S. maritime conditions require it.

A supplemental construction differential subsidy appropriation may be needed for several reasons. For example, should additional trade agreements such as the United States-Soviet agreement be negotiated, the demand for U.S. shipping may require new appropriations of funds for construction subsidy. If it appears that ships which

would be otherwise built in U.S. yards would be lost to the United States because of the delay in waiting for 1975 shipbuilding funds, then a supplemental construction subsidy request may be essential.

A supplemental operating subsidy request will be required if the United States and the Soviet Union extend the Maritime agreement signed last year to cover new shipments of grain and other goods after June 30, 1973. At present the 1974 budget authorization contains no funds for Russian shipping subsidies.

It is thus vital that this committee give the Maritime Administration the greatest possible flexibility in meeting the need for supplemental budget requests. Only in this manner can the Maritime Administration adequately respond to the rapidly changing conditions and demands of the U.S. maritime industry.

Finally, we wish to stress that the primary incentive and the driving force behind any successful U.S. maritime program is sustained quantities of cargo for U.S. ships. We urge the Merchant Marine and Fisheries Committee to provide the fullest possible funding and encouragement for Maritime Administration programs designed to increase the amount of U.S. trade carried on U.S.-flag vessels. Only if this goal is accomplished can the aim of the Merchant Marine Act of 1970 be completely achieved.

In summary, H.R. 5449, the fiscal year 1974 budget authorization for the Maritime Administration, will allow Marad to continue to fully support ship subsidy programs which it has so successfully administered in the past.

This budget, coupled with the United States-Russian shipping agreement, increased carriage of U.S. oil imports on U.S. ships and greater U.S. ocean competitiveness throughout the world will signal the continued revival of a strong American-flag merchant marine.

We urge the House Merchant Marine Committee to give its swift approval to the Maritime Administration's fiscal year 1974 budget authorization, along with a proviso which would permit consideration of requests for supplemental appropriations, if required.

In so doing, the Congress will provide further support for the 10-year program to rebuild the U.S. merchant marine.

I thank you for this opportunity to present the views of those people we represent on this bill and I would be pleased to try to answer any questions you may have.

Mr. CLARK. Thank you very much for a fine statement.

I have one question.

I read with interest your recommendation that the construction differential and operating differential subsidy elements of H.R. 5449 contain a specific proviso that the Maritime Administration can request a supplemental appropriation to cover either of these areas should U.S. Maritime conditions require it.

Do you not think that such a proviso could conceivably cause problems in the passage of the bill. Should conditions warrant, I am sure you know that this committee will always favorably receive a supplemental request.

In the last session of the Congress, I think we set some sort of record with the Maritime Administration supplemental request for a \$175 million supplemental for construction subsidy.

Mr. MOODY. Of course, Mr. Chairman, if the committee in its wisdom thinks that such a proviso would create problems in connection with the passing of the bill, we would certainly bow to your thinking.

I guess we just wanted to, as the bill moved from the House over into the other body, have some assurance that we would have no problem if we see that we do need these funds.

Mr. CLARK. Mrs. Sullivan?

Mrs. SULLIVAN. Mr. Moody, you have heard my questions to Mr. Hood, although I have not been able to talk with you individually, which I hope to do, but I wonder if you understand what I am trying to accomplish in this Congress, by bringing labor, management, and industry together without any interruption in our ship sailings?

Mr. MOODY. We certainly do understand your objective and your concerns, Mrs. Sullivan, and I assure you we share them.

Mrs. SULLIVAN. I just wonder if we can count on your cooperation in whatever efforts and whatever responsibilities you have within the maritime labor movement?

Mr. MOODY. You certainly can. I was aware that you were present when Paul Hall, who is the president of our department, spoke at the Propeller Club the other day, and I think he made his views in this regard perfectly clear.

Mrs. SULLIVAN. I was very, very happy to hear him comment on that because, as I mentioned before to Mr. Hood, if we cannot keep these ships moving, we are not going to get the cargo and if we do not have the cargo, why should the shipping industry build more ships? It is just as simple as that.

Mr. MOODY. Well, we in the maritime unions, of course, unilaterally cannot achieve all of this.

Mrs. SULLIVAN. I understand that.

Mr. MOODY. But we began over a year ago among ourselves to start grappling with these problems.

We had a meeting in February of 1972 that was attended by the leadership of all the maritime unions, the operating unions, and the east coast longshoremen, at which we had some frank and open discussions of the matter and adopted a statement of policy which, in turn, was endorsed by the executive council of the AFL-CIO in which we took up such matters as common expiration dates of contracts, machinery to at least attempt to guarantee that during the progress of contract discussions, and during the term of a contract, there would be no work stoppages and that kind of thing.

Mrs. SULLIVAN. In other words, it will be possible through this new National Maritime Council, to settle differences:

I do not think these differences should be settled by law, but I think they have to be settled between industry and between labor and I have said for years before this Council was ever organized, that I thought that the Federal government had a role that they had to play in helping industry and labor get together.

Do you feel that the Council represents every segment of maritime labor?

Mr. MOODY. Yes, I believe it does and at least it has created a better climate in that it gets everybody together in the same room where they can talk about their problems at regular intervals.

Mrs. SULLIVAN. I do not want to put you on a spot with this and I do not think I am, but do you not feel that first we have to have the agreement of all these segments of maritime labor in order to make this work?

Mr. MOODY. That is right.

Mrs. SULLIVAN. The same as we have all the segments of the maritime industry. They have to work as a group and if you have a place like the Council where you can sit down and really talk out and work out the differences, is it not possible then in some way to bring these differences between the individual labor groups and the individual shipping industry to this Council, for some kind of arbitration, if you want to call it that, and keep the ships moving, so that we do not have the problems we have had in these past years where cargo stays in the warehouse or in the hold of a ship for weeks and sometimes months?

Mr. MOODY. I think it is a desirable objective and I think it is one we all ought to work toward.

If it would be helpful, I would like to send to the committee to make a part of this record, the statement that was adopted at that meeting a year ago, which relates to this question.

Mrs. SULLIVAN. If it is all right with the chairman of the subcommittee, I think it would be a good thing to put in here.

Mr. CLARK. Without objection, so ordered.

(The document referred to follows:)

REPORT OF THOMAS W. GLEASON, PRESIDENT OF THE INTERNATIONAL LONGSHOREMEN'S ASSOCIATION

The AFL-CIO maritime unions with Thomas W. Gleason serving as chairman met to discuss a range of problems affecting all maritime unions. There was general agreement on legislative and industrial issues to protect employment of U.S. maritime workers, to generate increased cargoes and to provide more effective government safeguards for U.S. flag ships. There was agreement to have further regular meetings and close cooperation between the unions to promote increased cargo for U.S. ships through assurances of fast, efficient, dependable service second to none.

There was agreement on a joint Federal legislative program based upon the following priority considerations:

1. Opposition to compulsory arbitration or any form of government interference in any manner in collective bargaining.
2. Support of H.R. 12324 to require that at least 50% of all U.S. oil and natural gas imports be carried in U.S. flag ships, and support of S. 2404 to preserve the merger of El Paso Natural Gas and Pacific Northwest Pipeline Company as a means of assuring the development of U.S. technology in this highly specialized shipbuilding field and to assure maximum U.S. flag participation in the transportation of Liquid Natural Gas which will have an increasingly vital role in meeting America's energy requirements.
3. Support of H.R. 10923 that would require government-financed cargo to be carried 100% on American Flag ships, provided freight rates are equal to those charged by foreign flags.
4. Support all legislative efforts to modernize and preserve the existing U.S. Public Health Service Hospitals and prevent efforts of the Department of Health, Education, and Welfare to close these essential health care facilities.
5. Call upon the AFL-CIO to include key issues affecting maritime workers among those issues upon which COPE makes its determination of legislator's performance in Congress.

At this meeting, the maritime unions also discussed ways and means of insuring the job security and employment opportunities of their members. They agreed that industry stability is a key factor in this respect and consequently they reviewed the areas on which they will continue their discussions and through which industry stability can be achieved as a necessary ingredient to the success

of the current program to encourage U.S. shippers to ship cargoes on U.S. flag ships. The areas which will be given priority in their continued discussions are:

1. No strike during the period of contract negotiations.
2. Three- to five-year contracts to provide assurance with respect to continuity of operations.
3. Uniform contract expiration dates.
4. Provision for automatic wage adjustments annually.
5. Establishment of a mechanism or procedure for the resolution of disputes without stoppages.

The unions and their representatives participating in this meeting were:

International Longshoremen's Association, Thomas W. Gleason, President, and Thomas O'Callaghan, President of the Masters, Mates and Pilots Marine Division, I.L.A.

Marine Engineers' Beneficial Association, Jesse M. Calhoon, President.

National Maritime Union, Joseph Curran, President.

Seafarers International Union of North America, Paul Hall, President.

United Steelworkers of America, Local 5000 Great Lakes Division, Stephen Nowalski, President.

American Radio Association, William R. Steinberg, President.

Mrs. SULLIVAN. This is something I feel we in this committee have to pursue or why should we authorize legislation now for more subsidies to build and to operate ships if we are not going to have a good, smooth operation and build up our merchant marine.

I think it is as simple as that.

Mr. MOODY. I agree.

Mrs. SULLIVAN. Thank you.

Mr. CLARK. Mr. Mailliard?

Mr. MAILLIARD. Mr. Chairman, I do not have any questions but I would like to comment on the question that you raised.

It seems to me that the suggestion here that we should include some advance authority to cover supplemental appropriations would be in direct contravention of the whole authorizing concept.

I would offer a suggestion that the committee might consider putting in the report our recognition of the fact that supplemental authorizations might be required.

Thank you, Mr. Chairman.

Mr. CLARK. Mr. Ashley?

Mr. ASHLEY. No questions.

Mr. CLARK. Mr. Mills?

Mr. MILLS. No questions.

Mr. CLARK. Mr. Ginn?

Mr. GINN. No questions.

Mr. CLARK. Mr. Eckhardt?

Mr. ECKHARDT. Thank you, Mr. Chairman.

Mr. Moody, on yesterday Secretary Blackwell stated that a good sound start has been made and we have seen many examples of progress thus far.

He mentioned that 24 of the 37 new ships awarded so far have been bulk carriers to meet our energy resources, the deficiencies and satisfy our other raw resource requirements.

The first LNG's, a large crude carrier for ore, or oil bulk carriers ever built in the United States have been contracted for.

I have some concern about that proportion of ships of that nature with respect to the jobs created.

Could you give any comment as to the effect on jobs of bulk carriers and LNG's as compared to the other type ships respecting both

the crew of the ship and the jobs that may be obtained in connection with longshoremen operations?

Mr. MOODY. Are you talking about operating jobs or shipboard operating jobs?

Mr. ECKHARDT. No, the total number of jobs that would be covered by the maritime trade. That would include both seamen, longshoremen, and such persons who are associated with the ship's operation.

Mr. MOODY. Well, of course, longshoremen are not involved in unloading tankers.

Mr. ECKHARDT. I understand that.

Mr. MOODY. So it is obvious on the face of it. They are involved in some bulk, other than bulk loading operations, however, such as when tankers are fixed for grain, that kind of matter.

I really believe, Congressman Eckhardt, that in the context of our very great deficiency in any American-flag capability for the transportation of such vital resources as petroleum and some vital ores, that we have got to be concerned with achieving some of that capability even at the cost of a few jobs.

As far as seagoing jobs are concerned, shipbuilding jobs, I cannot see that it would really hurt us that much because it would give us employment in an area where we now do not have any employment.

When you start talking about longshoremen, petroleum is going to move, and in somebody's ships, and it is going to be unloaded without longshoremen anyhow.

What I think we are talking about is in the interest of our national economy, our balance of payments and our national security where we should do everything that we can to insure that we have some American-flag capability in the area of bulk movement.

Mr. ECKHARDT. Suppose we were not subsidizing the production of large petroleum tankers and the LNG's. Do you think that we would be building them anyway to satisfy that tremendous demand?

Mr. MOODY. Not as the law is presently constituted, no, not without the subsidy provision.

Mr. ECKHARDT. You mean not in the United States without subsidy?

Mr. MOODY. That is correct.

Mr. ECKHARDT. I assume the oil companies would have a tremendous demand for gas and petroleum, and would see that the ships were built somewhere and would be operated.

Mr. MOODY. That is right, and they would not be built here.

Mr. ECKHARDT. The question I am getting at is the question of priority as respects large petroleum tankers and LNG's.

I assume that there is some limitations on our capacity to subsidize and it gives me some concern that these statistics show that 24 out of 37 new ships are of that category.

Thank you.

Mr. CLARK. Mr. Anderson?

Mr. ANDERSON. No questions.

Mr. CLARK. Mr. Cohen?

Mr. COHEN. No questions.

Mr. CLARK. Thank you very much. We appreciate your coming here this morning.

Our next witness is Mr. Albert E. May, vice president, American Institute of Merchant Shipping.

STATEMENT OF ALBERT E. MAY, VICE PRESIDENT, AMERICAN INSTITUTE OF MERCHANT SHIPPING, ACCOMPANIED BY MISS BARBARA BURKE, LEGISLATIVE DIRECTOR

Mr. MAY. Thank you, Mr. Chairman.

I would like to have Miss Barbara Burke accompany me, legislative director of the American Institute of Merchant Shipping.

Mr. Chairman and members of the subcommittee, my name is Albert E. May and I am vice president of the American Institute of Merchant Shipping (AIMS), a national trade association composed of 35 American companies which own and operate over 400 U.S.-flag oceangoing vessels in our Nation's foreign and domestic commerce. These ships include all types of oceangoing vessels and in total represent approximately two-thirds of the country's merchant marine.

I appreciate this opportunity to testify on the Maritime Administration's authorization bill, H.R. 5449.

Every responsible member of the American maritime industry is aware of the critical need to increase the size and quality of our merchant fleet as swiftly as possible. Accordingly, we support the maximum appropriations that can be efficiently used in merchant marine building and vessel operating programs. However, we also recognize the legitimate demands of many other national programs upon Federal resources. This understanding prompts us to support the minimal but adequate appropriations for merchant marine programs in the President's budget for fiscal year 1974. In view of the heavy pressures upon the budget this year, we believe that the proposed expenditures represent a reaffirmation of President Nixon's commitment in the merchant marine program of 1970 to rebuild the U.S. fleet. The Congress, and this committee in particular, made that program possible, and we are confident that you will authorize sufficient funds to insure its continued implementation.

Mr. Blackwell, the Assistant Secretary of Commerce for Maritime Affairs, testified before this committee yesterday and placed in the record statistical evidence of the progress already made under the Merchant Marine Act of 1970 and I will not impose upon your time by repeating the important background material already before you.

I would like to make three observations and one recommendation with regard to Marad appropriations for fiscal year 1974.

The \$121,500,000 requested for operating differential subsidies during the next fiscal year appear adequate to meet known existing contractual operating subsidy obligations. The new budget, however, does not include new funds to pay operating subsidies for U.S.-flag ships that should be employed if another grain deal is entered into with the Soviet Union. The present grain sale to the U.S.S.R. runs only through the end of this fiscal year. If, as appears probable, there is a new grain sale, then we urge that you later authorize a supplemental ODS appropriation sufficient to permit half of the grain to move in U.S.-flag vessels.

The \$275 million requested for construction differential subsidies in fiscal year 1974 will be supplemented by approximately \$180 million of the fiscal year 1973 appropriation for CDS which is currently uncommitted. In addition, we understand that some \$25 million

previously appropriated for additions to the Reserve Fleet will be applied in whole or in part to subsidize new construction in U.S. shipyards. Accordingly, about \$480 million will be available for new construction contracts during the next 15 months. This appears adequate to meet the most urgent pending requests for Government support of new vessel construction.

AIMS would like to call the committee's attention at this time to one deficiency we see in the proposed Marad budget for fiscal year 1974.

The Ports and Waterways Safety Act of 1972 requires that positive steps be taken by the Federal Government to prevent pollution of our water resources through improved navigation and vessel construction requirements. Because of this legislative mandate to further the goal of pollution abatement, AIMS must voice concern over the absence of funds in the proposed budget that will permit the continued operation of radar training schools in New York, San Francisco, and New Orleans after June 30, 1973. Radar is an increasingly important part of a merchant marine officer's training. An example of the greater emphasis on the use of radar is found in last year's revision of the Regulations for Preventing Collision at Sea, which were made part of an international convention.

Coast Guard regulations for the licensing of merchant vessel deck officers include the requirement that the applicant's license must be endorsed initially and, thereafter, at 5-year intervals with a radar observer's certification. This endorsement may currently be obtained either by successfully completing a written Coast Guard examination or by attendance at a Marad radar training school.

Of a man attending anything but a Marad school, the Coast Guard requires examination, so there is very little incentive to go to other schools.

The Coast Guard radar endorsement examination has recently been upgraded to reflect increased concern with collision avoidance and pollution prevention. Assurance that additional skills required of U.S. deck officers are in fact being learned can be realized through the continued availability of the high-quality Government radar schools presently being operated by the Maritime Administration.

The up-dated Coast Guard testing procedure, while adequate for its purpose, is nevertheless a written examination with built-in limitations in such areas as situation presentation and simulation. These limitations do not exist where qualification is obtained through practical training at a radar school.

With the significant effort continually being made to improve the level of efficiency of our licensed officers, halting the services that these radar schools provide would be counterproductive. Training in up-to-date techniques and equipment is necessary so that deck officers can keep abreast of advanced navigation and collision avoidance systems.

Our understanding is that these three schools, utilizing four radar simulators, require a total personnel staffing of only 11 individuals, and a yearly funding of approximately \$250,000. While this sum is small indeed, when viewed in relation to the overall budget, each dollar spent in improving the proficiency of U.S. merchant officers is directly related to greater safety of life and property at sea. Presently, 1,500 officers go through these training schools annually. This

number will increase in accordance with the additional Coast Guard requirements.

We strongly urge that the absence of funds for radar training schools be examined in proper perspective. The importance of these schools in the effort to reduce pollution and loss of life and property should be considered. The Maritime Administration radar schools are efficiently operated and provide large benefits at minor cost. They should not be closed.

Thank you, Mr. Chairman.

Again, I appreciate the opportunity to appear before you today and I will be happy to attempt to answer any questions that you might have.

Mr. CLARK. The first question is, why is the Maritime Administration going to close its radar training schools and why was this matter not brought to the attention of the committee prior to the appearance of Mr. Blackwell yesterday?

Mr. MAY. Mr. Chairman, we only recently learned of this and it is our understanding that the money was deleted at the insistence of the Office of Management and Budget.

Now, that is something of a speculation on our part, but we know Marad is aware of the importance of these schools.

The lack of appreciation of this problem until very late came about because the fund for the schools had not been a line item in the budget in the past. Thus, neither we nor other industry representatives picked up the fact that the money was deleted until very late in the game.

Mr. CLARK. We all recognize reliable service is mandatory if our own fleet is to carry an increased share of our cargo.

In this connection, are discussions conducted in advance with representatives of labor concerning such things as manning scales for vessels so that disruption of service can be avoided?

Mr. MAY. Today, yes, very definitely, sir.

In the past often I believe there was a failing in that area. Today, before vessels are built, there are always discussions with the cognizant unions and indeed, very great progress has been made by cooperation between labor and management in reducing manning scales.

Despite the vast size of the new ships we are bringing on line, the number of men in the crews have actually declined and the unions in some cases have been willing at considerable sacrifice to themselves, to take whatever manning the Coast Guard would approve for a vessel.

Mr. CLARK. Mr. Ashley?

Mr. ASHLEY. I just want to make sure the figures on page 2 are correct.

We are putting new subsidies for fiscal year 1974 in of \$121,500,000 for the ship construction differential subsidies. Those programs for fiscal 1974 carryover, plus those funds previously appropriated for the reserve fleet, would come to \$482,000,000 together for ship construction activity. Is that correct?

Mr. MAY. That is my understanding, yes.

Mr. ASHLEY. You know what total volume of ship construction that represents?

Mr. MAY. We can only speculate as to the answer to that question, Mr. Ashley, because it depends on what type ships are built.

That is much harder to predict than it was in the past because today we are concentrating on the construction of very large tankers, dry bulk carriers, and LNG vessels.

Mr. Ashley, these vessels are not built on speculation. They are built only when there is a charter for their employment or in the case of LNG's where there are facilities adequate to take them.

These facilities, both abroad for liquification, and in this country, regasification, costs upwards of \$1 billion, and there are many environmental problems as you are well aware, standards which we must meet.

Mr. ASHLEY. Well, generally speaking, if we are putting \$482 million for subsidy in the next fiscal year into ship construction, what level of construction with respect to the subsidized program does that represent?

Mr. MAY. We would expect about 25 percent.

If I may, sir, I would point out that using the 1960 standard which many of us are familiar with, where ships cost about \$10 million, that would, of course, represent almost 50 ships, but the ships today are more expensive and they are also vastly more productive.

Mr. ASHLEY. Well, I am surprised that you cannot do a little better than that. You are specific about the request and your support of the request for \$480 million, but it would seem to me you could give me some kind of a ballpark figure as far as the total that that represents with respect to the program.

That is just the subsidy fund?

Mr. MAY. That is correct.

We would anticipate that the total expenditure if that subsidy money is appropriated, would be between \$1.5 billion and \$1.7 billion.

Mr. ASHLEY. It has come to my attention that a number of the vessels that have been constructed under the 1970 program are under charter to foreign operators. Is this your understanding?

Mr. MAY. No, sir, it is not.

Vessels built with subsidy have to be operated by U.S. owners and there are no ships that have been built for any members of my association which are operated or owned abroad. They are entirely owned and operated by U.S. companies.

Mr. ASHLEY. There are no British companies that are operating any of these ships?

Mr. MAY. No, sir, not built with subsidy funds, not to my knowledge, and not with any of the members of our association.

There are operators such as the Seatrain liners which were built in Germany without subsidy, which are owned by U.S. companies and operated under the British flag.

I am aware of none in our group that are operated or controlled foreign.

Mr. ASHLEY. The information I have is that they have been chartered by U.S. companies, but I can track that down.

That is all, Mr. Chairman.

Thank you.

Mr. CLARK. Mr. Mailliard?

Mr. MAILLIARD. Thank you, Mr. Chairman.

Mr. May, you put some emphasis on this radar school and I am glad you called it to the committee's attention, but are those funds included within the categories covered by this bill?

Mr. MAY. Yes, sir, the funding for the schools in the past has been paid from the Maritime Administration's budget.

Mr. MAILLIARD. Now, wait a minute. I did not ask you that question. I said is it from the fund authorized in this bill? This is not the whole Maritime Administration budget. This is only a part of it.

Mr. MAY. No, sir, it is not.

Mr. MAILLIARD. It is not involved in this bill at all?

Mr. MAY. Not this specific bill.

Mr. MAILLIARD. So you should be addressing the Appropriations Committee and not us, as we have no authority over general operating funds.

Mr. MAY. Well, as part of the Maritime Administration's budget we had thought that you could authorize these funds to be included.

Mr. MAILLIARD. We authorize annually for construction or reconstruction of ships, for operating subsidy, for training at the Academy and State schools, R. & D. and reserve fleet and the rest of the budget has permanent authorization authority and while I would hope this committee might continue to have some influence, we have no authorization authority that I know of covering this specific area.

Mr. MAY. Mr. Mailliard, the money for some training such as at Kings Point is.

Mr. MAILLIARD. That is the question I am asking. Were the funds with which the schools have been operated or are operating today in that part of the budget or are they in the Maritime Administration's general operating budget over which we have no legitimate control.

Mr. MAY. We do not know. It was not a line item and we do not know where it came from.

Mr. MAILLIARD. I would think it is possible to find out where they got the money.

Mr. MAY. At this point we do not know.

Mr. MAILLIARD. That is all.

Mr. CLARK. Mrs. Sullivan?

Mrs. SULLIVAN. Thank you, Mr. Chairman.

Mr. May, you have heard me ask the questions of Mr. Hood and Mr. Moody.

Do you think that we can expect genuine progress in achieving stability in the near future among the elements of management, labor, and the Government?

Mr. MAY. I think we have to, Mrs. Sullivan, and I genuinely believe that what has already been stated by Mr. Moody and Mr. Hood is quite correct.

There has been very real progress, for the very first time, in the 10 years I have been associated actively with the industry, because of the work of the National Maritime Council. There the heads of the unions, the steamship companies, and various senior Government people have gotten together regularly and I am confident we will make real progress.

Mrs. SULLIVAN. Are you a member of the Council?

Mr. MAY. I am not.

Mrs. SULLIVAN. You have said that the committee, in the event of a new grain sale to Russia, should authorize a supplemental appropriation sufficient to permit one-half of the grain to move in U.S.-flag vessels.

Are you familiar with the reason why the American operators did not take full advantage of the opportunity to move one-third of the grain in the last sale to Russia?

Mr. MAY. Yes, I am.

I believe that the reasons we did not move more were due to several factors.

First, Madam Chairman, we do not have efficient, modern bulk carriers. When we move grain, it is almost exclusively in tankers and occasionally in break bulk vessels, which have tween decks, and are quite inefficient because of tween decks and the general configuration.

Tankers are not as efficient as large modern bulk carriers. The tanker is attracted to the grain trade when they cannot carry oil.

What happened was that after the grain deal with the Russians was consummated the demand for petroleum picked up very heavily worldwide. There was more employment than had been anticipated for laid up U.S. tankers and thus, the anticipated number were not offered for grain.

Mrs. SULLIVAN. Is it true that some of the bulk carriers that could have been used were on a more profitable route? Was it more profitable to carry some other type of cargo?

Mr. MAY. For the tankers, it was more profitable for them to be employed in the oil trade and they managed to get the business they had not thought was possible.

Mrs. SULLIVAN. It has been stated that the primary emphasis at this time should be on the shipping of cargoes rather than on ship construction.

Is your segment of the maritime industry able to project over the next 5, 10, or 20 years the types and volumes of cargo which will be available, and then relate this information to your shipbuilding plans?

Mr. MAY. A great deal of effort is being done both collectively by our industry, individually by companies, and by Government agencies to make these projections.

We have been working very closely insofar as our tankers and petroleum company members are concerned with the American Petroleum Institute, with the Department of the Interior, with the Department of Commerce, in trying to make most accurate possible projections of the requirements for imports of energy of all kinds.

We believe that there are some very accurate projections that are available today. We believe these will be sent to the Congress in a rather definitive form when the President's energy message comes up.

There are a lot of variables. If we can get more oil from Alaska or Venezuela, or north Africa, then you will need a great deal less in tanker tonnage than if we must import it all from the Far East because of the distance of the trip.

In other words, you probably need twice as many tankers if all of the fuel has to come from the Far East than you would require if we could get it from Africa or South America.

Mrs. SULLIVAN. Is the fashion of the day just tankers, because of the oil and energy problem?

Mr. MAY. Oh, not at all. We have had legislation as you are well aware, that authorized Government assistance for liner vessels prior to 1970, and today, we have a liner fleet that qualitatively and in many way quantitatively, is the best in the world. Almost all the cargo barge ships are under our flag.

We have the largest container fleet in the world.

We are building what will be the largest roll-on, roll-off fleet. The liners are carrying by value over 30 percent of our liner trades and while they need some fleshing out and need some replacements, they basically—the liners—are in pretty good physical condition.

The emphasis in shipbuilding has shifted properly, we believe, to the bulk trade where in many cases we just do not have a fleet.

Mrs. SULLIVAN. You say we are getting 30 percent of the cargo on our liner ships?

Mr. MAY. By value, yes.

Mrs. SULLIVAN. What do you mean by value?

Mr. MAY. We are carrying 20 percent in tonnage and 30 percent in value.

Mrs. SULLIVAN. We were told this weekend before the hearings that that the North Atlantic has so many ships running that they just cannot find enough cargo for them.

What is being done about that?

Mr. MAY. An attempt is being made by all the operators in that trade to secure approval from the Federal Maritime Commission for what is known as the North Atlantic pool, and they would attempt through that device to rationalize the really severe overtonnage.

We see a very similar problem coming in the Pacific because there has been overconstruction worldwide, particularly in the container trades, and this has resulted from two reasons:

First, we are the only country in the world, with the exception of Canada, which has a policy of open conferences which means that any carrier of any flag who is willing to abide by the rules of the conference, which are on file with and approved by the Federal Maritime Commission, can put a ship or ships into any U.S. trade he desires.

That is not true anywhere else in the world.

This was a policy we adopted back in 1916 when the world was at war, when we had virtually no merchant fleet, and the foreign ships serving us had to go off to meet the war requirements of their own nations.

We were also in a time of great national debate over anti-trust and cartel problems.

We believe the United States has to rethink this policy of open conferences because every time there is an extra ship in a British to Australian trade or European to South American trade, the tendency is to stick it into the U.S. trade because it is the only place you can put it.

Mrs. SULLIVAN. Can you tell me whether the people within your organization are really making an effort to go out and get the cargo for their ships, or are they just relying on the brokers for the cargo on these various routes under the American flag?

Mr. MAY. Mrs. Sullivan, I can tell you without exception these companies are working nights and Saturdays soliciting cargo. Whether or not the image, of past years that the maritime industry was somewhat complacent, somewhat inbred, was correct or not, it certainly is not true today.

The capital investments have raised staggeringly. The banks are looking at us every single minute. The Government is looking at us and the companies themselves realize that unless they get more cargo to fill these ships they are going to go bankrupt.

Mrs. SULLIVAN. Now, just one other question. I know that I am taking too much time, Mr. Chairman, but I want to ask this.

What is this LASH type ship going to do to other cargo ships that have carried the type of cargo that LASH ships will now carry in their barges or containers?

Mr. MAY. It will replace many of these ships, I believe.

You see, each shipowner has to look at his trade, and decide what is the best possible vessel for that trade.

If he is in the North Atlantic where you are trading with other highly industrialized nations and where a very large percentage of the cargo is containerizable, your optimal vessel investment is a containership.

If you are in other areas such as the less developed world where most of the cargo tends to be locomotives, generators and such goods which are not containerizable, than you begin to look toward some other vessel that is very efficient because the old ships are simply too inefficient. They spend four days in port for every day they spend at sea.

We have to have a ship that can spend half its life at sea. That is what it is supposed to be doing and you cannot put the capital investment in unless you get the greater utilization.

Therefore, the American companies developed the so-called barge ships. We think over a period of time these will be so efficient that they will begin to replace both within our fleet and foreign fleets the conventional break bulk ship.

Mrs. SULLIVAN. Well, I have a question, but I do not want to take any more time.

I do want to talk to you on this because I think we are seeing some new type of shipping and I want to know what is being done within the Council by all these interests and to see how they can work out some of their problems of competition.

Thank you, Mr. Chairman.

Mr. CLARK. Mr. Mills?

Mr. MILLS. Thank you, Mr. Chairman.

I have no questions.

Mr. CLARK. Mr. Ginn?

Mr. GINN. Thank you, Mr. Chairman.

Mr. May, you represent thirty-five companies which own and operate over 400 vessels.

How many of these 400 vessels are subsidized, approximately?

Mr. MAY. About 180, but I would like to check that and supply you with a more accurate statement.

Mr. GINN. Fine. How many of your companies are participating in the wheat transaction?

Mr. MAY. I can think of six who have asked for authority to participate with Government subsidy aid.

I do not know exactly how many have actually carried wheat.

[The following was received in response to the above:]

AMERICAN INSTITUTE OF MERCHANT SHIPPING,
Washington, D.C., March 20, 1973.

HON. RONALD "BO" GINN,
508 Cannon House Office Building,
Washington, D.C.

DEAR MR. GINN: In answer to your question on page 200 of the transcript from the March 14, 1973 hearing on the Maritime Authorization Bill (H.R. 5449), AIMS ships receiving operating subsidies as of March 20, 1973 number 190.

This number fluctuates everyday as new ships are placed on our trade routes. While the total has decreased over the last several years, you should understand that the new ships presently being constructed are more efficient than the vessels operated in the past and, therefore, do not always require subsidy.

Sincerely,

ALBERT E. MAY,
Vice President.

Mr. GINN. Thank you, sir.

Thank you, Mr. Chairman.

Mr. CLARK. Mr. Cohen?

Mr. COHEN. Thank you, Mr. Chairman.

Mr. May, in your opinion, was the event that occurred in May of 1967 with the *Tory Canyon* due to insufficient radar expertise or use?

Mr. MAY. I am quite familiar with that incident.

There is no question it was inefficient use of radar that was involved.

Mr. COHEN. Do you have any idea in rough figures what the cost of that incident was?

Mr. MAY. Wait a minute. Let me qualify that answer because this issue is now in the courts and as a lawyer I would qualify that it is simply my opinion from the press reports I have read. What I am really expressing is the thought that if you had highly trained men and modern radar equipment, you should be able to avoid collisions or groundings of that nature.

Mr. COHEN. Is it fair to say that your priorities, that is, adequate training in radar would be a very high priority item?

Mr. MAY. Very definitely.

Mr. COHEN. Then you have suggested that the OMB has been responsible for deleting this item. It was not in fact a line item in the budget and the question I raise is this: was this action taken by the Maritime Administration in setting its own priorities?

Mr. MAY. It is my understanding that it was an OMB action, but I do not participate in the internal discussions on the budget.

Mr. COHEN. The question I had, if it was not a line item how would the OMB have deleted the item?

Mr. MAY. Miss Burke tells me that what happened was that Marad put in a line item because they wanted to increase the amount of available money for radar schools to include the Great Lakes; that this brought the matter to the attention of the OMB examiners and in their added search on ways to reduce expenses cut out the entire program.

Mr. COHEN. I am putting you perhaps in an unfair position. I would like to go back to Mr. Moody's testimony and go forward to the testimony of Mr. Maskin, to get to a question raised by Mr. Eckhardt and that is about the subsidization of construction of ships.

On page 6 of Mr. Maskin's testimony to be submitted to the committee he indicates that in addition to the ships under subsidy are the U.S. existing flag tanker fleet built without subsidy, and he also refers to a fleet of tankers constructed without subsidy contracted for in the anticipation of the Alaskan oil trade.

I come back to the question that half the ships have been constructed without subsidy and why would the private industry fail to go ahead?

Mr. MAY. I would not want to anticipate any answer by Mr. Maskin, but in my opinion, the answer is that without exception all of the ships that have been built without subsidy have been built for the cabotage trade of the United States where there is no foreign competition allowed.

The single exception is SS *Manhattan*. It is my understanding that she was constructed basically by an Onassis interest as a part of the quid pro quo for the right to take some U.S. tankers from our flag to foreign flag.

Mr. COHEN. That is all I have.

Thank you, Mr. Chairman.

Mr. MAY. The subsidized ships are all built for the foreign trade.

Mr. CLARK. Mr. Eckhardt?

Mr. ECKHARDT. Thank you, Mr. Chairman.

Mr. May, I believe you stated that the LNG's in the large bulk carriers are invariably built with the charter for their employment in advance.

Mr. MAY. Except where they are built by a petroleum company which has its own product to move.

Mr. ECKHARDT. Well, now, who makes the charter for the employment in advance?

Is it ordinarily a petroleum company?

Mr. MAY. The charter would normally be between the owner and the petroleum company.

Mr. ECKHARDT. So the petroleum company is, in effect, guaranteeing the use of that ship prior to its being built.

Mr. MAY. That is generally correct; yes, sir.

Mr. ECKHARDT. Now, if that be true, would the ship not be built whether or not a subsidy existed?

Mr. MAY. It would be built, but not in the United States.

Mr. ECKHARDT. That is right. In other words, do you say that the demand would be met somewhere in the world market, but the fact there is a subsidy would tend to satisfy that demand by shipbuilding in the United States?

Mr. MAY. That is correct.

Mr. ECKHARDT. Then we are really not talking about whether or not there will be LNG's and large bulk carriers built to satisfy the present world demands for oil and gas, but we are talking about where they will be built, is that correct?

Mr. MAY. That is correct.

Other countries would love to sell us that service and earn the dollars involved.

Mr. ECKHARDT. I see.

Now, I understand from the testimony of Mr. Blackwell yesterday, that approximately two-thirds of the new ships ordered since the inception of the new maritime program were bulk or cargo ships; so we are talking about most of this shipbuilding subsidy is with respect to bulk cargo ships.

Mr. MAY. In the past 3 years; yes.

Prior to that, no; it was entirely liners.

Mr. ECKHARDT. And we anticipate that in the future it will move in this direction probably even more strongly, is that correct?

Mr. MAY. For the next 4 or 5 years that would be my anticipation; yes.

Mr. ECKHARDT. And the subsidy runs or will run somewhere between 39 percent, down to a possible 23 percent.

Mr. MAY. That is correct, but hopefully, we as owners anticipate that it might be even lower because of the recent very substantial devaluation of the dollar.

Mr. ECKHARDT. And as we have said, most of this will be for bulk cargo and most bulk cargo will be oil and gas, will it not?

Mr. MAY. Yes.

Mr. ECKHARDT. Is there any reason why we should not similarly subsidize American pipelines?

Mr. MAY. I believe there is a difference, Mr. Eckhardt, in that the pipeline is competing only against domestic modes of transportation, all of which are normally bought, paid for, and employ U.S. labor.

Mr. ECKHARDT. It is now competing against the ships, is it not?

Mr. MAY. No, sir; it is not.

Mr. ECKHARDT. In the future will it not be? Is that not the reason why we are talking about building more LNG's?

Mr. MAY. Only in an extremely narrow context could that be true.

With regard to fuel that may move, let me say, from Texas to the Northeast or Northwest in a pipeline, the only competition is from U.S.-flag vessels which are built without subsidy.

The ships that are in our domestic trade and which carry petroleum from the gulf to the Northeast do not get a subsidy of any kind.

Mr. ECKHARDT. What you are saying is that the question of whether or not the transportation carrier will be a pipeline or a ship is a question which is not within this competitive range, but what I am talking about is the choice of whether or not the oil will be obtained or the gasoline will be obtained by pipeline from another place in the United States or whether it will be obtained by a ship from Saudi Arabia is a question of competition as between the pipeline and the ship, is it not?

Mr. MAY. Not necessarily and not usually.

We now have many ships built and operated without subsidy that are members of AIMS, in our domestic trade, primarily from the gulf.

Mr. ECKHARDT. I understand that, but I do not think you are understanding my question.

What I am saying is this, Mr. May, that when one considers the entire mix of production and transportation of oil and gas by a company producing, say, in Texas, and shipping by a pipeline and then distributing through pipelines to its ultimate destination to a certain extent that group of businesses is in competition with another oil company producing oil and gas in Saudi Arabia, shipping by ship and distributing the product at the marketplace.

Now, is that not correct?

Mr. MAY. It certainly could be.

Mr. ECKHARDT. And in the case of the ship, if the ship is built under the program that we are here talking about, there is a subsidy in the building of the ship which may range between 39 percent and downward, and in addition to that, there is a subsidy with respect to the operation of this ship. Is that not correct?

Mr. MAY. That is correct; but I believe there has already been a determination as low as 24 percent in the case of an LNG.

Mr. ECKHARDT. I see. Well, what I am getting at is that you must admit then that there is a subsidy in that kind of business, whereas there is no similar subsidy with respect to the pipeline.

Mr. MAY. If I understand you, these subsidized ships do not compete with the pipeline. There is no pipeline to Saudi Arabia or Venezuela.

Mr. ECKHARDT. I thought we had gone over that. I thought we had admitted a minute ago, say a marketplace on the Atlantic coast would be a marketplace which would use either gas shipped by pipeline, say, from the central part of the United States or might competitively use gas shipped by ship from Saudi Arabia.

In the latter instance, the subsidies that we refer to would measure into the cost of the gas at delivery on the east coast.

In the case of the pipeline there would be no similar subsidy measuring into that cost, is that not correct?

Mr. MAY. That is correct.

If we could secure all of our fuel from the United States we might have to rethink it. It is in our opinion that we cannot.

Mr. ECKHARDT. Now, I am not suggesting that. I am a free trader and I want us to bring in as much oil and gas as we can use because, of course, this builds up our refineries and our employment and industry here.

The only question I am raising is whether or not there should be a subsidy in that type of operation, but no subsidy with respect to the production locally.

That is all I have, Mr. Chairman.

Mr. MAILLIARD. Would the gentleman yield?

Mr. ECKHARDT. Yes.

Mr. MAILLIARD. I do not think there is any question. There is only one issue involved in the subsidy. The ships are going to ply that trade competitively with the domestic pipeline regardless of what we do.

The only question is will they be American ships?

Mr. ECKHARDT. I disagree with the gentleman. It is a question of whether or not they will be built in the United States.

Mr. MAILLIARD. And whether they will be operated by American crews under the American flag as far as the operating subsidy is concerned.

Mr. ECKHARDT. That is correct. I did not disagree with the operating subsidy as such, but it seems to me the manufacturing subsidy is quite questionable, particularly when the subsidy, two-thirds of it is involved with bulk carriers.

Mr. MAILLIARD. I still say the only question is whether we are going to have U.S. shipyards build ships for this trade or whether they are going to be built abroad.

Mr. ECKHARDT. I think that is correct.

Thank you, Mr. Chairman.

Mr. CLARK. Mr. Studds?

Mr. STUDDS. Thank you, Mr. Chairman.

I apologize for missing your testimony, Mr. May.

The OMB keeps us hopping from committee to committee to keep up with the most recent perpetration of disaster.

Mr. May, I have read your testimony. I have one question and I wonder if you could comment on the experience that the companies your trade association represents have with the graduates of the State maritime academies.

We have the authorization in this budget for that program as well. It was only briefly referred to in your testimony.

Many of us sense an inclination on the part of the administration to increasingly cut down the Federal Government's participation in assistance for those academies.

The admirals heading up each of them were here yesterday and spoke very strongly to the point that they had a spectacular performance in terms of placing their graduates in the maritime program.

Can you say something about your experience with these graduates?

Mr. MAY. My own experience is really limited to the State of Maine Academy, but I believe that the experience there probably is true of many of the rest; that is, that they generally have boys from seafaring or farm families. They generally have a very real interest in going to sea. They, of course, pay over \$1,000 a year tuition themselves in the State of Maine and I know many of our companies, both tanker and liner companies actively recruit new men in Maine and I might say it is not an easy place to get to up there where the academy is located.

They also have a reputation of staying at sea for longer periods than even people from Kings Point and this may reflect the fact that the Kings Point people are more sophisticated and more educated in some instances and they perhaps find it easier to gravitate into management and the new more sophisticated problems, the marketing problems. All the companies are setting up marketing organizations. There are more and more sophisticated engineering problems that require engineers ashore.

These men tend to come ashore after awhile. It is my understanding from the companies and also from talking to the Maine graduates, that these young men really compliment the Kings Point program.

They have what you might say is a more fundamental education in some cases. It perhaps does not meet all of the sophisticated requirements of a capital intensive industry, but it does provide good seagoing officers and I personally have been impressed particularly by the boys from Maine who are the only ones I have had an opportunity to meet and to get to know.

Mr. STUDDS. From your experience in the industry, you would support a continuation of these programs?

Mr. MAY. Very definitely. Beyond the maritime field, I think, here we are educating in a rather cheap way some very fine young men who might not otherwise get an education and it is a fine education.

Mr. Studds, besides being technically sound, it is also grounded in, at least what I happen to believe, are good old fashioned American virtues, and I feel there is a lot of value in that to this country.

Mr. STUDDS. Thank you.

Mr. CLARK. Thank you, very much.

Mrs. Sullivan?

Mrs. SULLIVAN. May I ask just one question of Mr. May?

Is it true that the LASH ships of Prudential and Grace Lines are not able to carry cargo? What has happened to them?

Mr. MAY. Two of those ships were intended for operation from the United States to the west coast of South America.

There have been difficulties over a period of 18 to 24 months with getting the necessary agreements to operate those ships in an efficient manner in many of the countries on the west coast of South America.

There has also been a concern that these ships are very efficient and

may tend to drive cargo away from the more conventional liners, the vessels that some countries operate.

We have been working very actively in cooperation with our companies who have barge ships, not only Prudential and Grace, but Delta and Lykes and others, to explain to the Government and shipowners and shippers in South America and other parts of the world the advantages of these ships; that they do not displace a great deal of longshore labor as does the container ship.

Still, they bring the benefits of modern technology; they do not require the vast expense for new port areas and deepening of ports that often the big container ship does, because they can drop the barge off in the seaway.

We think they are beginning to win acceptance and that the more knowledgeable people in these countries, as they learn more about them, begin to appreciate they can be of benefit to their trade by holding down freight rates.

Mrs. SULLIVAN. Do the new LASH ships that are being built by Delta to run on the east coast of South America have assurances at the moment that they are going to be able to operate these three huge ships?

Mr. MAY. I know that the companies are confident that they will not have a problem. Just what form the assurances are, whether they are verbal or ironclad written agreements, I do not know. They have been, let us say, forewarned by some of Prudential—Grace's problems and are now working very diligently to make sure these problems do not arise, and we are quite confident they will not arise on the east coast. We still have not resolved all the problems on the west coast.

Mrs. SULLIVAN. This is extremely interesting, knowing that here was a perfectly capable good fleet of LASH ships that could not be accepted and yet, just on the other side of the continent they were going to put three huge sister ships in to carry the same type cargo.

Thank you, very much.

Mr. CLARK. Thank you, Mr. May.

Our next witness is Mr. Alfred Maskin, executive director of the American Maritime Association.

We thank you for your patience, Mr. Maskin.

STATEMENT OF ALFRED MASKIN, EXECUTIVE DIRECTOR, AMERICAN MARITIME ASSOCIATION, WASHINGTON, D.C.

Mr. MASKIN. Thank you, Mr. Chairman.

Mr. Chairman and members of the committee, my name is Alfred Maskin and I am the executive director in Washington for the American Maritime Association, which consists of 52 companies operating 173 American-flag cargo liners, containerships, dry cargo tramps, bulk carriers and tankers in the foreign and domestic commerce of the United States.

As requested, I have submitted to the committee 50 copies of a prepared statement, setting forth the views of AMA with respect to H.R. 5449, the maritime budget authorization bill for fiscal year 1974.

I would like, however, with your permission, to file that statement for the record, and briefly summarize it orally.

Before doing that, however, I wish to point out that I have not come here today to criticize either the budget requests which have been made for fiscal year 1974 or the authorizations and appropriations which have been made in previous years.

On the contrary, I feel that the White House, the Maritime Administration, and the Congress have all been sincere in their desire to implement the Merchant Marine Act of 1970 in proper fashion, and to provide sufficient funds to achieve that purpose.

With respect to the 1974 requests specifically, I believe that in view of the drastic budget cuts which appear to be in store for other Federal programs, maritime has fared well.

But I also believe that the effectiveness of the new maritime program cannot be measured merely in terms of the dollars we authorize and appropriate for it, or the number of ships we are able to build with those dollars. A more meaningful yardstick, I believe, would be the degree to which the dollars we are expending and the ships we are building are enabling us to fulfill our national shipping needs.

In this connection, before going further, I would note that the fiscal year 1974 budget request includes a request for \$275 million for shipbuilding funds. We understand that to this amount will be added \$50 million carried over from fiscal year 1973, to enable the contracting of 17 vessels, and we also understand that the thrust of the 1974 program will be toward the construction of vessels which will enable us to meet, at least in part, shortages of domestic energy supplies. In fact, of the 17 vessels which will be contracted for in fiscal year 1974, 14 will be LNG carriers, tankers, including very large crude carriers, and OBO's; i.e., ore-bulk-oil ships, capable of carrying petroleum.

I would note that the greatest interest of AMA members is in the shipbuilding budget, and particularly—for most AMA members—in the manner in which shipbuilding funds relate to the construction of tankers.

It is to this area that I will limit my remarks this morning, and I would summarize these remarks at the outset by stating that, in terms of the relationship between the tankers we are building and our national need for such vessels, we are falling short of the mark.

As can be seen from the prepared statement I have submitted to the committee, our escalating demands for oil and petroleum products, coupled with the fact that our domestic production and refining facilities are already working at virtually peak capacity, have created an energy crisis in this country which is obliging us to import crude oil and refined products in ever greater volumes, and over longer distances.

As the figures show, during 1972, our waterborne imports of oil—crude and products—amounted to about 4 million barrels, or slightly under 600,000 tons a day. This year, 1973, our waterborne imports are expected to be over 5 million barrels, or better than 700,000 tons a day; and by 1985, according to industry and government projections, the total should be about 15 million barrels, or over 2 million tons a day.

To carry such volumes will require, according to our estimates, about 20 million tons of tankers in 1973; i.e., U.S. and foreign flags; about 50 million dwt in 1976, and about 70 million dwt in 1978.

Against these requirements, we must weigh the fact that our subsidized tanker building program, considering the awards which have been made thus far and those which will be made through the end

of fiscal year 1974, will produce about 450,000 tons of new tankers by this year, 1973; about 840,000 dwt by 1974; 1.5 million dwt by 1975; 2 million by 1976; and 4 million by 1978, which is about as far as we can project the present subsidized building program.

As can be seen, the tanker fleet we are producing with subsidy will be literally a drop in the bucket compared with our shipping needs—a fleet capable of carrying only a little better than 2 percent of our oil imports in 1973, 4 percent in 1976, and somewhat under 6 percent in 1978—and it is this fleet, we must remember, which—built with construction subsidies and eligible for operating subsidies—is the only one we will have which hopefully will be competitively able to capture a share of our oil imports.

Of course, if we were to take other steps to increase the carriage of our oil imports, as by reserving a portion of these imports to American-flag ships by law—a step I sincerely hope the Congress will take during this session—it would, I believe, stimulate a demand for new building on a scale unprecedented in this country's peacetime maritime history—even without additional subsidy.

In any event, as the present figures I have just given you indicate, we are making some progress—primarily as a result of the building of very large tankers—in closing the gap between the tonnage we are building and our national shipping requirements. But we still have a long way to go. We are still very far from the goal that I believe all of us talked about prior to passage of the 1970 act; i.e., a fleet capable of carrying at least 30 percent of our cargoes in the various areas of our foreign trade.

Accordingly, as I stated in my prepared text, I would hope that this committee will see fit, not only to approve the present budget request, but even to increase it somewhat. Each additional dollar that we are able to authorize and appropriate for shipbuilding will bring us that much closer to the realization of our national shipping goal.

Mr. Chairman, that is my oral statement. I have a formal, written statement that I wish to submit for the record at this point.

Mr. CLARK. Without objection, it will appear in the record at this point.

[Mr. Maskin's full statement follows:]

STATEMENT OF ALFRED MASKIN, EXECUTIVE DIRECTOR, AMERICAN MARITIME ASSOCIATION

Mr. Chairman and Members of the Committee: My name is Alfred Maskin and I am the Executive Director in Washington for the American Maritime Association, which consists of 52 companies operating 173 American-flag cargo liners, container ships, dry cargo tramps, bulk carriers and tankers in the foreign and domestic commerce of the United States.

I appear here today to express the views of AMA on H.R. 5449, the maritime budget authorization bill for fiscal year 1974.

H.R. 5449, as you know, calls for a total budget, for maritime programs during F.Y. '74, of \$543.5 million—a decrease of about \$215 million from the F.Y. '73 level of \$758.3 million.

The 1974 shipbuilding budget is \$275 million; and while this is \$25 million more than the original 1973 allocation of \$250 million, it is \$150 million less than the final, total 1973 appropriation of \$425 million which was made in two stages. This \$150 million reduction for shipbuilding represents, of course, the major part of the total \$215 million reduction which we cited a moment ago.

It is our understanding that to this \$275 million budget request will be added \$50 million carried over from the appropriation for F.Y. '73, and that this amount will make possible the award of contracts for 17 vessels.

Further, we understand, the thrust of the '74 program will be toward the construction of ships capable of carrying petroleum and liquefied natural gas in order to meet shortages of domestic energy supplies; and of the 17 proposed ships, in fact, all but three dry bulk carriers will be LNG carriers, tankers, or OBOs—i.e., oil-bulk-ore vessels—which are also capable of carrying petroleum.

We are primarily interested in the proposed shipbuilding budget, and particularly in the manner in which this budget will relate to the construction of tankers, and it is to this area that I will confine my remarks this morning.

To begin with, I would note that the '74 maritime authorization will be the fourth to be made by this Committee since the Merchant Marine Act of 1970 was signed—the first shipbuilding awards under that program having been made during F.Y. '71. And it would be appropriate for us at this time, I think, to consider not only the year ahead, but briefly to evaluate the record of the nearly three years past, and to attempt to determine how successful the program has been in meeting its objectives, and how successful we may expect it to be in the future.

There are, of course, several yardsticks one can use to measure the new maritime program. The number of dollars authorized and appropriated for the program is one such yardstick. The number of ships being built with those dollars is another. But a third—and, I believe, a more meaningful measure—would be the degree to which the program is enabling us to meet our national shipping needs.

I would ask the Committee this morning, therefore, to consider the maritime authorization bill before us not only in terms of the dollars involved, or the number of ships that can be built with these dollars, but in terms of the extent to which the dollars authorized will assist us to fulfill our national requirements for a shipping capability.

In this respect—and bearing in mind the announced thrust of the '74 shipbuilding budget—I would begin by noting that our burgeoning demands for energy, coupled with the fact that our domestic producing and refining facilities are already operating at virtually peak capacity, have created an energy crisis in this country and are obliging us to import energy—oil and gas—in ever greater volumes.

During 1972, for example, our waterborne imports of oil—which is the area of greatest interest for most AMA members—amounted to nearly 4 million barrels a day, of which approximately one-half consisted of crude oil and one-half of petroleum products.

This year, 1973, our waterborne imports are expected to be over 5 million b/d (or better than 700,000 tons a day)—again at an approximately 50-50 ratio of crude to refined products.

By 1985, according to industry and government projections which have been made, our oil imports are expected to climb to about 15 million barrels—or over 2 million tons—a day.

Now, how do these figures relate to the maritime budget?

To begin with, I might note that since the first shipbuilding contracts for oil carriers were awarded on June 30, 1971—for two OBOs of 80,500 deadweight tons each—there have been contracts awarded for 16 tankers totalling just about 2 million dwt.

In addition, we have been told that, out of existing funds, the Maritime Administration intends to award contracts for two additional tankers, totaling approximately 500,000 dwt, before the end of F.Y. '73.

Adding these figures to the two OBOs and six tankers which are expected to be contracted for during F.Y. '74—totaling approximately 1.6 million dwt—means that by the end of F.Y. '74 we will have contracted for 28 oil carriers—four OBOs and 24 tankers—totaling a little better than 4 million tons.

Again I pose the question—how do these figures relate to our national shipping needs?

And again, to begin with, I might note that the first of the new tankers to be contracted for under the program—totaling about 450,000 dwt—are due to be delivered by the shipyards this year, 1973, and that thereafter delivered tonnage will escalate to about \$40,000 dwt by '74, to about 1.5 million dwt by '75, and to about 2 million dwt by '76—i.e., the same tonnage contracted for through approximately the first half of '73.

To this fleet of approximately 2 million dwt, built with construction subsidy under the new program, we can add the existing U.S.-flag tanker fleet, which has been built without subsidy primarily to serve the coastwise trades, as well as the fleet of tankers, again constructed without subsidy, which was con-

tracted for in the anticipation—which has thus far proved vain—of the development of the Alaska oil trade.

The existing U.S.-flag tanker fleet, built primarily for the coastwise trades, now totals approximately 7.5 million dwt, of which approximately 4 million dwt consists of proprietary vessels owned and operated by the oil companies, and approximately 3.5 million dwt of independently owned and operated ships.

Since the proprietary tanker fleet is, by and large, still primarily engaged in the coastwise movement of oil, it is principally the independent fleet of 3.5 million tons, which has been almost completely squeezed out of the domestic market, which would be available for the carriage of imported oil.

Here it must be remembered, however, that approximately 800,000 dwt of U.S. tanker tonnage is now committed under charter to the Military Sealift Command; that independent tankers account for virtually all of this, and that this figure is expected to remain the minimum military tanker requirement through at least 1976.

Thus, if we were to assume that these tankers were to refrain entirely from the carriage of such dry bulk cargoes as grain for Bangladesh and Russia, the existing coastwise tanker fleet available for foreign trade would be slightly under 3 million tons—and here it must be remembered that these ships are small, averaging less than 40,000 dwt in size, and suitable only for comparatively short hauls, such as from the Caribbean or from transshipment points served by the VLCCs—the Very Large Crude Carriers—now being built for international trade.

To this essentially coastwise fleet, as I indicated a moment ago, can be added the unsubsidized fleet of tankers in the 60,000–120,000 dwt range being built for the Alaska oil trade, which, as you know, has not materialized because of the unexpected delay in the building of the trans-Alaska pipeline.

Our figures indicate that by the end of this year, 1973, some 730,000 dwt of these tankers will be delivered, and that this figure will rise to 850,000 by '74; 970,000 by 1975, and remain at 970,000 as of 1976.

To recap the building picture, then, by the end of this year, the U.S.-flag tanker fleet available for the carriage of foreign oil will consist of approximately 450,000 dwt of subsidized tankers built under the new program; 730,000 dwt of tankers built for the Alaska trades, and 3 million tons built primarily for the coastwise trades.

Our total tanker fleet available for foreign trade in 1973, then, would approximate 4 million tons, and of this all but about one-tenth—i.e., the 450,000 tons being built under the subsidy program—would be of limited utility.

Against this available tanker tonnage we must weigh our national shipping requirements; and in this connection we must recall that our total waterborne oil imports in 1973 are expected to be over 5 million barrels—or over 700,000 tons—a day.

This volume of imports, we estimate, would require the employment of approximately 20 million dwt of tankers,¹ which would mean that the U.S.-flag fleet of 4 million tons would be capable of carrying no more than 20% of our imports—two-thirds of the 30% figure of our foreign trade which I believe we all hoped to achieve at the time we were discussing enactment of the new program.

(Parenthetically, I might point out that the ability of the present fleet to carry 20% of the oil imports is based on the assumption that the vessels would be competitive for these cargoes in world trade. It must be remembered, however, that only 450,000 tons are being built with construction subsidy and will be eligible for operating subsidy, since there has been no indication by the Administration that operating subsidy will be provided for vessels built outside the framework of the new program. Moreover, of the \$221.5 million which is being sought for ODS for '74, only about 1%, a little better than \$2 million, we understand, has been earmarked for ODS for six comparatively small tankers as well as one vessel to operate on the Great Lakes; and the regulations which will govern the payment of this ODS, in fact, have not yet been finalized by the Maritime Administration.)

By 1976, as can be seen from the figures I have already given you, our tanker fleet for the foreign trade—due entirely to subsidized new shipbuilding—will

¹ This figure, it should be noted, is based only on direct hauls to the U.S. That is, if oil is brought in from the Persian Gulf to a transshipment point 1,000 miles offshore, and then to the States, only the 1,000 mile leg of the voyage is considered. Were the entire voyage to be considered, the total tonnage requirement would, of course, be much higher.

have risen to 5.6 million dwt.² But by this time our total oil imports will require the employment of over 50 million dwt of tankers—2½ times the '73 requirement—and our U.S.-flag carrying capability will thus have shrunk from 20% in '73 to 10%.

By 1978, which we roughly estimate as the date of delivery for ships contracted for in '74, our tanker fleet will total approximately 7.5 million dwt, but our tonnage requirements again will have escalated to over 70 million dwt, still leaving us with a carrying capability of approximately 10%.

Mr. chairman and members of the committee, I have not come here today to criticize the proposals which have been made with respect to the 1974 maritime budget. On the contrary, I believe that ever since the new maritime legislation was signed by the President on October 21, 1970, the White House, the Commerce Department and Maritime Administration, and the committees of the Congress concerned with the authorization and appropriation procedures have all been sincere in their efforts to implement the program in proper fashion and to provide sufficient funds to achieve that result.

With respect to the '74 budget specifically, I believe that in view of the drastic budget cuts which appear to be in store for other federal programs, maritime has fared well.

I believe, however, that we should all recognize—and I hope that I have been able to demonstrate in some degree—that in terms of meeting our total national needs, we are still falling somewhat short of the mark, at least insofar as we are concerned with the tanker requirements to which I have limited my comments today. There is still obviously room for improvement.

Accordingly, I would hope that this committee will see fit, not only to authorize the shipbuilding budget sought by the Administration, but possibly to increase the amount somewhat, either by adding to the present budget request or by indicating the advisability of a supplementary authorization, if that proves to be desirable.

In conclusion, I would make one final point:

All of my previous remarks, regarding the ability of U.S.-flag tankers to carry a portion of our oil imports, as I indicated earlier, have been based on the premise that these tankers would be competitively able to obtain such cargoes.

The only means we have at the moment of making these tankers competitive, is through the provision of direct construction and operating subsidies. But such government aid must necessarily be limited in amount and impose finite restrictions on our ability to capture a substantial percentage of our foreign trade.

Accordingly, we who represent the major segment of the independent U.S. flag tanker fleet have been seeking to assure the provision of tanker cargoes through other means. We have, for example, been urging early construction of the trans-Alaska pipeline. And we have been urging an end to the exclusion of the Virgin Islands from the Jones Act—an exclusion which could negate much of the benefit which could be derived from the pipeline. Most important, we have been urging the Congress to amend the Cargo Preference Act to allocate to American-flag tankers, by law, a percentage of our oil imports, and I would certainly hope to see such legislation enacted during the current Congress.

Should this occur, it would not only provide cargo for existing tankers, but stimulate a desire for new American-flag shipbuilding which I believe would be unprecedented in this country's peacetime maritime history.

In the absence of such legislation, however, the present subsidized building program remains the only means available to us for the construction of vessels to capture a portion of these cargoes.

Accordingly, I would again express the hope that this committee will not only approve the present shipbuilding budget recommendation, but perhaps even increase it, and possibly hold it at the \$425 million level of F.Y. '73.

Mr. CLARK. Thank you very much.

You would appear to recommend either increasing funds for operating subsidy so that our tanker carrying capacity can be increased from 20 percent to some other figure or, alternatively, to achieve the

² It should be noted here that with the new subsidy program, with the decline of employment opportunities in the coastwise trades, and with the failure of the Alaskan trade to materialize, it is unlikely that there will be further unsubsidized tanker building in this country, at least for the foreseeable future. Moreover, we have estimated that the present unsubsidized fleet will decrease by approximately 3% a year due to casualties, scrappings and foreign transfers.

same result by legislation such as the so-called oil bill in the last session of Congress.

What percentage of our oil imports do you feel should be carried by U.S.-flag vessels?

Mr. MASKIN. Well, as you know, Mr. Chairman, we sought legislation last year to amend the Cargo Preference Act and to provide 50 percent of the oil imports to U.S.-flag ships.

Hopefully, there will be another effort made in the current Congress to achieve that type of legislation. I, personally, would like very much to see it pass.

Of course, if we do obtain a 50-percent quota, we would not be able to carry that amount immediately and very likely not for some years to come.

However, as I said in my statement, I believe it would create a demand for new American shipbuilding, even without subsidy appropriations which would be unprecedented in our peacetime maritime history.

I would like to say, though, that last year, if you recall, the legislation, although it called for a 50-percent quota for U.S.-flag ships, excluded certain categories of oil and petroleum products, so that the net result was somewhat less than 50 percent.

We have always thought of 30 percent as being a reasonable figure for American-flag participation in all of our various trades.

I have mentioned this in my statement here today and I would think that 30 percent would be a realistic target that we should shoot for.

Mr. CLARK. Madam Chairman, any questions?

Mrs. SULLIVAN. No questions, except that I am glad that I could be here to hear you, Mr. Maskin.

Mr. CLARK. Mr. Eckhardt?

Mr. ECKHARDT. Mr. Chairman, did you decide to adjourn and reconvene?

Mr. CLARK. No, I would like to finish. We only have one witness left after Mr. Maskin.

Mr. ECKHARDT. It makes no difference to me, Mr. Chairman.

Mr. Maskin, in view of the tremendous demand that you envisage for oil and gas to be carried by ship, why would not this demand generate sufficient investment and sufficient impetus to build the ships without a subsidy?

Mr. MASKIN. Well, they cannot be built in the United States at American-shipyard costs, and operate at American-crew costs without subsidy and be competitive with the foreign-flag ships.

Mr. ECKHARDT. Well now, suppose that we maintained our present operating subsidies and suppose they were not built in our shipyards, they could still be American-flag ships, could they not?

Mr. MASKIN. You can have American-flag ships that are not built in American shipyards but registered under the American flag, yes.

Mr. ECKHARDT. There is really no difference, is there, as long as their were an operating subsidy and your companies; for instance, those in your organization, they do not care where they buy them, do they?

Mr. MASKIN. Well, they would be precluded by law now from receiving the operating subsidy if they were not built in American yards.

Mr. ECKHARDT. I see. Well now, suppose they were permitted operating subsidies with respect to bulk ships? In that event, it would

make no difference as far as which ships were American-flag, I mean it would make no difference whether they bought them overseas or locally, would it?

Mr. MASKIN. The interest of shipowners is in obtaining ships at world prices.

Now, they can do it in one of two ways. They can either buy the ship overseas or buy them in American yards and have the Government subsidize the difference between the two costs.

Mr. ECKHARDT. I am most sympathetic with maintaining American-flag ships and maintaining a fleet under American-flag and increasing it, but I see certain questions about subsidizing the building of bulk ships which are largely, apparently, constructed for a single industry.

The testimony here shows that about two-thirds of them, of the subsidized ships, are the bulk-cargo ships, and I think it is pretty apparent that most of these are for oil and various petroleum products.

Mr. MASKIN. Well, I would like to make this point, Mr. Eckhardt, that we have built a good many tankers in this country, in American shipyards, without subsidy. We built them without subsidy and built them even without the tax deferral benefit which is available to American ships under the 1970 act.

The reason those ships were built is because the operators felt there was going to be cargo available for them. They were built for trades, as Mr. May pointed out a moment ago, that are protected from foreign competition. We built the tankers for the domestic trade. We built them for the Alaskan trade.

If there were assurance of cargo that was going to be available to us that was protected from foreign competition, ships would be built and they would be built in American yards, registered under the American flag, manned with the American seamen, and without subsidy.

Mr. ECKHARDT. There is no question that there will be cargo.

The second qualification without foreign competition is the second point you are making; is that not right?

Mr. MASKIN. Certainly.

Mr. ECKHARDT. Your testimony will indicate that there will be abundant cargo and unless we build ships at a rather rapid rate, we will not have the carrying facility to take care of that which is available.

Mr. MASKIN. That is right.

Mr. ECKHARDT. From your statement, I would think that we would be building these ships even in American shipyards without subsidy, if that demand grows at the rate that you have described.

Mr. MASKIN. We could not build competitive ships that way. There is no point in building ships if they cannot be competitive for the cargo, and there are only two ways you can make that cargo available to them. You can either try to make them competitive through the provision of subsidy, or else you can reserve the cargo to them by law.

These are the only two ways it can be done, Mr. Eckhardt.

Mr. ECKHARDT. You mean that even with a new generation of deep-draft ships and with new shipyards to build them, that we cannot possibly compete with the other nations in the world?

Mr. MASKIN. I believe so, yes, because, do not forget, Mr. Eckhardt, that we are perfectly capable of making various technological advances which will make our ships more productive, but the foreigners are not standing still. They are capable of doing the same thing, also.

Mr. ECKHARDT. I suppose that what we used to call the "Old Yankee get up and go," that excellence of the American industrial complex to compete with the whole world, is gone today.

Mr. MASKIN. Well, that is true in some areas. This is not true in every area.

For example, I understand, although the LNG ship is not the area of my interest—my interest is the tanker area—that the reason we are able to build LNG ships in this country at a cost differential of perhaps 25 or 23 percent, is because we have established somewhat of a technological lead in this area, and we have developed the technological expertise necessary to keep that cost differential down. It does not seem to be true in the tanker area.

Mr. ECKHARDT. I have always supported free trade and I have supported it on exactly the opposite basis that I am called on to support subsidy and that is things ought to be produced in the world where they can be produced most efficiently.

When one is asked to subsidize the building of large ships even in a new generation in which it seems to me we ought to be able to compete, this seems to me to go strongly against my whole basis for supporting free trade.

If it be true that we must subsidize, then it seems to me it is just as logical that we should place protective barriers against the goods manufactured overseas and it troubles me that we may not look, sometime in the future, toward a situation in which America can compete and compete successfully without the Government paying the difference.

Mr. MASKIN. Well, we know when we provide subsidy for the building and operation of a ship, that is not throwing up a barrier to free trade, in my estimation.

We are not closing out the ability of foreign ships to come in and compete for our cargoes.

One of the difficulties, really, in my estimation, of providing subsidy is that the subsidy does not assure American-flag ships of any cargo. All it does is put American-flag ships on, at least theoretically, a parity with the foreign-flag ships, so they can compete on an equal basis.

This is not a roadblock, Mr. Eckhardt.

Mr. ECKHARDT. I understand that and I hope you understand that I am not opposing operating subsidies.

Mr. MASKIN. Yes, sir.

Mr. ECKHARDT. Because I think you have a little different problem here. You have the question of labor standards, which we maintain at a considerable high rate, and safety standards, and so forth.

It troubles me to say that any particular area of manufacturing industry in the United States must be protected by subsidy indefinitely. Now, that is what troubles me in this situation.

Thank you for your statement.

Mr. CLARK. Thank you very much, Al.

Mr. MASKIN. Thank you, Mr. Clark.

Mr. CLARK. Our next witness is Earl W. Clark, codirector, Labor-Management Maritime Committee.

STATEMENT OF EARL W. CLARK, CODIRECTOR, LABOR-MANAGEMENT MARITIME COMMITTEE, ACCOMPANIED BY TALMAGE SIMPKINS, CODIRECTOR

Mr. CLARK. Thank you, Mr. Chairman.

I am Earl W. Clark, and on my right is Mr. Simpkins, the other co-director of the Labor-Management Maritime Committee.

The Labor-Management Maritime Committee, composed of major steamship lines and both seagoing and shoreside unions appreciates the opportunity of making this statement on maritime authorization for fiscal year 1974. We note the Administration's request for \$221,515,000 for operation-differential subsidy for the next fiscal year. This would appear to cover contractual obligations to be met during this period and we offer no other observation with respect to this item. In the field of ship construction, the figure of \$275,000,000 would fall short of the plan for 30 ships a year and 300 ships over a 10-year period, as envisaged under the 1970 Merchant Marine Act. However, larger ships with greater tonnage, even though fewer in number, help make up part of the difference and the 1974 funding is certified by the Maritime Administration as covering unfinished balances for 2 vessels under the 1973 contracts, construction-subsidy contracts for 17 ships planned in 1974 with 13 vessels being finished with 1974 funds with multiyear financing being utilized for the remaining 4. While falling short of the original planning in ship construction, it nevertheless represents a creditable program for this fiscal year. Nor do we quarrel with the other regular items normally covered in budget presentations to the Congress. Our chief concern is the elimination of any budget provision for the special training schools which are so essential to navigation and safety at sea. We believe the Office of Management and Budget does not truly understand the tremendous effect of this negative budgetary action and hope that the Congress of the United States will come to the rescue of this most vital program.

The Office of Management and Budget has determined to eliminate the maritime special training installations now operated by the Maritime Administration. It is our understanding that the total cost of these training schools is between \$185,000 and \$200,000 annually with a staff totaling approximately 11 people. These schools are located in three regions.

The eastern region, located at 26 Federal Plaza in New York City, trains in radar, loran, gyrocompass at Seamen's Church Institute and also trains in firefighting and damage control in connection with the Military Sea Lift Command at Bayonne, N.J.

The central region, located at 701 Loyola Avenue, New Orleans, La., trains in radar, loran, and gyrocompass at the naval support activity on Dauphine Street in New Orleans.

The western region, at 450 Golden Gate Avenue, San Francisco, Calif., trains in radar and gyrocompass at pier 1, Fort Mason, San Francisco, and firefighting and damage control in connection with the Military Sealift Command and Naval School Command at Treasure Island near San Francisco.

These programs grew out of the *Andrea Doria* disaster incident and give the finest training of its type yet devised in the area of safety of navigation and the protection of personnel, property, and environment.

Its loss, as a result of the pure hatchet work of the OMB, would greatly impair the future of merchant marine operations and would be exceedingly detrimental to U.S.-flag navigation. It is our belief that no greater use of marine training funds exist than in these schools which deal principally with those currently in the shipping occupation and, in that sense, is an upgrading program.

Nor do we see any substitute for this program, once the OMB has its way. Only the recently installed simulator equipment in radar at the Maritime Institute of Technology and graduate studies of the Masters, Mates & Pilots in Linthicum, Md., can provide any simulator instruction among going institutions. They do not have the capabilities of providing the required instructions for U.S.-flag shipping. It is our understanding that transfer of equipment and training facilities to other institutions, such as, State maritime academies, has been considered, but availability to seamen has been deemed impractical, plus the fact that a considerable fee would be charged—\$100 to \$200. At present the Coast Guard either requires an examination in practically all seagoing classes or a graduate certificate from one of these MARAD accepted schools. This would undoubtedly give way to loss of graduate recognition and required examinations if the schools are disbanded. Under the current situation, the acceptance of a graduate certificate by the U.S. Coast Guard, in lieu of examination, is in itself a tribute to the capability and success of the regional training establishments. Just where the firefighting and damage control training would be given, if at all, no one seems to know. Presently, we understand, quite successful training courses are given at Bayonne, N.J., and Treasure Island in San Francisco Bay.

Strangely enough, in the United States, there are no laws or regulations which require training in these areas of safety at sea. The U.S. Coast Guard requires possession of expertise to perform, but this is by test only. Actually, a person with something less than total recall can "cram" up and pass an examination and thus becomes qualified. If these schools go down the drain, our U.S. delegation to IMCO may be in a real box. On the one hand, they could consent to mandatory demonstration of ability and expertise, but would be forced to oppose any mandatory training program, such as we now have. Eighteen nations now have marine radar simulating programs. We do not know in how many of these nations the program is mandatory but suspect many of them require this training.

In summary, there are no alternate programs to substitute for this service. We have heard that the OMB tried to make some comparison with Air Transport Safety programs. However, in that area, we understand Government participation in training and traffic control exceeds anything ever conceived for the U.S. Merchant Marine. I have reference to the tower controllers who are Government paid personnel. This involves radar and other communication devices. We, therefore, are being pennywise and pound foolish to abandon this Marine training program, for all the lessons of the *Andrea Doria* disaster, from which it sprung, will be lost. A yearly figure of some \$185,000 for adequate training of personnel for our U.S. merchant marine seems a small sum indeed for providing safety of personnel and property at sea. We believe the Coast Guard and Military Sea Lift Command should be called to speak their minds on this proposed program elimi-

nation. We have been told that every course in this training program is booked solid for periods of 3 or more months in advance, showing both the necessity and popularity of the program.

We urge this committee to authorize the continuation of this program and to include it in the authorization legislation itself. We would even suggest that an additional sum or sums be authorized now for additional facilities that are needed in the Great Lakes area.

This whole matter is viewed with substantial alarm by our organization and we truly hope this valuable program can be saved. We thank the committee for the opportunity to present our views.

Mr. CLARK. Thank you.

Mr. EARL W. CLARK. Mr. Chairman, that is a general statement that says, in effect, we are somewhat disappointed that the ship construction program is not bigger than it is, but we believe after hearing Mr. Blackwell's very fine testimony that it is still a most credible program.

It is a good start and as the years go on I am hoping that we can meet the full objectives of the 1970 act. We have that hope.

Now, Mr. Chairman, we have in our statement addressed the question raised by, really, Mr. Mailliard, here a moment ago, and that is the special training schools that are located at New York and New Orleans and San Francisco.

We are not aware, and I wish the committee would advise us if we are wrong on this, but we are not aware of the fact that you are limited so completely and absolutely at this point in the bill as it is now written, and that in the congressional processes, as you proceed through the House and the Congress, additional authorization items could not be added. Our testimony was prepared on that basis.

Now, let me state for this record that I went out during these hearings and checked with the Maritime Administration and found that these schools I am talking about—these special training schools in radar and loran and gyrocompass, the damage control and the fire-fighting are under "Salaries and expenses" as an item in the total budget presented by the Maritime Administration. It falls under that category of "Salaries and expenses" and the schools are under the direction of the regional directors of the Maritime Administration.

Now, in this particular bill, the only place that I see reference to this is on page 2, I believe, in the bill, where you are talking about in the main, increases as affecting item No. 1.

In the bill, you do get into the field of salaries and expenses, but I do not think you get into it to the full extent of covering the regular Salary and expenses items.

Now, if it is the intent of this Congress not to add any items to this authorization bill, as you proceed, then the rest of my testimony would only be informative because it treats this very, very serious training problem.

I was a cochairman of a labor-management subcommittee in the *Andrea Doria* investigation matter and I know what training means, particularly in the field of bridge-to-bridge communications, and radar and the rest of the navigational devices.

If we lose these schools, I think the merchant marine is going to be very badly hurt. It only amounts to \$185,000 or \$200,000 for the whole year. If we cannot consider this in this particular bill, we will want to

come back to you in some other hearing, because if we go before the Appropriations Committee, I think that that perhaps may not give it the full strength it will have if a committee such as this and the committee in the Senate can also deal with this problem.

Before I agree to my statement for the record, Mr. Chairman, can you advise us with respect to whether additional items are ruled out in this legislation?

Mr. CLARK. I think section 209 would have to be amended.

Mr. EARL CLARK. Would have to be amended?

Mr. CLARK. Yes.

Mr. EARL CLARK. We would like to suggest to the committee that our testimony on these schools remain in the record, as I have given it, were it the understanding that it is within the authority of this committee to add items, and if so, we would then seek to leave our statement as it stands.

If it were the contrary, I would want to ask permission to amend the statement.

Mr. CLARK. It is counsel's opinion that what I have said is correct and our redress and your redress is with the Appropriations Committee, by direct negotiation.

Mr. EARL CLARK. If it is direct negotiation, may I interpret that also as meaning your committee, while interested in the problem, would not be dealing with it in this particular bill?

Mr. CLARK. That is so.

Mr. EARL CLARK. Then, Mr. Chairman, I would like to amend my statement and file it for the record at a later date, with your permission.

Mr. CLARK. If there is no objection, it is so ordered.

[The additional statement follows:]

ADDITIONAL STATEMENT ON EARL W. CLARK

It is apparent that Section 209 is insufficiently broad to encompass the authorization of the special training schools without amendment. It also seems apparent that either amending Section 209 or passage of a special authorization bill for such purpose could not be accomplished within the time frame required to save these schools. Our chief resort is therefore to the Appropriations Committee which would need to add funds for the purpose as they are not included in the Budget as submitted to the Congress.

For the long run solution to the problem, we recommend that another title designated as Title III be added to Public Law 92-340 commonly known as the Ports and Waterways Safety Act of 1972. We believe that safer navigation resulting from the proficiency of these special training schools is specifically germane to the purposes and provisions of this Act. Title I of that Act, Section 102(e) makes specific reference to the duties and responsibilities of the Secretary of the Department in which the Coast Guard is operating "to promote the safe and efficient conduct of Maritime Commerce" and provides that it is within the province of the Secretary to consider "existing vessel traffic control systems, services, and schemes."

Under Section 105, the Secretary is required to—"within one year after the effective date of this Act, report to the Congress his recommendations for legislation which may be necessary to achieve coordination and/or eliminate duplication between the functions authorized by this Act and the functions of any other agencies." In the instant problem, the activities of both the Coast Guard and the Department of Commerce are closely related requiring the greatest coordination. The requirements for safety of navigation protecting personnel, property and environment, cannot be adequately met without the type of training supplied by the Maritime Administration's special training program. Today, one is intricately bound to the other. Title II of the Ports and Waterways Safety

Act of 1972, Section 201, provides an amendment to Section 4417a of the Revised Statutes of the United States (46 U.S.C. 391a) which under subparagraph 3 provides special responsibilities for the Secretary of the Department in which the Coast Guard resides, involving:

"the handling and stowage of such cargo, the manner of such handling or stowage, and the machinery and appliances used in such handling and stowage; and with respect to equipment and appliances for life saving, fire protection, and the prevention and mitigation of damage to the marine environment; and with respect to the operation of such vessels; and with respect to the requirements of the manning of such vessels and the duties and qualifications of the officers and crew thereof."

The above has its base in principal measure in the construction aspects of the vessel, but these provisions are related directly to the type of training which must follow vessel operations through the life of the ship.

Title II of this Act under Section 201, paragraph (9) (B) provides perhaps the most relevant of all relationships to training. It provides that:

"The Secretary shall issue to applicants, certificates as tankerman, stating the kinds of cargo the holder of such certificate is, in the judgment of the Secretary, qualified to handle aboard vessels with safety, upon satisfactory proof and examination, in form and manner prescribed by the Secretary, that the applicant is in good, physical condition, that such applicant is trained in and capable efficiently to perform the necessary operations aboard vessels having such cargo on board, and that the applicant fulfills the qualifications of tankerman as prescribed by the Secretary."

Penalties of sizeable proportions are provided for failure of compliance or violations, some civil, some criminal, and in addition, the vessel itself is subjected to liability in rem.

Section 203 provides further reports from the Executive to the Congress on matters contained within the Ports and Waterways Safety Act of 1972 for improving the successful operation of the Act. We feel the currently prospective abandonment of the MARAD special training schools would impair such improvements. We urge the Committee to consider a new Title III to the Ports and Waterways Safety Act of 1972 to provide for insuring that the type of training essential to the successful operation of that Act continues to be provided.

Such legislation would be a most apropos legislative Act to insure that the authorizations arising out of H.R. 5449 are properly implemented.

Mr. CLARK. Mr. Corrado, our chief counsel, would like to just say a word on this.

Mr. CORRADO. We will check with the Maritime Administration to be absolutely sure where this item comes, but I am pretty sure that it is an operating expense and a matter of direct appropriation.

As you know, we have had other problems at other times with maritime authorizations and there are certain sensitivities in this area that we must be careful of. I think your recourse is to the Appropriations Committee since this is an operating expense and not an authorization item.

Mr. EARL CLARK. With that understanding, let me say that I hope this committee, and I am sure it will cause the committee no difficulty, because I know the committee is interested in promoting the best interest of the whole merchant marine, whether in this kind of hearing or some other kind of hearing—that it give what support it can to this problem, because it is a very difficult one, a very dangerous one.

I think the way OMB was alerted was when they started to do away with the marine hospitals. You know, we've got to fight that problem also. All through the Coast Guard regulations I note that the seamen have to go to the public service hospitals and that is tied directly with this training program. I think that that perhaps may have been where they picked it up, you see, to do away with these schools.

I enlist your interest in this particular item. I will withdraw any section 209 reference to this matter from my testimony and I will

insert another section, with the permission of the chairman, and submit it to you at a later date.

Mr. CLARK. You may do so, and we appreciate both of you gentlemen coming here this morning to appear before this committee and being as patient as you have been.

Mr. EARL CLARK. It was our pleasure.

Mr. CLARK. The meeting is adjourned subject to the call of the Chair.

[The following material was submitted for inclusion in the printed record:]

STATEMENT OF CALIFORNIA MARITIME ACADEMY

The California Maritime Academy was established in 1929 for the purpose of preparing young men for a life at sea as ship's officers in the U.S. Merchant Marine. Subsequently the program has been broadened, but it is still directed toward the goal of providing well-trained, college-educated officers for the maritime industry.

The requirement that students be male was deleted by the Legislature in 1972. The three-year program of the academy, during which the student attends 11-months of each year, includes an annual three-months sea training session aboard the Training Ship GOLDEN BEAR. The students operate the ship under the supervision of the licensed merchant marine officers who comprise the majority of the faculty. Cruises are to the Far East, South Pacific, Latin America, or Europe.

At the conclusion of the course of instruction the students take Coast Guard license examinations, and emerge as third mates or third assistant engineers in the merchant marine. They also receive a bachelor of science degree in nautical science or marine engineering, and qualify for a commission in the U.S. Naval Reserve or U.S. Coast Guard Reserve if fully qualified.

During the past two years the California Maritime Academy has been the subject of close scrutiny by both the executive and the legislative branches of state government. A study group, under the chairmanship of the Lieutenant Governor, was appointed to assess the future of the Academy, and to consider alternative means of operating the institution. The conclusion reached by this group was that in order to retain its primary function of training officers for the maritime industry, the Academy should continue to operate as an independent institution of higher education, rather than being incorporated in the state university and college system.

Subsequently, Assembly Bill 209 was signed into law in August of 1972. This legislation revised and enlarged the purposes of the Academy and altered the composition of the Board of Governors. The reconstituted board will include representatives of the maritime industry as well as representatives from higher education and from the general public. The industry has offered its assistance in obtaining marine equipment, local maritime industry facilities, advisers and lecturers from maritime industry and private grants and donations to supplement the basic school program through the CMA Alumni Association Foundation.

Currently the California Maritime Academy is analyzing the impact of the new legislation and formulating plans to broaden its curriculum in consonance with the new legislation while retaining its primary mission of preparing students for the purpose of providing high quality licensed officers for the American Merchant Marine and the maritime industries. The Academy is also working actively toward the goal of accreditation by the Western Association of Schools and Colleges.

BUDGET CONSIDERATIONS

The 1973-74 Governor's Budget summarizes the budget history of CMA and makes a proposal for the next fiscal year. The State support has increased from \$792,643 to \$1,137,000 for 1973-74.

The Board of Governors of the California Maritime Academy has approved an increase in student charges which will fund an anticipated \$54,000 of the above mentioned augmentation. The 1973-74 budget will provide for the training of 240 students.

The State support of the California Maritime Academy has increased about \$200,000 each year over the last two years with a proposed increase of about the same amount for 1973-74. Federal support has decreased about \$20,000 over each of the last two years.

PRESENT STUDENT BODY

Over the last seven years, applications to the Academy have ranged between 1,000 and 300. It has been only within the last two years that the applications have been low because of the budgetary problems of the school. But since the school has been given the financial green light by the State, interest in the school has begun to return to a more stable and increased rate of applications. But since the Maritime Administration limits the number of first-year students for subsidy, the incoming class has been limited to only 110. The projection for next year's enrollment is 135; and in the near future, freshman enrollment is anticipated to increase.

In addition to the enrollment of freshmen students, the Community College transfers have increased in number from 25% in 1969 to nearly 33% in 1972. More students are becoming more interested in the Academy with the increase of employment opportunities in the maritime industry.

CMA GRADUATES AND EMPLOYMENT

Over the last seven years, about 90% of the graduates of CMA have gone to sea or are in maritime-related fields. At the present time, there are about sixty positions available that the CMA Placement Office cannot fill. Letters from industry have indicated the excellence and desirability of CMA graduates; attached is one such letter. Graduates excel in their positions within the industry: they are hard working, highly motivated young men. The industry demands the licensed officer whether he goes ashore or to sea. CMA graduates have filled the demands of the industry for over 43 years.

PLANNING

A five-year master plan is soon to be developed to support the new, broadened mission of the Academy. The new directions in which CMA is moving should broaden the prospectives of CMA graduates. The primary aim of the school remains to produce highly competent graduates for the merchant marine and the related maritime industries. By responding to the needs of a changing, technological society and the new developments and concepts of the maritime industries, CMA will provide a graduate who has a college education as well as one who is a highly competent, intelligent, articulate professional.

CONCLUSION

CMA is experiencing a trend in education toward more technical-vocational training. The California Maritime Academy has offered, and continues to offer a fine program which integrates both the theoretical and the technical-vocational. CMA offers the kind of education expected of the young person today: a healthy blend of the intellectual, technical, and practical. The federal investment into the future of these young people represents an investment into the future of the maritime industries and to the economy of the nation. Such an investment seems small in terms of the returns to the United States.

WESTINGHOUSE ELECTRIC CORP.,
INDUSTRY AND RELATED PRODUCTS,
Sunnyvale, Calif., March 1, 1973.

Adm. J. P. Rizza,
California Maritime Academy,
Office of the Superintendent,
Vallejo, Calif.

DEAR ADMIRAL RIZZA: I would like to take this opportunity to reflect upon the graduates of the California Maritime Academy employed at the Westinghouse Marine Division.

On 23 February 1973 it was my pleasure to announce the appointment of Mr. Donald Allison as manager of supplier quality. He joins four other members of management who are graduates of the California Maritime Academy. These other graduates hold management positions as General Foreman of Assembly, Test and Fabrication; Polaris-Poseidon Program Manager; Supervisor of Hunters Point Test Facility and Manager of Military Marketing. In addition, our

field installation and test organization, which is charged with the installation of the Poseidon submarine missile launching systems as shipyards on both coasts, has several graduates who hold positions as Engineer-in-Charge at these shipyards.

I believe these facts speak highly of the training received at the Academy. The graduates we have employed are prepared, motivated, resourceful and well suited for our business. I thought you would like to know how well the school is doing.

Sincerely yours,

H. J. CABRAL,
General Manager, Marine Division.

CALIFORNIA MARITIME ACADEMY

Budget year	Total	State operation	Per-cent	Federal funds ^a	Per-cent	Tuition and other reimbursements	Per-cent
Total budget expenditures:							
1972-73-----	1,365,229	918,829	67	200,400	15	246,000	18
1971-72-----	1,266,098	792,643	63	221,771	17	251,684	20
1970-71-----	1,177,298	791,200	67	196,936	17	189,162	16
1969-70-----	1,213,130	808,125	67	212,329	18	192,676	15
1968-69-----	1,111,688	699,845	63	213,752	19	198,091	18
Sea training program (operation of T/S Golden Bear):							
1972-73-----	346,192	235,273	68	49,797	14	61,122	18
1971-72-----	291,300	182,369	64	51,024	17	57,907	19
1970-71-----	199,596	134,138	67	32,070	16	33,388	17
1969-70-----	298,913	199,121	67	52,317	18	47,475	15
1968-69-----	279,223	175,782	63	53,687	19	49,754	18

^a Federal funds include a \$75,000 grant plus \$600 per eligible student in accordance with General Order No. 87.

GOVERNOR'S BUDGET SUPPLEMENT—CALIFORNIA MARITIME ACADEMY

(Located at Morrow Cove, Vallejo, Calif.)

The California Maritime Academy was originally established in 1929 by the State Legislature as a unit of the State Department of Education. In 1972 it was given its present status as an independent institution of higher education, obtaining certain administrative services from the trustees of the California State University and Colleges.

Federal authority for state nautical schools originally stems from an act of Congress of 1874. The United States Maritime Administration's interest was mandated by the Merchant Marine Act of 1936 which directs the maintenance of an adequate merchant marine to support American domestic and foreign commerce and to meet the requirements for national defense. The act provides that the merchant marine be "manned with a trained and efficient citizen personnel." The present federal-state relationship in the field of maritime education results from the Maritime Academy Act of 1958 which specifies "It is declared to be the policy . . . to promote the national policy with respect to the United States Merchant Marine . . . by assisting and cooperating with the states and territories in the operation and maintenance of maritime academies or colleges for the training of merchant marine officers."

The State of California experiences a high level of activity in all phases of the maritime industry including dry cargo ships, tankers, container ships, oceanographic and research vessels, dredges, inland waterway tugs and barges, fishing vessels, drilling ships, offshore drilling service vessels, and a few passenger cruise ships. Nearly one hundred million tons of cargo pass through California ports every year, each ton generating, according to one estimate, \$22 for the local economy.

The statutory mission of the California Maritime Academy is now defined as: to provide instruction in the nautical sciences, marine engineering, and related fields, including all those necessary to provide the highest quality licensed officers for the American merchant marine and California maritime industries.

The graduates become licensed officers in the merchant marine. The course last three years and leads to a bachelor of science degree with a specialization in either deck or engineering fields. The students also receive instruction in naval

science under the auspices of the Navy Department. The mission of the department is to provide, by a permanent system of training and instruction in essential naval subjects, a source from which qualified officers may be obtained for the inactive Naval Reserve.

The three-year training program, during which the student attends school 11 months of each year, culminates with the U.S. Coast Guard examination for a license as either third mate or third assistant engineer. The student must pass the license examination before he can receive a degree.

The program at the academy is supplemented by a sea-training session each year of three months' duration aboard a merchant-type ship loaned to the State of California by the Federal Maritime Administration. These sea-training sessions are essential to establish the eligibility of the student to take the U.S. Coast Guard examinations.

The Federal Maritime Academy Act of 1958 permits an outright grant of \$25,000 to academies operating in accordance with prescribed standards, and an additional \$50,000 for academies that agree to accept students from other states. The act also provides payments of not more than \$600 per student per academic year to assist in defraying the cost of uniforms, books and subsistence; for each student the academy receives \$400 of this, and the student \$200.

In addition, the federal government pays for the annual drydocking, overhaul, and major repair of the ship, at an estimated cost of over \$242,000; this amount is not included in the budget.

Graduates find jobs in manning the merchant fleet, on research vessels, dredges, tugs, service vessels, and in the fields of plant inspection and maintenance, terminal operations, and shoreside transportation.

The 1973-74 budget includes sufficient funds to provide for the training of 240 students in the academy's program.

SUMMARY OF PROGRAM REQUIREMENTS

	Actual, 1971-72	Estimated, 1972-73	Proposed, 1973-74
I. Classroom instructions.....	\$285,912	\$372,352	\$389,487
II. Sea training.....	291,300	346,192	362,123
III. Residential.....	200,161	236,472	247,353
IV. Administration and institutional services.....	488,725	424,884	656,437
Total programs.....	1,266,098	1,379,900	1,655,400
Reimbursements—other.....	—251,684	—246,000	—300,000
Reimbursements—Federal.....			—18,000
Net total programs.....	1,014,414	1,133,900	1,337,400
General fund.....	792,643	933,500	1,137,000
Federal funds.....	221,771	200,400	200,400
Personnel man-years.....	83.8	85.8	86.8
Students ¹	209	212	240
Gross cost per student.....	\$6,058	\$6,509	\$6,898
Net general fund cost per student.....	\$3,793	\$4,403	\$4,738
Number of graduates.....	62	60	58

¹ The 1971-72 and 1972-73 figures represent average student counts and the 1973-74 figure represents the anticipated student count at the beginning of the year

I. CLASSROOM INSTRUCTION

Need

Basic scientific and specialized technical knowledge built on a foundation of general studies are required for the development of qualified merchant marine officers in the maritime industry, as well as the general education level associated with professional competence at the executive level.

Objectives

To provide instruction in nautical science and marine engineering to enable students to become licensed officers afloat and leaders ashore in the maritime industry.

Authority

Education Code Sections 25951, 26052, 26063.

General Description

The instruction program provides general education classes and specialized courses to prepare students for careers as licensed merchant marine officers and

as executives in the maritime industry. The curriculum provides for specialization in either nautical science or marine engineering. Satisfactory completion of the academic program and successful performance on the U.S. Coast Guard license examination enables a student to graduate from the three-year program with a bachelor of science degree in either nautical science or marine engineering.

Students select their area of specialization (deck or engineering) before starting classes for their first trimester. Other than a few elective courses, the academic program for either area is largely prescribed, but options or areas of emphasis will be increasingly utilized in the curriculum.

Recent developments in the maritime industry (containerization, automation, supertankers, etc.) are currently being reflected in curricular development. Furthermore, considerable effort is being made toward the goal of accreditation for the academy by the Western Association of Schools and Colleges. New courses have been developed in oceanography, computer science, automation, and in industry internships.

Two diesel-powered 65-foot vessels continue to play an important role in the instructional program. The academy is developing agreements with other institutions to utilize these vessels in support of oceanography programs.

	1971-72	1972-73	1973-74	1971-72	1972-73	1973-74
Program requirements:						
Continuing program costs.....	21.6	22.6	22.6	\$285,912	\$372,352	\$389,487
General fund.....				178,995	250,165	228,349
Federal funds.....				50,081	54,851	74,371
Reimbursements.....				56,836	67,336	86,767

II. SEA TRAINING

Need

Practical skill in navigation and operation of a ship is an essential element in the development and training of deck and marine engineering officers.

Objectives

To provide experience and training in navigation, seamanship and communications for midshipmen specializing in nautical science and to provide experience and training in the operation of marine engineering plants for midshipmen specializing in marine engineering.

Authority

Education Code Sections 25951, 26052, 26055, 26056.

General Description

In each of their three years at the academy, midshipmen participate in a sea-training trimester. A part of the cruise consists of an annual shipyard overhaul which affords the midshipmen firsthand experience in readying a ship for sea through inspection and replacement procedures. From time of departure until return to the academy, the midshipmen operate the ship under the supervision of their officer-instructors. The sea-training trimester is not an observation cruise but rather a learn-by-doing experience under all types of sea conditions. During the sea-training trimester the midshipmen learn firsthand the duties and responsibilities of the Merchant Marine officer and put into practice the theoretical knowledge learned in the classrooms ashore. They are thus fully qualified to assume the responsibilities of ships' officers.

	1971-72	1972-73	1973-74	1971-72	1972-73	1973-74
Program requirements:						
Continuing program costs.....	22.1	22.1	22.1	\$291,300	\$346,192	\$352,123
General fund.....				182,369	235,273	264,373
Federal funds.....				51,024	49,797	45,116
Reimbursements.....				57,907	61,122	52,634

III. RESIDENTIAL

Need

Midshipmen are recruited statewide and from out-of-state, necessitating a residential facility and provisions for meals.

Objectives

To provide a residence facility and meals for midshipmen enrolled at the academy.

Authority

Education Code Sections 26054, 26055.

General Description

The academy's daily routine is similar to that of a military installation (0600 to 2200) providing for residence facilities and daily meals for the midshipmen on nearly a year-round basis. This continuing requirement is interrupted four times during the year: Christmas recess (two weeks); sea-training trimester (12 weeks); spring recess (one week); and summer recess (three weeks).

	1971-72	1972-73	1973-74	1971-72	1972-73	1973-74
Program requirements:						
Continuing program costs.....	16.5	16.5	16.5	\$200,161	\$236,472	\$247,353
General fund.....				125,313	158,875	183,845
Federal funds.....				35,061	34,831	29,316
Reimbursements.....				39,787	42,766	34,192

IV. ADMINISTRATION AND INSTITUTIONAL SERVICES

Need

Educational institutions require administrative direction and logistic support in order to insure efficient and effective operation.

Objectives

1. To provide academic and administrative leadership, coordination, and supporting services for achievement of the academy's overall objectives.
2. To provide utilities and maintenance services.

Authority

Education Code Sections 25951, 26051-26055, 26062, 26101-26156.

General Description

The administrative staff and plant operation personnel provide the necessary ancillary services in support of the training program provided for midshipmen. The 67-acre campus contains three classroom buildings, residence hall, dining hall, gymnasium, seamanship building, library, and administration building, which require continuous maintenance and upkeep.

Also included in budget totals for this program in 1973-74 are the following program augmentation items: (1) \$45,000 in contract services funds for the academy to contract for assistance in preparation of educational and facility plans, (2) \$50,000 (nonitemized) for instructional program modification when it is justified in terms of approved plans, (3) \$18,000 anticipated from federal vocational education funds for the initial costs of developing a continuing education program, (4) \$14,000 in contract services for management services previously provided by the Department of Education, (5) \$45,000 for Minor Capital Outlay, and (6) \$40,000 augmentation for various operating expense items.

Detail of Minor Capital Outlay:

Dredge boat basin.....	\$12,000
Replace residence stairway.....	4,000
Resurface sundeck-roof.....	5,000
Fire alarm system.....	24,000
Totals	\$45,000

	1971-72	1972-73	1973-74	1971-72	1972-73	1973-74
Program requirements:						
Continuing program costs.....	28.6	24.6	25.6	\$488,725	\$424,884	\$656,437
General fund.....				305,966	289,187	478,433
Federal funds.....				85,605	60,921	51,597
Reimbursements.....				97,154	74,776	126,407
STATE OPERATIONS						
Personal services:						
Authorized positions.....	83.8	85.8	85.8	820,932	928,864	946,525)
Merit salary adjustment.....				(6,216)	(15,600)	(15,600)
Proposed new positions.....			1			12,888
Totals, salaries and wages.....	83.8	85.8	86.8	820,932	928,864	959,413
Estimated salary savings.....					-33,455	-17,600
Net totals, salaries and wages.....	83.8	85.8	86.8	820,932	895,409	941,813
Staff benefits.....				86,501	90,000	94,500
Totals, personal services.....	83.8	85.8	86.8	907,433	985,409	1,036,313
Operating expenses and equipment.....				358,665	394,491	524,087
Special item of expense.....						50,000
Minor capital outlay.....						45,000
Totals, expenditures.....				1,266,098	1,379,900	1,655,400
Reimbursements—other.....				-251,684	-246,000	-300,000
Reimbursements—Federal.....						-18,000
Net expenditures.....				1,014,414	1,133,900	1,337,400
General fund.....				792,643	933,500	1,137,000
Federal funds.....				221,771	200,400	200,400

RECONCILIATION WITH APPROPRIATIONS—STATE OPERATIONS

	1971-72	1972-73	1973-74
General fund:			
Appropriations:			
Budget Act appropriations.....	\$791,000	\$891,000	\$1,137,000
Allocation for salary increase.....		41,400	
Allocation for overtime premium.....	10,000		
Allocation for health benefits.....		1,100	
Allocation from section 16409, Government Code.....	10,700		
Total available.....	811,700	933,500	1,137,000
Unexpended balance, estimated saving.....	-19,057		
Total expenditures, State operations.....	792,643	933,500	1,137,000
Federal funds:			
Appropriations: Federal grants (U.S. Maritime Act of 1958).....	221,771	200,400	200,400
Total, expenditures all funds.....	1,014,414	1,133,900	1,337,400
Revenues: Miscellaneous (general fund).....	568		

SUPPLEMENTAL INFORMATION ON THE STATEMENT REGARDING STATE MARITIME ACADEMIES PRESENTED BY REAR ADM. E. A. RODGERS, U.S.M.S.

Mr. Chairman, Members of the Committee, I am extremely grateful for this opportunity to provide for you and the members of your Committee supplemental information to the statement delivered to your Committee by Rear Admiral Rodgers as it relates to the Massachusetts Maritime Academy.

May I begin with data concerning financial support afforded to the Massachusetts Maritime Academy by the Commonwealth of Massachusetts. In fiscal year 1973 the State appropriated \$1,418,442 for Academy operations. The Governor has recommended an Academy operating budget of \$1,988,953 for fiscal year 1974. This recommendation probably will be approved. By way of comparison, the State appropriated \$527,524 to operate the Academy in fiscal year 1964. A quick calculation shows that the fiscal year 1974 budget reflects an increase of

approximately 400 percent over the 1964 budget. These annual appropriations for the operating budget (maintenance and support) do not include an additional sum of approximately \$12 million in capital outlay funds appropriated by the Commonwealth of Massachusetts since 1966 to plan and build new educational facilities. The facilities master plan, incidentally, is about three-quarters complete.

Our enrollment currently stands at about 390. Since we are into the third year of making the transition from a three to a four-year program, there will be no graduating class this year. An incoming freshman class of 250 will therefore increase the enrollment to 615 (allowing for normal attrition) in the fall of 1973. We will move to a maximum enrollment of 800 cadets in September 1974. Again, by comparison, enrollment in the academic year 1964-65 was about 180.

As you know, Maritime Administration support under General Order No. 87 takes the form of cadet subsidies, an annual general maintenance and support allowance, and the loan and upkeep of a suitable training vessel. In my judgment, current Federal statutes—as well as the administrative and fiscal policies of the Maritime Administration over the past several years—have not kept pace with skyrocketing educational costs coupled with new and expanded programs which have been implemented by the State academies in response to the demand for quality education, and an increasingly sophisticated Maritime industry. Although certain of the Maritime Administration administrative and fiscal policies have been defended in the name of budgetary constraints, I find myself questioning the rationale—as well as the motivation—for these decisions in the light of increased Federal support for other segments of maritime industry training and research. In brief, the State maritime academies appear not to be getting even minimal financial support, and I am concerned that if recent trends persist, the State maritime academies may be forced out of business and an important source of officer procurement for the U.S. Merchant Marine and the maritime components of the armed forces will add to the future decline of our worldwide trade position.

Three random points may help to illustrate how Federal policy has fallen out of step with increased costs and changes on the educational scene. *Item:* In 1964 educational expenses for a three-year Academy education were about \$3,250. In 1974 the cost of a four-year Academy education has risen to approximately \$9,500. In 1964 the \$600 annual subsidy—for which all students were eligible—defrayed more than half of the cost of attendance. In 1974 the \$600 subsidy—for which only one in three of four Academy students can qualify—will defray about one-fifth the total costs. *Item:* In 1964 the \$75,000 annual maintenance and support allowance represented about 14 percent of the Academy annual operating budget. In 1974 the same \$75,000 allowance will represent less than 4 percent of the Academy fiscal year operating budget. *Item:* At a time when Academy cadets (and students in colleges across the country) are clamoring for more, not fewer, practical, “hands-on” educational experiences, the Maritime Administration sees as “inevitable” a training ship consolidation plan whereby one ship would serve two or more State academies for afloat training.

In my view, several actions—some of which you may not concur in—would help to reverse an increasingly discernible trend toward eventual phase-out of the State academies. Possible remedies are captioned below to match the three types of Federal aid provided to the State academies under Public Law 85-672 and 92-53.

CADET SUBSIDIES

1. The \$600 annual subsidy, intended as an “allowance for uniforms, textbooks and subsistence,” should be increased to reflect current costs for these items—probably something on the order of \$1,200 annually.

2. The Maritime Administration policy prohibiting substitutions of students to replace those removed from subsidy lists should be rescinded forthwith since annual appropriations provide funds for a specified number of subsidy payments.

3. The quota formula for allocating cadet subsidies in accordance with 1965 enrollment data should be examined closely to assure fair and equitable distribution among the State academies. The argument that cadet subsidies should be apportioned in accordance with eight-year-old enrollment data is arbitrary at best.

4. Consideration should be given to increasing the number of cadet subsidies as an inexpensive means of developing trained officers for the seagoing armed and supportive services as well as for the U.S. Merchant Marine.

ANNUAL MAINTENANCE AND SUPPORT ALLOWANCE

1. The \$75,000 annual allowance should be increased to assure compliance with the declared policy of "Maritime Academy Act of 1958", viz., "by assisting and cooperating with the States and Territories in the operation and maintenance of maritime academies . . ." The quotation above may be fairly interpreted to mean that the Federal government will provide a reasonable share of the costs of operating and maintaining State maritime academies. Comparing the 1964 and the 1974 Academy annual operating budget, the financial assistance provided by the Federal government in the form of the annual maintenance and support allowance has declined substantially especially when the affects of inflation are considered.

2. A formula basis for determining the amount of the annual maintenance and support allowance—say 10 percent of each school's annual operating budget, or similar method for arriving at the Federal government's reasonable share—might be in order to rectify the present imbalance.

LOAN AND UPKEEP OF SUITABLE TRAINING VESSELS

1. Alternative approaches to MarAd's schoolship consolidation plan might include: (a) construct and furnish suitable training ships for each State maritime school if replacements are not available (see Sec. 3. (a) of Public Law 85-672), (b) charter US flag ships for use as training vessels during scheduled annual training periods, (c) furnish, repair, recondition, and equip as necessary suitable training vessels from existing government resources with the individual States to assume the costs for operation and upkeep within increased Federal annual maintenance and support allowance earmarked for this purpose.

I hope that these comments and suggestions will prove of some use to you.

Sincerely yours,

LEE HARRINGTON,
Rear Admiral, U.S.M.S.,
President.

EXTENDED REMARKS—MAINE MARITIME ACADEMY BY REAR ADM. E. A. RODGERS,
U.S.M.S. SUPERINTENDENT

Maine Maritime Academy was founded in 1941, prior to the entry of the United States in World War II. Its first graduates completed their training in early 1943. They and subsequent graduates served with distinction in the merchant marine and armed services throughout the war. With the return of peacetime conditions the Academy expanded its curriculum to a three-year program, and again in 1960 went to a four-year program. Academic accreditation was achieved in 1971, after a five-year period of candidacy, accreditation being accorded by the New England Association of Schools and Colleges.

Since its founding, some 2,450 men have graduated from Maine Maritime Academy, some 550 in the past five years. The great majority of these men have served in the merchant marine or the armed services. A survey of alumni made in 1968 showed that 77% of all graduates still held valid merchant marine licenses, with some 48% known to be sailing or in military service. Of the members of the graduating classes from the preceding five years, 96% were sailing on their licenses. For the last three years our graduates have demonstrated the same or better retention rate for sea service, despite a decrease in placement opportunities. An increasing number of graduates, reflecting greater acceptability and broader educational training, has moved into management trainee positions in the marine transport and allied industries. Of the 104 graduates of the Class of 1972, 70% are sailing on their licenses or are commissioned officers in the U.S. Navy or Coast Guard.

These figures are cited primarily to establish the assertion that our State Academy graduates have a vocation for the sea, and given the opportunity to obtain employment, they accept it and largely stay with it.

The support the State of Maine has given the Academy through these past years of retrenchment and indecision on the part of the federal government bear repeating. In the five year period from 1968 to 1973, the state contribution for current operations and new services has increased from \$546,000 to \$1,005,000. The total capital construction completed or initiated in this period comes to

6.3 million dollars. Meanwhile, the amount of Maritime Administration support has been frozen at the 1958 level.

Maine Maritime Academy has made impressive progress academically in these past five years. Accreditation in 1971 marked the culmination of five years of intensive effort to upgrade the academic level of the Academy without reducing the level of practical training. Contacts have been expanded within the academic community, the most noteworthy being the inauguration of a joint summer program with the Ocean Engineering Department of Massachusetts Institute of Technology. Recognizing our increasing dependence on ocean carriers for our fuel needs, we have expanded our relations with tanker operating companies and have constructed a unique tanker trainer model, which will give our students practical experience in the procedures of loading and discharging fuel from the modern giants of the sea.

On the annual training cruises, the Academy for a number of years has cooperated closely with the Maine State Department of Agriculture and other agencies interested in expanding trade by the promotion of Maine grown and manufactured articles and products. Four years ago the Academy cooperated with the Maine Association of the Partners of the Alliance for Progress in carrying goodwill cargo to Maine's sister state in Brazil. This venture was so successful the National Association of the Partners of the Americas has requested our cooperation in a vastly expanded project for this year, by carrying the gift cargoes from some ten of our state associations ranging from Maine to Florida to their sister states in Latin America. Planning is now going forward in cooperation with interested foundations and the Bicentennial Commission for the staging of a floating exhibition to be carried around the world during the Bicentennial year.

For the future the Academy is planning expanded academic and practical participation in the fields of marine industrial engineering, ocean science, and environmental studies. Our students are being offered additional opportunities to study shipyard operation and management through a cooperative program with Bath Iron Works. These additional courses and programs are designed to open broader perspectives and opportunities for licensed officers in the expanding marine environment. As one of the distinguished former members of our Board of Visitors once remarked, "A steamship company assumes that a Maritime Academy graduate knows seamanship or knows engineering. It is what else he knows that determines his value to the company and his ultimate achievement in his profession." It is very reassuring that today our graduates continue to be in great demand for a wide assortment of job opportunities. Our placement officer cannot accommodate the demand.

Surely, it is to the interest of this country to foster expanded opportunities to our young people. Our State Maritime Academies are on the right course, blending as few other schools do, the vocational, theoretical and intellectual experience which constitutes a well rounded education. The federal investment represented by the budget requests of the Maritime Administration for support to these Academies, in the futures of the young men who matriculate at the State Maritime Academies, is re-paid many times over through their lifetime of service in the maritime industry and the world at large. We might wish that all our government expenditures offered an equal promise.

TEXAS A. & M. UNIVERSITY,
MOODY COLLEGE OF MARINE SCIENCES AND MARITIME RESOURCES,
Galveston, Tex., March 12, 1973.

The attached statement and this preface covering Texas Maritime Academy, its programs, operations and costs with appropriate background and rationale are provided for the information and use of the Committee on Merchant Marine and Fisheries of the U.S. House of Representatives on March 13, 1973.

In May 1972, the Moody College of Marine Sciences and Maritime Resources of Texas A&M University dedicated its first two buildings on Pelican Island, in Galveston. The keynote speaker, Mrs. Helen Delich Bentley, Chairman of the Federal Maritime Commission, indicated in her remarks that a major reason the U.S. has lost its maritime heritage is the failure of our Universities to teach subjects related to the oceans. She commended the citizens of Galveston and Texas because Moody College was already emerging as a true leader in the field of ocean education. She described the Sea Grant Program, of which Texas A&M

University was one of the original four such designated Colleges, as the real key to true American reorientation in marine affairs.

Now after more than four years of operation as a Sea Grant College, Texas A&M has invested more than \$5.8 million in key programs of research, education and advisory sources aimed at the use and development of coastal and marine resources.

Texas Maritime Academy, as a major component of Moody College of Marine Sciences and Maritime Resources, reaps the unique advantages, benefits and associations with the College and the Sea Grant Program.

This preface is aimed at describing a little of the support, spirit and salt water flavored educational environment which gives Texas Maritime Academy its setting and strength.

Very respectfully,

JOHN W. SMITH,
*Rear Admiral, U.S. Maritime Service,
Superintendent.*

Attachment.

TEXAS MARITIME ACADEMY

Texas Maritime Academy (TMA) is a major component of the Moody College of Marine Sciences and Maritime Resources of Texas A&M University (TAMU). TMA was originally established in 1962 as an independent part of the Texas A&M System and graduated its first class of students in 1966. The consolidation with Moody College took place with the establishment of that College in September, 1971.

Moody College, including TMA, is located on the Mitchell Campus on Pelican Island, Galveston, Texas. Mitchell Campus, consisting of 100 acres valued at \$1.5 million, was donated by the Mitchell family of Galveston and Houston. TMA's current inventory includes: the Training Ship TEXAS CLIPPER (on loan to the State of Texas from the U.S. Government since 1965), supporting water-front, power and mooring facilities valued at \$650,000 provided by the State of Texas, and a modern administration and classroom building and an equipped engineering laboratory valued at \$1.1 million donated by the Moody Foundation of Galveston. Contractor bids have just been received on the construction of a modern dormitory, including dining facilities. It is expected that bids will be received and contract awarded by the Board of Directors of TAMU in April. The \$1.9 million required to build this facility is being provided by the Moody Foundation and other private donors. Additional funds for College expansion are included in legislation now before the Texas Legislature expected to be acted on this month. Ultimately, the Mitchell Campus will include about 20 buildings of which the 3 now completed, and the new dormitory will be a part.

TMA provides an accredited 4 year course and TAMU degree as Bachelor of Science in Marine Engineering or Marine Transportation. A third program leading to a Bachelor's degree in Marine Architecture is presently under development. Additionally, a program leading to a Bachelor's degree in Marine Sciences is being planned. In all cases these programs lead to a license as a maritime officer. The graduates also may apply for reserve commissions in the Navy, Coast Guard, Army or NOAA.

TMA is in the throes of construction and development. Presently, all 78 of its students are berthed and fed on the school ship TEXAS CLIPPER. The construction of the dormitory-dining facility will allow physical expansion as well as provided a modern study environment enhancing the Academy's recruiting program.

An additional recruiting benefit of considerable magnitude is the fact that the Board of Directors of TAMU recently approved lowering tuition rates for out-of-state students \$35 per semester hour resulting in equal rates for in and out-of-state students.

TMA has graduated 167 students since its first class (1966). Of this number, 97 are at sea in ships, 62 are in marine-associated industries and only 8 are known to be in non-related industries. TMA has been able to place 100 percent of its graduates each year, and at this time an over abundance of positions in an ever widening field of maritime industries exists in the Gulf area. About once per week a representative of one such industry comes into the Academy to talk to the seniors. It is apparent that the market for TMA graduates is large and expanding.

Aside from the output of students, there are features of support provided by TMA to the government and the marine industry that are most significant. The U.S. Maritime Administration (MARAD) has just asked TMA to take over the Radar Observer School in New Orleans, one of three such programs in the nation. This school trains and certifies a radar observer qualification for ships officers and other graduates. Last year, some 600 persons were trained in the New Orleans school. TMA expects the facility to be moved to Galveston and functioning by 1 July, thus relieving the Federal Government of the cost of operating the school. This training will enhance the Academy and provide a fuller range of training equipment for all. In addition, it will provide a highly valuable service to the Gulf States and the marine industry.

One of two National Maritime Research Centers (NMRC) is located on Pelican Island in Galveston, and research programs are under development with the NMRC and TMA. A research grant has been awarded for continued monitoring and testing of the sewerage treatment plant installed on the TEXAS CLIPPER. A proposal by TMA professional personnel is being developed with NMRC on the monitoring of stack gases emitted from ships in Galveston harbor.

TMA, in support of federal programs, has Iranian students enrolled this year and expects additional Iranian students next year.

TMA is asked by industry, and does, provide frequent seminars to re-train engineers and mates. Approximately 55 were processed in such a manner in 1972. Another such request that TMA is currently reviewing, is the establishment and operation of a school for licensing of operators and crews of the self-propelled, semi-submersible rigs in the offshore petroleum industry.

TMA is interested in and has asked to be considered for an NROTC Unit to provide further diversity for its students and support for the Federal Government.

In regards to funding, the State of Texas and private donor contributions for capital investment have totalled \$3.82 million. State support over the past 5 years has averaged about \$522,200 annually, and input from students about \$120,600. In comparison, federal funding (for ship repairs, student subsidy and contracted to state) over this same period has averaged about \$234,300. These figures illustrate that the Federal Government is paying less than one third of the annual cost of TMA's budget. (For a more detailed account see page 5)

The educational base which emanates from the Texas A&M University System is a benefit not obtainable to academies not aligned with such universities. All the educational assets of the University are available and contribute to the excellence of TMA, including professors, administrative guidance, standard procedures, professional assistance and advice in all categories. In using this base, TMA endeavors to broaden the education provided to its cadets and to give them more variety and options from which to choose.

The requirement to provide an adequate number of qualified officers to man merchant ships is now joined by an ever growing and widening need for different and challenging new types and concepts of maritime transportation such as the afore mentioned self-propelled, semi-submersible rigs, offshore drilling platforms, rivers and Inland Water Way craft and vehicles, maritime shore operations and administration. The present energy crisis and wheat shipments have accentuated the lack of U.S. bottoms. This has resulted in additional new construction and an increase in manpower needs not foreseen even two years ago. Industry contacts with TMA indicate a serious manpower shortage for ships officers by 1975. These all contribute to the security and industrial needs of the U.S. TMA's location as the only Maritime Academy in the Gulf area and in the heart of the petro-chemical industry makes it the prime source and focus for meeting the needs of all the Gulf States in the total industry.

The relatively small number of TMA students and graduates over the years has been due to the limitations of berthing cadets onboard ship due to lack of a dormitory facility. The current calendar year will see this problem eliminated and with all the construction programs envisioned and the positive factors cited, a rapid expansion is considered certain.

As with all Academies, TMA has a school ship "advanced in years" (30). A training ship is vital to the program. The older ship is also expensive. In the interest of objectivity and progress, if funds could be provided to construct one or two training ships "from the keel up" to serve the need of the several State Academies, it would be a major step ahead that would be in the interest of in-

dustry and State and Federal Governments, as well as being the most economical solution.

In summary, Texas Maritime Academy considers: 1) it is providing a superior highly qualified graduate at a low relative cost to the Federal Government; 2) State Government and TAMU are providing maximum support; 3) there is a market for considerably more TMA graduates; and 4) above all, the highest educational standards are being met. The State Maritime Academies, because of the low cost to the Federal Government and the proven experience of their professionally qualified graduates, make an invaluable contribution to the Nation's security and economy.

(Pertinent financial data and graduate placement figures are included on the following pages.)

I. TEXAS MARITIME ACADEMY FINANCIAL SUMMARY

A. ORIGINAL CAPITAL INVESTMENT (STATE AND PRIVATE DONORS)

One hundred acre campus—Pelican Islands	\$1,500,000
3 new buildings—Pelican Island	1,085,000
Waterfront and mooring facilities for school ship	650,000
Laboratory equipment	152,000
Sewerage treatment system for school ship	90,000
Power rectifier and boiler for shore power to school ship	65,000
Surface radar for school ship	20,000
Omega radar	5,000
Original restoration of Fort Crockett (original site of TMA)	250,000
Total	3,817,000

B. PROJECTED PLANNING

Plans and projections for development and expansion of the Moody College, including TMA, total \$14.76 million throughout the next 5 years. Legislation now pending before the Texas Legislature includes \$7.5 million for these plans.

C. TMA BUDGETARY AND FUNDING DATA

Fiscal year	Federal	State	Student	Total
1963	\$86,789	\$99,000	\$13,750	\$199,548
1964	112,332	183,515	47,788	343,635
1965	106,454	121,616	153,457	381,527
1966	197,492	280,457	128,858	606,817
1967	222,790	223,242	235,801	681,833
1968	223,236	287,068	98,170	608,474
1969	299,475	324,714	106,016	730,207
1970	235,438	389,140	93,520	718,098
1971	200,253	565,190	138,548	903,991
1972	212,552	662,585	132,548	1,007,685
1973	223,000	669,254	132,500	1,024,754
Total	2,119,811	3,136,598	1,280,956	6,537,365

Notes.

1. Federal funds provided annually include a \$75,000 grant, \$600 per eligible student in accordance with General Order 87 and funds for ship repairs and maintenance.

2. Figures for FY 1973 are based on best estimates.

3. Summary for past 5 years:

Federal	\$1,170,718	Annual average	\$234,143
State	2,610,884	Annual average	522,176
Students	603,132	Annual average	120,626
Total	4,384,734	Total	876,946

II. TEXAS MARITIME ACADEMY GRADUATE PLACEMENT DATA

Class	Graduates	At sea	Ashore in maritime industry	In nonmaritime positions
1966	13	4	8	1
1967	15	5	9	1
1968	27	14	12	1
1969	27	14	11	2
1970	32	21	10	1
1971	34	25	7	2
1972	19	14	5	0
Total	167	97	62	8

Notes.

1. More than 95% of all students graduated are now at sea or in related industry.
2. Indications are that more than 90 vacancies exist for TMA graduates at this time. Of this number, nearly 75 are at sea as ships' officers.

STATEMENT OF THE PRESIDENT OF THE STATE UNIVERSITY OF NEW YORK—MARITIME COLLEGE

Mr. Chairman, Members of the Committee.

I am Rear Admiral Sheldon Kinney, President of the State University of New York Maritime College. The Maritime College is grateful for the opportunity to appear before your committee to testify concerning funds for maritime training.

The State University of New York Maritime College at Fort Schuyler will, in 1974, celebrate its Centennial Year. It is the oldest of the "State Nautical Schools" and one of the oldest units in the State University of New York.

Situated on Throgs Neck at the western end of Long Island, the Maritime College has a most modern campus and facilities, and a great variety of quality degree programs. The College is accredited by the Middle States Association of College and Secondary Schools. The Marine Engineering curriculum is unique among the Marine Engineering programs offered by maritime training institutions in that the program is accredited by the Engineers Council for Professional Development. In addition, an engineering graduate is eligible to take Parts I and II of the New York State Professional Engineers examination, the successful passing of which earns him the designation of Intern Engineer. The Marine Transportation degree is approved by the Court of Appeals for admission to law schools in the State of New York.

The Maritime College serves the nation, in general, and the maritime industry, in particular, by offering programs leading to a Bachelor of Engineering degree in: Marine Engineering, Naval Architecture, Electrical Engineering, and a Bachelor of Science degree in Nuclear Science, Meteorology and Oceanography, Marine Transportation Economics, Marine Transportation Management, and Mathematics. In addition to qualifying each cadet for his license as third mate or third assistant engineer and his commission as Ensign, the Maritime College has offered an academic program leading to a Masters Degree in Transportation, since 1969. This curriculum provides advanced academic knowledge to managerial personnel equipping them with the advanced techniques requisite for upper echelon decision makers.

The Report to the National Academy of Sciences by the Panel on support for Maritime Research and Education of the Maritime Transportation Research Board (January 1973) stated, in concluding:

"The Maritime Administration and the maritime industry should seek to strengthen their relationship with universities and other educational and non-profit institutions to insure a continuing supply of professional specialists who will be knowledgeable, concerned, and committed to careers in the maritime field. If the maritime industry of the United States is to be improved, if the ship building and ship operating industries are to regain vitality and initiative, and if the Maritime Administration itself is to serve those industries and the American

people in an enlightened and progressive manner, then they all must continually seek young and intelligent personnel and new ideas. Maritime Education and Research should, therefore, be among the foremost concerns of both the maritime industry and the Maritime Administration."

The State University of New York Maritime College is particularly responsive to this recommendation. We have evolved during the past 100 years as a prime source of qualified officers for the American Merchant Marine and marine oriented executive personnel for the transportation industry. The College produces about 130 licensed officers for the merchant marine each year. In response to the changing demands of the maritime industry for personnel, both seagoing and ashore, the state has expanded and strengthened the curricular offerings and has expended considerable sums for capital improvement. The capital expenditures and curriculum improvements have been necessary in order to attract the type of young American who is not only capable of coping with the complex problems of modern technology involved in ship operations at sea, but also has the potential to take his place among the captains of industry. We train for the Third Mate License and the Third Assistant Engineer License, but quite importantly, we educate while we train. The college provides America with well-educated mariners capable of serving at sea and ashore.

The Federal government provides a fraction of our operating expense, but this is vitally necessary for our continued existence, and not available from state or private sources. It seems to us, however, a false economy to hold at a 15-year old level, support for the source that provides quality merchant marine officers at the least expense to the Federal taxpayer. (The most recent federal computation of all sources, 1970, showed the federal cost per graduate at New York Maritime to be \$4,068).

The State of New York, responding to the educational needs of the maritime industry and the expressions of the Congress in enacting the Maritime Academy Act of 1958 on the continued need for the State Maritime Schols, modernized the physical plant in two stages. The first, between 1958 and 1969, necessitated an expenditure of \$17.8 million for new classrooms, laboratories, library, dormitories, and gymnasium. The second stage, between 1969 and 1972, completed the modernization of the plant by providing additional dormitory space, dining facility, student activities building, etc. at an additional expenditure of \$6.4 million. The total investment since 1958 for capital construction alone amounted to more than \$25.3 million. More than \$2 million was expended for facilities equipment since 1964.

The capital contribution of the Federal government has of course been the loan of the training ship of federal ownership. In addition to its use as a floating laboratory to train cadets, the Training Ship is a cooperating observer for the United States Weather Bureau providing meteorological data for world-wide weather forecasts. Oceanographic data is gathered on a daily basis for use by the United States government. In this connection the ship has been used, while on training cruises, to gather data in the Atlantic and Mediterranean useful in determining mercury levels below the air-sea interface. The EMPIRE STATE has been equipped by the State University of New York with a seismic profiler in order that the ocean bottoms may be charted. During the summer of 1972, much valuable data was gathered for the Smithsonian Institute using this equipment. Faults in the earth's crust, off the Spanish coast that scientists believed were there, were clearly outlined. It must be emphasized that while the Federal government provides the ship and certain repair sums, the State funds all other operational and educational commitments. With Federal appropriations for oceanographic research being cut, causing research vessels to be inactivated, the training ships' value as an asset to oceanographic research increases.

The State of New York provides annual operating funds to the Maritime College. It is expected that during the 1974 fiscal year the state will appropriate \$4 million. For this same period we estimate that the Federal appropriation will be about half a million dollars. (About one-eighth that of New York State). Included in this estimate is \$358,000 for cadet subsidies, \$128,000 for training ship maintenance and repair, and \$75,000 in tuition reimbursement payments by the Federal Government to the State of New York for accepting out-of-state cadets. The total cost to the Federal government per cadet will be less than \$900.

The subsidy to a cadet, set at \$600 per year in 1958, and unchanged since that time, compares to his annual out-of-pocket cost of \$2,400. While education cost has constantly risen since 1958, the cadet subsidy has been frozen at a 15-year-old

level. When the amount was established, it paid the majority of his out-of-pocket costs. As his obligations to the Federal government and his benefit to the nation are identical to those of his Kings Point counterpart, it is hoped that this stipend will be increased.

The State of New York is firmly committed to educating, training and indoctrinating a graduate who in his capabilities at sea and in the maritime industry has no superior. We consider our education and training second to none. Again, referring to the 1973 report on maritime academies should be encouraged to increase emphasis on "managerial, technical and administrative education programs", the Maritime College, a quarter of a century ago, came to this conclusion and began to equip a graduate in order that he could enter any phase of the maritime industry. More than 90 percent of our graduates are employed in the maritime industry either as ship's officers or as "shoreside" executives.

Seagoing employment is union controlled. We experience the same difficulties in obtaining seagoing employment that a graduate of the Federal Academy has, however, we have no difficulty in placing graduates who do not go to sea in the maritime related fields. Thus, we have a four-year program of educating and training a marketable young man, using facilities largely provided at considerable expense by the State.

State funded research projects of considerable importance to the marine environment have been conducted at our campus at Fort Schuyler affording the cadets and faculty an invaluable educational experience. Our faculty members possess superior academic credentials and are well qualified to conduct seminars, and research work, as well as ably teach. The computer laboratory, built and maintained at State expense, is freely available to staff members and cadets for research work. Research projects underway at the Maritime College include a joint New York, New Jersey, Connecticut project on water pollution; studies into low pressure natural gas transportation and a project to develop a pollution free cargo tank cleaning system for use on board tankers.

The sums which the Department has recommended to you in H.R. 5449, if authorized and appropriated by the Congress would provide:

First.—An annual subsidy of \$600 to our United States Maritime Service Cadets. This subsidy assists the Cadet in defraying the cost of uniforms, textbooks, and subsistence in preparing for a career in the merchant marine and maritime industry. But this amount is now only half of what is currently required to meet the actual cost to the Cadet.

Second.—Provide Maintenance and Repair funds for training ships. The Maritime Administration has indicated that these funds will be curtailed in the near future. We expressly desire a guarantee that each Academy will be provided with its own vessel suitably equipped as specified in the Maritime Academy Act of 1958.

Third.—Provide \$75,000 to New York to be used for the maintenance and support of the Academy.

(Parenthetically we would note that in addition the Federal government provides a Naval Science Department at the College to instruct the Cadets in the subjects and skills which qualify them on graduation for commission as Ensigns in the merchant marine component of the Naval Reserve and thereby enhance their value to the total maritime strength of our nation. This department is staffed by the Navy in state funded facilities.)

Funds appropriated for the subsidy of the State Maritime Academies have remained essentially the same since the Maritime Academy Act of 1958 became law. Despite this the states have constantly increased their expenditures for plant and academic improvement.

Considering now our recommendations on the fund authorization in order of priority, I respectfully submit and request:

1. That \$600 annual subsidy (or \$50 per month) set in 1958, as the Cadet's "allowance for uniforms, textbooks, and subsistence" be increased to reflect current costs for these items. As a "yardstick" the Congress in the last session raised the corresponding "stipend" for college NROTC Midshipmen and ROTC Cadets from \$50 per month to \$100. The Cadets of the U.S. Maritime Service in the college merits the same consideration. I earnestly request that Public Law 85-672 of the 85th Congress, August 18, 1958, be amended to provide "a rate of \$1,200 per academic year per student" vice \$600.

2. We have been informed by the Department of Commerce that budgetary constraints will force within two years the withdrawal of the schoolship from the schools and the assignment of one or possibly two ships for all the Academies.

The states provide excellent "colleges" ashore for the education and training of the Cadets, but they cannot provide the schoolship. I expressly urge that the Congress affirm and continue to honor the principle specified in the Maritime Academy Act of 1958 that each State Academy will be provided a training ship by the Secretary of Commerce.

The State University of New York Maritime College constitutes a valuable national as well as State asset. It has been strengthened, enriched in curriculum, and endowed with a splendid physical plant with the encouragement of the Federal government to help meet the national need. The Federal sum required to assist in realizing the full potential is modest. We are confident that it has returned quality and quantity for the Federal support it has received over the past 99 years. We fervently hope that appropriations for this program will be increased thereby reflecting the government's role in support of the state maritime education in the national interest.

STATEMENT OF CAPT. WHEATLEY N. HEMMICK, Jr., DIRECTOR
OF THE GREAT LAKES MARITIME ACADEMY

On behalf of the Great Lakes Maritime Academy, a Division of North western Michigan College, I wish to express my appreciation for this opportunity to present the following statement supporting continued Federal appropriations for State Maritime Academies. Since the Great Lakes Maritime Academy is the youngest of the State schools and is offering a unique approach to Merchant Marine Officer Training I feel that greater detail of the educational philosophy adopted by the Academy and Northwestern Michigan College is required. I therefore request your analytical perusal of the following.

Capt. WHEATLEY N. HEMMICK, Jr.,
Director, Great Lakes Maritime Academy.

MISSION OF THE ACADEMY

To serve the Great Lakes and connecting waterways of the United States by offering the young man seeking a career a life on the seas and the ships and boats plying these waters; and to sustain in these waterways the flexibility of alert, imaginative education designed to meet the demands of future technology in an expanding marine transportation complex.

INTRODUCTION

The proper training of maritime personnel has long been a concern for both the economic well-being and security of the nation. A longstanding philosophy has evolved that is a mutual concern of both state and nation. As far back as the late 1800's the government of the United States, in an effort to encourage the states to initiate maritime programs, offered direct assistance through the United States Navy. An Act of Congress in 1874 authorized the Secretary of the Navy . . . "Upon application in writing by the Governor of the state, to furnish a suitable vessel of the Navy, properly equipped . . . to be used for the benefit of any nautical school or college having a nautical branch established at each or any of the ports of New York, Boston, Philadelphia, Baltimore, Norfolk and San Francisco, upon the condition that there shall be maintained at such port a school or branch of a school for instruction of youths in Navigation, Seamanship, Marine Engineering, and all matters pertaining to the proper construction, equipment, and sailing of vessels . . ."

New York was the first state to avail itself of the benefits of the Act and today the New York Maritime College at Fort Schuyler, Bronx, New York offers a full four year higher education program leading to a Baccalaureate Degree. Massachusetts, Pennsylvania, Washington, Maine, California and Texas followed . . . of these, the schools in Pennsylvania and Washington have not survived. (At this time it appears that the State of Washington, through its community college in Seattle, may revive a full maritime program.) In addition to the five state academies presently in operation, the Federal Government, through the Merchant Marine Act of 1936, provides a full four-year program at Kings Point, Long Island, New York. It was the United States Merchant Marine Academy that set the pattern for the full Baccalaureate Degree concept in maritime training. Nearly a full century has passed since the original Act of 1874, and until the present no lake state has participated despite the fact that lake fleet equals approximately one-third of the United States ocean fleet. After eight dec-

ades of experimentation through periods of decline and expansion in the ocean fleet, Congress in 1958 reaffirmed the policy of Federal assistance to state maritime training as follows:

(Public Law 85-672, August 18, 1958) Maritime Academy Act of 1958—Declaration of Policy "Sec. 2, It is hereby declared to be the policy of this Act to promote the national policy with respect to the United States Merchant Marine, as set out in Section 101 of the Merchant Marine Act, 1936, by assisting and cooperating with the states and territories in the operation and maintenance of maritime academies or colleges for the training of Merchant Marine officers."

In the addition to the five state academies and one federal academy, there are seven maritime licensed labor training programs primarily involved with upgrading of seamen and officers currently sailing. These programs, with the one exception of that offered by the Marine Engineers Beneficial Association (MEBA # 1) District I, located in Baltimore, Maryland, are of the cram-type course designed to provide the experienced seaman with the educational know-how to pass the examinations for specialized ratings and licenses as used by the United States Coast Guard. All but one—Association of Marine Officers (AMO) are located on the seaboard states and are training for the ocean trades. It is significant to further note that all have been started within the past eight years. Supplementing the federal, state and union programs are a number of private navigation and marine engineering schools located primarily in the vicinity of United States Coast Guard licensing offices.

To evaluate the in-put of all of these programs and schools it becomes obvious that a thorough and complete understanding of the problems of the marine industry, and more specifically, of the Great Lakes and inland waterways as they are interrelated, is paramount in the planning of a program. In order to accomplish this, the Academy has interviewed innumerable persons, including ship masters, chief engineers, United States Coast Guard and maritime administration authorities, both within and without the marine industry, and drawn heavily upon recent studies of training and manpower, some of the most notable being "Annual Report Lake Carriers' Association"; "Shipboard Manpower—A Statistical Study of Men in the U.S. Merchant Marine 1962-1963", National Academy of Sciences; "An Abridged Study of and Recommendations for Maritime Training in the United States" by John P. Miraglia; "State Plan for Higher Education in Michigan" based upon the work of Dr. Harold T. Smith; "Licensing of Deck and Engineering Officers in the United States Merchant Marine" by Benjamin Shimberg, Educational Testing Service, Princeton, New Jersey; and statistics available through the Maritime Administration, the United States Coast Guard and other sources.

Once the clear need for a program was established, the Academy then attempted to assess the most viable course and education vehicle suited for the primary purpose of meeting the long range needs of the industry on the lakes and inland waterways. Conclusions drawn and program outline are unique in that they attempt to bridge the gap between the Baccalaureate concept of the federal and several state programs and the trade school concept of labor and private navigation and marine engineering schools. It must be accepted, also, that perhaps the main achievement of any new program on the lakes and in the ocean trades may be measured by the public spirit and acceptance of both the program and the industry. If any one thing becomes clear throughout an exhaustive study of manpower and training problems in the marine industry, it is the need for first public acceptance and respect for the seaman and second, an infusion of new blood aboard the ships.

JUSTIFICATION

Considering the number of programs outlined in the introduction of this paper, it appears only logical that the lakes and inland waterways systems would look first to those programs as a source of manpower if indeed a need exists. Following this logic, a careful perusal of the available statistics reveal that this is virtually an impossibility. First, the programs, as presently operated and projected, have not met the minimum requirements of our inland waterways and specifically the continual needs of the Great Lakes. Perhaps of more importance in considering the requirements of the Great Lakes and Inland Waterway systems is that because of the unique nature of the trade and systems, experience and training of ocean seamen does not necessarily qualify or acclimate an individual to the daily operations of the vessels plying the lakes, canals, and rivers of our inland waterways . . . The nomenclature is in opposition . . . The pilot

rules are at variance . . . The vessel construction and equipment is unique . . . The licensing examinations for deck officers and the required experience are in opposition . . . The daily work and the nature of the trade routes require an entirely different outlook to that of the ocean voyager. (At one time the United States Merchant Marine Academy attempted to incorporate a Great Lake concept of training into the program. It was dropped, we are told, because, "despite the fact that the students selected were from the mid-west, their close association with the Academy at Kings Point and the 'glamour' attached to the ocean voyages made recruitment and attrition an impossible administrative problem.")

As of December, 1969, the Great Lakes fleet surveyed as follows: Licensed ships' personnel employed aboard U.S. Flag Great Lakes vessels reportedly number about 2,800, consisting of some 1,200 deck and 1,600 engineering officers. Shipboard employment opportunities are generated by 246 ships having an average staff of 4 deck and 4.5 engineering officers per vessel providing 984 deck and 1107 engine officer billets. The reported manpower pool should afford a ratio of 1.22 deck officers and 1.45 engine officers per job which is considered minimal in contrast to officers on the high seas where a ratio of 1.5 deck and 1.7 engineering officers per job has been the acknowledged standard. The constricted man-to-job ratios evident in the Great Lakes District may also serve to explain the gradual increase in short-handed officer complements aboard Great Lakes vessels. Unfilled deck officer jobs were reported as averaging 14 daily in 1968 and 20 per day in 1969. Licensed engineers were unavailable to the extent that a daily average of 30 jobs are unfilled during the present shipping season. This situation also applied last year, 1972. A spokesman for Master/Mates/Pilots in the Great Lakes District stated that the Union had a "handful of deck officers in their upper 60's" on standby for port relief work. These men, due to their age and some minor infirmities, were reluctant to accept voyage assignments. In reviewing the age distribution among licensed engineers, we can surmise that the age also contributes to the lack of sufficient engineers to fill all sailing requirements.

The age of the Great Lakes officer workforce is reflected in the median age of 46 for deck officers and 50 for engineering officers. Ships' officers over 50 years of age constitute 36.2 percent of deck officers and 48.4 percent of engineering officers. By ten-year age groups, the 1969 workforce is distributed as shown below. (see next page)

Age group	Deck officers		Engine officers	
	Number	Percent	Number	Percent
61 to 70	128	10.8	226	13.7
51 to 60	299	25.4	573	34.7
41 to 50	452	38.4	538	32.6
31 to 40	227	19.3	237	14.3
30 and under	172	6.1	178	4.7
Total	1,178	100.0	1,652	100.0

¹ Includes men receiving original 3d's licenses from industry training programs in 1969; 14 deck and 22 engine.

The Great Lakes workforce has for many years regarded itself as distinctly different from those officers and men sailing the high seas. Many Great Lakes ships' officers pride themselves in their continuing association not only with the same employer but with the same ship for periods of 35 or 40 years. Vacations and other breaks in service were generally deferred to the end of the 8 or 9 month Great Lakes sailing season. Bonuses for continuity of employment for assisting in preparation of seasonal activation and layup were the general rule in lieu of vacation benefits. As a result, crew turnover during the shipping season was minimal and the workforce in past years was generally regarded as adequate.

The infusion of younger men in the workforce generated demands for vacation benefits within season rather than deferring such credits to the seasonal layup period. Shipowners who demurred found an increasing turnover in their crew complements. The continuing expansion of union representation served to extend contractual obligations of employers to agree to vacation plans which at present are not too dissimilar from the benefits being given to men sailing the high seas. Deeper union penetration into the Great Lakes also created new, or served to enhance established pension programs. Pension benefits are currently almost

identical to those for seamen on the Atlantic and Gulf Coasts permitting retirement after 20 years of service regardless of age. These vacation and pension benefits constitute radical changes for the employment patterns that had prevailed on the Great Lakes and will adversely influence the future number of men, particularly ships' officers who will be available for assignment.

Of particular significance is the peak of men aged 22 to 30 that are evident in the high seas workforce but absent from the Great Lakes group. The absence of this age group from among the Great Lakes officers, specifically the deck officer category, is partly attributable to U.S.C.G. qualification standards that prescribe for original mate and pilot's license, three years as a member of the deck department during which time the applicant must have served at least one year in the capacity of quartermaster, wheelsman or as deckhand whose routine duties included wheel watch. The emphasis given to standing regular watches at the wheel to perfect the piloting ability of the Great Lakes deck officer applicant has no parallel qualification requirement for a third mate's (ocean) license. Present graduates from the Federal or State Academies, lacking the cited helmsman experience, would not qualify as third mates for Great Lakes ships.

The 22 to 30 year group, as it compares to the same age group on the high seas is:

Age Group 22 to 30	Total	
	Percent of Great Lakes	Work force high seas
Deck officers.....	5.7	14.5
Engineering officers.....	3.5	12.2

PROJECTION OF THE GREAT LAKES FLEET AND WORKFORCE, 1969-1979

Assuming that during the next five years, 42 vessels currently sixty-years of age or older will be scrapped, half of which will be replaced by new tonnage, the number of officer billets would be affected as shown:

Year	Projected fleet	Officer billets	
		Deck	Engine
1969.....	246	984	1107
1970.....	240	960	1080
1971.....	234	936	1050
1972.....	230	920	1035
1973.....	227	908	1022
1974.....	225	900	1013
1975.....	225	900	1013
1976.....	225	900	1013
1977.....	225	900	1013
1978.....	225	900	1013
1979.....	225	900	1013

The manpower required to fill these officer billets over the next ten years cannot be readily estimated with any degree of certainty due to the limited information available as to the current and future employee response to constantly increasing social benefits and emerging changes in the employment habits of the workforce. That the man-to-job ratio could conceivably reach a level similar to that of the current high seas workforce (1.5 deck to 1.7 engine officers per job) seems realistic. (The lakes are currently involved in an extended shipping season which is already affecting the man power requirements.) Lacking a clear indication as to when and if such a ratio will prevail, the existing ratio for Great Lakes officers (1.22 deck and 1.45 engine officers per billet) has been applied in an effort to present a conservative estimate of the number of ships' officers required for the Great Lakes Fleet.

MANPOWER REQUIREMENTS

Year--	Deck officers		Engine officers	
	Billets	Men at 1.22	Billets	Men at 1.45
1969.....	984	1,200	1,107	1,605
1970.....	960	1,171	1,080	1,566
1971.....	936	1,142	1,053	1,527
1972.....	920	1,122	1,035	1,501
1973.....	908	1,108	1,022	1,482
1974.....	900	1,098	1,013	1,469
1975.....	900	1,098	1,013	1,469
1976.....	900	1,098	1,013	1,469
1977.....	900	1,098	1,013	1,469
1978.....	900	1,098	1,013	1,469
1979.....	900	1,098	1,013	1,469

The attrition rate for the Great Lakes officer workforce would be expected to be strongly influenced by the greater proportion of men in the higher age brackets. The reported employment patterns established by the older age group whereby association with the same employer, and infrequently the same ship for periods of 30 to 40 years, is not expected to remain a continuing pattern. If the behavior patterns regarding employment of the high seas officer workforce is any indication, new men joining the Great Lakes officer workforce can be expected to display similar characteristics of skill mobility contributing to withdrawal from shipboard employment. While the National Academy of Sciences Study of 1962-63 estimated officer attrition including Great Lakes, in excess of five percent annually, an attrition factor of five percent is regarded as conservative and has been used, in conjunction with estimated input, to project the size of the officer workforce in relation to the anticipated manpower requirements.

DECK OFFICER SUPPLY AND DEMAND

Year	Annual		Input		Deck officers		
	Work force	Attrition	LCA	MEBA No. 2	Available	Required	Deficit
1969.....	1,200	60	10	4	1,154	1,200	46
1970.....	1,154	58	10	7	1,113	1,171	58
1971.....	1,113	56	10	10	1,077	1,142	65
1972.....	1,077	54	10	10	1,043	1,122	79
1973.....	1,043	52	10	10	1,011	1,108	97
1974.....	1,011	51	10	10	980	1,098	118
1975.....	980	49	10	10	951	1,098	147
1976.....	951	48	10	10	923	1,098	175
1977.....	923	46	10	10	897	1,098	201
1978.....	897	45	10	10	872	1,098	226
1979.....	872	44	10	10	848	1,098	250

ENGINEERING OFFICERS SUPPLY AND DEMAND

Year	Annual		Input		Engine officers		
	Work force	Attrition	LCA	MEBA #2	Available	Required	Deficit
1969.....	1,600	80	8	14	1,542	1,605	63
1970.....	1,542	77	10	15	1,490	1,566	76
1971.....	1,490	75	10	20	1,445	1,527	82
1972.....	1,445	72	10	20	1,403	1,501	98
1973.....	1,403	70	10	20	1,363	1,482	119
1974.....	1,363	68	10	20	1,325	1,469	144
1975.....	1,325	66	10	20	1,289	1,469	180
1976.....	1,289	64	10	20	1,255	1,469	214
1977.....	1,255	63	10	20	1,222	1,469	247
1978.....	1,222	61	10	20	1,191	1,469	278
1979.....	1,191	60	10	20	1,161	1,496	308

This projection has been attempted with only marginal information concerning the Great Lakes officer workforce. Labor and management spokesmen, while well informed, were generally unable to address themselves to industry-wide problems concerning shipboard manpower. Statistical fragments have been pieced together as best as such data would lend itself, to assure some semblance of facts suitable to logical interpretation.

The anticipated rejuvenation of the Great Lakes Fleet is currently well underway. Two new super ore carriers are in operation and contracts have been let for new automated self loaders and tankers. The projections now call for twenty super carriers and forty self unloaders within the next fifteen to twenty years. During the past two decades the nation has witnessed a tremendous impetus in the use of inland waterways. New and highly sophisticated systems of commodity handling equipment have been developed. Certainly the assured transportation of our basic raw materials-ore-grain-coal and oil are paramount to the health, economic well being, and international stature of the Nation.

The Great Lakes Maritime Academy has been created and is developing its curriculum, job training, public education and recruitment to first meet the supervisory and operating personnel requirements for the inland waterways and second to alert the citizenry to the importance of our natural water highways.

This year the State of Michigan will spend \$1,628,085 representing 55.1% of the college budget of this the Maritime Division will account for \$164,929. The Academy is regional in concept serving primarily the eight states bordering the Great Lakes. Students come from Buffalo to Duluth. Their aim is to become a Master or Chief Engineer of a Great Lakes vessel. In Capital outlay the State's Investment is as follows:

Funds from State of Michigan for our vocational technical building (site of our maritime academy)-----	\$389, 750
State of Michigan aid to Northwestern Michigan College for operations (current year)-----	1, 628, 085
Local taxes for operations (current year)-----	200, 000

The U.S. Maritime Administration provides the following funding:

(1) Operation (annual)-----	\$75, 000
(2) Maintenance and repair of vessels (total cost to date)-----	100, 000
(3) Student subsistence (\$50 per month per student)-----	30, 100

Considering the unique approach to technical and vocational education as applied at Northwestern Michigan and the fact that we are still in the development stage I have attached a detailed outline of the basic Great Lakes Maritime Program: a summary of current students; and a list of "Spin-Off" related programs. We believe that the total utilization of class rooms, labs, floating equipment, and diverse disciplines as exemplified in the community college concept offers a most excellent vehicle for a complete Maritime Program. We are progressing accordingly.

Respectfully submitted.

Capt. WHEATLEY N. HEMMICK, Jr.,
Director, Great Lakes Maritime Academy.

GREAT LAKES MARITIME ACADEMY—(REVISIONS TO CATALOG)

ENTRANCE REQUIREMENTS

Admission to the Academy is based on (a) the same standards required of all graduation candidates entering Northwestern Michigan College and (b) the same standards used for admission to other state maritime academies with the exception that Great Lakes Maritime Academy students are not required to be unmarried at the time of admission nor to remain single during the program.

Students who have completed some of the required courses elsewhere may be admitted with advanced standing. The College also offers opportunities for students to take qualifying courses if they are weak in high school mathematics.

Each applicant to qualify for United States Maritime Service must:

1. Be a citizen of the United States.
2. Meet the physical standards specified by the United States Coast Guard for original licensing as a merchant marine officer.
3. Be no less than 17 years of age.

4. Have a secondary school education or equivalent, satisfactory for admission as an undergraduate.

Students admitted to the Great Lakes Maritime Academy, who have applied for and been enrolled in the United States Maritime Service, will be entitled to receive a uniform, textbook and subsistence allowance, provided that Congress has appropriated necessary funds for this purpose.

For complete information on how to make application to the Great Lakes Maritime Academy, address inquiries to:

Dean of Admissions, Northwestern Michigan College, 1701 East Front Street, Traverse City, Michigan 49684.

The model schedule that follows lists the course work included in the Great Lakes Maritime Academy curriculum:

FIRST YEAR

Summer term

Emphasis is on basic seamanship and basic college introductory courses. All cadets live and cruise aboard Academy vessels for half the term. Cadets work and maintain the vessels during the cruise and in port under supervision of officer personnel and learn practical application of shipboard operations as it is practiced on Merchant ships. Basic watch standing in engine, deck, and galley is scheduled.

Courses offered are:

Summer term: MaGL 101 Introduction to Maritime Disciplines I; CoEn 97 Freshman Communications; SMMa 111 Intermediate Algebra; MaGL 34 Maritime Drawing.

During the next two terms cadets concentrate on basic college academic work and a progressive seamanship and engine course leading to unlicensed ratings in both deck and engine departments.

Courses offered are:

Fall term: MaGL 102 Introduction to Maritime Disciplines II; CoEn 98 Freshman Communications; SMMa 121 College Algebra; SMPS 101, 102 Introduction to Physical Science (Chemistry) and Lab.

Winter term: MaGL 103 Introduction to Maritime Disciplines III; MaGL 184 Marine Electrical Theory; CoEn 99 Freshman Communications; SMMa 122 Trigonometry.

Upon completion of his first three terms the student designates his choice of deck or engine department.

During the next two terms, studies are as follows:

Qualifying Experience-On Job Training. Cadets work for six months aboard Great Lakes commercial ships. To provide relevant qualifying experience, students who have selected Deck Officer option will be assigned duties appropriate to that objective, and those who have selected Engine Officer objective will be assigned appropriate duties in that department. All students will receive ordinary seaman pay for this six month period. During the practical on job experience all students will continue academic studies by following course material in work books, completing specified assignments and mailing them to the College where they will be analyzed and graded, then returned to students. In addition, students will be assigned Sea Projects that combine practical experience and reading courses in Deck or Engine objectives and are analyzed by Academy instructors.

Self-Studies are as follows:

Spring term: Sailing cadet/ordinary or cadet/wiper; MaGL 153 Sea Project—Deck or Engine; HuHi 102 History of Western Civilization.

SECOND YEAR

Summer term: Sailing cadet/ordinary or cadet/wiper; MaGL 154 Sea Project—Deck or Engine; HuHi 103 History of Western Civilization; CoEn 151 Introduction to Literary Types—Maritime.

Fall term—Deck: SMPS 117, 118 Meteorology & Lab; MaGL 142 Ship Stability; MaGL 121 Navigation; MaGL 131 Communications; MaGL 161 Nautical Rules of the Road. Engine: MaGL 286, 287 Diesel Engineering I & Lab; MaGL 142 Ship Stability; MaGL 111 Marine Welding; MaGL 186, 187 Marine Electrical Engineering I & Lab; MaGL 181 Machine Shop.

Winter term—Deck: SMPS 119, 120 Astronomy & Lab; MaGL 122 Navigation II; MaGL 132 Elec. Aids to Navigation; MaGL 147 Cargo Stowage; MaGL 223 Navigation Electronics Lab. Engine: MaGL 171 Steam Engineering I; MaGL 176 Steam Engineering I—Lab; MaGL 288 Diesel Engineering II; MaGL 289

Diesel Engineering II—Lab; MaGL 188, 189 Marine Electrical Engineering II & Lab.

Spring term—Deck: MaGL 123 Navigation III; MaGL 201 Maritime Law; MaGL 211 Ship Management; BuDP 110 Computer Programming. Engine: MaGL 172 Steam Engineering II; MaGL 177 Steam Engineering II Lab; MaGL 144 Auxiliary Equipment; MaGL 145 Auxiliary Equipment Lab.

THIRD YEAR

Summer term: Sailing cadet/observer; MaGL 155 Sea Project—Deck or Engine; SSPo Survey of American Government; MaGL 261 History of Great Lakes Shipping.

Fall term—Deck and Engine: MaGL 203 Labor Relations; SSPs 101 General Psychology; MaGL 267 Shipboard Medical Practices; SMPS 105, 106 Introduction to Physical Science (Physics) & Lab.

Winter term: License Preparation—Deck or Engine.

TECHNICAL AND VOCATIONAL PROGRAMS OF NORTHWESTERN MICHIGAN COLLEGE, TRAVERSE CITY, MICH.

Automotive service technology; Welding technology; Electronics technology; Drafting and design technology; Data processing.

GREAT LAKES MARITIME ACADEMY STUDENT ENROLLMENT

Graduated: William Cederholm; Constantin Deliyianides; Richard Friday; Christian Hagen; Malcolm Lamp; Bob Noffze.

Entered in the year 1969: James Lake; John Tomlinson.

Entered in the year of 1970: Thomas Bentsen; John Hayes; William Kivell; Stuart Lamp; Robert Mason; Richard Paris; William Sandell; Robert Voce; Andrew Sciuillo; Robert Zink; Craig Silliven.

Entered in the year of 1971: David Allen; Rick Barthuli; George Biros; Ronald Carlson; Kenneth La France; Dale Miller; Thomas Petro; Barrett Sutton; Gerald Zorsch.

Entered in the year of 1972: Mark Adamson; Christopher Chadwick; Steven Desotell; Bradley Ell; Dwight Engelhardt; Arthur Goussy; Harold Halperin; Albert Heber; Ivar Kazaks; Mark Lathrop; Robert Le Furgy; Andy Mangiaracina; Cyril Mayne; Paul Mooney; Wayne Niebroski; Richard Oberg; Curtis Parker; Kirk Rubright; Richard Schultz; Raymond Sheldon; Bryce Sunderlin; William Tessman; Robert Waldron; David Wallin; George Wilken; Geoffrey Woods; William Yockey.

Entered in the year of 1973: Kevin Ling; Mark Phillips; Ralph Yanik.

Graduates, 6; 1969, 2; 1970, 11; 1971, 9; 1972, 27; 1973, 3; total current enrollment 52.

Student enrollment from the following States: Michigan, 38; New York, 5; Wisconsin, 2; Ohio, 4; Illinois, 2; Maine, 1.

March 12, 1973.

[Whereupon, at 12:40 o'clock, p.m., the subcommittee adjourned, to reconvene Wednesday, March 21, 1973.]