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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1975

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS UNITED STATES SENATE

NINETY-THIRD CONGRESS

SECOND SESSION

ON

H.R. _____

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF DEFENSE FOR THE FISCAL YEAR ENDING JUNE 30, 1975, AND FOR OTHER PURPOSES

Printed for the use of the Committee on Appropriations

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Staff Assistants, Department of Defense Appropriations Subcommittee

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1975

WEDNESDAY, MARCH 13, 1974

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room 1223, Everett McKinley Dirksen Office Building, Hon. Milton R. Young presiding.

Present Senator Young.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

STATEMENT OF HON. JOHN W. WARNER, SECRETARY OF THE NAVY

ACCOMPANIED BY:

ADM. ELMO R. ZUMWALT, JR., U.S. NAVY, CHIEF OF NAVAL OPERATIONS
GEN. ROBERT E. CUSHMEN, JR., U.S. MARINE CORPS, COMMANDANT OF THE MARINE CORPS
REAR ADM. E. W. COOKE, U.S. NAVY, DIRECTOR OF BUDGET AND REPORTS, OFFICE OF THE NAVY COMPTROLLER
REAR ADM. JAMES B. WILSON, U.S. NAVY, DIRECTOR, OFFICE OF PROGRAM APPRAISAL, OFFICE OF THE SECRETARY OF THE NAVY
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BRIG. GEN. E. R. REID, JR., U.S. MARINE CORPS, LEGISLATIVE ASSISTANT, HEADQUARTERS, MARINE CORPS
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CAPT. D. A. ALLEN, U.S. NAVY, OFFICE OF THE NAVY COMPTROLLER
D. C. SINCLAIR, OFFICE OF THE SECRETARY OF DEFENSE (COMPTROLLER)

SUBCOMMITTEE PROCEDURE

Senator YOUNG. The subcommittee will come to order.

The Chairman has been detained on the floor of the Senate and regrets his inability to be here. He has asked that the questions he would have asked had he been present be included in the record at the proper place, together with the responses from the witnesses.

This morning the subcommittee will hear John W. Warner, Secretary of the Navy, Adm. Elmo R. Zumwalt, Jr., Chief of Naval Operations, and Gen. Robert E. Cushman, Jr., Commandant of the Marine Corps.

POLICY ON PRESENTATIONS

The witnesses will present testimony in support of a fiscal year 1974 supplemental request and the regular fiscal year 1975 budget request for the Department of the Navy. The first witness will be Secretary Warner.

SHIPBUILDING PROGRAM

Mr. Secretary, the Navy budget request is larger than the other services. This, I assume, is because of the increase requested to build a greater number of new ships. Can you briefly indicate the number and type of ships requested in this budget?

Secretary WARNER. The fiscal year 1975 budget request for Shipbuilding and Conversion, Navy (SCN) includes the following shipbuilding programs:

Ship type:	*Number*
Trident submarines [1]	2
Attack submarines (688 Class) [1]	3
Destroyers (963 Class)	7
Guided missile frigate (38 Class) [1]	1
Sea control ship	1
Patrol Hydrofoil	4
Patrol frigate	7
Destroyer tender	1
Fleet oiler	1
Fleet tug	1
Patrol Gunboats [2]	2
Total	30

[1] Nuclear powered.
[2] Destined for South Vietnam under the Military Assistance Service Funded (MASF) Program.

REQUEST FOR SHIPS DOUBLED

Secretary WARNER. I should remark, Senator Young, that although we are requesting more than double the number of ships in our fiscal year 1975 program as compared with the number requested in fiscal year 1974, the SCN funding requested is $3.6B in fiscal year 1975 as opposed to $3.5B in fiscal year 1974. Thus, any change in the size of the Navy budget is not primarily due to our shipbuilding program.

SUPPLEMENTAL REQUEST

Senator YOUNG. Are you going to testify on both the supplemental and your regular appropriation?

Secretary WARNER. We will refer briefly to the supplemental. Of course, we are prepared to go into the supplemental to whatever extent the Chair desires.

Senator YOUNG. You say you plan to do that?

Secretary WARNER. No, we plan to address just the fiscal 1975 budget. Nevertheless, we would very easily address the supplemental issue.

COMMENTS ON SUPPLEMENTAL

Senator YOUNG. I think maybe we should have some comments on the supplemental.

Secretary WARNER. At the conclusion of fiscal year 1975 material perhaps we could go into the supplmental in connection with responding to questions.

Senator YOUNG. How much is in the supplemental budget for your department?

Secretary WARNER. $1.9 billion. That includes pay and fuel costs.

Senator YOUNG. Is most of the $1.9 billion in the supplemental for pay and fuel costs?

Secretary WARNER. Mr. Chairman, if you will give me a few moments, I can address it now.

Senator YOUNG. I think you should unless you plan to come back another time.

Secretary WARNER. No. I think we should take this opportunity to get into the question of the supplemental.

Senator YOUNG. It is something we have to appropriate for and we need the testimony.

Secretary WARNER. I think your assumption is correct, Mr. Chairman.

The fiscal 1974 supplemental appropriation contains $1.9 billion for the Department of the Navy. This includes increases of $874.9 million for raises in military pay, civilian pay, Wage Board pay, and increased postal and subsistence rates. The remaining $991 million in the supplemental request is in five areas: First, fuel price increases $135 million primarily due to the February 1, 1974 bulk petroleum price increases. Aviation and ship distillate fuel prices increased by 60 percent and 80 percent respectively. Also included is $7.7 million for increases in PCS costs.

Second, Mideast crisis related costs of $125.4 million, comprised of $61.8 million in costs due to expanded tempo of operations and $63.6 million for replacement costs of items furnished Israel from our inventories. These latter funds are to cover the difference between the price Israel paid for the equipment and the price of replacement on today's market.

Third, augmented force readiness. The total is $527.9 million and included are increases for ship overhauls, aircraft reworks, air launched ordnance, aircraft mods, spares and repair parts, ammunition, support equipment and Milcon.

Fourth, accelerated modernization. The total is $177.1 million which includes the following high priority modernization requirements: Procurement of six P–3C aircraft, six KC–130 aircraft, 200 standard MR missiles, and additional TOW missile systems. Also included is

increased R. & D. funding in warfare areas relating to Mideast experience, for example, AEW, ASMD, and so forth.

Fifth, strategic program change totaling $24.8 million for advance procurement of components for Trident submarines to allow procurement of two submarines in fiscal year 1975.

Perhaps the two chiefs would like to add some further comments, Mr. Chairman.

NEED FOR SUPPLEMENTAL

Senator YOUNG. First, may I ask why do you need the money? Why are the planes and missiles you mentioned in the supplemental instead of the regular bill?

Secretary WARNER. It is the judgment of the two chiefs that they need the material now in order to maintain a level of readiness, which they, in their judgment, think is necessary, rather than wait for the 1975 appropriations, which would result in a 7- or 8- or 9-month hiatus.

Senator YOUNG. What other equipment did you give the Israelis besides planes? You say you provided missiles?

ORDNANCE DELIVERIES

Admiral ZUMWALT. Yes, sir, they were provided.

[Deleted.]

Senator YOUNG. The other services testified that they had to give away a greater amount of certain types of equipment than the Navy.

Admiral ZUMWALT. This is in regard to aircraft, Mr. Chairman. We had to give away some A–4's that will take 2 or 3 years to replace.

AMMUNITION

Senator YOUNG. Any ammunition?

Admiral ZUMWALT. Yes, sir. [Deleted.]

General CUSHMAN. Sir, I can give the Marine Corps' position. We requested supplemental funding for $11.5 million worth of ammunition. This includes 40 millimeter cartridges, 2 million rounds at $7.2 million, and 82,000 rounds of 105 illumination artillery rounds at $4.3 million. However, our request for ammunition falls into the category of augmented force readiness as previously described by Secretary Warner. The Marine Corps did not provide any ammunition to Israel.

We did provide aircraft and we feel we need these now as in the case of ammunition, to keep our stocks up. Of course, the aircraft were taken out of our active and reserve inventories and we need them back as soon as we can get them.

DELIVERY SCHEDULES

Senator YOUNG. If Congress appropriates the money in the supplemental, how long will it be before you procure the planes?

General CUSHMAN. I will have to supply that. The Navy will be running the production line on it, sir.

Senator YOUNG. About 1½ years?

General CUSHMAN. I think so or a little longer.

The 24 A–4M's in the 1974 supplemental should deliver at 3 per month, January–May 1976, 5 in June and 4 in July.

Senator YOUNG. Off the record.

[Discussion off the record.]

TRIDENT SUBMARINE PROGRAM

Senator YOUNG. I have a couple of other questions. What is the basis for funds requested for the Trident submarine program in the supplemental request? Could this request be considered in conjunction with the fiscal year 1975 request and accomplish the same purpose?

Secretary WARNER. Mr. Chairman, the $24.8 million are for the advance procurements of components, so that the two submarines which we hope Congress will authorize and fund in 1975 can get underway now.

Senator YOUNG. Is the Armed Services Committee considering authorization for these funds?

Admiral ZUMWALT. Yes, sir.

Senator YOUNG. What is the proposed building schedule for the Trident submarine as a result of the fiscal year 1974 appropriations reduction of funds?

Secretary WARNER. The currently planned Trident submarine building rate of two ships per year was the result of congressional action on the fiscal year 1974 budget which reduced the advance procurement request for Trident submarines from $281 million to $41 million. The Senate Appropriations Committee report on the Department of Defense appropriations bill included the following remarks on the $240 million reduction:

> In approving this reduction, the committee in no way desires to detract from those long leadtime items whose procurement is necessary for the timely production of submarines one through four. The committee therefore directs that the Department of Defense review the rate of production that would result from the reduction of $240 million and seek additional funds in a supplemental request if necessary.

The $41 million of fiscal year 1974 advance procurement funding was used to continue procurement of the longest leadtime items for the second, third, and fourth submarines, although funds were not available to complete the originally planned procurements. The objective was to minimize the risk, within available funding, of a two-ship per year building program.

The fiscal year 1974 supplemental request of $24.8 for Trident is to permit advance procurement of nonnuclear components to reduce the delivery schedule risk for the second and third submarines which comprise the fiscal year 1975 shipbuilding program.

Admiral ZUMWALT. Yes. You recall, Mr. Chairman, during the appropriations conference last year the words were put in which authorized the President to come back and request additional long leadtime money in a budget supplemental if he determined that he needed additional money in order to buy additional Trident submarines this year.

This is the long leadtime money required for the two Trident submarines in the 1975 budget.

ARGUMENTS FOR TRIDENT

Senator YOUNG. It seems to me that the Trident submarine would be a better way to offset the increased operations and developments that the Russians are doing to improve their nuclear weapons. I would think the Trident submarine would be a better way of trying to keep abreast of them than the land-based intercontinental ballistic missiles.

Secretary WARNER. Mr. Chairman, we won't want to comment on the relative importance of the three elements of strategic deterrence, but we concur in your observation describing the submarine as a needed component for our arsenal of defense.

Senator YOUNG. I think stronger arguments can be made for the Trident now than 1 year ago.

Admiral ZUMWALT. Yes, sir, I think that is clear. The Trident submarine, plus the money in this year's or in the 1975 budget for the new type of strategic submarine, a smaller one, will give the country an option of going in for differing combinations of Tridents and lower cost strategic submarines, depending on the nature of the SALT II agreements and how much freedom of mix there is, so we think there are some safe options for the country provided for in this budget.

MIDDLE EAST EQUIPMENT

Senator YOUNG. Did the Navy send equipment assigned to the Active Forces to the Middle East, similar to the Army and, if so, what items and how many do you need to procure to bring our forces back to their authorized level? How much are you requesting in the supplemental for this purpose?

Admiral ZUMWALT. If I may, I will address it this way. The Navy did provide equipment for Israeli Forces, but the Navy did not have sufficient equipment on hand to meet its war reserve requirements, therefore, the drawdown took us still further below the war reserve requirement than we were at the outset. The money in this year's readiness supplemental budget will permit us to begin to replace that equipment which was given to the Israelis, but will not bring us back up to the amount that we should have on hand to meet our required war reserves.

EFFECTS OF SOUTHEAST WAR

Senator YOUNG. I may be wrong, but it seems to me that we fought the Vietnamese war at the expense of the operations and maintenance requirements, weapons and other things we ordinarily would have purchased if it had not been for the heavy expenditures in Vietnam.

Admiral ZUMWALT. Yes, sir.

Senator YOUNG. This was true of the Navy?

Admiral ZUMWALT. Yes, sir, it was. The 1974 budget was designed to start to get us well, then we had to give away readiness because of the Israeli crisis in terms of both equipment provided to the Israelis and additional operating expenses to ourselves, so we think this readi-

ness supplemental is a critical requirement to begin the decade-long delay process of recovering.

Senator YOUNG. In regard to the overhaul of ships, if you get the money in the supplemental, are ship overhauls included?

Admiral ZUMWALT. Yes, sir.

Senator YOUNG. Would you say 6 months would be the savings in time?

Admiral ZUMWALT. Yes, sir, there is probably 6 months' difference involved.

FISCAL YEAR 1975 BUDGET

Senator YOUNG. Are you finished, Secretary Warner, on the supplemental?

Secretary WARNER. I think if you are prepared, we could go ahead with the fiscal year 1975 budget.

Senator YOUNG. Do you want your entire statement placed in the record and summarize it or do you wish to read it?

Secretary WARNER. If you put the entire statement in the record, with your permission I will just rather extemporaneously address three pages of it.

Senator YOUNG. That is fine. That will be done. Your whole statement will be placed in the record.

Secretary WARNER. Thank you very much, Mr. Chairman.

BUDGET REQUEST

It is my pleasure to appear here today with Admiral Zumwalt and General Cushman in support of the fiscal 1975 budget.

This week I am privileged to commence my sixth year in the Navy Secretariat, and it is my judgment that at no time in our Nation's history has the maintenance of a strong and effective Navy and Marine Corps been more important than it is today. In many respects, we are an island nation which, from its inception, has relied upon the expanse of the adjoining oceans for our primary means of protection. Despite the advancements in military technology, this protection remains essential. Moreover, within our generation, this Nation's dependence on the sea has expanded to include our economic security.

U.S. IMPORTS/EXPORTS

For example, the U.S. imports, in whole or in part, 69 of the 72 materials designated by the Department of Commerce as critical to its industrial base—and over 99 percent by weight of these materials is carried by shipping over the adjoining seas.

Similarly, exports—critical to our balance of payments and a high level of domestic employment—require continuing freedom of the seas. From a resource-rich and largely self-sufficient Nation, we have arrived at a position where our ability to safeguard the sealanes is now doubly important.

OBJECTIVES

The fundamental mission of the Navy—indeed, that of all the Armed Forces of the United States—is to deter armed conflict. To

achieve this objective, it must be clearly perceived within the international community that United States and allied military forces are, as a minimum, in overall balance with those of the Soviet Union and its allies. It must also be perceived that U.S. naval forces themselves are sufficient to deter actions which would restrict our freedom to use the seas for self-protection or for free access to our economic markets and interests abroad. This country, the world's largest consumer of energy and raw materials, cannot recede to any position whereby we could be held hostage to the naval capabilities of other nations.

MAJOR CONCERNS OF BUDGET

While these considerations are fundamental to all our planning, the fiscal year 1975 budget addresses, additionally these immediate concerns:

The level of force readiness and the pace of force modernization;

The continued viability of the All-Volunteer Force, and the effectiveness of our personnel programs and policies;

Reserve Force effectiveness;

Management effectiveness, particularly as it relates to the acquisition of major weapons systems; and

The balance between combat forces and support organizations.

The main provisions of our obligational request for $29 billion in fiscal year 1975 are covered in my formal statement, which I have submitted for the record. Over the coming weeks, appropriate sponsors will testify as to budget details. In the interest of brevity, therefore, I will offer only a brief overview:

MODERNIZATION

Almost 35 percent of the budget is targeted for modernization of our forces—that is, for the procurement of the ships, aircraft, and other equipment so vital to our future combat effectiveness—and another 11 percent is allocated to a strong research and development effort, which is also a key determinant of our future strength.

Shipbuilding dominates our modernization programs. As you know, Congress has recognized the requirements in this area and has supported the growth of SCN funding from a level of $1.2 billion in fiscal year 1969 to a level of $3.5 billion in fiscal year 1974. This year we propose to continue the emphasis on shipbuilding and are requesting $3.6 billion to construct 30 new ships, modernize four older ones, and provide advance funding for future construction.

NEW CONSTRUCTION

The acquisition of 30 ships in fiscal year 1975 is more than double the 14 acquired in fiscal year 1974. This reflects our increased emphasis on ship procurement at the lower cost end of the planned high-low force mix, and recognizes the need for quantity as well as quality in the years ahead. These 30 ships, if authorized and if funded, will mean that for the first time in 7 years we will be building Navy ships at a greater rate than we are retiring them.

Mr. Chairman, this is the most significant statement I have in my entire presentation to you this morning.

Senator YOUNG. What kinds of ships are these you refer to, smaller types?

Secretary WARNER. Yes, this 30 ship authorization request reflects the shift in procurement emphasis from the higher end of the cost and capability spectrum to what we regard as the lower end of the spectrum, namely, patrol frigates, the patrol hydrofoils, and the sea control ships.

Senator YOUNG. What do you call a small carrier?

Secretary WARNER. I believe you are referring to the Sea Control Ship. It is included in our fiscal year 1975 request and would subsequently enter serial construction in later years.

OPERATION AND MAINTENANCE

For operation and maintenance we continue approximately level funding. Slightly over 50 percent of the budget is again allocated to immediate operational needs, such as pay for our personnel, fuel for our ships and aircraft, and repair and maintenance efforts. It is the level of funding in these areas that in large measure determines the day-to-day combat readiness of our forces.

RESEARCH & DEVELOPMENT

Finally, we recommend that research and development funding be increased to a level of about $3.3 billion (over 11 percent of the fiscal year 1975 budget) as compared with the $2.7 billion of fiscal year 1974. We regard expenditures in this area as key to the assurance of our strength in the future and consider this increased funding to be a vital feature of our long-range program.

CONCLUSION

Mr. Chairman, this concludes my statement. In your examination of our fiscal year 1975 recommendations it is my hope that you will find we have presented our programs in a logical and consistent manner, and that we have responded appropriately to your previous counsel and direction. We sincerely appreciate such counsel and solicit your continued strong interest and support in the future.

BIOGRAPHICAL SKETCH AND PREPARED STATEMENT

Senator YOUNG. Your complete statement, together with your biographical sketch and the questions and responses will be included in the record at this point. As I indicated earlier, questions Senator McClellan would have asked had he been here will be provided and those and the responses will be included in the record at the proper places.

[The biography and statement follow:]

BIOGRAPHY OF HON. JOHN W. WARNER

John W. Warner maintains his legal residence in the State of Virginia on a farm near White Post in the Shenandoah Valley. He was born 18 February 1927 in Washington, D. C. His father was the late Dr. John W. Warner, a physician, whose family came from Amherst, Virginia, and his mother, Martha (Budd) Warner, came from St. Louis, Missouri.

He received his early education in the public schools in Washington, D. C., and, following a tour of active military service in the U. S. Navy, entered Washington and Lee University, Lexington, Virginia, in September 1946. He majored in general engineering courses, physics and mathematics, and received his B. S. Degree in June 1949. The following September he entered the University of Virginia Law School. His law training was interrupted for a second tour of active military service, this time with the United States Marines, and he graduated from the law school with an LL.B. Degree in 1953.

Mr. Warner enlisted in the Navy in December 1944 at the age of 17 and was released from active duty in June 1946. He attained the rank of Electronic Technician Third Class, following completion of a 14-month course in electronics, which concluded with graduation from the school at the Naval Research Laboratory, Washington, D. C.

He subsequently enlisted in the U. S. Marine Corps Reserve and was called to active duty as a Second Lieutenant in October 1950. After a tour of duty in Korea serving as Communications Officer for Marine Attack Squadron VMA-121 and later as Communications Officer for Marine Air Group 33, he was released from active duty in April 1952. He attained the rank of Captain and remained in the Marine Corps Reserve until 1961.

Upon graduation from law school, he was appointed law clerk to the Honorable E. Barrett Prettyman, former Chief Judge, U. S. Circuit Court of Appeals, District of Columbia Circuit. He was admitted to the Bar in April 1954, and following a brief period in private practice was appointed a Special Assistant to the U. S. Attorney in 1956 and in 1957 was appointed Assistant U. S. Attorney, Department of Justice. He served as a trial lawyer in the U. S. Attorney's Office, Washington, D. C., until April 1960, when he joined the campaign staff of then Vice President Richard M. Nixon.

In November 1960 he became associated with the law firm of Hogan & Hartson, and in 1964 was admitted to the firm as a general partner, specializing in corporate and banking law.

Mr. Warner was appointed Under Secretary of the Navy by President Richard M. Nixon and sworn in on 11 February 1969 by Secretary of Defense Melvin R. Laird. He subsequently was nominated by President Nixon to be the Secretary of the Navy and sworn in by Secretary of Defense Laird on 4 May 1972. He is the first Under Secretary and Secretary to have served in the uniform of both the Navy and Marine Corps.

In addition to duties as Under Secretary of the Navy, Mr. Warner was given assignments representing the Department of Defense. On 15 July 1971 he was appointed Director of

Ocean Affairs, with the primary responsibility of representing the Department in international affairs involving law of the sea.

The President designated him head of the U.S. Delegation which met in Moscow in October 1971 and again in Washington, D.C., in May of 1972 to discuss incidents at sea between U.S. and Soviet naval units. Secretary Warner was a member of the Presidential Party at the Moscow Summit Meeting and signed, on behalf of the United States Government, the Executive Agreement on Incidents at Sea between the United States and the Soviet Union on 25 May 1972.

For his nearly four years' service as Under Secretary and then Secretary of the Navy, Mr. Warner received the Department of Defense Distinguished Public Service Medal, on 10 January 1973 from the then Secretary of Defense, Melvin R. Laird. A citation accompanying the Medal, signed by Secretary Laird, said in part:

> "... John W. Warner has provided superb leadership to the Department of the Navy during a difficult period of changing priorities, missions, and resources ... he has brought great energy, keen foresight, broad vision and expert managerial capacity to guiding the development of new naval forces and concepts ... and to improving the management of weapons systems acquisition ... he has ably represented the Department of Defense in international law of the sea negotiations, and the President of the United States in negotiating an Executive Agreement on Incidents at Sea between the United States and the Soviet Union."

Mr. Warner has three children: Mary, Virginia and John William IV.

STATEMENT OF SECRETARY WARNER

Secretary WARNER. It is a pleasure for me to appear before this Committee today to present the Navy and Marine Corps budget and program for fiscal year 1975. Accompanying me are Admiral E. R. Zumwalt, the Chief of Naval Operations, and General R. E. Cushman, Commandant of the Marine Corps. Collectively we will report to you on the financial implications of our program and also, as custom dictates, on the current posture of the Navy and Marine Corps team, its strengths and weaknesses as we perceive them today, and the challenges which we foresee in the years ahead.

I will leave it to the Service Chiefs to provide the principal comment on the operational matters affecting our forces, while I point my remarks towards the allocation of the resources which these forces require.

Resources are allocated to support objectives, and our national maritime objectives remain today as they have been in the past: maintenance of a credible, sea-based strategic nuclear deterrent, and the capability to control the sea lines of communications in areas vital to our national interests. In this latter objective I include a meaningful ability to influence events at the terminals of these lines—that is, projection of power ashore when and where necessary.

I believe that at no time in our nation's history has the maintenance of a strong and effective Navy and Marine Corps team—fully capable of achieving these maritime objectives—been so important as it is today.

IMPORTANCE OF NAVY

In many respects we are an island nation which, from its inception, has relied upon the expanse of the adjoining oceans for our primary means of protection. Despite the advancements in military technology, this protection remains essential. Moreover, within our generation, this nation's dependence on the sea has expanded to include our economic security. For example, the United States now imports in whole or in part 69 of the 72 materials designated by the Department of Commerce as criteria to its industrial base—and over 99% by weight of these materials is carried by shipping over the adjoining seas. Similarly, exports—critical to our balance of payments and a high level of domestic employment—require continuing freedom of the seas. From a resource-rich and largely self-sufficient nation 60 years ago, we have moved to a position where our ability to safeguard the sea lanes is now doubly important.

MATERIALS IMPORTANT TO INDUSTRAL BASE

Chairman MCCLELLAN. You indicate that 69 of the 72 materials designated by the Department of Commerce as critical to the country's industrial base are carried by shipping. How many of these materials are critical to the military portion of the U.S. industrial base, and what percent of the weight of these materials is carried by shipping?

Secretary WARNER. Actually, Mr. Chairman, my statement was that this country imports 69 of the 72 raw materials designated as critical to its industrial base. Of those materials imported more than 99% are transported by sea. The attached listing shows each of the critical raw materials, the percentage imported, and the percentage transported by sea. It would be fair to say that the vast majority of these items are critical to the military portion of the U.S. industrial base.

(The information follows:)

STRATEGIC AND CRITICAL MATERIALS

No.	Item Identification	Per Cent Imported* 1969-72	Per Cent Imported* 1985	Per Cent of Imports Transported by Sea 1969-72	Per Cent of Imports Transported by Sea 1985
1.	Aluminum (net imports)	(-3)	19	0	20
2.	Aluminum oxide, fused	90	97	100	100
3.	Antimony	90	90	96	96
4.	Asbestos, amosite	100	100	9	9
5.	Asbestos, chrysolite	85	85	10	10
6.	Bauxite, metal, Jamaica	100	100	100	100
7.	Bauxite, metal, Surinam	90	95	100	100
8.	Bauxite, refractory	90	95	100	100
9.	Beryl	98	98	100	100
10.	Bismuth	100	100	90	90
11.	Cadmium	10	10	100	100
12.	Castor oil	85	85	100	100
13.	Chromite, chemical	100	100	100	100
14.	Chromite, metallurgical	100	100	100	100
15.	Chromite, refractory	100	100	100	100
16.	Chromium metal	35	40	100	100
17.	Cobalt	100	100	93	93
18.	Columbium	100	100	100	100
19.	Copper	19	15	86	86
20.	Cordage fibers, abaca	100	100	100	100
21.	Cordage fibers, sisal	100	100	85	85
22.	Diamond dies, small	100	100	0	0
23.	Diamond, industrial bort	100	100	67	67
24.	Diamond, industrial stones	100	100	50	50
25.	Feathers and down	60	60	100	100
26.	Fluorspar, acid grade	78	90	50	50
27.	Fluorspar, metallurgical	88	93	25	50
28.	Graphite, natural, Ceylon	100	100	100	100
29.	Graphite, natural, Malagasy	100	100	100	100
30.	Graphite, other	25	25	100	100
31.	Iodine	82	85	100	100
32.	Jewel bearings	100	100	100	100
	(stockpile and defense requirements can be produced at Rolla, N. Dakota)				
33.	Lead	27	24	72	72
34.	Manganese, battery, natural	100	100	100	100
35.	Manganese, battery, synthetic dioxide	0	0	-	-
	(manufactured in U. S., but stockpiled anyway)				
36.	Manganese ore, chemical A	100	100	100	100
37.	Manganese ore, chemical B	100	100	100	100
38.	Manganese, metallurgical	100	100	100	100
39.	Mercury	43	54	90	90

* Net imports where exports are significant (aluminum and vanadium).

No.	Item Identification	Per Cent Imported 1969-72	Per Cent Imported 1985	Per Cent of Imports Transported by Sea 1969-72	Per Cent of Imports Transported by Sea 1985
40.	Mica, muscovite, block st./better	100	100	100	100
41.	Mica, muscovite, 1 & 2	100	100	100	100
42.	Mica, muscovite, splittings	100	100	100	100
43.	Mica, phlogopite, block	100	100	99	99
44.	Mica, phlogopite, splittings	100	100	100	100
45.	Molybdenum (U. S. exports)	(-79)	(-100)	-	-
46.	Nickel (from Canada by land)	98	98	0	0
47.	Opium (by air)	100	100	0	0
48.	Platinum group, iridium	100	100	25	35
49.	Platinum group, palladium	100	100	25	35
50.	Platinum group, platinum	100	100	30	35
51.	Pyrethrum	100	100	100	100
52.	Quartz crystals	75	75	100	100
53.	Quinindine	100	100	99	99
54.	Quinine	100	100	99	99
55.	Rubber, natural	100	100	100	100
56.	Rutile	100	100	100	100
57.	Sapphire and ruby	100	100	small	small
58.	Shellac	100	100	100	100
59.	Silicon carbide	30	30	25	25
60.	Silver	55	25	40	40
61.	Sperm oil (removed from list of strategic and critical materials recently to support U. S. position on preservation of whales)	98	98	100	100
62.	Talc, steatite block and lump	100	100	100	100
63.	Tantalum	100	100	100	100
64.	Thorium oxide	70	70	100	100
65.	Tin	100	100	100	100
66.	Titanium sponge	28	35	100	100
67.	Tungsten	37	45	95	95
68.	Vanadium (net imports)	(-50)	+35	100	100
69.	Vegetable tannin, chestnut	100	100	99	99
70.	Vegetable tannin, quebracho	100	100	100	100
71.	Vegetable tannin, wattle	100	100	99	99
72.	Zinc	58	65	30	35

Additional notes

1. List is now 71 items. See sperm oil.
2. Of the remaining 71 items, there is a strong net import of 66. Aluminum should be considered imported since virtually all ore is imported, and refined metal will become or has become a net import. Synthetic manganese dioxide, battery, and molybdenum are not imported. Jewel bearings and vanadium are borderline cases. Hence, 67-69 are imported. (Was 68-70 including sperm oil.)
3. Except for items transported by land from Canada and Mexico plus a few high-unit-value items (diamonds, sapphires, rubies, and opium), all these materials are imported by sea.

[The statement continues.]

Secretary WARNER. Paradoxically, the only nation which can mount a military challenge to our maritime objectives on a sustained basis is the Soviet Union. I say "paradoxically" because the Soviet Union is by geography and history a major land power, self-sufficient in virtually all the strategic materials required to support a modern industrial state. Yet within the past 15 years the Soviet Union has built combat capable fleets which range the world's oceans.

SOVIET FOOD DEPENDENCE

Chairman MCCLELLAN. You stated that the Soviet Union "is by geography and history a major land power, self-sufficient in virtually all strategic materials required to support a modern industrial state." Haven't the Soviet imports of grain recently demonstrated their dependence to a certain extent on outside sources of food?

Secretary WARNER. The Soviets are not nearly as dependent on outside resources as the U.S. With respect to their recent purchases of grain, I would say that this has been caused by a number of factors such as weather and the fact that the grain purchase took place during peacetime and was accompanied by domestic pressure for more foodstuffs. If this situation were to present itself during wartime I would be of the opinion that the Soviets would tighten their belts and be self sustaining. Therefore, in my judgment, their dependence on outside resources would be very limited.

[The statement continues.]

SEA LANE IMPORTANCE

Secretary WARNER. Providing and structuring naval forces to meet the potential threat that this Soviet fleet poses to our sea lines of communications has been a major challenge to U.S. naval leadership over the past decade. But it is not just with respect to the Soviet Union that we must size our combat forces. We must also look to the changing international order, to its alliances and its economic realities, and consider the more diverse challenges which this change presents.

The fundamental mission of the Navy, indeed that of all the Armed Forces of the United States, is to deter armed conflict. To achieve this objective, it must be clearly perceived within the international community that U.S. and allied military forces are, as a minimum, in overall balance with those of the Soviet Union and its allies. It must also be perceived that U.S. naval forces themselves are sufficient to deter actions which would restrict our freedom to use the seas for self-protection or for free access to our economic markets and interests abroad. This country, the world's largest consumer of energy and raw materials, cannot recede to any position whereby we could be held hostage to the capabilities of other nations.

These complex and interrelated factors necessarily must be weighed with an awareness of a national divergence of views regarding the spending priorities in our country, and the reality of the strongly competing demands for the tax dollar resulting therefrom.

LONG-TERM DECISION INFLUENCES

In short, our long-term resource allocation decisions and recommendations are influenced by three factors:

The necessity to size our maritime capability in such a way as to balance the projected maritime capability of the Soviet Union, and most particularly that facet of it which could be directed at our sea lines of communications;

Simultaneously, to build into this naval force the force levels and flexibilities required to protect United States interests and safeguard a stable world maritime commerce;

Thirdly, to accomplish these tasks within reasonable fiscal constraints.

SOVIET SEA-LANE CAPABILITY

Chairman MCCLELLAN. You specifically are concerned with the portion of the Soviet Navy that could be directed at our sea lines of communication. Could you provide a breakout of the Soviet Navy showing the particular ships and that

percentage of the Soviet fleet (in numbers and tonnage) that is specifically capable of disrupting our sea lines of communications? What are the principal ships under development or construction in the Soviet Union aimed specifically for this mission?

Secretary WARNER. As you are aware all naval warships and submarines have a primary purpose of combating enemy warships and that is the specific purpose for which they are designed. Whether the unit's primary mission is ASW, air attack, air defense, etc., it will normally have other capabilities as well, even if only for self-defense. Consequently, by virtue of a warship's ability to combat other warships and protect itself, it has the inherent ability to engage in activities directed against sea lines of communications (SLOC).

The attack submarine is a warship possessing significant anti-SLOC capabilities. The Soviets, as you are aware have some [deleted] effective attack submarines currently active and have [deleted] different classes currently under construction. With respect to surface combatants possessing significant anti-SLOC capabilities, there are [deleted] major units equipped with antiship missiles, and another [deleted] gun-armed cruisers and destroyers currently active, and there are [deleted] cruisers and [deleted] destroyer [deleted] currently in series production. These ships represent 70% of the active submarine and major surface combatants in the Soviet Fleet. These [deleted] ships and submarines displace [deleted] about [deleted] of the Soviet Navy's total active fleet tonnage. I would also point out that there are large numbers of small combatants, either missile or gun/torpedo armed, that could pose a serious threat to our SLOC at the terminal end.

These forces with an anti-SLOC capability include the following:

[Deleted.]

[The statement continues.]

PLANNING CONSIDERATIONS

Secretary WARNER. These considerations are fundamental to all our planning. For example, as we move into the 1980 time frame we should see—if our building programs hold course—a gradual but steady increase in the number of surface combatant ships in our fleets. The large aircraft carriers, their embarked air wings, and their powerful supporting task groups will still be the essential elements of our offensive capability. Supporting and complementing their capability will be less heavily-armed and less costly ships such as the Sea Control Ship and the Patrol Frigate—which can be procured in the numbers required to provide an effective and balanced naval force.

With respect to the Marine Corps, our program reflects essentially a level end strength combined with very significant modernization in tank and anti-tank capabilities. The recent Middle East war confirms the necessity for these and other efforts toward modernization.

By initiating the changes which I have described, by providing for them in the FY 75 Budget, I believe that the Navy and Marine Corps are moving in step with the times to hold expenditures to a minimum while still meeting the potential challenges. In addition to these longer range goals, however, the FY 75 budget also addresses a number of immediate concerns:

The level of force readiness and the pace of force modernization;

The continued viability of the All-Volunteer Force, and the effectiveness of our personnel programs and policies;

Reserve Force effectiveness;

Management effectiveness, particularly as it relates to the acquisition of major weapons systems;

The balance between combat forces and support organizations.

Admiral Zumwalt and General Cushman will speak in detail to readiness considerations, and force modernization objectives and programs will be discussed by all of us in the course of our testimony. Therefore, let me at this time confine myself to brief remarks regarding each of our other immediate concerns. Following these remarks, I will then present the highlights of our FY 75 budget.

THE ALL-VOLUNTEER FORCE; PERSONNEL MANAGEMENT

With respect to the All-Volunteer Force (AVF), it should first be noted that no nation in history has heretofore attempted to raise and support, without the draft, a military force of the size this country requires. Nevertheless, our country

has mandated just such a mission, and the Department of Defense is committed to it. In Navy, we have been successful in the main in meeting our recruiting goals; in the Marine Corps somewhat less so. Clear evidence that both services are totally committed to the objective is the assignment of dynamic and resourceful officers and highly dedicated enlisted specialists to recruiting. Your past support has shown your understanding of the necessity for the increased funding that our recruiting programs require, and I solicit such support again in the forthcoming budget hearings and debates.

With respect to the larger question of personnel management and its effect on the performance and motivation of the men and women of the Navy Department, we have experienced a steady rise in first-term reenlistment rates, one of the most significant barometers of personnel satisfaction and motivation. Navy first-term rates have gone from 10% in FY 70, to 17% in FY 71, to 23% in FY 72 and FY 73. Similarly, Marine Corps rates have gone from a low of about 5% in FY 70 to 13% in FY 73. These are indicators that the Navy and Marine Corps of today are more and more demonstrating to their young men and women that service to country can be a rewarding way of life. The Congress can share in the credit, for without your support of competitive pay structures and the many other personnel incentive programs enacted into law over the last seven to eight years, we would be outclassed in today's labor market.

First-Term Reenlistment

Chairman McClellan. You indicate a steady rise in first-term reenlistment rates in both Navy and Marine Corps. What is your objective for first-term reenlistment rates, and is there any estimate of when it may be achieved?

Secretary Warner. The Navy first term reenlistment rate objective for FY 1974 is approximately 31% in anticipation of about 18,000 such reenlistments. Based on actual experience to date, we are now predicting an attainment of 22–23% in FY 1974, about the same as experienced in FY 1972 and 1973. The Marine Corps objective for first term reenlistment rates in FY 1974 is 14.7%, or a total of 5,148 reenlistments. Through Feb. 1974, Marine Corps has experienced a first term reenlistment rate of 15.2%, or 3,647. This represents 71% of the Marine Corps objective. First term reenlistment objectives are a function of the number of personnel expected to be eligible to reenlist and the number required to maintain the desired career force; therefore, they will vary from year to year. We are exerting every effort to improve the retention of our quality people and the Selective Reenlistment Bonus should prove helpful. However, a realistic estimate of when desired retention levels will be attained is not possible at this time.

[The statement continues.]

Management Concerns

Secretary Warner. Despite this progress, these management concerns remain:

Personnel Turbulence—During the past few years excessive turbulence has been one of our most serious personnel problems. Our post-Vietnam drawdowns coupled with the effects of an inflationary economy have in the past forced us to shortterm management actions—such as early release of personnel and delay of promotions—in order to remain within budget authorizations. Such actions inevitably increase the numbers of people in motion and impact adversely on morale. Although the situation appears to have improved in FY 74, we continue to regard the reduction of personnel turbulence as a most important management objective.

Critical Skills—Although we have been generally successful in increasing the number of volunteers and in increasing personnel retention, we are still at a disadvantage in competing for those personnel whose skills or abilities command a premium in the open market. As a result, in the Navy we are critically undermanned in some areas of fleet and other combat unit capability, even though we are at or near overall authorized manning levels.

Skill Shortages

Chairman McClellan. You indicate critical undermanning in certain skills that command a premium in the open job market. Which skills are involved

here, what are your manning requirements and what are the shortages? When do you expect to eliminate these shortages?

Secretary WARNER. As of end January 1974, Navy had a deficit of 34,448 personnel in 51 undermaned ratings, 27 of which were manned below 90%. The majority of the skills affected by these personnel deficits are in the engineering (mobility) ratings and technical ratings associated with fire control systems, electronic warfare, gunnery and missile systems. Examples of personnel shortfalls in these areas are: Machinist Mate (Conventional propulsion) 1,929 short; Boiler Technician 1,814 short; Hull Technician 1,532 short; Missile Fire Control Technician 776 short; Gunners Mate Missiles 427 short; and Gunners Mate Technician (Nuclear Weapons) 538 short. It is anticipated that there will be minimal change or improvement in these skill shortages in the near term.

[The statement continues.]

Secretary WARNER. Sea/Shore Rotation—Despite our best efforts, there remain imbalances between the numbers of sea and shore billets with the result that some ratings are still required to be assigned inordinately long sea tours. Uncorrected, this situation continues to impact adversely on personnel retention.

Health Professions—In common with the other Services, we anticipate very significant difficulties in attracting and retaining certain health professionals, particularly doctors, in an AVF environment. I see no remedy except by the legislative initiative now pending before the Congress which significantly increases the special pay of this category of professional personnel.

UTILIZATION OF DOCTORS

Chairman MCCLELLAN. How many doctors are presently being required to work outside of their trained specialties? Do you attribute any portion of your problems in attracting and retaining doctors to the number working outside their specialties?

Secretary WARNER. Currently there are less than 3% of Navy doctors who work in executive medicine positions outside of their trained specialties. This group, however, has chosen this career and does not represent a problem.

The ever increasing but still small number of specialists who are required to work part of the time in outpatient departments and emergency rooms where the general duty officer has worked in the past is a problem, both in recruiting and retention. Medical doctors frankly view with concern the change in the character of their medical practice and cite this as a factor in the decision to resign. Likewise, the volunteer physician usually asks if he can practice within his specialty and whether he will have to perform general medical work. Specialists prefer to have patients screened, believing this to be a more efficient practice. These conditions are not confined to the Navy, however, and also represent a significant problem in civilian medicine.

[The statement continues.]

Secretary WARNER. Officer Continuation Policies—Existing legislation inhibits selective release of officers in the more senior grades. Excesses in numbers of senior personnel force reductions in junior grade input, and result in promotion stagnation, training inefficiencies, and lowered morale. Legislation has been submitted by the Department of Defense to address this situation.

Administration of Training Programs—I am aware of Congressional concern that training and education programs be managed efficiently and be responsive to mission requirements. I believe that we have made significant improvements in the management and organization of our training activities within the past two years. The amount of the financial resources which we allocate to the training function demands that we maintain this effort in the future.

IMPROVEMENTS IN TRAINING ACTIVITIES

Chairman MCCLELLAN. Would you describe the improvements in management and organization of the Navy's training activities within the past two years?

Secretary WARNER. Two years with a totally new and integrated Navy Education and Training Command are marked by a number of major accomplishments. Most important is the partnership that is emerging between the CNO staff and the warfare oriented DCNO's, the Chief of Naval Personnel, the Chief of Naval Material, the Chief of the Bureau of Medicine and Surgery and the Fleet Commanders.

Through this cooperative relationship we have been better able to systematically identify new training requirements and review existing training programs and to do so in a timely and structured way. This is of particular importance in ensuring that we are training strictly to requirements, neither over nor under training.

We are confident that our fleet interface and feedback on training quality is improving. In the two years of the existence of the Navy Education and Training Command, there has been a great increase in the accuracy of requirements. At the same time, we are moving the entire training process to a systems approach in which we are seeking to thoroughly define the *input* to training, the *process* that modifies the trainee's behaviors, and the quality of the *output*. We are also developing an appraisal system to address relevance and overtraining/undertraining, and also to ascertain how well the training we provide transfers to jobs in the fleet. This will provide information from which we can "fine tune" training programs.

Specifically, our undergraduate flight training program is heavily committed to the implementation of advanced training techniques. Task analyses have been accomplished and provide us definitive specifications for the performance required in the fleet. More detailed analyses of such data are being conducted to define step-by-step training objectives and the most effective training media. We are developing methodologies for determining how good our flight simulators really are and how the next generation can be improved. In their collective impact, these processes are enhancing our cost-effectiveness by improving and shortening our syllabi. For example, we have shortened six of our principal flight syllabi in FY 74 and have reduced annual fuel consumption by 4.7 million gallons.

A necessary ingredient to an effective training organization is an efficient and responsive education and training support structure. Training materials must be of the highest quality in order to achieve the level of instruction for which we are striving, and must be coordinated with the entire spectrum of training within schools and on-the-job training. Thus, Education and Training Support addresses training publications, training aids, mock-ups, audio-visual programs and training devices, and also on board training packages, rate training manuals, shipboard libraries, correspondence courses, and enlisted examinations.

Over the past two years, we have worked to consolidate what was a fractured training support organization. The most significant action consolidated an examination center, two training publications centers and a correspondence course center, to form the Naval Education and Training Program Development Center at Pensacola, Florida. This activity now opens the door for a more complete application of the newest and most productive aspects of instructional technology. It will provide us a greatly improved capability in this area.

We feel significant improvements are also being made in off-duty and part-time voluntary education. The Navy has been attempting to create improved opportunities for the individual service members in this regard. A system is being developed to provide a more qualified sailor of the future. This will increase the benefits realized by the service and the member while reducing the expense to both. It will also fulfill the educational aspirations of the individual resulting in a more capable service member who is more satisfied with his job. The system for accomplishing this is the Navy Campus for Achievement (NCFA). This is not an institution but a system for management of off-duty education programs and the coordination of these programs with the Navy's on-duty education and training programs. The system provides information on educational opportunity, compiles a record of educational and training experience—formal and informal—and progress toward educational and training goals. Over 200 Servicemen's Opportunity Colleges have pledged themselves to work closely with service men and women in this program. A number of these institutions have agreed to undertake degree contracts directly with NCFA students and to waive residency requirements. The primary goal of NCFA is to enhance mission performance and personal achievement through continuing education and training opportunities, both inside and outside the services.

Finally, I should not neglect to mention our continuing efforts in the area of interservice training. The Interservice Training Review Board was established by the Services in September 1972 to review Service courses and consolidate Service training where possible. This Board is a continuing and active group and has made contributions towards finding additional areas for interservice training

cooperation, as well as in identifying and encouraging those joint training efforts already ongoing. I can assure you that in this endeavor all four Services are striving conscientiously twoards a common goal.

In summary, we are vigorously seeking out and energetically applying innovative teaching and learning strategies to enhance individual performance. We are, within our resource constraints, utilizing advanced educational technology to shorten the processing time. And we are identifying educational opportunities and encouraging our Navy family to avail themselves of these opportunities for personal development and for a commitment to continued learning.

Off-Shore Education

Chairman McClellan. What are your plans for accomplishing off-duty education and counseling in the Navy that were previously provided by the Armed Forces Institute (USAFI)?

Secretary Warner. As requested by higher authority, the Navy, serving as Executive Agent for all the armed services, is staffing a plan to assume those functions formerly performed by USAFI pertaining to the continuation of examination programs, such as General Educational Development, College Level Examination Program and New York Regents External Degree Examinations. In addition, the Navy will provide for procurement, printing and distribution of testing materials, and for scoring and recording the tests, and publish an annual directory of credit-by-examination opportunities in high school, vocational/technical, and college programs.

At the present time, plans are being developed to contract for these services, which will be provided to the Army, Air Force, and Marine Corps.

(The statement continues.)

Secretary Warner. Finally, a word about our people themselves. During my tenure in this office I have come to view our manpower resources as the most critical element in our defense posture. Used wisely, these resources return our investment in them many times over; misused or mismanaged, their cost is insupportable. We in the Navy and Marine Corps have invested very heavily in "people" programs. These programs, which have been consolidated in our Human Goals Plan and promulgated to our top fleet and shore commanders for execution, emphasize the principle of individual dignity and worth. Through them, we are at once providing a renewed emphasis of traditional leadership principles and an effective response to the societal values that are shaping the all-volunteer environment.

Mr. Chairman, in our very critical personnel programs and management efforts I am certain that we are moving in the right direction to improve the quality of professionalism and life in the Navy and Marine Corps. We are accepting the challenge and the implications of change, while preserving the values and traditions which have made us great. In these efforts, we continue to need your support. We need to convince our young men and women that duty in one of the Services is not an interruption of their lives but a contribution to them, that individual success in the Service is dependent only upon their individual talent and diligence, and that there is no higher calling than the defense of the Nation. By accomplishing these things we will make the All-Volunteer Force a reality, and give the clearest possible signal to potential adversaries that there is a national will to defend our interests and way of life. I can think of no objective more worthy of Congressional and public support.

Reserve Force Effectiveness

The Total Force Policy dictates, among other things, that our Reserve forces—rather than draftees—will henceforth be the primary source for expansion of our regular forces in times of emergency or other national crisis. As such, the Reserve must be maintained as a credible force in being, composed of trained personnel possessing suitable and sufficient equipment, able to deploy rapidly and to operate side by side with active force units when and where required.

This is a most challenging and serious responsibility. It has focused attention on the Reserves as never before, and has impelled us to numerous changes in the organization, manning, and equipping of these forces over the last four years. Much has been done, but much remains to be done in upgrading the combat effectiveness of our Reserve units. Let me cite a few of our concerns and objectives.

One of our primary goals has been to provide our Reserves with more and better equipment. In this I believe we are making the best progress we can under current budget limitations. Although our Reserve destroyers comprise the older classes of ships, these ships have been modernized to the extent that fiscal constraints permit. By end FY 75 we will have completed the transfer of virtually our entire surface mine warfare capability to the Naval Reserve. Air Reserve capability will increase through FY 74 and FY 75 as the older Reserve aircraft continue to be replaced by transfers from our active forces—for example, the P–3A ASW patrol aircraft, the F–4B fighter, and the SH–3G helicopter.

But while I am pleased to report modest progress in modernizing our Reserve hardware and equipment, many significant problems remain. These include overage surface ships, less maintainable than their active fleet counterparts; aircraft squadrons equipped with older models of aircraft; and significant equipment deficits in Reserve cargo handling battalions, mobile construction battalions, and inshore undersea warfare organizations.

Reserve Modernization

Chairman McClellan. You indicated many significant problems in the modernization of the Reserves, including overage surface ships, equipage with older aircraft models, and equipment deficits. What is your long range program for coping with these problems? By what year do you expect to eliminate the equipment shortages?

Secretary Warner. Funds available to the Navy do not permit the programming of new ships or aircraft for the Reserves. We are, however, programming new small craft, construction equipment, and some new training devices for the Reserves. Aircraft and ships will continue to be provided to the Reserves from fleet assets as available, and we will maintain those assets in the reserve in combat ready status to the maximum extent our funds will permit. Over the long range we will probably always have some equipment deficiencies in Active as well as Reserve forces. We are, however, making progress toward improving reserve combat readiness in both quantity and quality of equipment.

(The statement continues.)

Secretary Warner. Although we remain concerned with Reserve equipment status, we are moving to offset these deficiencies at least partially in other ways. For example, we have embarked on a long-term program to provide modern ship system training devices for our surface Reserve training effort. These devices simulate shipboard conditions and provide realistic team training. They are designed to produce highly qualified units capable of providing critical skills in such areas as operations, engineering, communications, and damage control. The first phase of the Ship Operational Training program has been initiated, and both Navy and the Defense Department are closely monitoring its effectiveness.

Use of Equipment for Reserves

Chairman McClellan. Are efforts made to use active force training equipment and facilities for the reserve force where possible rather than procuring new items? For example, the modern ship system training devices would appear to be an item which could be used by both reserve and active units.

Secretary Warner. Where reserve and regular Navy forces are collocated the sharing of training equipment and facilities occurs routinely. Occasionally reserve units are transported to regular Navy sites to use training equipment. The ship system training devices to be procured for the Reserve units will be located at sites not easily accessible to regular Navy personnel; on the other hand reserve units do use regular Navy ship system trainers when and where they are available.

(The statement continues.)

Secretary Warner. With respect to personnel, Navy's Selected Reserve strength is targeted at about 117,000 manyears in FY 74. For FY 75, we are requesting funding for 108,000 manyears, a 9000 manyear reduction. For Marine Corps, we are recommending a small increase—about 1600 manyears—from the 35,000 manyears funded in FY 74.

REDUCTION IN RESERVE STRENGTH

Chairman MCCLELLAN. Why are you recommending a reduction in the Navy's Selected Reserve strength in FY 1975?

Secretary WARNER. The reduction recommended by the Navy was to provide increased funds in other areas for the Naval Reserve. The funds to be made available by a reduced number in the Selected Reserve was intended to be used to increase repair and maintenance efforts for Reserve hardware and facilities, to procure additional training equipment for Reserves, and to address other equipment deficits.

(The statement continues.)

Secretary WARNER. Although we are requesting a smaller total number of selected Reserve personnel in FY 75, you should be aware that there has been little net change in total Reserve force funding, despite the past and projected personnel strength decreases. The money that we save by employing fewer people is being devoted to meeting increased operational expenses—mainly due to oil price increases, maintaining repair and maintenance efforts for Reserve equipment and hardware, supporting procurement of training equipment for organizational units, and addressing the other equipment deficits. In short, we are attempting to relate manpower and hardware more closely to stated mission requirements and the end result of this effort will be a stronger and more effective Reserve force.

RELATION TO MISSION REQUIREMENTS

Chairman MCCLELLAN. You indicate that you are attempting to relate manpower and hardware more closely to stated mission requirements and that the end result of this effort will be a stronger and more effective Reserve force. Could you explain this statement in greater detail, indicating in general the mission requirements of the reserves and relating this to manpower and hardware? It would be particularly helpful if you would relate reserve force sizing to mission requirements.

Secretary WARNER. The Total Force Concept requires that the Reserve be well trained, well equipped, and readily available when mobilized to serve as an effective complement to the active forces. In implementing this policy it was clear that the Naval Reserve units should approximate a "mirror image" of the active units and that mission requirements should be the same regardless of the source. Accordingly, the Naval Reserve is being restructured into mission-capable, hardware-equipped combat and combat support units that will be available to play an effective role in a contingency requiring their mobilization. To accomplish this within funding constraints it has been necessary to eliminate funding support for some reserve personnel. The financial resources gained by these actions were used, where possible, to improve equipment readiness of the remaining units. Further study is in process to correlate force sizing to contingency response actions.

(The statement continues.)

Secretary WARNER. Finally, our deepest concern is with regard to Reserve recruiting. Through the first six months of FY 74, Navy recruited just 75% of its goal and Marine Corps 36%. We have fewer Reserve applicants, and most of those who previously enlisted while the draft was still in effect are leaving as their terms of obligated service expire. We recognize that provision of meaningful training with modern equipment is essential to the recruiting and retention of an effective Reserve force. Additionally, there is little doubt that legislative attention is required. Other incentives are currently being evaluated in the ongoing Guard and Reserve Study that has been directed by the Secretary of Defense.

WEAPONS SYSTEMS ACQUISITION AND MANAGEMENT EFFECTIVENESS

I have grouped these two topics together because the net effectiveness of our acquisition programs is in large measure a reflection of the collective abilities of our individual line managers, and of the policies established by top management for their guidance.

Weapons systems acquisition and management practices continue to improve following the policies set over the last several years, and this is having the

desired effect of improving the quality of our systems. The basic principles and guidelines which are emphasized include:

Decentralization of authority and responsibility to the maximum extent possible in the acquisition process;

Assignment of a single manager—the program manager—for the development and production of each major system;

Recognition of system cost as a major design constraint;

Emphasis on early and more extensive use of test and evaluation;

Emphasis on use of cost type contracts vice fixed price type in situations where substantial development effort is required;

Restriction of concurrent development and production to the maximum extent possible.

Acquisition of Major Defense Systems

The acquisition of major defense systems is a long term process. For example, it takes roughly eight to thirteen years from the initiation of a major development effort to the appearance of the actual equipment in the fleet. Thus it is much too early to claim success—or failure—for the philosophy represented by these management principles and guidelines. Nevertheless, we are encouraged by the portents thus far, and are instituting further refinements within the context of the principles I have just outlined. These refinements include:

Greater emphasis on controlling the number of changes we allow in the production phase of programs. Excessive changes have in the past contributed inordinately to program cost growth and contractor claims against the government;

Upgrading our cost estimating capability, with particular attention devoted to improving the validity of long-term system cost estimates. As annual system maintenance costs continue steeply upwards, it has become increasingly important to emphasize designs which reduce the need for special skills and test equipment and to weigh these factors appropriately in the basic system selection criteria.

Reduction in Special Skill Needs

Chairman McClellan. What specific systems in the Navy are being developed or procured where the designs have concentrated on reducing the need for special skills and test equipment?

Secretary Warner. The Navy attempts in all systems to strike an appropriate balance between performance requirements and the need for special skills and test equipment. There are several approaches that can be taken to minimize the requirements for special skills and test equipment.

The broadest approach is to seek maximum simplicity in the design, consistent with the need for system performance. This approach is followed in all programs.

Where system performance requirements dictate complexity, the needs for special skills and test equipment for maintenance can be minimized through the inclusion of built-in features to monitor the performance of the system and identify faults. This can further be supplemented by modular designs which permit the correction of faults by simple replacement of modules which are subsequently repaired by contractors or centralized maintenance activities. Examples of systems which embody automatic fault isolation and modular replacement techniques include the AN/UYK–20 Standard Shipboard Combat Systems Minicomputer, the VAST (Versatile Avionics Shop Test) system, the AN/BQQ–5 Sonar, and the TRIDENT Integrated Radio Room.

Another approach is to establish maintenance strategy which emphasizes more frequent preventive maintenance by centralized maintenance activities rather than attempting to use longer cycles which require more maintenance to be performed at the operating unit level. The PF (Patrol Frigate) and PHM (Patrol Hydrofoil) programs are examples of this approach.

(The statement continues.)

Secretary Warner. Increasing our efforts to reduce the overall time lag between concept formulation and system production. If present inflationary trends continue, an improvement in this area could have a significant and favorable budgetary impact, in addition to the operational advantages which would result; and

Establishing formal communities comprised of "weapon system acquisition managers", identifying and training such personnel sooner in their careers, and leaving them in key acquisition positions for increasingly longer periods of time to permit them to "see the job through".

Weapon System Acquisition Managers

Chairman McClellan. How many weapon system acquisition managers does the Navy have? What number are civilians? What is the average tour length of the managers completing their assignment in FY 1973 and projected for completion in FY 1974 and FY 1975?

Secretary Warner. At the present time the Navy has 57 Weapon Systems Acquisition (Project) Managers. These project managers are all military, however, Navy policy does not preclude the appointment of qualified civilians in these positions.

The average tour lengths of Project Managers completing their assignment during FY 1973 through 1975 are as follows: 1973—2.8 years; 1974—2.5 years; 1975—3.6 years.

(The statement continues.)

Secretary Warner. Finally, Mr. Chairman, as we achieve the foregoing, we will enhance our credibility with the public and Congress with regard to all facets of the weapons systems acquisition process, especially program procurement costs and contract administration. To the degree that the dedication and integrity of the military officers and civil servants serving in responsible management positions is a determinant, I am confident that we will succeed in achieving this goal.

Management of our weapons systems acquisition process is, of course, just one facet of the larger process of management within the Department as a whole. To say that we are seeking improvements in this process is to state the obvious, and I shall not burden you with extensive remarks along this line. I think you would be interested, however, in a management program recently instituted within the Department of Defense. It is by no means a new concept, but it does place on a formal basis a management practice which has been applied less formally for years within DOD—"management by objectives".

This program sets forth concrete and specific management goals and objectives in several different areas: modernization and readiness; airlift and sealift capability; Guard and Reserve Force effectiveness; command and communications; manpower management; weapons acquisition; management of the support establishment; management of social and human relations programs; and energy conservation programs.

By its conscious emphasis on goals, our program will also necessarily focus on progress and results. In turn, we should expect the attendant benefits of better communications, earlier resolutions of issues, and more timely and efficient allocation of resources. I am confident that this renewed look at our management practices, together with the top level attention and support the new program is receiving, will have a most favorable impact on management effectiveness.

Management Goals

Chairman McClellan. Would you describe some of the specific, concrete management goals and objectives that are part of your Management by Objectives Program?

Secretary Warner. The FY 74 Management by Objectives Program for the Department of Defense includes 12 specific objectives each with the planned actions intended to support attainment of the objective. Examples of the objectives and related actions include:

Objective.—Improve the capability and efficiency of DOD management systems in the support area.

Actions.—1. Develop a cost-effective system to identify maintenance and other operations costs by weapons system.

2. Expand the application of DOD labor productivity measurement to cover all major support functions.

3. Expand and update the "Logistics Performance Measurement and Evaluation System" in order to enhance top management visibility over key logistics functions and areas.

4. Advance standardization of DOD management systems in areas where standardization will reduce development, maintenance, or operating costs without sacrifice of support essential to management.

5. Develop methods for systemtically reviewing items in the inventory to reduce or eliminate varieties and sizes to the minimum number compatible with the operating needs of the Military Services.

6. Eliminate duplicate wholesale inventory management of items used by more than one Service.

Objective.—Implement a 15 percent reduction from FY 73 in total energy use within DOD.

Actions.—1. Consistent with the need to ensure an adequate posture of military readiness and training the following actions will be taken:

Reduce aircraft flying hour programs.

Reduce Navy ship operations.

Reduce use of high speeds in Navy ship transits.

Increase the use of shore training facilities in order to minimize time at sea.

Emphasize energy conservation policies in the R & D program.

Limit vehicle speeds to 50 mph.

Limit administrative use of vehicles and aircraft.

Objective.—Decrease the size of the Defense support establishment.

Actions.—1. Reduce the number of bases through a realignment of the DOD domestic and overseas base support structure.

2. Begin reductions in headquarters staffing by 30 June 1974 through a reduction in both the number and size of DOD management headquarters.

3. Determine the requirements for DOD laboratories and assess the capability of present laboratories to meet the requirements. Identify excess capacity overlapping capability, shortfalls, and instances where R & D could be contracted to industry.

4. Reduce the number of intelligence personnel by 30 June 1974 through management efficiencies, technological advances, and mission reductions.

Chairman McCLELLAN. Are progress and results that the Management by Objectives Program focuses on actually quantifiables? Give us some examples.

Secretary WARNER. There are many actions contained in the Management by Objectives program that are quantifiably measurable. For example the planned actions under the objectives previously mentioned relating to reductions in energy use and reductions in the size of the Defense Support establishment are readily measurable.

For those actions which do not lend themselves to quantifiable measurement, such as certain actions listed under the objective dealing with DOD management systems in the support areas, progress and results are measured in terms of a milestone schedule of events keyed to target completion dates.

(The statement continues.)

SUPPORT ACTIVITIES AND COSTS

Secretary WARNER. The Shore Establishment Realignment (SER) action which the Department of Defense initiated in FY 74 was a major step towards bringing our combat forces and their support facilities into better balance. We estimate that the savings which these actions may achieve over the next ten years are almost $2B in the Navy Department alone. You will recall that it was this Department which took the most extensive actions of any Department of Defense activity. When our FY 74 SER actions have been completed we will have accomplished the closure of disestablishment of 29 bases or other major installations/activities. I recognize and share the concern expressed by the many public officials and members of Congress regarding the economic impact of these actions in their states and districts. It is my hope that in responding to their inquiries and concerns over the past months, the Department has been able to explain satisfactorily its plans and actions as well as the rationale supporting them. And it is my further hope and relief that this Administration, through the Interagency Economic Adjustment Committee established by the President and chaired by the Secretary of Defense, will be able to eliminate or reduce grately the economic impact of these necessary actions upon individual communities and turn temporary adversity into permanent economic progress.

Loss of Employment

Chairman McClellan. You indicate that your FY–1974 shore establishment realignment actions will accomplish the closure or disestablishment of 29 bases or other major installations and activities. How many people will actually lose jobs because of these actions, and of that number, how many will be placed in outside jobs as a result of economic adjustment programs operated by the Navy or the Defense Department?

Secretary Warner. At the 29 major Navy shore activities it is planned that approximately 24,500 jobs will be affected by shore establishment realignment actions. It is difficult to estimate how many of that number will be placed in outside jobs although we are making every effort under the Department of Defense Placement Assistance Program to assist displaced employees in obtaining other acceptable employment. Even though some of the activities are not scheduled to close until FY–1975, through 31 January 1974 a total of 5,388 employees at these activities have been placed within the federal government, 495 have been placed outside of the federal government, and 3,096 have retired.

(The statement continues.)

Secretary Warner. Although the bulk of these closure and related actions appear to be behind us, we will continue to realign our shore establishment with the force levels as approved by the Congress, and as we discover additional economies that can be effected. We simply cannot afford a base structure excess to the needs of our combat forces.

There are, of course, many other areas besides bases and installations where we can achieve an improved combat/support ratio. Two disparate examples of such activities are headquarters personnel and civilian manning of fleet support ships.

You are perhaps aware that the Navy Department has taken very sizable reductions in the numbers of personnel assigned to its headquarters activities over the past few years. Since FY 69 through the end of the present fiscal year, this reduction amounts to over 25% of the original billets. Although this is a sizable cut, significant further reductions—in both civilian and military headquarters personnel—are planned in FY 75. In effecting reductions of this magnitude the Department has, of necessity, eliminated entire staff functions, disestablished staffs, co-located staff facilities, and in general has bent every effort towards streamlining and strengthening its headquarters operations.

Headquarters Activity Reductions

Chairman McClellan. You indicate that between FY 1969 and FY 1974, reductions of 25% have been made in numbers of personnel assigned to headquarters activities. What was the specific size of the headquarters establishment in each year, FY 1969 to FY 1974 (military and civilian)? How many of these reductions in billets were reclassifications rather than actual eliminations?

Secretary Warner. The size of the Department of the Navy management headquarters, exclusive of the Marine Corps headquarters organizations, for each year from FY 1969 to FY 1974 is as follows: [1]

	Military	Civilian	Total
Fiscal year:			
1969 (actual)	14,300	17,811	32,111
1970 (actual)	14,393	16,998	31,391
1971 (actual)	13,455	14,715	28,170
1972 (actual)	12,535	13,837	26,372
1973 (actual)	11,866	12,645	24,511
1974 (estimated) [1]	10,131	12,580	22,711

[1] Fiscal year 1974 end strength totals are the estimated fiscal year 1974 end strength contained in the fiscal year 1974 column of the fiscal year 1975 President's budget.

[1] Does not include personnel assigned to OSD, JCS, International Headquarters, Joint and Unified Commands, or Defense Agencies which are subject to review and management control by their assigned organizations.

The manpower data shown above reflects a reduction of 9400 military billets and civilian positions in the FY 1969 to FY 1974 time period, a 29.3% decrease. This data has been adjusted to delete all significant functional transfers from management headquarters organizations and to add all significant functional transfers into management headquarters organizations for each year to portray a consistent manpower base over this time period. It is recognized that numerous less significant functional and manpower transactions have occurred in this same time period both into and out of the management headquarters organizations for which information is not readily available and which do not represent eliminations. However, it is considered that such transactions would not exceed 10% of the reflected reduction total at the maximum. This is consistent with the DEPSECDEF imposed 15% reduction of the FY 1969 end strength directed in September 1970 and the more recent Navy initiative in FY 1973 and FY 1974 to effect significant headquarters manpower reductions in fleet and shore staffs, both of which precluded "reclassification" action to accommodate such reductions.

Loss of Military and Civilians From Headquarters Jobs in 1975

Chairman McClellan. You indicate that significant further reductions in both civilian and military headquarters personnel are planned in FY 1975. How many military and civilians will be eliminated from "headquarters" jobs in FY 1975? Will these spaces be eliminated or transferred to other non-headquarters activities?

Secretary Warner. Exclusive of the Marine Corps headquarters reductions, the proposed Navy budget provides for the elimination of 179 military billets and 982 civilian positions from the Navy Secretariat and those headquarters organizations under the Chief of Naval Operations in FY 1975. No transfer from headquarters to other non-headquarters activities is involved. Additionally, as a result of the Secretary of Defense-directed headquarters manpower review effort, the Secretary of Defense shortly plans to impose a further reduction in military billets and civilian positions from these same headquarters staffs. Under the guidelines provided by the Secretary of Defense in this latter review effort, the manpower ceilings and supporting funds derived from this additional reduction in headquarters personnel are to be reprogramed and utilized to increase the Navy's combat capability.

Comparison of Personnel Reductions Between Army and Navy

Chairman McClellan. In testimony before the Committee on March 5, 1974, the Secretary of Defense indicated that a reduction of approximately 15% in headquarters personnel would be made in the Office of the Secretary, the Chairman of the Joint Chiefs, and the various Service headquarters staffs. According to the Secretary of Defense, the specific reductions amount to 15% in OJCS, 15% in OSD, 19% in Army, 14% in Air Force, 10% in the Marine Corps and 7% in Navy. Why is there such a great disparity between the reduction being made in other headquarters when compared with the Navy and Marine Corps reductions? Why is the Navy's percentage reductions less than half that being made in the other services?

Secretary Warner. Differences in the percentage reductions being made in other headquarters when compared with the Navy and Marine Corps reductions is a recognition of the significant Navy and Marine Corps staff reductions effected in the latter half of FY 1973 and in FY 1974 at the initiative of the Chief of Naval Operations and the Commandant of the Marine Corps. The decision of the Secretary of Defense in this regard reflects his intent to generally equalize the reductions between the Military Services since FY 1971.

(The statement continues.)

Secretary Warner. The increasing costs of trainable military manpower have also prompted us to examine alternatives that would reduce personnel in various support functions. A promising experiment has been the use of civil service crews to man certain types of Navy ships used for support of the fleet. At the present time three oilers, two fleet tugs, and two cable layers are being operated in this capacity by our Military Sealift Command. We believe that this mode of operation will not only meet fleet standards of dependability and professionalism, but will also produce significant savings in operating costs.

Although I anticipate some further expansion of this promising development in FY 75, we have not yet decided how far to go in implementing the concept. There are obviously limits on what we can ask civilian-manned ships to do, and I do not intend that our drive for economies in support functions will result in reducing our military flexibility.

Civil Service Crew Ship Manning

Chairman McClellan. What criteria are used by the Navy in determining what types of Navy ships will be manned by civil service crews?

Secretary Warner. The degree of similarity between certain Navy support ships and commercial bottoms is the basic criteria. The less sophisticated tugs, cable repair ships and tankers offered the quickest test of these concepts with the potential to expand into certain dry cargo resupply missions. Results of this building block approach in fleet environments has been encouraging.

Due to our wartime requirements to support carrier task forces and other combatants, the Navy will always have a requirement for Navy manned support ships. However, a proper mix of Navy and civilian manned ships and crews can provide peacetime efficiencies while still meeting wartime readiness requirements. The concept also provides the Navy greater flexibility in the management of its resources, in scheduling peacetime operations and training, and in the further development of overall combat capability.

Chairman McClellan. Besides the seven ships you cited, what other ships would this program be applicable to?

Secretary Warner. As previously mentioned, the degree of similarity between certain Navy support ships and commercial bottoms is the basic criteria. It would be neither feasible nor practical to operate combatant or many types of support ships with civilian crews. One obvious reason is that the military skills needed to man a combatant ship, as well as the highly trained technicians to support these ships from our tenders and repair ships, do not exist in the U.S. civilian labor force. Therefore, I do not envision the program expanding to encompass other ship types than have already been or are planned for turnover to MSC, viz oilers (AO), cable repair ships (ARC), Fleet Ocean Tugs (ATF), and Store Ships (AF).

Cost Savings

Chairman McClellan. What kinds of annual cost savings do you anticipate from this program?

Secretary Warner. Annual direct cost for a Navy and MSC-operated ship are similar. For example, the direct cost of an AO is about $3.2 to $3.5 million annually and that of an ATF about $0.9 million. However, cost statistics do not tell the entire story. The most significant return for the Navy's dollars comes from the Military Sealift Command's higher utilization rate—their actual days at sea. For example, a Navy oiler operates about 150 days per year while the MSC tanker operates about 240 days per year at sea. This is not to suggest, however, that Navy crewed ships could not equal the peacetime utilization rates of a civilian manned ship. They can and have in both peacetime and wartime. Navy ships and crews require time for professional training, e.g., gunnery practice, leadership, etc., needed to prepare military men for career progression. Merchant Mariners, while undergoing rigorous training, do not have to worry about gunnery practice, fire control procedures, etc. Additionally, because of the demands and inflexibilities of military life and the long family separations inherent in particular to the naval service, my policy calls for a 1 in 3 deployment pattern. Because Merchant Mariners are hired specifically to go to sea—and are paid on that basis—they remain at sea for longer periods. Additionally, there are other dissimilarities which effect the cost comparisons. For example, the MSC tanker cannot man as many replenishment stations simultaneously as can the Navy oiler; they do not have to maintain Combat Information Centers, etc. But to reemphasize, the primary advantage is on the higher peacetime utilization rates. While annual direct costs are comparable, the higher utilization rates result in an average cost per day at sea of $16,000 for MSC versus $21,000 for a Navy oiler. Similarly an ATF under MSC costs about $3,000 versus $6,000 per day at sea with Navy manning.

(The statement continues.)

The Fiscal Year 1975 Budget

Secretary Warner. To support our long-term maritime objectives, to address our fleet readiness and modernization problems, and to answer the other immediate concerns and considerations of the Department—some of which I have outlined to you today—are the tasks of our FY 75 budget. Our request totals $29.0B in total obligational authority, as compared with the $27.5B—including supplementals—of FY 74, and the $25.4B of FY 73. It is nonetheless an austere budget and supports austere forces when compared to those of former years.

The Operating Accounts.—In discussing our budget request, let me speak first to our operating accounts, which provide fiscal support for critical activities and are, in effect, the sinews of the fleet.

TABLE 1.—DEPARTMENT OF THE NAVY MANPOWER COSTS, FISCAL YEAR 1973–75 [1]

	Military			Civilian [2]		
	1973	1974	1975	1973	1974	1975
Active end-strength (in thousands)	760	747	737	322	326	324
Reserve end-strength (in thousands)	164	153	143			
Cost (in millions) [3]	$7,340	$7,684	$7,777	$4,327	$4,515	$4,578
Percent of DON budget	29	28	27	17	17	16

[1] Not including retired pay and family housing costs, funded by DOD.
[2] Direct-hire, U.S. and foreign nationals.
[3] MPN, MPMC, RPN, RPMC accounts for military personnel; applicable portions of other appropriation accounts for civilian personnel.

Manpower costs, civilian and military, dominate the operating accounts and constitute 43% of the total Departmental budget in FY 75. For the Navy, we are requesting funding for an end-strength of 540,000 officers and enlisted personnel in FY 75, down 11,000 from FY 74. For the Marine Corps we recommend an end-strength of 196,000 personnel, about level with that provided in FY 74. Civilian personnel levels decrease slightly—from 326,000 to 324,000.

I do not need to tell you that our forces have shrunk over the years. The following table details the extent of this change.

TABLE 2.—DEPARTMENT OF THE NAVY FORCE LEVELS, FISCAL YEAR 1964, 1968, AND 1975 (PROJECTED)

	Fiscal year—		
	1964	1968	1975
Ships:			
Aircraft carriers	24	23	15
Other combatant ships	364	388	168
Attack submarines	104	105	77
Ballistic missile submarines	21	41	41
Amphibious ships	133	157	65
Auxiliary and patrol ships	271	262	142
Total active ships	917	976	508
Aircraft:			
Combat aircraft	3,710	3,877	3,012
Training/support aircraft [1]	3,239	3,226	2,558
Pipeline aircraft	1,442	1,388	713
Total aircraft	8,391	8,491	6,283

[1] Including all USNR and USMCR aircraft.

Decline in Active Fleet

The number of ships in our active fleet has declined by 45% since the pre-Vietnam year of 1964, and the numbers of operating aircraft have been reduced by about one quarter in this period.

To defray the operating and maintenance costs of these forces, of the Marine Corps combat units, and of all the other organizations and activities which act

in their support, we are requesting $8.0B in FY 75, which amount includes the civilian personnel costs contained in our annual accounts. This compares with the $7.3B which was provided us in FY 74, and the $5.94B of FY 73. Projected cost growth accounts for a portion of the roughly $700M increase from FY 74. Largely, however, this increase is the reflection of concerted efforts to increase fleet and station readiness by reducing maintenance backlogs, and by increased funding of overhauls, aircraft reworks, and other major repair and maintenance projects.

MAINTENANCE COSTS AND BACKLOG

Senator MCCLELLAN. You indicate that the $700 million increase for operation and maintenance in FY 1975 over FY 1974 is principally a result of reducing maintenance backlogs and increasing funds for overhauls, aircraft reworks and other major repair and maintenance projects. Why was FY 1975 selected as the year for this large increase in maintenance funding? This problem has obviously been faced in the past, yet the Navy has not allocated such a large amount of funding in this area in the past. What would be the impact of deferring the large funding increase to FY 1976? Provide the maintenance backlog as of the end of FY 1973 and projected for FY 1974 and FY 1975.

Secretary WARNER. Maintenance funding is being emphasized in order to reverse an unfavorable trend caused by operational requirements of the fleet in South East Asia from FY 1965 to FY 1973. This tempo of operations has been a major cause of degraded material condition of our ships and aircraft. We were forced to borrow against the material condition of our ships, aircraft and shore facilities in order to meet higher priority operational requirements. We are now engaging in a concerted effort to restore our material condition and improve fleet readiness.

Deferral of the increases requested would have several impacts. In maintenance of real property, the cost of the eventual repair will escalate because of the acceleration of deterioration. If the runways cannot be sealed, there is rapid base course failure, and early loss of the pavement. The same is true of roof repairs. Inability to replace pier fenders quickly leads to loss of supporting piles and decks of the pier itself. Historically, and on an average, the cost of deferring known repairs one year increases the cost of repair at least 12 percent.

At the end of FY 73 the Navy's backlog of real property maintenance was $387.5M. We estimate the backlog will be $415M at the end of FY 74. This increased funding, it is estimated will reduce the Navy's backlog to under $355M at the end of FY 75.

The backlog in depot level maintenance for aircraft reworks is increasing over prior years and we have submitted a supplemental request in FY 1974 for $40 million in an effort to improve our position in this area. The percentage of active operating aircraft beyond their prescribed maintenance cycle is increasing from 17.5 percent in FY 1973 to 22.6 percent in FY 1974 and will increase to 24.3 percent in FY 1975. We consider a backlog of approximately 10 percent as an acceptable level.

The maintenance backlog of ships due for overhauls for FY 1973 was 33. In FY 1974 and FY 1975, it is estimated to be 39 and 52 ships respectively. In the face of this increasing ship maintenance backlog, the increased funding in FY 1975 is due to more sophisticated ships entering overhaul than in FY 1974, and increased work packages on carriers and destroyer types primarily related to the 1200 PSI propulsion plant repairs. With active Navy ship forces remaining relatively constant and additional newer class ships entering the maintenance schedule, further deferral of overhauls into FY 1976 would seriously jeopardize our ship maintenance program in FY 1976 and aggravate an already serious backlog situation in FY 1975.

(The statement continues.)

Secretary WARNER. There is a major uncertainty with respect to our FY 75 operating cost estimates due to fluctuating world petroleum prices. In view of the current rising trend, the need for energy conservation is being stressed with all hands. In terms of fuel consumption, both FY 74 and FY 75 reflect a projected decrease in Navy requirements from 91 million barrels actually used in FY 73 to about 75 million barrels. We will seek further economies at every opportunity.

PETROLEUM CONSUMPTION

Senator McCLELLAN. Provide the petroleum consumption by the Navy in FY 1973 and projected for FY 1974 and FY 1975.

Secretary WARNER. I will supply that information.

(The information follows:)

DEPARTMENT OF THE NAVY PETROLEUM CONSUMPTION

[Barrels in millions]

Fiscal year 1973	86.9
Fiscal year 1974 (estimate)	70.2
Fiscal year 1975 (estimate)	74.6

(The figures differ slightly from those contained in the prepared statement of the Secretary of the Navy, but represent Navy's best estimate as of April 1, 1974.)

[The statement continues.]

RESERVE FORCES

Secretary WARNER. Turning to the Reserve forces, we propose in FY 75 a Naval Reserve drill pay program of about 108,000 manyears, a decrease of about 9,000 from FY 1974. For the Marine Corps, we are proposing about 37,000 manyears, a 1600 manyear increase over FY 74.

I am requesting a substantial increase in Reserve force operating funds in FY 75—$31M or about 15% over the comparable FY 1974 amount. Some of this increase is due to the fact that we will have more Reserve training ships, but the greater part of it is allocated to increased funding for overhauls and maintenance of these ships. It represents a major effort to enhance the material condition and hence readiness of our Reserve forces.

A summary of the operating funds requested for the Department of the Navy in fiscal 1975 is displayed in the table which follows. Fiscal years 1973 and 1974 and included for comparative purposes.

TABLE 3.—DEPARTMENT OF THE NAVY OPERATING FUNDS, FORCES, AND PERSONNEL—FISCAL YEARS 1973-75

	Fiscal year		
	1973	1974	1975
Operating funds (billions):			
Military (active) pay	$7.04	$7.40	$7.49
Military (Reserve) pay	.30	.29	.28
Other operating accounts [1]	5.94	7.30	8.01
Total operating funds [2]	13.28	14.98	15.79
Percent of DON budget	52	54	54
Active military end strength	760,406	747,101	736,778
Civilian end strength	321,786	325,695	323,529
Active fleet (number of ships)	584	511	508
Active aircraft inventory	6,574	6,475	6,283

[1] Includes O. & M.N., O. & M.M.C., O. & M.N.R., O. & M.M.C.R. and NPR (in fiscal year 1975).
[2] Includes all funds allocated to the MPN, MPMC, RPN, RPMC, O. & M.N., O. & M.M.C., O. & M.N.R., O. & M.M.C.R., and NPR (fiscal year 1975 only).

INVESTMENT—FORCE MODERNIZATION

Operating costs comprise 54% of our budgeted expenses in FY 75. The second major budget category is investment, the level of which determines the pace and effectiveness of our force modernization efforts. We are requesting funds in the amount of $9.93B for this purpose in FY 75—34% of our total budget.

Five different accounts—in addition to the military construction account—describe our investment program. I have shown these accounts, and the funding we are requesting for each, in the table which follows.

TABLE 4.—DEPARTMENT OF THE NAVY INVESTMENT PROGRAM, FISCAL YEAR 1975

	Amount requested (billions)
Account:	
Shipbuilding and conversion (SCN)	$3.56
Aircraft procurement (APN)	2.96
Weapons procurement (WPN)	.83
Other procurement, Navy (OPN)	1.68
Procurement, Marine Corps (PMC)	.23
Subtotal, procurement	9.27
Military construction (MCON, MCNR)	.66
Total investment	9.9

In the forthcoming weeks you will be examining the elements of each of these accounts in detail. Today, to set the stage for these considerations, I will present the highlights of our investment programs and briefly set forth the rationales which support them.

Shipbuilding and Conversion.—The 1975 shipbuilding program includes 30 new ships, the conversion of the final three ship increment of the POLARIS class ballistic missile submarine to a Poseidon capability, and the conversion of a submarine tender to provide further support capability for fleet ballistic missile submarines. The following table summarizes the 1975 building program.

TABLE 5.—DEPARTMENT OF THE NAVY—FISCAL YEAR 1975 SHIPBUILDING PROGRAM

	Number	Cost (millions)[1]
Combatant ships:		
Trident ballistic missile submarine	2	$1,065
DD-963 class destroyer	7	655
SSN-688 class attack submarine	3	581
Patrol frigate (PF)	7	437
DLGN nuclear powered frigate	1	268
Sea control ship (SCS)	1	172
Patrol hydrofoil missile (PHM)	4	96
Patrol gunboat (PG)	2	14
Support ships:		
Destroyer tender	1	117
Fleet oiler	1	81
Fleet ocean tug	1	11
Total	30	3,497

[1] Includes advance funding provided in prior years. As shown in table 4, the TOA requested for the fiscal year 1975 SCN account is $3,560,000,000.

As you know, Congress has recognized the requirements in this area and has supported the growth of SCN funding from a level of $1.2B in FY 69 to a level of $3.5B in FY 74. This year's program requires $3.6B and thus remains essentially level with last year. The acquisition of 30 ships, however, is more than double the 14 acquired in FY 74. This reflects our increased emphasis on ship procurement at the lower cost end of the planned high-low force mix and recognizes the need for quantity as well as quality in the years ahead.

High-Low Ship Mix

Chairman McClellan. You mention increased emphasis on ship procurement at the lower cost end of the high-low force mix. What are the specific ships to which you are referring? Can you tell us how many of the more costly ships (and what types) would have been required if you were not procuring these lower cost alternatives?

Secretary Warner. The ships to which we refer are the Sea Control Ship (SCS), the Patrol Frigate (PF), and the Patrol Hydrofoil, Missile (PHM). All of these ship programs are cost constrained and are subject to constant review and monitoring to ensure that we get the best—and adequate numbers of—ships

for the least money. The number of ships has become a significant factor, and I think that I would have to answer the second part of your question by saying that we would need essentially as many of the more expensive ships—antisubmarine aircraft carriers, Guided Missile Frigates and destroyers—as we now plan for the low-cost ships. Since it is patently impossible, under current fiscal constraints, to procure the more costly high-mix ship in these numbers, the only way that we can build a modern, viable Navy to perform our required missions into the 1980's and beyond is to develop and procure ships tailored to meet a more specific mission. In this way, I believe that we can provide the requisite numbers of ships to meet the Navy's sea control requirements, while at the same time meeting peacetime fiscal constraints.

[The statement continues.]

Secretary WARNER. Prominent among these acquisitions, not by virtue of its cost but in its recognition of future Navy roles, is the Sea Control Ship (SCS). The SCS will displace about 14,000 tons and carry a mix of up to 21 ASW helicopters and/or VSTOL aircraft. Its mission is to provide protection for our forces and shipping. The SCS concept has been subjected to close scrutiny and extended debate both within and without the Navy Department. As you are aware, Congress provided $29M in advance funding for the lead ship of this class in FY 74 on the condition that none of the funds be obligated until completion of a staff study of the subject by the House Appropriations Committee, and then the issuance of written approval by the Appropriations Committees of both chambers. Subject to the ultimate Congressional action as a consequence of this study, we are requesting the remainder of the funds—$143M—required to fully fund the lead ship in FY 75.

Just as the SCS signals emerging new concepts in the application of maritime power, so too do two other FY 1975 building programs: the Patrol Frigate (PF) and the Patrol Hydrofoil (PHM). Together, these two programs in FY 75 comprise 11 ships at a cost of $530M, exclusive of advance funding previously provided. The Patrol Frigate—a class the lead ship of which was funded in FY 73—is smaller and less expensive than the more heavily-armed general purpose destroyer now under construction. We are requesting seven in FY 75, building towards a total programmed force of 50 vessels.

With respect to the PHM, its development is a joint NATO program which was undertaken with Germany and Italy. Construction of the two lead ships of this class was funded from R&D money, as directed by the Congress. The PHM is a small, fast ship of hydrofoil design, which carries the HARPOON missile as its main armament enabling it to attack surface combatants many times its size. It is intended to supplement our sea control forces and those of our allies in straits, narrow seas, and open ocean coastal areas. We are requesting authority to procure four such ships in our FY 75 program, and anticipate a total force of 30 PHMs when the acquisition program is completed.

HYDROFOIL PATROL SHIPS

Chairman MCCLELLAN. You mentioned a total force of 30 Patrol Hydrofoil Missile (PHM) ships in the program. How was this level of PHM's determined?

Secretary WARNER. The number of 30 PHM's was derived from a study of several alternatives and is based on having five PHM Squadrons of six ships each. Two of these squadrons would be deployed in forward areas of interest, such as the Mediterranean or the Sea of Japan. Two more squadrons would be based in the continental U.S. participating in fleet exercises and conducting training in preparation to relieve the deployed squadrons. The CONUS based PHM's would be operationally ready to reinforce the deployed squadrons. The fifth squadron represents those PHM's not operationally ready due to overhaul rotation.

[The statement continues.]

Finally, the two patrol gunboats which we are requesting in our FY 75 program are destined for South Vietnam under the Military Assistance Service-Funded (MASF) program.

Speaking to the high-mix side of our capabilities spectrum, we propose to continue the ballistic missile submarine, attack submarine, and destroyer modernization programs initiated in prior years, and to reinstitute acquisitions of the DLGN-38 class nuclear frigate. Preeminent among these programs is, of course, the Trident submarine program. The Congress authorized and funded the construction of the lead ship of this class in FY 74. In FY 75, we are requesting

funding for two more ships of the class. Trident funding, including advance funding for two future ships, comprises over 32% of the FY 75 building program. In response to Congressional guidance with respect to the pacing of the program, we have revised our planned procurement rate for the remaining seven ships in the program to a two per year buy through FY 78, and one in FY 79. Total program procurement remains open and will be determined eventually by such factors as the aging of the present Polaris/Poseidon force, results of our examination of smaller, less costly platforms, SALT II developments, and the evolution of the threat. As we view our projected requirements through the 1980's, it is evident that we should maintain the flexibility to adjust total program quantities in consonance with these factors.

Guided Missile Frigate Program

With respect to the guided missile nuclear frigate program, there are two such ships in commission now, and five others in various stages of the construction process. Congressional action in FY 74 approved $79M for advanced funding for two more ships, DLGN 41 and 42. We are requesting full-funding ($152M) for DLGN 41 in our FY 75 budget, and another $92M for further long lead procurement for DLGN 42. I appreciate the concern that has been expressed as to the adequacy of this force in relation to our nuclear carrier assets and their related air/missile defense requirements.

Nuclear Attack Submarines

Our FY 75 request provides for continued procurement of the 688 class of high speed nuclear attack submarines, though at the somewhat reduced rate of three new construction ships compared to the five funded in FY 74. The first ship of the class, *Los Angeles*, is scheduled to be launched in Newport News on 6 April 1974. We have had a steady acquisition program in effect for the 688 class since FY 70. Construction of 23 of these ships has been authorized to date. They comprise a formidable weapons system, and add immense flexibility and effectiveness to the fleet.

SSN 688 Planned Force Level

Chairman McClellan. What is the planned force level of SSN 688 Class submarines? Could you compare the capabilities of the 688 Class submarine with those of the submarines it is replacing?

Secretary Warner. Including those already funded and those in the currently approved Department of Defense Five-Year Defense Plan for FY 75 through 79 are [deleted] SSN 688 Class submarines [deleted].

The principal capability improvement of the SSN 688 is [deleted].

[The statement continues.]

Secretary Warner. Our shipbuilding budget also includes funding for the last increment of seven ships in the 30 ship Spruance class destroyer (DD 963) program. These powerful, multi-purpose ships are essential force replacements. They can operate offensively in conjunction with aircraft carrier, anti-submarine, or amphibious forces, and independently in a variety of roles. The first ship of the class was launched in November 1973. A potential cost growth in this program is a concern. As required by the terms of the contract, Litton Industries recently submitted a proposal for establishing a new target price. We are analyzing this proposal to determine its validity and negotiations will soon commence to establish a reset figure for program completion.

Destroyer Tender

In addition to our combatant ship procurements we are requesting FY 75 funding of $209M for a Destroyer Tender, the first ship in a new class of oilers, and a new class of fleet ocean tug. These ships are required to maintain a proper balance between our offensive striking fleet and our sustaining support base. Navy witnesses will describe their purpose and justification in appropriate detail in the forthcoming weeks.

Military Sealift

I will round out my discussion of our shipbuilding program with just a few remarks concerning our military sealift capability and our concerns and plans regarding it.

Our sealift forces comprise government owned or chartered cargo ships and tankers operated by civilian crews under the command and control of the Military Sealift Command (MSC). It is an industrially-funded operation, and operating costs are defrayed by charges to user activities. Sealift assets are critical to our ability to maintain a sustained volume of supplies to overseas areas in contingency situations, but the recent Mideast crisis demonstrated again the small number of suitable ships available on short notice for charter from the U.S. Flag merchant fleet. There is no indication that this condition will improve in the future.

To resolve this increasingly unsatisfactory rate of affairs, we initiated a build and charter program—with which most of you are familiar—to bring additional sealift assets under our control. Nine shallow draft tankers are under construction now and are scheduled for delivery and subsequent charter to MSC in FY 75. It is likely that we will recommend similar programs for your consideration in the future. For example, the build and charter arrangement appears to be an ideal vehicle for accomplishing the replacement of Navy's aging cable ships.

There has been Congressional criticism of the build and charter concept primarily on the grounds that it constitutes a procurement program not subject to Congressional appropriations control. This is an understandable concern, though I can assure you it was not our intent to evade Congressional review—it was to provide an efficient and economical means to improve our sealift capability. In any case, the Department of Defense has proposed legislation which would in effect require Congressional approval of future build and charter acquisition programs. I urge your favorable consideration of the DOD proposal.

Charter Program

Chairman McClellan. Could you describe your proposed legislation on the build and charter program in more detail and explain how it differs from the practice previously followed in the build and charter area?

Secretary Warner. In a report on the Military Sealift Command program for build and charter of nine tanker ships, which was issued August 15, 1973 by the Comptroller General of the United States, it was recommended that Congress evaluate the need for legislation to provide for its review of programs for long term leasing of such assets as ships.

Subsequently, the Seapower Subcommittee, House Committee on Armed Services, asked that Navy prepare proposed legislation which would serve this purpose. Both the Department of Defense and the Navy concurred in the recommendation contained in the GAO report. On March 13, 1974 a proposed bill was forwarded to OMB, and is now being coordinated by OMB. Until such time as a final proposal has been concurred in by all concerned agencies within the executive branch, I feel I should not attempt to describe the specific details of the proposed legislation. Inter alia, it provides for Congressional review of the justification for support-type ships the Defense Departments needs to meet military requirements, ships which are not available in the commercial inventory, and for review of their anticipated costs. In addition, the proposed legislation will treat several technical problems, such as identifying the source of funding, providing the Government with certain favorable options to purchase, and establishing the full faith and credit of the obligations created by such charters, all of which will facilitate future build and charter programs.

Present build and charter concepts have been dictated principally by the more specialized type of ships required by the Navy and the introduction into the ship construction industry of more sophisticated financing techniques which result in a lower economic cost to the user of the vessels to be built. Ships chartered by MSC during the 1950's and early 60's were of a size and type being built commercially. Prospective owners and operators were prepared to speculate

that the ships could be commercially employed in the event they were no longer needed by MSC. The charter hire paid by MSC under such circumstances reflected the potential risks of seeking commercial employment.

Today, ships are substantially larger and more expensive. Risk capital is no longer available, except on very unfavorable terms, to build specialized ships. Consequently, the shipping industry as a whole, and MSC with particular regard to the nine small tankers, have relied increasingly upon financing provided by commercial banks and leasing companies which are structured around the benefits provided by applicable Internal Revenue Service depreciation regulations.

The economic costs to the user of charter financing are competitive with traditional means of financing ship acquisitions. However, to obtain charter financing on favorable terms it is necessary to provide financial institutions with assurances that such charter commitments are sufficiently long term to reduce their risks, repay their obligations and provide them a moderate rate of return. Charter periods substantially longer than the five years generally utilized are necessary to make the most favorable use of Build and Charter.

[The statement continues.]

Aircraft Procurement

Secretary Warner. This account is the next largest, after shipbuilding, of our FY 75 investment programs. We are requesting $2.96B. These funds will support the procurement of 248 aircraft, of which 229 are combat aircraft, and will additionally provide nearly 715 million dollars for aircraft modifications, for improvement of our aircraft parts inventory position, and for procurement of other support equipment.

All the requested FY 75 aircraft programs are continuations of modernization efforts previously initiated. Although I am concerned that we have been unable to reverse the aging trends of our aviation forces, I do feel that the budget addresses the more important of our aircraft modernization requirements. In this regard, you will find that we have allocated increased resources to the maintenance and modifications of those aircraft retained beyond their optimal service life.

All aircraft procurement programs will of course be covered in detail by the program sponsor in subsequent hearings before your committee. I will highlight a few of the more significant of these programs today.

F–14A Fighter

A key element of future Navy/Marine Corps tactical air capability is the F–14A fighter. Congress has funded the purchase of 184 of these aircraft through FY 74, and nearly 60 have been delivered to date. Later this year the first two operational squadrons will deploy aboard the nuclear carrier Enterprise. The F–14 equipped with the Phoenix missile and the AWG–9 weapons control system is admittedly expensive, but it is also extremely capable. We are requesting the procurement of 50 F–14s in FY 75, and anticipate recommending like buys in FY 76 and FY 77. As you are aware, our objective is to equip 12 Navy and four Marine squadrons with the F–14, and provide the necessary pipeline and training aircraft in support.

The total F–14 procurement now planned—334 aircraft—will not meet the modernization requirements of the Navy and Marine Corps fighter force. Follow-on procurements will be required and, as you are aware, we are involved in extensive efforts to identify a lower cost alternative to the F–14.

Modernization Requirements

Chairman McClellan. You indicated that the total planned procurement of 334 F–14 aircraft will not meet the modernization requirements of the Navy and Marine Corps fighter force. Just what are the modernization requirements? How many lower cost alternatives are required to meet these requirements?

Secretary Warner. The 334 F–14A procurement provides the minimum Navy and Marine aircraft required to form 16 combat squadrons and the training and pipeline aircraft necessary to support those squadrons. This program, however, makes no provision to procure attrition F–14A's to maintain the minimum force level, and additional procurement may be necessary for this reason. The

remaining fighter inventory of 12 Navy and 8 Marine Corps squadrons will be flying the aging F–4 Phantoms which, even with maximum service life extension through in-depth overhaul and update, will exceed their safe operating life in the early 1980's such that about 400 new fighters will be required to maintain adequate fighter forces.

To meet this need, we have initiated studies to identify a lower-cost alternative to the F–14A—termed the F–14X—as well as an entirely new fighter: the VFX. Either or both of these designs could eventually be the alternative selected to meet our longer term modernization requirements. However, a decision in this regard would not be taken until some time in the future. The Congress will, of course, be kept fully informed of our intentions in this matter.

[The statement continues.]

S–3A Viking

Secretary Warner. To provide our carrier forces with the dual capabilities of projection of power and sea control we have, as you know, modified the composition of our air wings and the configuration of our carriers to enable our operational commanders to tailor these combat platforms to a wider variety of missions. The new aircraft which enhances this capability is the highly capable, carrier-based, ASW aircraft: the S–3A Viking. With its potential to counter the present and projected submarine threat, the S–3A will provide our carrier forces with an increased level of ASW capability. For FY 75 we are requesting procurement of 45 aircraft to equip the fifth through eighth of the 12 planned carrier squadrons. I should mention that our FY 75 request is for three aircraft less than the number we had originally programmed. The funds remaining will instead be used to procure flight simulators and associated training devices. I am hopeful that important reductions in flying hour requirements for training and costs attendant thereto may be achieved. Not the least of the advantages of this initiative will be reduced consumption of aviation fuel. A similar four plane trade-off is planned for FY 76.

Attack Aircraft

We are continuing our program to modernize the Navy and Marine Corps attack aircraft forces. Procurement plans for the coming fiscal year call for an additional 34 A–7E light attack aircraft, 12 A–6E all-weather medium attack aircraft, and 24 A–4M light attack aircraft. To complement these procurement programs, we are also requesting funds to modify a portion of our present inventory of earlier models of the A6 and A7 series. It is our intention to continue these modification programs at a steady pace into later years, and expect to generate significant savings thereby as we progress towards our modernization goals.

Finally, we have not overlooked the need to update and improve the capabilities of the aircraft that perform important peripheral tasks. The past year has clearly demonstrated the requirement for capable and reliable Airborne Early Warning and Electronic Warfare platforms. In order to meet this requirement, we have requested the procurement of six E–2C Early Warning aircraft and six improved EA–6B Electronic Warfare aircraft.

Weapons Procurement

We have allocated $834M to missile and other weapons procurement in FY 75. Included in this sum is $85M for the ballistic missile programs and $536M for the acquisition of other missiles and aerial targets.

Also included in our weapons procurement program is a continuation of the important MK 48 torpedo buy. $141M (450 torpedoes) has been budgeted for this purpose in FY 75.

Other witnesses will provide the details on these programs. Let me comment briefly on just two.

Poseidon

As previously reported to the Congress, the Navy has completed a comprehensive program review and analysis to determine why the success rate of operational tests of Poseidon had been somewhat less than originally projected. Based on findings of this reliability review, a Poseidon Modification Program was de-

signed to incorporate necessary improvements in the Poseidon missile. This program provides for modifying new production missiles as well as those missiles already delivered, and we have budgeted fund for this purpose. The total program will span about three years, and I am confident that the reliability of the Poseidon weapon system as now deployed permits this orderly approach to achieve gradual improvements to the missile inventory. The appropriate Congressional committees have been and, of course, will continue to be kept informed of our progress in this matter.

Total Cost of Three-Year Poseidon Program

Chairman McClellan. The Navy has budgeted funds for improvements in the Poseidon Missile System to increase its reliability. What is the total cost of this three year program, its annual funding, and the number of Poseidon missile to be modified?

Secertary Warner. The total cost of the Poseidon Modification Program is currently estimated to be $137.1 million of which $21.3 million is for the new production phase and $115.8 million is for the retrofit phase. Funding approval to initiate this program was granted in FY 1974 for $56.5 million. In addition, that approval permitted the use of prior year assets available by fiscal year as follows: FY 1972, $9.7 million and FY 1973, $25.8 million. The FY 1975 budget presently being reviewed by the Congress contains $15.2 million. Subsequent year budgets will reflect $19.6 million in FY 1976 and $10.4 million in FY 1977. The total number of missiles to be modified under this program is [deleted]. Of these, [deleted] will be modified during the new production phase of this program and the balance of [deleted] will be modified as part of the retrofit phase.

[The statement continues.]

Harpoon

Secretary Warner. Since initiation of its development in 1971, the HARPOON program has successfully met its milestones, maintaining both cost and time schedules. Funds requested for the program in FY 75 are to support initial procurement action. These missiles will be utilized for both continuing test and evaluation work to insure proper completion of development and also to provide, after certification, an initial operational capability for designated ships and aircraft. We are requesting $82M in FY 75 for this particularly important program which is designed to fill a serious gap in our present anti-ship offensive capabilities.

Other Procurement, Navy

The FY 75 investment funds requested for this account total $1.68B. This compares with the $1.51 B provided for this purpose in FY 74. For the most part this increase reflects the quickened pace of our modernization programs, as well as concerted efforts to enhance fleet readiness levels. Readiness related items include increased funding for air launched ordnance, sonobuoys, training devices, and repair part inventories. Significant fleet modernization programs include ship and submarine sonar, radar, ASW, and communications equipment acquisition and improvements. Finally, the funds we have requested in this category include $167M for reactor plant equipment and $115M for support related to the Trident program.

Procurement, Marine Corps

In addition to the modernization of Marine Corps aviation forces, we are continuing our program to upgrade the capability of Marine ground forces to defeat enemy armor. Foremost in this program is the phased replacement of the M–48A3 tank with the M–60A1 tank. This three year replacement program commenced in FY 74, and will modernize the tank assets of both the active and Reserve forces. We are requesting $52M for procurement of 154 tanks plus advanced funding of $5.9M to support our FY 76 final production buy. To further improve our anti-tank posture, we are requesting initiation of procurement of the DRAGON medium assault and continued procurement of the TOW heavy-assault anti-tank weapons in FY 75. These weapons will significantly enhance our effectiveness against enemy armor and provide the Marine Corps with capabilities equivalent to those appearing in other armed forces.

RESEARCH AND DEVELOPMENT

The final major budget category is Research and Development. In the same fashion that operational funding affects the level of force readiness and investment funding determines the pace of force modernization, the Research, Development and Test program is the key to our strength in the future.

Our FY 1975 RDT&E(N) program contains a request for new obligation authority of $3.26B—an increase of about $520M over that appropriated last year. This increase in large part is due to a change in program emphasis and at the same time responds to Congressional guidance and our changing defense needs. $350M of the change is found in such efforts as:

Investigations to improve our strategic posture including Trident, Submarine Launched Cruise Missile (SLCM), Strategic System Guidance accuracy, and a smaller and less costly ballistic missile submarine option;

Major new initiatives—the VFX fighter aircraft;

Engineering development of the CH–53E helicopter and the AEGIS missile system.

Almost 40% ($1.3B) of our program request in FY 75 will support programs now entering or in the engineering development phase. However, our research ($118M) and exploratory development ($294M) efforts remain at virtually the same dollar level as last year.

Submarine and missile development, the F–14/F–401 engine test and development, the cruise missile, the AALC air cushion amphibious craft, the Captor mine, the CH–53E 16-ton lift helicopter, and the thrust augmented wing advanced prototype VSTOL development illustrate the breadth of our research and development efforts. The details of the total program will be presented by the Assistant Secretary of the Navy for Research and Development as the hearings progress.

CONCLUSION

Mr. Chairman, this concludes my statement. I have summarized the principal factors bearing on the size and thrust of the FY 75 Navy and Marine Corps budget request, have highlighted its more significant programs, and have shared with you some of our immediate management considerations and concerns.

In your examination of our FY 75 recommendations, it is my hope that you will find we have responded appropriately to your previous counsel and direction. Recognizing that there will always be some difference of opinion, however, I would hope that you will find the Navy Department witnesses fully responsive to your questions, and that these hearings will provide the necessary forum for a full and mutually satisfactory airing of collective views. We sincerely appreciate your past counsel and solicit your continued advice and support in the future.

NEW SHIP CONSTRUCTION

Secretary WARNER. Might I provide you now with the ships that are in this submission?

Senator YOUNG. Yes.

Secretary WARNER. This year we are requesting two Trident submarines, three attack submarines, seven DD–963's, one DLGN, one Sea Control Ship, four patrol hydrofoil missile craft, seven patrol frigates, two patrol gunboats, one destroyer tender, one fleet oiler, and one ocean going fleet tug. That is the list of 30. The last three ships are support vessels.

NAVY AIRCRAFT

Senator YOUNG. Describe the aircraft you are requesting.

Secretary WARNER. We are asking for additional new Navy F–14 fighters, S–3 ASW carrier based aircraft, P–3C, patrol planes, and also some A–4's, among others.

Senator YOUNG. How many F–14s are you requesting?

Secretary WARNER. 50.

Senator YOUNG. I understand some F–14s are going to Iran?

Secretary WARNER. Iran will get 30 under a proposed contract.

Senator YOUNG. In addition to these?

Secretary WARNER. Yes. The Iranian buy has nothing to do with this budget.

Senator YOUNG. How much would additional purchases reduce the cost?

Secretary WARNER. It would reduce the unit cost but I am not sure I have the increment of that reduction.

Senator YOUNG. The Government had a problem of living with the old contract.

Admiral ZUMWALT. It was revised before last year's testimony and we think they are doing well now and the impact of this Iranian buy will permit them to produce at the rate of six per month, which gives us something on the order of a $500,000 savings per aircraft. We will get them at the rate of four per month out after production base of six per month, two of which will go to Iranians.

Senator YOUNG. What do you plan to do about the bigger engine?

Admiral ZUMWALT. That big engine R. & D. will continue up to the point of completion of research and development, then we will make a decision later in the out years as to whether or not to put it in the F–14. What it will give us in essence at the time we decide to do it, if we do it, is the next generation fighter just for the price of the engine.

Senator YOUNG. Do you plan to continue the present engine for several years?

Secretary WARNER. Yes. We will equip some 300-plus aircraft with it.

AIRCRAFT PROPOSALS

Mr. Chairman, I can give you in detail now the aircraft proposals for fiscal 1975. They are 24 A–4M's, 12 A–6 attack planes, 6 EA–6 electronic countermeasures aircraft, 34 A–7E light attack aircraft, 50 F–14's, 20 UH–1 helicopters, 20 AH–1J's and 12 P–3C's and 45 S–3A's, 6 E–2C early warning aircraft, 7 C–9 and 6 CT–39 airlift aircraft and 6 KC–130's.

QUESTION AND ANSWER

Senator YOUNG. I have a question from Chairman McClellan on Tactical Support Aircraft, which he would like to have you answer for the record.

General CUSHMAN. Yes, sir.

[The question and response follow:]

TACTICAL SUPPORT AIRCRAFT

Chairman MCCLELLAN. What are the aircraft that the C–9 and CT–39 will replace? Where will these aircraft be based? How many aircraft are currently used for the fleet tactical support transport mission?

General CUSHMAN. The C–9 and CT–39 will replace the 30-year-old C–117 aircraft which are currently filling the fleet tactical support transport mission. Because of the age and paucity of these aircraft, the majority of this support is currently being provided by a variety of aircraft including the KC–130 aerial refueler/transport aircraft, the combat support transports, the tactical helicopters, and even some self help by the Tacair aircraft. For example, a recent study identified, by bureau number, 207 aircraft that were used in a specified 2-month period throughout the Marine Corps to provide this support.

These aircraft will be based at our east and west coast bases, and at WestPac locations, with the Marine aircraft wings and adjacent to the division bases.

Senator YOUNG. As I stated we have prepared quite a few questions you can answer for the record.

Secretary WARNER. Thank you.

Admiral ZUMWALT. May I make an additional point on the F–14's, that the Iranians are being charged for some of the research and development cost and we will get a recovery there.

QUESTION AND ANSWER

Senator YOUNG. I have another question from Chairman McClellan directed to the Secretary regarding the Iranian F–14 sale.

Secretary WARNER. I would be happy to respond, Senator.

[The question and response follow:]

IRANIAN F–14 SALE

Chairman MCCLELLAN. What will be the recovery of research and development costs on the Iranian F–14 sale—how much per plane as well as total? How was this amount of recovery of R. & D. computed? Who established the specific amount?

Secretary WARNER. The Iranian procurement of 30 F–14A aircraft had included in the purchase price $67 million or slightly more than the $2 million per aircraft in research and development recovery costs established by the Deputy Secretary of Defense. I understand that those costs were computed based on program R. & D. cost to date amortized over the number of aircraft in the program.

Secretary WARNER. That concludes my presentation, Mr. Chairman. I recommend that the Chief of Naval Operations follow me.

QUESTIONS BY SENATOR THURMOND

Senator YOUNG. Senator Thurmond was unable to be present at this meeting but has asked that questions he has prepared be answered for the record. They will be included at this point.

[The information follows:]

RESPONSIBILITY FOR STRENGTH REDUCTION

Senator THURMOND. Mr. Secretary were fiscal constraints responsible for the 10,000 reduction in Naval Reserve strength proposed for fiscal year 1975? If not, what were the reasons for this cut?

Secretary WARNER. Fiscal constraints were responsible for about 4,400 of the total 9,400 reduction. The remaining 5,000 reduction took place during the planning, programing, and budget review. It was based on a decision that planned mobilization requirements were in excess of those actually needed to augment active force ships from conditional to organizational manning.

Senator THURMOND. Are the enlisted men to be released meeting their drill requirements?

Secretary WARNER. Some reductions will be accomplished through normal attrition such as expiration of enlistments, voluntary withdrawal of nonobligated personnel because of family or job conflcit, et cetera. Some may be released because of unsatisfactory participation. These factors would tend to reduce the extent of other actions we might take in order to remain within our budgeted strength. Nevertheless, it is likely that actions which would result in the release of some enlisted personnel who are otherwise performing satisfactorily would have to be taken. Reduction of veteran recruiting and direct petty officer procurement might also be necessary.

Seabee Force

Senator Thurmond. Why is the Navy reducing its Seabee force for FY 1975?

Secretary Warner. The Naval Reserve Mobile Construction Force was having manning problems, particularly in the Northeastern part of the United States. In assessing the low manning level and the low availability of mobilization equipment, it was considered feasible to reduce the Construction Force by one battalion from 18 to 17 battalions. This results in a reduction of 762 spaces.

Naval Reserve Reparation

Senator Thurmond. Mr. Secretary I understand large numbers of Naval Reservists are leaving the program because their drill periods are being cut in half. Is this so and why was this action?

Secretary Warner. During FY 74 we transferred approximately 3,000 Selected Reserve billets from Training Category A (48 regular drills per year) to Training Category B (24 regular drills per year). We believe that some of the Reserve personnel affected by this action terminated their Reserve affiliation as a result thereof.

In the FY 75 budget the transfer of an additional 10,000 paid drill billets from Category A to Category B was recommended. In both FY 74 and FY 75, the basis for this recommendation was the determination that the mobilization billets affected do not require the more rigorous Category A training regimen. Should we find that these actions significantly affect our ability to recruit and retain qualified personnel we will, of course, review our recommedations to Congress in this matter.

Attainment of Drill Strength

Senator Thurmond. Will you be able to attain the 119,231 authorized drill strength for the Naval Reserve in FY 1974?

Secretary Warner. The RPN funds appropriated by the Congress for FY 74 will support a Selected Reserve paid drill strength of 116,857 manyears, a number slightly less than the 116,981 man-years recommended by the FY 74 President's Budget. These funds will not support the 119,231 manyears authorized by the Congress for FY 74.

Transport Aircraft

Senator Thurmond. Why has the Navy not approved the Reserve request for transport aircraft to replace the old 118's?

Secretary Warner. The Reserve request has been approved by the Navy and forwarded to the Department of Defense, the Air Force and Army for interservice coordination. The Reserve request seeks Congressional approval for a unique method of aircraft acquisition.

Reserve Reduction Effect

Senator Thurmond. What has been the result of the reduced appropriations for the Naval Reserve in FY 74?

Secretary Warner. Congressional action on that portion of the President's FY 74 Budget request pertaining to the Naval Reserve was as follows:

[In millions]

Appropriation	Fiscal year 1974 budget request [1]	Appropriated by Congress [1]	Difference
RPN	$212.1	$209.4	−$2.7
O. & M.N.R	175.4	170.8	−4.6

[1] Excluding supplemental requests.

In my opinion, the principal effect of the Congressional actions will be felt in the operations and maintenance area of responsibility. The reduced funding in this area means that ship maintenance efforts will not be as comprehensive as we originally planned, and that some reserve ship overhauls will have to be deferred. The recent sharp rise in fuel costs—which are also met from this account—has exacerbated the matter.

Systems Analysis

Senator Thurmond. What are your FY 1975 plans for the Systems Analysis and Phased Forces units?

Secretary Warner. The Systems Analysis units are being phased out in the restructuring of the Naval Reserve. However, there are mobilization requirements for personnel with such qualifications and some of the personnel in these units will be retained in Fleet Staff Augmentation units. As for the Phased Forces, most of the personnel drilling in these units do not receive pay for their drill participation. Therefore, the cost of this program is minimal. We have no plans at the present to eliminate these units which provided training for personnel who contribute to the overall Navy mission and constitute a source of trained available manpower to meet mobilization needs. These needs are in excess of the initial requirements of contingencies.

F–14B Engine

Senator Thurmond. What is the status of the F–14B engine program?

Secretary Warner. The F–401 engine is still in development. Flight testing is being conducted in number 7 F–14 using a YF–401 early development model engine. A later development model (the F–401 II) failed in its preliminary flight rating tests late last year. The Navy and the contractor are determining the causes of the failure and are developing a program to correct known discrepancies in order to proceed with the test and development of the F–401 advanced technology engine.

Statement of Admiral Zumwalt

Admiral Zumwalt. Mr. Chairman, I have, sir, a very long statement.

Senator Young. Would you prefer to have it placed in the record?

Admiral Zumwalt. Well, sir, I am prepared to do it that way or read it, if you prefer. It has information, much of which will be familiar to you which will present the relative balance between ourselves and the Soviet Union. I had planned to read it, but I can summarize it off the cuff, if that would be your desire, sir.

Questions submitted by Chairman M'Clellan

Senator Young. As I indicated previously, Senator McClellan has been detained on the floor of the Senate. He has prepared a number of questions to which he would like answers.

The questions and answers will be put in the record in an appropriate place in connection with your testimony, if that is satisfactory.

Admiral Zumwalt. We will do that.

Senator Young. All right, you may read the full statement.

Assessment of U.S. Navy capabilities relative to Soviet Navy

Admiral Zumwalt. As a basis for my posture statement this year I have prepared a comprehensive net assessment of U.S. Navy capabilities relative to those of the Soviet Navy. I will present, within this context, the Navy's programs as contained in this year's budget. I will show how these programs have been structured to correct, insofar as possible, the relative weaknesses in our own forces.

This net assessment compares our two navies over a 10-year period—the past 5 and the next 5. I will not add here to the testimony that the Secretary of Defense and the Chairman of the Joint Chiefs of Staff have given to support the requirement for naval power for deterrence

to general nuclear war, conventional war, or war limited to conflict at sea. But I feel that this comparison of our relative naval capabilities is particularly appropriate at this time:

U.S. DEPENDENCY ON IMPORTS

1. Three years ago I pointed out that this country was—and would be—highly dependent upon petroleum imports. We are witnessing today just how dependent on them we really are.

2. The industrialized world faces a similar producer consumer imbalance in many raw materials. The United States consumes over a third of the aluminum produced in the world; Western Europe and Japan slightly under a third. Three countries, Australia, Jamaica, and Surinam, produce two-thirds of the non-Communist world's aluminum ore. The United States, Western Europe and Japan have negligible tin resources, yet these three regions consume over three-fourths of the tin produced in the world.

3. That same fraction of the world's tin is produced by four other countries: Malaysia, Bolivia, Thailand, and Indonesia.

4. A third critical resource worthy of our careful consideration is food. Of the five major food-producing regions on Earth, only two have any long term exportable food potential—the Soviet Union and North America. If current history is any indicator of future events, then the United States may expect to play a leading role in the world's food supply and, therefore, we will have to be able to get it there.

The oil-producing countries have shown the way in taking advantage of a near-monopoly position in a key world industrial resource for greater profits and political gains. The recent meeting of bauxite producers and further activity by the world tin cartel can lead in the same direction. Conditions are also ripe for similar activity by producers of copper, natural rubber, and timber.

CRITICAL RESOURCES

I have singled out these three critical resources because they all have two elements in common:

1. They are primarily transported in ships. Clearly, if we cannot ensure the safety and freedom of our sea lines of communication, we must be prepared, in any future conflict, to pay a very heavy price—or to negotiate on terms most favorable to our adversary.

2. Maritime power is a relevant power factor in the mosaic of political, economical, psychological and other factors necessary to assure our continued access to seaborne resources in a successful foreign policy.

HISTORICAL PERSPECTIVE

Before I proceed with the net assessment and present the Navy's planned programs, I would like to review with you the history of the change in relative capabilities. I do this so that I might better portray the rationale for my decision to accept near term risk and reduce force levels to fund necessary modernization.

DEVELOPMENT OF SUPERPOWERS

The development of the United States and the U.S.S.R. as superpowers has been marked by their differences rather than by their similarities. The United States has always been an island Nation dependent on its maritime assets for political influence. Americans have grown up with such a natural dependence on the sea that the majority of our industries and institutions can trace some portion of their origins or development to maritime influence. Our capabilities in the exercise of seapower have paralleled our development as a world power.

Russia has evolved through history as a continental nation, endowed with a great wealth of natural resources and largely independent of sea lines of communications. As a land-oriented people the Soviets in their quest for a dominant position in the world order very naturally developed the capabilities of their land forces as a matter of first priority. They then turned logically to the development of their air forces as the necessary complement to their ground force capability.

Their navy, on the other hand, was developed as an adjunct to their land forces. It was a force which served to secure the seaward flank of their armies and to protect their limited coastal areas from frontal assault. As Soviet power and influence developed in the international arena and as they acquired offsetting strategic capabilities that would permit them to move into new and more distant spheres of influence, they perceived the need to redress the military balance at sea.

Two unrelated events, which occurred essentially during the same period, gave the Soviet planners the examples they needed to convince their political leaders of the necessity for a reordering of their priorities. In Lebanon in 1958 the U.S. 6th Fleet was able to move our Marines ashore with almost complete impunity in an area that is virtually the Soviet backyard. In 1962 the U.S. Atlantic Fleet was able to enforce a turnaround of their ships which were transporting land-based missiles enroute to Cuba, by demonstrating under the U.S. strategic nuclear superiority, an overwhelming capability to control the sea.

SOVIET MARITIME PROGRAM

The lesson was learned. The Soviets initiated the most impressive maritime program in history (with the single exception of our own World War II expansion). In the ensuing 10 years they produced a navy with worldwide competitive capability, as shown on this slide No. 1. They outdid us three and a half times.

USSR vs U.S.
NAVAL SHIP CONSTRUCTION 1962 - 1972

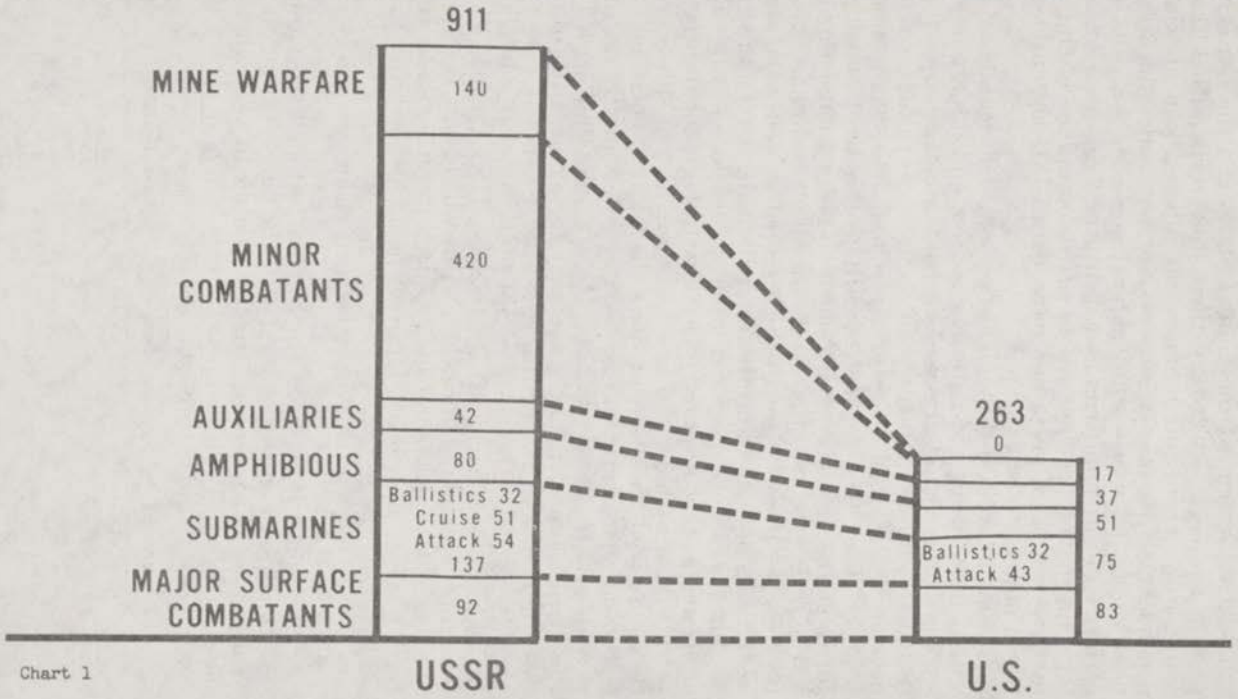


Chart 1

MODERNIZATION OF SOVIET FLEET

Admiral ZUMWALT. From their position at the end of WW II their forces developed in a logical sequence. First, they modernized and expanded their naval protective forces and offshore capabilities. Their small, high-speed missile-equipped patrol units became their insurance that we could never again operate at will within range of their continental bases. They rapidly produced a huge attack submarine fleet. To supplement the capability of their submarine forces in the sea denial role, they developed a land-based maritime air capability and a family of missile-equipped major and minor surface combatants.

[Slide No. 2 deleted.]

U.S.S.R. ANTISHIP MISSILES

To make these ships and aircraft a viable threat to our more sophisticated Navy, they expanded and modernized their antiship missiles. As you can see, they have progressed from an inventory of [deleted] missiles and they are still growing. They can bring them to bear from submarines, surface ships and aircraft, and can strike targets at ranges anywhere from 30 to 300 miles.

This family of missile systems produced a major strategic shift, making every platform which carries antiship missiles into a significant offensive platform.

RANGE OF SOVIET ANTISHIP MISSILES

Chairman MCCLELLAN. The Soviet Navy has over [deleted] anti-ship missiles with ranges between 30 and 300 miles. How many are short range, how many medium, and how many are long?

Admiral ZUMWALT. The Soviet Navy has about [deleted] short range, [deleted] medium range and [deleted] long range anti-ship missiles. These totals represent the missiles which are directly associated with active launch platforms. We estimate that these are [deleted].

COMPARISON OF ANTISHIP MISSILES

Chairman MCCLELLAN. Compare the Soviet anti-ship missiles with similar missiles of the U.S. Navy in terms of items in inventory, range, and relative attack capability.

Admiral ZUMWALT. There are several Soviet classes of missile-armed combatant ships and patrol boats that constitute a significant threat to naval forces and shipping of the U.S. and its allies. Current and projected Soviet and bloc missile capable forces and missile capabilities are as follows:

Surface combatant	1974 estimate, Soviet/bloc	1979 estimate, Soviet	Type SSM	Max propulsion range (NM)	Operational range (NM)
KOMAR	[Deleted.]	[Deleted.]	SS-N-2	[Deleted.]	
OSA			SS-N-2		
NANUCHKA/PGGP			[Deleted.]		
DDGS			SS-N-1		
KYNDA/KRESTA I CLGM			SS-N-3		
KRESTA II			[Deleted.]		
SSG/SSGN			SS-N-3		
"C" SSGN			[Deleted.]		
KRIVAK DDGSP			[Deleted.]		
KARA CLGM			[Deleted.]		

The effective range of the SS–N–1, SS–N–3, [deleted] is dependent on target detection methods and data link limitations.

Current capability of U.S. naval surface ships for surface attack is principally limited to 5''-gun range (~12 nm) and SAM's fired in an anti-ship mode [deleted] depending on target size). Since all Soviet ship-launched missiles can be fired outside the range of these weapons, we have committed ourselves to fulfilling the requirement for a standoff, all weather surface-to-surface missile capability to improve the Navy's surface ship SSM offensive posture.

Surface combatant	Type SSM	Op range	Speed	IOC
DLG, DDG, DEG, DE, PG	Standard semiactive	[Deleted]	[Supersonic	Deployed.
PG	STD ARM		do	Do.
PG, DDG	STD active		do	[Deleted
Surface combatants; SSN's; many aircraft	Harpoon	[Deleted] 60nm.[1]	[Deleted]	[Deleted.]

[1] Harpoon has achieved ranges of [deleted] in tests firings.
[Deleted].

Chairman McClellan. If every platform which carries anti-ship missiles is a significant offensive platform, why has it taken so long for the U.S. Navy to build an anti-ship missile? Wasn't this recognized five or ten years ago?

Admiral Zumwalt. The advantages of an anti-ship missile have long been recognized by the U.S. Navy. We have had a limited form of an anti-ship missile available in the Fleet since later models of the TARTAR, TALOS and TERRIER missile systems were modified to give them a surface to surface mode in the mid-60s. These missiles are very limited in range when used in a surface-to-surface mode; however, this has been offset by the fact that our principal means of engaging surface ships at extended ranges was and remains through the use of our carrier borne strike aircraft. The impetus for providing longer range anti-ship missiles stems from the fact that our potential adversaries have continued to develop an offensive threat by equipping numerous classes of surface ships with increasingly capable surface-to-surface missiles. In order to counter this threat it is essential that we provide our fleet with a more flexible standoff missile capability rather than relying solely on the carrier's air strike capability for this purpose. With the diminishing number of carriers this becomes even more urgent. This has been the thrust of our planning efforts for the past several years and has been the motivating factor for our HARPOON and STANDARD Missile development programs.

FOREIGN INFLUENCE

Senator Young. Proceed.

Admiral Zumwalt. Their next move was to expand the range of their influence by acquiring base and usage rights in foreign countries to permit the extension of ships and vital land-based naval air power into wider reaches of the world. Their political system has made them much more successful in this acquisition during recent years than we have been.

You can see the dramatic reductions in the number of our bases on that slide while theirs increased.

Senator Young. Russia has done much more in recent years to become a military power than Hitler did with Germany?

Admiral Zumwalt. Yes, sir.

Senator Young. They are accelerating their military potential more than other nations.

Admiral Zumwalt. They have done much to improve their front overseas and are moving their front lines beyond their own continent.

We have witnessed dramatic increases in Soviet access to or control of strategic places overseas. This development is traced in greater detail in Addendum II to this statement.

The final step in this sequential development, the one in which they are presently engaged, is the development of a projection capability in the form of both sea-based air and naval infantry with associated amphibious lift.

THE AGING U.S. FLEET

During this post-World War II period of Soviet naval expansion events conspired to prevent adequate modernization of U.S. naval forces. We ended World War II in a position of overwhelming naval superiority and, hence, felt no requirement to modernize our fleet then. We fought the Korean war with World War II ships and had inadequate funds during the war to modernize appropriately.

In the post-Korean war period we began the expenditure of vast sums for the urgently needed strategic Polaris submarine fleet. Again, we devoted inadequate sums to modernization of the rest of the fleet. Next began the decade-long period when our forces were heavily engaged in Southeast Asia while we continued to fulfill our commitments in other areas of the world. The result was that with heavy operational expenses there was again heavy downward pressure on money available for modernization of our fleet.

MODERNIZATION OF NAVY

Chairman MCCLELLAN. You seem to indicate a "conspiracy of events" prevented adequate modernization of U.S. naval forces. To what extent do you attribute the Navy's failure to modernize to management decisions within the shipbuilding program as opposed to the influence of outside events?

Admiral ZUMWALT. The Navy had "low mix" ships in its program (DE-1052s) even during the period when shipbuilding was not adequate. Even with such "low mix" ships, however, the building rate was totally inadequate because of overall funding limits. Further, because of the air threat and the need to build missile ships to meet it, the "high mix" ships built during the late 1950s and 1960s were essential programs. Therefore, the overall inadequacy of our building program is not a result of building the "wrong" ships—it is, as I explained in my testimony, quite simply the result of heavy downward pressure on overall shipbuilding funding levels from the events I cited.

Senator YOUNG. Proceed.

Admiral ZUMWALT. This is the problem you talked about earlier, Mr. Chairman.

Adding to the problem of an already aging fleet was the need to defer much of our ship and aircraft maintenance because of scheduling and material priority revisions associated with the conflict. And, compounding the problem, was the forced drawdown of our ammunition and supplies.

DOMESTIC REALIGNMENT

As we approached the period when our Southeast Asia commitments would be reduced, we also entered an era when realinement of domestic priorities and shifting economic trends were operating markedly to reduce both the overall percentage and the buying power of the military portion of the national budget.

At this point in 1970 we asked in a major review: What capabilities do we need in the future? And, how can we achieve these capabilities within the fiscal constraints we foresee?

NAVY MISSION PRIORITIES

- ASSURED SECOND STRIKE
- SEA CONTROL
- PROJECTION OF POWER ASHORE
- OVERSEAS PRESENCE

Chart 3

Admiral ZUMWALT. We analyzed our mission requirements [Slide No. 3] and placed the missions in this priority order.

AGE OF U.S. FLEET

We looked at our fleet and its increasing technical obsolescence. [Slide No. 4.]

AGE OF THE ACTIVE FLEET

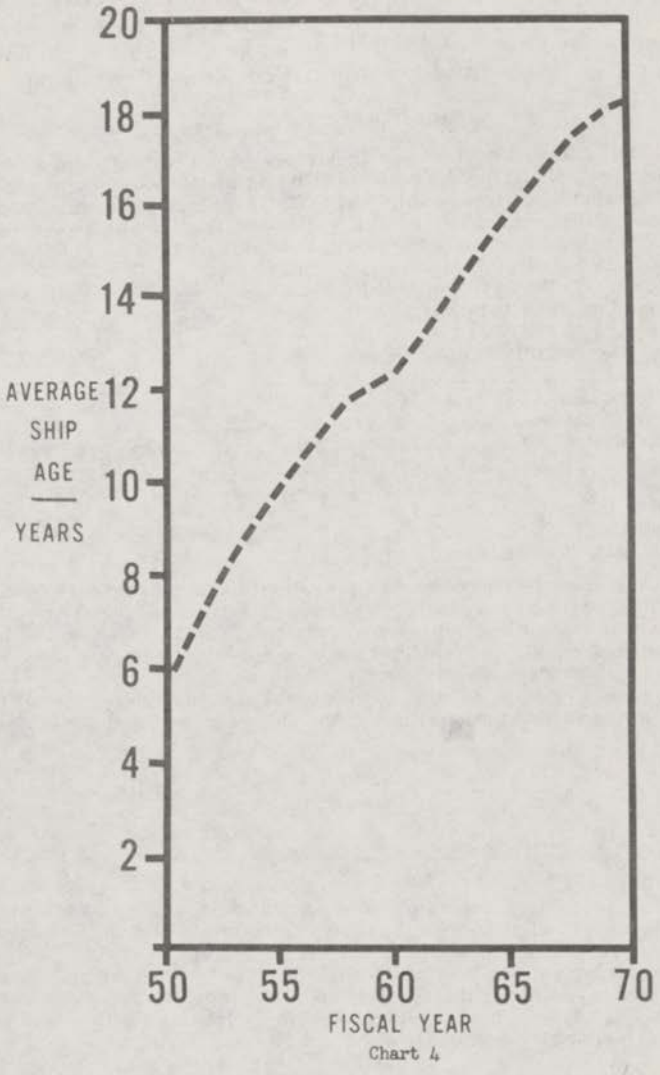


Chart 4

Our 976 ships were approaching an average age of 18 years. As a comparative figure, only 3 percent of the Soviet ships were over 20 years of age at that time. It was apparent that we had allowed the massive buildup of our sea-based strategic capability and the Southeast Asia conflict to postpone modernization too long. We concluded that, at projected levels, we would have to give up a large number of ships and associated aircraft in order to make available within those austere budget levels the funds we would need for modernization.

Ship Useful Life

Chairman McClellan. You indicate that there was a strong degree of concern over the age of the U.S. fleet both in 1970 and at the present time, specifically indicating that the average ship age of 18 years was important. What is the estimated useful service life of the various classes of ships now in the U.S. Navy? What do you estimate the useful service life of the new classes (Sea Control Ship, Patrol Hydrofoil Missile, etc.) will be?

Admiral Zumwalt. We have estimated the *maximum* useful service life of the major classes of fleet ships to be as follows:

	Years
Fleet support ships/auxiliaries	30–35
Cruisers	35
Aircraft carriers	30
Guided missile frigates	30
Guided missile destroyers	25
Destroyers	30
Destroyer escorts	25
Minesweepers	30
Attack submarines	25
Fleet ballistic missile submarines	30

These ship ages must be viewed as maximum limits, since our actual experience has shown that, under the operating conditions we have encountered and the degree of weapon system and sensor modernization which can be economically included in our older hulls, actual ship "useful service life" may be 5 or 10 years less than the numbers given above.

The newer classes of ships fit into essentially the same age groupings as above. As we have stated in previous testimony, the ships are designed for maximum service as follows:

	Years
DD–963	30
SCS	30
PF	25
PHM	20

[Slide No. 5 deleted.]

Admiral Zumwalt. As a result of these sacrifices of current capability for modernization, this is what happened to Navy force levels. We have sustained a reduction of 47 percent of our ships and about 22 percent of our aircraft since 1968. The average age of our fleet has been reduced to 14 years by giving nearly half of it up. Note, however, that we can maintain that average age while the Navy increases to 61 percent of its 1968 numbers by 1980, if the Congress funds this year's and planned outyear budgets.

Comparison of Options

Chairman McClellan. [Deleted] how do these options compare with what we could have done five or ten years ago?

Admiral Zumwalt. For example, it is my judgment that during the Lebanon crisis the President was able to make the decision to go into Lebanon in 1958, feeling there was almost nothing that the Soviets could do with conventional power to stop us. However, by the time of the recent Mid-East crisis I believe the President should have felt considerable constraint on his freedom of movement there [deleted].

Senator Young. Proceed.

Admiral ZUMWALT. I might interpolate we are not being that sucessful with regard to aircraft. We are buying a smaller number this year than last and the average age of our aircraft continues to increase.

SHIP ACQUISITIONS

Senator YOUNG. You indicate the average age of ships in our fleet was reduced to 14 years by giving nearly half of them up. Did not new ships enter the inventory during the period you mentioned? Was any part of this decrease in fleet age a result of new ships entering the service?

Admiral ZUMWALT. Yes, sir. Out of that drop, which is a net reduction of about 465 ships, we actually retired over 625 ships while gaining 163 from new construction. So there was a net decrease of 465 ships, but it consisted of a larger reduction of that with some increases. Most of the reduction in average age was the result of giving up older ships and about a quarter of it was a result of new ships.

Senator YOUNG. I suppose you are able to carry on with old ships to some extent. I know an automobile that is 15 or 20 years old is not much good. The same thing is true of farm machinery. When it is 20 years old, it is practically useless.

Admiral ZUMWALT. That is correct, Mr. Chairman, you put a lot of money in it to get a little use out of it.

In the light of these historical trends and the future dynamics of the maritime interface between the U.S. and the Soviet Union, we in the Executive Branch and you in the Congress now face the problem of how to evaluate the balance of power, how to perceive the meaning of that balance and how to structure our forces to improve that balance. The rest of my statement is designed to deal with that problem.

NET ASSESSMENT: GENERAL

I consider that this net assessment is an important step toward identifying our position so that we may consciously influence its future trend.

DENIAL OF OPTIONS

From this assessment—and placing its analyses in the broader context of my own personal vantage point as CNO—I find that the U.S. Navy is today possibly at the nadir of its capabilities vis-a-vis a Soviet Union which has embraced naval power as a major element of its foreign policy, and which has the capability to compete most effectively with us in the peacetime, paradiplomatic use of naval power. [Deleted] we face an opponent who has built a new Navy which is now in many respects on a technological par with our own.

Senator YOUNG. May I ask, [deleted] how do these options compare with what we could have had 5 or 10 years ago?

Admiral ZUMWALT. All right, sir.

LEBANON CRISIS

For example, during the Lebanon crisis, in my judgment the President was able to make the decision to go into Lebanon in 1958, feeling there was almost nothing that the Soviets could do with conven-

tional power to stop them. By the time of the recent Mid East crisis I believe the President should have felt considerable constraint on his freedom of movement there [deleted].

LACK OF CONCERN

Senator YOUNG. I doubt if very many people in the United States realize how far the Russians have advanced in their military power and what a dangerous situation could develop. I know in my own State I have the problem of a lack of understanding and concern by the people. The American people generally seem to expect a reduction in preparedness after every war. This was true after World War I and World War II and also after the Korean war. Now, in the aftermath of the Vietnam war, we seem to be experiencing the same problem.

Admiral ZUMWALT. You recall, Mr. Chairman, you and I tried to tell it to some of the good citizens of your State not too long ago.

Senator YOUNG. Yes, you did a good job, I think.

One thing, Admiral Zumwalt, you have done while you have been Chief of Naval Operations, is to tell the story as it is and in a forceful way. And I want to say to Secretary Warner that if it had not been for you people, we would be a much weaker Nation than we are today and would not have accomplished as much. For example, had someone more complacent been in your place, what a difference it would have made. You probably accomplished more than you think you have.

Secretary WARNER. Thank you, Mr. Chairman. We both believe this will be our last formal appearance before this committee.

Senator YOUNG. Yours, too?

TO THE ATTENTION OF CONGRESS

Secretary WARNER. Yes, I am going to take over the nationwide Bicentennial campaign subject to confirmation of the U.S. Senate, and we tried to forcefully bring the facts as we know them to the attention of Congress as well as the public at large.

Senator YOUNG. Off the record.

[Discussion off the record.]

Senator YOUNG. Back on the record.

SOVIET GAINS

Admiral ZUMWALT. The Soviet Navy has steadily gained on the U.S. Navy both numerically and technologically over the past two decades. As demonstrated in addendum VI to this statement, this technological gain appears to be on the order of half a generation per weapon system generation—or about 10 years in technology every 20 years. Generally, the U.S. lead was 10–12 years in the 1950–55 time frame, but that lead has essentially vanished in many important areas today. In order to provide for future improvements in our relative capabilities, we opted to sacrifice force levels in order to gain funding for modernization programs. These programs, as I will show you, are designed to correct

both the numerical and the technological imbalance—and I think it is important for you to understand why we must address both elements.

SHIFT IN NAVAL BALANCE

There are several reasons for the dramatic shift in naval balance. The first point upon which I need to remark is that the Soviets, having to come from far behind in maritime power, were forced to optimize their naval forces as efficiently as possible against ours.

Second, I have traced how in the process of optimization they took advantage of their freedom from a requirement to use the seas, in order to concentrate first on denial of the use of the seas to us, and only lately on control and use of the seas themselves.

Third, I have indicated the major international events which accelerated, and the political opportunities which facilitated, the Soviet maritime expansion and which inhibited our ability to modernize.

Fourth, I have described the major sudden decrease in current capability that we accepted in order to make the investments in modernization that had to be made in order to achieve adequate future capability.

Now I shall give a series of comparisons designed to demonstrate in several different ways the elements of the maritime balance that exists between the United States and the U.S.S.R. I shall also give you assessments of the adequacy of the U.S. Navy vis-a-vis the Soviets in each major warfare area now and as projected for the future. Then I shall discuss the scenarios in which naval forces must be compared in order to give deeper insight into relative capabilities.

Finally, I shall give you a measure of relative capability in terms of estimated war outcomes. Throughout these discussions, I will highlight for you the impact of our current programs on the restoration of the naval balance.

COMBAT QUANTITATIVE IMPORTANCE

Senator YOUNG. Admiral Zumwalt, I know you are concerned about the U.S. Navy's comparative strength to that of the Soviet Navy. In your judgment, is a combat quantitative comparison more or less important as a qualitative comparison of U.S. and Soviet presence in the major ports and sealanes of the world?

Admiral ZUMWALT. During peacetime, our presence mission is extremely important as a vehicle to provide evidence of our commitment on behalf of our allies, as a visible deterrent to potential enemies, as a political restraining force between belligerents, as a way of protecting or evacuating U.S. citizens overseas, and as an initial war-fighting force in the event of hostilities. On the other hand, the combat capability of forces deployed in the peacetime presence role must be sufficient to engender considerable doubt of success in a conventional conflict in the mind of any potential opponent. For example, if Indonesia were to deploy its entire fleet to the Indian Ocean in the presence role, we would not view this as a serious deterrent to pursuing our national interests in the area. This view is based on the realization that their navy is no match for ours in combat capability. Soviet fleet deployments, however, are viewed in a different light. Therefore, on

balance, I would say that the two quantitative comparisons are mutually reinforcing. Without both elements, the influence of each is diminished.

NET ASSESSMENT: COMPARISON OF ELEMENTS OF NAVAL CAPABILITY

Some of the simplest comparisons of this type were shown in the earlier slides. The types and capabilities of ships and other weapon systems that a navy buys indicate not only current capabilities, but give us trends that we can use in making broader comparisons in future projections. However, to gain further insight into how we compare with an enemy, we went to a higher level of complexity in our net assessment and compared specific elements of naval power. We examined the various indicators which, when taken together, gave us a picture of the trend of relative capabilities of our two navies over the past 5 years.

CONCURRENCE OF INTELLIGENCE COMMUNITY

Senator YOUNG. What is the basis for the projection of the capability included in your net assessment? Are these numbers and capabilities fully agreed to by the intelligence community or do they represent naval predictions only?

Admiral ZUMWALT. No, sir, they are fully agreed. We used the projections of the DIP, the Defense Intelligence Projection program, which is agreed within the intelligence communities and for ourselves we used our 5-year plan. Frankly, I think our estimate of what the Soviets will do is probably more accurate than our estimate of what we will do, because traditionally we notice our 5-year plan gets cut down.

We further—within limits of our ability to assess the validity of intelligence estimates and our ability to rely on our own budget projections—pushed these indicators forward 5 years and evaluated the viability of our own get well programs.

TREND INDICATORS

The indicators which appear to possess the most merit in describing these trends are age of the force, the offensive power of each, the defensive capability of each and, since the force structures are asymmetrical, the offensive power of one arrayed against the defensive capability of the other. In addition, specific warfare areas where new capabilities are emerging are worthy of careful consideration.

NET MODERNIZATION PROGRESS BY SHIP TYPE

There are two things one can do to offset the aging of a force: Build new ships and retire old ones. In the case of the Soviet Navy, the new construction rate of major general purpose ships has been sufficient to offset the aging of existing ships and to provide the Soviet Navy with newer more capable ships.

EMPHASIS IN SHIP CONSTRUCTION

(On Basis Of: High Building Rate; Increase In Force Size; Decreasing Avg Age)

SOVIET	U.S.
• AMPHIBIOUS ASSAULT SHIPS	• NUCLEAR POWERED ATTACK SUBMARINES
• AIRCRAFT CARRIERS	
• MISSILE SHIPS	
• UNDERWAY REPLENISHMENT SHIPS	
• NUCLEAR POWERED CRUISE MISSILE SUBMARINES	
• NUCLEAR POWERED ATTACK SUBMARINES	

Chart 6

SOVIET SHIPBUILDING PRIORITIES

Admiral ZUMWALT. The classes of ships which the Soviets have emphasized—as evidenced by relatively high building rates, increases in force size, and decreasing average age—are:

Amphibious assault ships, aircraft carriers, nuclear-powered attack submarines, missile ships, underway replenishment ships, nuclear-powered cruise missile submarines.

On balance, the trends in the Soviet Navy over the past 5 years show an emphasis on ships to counter our own, to support operations in remote areas, and to carry out the projection mission.

U.S. FLEET RETIREMENTS

In the case of the U.S. Navy the rate of retirement of older ships has been so much higher than the building rate that the fleet has shrunk a total of 47 percent over the 5-year period. Whereas the Soviets have shown a high building rate and increase in numbers of ships in seven classes, we did this in only one, nuclear-powered attack submarines.

USE OF NUCLEAR POWER

Senator YOUNG. Have the Russians gone more to nuclear-powered ships than we have? Do they still build some with diesel power?

Admiral ZUMWALT. They have gone less for nuclear power than we. They still build some diesel-propelled submarines and we do not build any any more, and they have never built a nuclear-propelled surface combatant. They seem to prefer the benefit of large numbers of ships which they get by not having nuclear propulsion in their surface ships.

We indeed think this is an intelligent point and it is the reason why we think it is so important for us to have a balance between some nuclear-propelled and the larger number of lower cost conventionally propelled ships.

Thus, the major trend we see over the past 5 years in the U.S. Navy is a large decrease in numbers as many of our older ships have been retired. In numerical terms only our SSN force has had a relatively high building rate and an increase in numbers. All others have declined.

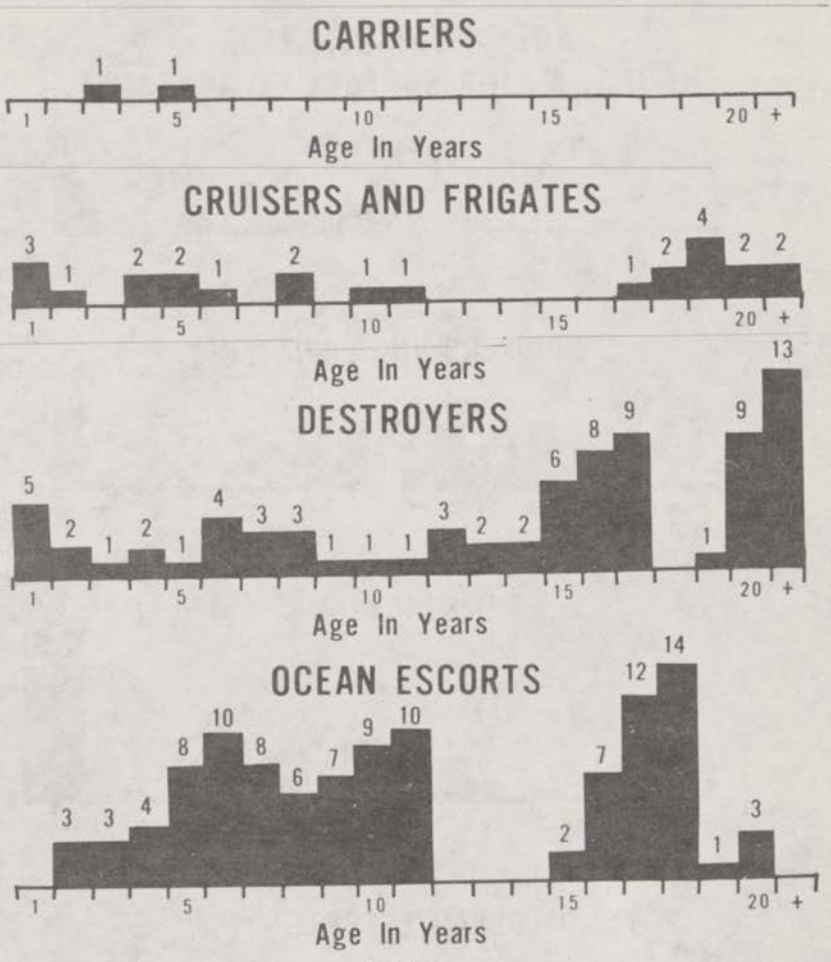


Chart 7

FLEET ADDITIONS

Admiral ZUMWALT. The building and retirement schedules I have just discussed resulted in the age distributions which are shown here

[Slide No. 7] for major surface combatants by mid-year 1973. Both this and the next slide show that approximately one-fifth of these ships have joined their respective fleets within the past 5 years.

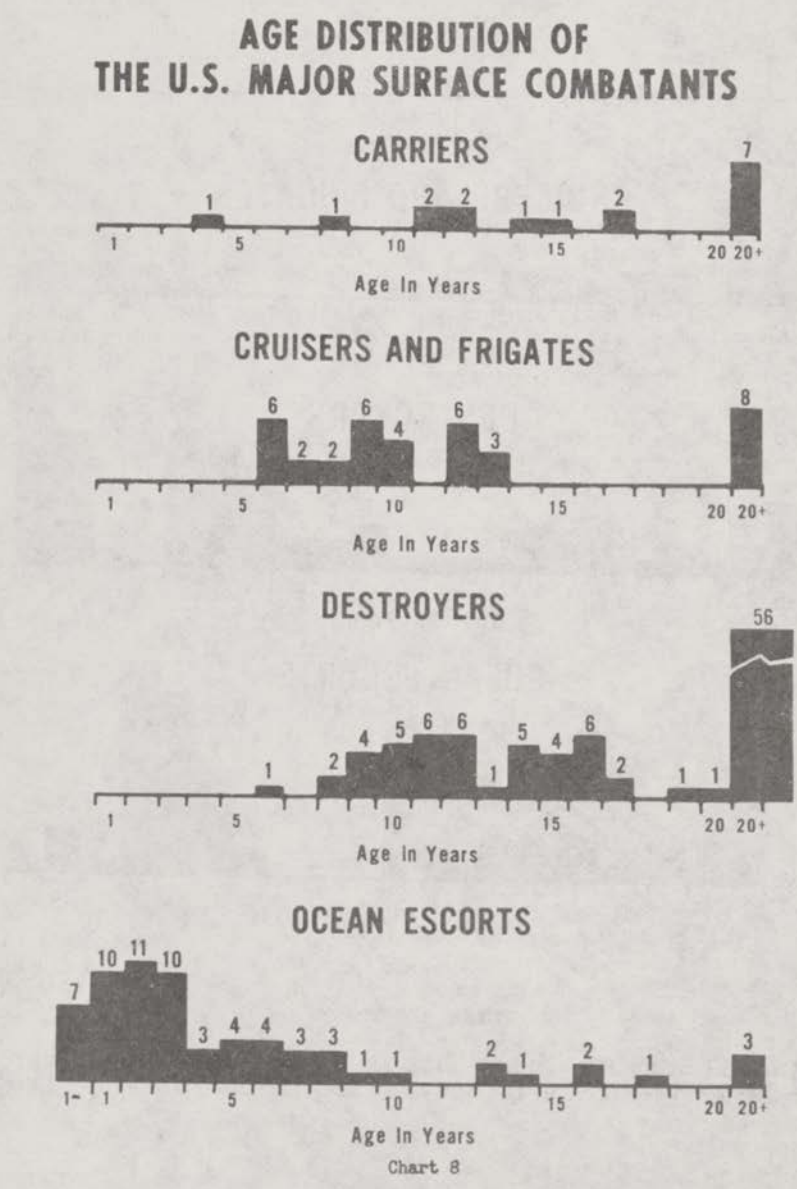


Chart 8

Admiral ZUMWALT. The U.S. additions [Slide No. 8] within this time frame were primarily ocean escorts, while the Soviet additions included cruisers, frigates, destroyers and ocean escorts to fill their perceived needs.

AGE FACTOR IN CAPABILITY JUDGMENT

Chairman MCCLELLAN. Is the age of a ship really a good indicator of its capabilities. Is it always the case that a newer ship will be more capable than an older ship, especially if the newer ship is a smaller version of a similar type?

Admiral ZUMWALT. As with all of the other indicators which were used in the net assessment, age of a ship has both its strengths and weaknesses as an indicator of capability. It is, of course, an indicator of the technology inherent in most of the subsystems (with the exception of any introduced through modernization conducted during its life). Average age is a good indicator of whether our replacement program is keeping pace or whether there is likely to be a block obsolescence problem for a given class of ships. Thus, the 18 year average age of the fleet in 1968 was an indication that our large number of World War II ships were approaching retirement age in a block without adequate provisions for replacement and this 18 year average age was a decidedly unhealthy indicator, particularly since the average age was still growing at that time. In answer to the second question, it is not always the case that a small, new ship will be more capable than a large older ship. However, out of the context of specific mission requirements, this is not a particularly meaningful fact.

Senator YOUNG. Proceed.

Admiral ZUMWALT. In some of our projections for the Soviet and U.S. Navies we went beyond the next 5 years. We did this because many of the shipbuilding programs now in progress will not deliver significant numbers of ships until after 1978.

PROJECTION OF SOVIET FORCE STRUCTURE

Our projection of the future Soviet force structure indicates a strong emphasis on development of amphibious and underway replenishment capabilities and in continuing vigorous building programs for missile escorts and nuclear-powered attack submarines. They also attach a high priority to carriers, presumably to redress, to an extent, the obvious imbalance in this area of naval warfare. In the aggregate the nominal age of their fleet will decrease slightly, but their forces will grow somewhat smaller at the same time.

OPPORTUNITIES FOR U.S. GAINS

When we examine the projected U.S. force structure trends for 1973–1982, we find that if we can with the support of Congress meet the budgetary goals involved, our forces as a whole will show a building rate somewhat higher than the Soviets'. Ours will continue to grow while theirs are estimated to be reducing, [deleted].

In addition, in the future the nominal age of our ships can decrease faster than that of the Soviets—an indication that we are capable of overcoming their technological surge. I cannot stress too strongly that these increases are entirely dependent upon continued congressional support.

Specifically, our missile escort force position is dependent upon procurement of the PF and DLGN. Any reduction in the proposed building rate of these ships will impact adversely on the balance. At the present time we are building DLGN's at the maximum rate which our industrial base will permit.

This is a very important point, Mr. Chairman, because we are constrained at the present time by our capability in the nuclear yards to build and we can't build them any faster than we are.

SHIPBUILDING CONSTRAINTS

Senator YOUNG. Do you have any problem with the shortage of steel now?

Admiral ZUMWALT. Yes, sir, steel is beginning to be a problem. The more important constraint at the present time in the major shipyards is labor. Newport News is just not able to hire enough people. Litton is not able to hire enough people and they, therefore, just cannot put the work out as fast as they could if labor were available.

Senator YOUNG. Are you talking about skilled labor?

Admiral ZUMWALT. Yes, sir. They are not able to even bring in unskilled labor and train them in adequate numbers to build up the force over a time. They are losing about as many as they gain.

Senator YOUNG. We have a rather tenuous situation in the United States now. Overall employment isn't bad, but there are areas of considerable unemployment. People don't shift to areas where they can get jobs.

Admiral ZUMWALT. One of the phenomena involved is that they can't persuade shipbuilding labor to change its location. In some way or other the labor force desires to stay where it is in the shipbuilding trade.

At this rate of one DLGN per year we shall achieve a level of three nuclear escorts per nuclear carrier by the time U.S.S. *Carl Vinson* (CVN 70) arrives in the fleet in 1980. Concurrently, however, we must pursue the PF building program vigorously in order to achieve the balanced force which we seek.

OCEAN ESCORT IMPORTANCE

Chairman MCCLELLAN. You indicate that the U.S. fleet additions during the past five years have been primarily ocean escorts, while Soviet fleet additions have included four different ship classes "to fill their perceived needs." Weren't the U.S. fleet additions also designed to fill *our* perceived needs? What was the reason why ocean escorts were the primary additions to the U.S. Navy?

Admiral ZUMWALT. I was speaking, Mr. Chairman, of surface combatant ships. We (and the Soviets) have also, of course, added submarines, amphibious and other ships to our forces. It is in the surface combatant ship area that we have had the most significant force reductions. In this area, over the past five years, we have indeed added only one class of ships while the Soviets have added four new classes.

The ocean escorts we have added were primarily of the DE–1052 class, and they most certainly were procured to meet our "perceived needs." These ships, and the Patrol Frigates included in the 1975 and future programs, will replace the large numbers of World War II destroyers and destroyer escorts we have retired over the same period. As I have indicated, we can see that the Soviets are rapidly expanding their surface combatant forces to provide the capability to limit our free use of the world's sea lanes and we have not been building surface combatant ships at the rate needed to counter their growing capability.

We built relatively few other surface combatants during the past decade because of first, the failure of the TYPHON missile program, and subsequently because of the debilitating argument internally within the Defense Department and then with the Congress over propulsion plants for these ships.

NUCLEAR CARRIER ESCORTS

Chairman MCCLELLAN. Why do we want three nuclear escorts per nuclear carrier? How many nuclear and conventional escorts per nuclear carrier do we now possess? Will conventional escorts be replaced on a one for one basis? Compare the relative capabilities of a nuclear and conventional escort.

Admiral ZUMWALT. Our long range objective is to have four nuclear escorts for each nuclear carrier. This will provide adequate protection for these carriers during a high speed transit to and initial operations in distant contingency areas. However, for sustained operations in a forward area, the four nuclear escorts would probably be supplemented with as many as four conventional types to provide improved ASW defense. We now have one nuclear carrier and four nuclear escorts in commission. There is funding provided for an additional three nuclear carriers and four nuclear escorts, and we plan to fund one DLGN per year. We have 57 conventionally powered carrier capable escorts with area surface to air missile capability and we are planning to build 30 DD–963 class carrier capable ASW escorts. For our current carrier force level of 14, this will provide an average of slightly less than 7 escorts per carrier; which is the low end of our planning factor of 7–9 escorts per deployed carrier.

Where configured with equivalent weapon systems, the conventional and nuclear ships have equivalent war fighting capability. However, the nuclear ships have the benefit of unlimited endurance which allows them to make long transits at sustained high speeds without refueling, reduces the quantity of logistics support needed by the task force, and eliminates the periods of higher vulnerability due to refueling.

SPACING OF WEAPONS SYSTEMS

Admiral ZUMWALT. In a war at sea, numbers of ships and, consequently, spacing of weapons systems will ultimately contribute more to a successful outcome than will individual ship endurance. In this regard I must note that this is the first time our budget has been adequate to support the procurement of an optimum proportion of both low and high mix systems since I have been on this job.

CONVENTIONAL VERSUS NUCLEAR SHIPS

Senator YOUNG. If the numbers of ships and spacing of weapons systems are more important to a successful outcome than individual ship endurance, why has the Navy been so firm in requesting nuclear-propelled surface ships when a greater number of nonnuclear ships could have been obtained for the same cost?

Admiral ZUMWALT. With regard to the submarine force, that statement is not as relevant. In the submarine force you get such a tremendous improvement in capability by the submarine being able to divorce itself from the surface of the sea and stay down until human endurance gives out.

There are a couple of orders of magnitude. Once you get into the surface force, you give up more if you try to include nuclear propulsion in the ships and, therefore, the Navy's position has been that we need to maintain a balance. We ought to have some nuclear-propelled, for example, the four carriers and the nuclear escorts to go with the four carriers, so that they can make high-speed runs and operate for sustained periods of time in crisis management situations, but we can't afford, either in dollars or personnel skills, to go for nuclear propulsion with regard to all ships. We would just have to give up too many ships in doing that.

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Senator YOUNG. Are all of the carriers under construction of a nuclear type?

Admiral ZUMWALT. Yes, the three under construction are.

Senator YOUNG. When was the last nonnuclear-powered carrier built?

Admiral ZUMWALT. The *America* and the *JFK*, are the only two recent nonnuclear carriers.

Senator YOUNG. How long ago was it that they were placed in the service?

Captain COOK. The *America* was commissioned in 1965 and the *Kennedy* in 1968.

Senator YOUNG. How many days can they cruise without refueling?

Admiral ZUMWALT. For a conventional ship—it depends on their speed. If they are not launching and recovering airplanes, they can cruise for many days without replenishment. However, we try to replenish them every 5 or 6 days to maintain full readiness.

If they are operating their airplanes at a high intensity rate something on the order of 6 or 7 days would be as long as they can go.

Senator YOUNG. Nuclear-powered ship fuels require replenishment after approximately 13 years?

Admiral ZUMWALT. With regard to ship fuel alone. The ship has to replenish, though, the fuel for airplanes every 8 or 9 days if it is operating aircraft at a high rate.

Senator YOUNG. All right, thank you.

THE PHM

Admiral ZUMWALT. Another low mix system which should be highlighted here is the missile equipped patrol hydrofoil which we are pursuing jointly with our NATO allies. While this ship is admittedly limited in an open ocean environment, it has a very real and viable role in such areas as the North Sea and Mediterranean and will provide a handsome return in offensive capability in such scenarios.

COMPARISON OF OFFENSIVE ELEMENTS

Now to give a rough idea of the capabilities of the two fleets to contend with each other, we can go a step beyond the comparison of building programs, and consider—in the most elemental way—such things as the offensive force each might use to protect itself. Since these comparisons will necessarily be highly aggregated, and thus oversimplified, they should by no means be interpreted as accurate predictors of the outcome of any real battle between the two fleets. Rather, they are intended merely as somewhat better indicators than mere ship counts.

OFFENSIVE SYSTEMS

As offensive systems we will be counting the weapons most likely to be used against the other side's ships. These are, first, attack aircraft and, second, antiship missiles—air-to-surface missiles (ASM's) if launched from aircraft, and surface-to-surface missiles (SSM's) if launched from surface ships or submarines.

We have included Soviet naval aircraft which are missile-armed, but have omitted other naval bombers from these counts. The Soviet naval bombers not equipped with air-to-surface missiles have far less capability against surface ships than do antiship missiles or attack aircraft. In addition, they have other roles to perform, such as electronic countermeasures, reconnaissance, and in-flight refueling. Soviet missile armed patrol boats are not included although they are very much a part of the balance in the Mediterranean, North Sea, and other areas close to Soviet bases.

Before counting the numbers of offensive systems on both sides, we looked at the number of platforms on which those systems could be carried.

[Slide No. 9 deleted.]

U.S. SYSTEM PLATFORMS

At the moment, on the U.S. side, the platforms are mainly our carriers, which carry our attack aircraft. However, the introduction of the HARPOON antiship missile will allow, in the next 5 years, many additional ships—as well as aircraft and submarines—to carry offensive antiship missiles. With continued congressional support of this important program, the HARPOON missile will redress the 4 to 1 numerical advantage held by the Soviets today and bring us to numerical parity in platforms [deleted].

SOVIET NUMERICAL ADVANTAGES

Chairman MCCLELLAN. Would you explain the 4:1 numerical advantage held by the Soviets in offensive ship platforms? Could you compare the capability of one Soviet missile carrying ship with that possessed by a U.S. carrier. Is numerical parity really necessary, especially with the Harpoon in the fleet inventory?

Admiral ZUMWALT. As you recall, I defined an offensive ship platform as one which carried either attack aircraft or antiship missiles. In addition, to be "conservative" I excluded the Soviet OSA, Komar and Nanuchka missile boats from consideration because their roles were taken as generally being limited to narrow seas or coastal applications as opposed to open ocean applications. Based on these definitions, in 1974 the U.S. has 24 such platforms composed of 14 carriers, 6 DEs and 4 PGMs; the Soviets have [deleted] SSM—capable surface ships and 65 cruise missile submarines for a total of [deleted] platforms. Thus, the ratio is approximately 4:1 in favor of the Soviets.

Any comparison of a single Soviet missile carrying ship with a U.S. carrier weighs heavily in favor of the carrier. The Kresta–II, for example, carries eight [deleted] missiles. The typical carrier would have a nominal air wing which includes 36 attack aircraft and 24 fighter aircraft. Hence, a significant advantage in both range and weapon delivery capability is accorded the carrier. This kind of quantitative comparison is considered in the slide which I presented on offensive systems.

Numerical parity in offensive platforms can be viewed as a measure of each side's ability to attack from dispersed positions. There are clearly major differences in capability among the platforms considered. Hence, we view this numerical comparison only as a first order approximation. It does indicate, however, a trend in fleet composition and armament which I feel is significant. As HARPOON enters the fleet in increasing numbers, the U.S. Navy will be better prepared to answer any Soviet threat.

Senator YOUNG. Proceed.

[Slide No. 10 deleted.]

SOVIET PLATFORMS

Admiral ZUMWALT. On the Soviet side the majority of platforms are the surface-to-surface missile-equipped submarines, an increasing proportion of which are nuclear powered. Their force level will continue to rise with the introduction of new surface-to-surface missile-equipped surface ships. Toward the end of the 10-year period covered here, aircraft carriers equipped with fixed-wing, supersonic, vertical and short takeoff landing aircraft will be introduced.

TREND OF OFFENSIVE SYSTEMS

The next trend indicator [slide No. 11 deleted] is the trend of total offensive systems carried by ships and aircraft platforms. This, of course, is a simplified comparison. We count an antiship missile as equivalent to an attack aircraft. We recognize that the antiship missile is probably more accurate and less affected by poor visibility. The attack aircraft, on the other hand, is often less vulnerable to electronic countermeasures, may provide damage assessment, and, above all, is reusable. Nonetheless, this figure does give at least a first approximation of offensive capability.

COMPARISON OF OFFENSIVE SYSTEMS

Chairman MCCLELLAN. You compared total offensive systems carried by ships and aircraft platforms. Could you compare simultaneous "attacks" of offensive weapons on a basis similar to the defensive comparison of simultaneous intercepts discussed on page 17 of your statement.

Admiral ZUMWALT. In computing offensive systems, we counted attack aircraft, SSM launcher rails (or missile launch tubes) and ASM launcher rails. This was tantamount to computing simultaneous "attack" capability, which was consistent with the methodology used in computing defensive systems. Since offensive air strikes are launched from carrier decks while fleet air defense intercepts are measured in terms of airborne combat air patrol (CAP) or deck launched interceptors (DLI) on 5 minute alert, all attack aircraft are counted for simultaneous attack capability while only one out of three fighter aircraft is capable of being airborne continuously or on 5 minute alert to contribute to simultaneous intercept. It should be noted that the F14 is credited in our calculations for the capability to execute six times as many simultaneous intercepts as an F4.

Senator YOUNG. Proceed.

HARPOON MISSILE

Admiral ZUMWALT, On the U.S. side offensive firepower has suffered from the reduction in our carrier and attack aircraft forces. With your support the introduction of the Harpoon will reverse this trend dramatically in the later years of the period.

Senator YOUNG. It seems that the Harpoon missile will reverse the trend of declining United States defensive firepower. Can you define the defensive systems now possessed by attack aircraft?

ATTACK AIRCRAFT SYSTEMS

Admiral ZUMWALT. Yes, sir, the attack aircraft do contain—or rather, the aircraft carriers do contain the attack aircraft in this slide, A–6E's and A–7E's and earlier models in this case, the A–7's

being the daylight or clear weather bombers. The problem is that those are restricted to just the 15 platforms we now have and later 12 platforms as the carriers continue to decline, whereas the cruise missiles are installed, in the case of the Soviets, on all offensive platforms we have shown, so they have a much larger number of offensive ships.

The installation of our Harpoon will begin to make many of our ships offensive for the first time, so we won't just be limited to offensive power from our aircraft carriers.

Senator YOUNG. What is the range?

Admiral ZUMWALT. The Harpoon will go about [deleted] miles.

Senator YOUNG. Will all of the aircraft carriers take the F–14's?

Admiral ZUMWALT. The present force will not. The *Essex* class carriers will not and we do not plan to modify the *Midway* class. By the time we get down to a level of 12, all but *Midway* will be capable of F–14 operation. CVN–70, which will replace *Midway*, will be the 12th F–14 capable carrier.

Senator YOUNG. How many F–14's will be required?

Admiral ZUMWALT. Somewhat in excess of the 334 of the F–14's currently in the program. It will take 12 squadrons of aircraft with the backup.

SOVIET ANTISHIP MISSILES

On the Soviet side, the number of antiship missiles rises [deleted] over the 10-year period; the increase of ship-launched and submarine-launched antiship missiles is more than enough to offset the slow decline in the number of air-launched antiship missiles. There will also be a small increase in capability toward the end of the period in the form of supersonic V/STOL tactical aircraft operating from the new larger Soviet carriers, but their numbers will not have a large numerical impact until after 1978.

[Slide No. 12 deleted.]

The Soviets' superiority has grown—because of gains on their side and losses on ours—[deleted] but introduction of the Harpoon will reverse the trend and bring us to a position of numerical superiority [deleted.]

Chairman MCCLELLAN. How can the Soviets possess a [deleted] superiority if fighters and attack aircraft are significantly better than air-to-surface missiles or surface-to-surface missiles?

Admiral ZUMWALT. The [deleted] superiority figure which I cited referred to a [deleted] numerical superiority in offensive systems in 1974. As you recall, I included attack aircraft and anti-ship missiles in this category. Fighter aircraft were included in the category of defensive systems. The comparison to which you refer was a quantitative one rather than a qualitative one. The interplay of forces and our estimate of the outcome, taking qualitative factors into consideration, was addressed in the war gaming portion of my presentation.

Senator YOUNG. Proceed.

Admiral ZUMWALT. Although readily apparent from these and the previous graphs, the importance of the Harpoon program cannot be overemphasized.

It is the Navy's principal antiship missile. It is designed to be launched from all of our surface combatants, from the S–3 and P–3 ASW aircraft, from the A–6 and A–7 attack aircraft, and in a special encapsulated version, from all but the oldest SSN's. Therefore, should

the program suffer any sort of reversal, whether budgetary or technological, it would reflect adversely not only on the number of offensive platforms, but also on our total offensive capability.

After 1978 we should expect to see the combination of increasing numbers of Soviet carriers and V/STOL produce a dramatic upswing in the Soviet line on this slide.

DEFENSIVE COMPARISON

[Slide 13 deleted.]

Here we see the relative advantage enjoyed by the United States in number of defensive systems. The capability which is displayed is the number of simultaneous intercepts possible against the other side's attack aircraft and antiship missiles. This capability is provided by surface-to-air missiles (SAMS) fired from surface ships, and by interceptors.

In making this comparison we have counted only a third of the actual number of interceptors in the inventory as a way of reflecting steady-state availability. Again, as in the offensive capability comparison there is a degree of artificiality in assuming equivalence between dissimilar systems.

For example, interceptors are extremely mobile, whereas missile ships are tactically stationary: interceptors have limited ammunition, while missile ships have relatively large magazines: and interceptors—at least in the case of the F–14—can shoot down at low-altitude targets, while missile ships are inherently horizon-limited. Therefore, what we see here is only a first approximation of defense capability.

Chairman McClellan. You compare simultaneous intercepts in your statement. What would be the comparison made strictly on the basis of numbers of defensive systems rather than intercepts?

Admiral Zumwalt. In computing defensive systems, we counted SAM fire control channels because each channel is capable of processing one target at any one time. These channels are available and ready on a 24 hour per day basis. In addition, we counted interceptor aircraft fire control channels that were available on a 24 hour per day basis. Our experience has shown that maintaining one fighter on combat air patrol and another on deck ready for launch requires a force of six in total. Thus, one-third of the fighters are available around the clock. We counted one-third of the fighters, and adjusted this figure to reflect the number of fire control channels which they represent.

Using this methodology, we arrived at a total number of systems capable of achieving a target intercept simultaneously. This methodology is consistent with that used to compute offensive systems.

If we were to make the comparison strictly on the basis of numbers of defensive systems, it would yield misleading and erroneous results because the criteria for defensive systems would be inconsistent. An aircraft which is neither in the air nor on the catapult ready for launch can not defend against an incoming missile. Hence, we counted only those which are capable of contributing to our defense in a given attack.

[Slide No. 14 deleted.]

Senator Young. Proceed.

FORCE MODERNIZATION

Admiral Zumwalt. On the U.S. side defensive capability has been relatively static in the recent past, but will double by 1978 with the introduction of the F–14, which can intercept six targets simultaneously, compared to the F–4's single-target capability. This improvement results not from a force level change, but from modernization.

V/STOL AIRCRAFT

Our sea control ship-based V/STOL's will become a factor in this equation in the late 1970's and will give our convoys and smaller task groups this element of in-depth air defense which they have never before enjoyed. These V/STOL aircraft are a spin-off from the larger Marine Corps V/STOL program and are one example of cost-saving through adaption of existing assets to developing needs.

Senator YOUNG. In what respect would the new V/STOL's be better than the ones we are now buying from England?

V/STOL DEVELOPMENT

Admiral ZUMWALT. Yes, sir. The new V/STOL's we have under examination are in three categories. The Advance Harrier or AV–16, which will really be an improvement on the existing Harrier and with greater range load capability and will be subsonic. We are also looking at supersonic Variants. The thrust augmented wing technology and lift-plus lift-cruise. The AV–16 looks as though it will come along in a much earlier time frame than the more sophisticated technology.

MILITARY V/STOL VEHICLES

Senator YOUNG. Considering the Marine Corps' experience with the Harrier V/STOL aircraft, would you recommend greater or lesser emphasis on military V/STOL vehicles?

General CUSHMAN. I would recommend greater emphasis on military V/STOL vehicles, particularly for light attack following the successful AV–8A vectored thrust design. For other applications, such as a supersonic V/STOL fighter or a V/STOL medium transport, I recommend we proceed with caution, and require adequate investigation, study and prototype testing to define the performance trade-offs before hard commitments are made and excessive moneys are spent.

TOTAL V/STOL FORCE FOR MARINE CORPS

Senator YOUNG. In the next decade, would the Marine Corps favor a total V/STOL force if such were possible?

General CUSHMAN. Only if the all V/STOL force could provide the spectrum of capabilities we plan for our currently programed force. The only firm, stated Marine Corps requirement, is for an all V/STOL light attack force, with AV–16A's replacing AV–8A's and A–4M's in about the fiscal year 1981 timeframe. The current supersonic V/STOL technology under investigation could give a lightweight V/STOL fighter. However, the Marine Corps would still have a requirement for an all-weather, systems fighter for the "high" side of our fighter mix. This aircraft is currently the F–14A which the Marine Corps is programed to receive. A successful V/STOL lightweight fighter could complement the F–14A and provide the "low" side of the mix. The Marine Corps has continually studied the benefits achieved from VTOL, STOL or a combination (V/STOL) for all our aircraft. The Marine Corps was a pioneer in the introduction of the VTOL, helicopter aircraft, and, of course, the V/STOL AV–8A light attack close

air support. Our experiences indicate other V/STOL applications which are possible, that is, our future KC–130 transport/aerial refueler replacement aircraft has requirements for STOL performance.

TIME PERIOD FOR ACHIEVING GOAL

Chairman MCCLELLAN. You indicate that an all-V/STOL light attack inventory is a reasonable goal. In what time frame do you think this goal could be achieved? With such a goal in mind, why are additional A–4M's being requested in FY 1975?

General CUSHMAN. An all-V/STOL light attack active force is indeed a reasonable goal, and it is believed attainable by the mid-eighties. The A–4 procurement program being presented in the FY 1975 Budget has been structured so as to provide sufficient A–4M aircraft to meet force requirements until the IOC of the follow-on V/STOL light attack aircraft—the AV–16. At this time the oldest A–4M's in the inventory will begin to phase out of the active forces and into the Reserves.

Senator YOUNG. Can you make a V/STOL supersonic?

Admiral ZUMWALT. The thrust augmented wing or lift-plus-lift-cruise, if successful, we will be able to make it supersonic and it will have quite an impact on types of aircraft we would want to put on the aircraft carriers.

SOVIET SAM CAPABILITY

On the Soviet side capability depends almost entirely on SAM systems based on surface ships. This will rise at an average annual rate of about [deleted] over the period. Toward the end their new aircraft carriers will add some highly credible intercept capability, but not in sufficient numbers to significantly affect the total until after 1978. And even then, we do not expect that these carriers will be able to support an interceptor with capabilities like that of the F–14, although their naval V/STOL aircraft, the Yak–36, reflects the most advanced V/STOL technology in the world today.

Chairman MCCLELLAN. We are currently investigating three different methods of V/STOL technology. Which technology does the Soviet YAK–36 use? What is the range of this aircraft compared with the AV–8A HARRIER?

Admiral ZUMWALT. [Deleted.]

Senator YOUNG. Proceed.

[Slide No. 15 deleted.]

ASW FORCES

Admiral ZUMWALT. This shows a different kind of defensive capability—antisubmarine warfare (ASW) forces. Here again, to get a rough comparison, we count suitably equipped SSN's, surface ships with an ASW capability (sonar and ASW weapons), and ASW aircraft, both fixed and rotary wing, and both land and sea based.

On the U.S. side, total ASW forces have dropped markedly in the past 5 years. Only in the SSN category has there been growth. The retirement of our ASW carriers (CVS's) has reduced the number of sea-based helicopters and fixed-wing ASW aircraft (S–2's). We have also retired some surface combatants and land-based patrol aircraft.

REVERSING TREND

Over the next 5 years, however, the trend will be reversed. We will continue to retire more ASW-capable ships than we build, but at a

rate far less than that of the past 5 years. The number of land-based patrol aircraft will stabilize, the SSN building program will continue to enlarge that force and our sea-based ASW aircraft forces will increase with the introduction of the S–3 and the Lamps helicopter, and the Sea Control Ship with its SH–3 helos.

SSN GROWTH

Chairman MCCLELLAN. Only in the SSN (submarine) category has there been growth in the U.S. anti-submarine warfare (ASW) forces. Compare the utility and effectiveness of surface ships with ASW capability, ASW aircraft and SSNs.

Admiral ZUMWALT. Comparing the utility and effectiveness of surface ships with ASW capability, ASW aircraft and SSNs is comparing three ASW systems which are not in competition with each other but are instead complementary. Each of these elements contributes in a different manner to the overall ASW problem. The aircraft brings speed and relative invulnerability; the SSN provides long-range passive capability while itself remaining hard to detect; the surface escort provides high power active sonar with high pay-off against very quiet submarines and excellent localization capability and in addition is able to perform a variety of other functions (e.g., area missile defense on AAW ships) required in a task force or convoy. The combination of these systems is necessary for adequate fleet ASW capability, not one system in isolation.

MEASURE OF ASW CAPABILITY

Chairman MCCLELLAN. What would be an appropriate quantitative measure of ASW capability (as opposed to numbers of ASW aircraft or ships)? Compare U.S. and Soviet capabilities using this measure.

Admiral ZUMWALT. We are continuing to explore a broad range of quantitative indicators for all the elements of naval capabilities, but we have not yet developed a simple indicator of ASW capability which we consider an appropriate measure to include in our net assessment. In addition to the comparison of numbers of platforms, our analyses which have been summarized in the net assessment do implicitly include all aspects of ASW capabilities. However, we have no simple representation of ASW capability other than that which is summarized in the net assessment. The SSN excels in the barrier ASW role, the P3 aircraft excels in the area ASW role (particularly when assisted by SOSUS), and the ASW escort, the CV with its S3 and SH3, and the Sea Control Ship with its SH3 contribute as a coordinated team to protection ASW. What the aircraft gains over surface escorts in terms of mobility and passive detection capability it loses in terms of ordnance load, time on station and active sonar localization capability. These elements of overall ASW capability are difficult to quantify except in a very simplistic way.

Senator YOUNG. Proceed.

TYPES OF OPERATIONS

Admiral ZUMWALT. In performing the ASW function, our naval operations can be divided essentially into two types—attrition (offensive) and protection (defensive) operations. Our attrition operations involve such forces as P–3 patrol aircraft, SSN barriers, Captor Mine barriers, SOSUS surveillance systems, et cetera. Analysis shows these forces to be relatively adequate to the need.

It is in our protection forces, which allow naval and troop resupply operations to be carried out in a timely manner (without waiting weeks or months for gradual barrier attrition to take place), that our greatest deficiencies exist. [Deleted.] In these protection operations, all our CV's are committed to sealane defense. They are employed in the highest threat areas, where Soviet airpower might be brought to bear,

where the largest concentrations of Soviet submarines are expected, and where we have frequent and high-intensity requirements for surface forces, naval and merchant.

NEED FOR SEA CONTROL SHIP

But the cost of a CV is simply too great to commit one to each individual force or convoy that must operate in the more distant reaches of the world—the South Atlantic, the Indian Ocean, the Mid-Pacific, the Philippine Sea, and even in areas like the Caribbean, the Eastern Pacific, the Western Mediterranean, and the Mid-Atlantic, south of 30° N.

Likewise, even the smallest CVS is so big and so expensive that we cannot afford to employ it with small task groups and convoys. The three-dimensional threat is such that we simply must provide low-cost, sustained, sea-based airpower with essentially all our forces. A sea control ship fills this need.

The Sea Control Ship (SCS) scheduled to enter the fleet commencing in fiscal year 1978 is a relatively small, austere ship designed to support sustained sea-based air operations in low-threat environments. The sea control ship will provide sea-based aircraft (V/STOL and helicopter) for the protection of underway replenishment groups, amphibious groups, and convoys in low air threat areas where protection by the more costly and capable CV's will not be available.

You may recall that in World War II, even though we had vast numbers of surface escorts, a large attack carrier force, and essentially unlimited budgets, we still found it necessary to develop the CVE—a low-cost air-capable escort which provided long-range air surveillance and defense for our convoys and shipping. The SCS grew out of a similar need in a modern era.

SCS—LOW COST CAPABILITY

The Sea Control Ship gives us this lowest possible cost through a combination of V/STOL's and helos. The smallest ship we could build with catapults and arresting gear, capable of operating conventional takeoff-and-landing aircraft, would, if conventionally powered, cost some three times as much as an SCS and, if nuclear powered, would be much more.

Operationally, the sea control ship gives us 24-hour surveillance, surface and subsurface, many miles out from the force. Forces without carriers are now blind beyond 15 to 20 miles for surface contacts and beyond about 5 miles for submarine contacts. We can get out to about 100 miles and 50 miles, respectively, with the sea control ship. It gives us the capability to locate and kill surface ships, missile boats, and submarines before they can target us with their missiles; and it provides a modest capability to intercept and destroy threat aircraft.

AWACS—A COMPLEMENTARY SYSTEM

Chairman MCCLELLAN. Could the airborne warning and control system (AWACS) aircraft being developed by the Air Force be used to provide surface surveillance many miles from the forces? Wouldn't the significantly greater range of the AWACS, when compared with the sea control ship, provide greater capability for surface surveillance?

Admiral ZUMWALT. I believe the AWACS could in certain instances provide some measure of surface surveillance at great distances from our forces afloat. However, it would not be likely that our naval forces could ever be solely dependent upon the AWACS, but rather it would be complementary to our own surveillance assets in ocean areas where we enjoy the benefits of nearby land-based air facilities.

In answer to the portion of the question relating to AWACS versus sea control ship capabilities, I should like to point out the difference in concept of the two systems. As I understand the AWACS, it is to function as a totally self-contained command and control system. To be sure, it would have surveillance capability as does the Sea Control Ship (SCS). However, the SCS, with its embarked aircraft can investigate, identify and if need be, attack hostile forces, a function which I believe is not intended for the AWACS.

Chairman MCCLELLAN. If AWACS were used by the Navy, would this reduce the requirement for sea control ships?

Admiral ZUMWALT. No, sir, it would not. As I noted previously, the AWACS would not perform the same functions as the Sea Control Ship (SCS) but would rather be complementary and we believe could probably increase the utility and effectiveness of the SCS in certain situations and in certain ocean areas in proximity to land-based air facilities.

E–2C

Chairman MCCLELLAN. Can the E–2C track ship targets? At what range?

Admiral ZUMWALT. Yes, indeed, it is very effective in tracking ship targets. As you will appreciate, the E–2C was designed for optimum performance in the naval environment and, therefore, both surface and air detection capability were necessary considerations in its design.

Without going into specifics, I think the E–2C surface detection capability against virtually all surface targets of interest or concern is entirely adequate, and can be detected essentially to the radar horizon of the E–2C.

Senator YOUNG. Proceed.

Admiral ZUMWALT. Thus, the Sea Control Ship will provide sustained sea-based air support to the many dispersed task groups and convoys which cannot, due to lack of numbers, be provided the protection of our CVs. It forces the Soviets to react to a completely new initiative, designed to attack their weakest points—the lack of sea-based air, and the reliance on long-range reconnaissance aircraft for antiship missile targeting assistance. This concept is sound, proven by wartime experience, and validated by 2½ years of intensive analysis and test. No other forces (ships, aircraft, submarines) above what we now plan to have could give us as much capability of this kind for the dollar.

OTHER NAVY ASW PROGRAMS

In addition, there are other current Navy programs which merit mention as they contribute significantly to the achievement of U.S. ASW force superiority. Although the older U.S. ASW carriers (CVS) have been retired, there remains a requirement for ASW platforms to provide a viable capability in light of the Soviet technological advances. In 1972 the role of the attack carrier (CVA) was expanded to include an ASW capability (CV). By 1979 11 of our carriers will be converted to CV's vice CVA's.

SH–3 ASW HELICOPTER

The modification of the SH–3 ASW helicopter is concurrent with expansion of the ASW platform capability and provides an effective, modern systems to operate both from the CV's and from the Sea Control Ship.

BQQ–5 SONAR

The BQQ–5 sonar is a technological improvement which significantly expands the ASW capability of the SSN [deleted].

On the Soviet side all categories of ASW-capable forces, and particularly the airborne components, have increased over the past 5 years and will continue to do so over the next 5 years. These total increases, however, will not be as great as ours—with the single exception of ASW surface ships—where some of the older and smaller single-purpose escorts will be retired.

UNITED STATES/SOVIET ASW FORCE DIFFERENCES

These comparisons do not reflect the qualitative differences in United States and Soviet ASW forces, such as: (1) Surveillance capability (that is, SOSUS); (2) submarine self-noise levels; (3) long-range capabilities of detection sensors on ASW platforms; and (4) variations in platform capabilities. The United States generally leads in the above areas, but this lead is at least partially diminished by the asymmetry in United States and Soviet need for use of the sea. Further, these qualitative differences do not change the principal significance of the trends indicated by the figures.

[Slide No. 16 deleted.]

This summarizes the total number of ASW-capable forces. In 1968 we had a numerical superiority of almost 2 to 1. But during the past 5 years our forces have shrunk at about 7 percent per year, resulting in our loss of numerical superiority. However, with congressional support we can experience a moderate growth in our forces over the next 5 years, compared with a very small predicted Soviet growth, and the combination could give us a slight edge in the number of ASW units by 1978. Since the margin is so slight, it is imperative that we continue with the previously mentioned ASW programs.

COMPARING OFFENSE VERSUS OPPOSITION

[Slide No. 17, deleted.] Here we can see the number of offensive systems on each side in proportion to the number of high-priority targets they would have to attack. The United States in 1968 had a superiority over the Soviet Union of more than two-to-one. With the reduction in our offensive capability resulting from the decline in our carrier attack forces, as well as the gradual growth in the number of Soviet ships with which they had to contend, the Soviets achieved numerical parity in 1971. Now they have a superiority [deleted]. This results, of course, from the introduction of Harpoon, which increases our offensive firepower, and dilutes the Soviet offensive firepower by presenting them with more opposing high-threat platforms.

[Slide No. 18, deleted.]

SYSTEMS COMPARISONS

Looking at this comparison in another way, we can see the number of offensive systems, in proportion to the number of opposing defen-

sive systems. The curves may be interpreted as a measure of each side's ability to penetrate the other's defenses.

[Deleted.]

[Slide No. 19, deleted.]

SUBMARINE SUPPRESSION

Here is the final comparative plot, which shows the number of ASW systems in proportion to the number of submarines with which they have to cope. We have included only general purpose submarines in this comparison, excluding those which launch strategic nuclear ballistic missiles. The curves can be interpreted as a measure of each side's ability to suppress the other's submarines.

On the U.S. side, the result is an essentially steady ratio throughout the period, although the character of the U.S. ASW force changes from surface ship intensive to a balanced air, surface and sub-surface force. With continued congressional support we will maintain our clear advantage in attrition ASW with the Captor Mine augmenting the already impressive capability of the SSN in ASW barrier operations and with SOSUS improvements and the P–3 holding their own in ASW area search operations. The Sea Control Ship operating to protect shipping, assisted by patrol frigates and DE's will provide an order of magnitude increase in protection ASW capabilities where the balance had begun to swing so markedly toward the Soviet submarine force in their SLOC interdiction role.

On the Soviet side their ability to suppress us rises rapidly over the first 6 years of the period as we retire almost all our diesel boats, and then turns downward as we approach an all-nuclear SSN force. However, the Soviets, by virtue of their larger diesel submarine force, maintain a clear numerical superiority throughout the period, though the difference decreases in the later years. [Slide No. 20.]

In retrospect, the last three plots show a generally similar trend. U.S. capabilities against their Soviet opponents show a marked decline over the past 5 years and, under the assumption of congressional support for the 1975 and subsequent budgets, a general recovery in the next 5.

COMPARISON OF PROJECTED CAPABILITIES

There is yet another element of Soviet naval capabilities that reveals an important trend in their naval thinking. We have witnessed a dawning interest on their part in the projection of naval power far from their home waters. Ambitious construction programs in underway replenishment ships, aircraft carriers, command and control ships, and amphibious ships and an operating pattern of steadily increasing overseas deployments provide evidence of this interest.

As recently as 1963 there was no permanently deployed Soviet naval force even in the Mediterranean. Today they have deployed forces not only in the Mediterranean, but also in the Caribbean, the Indian Ocean and off the West Coast of Africa. You can see the history of this buildup here.

SOVIET NAVAL FORCE DEPLOYMENTS

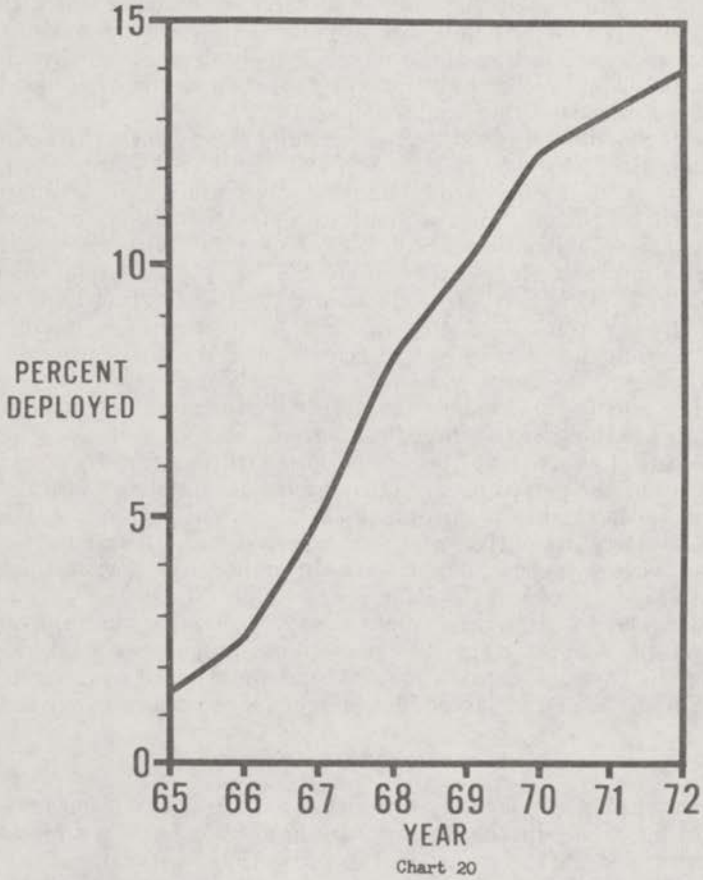


Chart 20

Admiral ZUMWALT. To support their burgeoning distant operations, the Soviets have correctly perceived the need for an effective mobile logistic support capability. They have embarked, therefore, on an accelerated program to develop the capability for underway replenishment.

[Slide No. 21 deleted.]

Admiral ZUMWALT. This year for the first time they have matched us in total numbers of underway replenishment ships capable of refueling at sea. At predicted building rates they will exceed us in total numbers by next year.

COMBATANT VERSUS REFUELING SHIP RATIOS

Our ships are, in general, larger than theirs and have greater deadweight tonnage. This is balanced, however, by an advantage to the Soviets in the ratio of combatants to refueling ships. [Slide No. 22 deleted.] If we consider the total underway replenishment capability of both sides and include the ability to replenish stores, repair parts and ammunition, the United States emerges with the greater out-of-area resupply capability today. However, the Soviets will reach a position of numerical parity [deleted].

[Slide No. 23 deleted.]

SUPPORT FORCES

Admiral ZUMWALT. Because of their lower priority, the large-scale modernization of the U.S. support ship forces has been deferred for many years and now lags modernization of the combatant forces by a significant margin. The situation promises to be further strained in the long run by our withdrawal from or denial of foreign bases for logistic support.

[Slide No. 23.]

FOREIGN AIRBASES AND NAVAL BASES

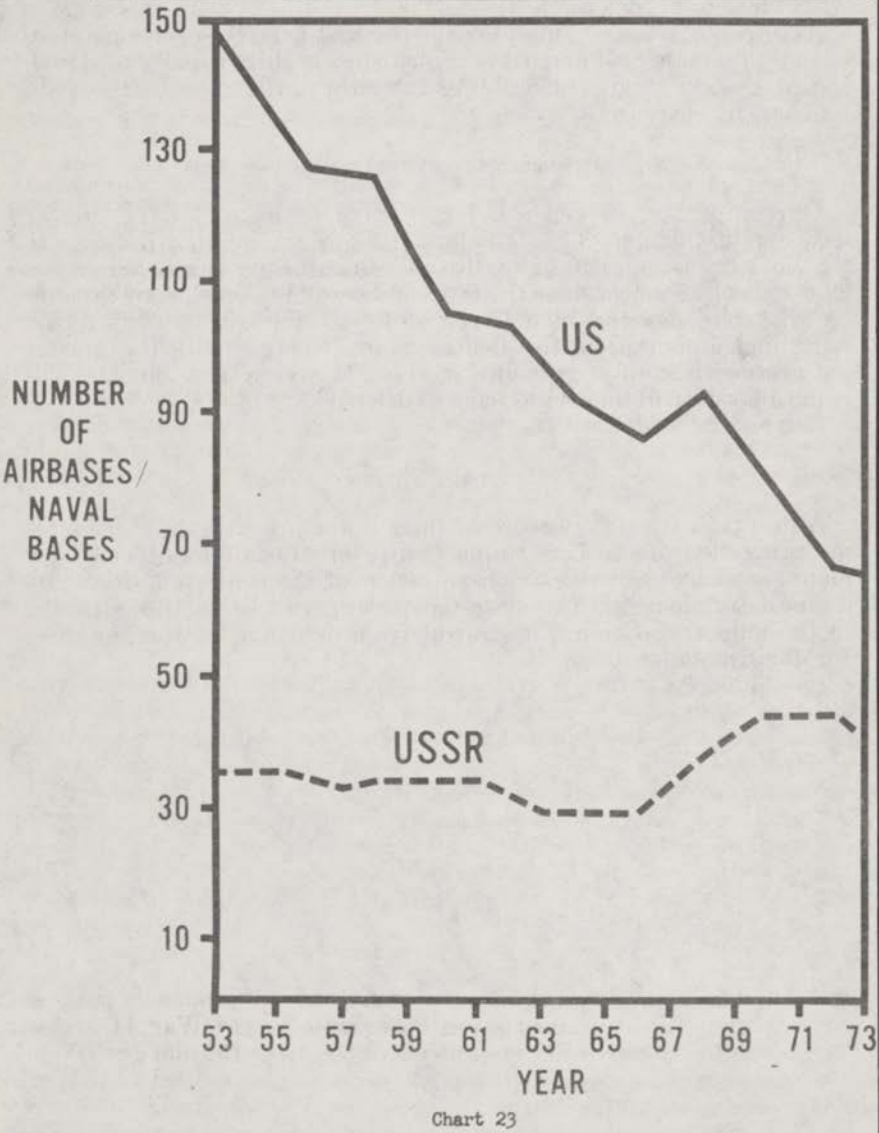


Chart 23

Admiral ZUMWALT. At the same time we may be called upon to operate in remote areas such as the Indian Ocean. We cannot, with an acceptable degree of reliability, conduct sustained operations of this nature without a modern and capable mobile logistics support force. This was the backbone of our operations in the Pacific in World War II. Therefore, we plan with your support to pursue a building program over the next 5 years which will remedy this deficiency.

AIRBASES ABROAD

Chairman MCCLELLAN. How do airbases abroad contribute to U.S. projection capabilities?

Admiral ZUMWALT. Airbases abroad are essential to Air Force projection operations. For example, almost half of the sorties flown against North Vietnam came from land bases. In addition, they may facilitate or increase the efficiency of carrier operations, if they are available, secure, and are not saturated by Air Force Army and/or allied aircraft. Planning for the use of carriers in contingency operations takes into account the prospective availability of land bases for use by other forces including their capacity, readiness, likelihood of political availability, vulnerablity to air attack, sabotage, or capture, and other relevant factors.

Senator YOUNG. Proceed.

Admiral ZUMWALT. Coupled with their developing blue water experience and their expanding capability to support combatant forces in distant areas is the evidence of a Soviet trend toward a power projection capability.

SOVIET "NAVAL INFANTRY"

Since 1965 the Soviets have placed increasing importance on their naval infantry—which we would call marines. From a small force they have now grown to about 10,000 men—still far from the size of our Marine Corps, but undeniable evidence of a serious interest in building this kind of capability.

In addition, to support their naval infantry the Soviet force of major amphibious assault ships (i.e., LST size) has grown from only 5 ships in 1968 to 12 today. We estimate continued growth [deleted] within the next 5 years. This, combined with other amphibious lift assets, translates to the lift capabilities shown here. [Slide No. 24 deleted.] As the slide indicates, U.S. lift capability has dropped approximately 40 percent since 1968, but will rise toward the end of the period as the last of the LHA's enter active service. Thus, by 1977 we shall reach a 1⅓ MAF lift capability in 20-knot, modern ships.

SOVIET CRUISERS

In addition to the two cruisers converted for command purposes, the Soviets have retained seven other post-World War II cruisers whose military capability rests primarily on their 152 mm guns. While it is perhaps conceivable that these ships might be used in a World War II-like antiship role, a far more likely employment in this age of antiship missiles is in gunfire support of operations ashore. When these assets are combined with the remainder of their naval guns suitable for gunfire support, we see this trend. [Slide No. 25 deleted.] The United States will regain a position of parity in overall numbers [deleted] only if the proposed 30-ship DD–963 program continues to receive congressional support.

COMPARISON OF SEA-BASED AIR

And, finally, to insure that we keep these trends in perspective, we should look at the great equalizer in the current relative posture of our two asymmetrical navies—sea-based tactical air. [Slide No. 26 deleted.]

ADVANTAGE OF SEA-BASED TACTICAL AIR CAPABILITY

Chairman MCCLELLAN. What specific advantages does our sea-based tactical air capability give this country? To what extent does our advantage in sea-based tactical air offset some of the other Soviet advantages?

Admiral ZUMWALT. The aircraft carrier, with embarked tactical air wing, is an effective weapons system whose inherent mobility provides the capability of inserting a concentrated, powerful force throughout the world without the political ramifications of obtaining base and overflight rights from other nations. It is, in one of its roles, a power projection platform which if targeted by an enemy does not endanger our populace or industrial complex.

Carrier-based aircraft provide the U.S. Navy with greater flexibility than the Soviet Navy enjoys today. Sea-based aircraft out-range Soviet naval weapons systems, can concentrate quickly for protection of sea lines of communications, and can deliver conventional or nuclear weapons on inland targets.

Senator YOUNG. Proceed.

Admiral ZUMWALT. While still in the embryonic state in the Soviet's otherwise impressive array of naval weapons systems, it is within their technological and industrial capability to develop an impressive sea-based tactical air system in the next decade.

It is my firm conviction that they intend to assure the capability for the projection mission through the same avenues that we have—sea-based tactical air, backed up with the required supporting capabilities—command and control and underway replenishment. But they will enjoy the supplementary advantage of much more access to overseas bases for supportive land-based air.

NET ASSESSMENT: WARFARE AREAS

A further insight into net assessment was recently provided in the process of preparing our annual program review. An appraisal was made of the major warfare areas indicated on this slide. [Slide No. 27].

WARFARE AREAS

ASMD..... SELF PROTECTION AGAINST ANTI-SHIP MISSILES
ASW(P)..... FORCE PROTECTION AGAINST SUBSURFACE THREATS
AAW..... FORCE ATTRITION OF AIRBORNE THREATS
ASW(A)..... ATTRITION OF SUBSURFACE THREATS
ASUW..... WARFARE AGAINST SURFACE SHIP THREATS
ARW..... STRIKE WARFARE USING CARRIER BASED TACTICAL AIR
EW..... ELECTRONIC WARFARE
CAC..... COMMAND, CONTROL & COMMUNICATIONS
CDS..... COMBAT DIRECTION SYSTEMS
SURV..... SURVEILLANCE
AMW(L)..... AMPHIBIOUS LIFT CAPABILITY
NGFS..... NAVAL GUNFIRE SUPPORT
MCM..... MINE COUNTERMEASURES
MIW..... MINE WARFARE
MLS..... MOBILE LOGISTIC SUPPORT FOR SEA BASED FORCES

Chart 27

We have 15 different areas listed there, Mr. Chairman.

An assessment of our capability vis-a-vis the Soviets in each of these areas was developed for the current time frame—through 1975—for the 1976–1979 period, and for the post-1979 period. Grades of adequate, marginal, and inadequate were assigned based on the results of studies, fleet exercises, and military judgment.

[Slide No. 28 deleted.]

This slide summarizes my assessment of today's forces.

You will note in [deleted] of those 15 areas we judge the Soviets superior to us and [deleted] are we superior to them.

In antishipping missile defense I evaluate our overall capability today as [deleted].

DETAILED ASSESSMENT

Senator YOUNG. Is it very difficult to relate your assessment of capabilities of the United States and the U.S.S.R. in the various warfare areas to the specific Soviet systems so as to indicate the newer or better weapons in Soviet inventories that give them the advantages that you have stated.

Admiral ZUMWALT. We do have that in detail.

ASW

In protection ASW, I evaluate our overall capability as [deleted]. The ability of surface ships to detect submarines varies from good to poor depending upon environmental conditions. ASW aircraft have a marginal capability to place a torpedo accurately on those targets which they detect with sonobuoys. In addition, surface and air launched torpedo performance is degraded by recent advances in Soviet submarine technology.

AAW

In antiair warfare, I evaluate our overall capability as [deleted]. The F–4 has a marginal capability to counter cruise missiles and we haven't yet got the F–14 to sea in numbers. Our missile ships are severely limited against the same type of threat.

In attrition ASW, I evaluate our overall capability today as [deleted]. Our SSN technology and our SOSUS/VP capabilities provide us [deleted].

SURFACE WARFARE

In antisurface warfare I evaluate our overall capability as [deleted]. We are clearly adequate wherever our carriers are employed. On the other hand, the remainder of our surface forces [deleted].

STRIKE WARFARE

In strike warfare, I evaluate our current overall capability for fiscal years 1974–75 [deleted]. At present procurement rates, we are able to maintain adequate attack aircraft force levels consistent with the reduction in number of carrier decks. [Deleted.]

ELECTRONIC WARFARE

Electronic warfare in the fiscal years 1974–75 period is assessed as [deleted]. Our primary EW deficiency is in passive surveillance and active countermeasures. [Deleted.]

COMMAND, CONTROL, AND COMMUNICATIONS

In command, control, and communications, I evaluate our current overall capability as [deleted].

COMBAT DIRECTION SYSTEMS

Combat direction systems (CDS) are defined as the method by which target information acquired by sensors is stored, processed, and disseminated. Current fleet-wide CDS capability is considered [deleted]. It ranges from automated digital systems such as NTDS down to manual systems in DDG/DE classes. Present automated systems interface with sensors of lower data rates and capabilities, and service weapon systems which have reached the limits of their capabilities. Search radar improvements or replacements are required to provide increased rates of target information. [Deleted.]

SURVEILLANCE

Our current capability in surveillance is assessed as [deleted].

SOVIET SOSUS TYPE SYSTEMS

Chairman MCCLELLAN. Do the Soviets possess SOSUS or a SOSUS-type system? Where is it deployed?

Admiral ZUMWALT. [Deleted.]

Senator YOUNG. Proceed.

AMPHIBIOUS LIFT

Admiral ZUMWALT. In amphibious lift we evaluate our current capability as [deleted]. We are deficient in helo assault ships. In addition, to lift one marine amphibious force, we must recall deployed ships and swing some of our ships from one ocean to the other.

NAVAL GUNFIRE SUPPORT

In naval gunfire support, we evaluate our overall capability as [deleted]. We have only one major caliber gun ship in the fleet. In addition as World War II destroyers were retired, our medium caliber support capability decreased to a low level.

MINE COUNTERMEASURES

Our current mine countermeasures capability is [deleted]. We do not have sufficient numbers of dedicated minesweeping helicopters. [Deleted.]

MINE WARFARE

In mine warfare, we evaluate our present capability as [deleted] we have better than adequate delivery capability.

MOBILE LOGISTICS SUPPORT

In mobile logistics support, we evaluate our overall capability as [deleted].

[Slide No. 29 deleted].

PROJECTION OF CAPABILITIES

Admiral ZUMWALT. Our projections for the future are shown on this slide. They assume that our proposed programs mature, that they are funded, and that we obtain approval for some restructured programs we will propose this year. [Deleted] we get hard kill point defense systems into the fleet in numbers. Our present programs of CIWS and NATO Sea Sparrow will be complemented in the future by a dual mode missile system which we are developing now, and, in the 1980's by an advanced system which should start in R. & D. in fiscal year 1976.

Our SPS–58 and design to price EW systems should provide major improvements in quick reaction active and passive detection, when installed in the late 1970's.

In protection ASW, the Sea Control Ship represents a quantum improvement. Surface ship sonar improvements, such as the SQS–26 rubber dome and towed arrays, will offer significant improvements. Continuing updates to the P–3 and introduction of the S–3 and Lamps helicopters will expand our air ASW coverage. An MK–46 torpedo improvement program is also being vigorously pursued. In the post-1979 period, the availability of Sea Control Ships in numbers and new families of air ASW sensors are expected to contribute heavily toward redressing the balance.

In AAW, we will see dramatic improvements when F–14's and E–2C's enter the fleet in increasing numbers. AEGIS, in the DG or DGN, will provide a quantum gain in surface-to-air missile capability in the early 1980's.

In attrition ASW, our rising submarine force levels, SOSUS and VP qualitative improvements plus the introduction of the Captor Mine are expected to keep us ahead of the threat. The fleet introduction of the Harpoon missile will bring force capabilities [deleted] particularly when coupled with the the onscene surveillance capabilities of the Sea Control Ship and Lamps helicopter.

Our projections into the future indicate that in strike warfare our capability [deleted]. Obsolete light attack aircraft will continue to be phased out until we obtain a modernized total A7E force by fiscal year 1979. The A–6 will continue to undergo modification and modernized A6E's will be produced. This will provide for increased aircraft performance and weapon system reliability. Modern technology will provide us with an increased inventory of standoff weapons such as Condor, Harpoon, extended range Walleye II, and the newer anti-radiation missile (HARM). This will increase our effectiveness against the Soviet and would substantially reduce our own force attrition levels in a sea control scenario. In a projection of power ashore scenario, however, where attrition is higher, our capability [deleted]. The EA–6B, as we build up our inventory, will provide support and increase the effectiveness of our strike forces.

ELECTRONIC WARFARE

EW during the fiscal years 1976–79 period should improve [deleted] by the end of fiscal year 1979. This improvement is due primarily to the IOC of the design-to-price electronic warfare suites currently in development. This program is intended to provide a threat warning ESM capability to about 300 ships, a wide area surveillance capability to 175 ships, and an electronic countermeasures capability to about 60 ships. EW assessment will improve [deleted] in the early 1980's as these systems are installed throughout the fleet.

ESM Costs

Chairman McClellan. What is the current estimated cost (development and procurement) of the Design-to-Price Electronic Warfare suites to provide threat warning ESM capability to 300 ships, wide area surveillance capability to 175 ships, and an ECM capability to 60 ships?

Admiral Zumwalt. In the Design-to-Price EW program two industrialists are developing competitive prototypes of modularized Electronic Warfare systems. The development cost to take these two systems through a competitive evaluation at sea is currently estimated at $48M. The winner of the competitive evaluation will receive a production contract for a total of approximately 300 ships suites. These are broken down as follows: 60 ships will receive a threat warning, surveillance and DECM capability at a unit installed cost of $1.4M; 115 ships will receive only a threat warning and surveillance capability at a unit installed cost of $0.5M; and 125 ships will receive only a threat warning capability at a unit installed cost of $300K. The current estimated cost for these procurements is $179M.

Senator Young. Proceed.

Chairman Zumwalt. The advent of FLTSATCOM in the 1976–79 timeframe will greatly improve our intraforce communications. Planned tactical secure voice systems will decrease our susceptibility to exploitation in intraforce command, control, and communications. The fleet command support center concept will provide additional improvement in our capability.

In the post-1979 period, we expect our ability to remain abreast of weapon system technology. The fleet command support center in combination with the tactical flag command center concept will reduce reaction times. A significant improvement in our relative C capability is not expected without a technological breakthrough.

In the 1976–79 period, combat directional systems fleet wide [deleted] increased automation of existing ships, and the introduction of the PHM, PF, DD–963, and SCS, all of which will have automated combat direction systems. Improved search radars will also be introduced as well as increased automatic detection and tracking capability.

In the post-1979 period, CDS will [deleted] with the introduction of AEGIS and the DG (fiscal year 1981). AEGIS will provide a combination of automatic target detection and tracking, quick response, and high firepower. It will also provide much greater force surveillance and weapon coordination.

During the 1976–79 period, overall surveillance capability [deleted]. The tactical array surveillance system or TASS will provide a mobile capability, and will provide tactical commanders with acoustic surveillance when a TASS equipped ship is in company. [Deleted.]

Our amphibious lift capability will change [deleted] as the remaining LHA's enter the fleet. My objective is to continue building toward

1⅓ MAF lift, while looking at ways to increase the capability of our existing ships.

Our NGFS capability will [deleted] during the 1976–1979 period, with the retirement of our last gun cruiser. However, in the post-1979 period, we show an increase [deleted] as the DD–963 and the major caliber lightweight gun join the inventory.

Our mine countermeasure capability will increase [deleted] when we obtain the next generation of sweep equipment. We have already made the shift to an airborne mine countermeasure system, and expect to increase our capability [deleted] with the development of a deep ocean MCM system.

Our mine warfare capability [deleted] we can complete the development of a new family of mines which we are pursuing in research and development.

The mobile logistic support forces will improve significantly in capability during the next 4 to 5 years due to the procurement of fleet oilers (AO's) and the ammunition ships (AE's). The fiscal year 1975 budget submit funds the lead ship of a new class of fleet oilers.

I have not judged it possible to predict for the future whether the United States will overtake the U.S.S.R. in those [deleted] warfare areas where they are ahead or whether we will stay ahead in those [deleted] where we are ahead because of inadequate detailed data on Soviet developments. But it will take vigorous efforts in all areas to make the future look less bleak than the present.

NET ASSESSMENT—SCENARIOS

When we assess our ability, present and future, to meet our mission requirements, we must ultimately evaluate the capabilities of our units against Soviet units in a spectrum of possible conflict scenarios. This provides a level of net assessment which goes much more deeply than do comparisons of naval elements and weapons systems into the complexities of naval warfare and deals with war outcomes.

[Slide No. 30.]

CONFLICT SCENARIOS

- DIRECT CONFLICT WITH SOVIETS IN EUROPE
- DIRECT CONFLICT WITH SOVIETS WITHOUT LAND WAR
- UNILATERAL MILITARY ACTION
- CRISIS MANAGEMENT

Chart 30

Admiral ZUMWALT. Some of these are:

Direct conflict with the Soviets in Europe where, in our sea control mission, we would be confronted directly by their sea denial mission. The Soviets would attempt to deny us the use the seas and the vital SLOC's. If they were successful, we would be unable to sustain support operations, economic support to NATO nations would be jeopardized, and it could impact further on our capability to perform our projection mission.

Direct conflict with the Soviet without land war. These scenarios are based on the proposition that land war would be too disastrous for the goals to be achieved by either party and the Soviets would opt for the less cataclysmic war at sea; less cataclysmic only in the sense that population and industrial centers would be unaffected. In these scenarios the sea control missions of both navies would be in direct opposition—the outcome being totally dependent upon the strength of our sea control forces relative to theirs.

Unilateral military action where a myriad of situations and variables could arise which could involve the use of any one or all of the naval missions. For example, an ally could be opposed by a third nation who had Soviet support. That support could take the form of military equipment and advice only, or direct combat support—each of which would require different actions for the United States.

Crisis management, a scenario category that has recently been prominently played in real life in the Mideast crisis.

Senator YOUNG. Admiral, we have a vote on now.

[Discussion off the record.]

Senator YOUNG. Continue.

NET ASSESSMENT: WAR AND CRISIS OUTCOME

Admiral ZUMWALT. In our studies we have looked at our capabilities in these various scenarios and assessed the outcomes by the most rigorous analytical means. The results of analysis of naval engagements within those scenarios figure prominently in our judgment of current capabilities.

EVALUATION OF ANALYSIS

Chairman MCCLELLAN. In each of the scenarios you describe, has the Defense Department evaluated your analysis of the war outcome? What were their views with regard to each scenario—do they agree with your conclusions? In your analyses, what contributions, if any, from Air Force and Army forces were considered?

Admiral ZUMWALT. You will recall in my statement, I discussed three conflict situations or scenarios: A major war with the Warsaw Pact in NATO; A conflict with the Soviets not involving a land conflict and Unilateral Military Action, such as may have resulted in the recent Middle East conflict.

The NATO conflict has been studied at length in two separate analyses conducted jointly by my staff and that of the Secretary of Defense. These analyses have included the views of the Defense Department staff and they agree with my conclusions drawn from them. These analyses did consider the contribution of some limited amount of Air Force support in defending the Mediterranean sea lines of communication. We could find no role for Army forces at sea.

Analyses of the other two scenarios have been coordinated with the Defense Department staff to a lesser degree, although results of analysis on conflict in the Middle East have been presented to the OSD staff and they have made no

significant criticism of it. In order to develop a more complete understanding of these two scenarios, the war at sea and unilateral intervention, we now have studies of them underway. The study plans have been coordinated with OSD.

Senator YOUNG. Proceed.

UNILATERAL ACTION

Admiral ZUMWALT. In the field of unilateral action, our carrier task forces and amphibious task forces give us a comfortable edge over the comparable Soviet capability to project air and naval infantry from the sea. In this case of course the projection forces are not opposed by the formidable sea denial forces of the other superpower. This superior naval projection capability is of more importance to the United States than to the U.S.S.R. again because the U.S.S.R.'s political system makes it possible for her to have air and naval bases in ever-increasing numbers in client states—a capability being increasingly denied to the United States. Therefore, the true measure of relative projection capability in given regions of the world must be the ability of each side to bring land, air, and sea projection forces to bear. In many areas of vital interest to us, the balance is much closer.

CRISIS MANAGEMENT

Net assessment of crisis management capability involves calculating what might have been the outcome if opposing sides had gone to war through mutual failure to manage the crisis, and therefore I will deal with these actions under the headings of direct conflict with the Soviets with and without associated war on land. We do know that the larger numbers of ships that the Soviets have been able to bring to bear in recent crises in the Indian Ocean and the eastern Mediterranean, coupled with their superior access to land airfields and ports in both areas have given them significant leverage during these crises which had to be carefully considered by our side. Perhaps the most important point to make in the entire net assessment is that if it becomes quite clear to both the United States and the U.S.S.R. that the Soviet Union has superior power to bring to bear in periods of crisis, the United States must accommodate to Soviet objectives in the crisis or risk losing a conventional war or destruction in nuclear war.

Senator YOUNG. I will have to go vote now, I will be back in about 10 minutes.

[Brief recess.]

Senator YOUNG. Proceed.

Admiral ZUMWALT. Mr. Chairman, you left as I was just about losing the war either conventionally or through nuclear destruction.

Secretary WARNER. I would like to stress the speed with which the chairman departed and returned.

Admiral ZUMWALT. Mr. Chairman, our next item is "War outcomes."

WAR OUTCOMES

We have done many analyses over the years of naval war outcomes for the case of direct conflict with Soviets, with and without associated

land war in Europe. We have varied the assumptions on various degrees of performance of weapons systems, on various estimates of force levels for both sides, on varying conditions of warning time, and on numerous other key parameters which could affect the outcome.

Two recent major studies examined the capability of our general purposed naval forces to carry out their missions in a large scale, non-nuclear war between NATO and the Warsaw Pact. The principal mission of these forces, in such a situation, is control of the seas in the vicinity of our vital sea lines of communication and in key offshore areas where such control is essential to the conduct of the war.

FIRST STUDY

The first study examined our existing forces against current enemy forces. [Deleted.]

SECOND STUDY

The second study examined the same scenario in 1981, with United States and allied naval forces opposed by the enemy forces, all projected for that year using the key assumption that the 1975 and subsequent planned budgets will be supported. [Deleted.]

Implementation of the CV concept resulted in increased direct protection of convoys. The modernization of the CV air wings to include S–3, F–14, E–2C, and SH–3 aircraft allowed the carrier force to provide significant direct protection to the Atlantic convoys against submarine attack while at the same time defending against long range Backfire aircraft and surface naval ships.

The Sea Control Ship, the patrol frigates, Lamps helicopters, and escorting submarines also strengthened the direct ASW protection of convoys, so urgently required when these convoys had to sail into a heavy submarine threat during the critical period early in the war.

Our anti-submarine barriers, which work to diminish the threat over time, were strengthened by Captor mines and by submarine performance improved by the use of the Mark–48 torpedo and modernized sensors such as BQQ–5.

[Deleted.]

In the Mediterranean and Pacific, the F–14, with its capability to enagage multiple targets at long range, together with programed point defense systems in our ships and improvements in surface-to-air missile systems approximately offset major Soviet improvements in anti-ship capability. Soviet improvements included the long-range, supersonic Backfire aircraft firing long stand-off air-to-surface missiles, and additional new missile ships and missile systems.

On the other hand, both studies indicated that, at our programed force levels, [deleted].

THREAT TO SEA CONTROL

These studies and another series of analyses of our capabilities in the Mediterranean indicate that our most severe threat to sea control would be encountered in areas like the eastern Mediterranean, Norwegian Sea and western Pacific, [deleted]. The extended range of the

Backfire aircraft alone has greatly increased the amount of ocean area in which this type of threat might be encountered. In such a situation, a layered defense in depth would be necessary.

DEFENSE IN DEPTH

The first line of this layered defense would be the F–14, which intercepts the incoming missile-carrying aircraft prior to the launching of their missiles. Due to the simultaneity possible in their attacks, the high speed of their approach and the range of their missiles, our capability to engage several targets at once at long range is critical. This fighter aircraft system is the only system which could destroy the attacking aircraft prior to missile launch.

In a saturation raid, not all the attacking aircraft would be engaged, and the second line of this layered defense would be our capability to intercept incoming missiles with surface-to-air missile systems currently in our program.

Finally, hard kill point defense systems would be absolutely essential to complete our capability to defend in depth, and these systems, when installed as planned on each of our combatant ships, would form the third ring in this defensive chain.

The threat posed by Soviet surface ships during a period of confrontation would be a second major area of concern. If such a situation results in the presence of both United States and Soviet fleets in the same waters, as in the Mideast crisis, a preemptive, surprise Soviet missile attack [deleted]. The Harpoon missile system employed by hydrofoil missile ships and aircraft, and our previously mentioned improvements in antiship missile defense systems would help [deleted] situations in the eastern Mediterranean. We have come to refer to this scenario as the D-Day shootout.

In summary, our analyses do not paint a bright picture of either current or projected capability, but they have served to guide us in establishing our programs to counter the disadvantages which we see in the current naval balance.

We have recognized from these studies that it would have been possible to retain a greater capability in the near term by retaining more forces. Nevertheless, in order not to mortgage the future for the present, it was necessary to get on with modernization. At the budget level which could be permitted by Executive and Congressional action, we were obliged to reduce our force levels to fund the needed modernization.

PROBABILITIES

I have shown various comparisons of elements of naval capabilities and then referred to the results we obtained from analyzing various scenarios. The true measure of our capability can only finally be determined by fighting a war—anything short of that is judgmental. Therefore, the closest we can practically come to measuring capability is by the results of our war games and our fleet exercises. We are told by these results and by our professional judgment what the outcome will be. We cannot, however, be positive. We must still put probabilities on our estimate. With regard to these probabilities, I cannot be

optimistic for the present when our fleet stands at its lowest level in almost four decades.

In arriving at my assessment of probabilities, I have considered results of systems analyses and this net assessment, results of fleet exercises, latest intelligence estimates of the Soviet's capabilities, personal discussions with the operational commanders and my own judgments based on my years of naval service.

Systems analysis and net assessment can provide many insights into the capabilities of our forces. However, analysis and net assessment cannot include all of the many uncertainties which surround warfare. Likewise, fleet exercises in which we simulate the tactics and capabilities of Soviet forces may give us a good indication of how we would fare in actual conflict, but these also have limitations in their predictive value. In making my judgments concerning the overall capability of the Navy, I must take the quantitative evidence from analysis and exercises, adjust it for latest intelligence on opposing force capabilities, and take into account the judgment of our senior operational commanders. This is a process much like that of great uncertainty; and, as with the football odds-maker, a usable prediction is possible, the product of informed judgment based upon analysis of the particular offensive and defensive capabilties of the opposing sides, comparisons of their past performances, recent capability changes, and, of course, relevant experience.

In 1970 when I first became CNO, it was my judgment that we had [deleted] of winning a sea control war at that time with the Soviets. I made that judgment based on my personal knowledge of several analyses and recent experience of the fleet. One of the analyses was the major fleet escort study, of which I had been study director in 1967, that indicated a [deleted] outcome for a sea war in the mid-1970's with a 21-carrier force level augmented by the construction of more than 15 new surface combatants a year. By 1970 carrier force levels had been reduced to 19 and we had been averaging less than four new surface combatants a year. A later analysis, the war at sea now study, found that [deleted].

Fleet exercises were showing that we were vulnerable to Soviet cruise missile attack and that our ASW systems had difficulty in handling the modern Soviet nuclear submarines. [Deleted.]

Senator YOUNG. I have to vote again. I hate to say that because I notice you have a very important part of your statement coming up.

The Mideast war certainly proved that the Arab nations were better prepared than we might have expected them to be. We may have underestimated their capability and effectiveness.

Admiral ZUMWALT. There were areas in which we think we underestimated them and areas in which our own equipment performed a little better than we figured.

Senator YOUNG. I think that makes your statement even more illuminating.

We will take a short recess.

[Brief recess.]

Senator YOUNG. You may continue.

Admimral ZUMWALT. I am at the bottom of page 48.

[Slide No. 31 deleted.]

CHANCES FOR SUCCESS

In the years since 1970, our chances for success have diminished. Fiscal constraints and the urgent need to fund modernization programs required budgetary offsets in the form of force reductions. [Deleted.] By 1973 the number of carriers had dropped to 16; surface combatant force levels had dropped by nearly 30 percent; submarine force levels had dropped 20 percent. These force reductions lead me to judge our current chances for success [deleted]. Further carrier reductions will be offset by more capable aircraft in the form of the S–3 and F–14 and by completion of the CV conversions. The surface and submarine force levels will begin rebuilding and qualitative improvements will be realized as a result of DD–963 introduction, completion of the SSN 637 class, and introduction of the SSN 688 class. [Deleted] we will see the confidence curve begin to improve as Harpoon is introduced to the fleet in limited numbers. [Deleted] significant progress up the curve will be seen as our F–14 force levels fill out and as the first sea control ship and patrol frigates become operational.

Senator YOUNG. You and Secretary Warner have a lot of confidence about what will happen after you leave.

Admiral ZUMWALT. Well, sir, I come back to stressing, "Assuming we get the money." [Deleted.]

SEA CONTROL WARFARE

Chairman MCCLELLAN. When comparing two major maritime powers who both pursue aggressive navies, do you think it ever would be possible for either side to have a probability much greater than 50% of winning a sea control war?

Admiral ZUMWALT. In my judgment, the United States has the economic strength and the technological capabilities to maintain a navy which can serve our interests in a sea control war against any other power in the world today. However, it must be recognized that to "win" in most scenarios, the free world must be able to maintain its ability to use the seas, whereas our opponents need only to be able to deny us such use of the sea. For those situations, the force requirements are very much heavier for the free world, particularly the U.S., than they would be for a potential opponent. The type of Navy which we must have to maintain a better than even probability of success in such a war under the conditions indicated is a navy that has both technological superiority and adequate numbers. It is this sort of navy which our current programs will enable us to build and support by the early eighties.

Chairman MCCLELLAN. Would you perceive that the Soviet Union would estimate a [deleted].

Admiral ZUMWALT. It is important to remember that my definition of the probability of success in a sea control war is that, in my judgment, [deleted]. The evidence for this was presented in my net assessment. The Soviets pursued their goals for maritime power in a highly prioritized fashion. Their first goal was a coastal defense capability, and consisted of a large fleet of submarines and missile armed coastal patrol craft. The next capability which they sought was a sea denial capability, as reflected by their nuclear submarine and longer range diesel submarine force, and by their extensive deployment of anti-ship missiles. Subsequently, they have expanded their world wide presence, a mission which is secondary to their sea denial capability, and they have also started the construction of ships necessary to a sea control force in the fullest sense of the word (e.g., SAM-equipped surface combatants and carriers). And, just recently, as indicated in my net assessment, they have started to develop projection capability. Indeed the fastest growing elements of the Soviet navy are elements that are directly linked to the full sea control capability and to this embryonic projection capability (such as the aircraft carriers and their ocean-going amphibious force with mobile support and logistics forces and command cruisers to support this projection force). I consider these trends in

the Soviet naval program to be strong indicators that they believe that they have achieved an adequate sea denial capability, i.e., evidence that the Soviets believe that their probability of success in a sea denial war would be good.

Senator YOUNG. Proceed.

BASIS OF ESTIMATES

Admiral ZUMWALT. It is well to note at this point that a simple comparison of force numbers, while vital in identifying trends, is not a good way to estimate relative force capabilities. My probability estimates are based on the issue of keeping open the sea lines of communications for the prosecution of a land conflict in Europe and/or sustaining our import of critical raw materials and economic support shipping. Because the Soviets can obtain their objective by merely preventing us from using these sea lines of communications, they have much more flexibility in selecting the time and place of conflict, to optimize their forces deployments, and attack us where we are vulnerable. Maintaining control of the sea requires a much larger force than attempting to deny it. Conversely, I would assess that we would certainly have that capability to deny the Soviets use of the SLOC's should they attempt a conflict requiring such use in South America or Africa, south of the Mediterranean coastal nations.

Parametric comparisons of the two navies, and the results of recent analyses, have been summarized in this net assessment, and have highlighted our relative strengths and weaknesses. More recent fleet exercises continue to show the need for antiship missile defense, which is just beginning to reach the fleet. They also tend to show that our approach to solving the ASW problem has good promise of working. Based on my review of the more recent analyses which I discussed earlier and my review of the fleet exercises, my discussions with the operational force commanders (a summary of their latest readiness reports is contained in addendum IV), and latest intelligence estimates on Soviet capabilities in the 1980's, my judgment confirms that [deleted] and here I come to your point, assumes we get the funding to pursue our modernization programs.

ACCURACY OF ESTIMATE

I believe my estimate of our force capability in fiscal year 1970 was accurate within 10 percent; that is, we might have had a [deleted]. Analyses conducted since that time, and subsequent fleet exercises have tended to demonstrate that my assessment was reasonably close. Further, I am quite confident in the shape of the curve. Our decision to drawdown forces in the midyears has resulted in a drop in our probability of winning, but the modernization programs which will be in the fleet by 1980–81 will clearly be more tailored to the threat at sea, with more emphasis on defeating the antiship cruise missile and a broader application of air ASW.

VICTORY ASSESSMENT

Chairman MCCLELLAN. In making your assessments of war outcomes, and the various probabilities for victory on each side, how do you quantifiably define "victory" in each of the scenarios?

Admiral ZUMWALT. An analysis of military engagements or wars cannot determine who "wins" or "loses." The analysis estimates the losses to each side as a function of time but there is no analytical way to relate that to winning or losing. For example, in the siege of Leningrad during World War II, the losses absorbed by the Soviets were many times any conceivable criterion for losing—and yet the city survived. In the Atlantic convoy battles the Allies lost almost 5000 ships and yet we did not lose.

Thus the function of analysis is to estimate trends in the war and the sensitivity of these trends to various factors such as strategy, tactics, intelligence, effectiveness, etc. Once the analysis had made these estimates, it is a matter of military judgment whether the objectives of either side can be accomplished in the face of these trends. Thus we never express our results in terms of winning or losing or "victory," but rather, in terms of the probability that we will be able to accomplish our objectives.

NATO SCENARIO

In a typical war at sea scenario, our objective would be maintenance of the seaborne trade necessary to our economic health in the face of Soviet attempts to stop this trade (through direct military action of sufficient scale to cause the merchant ships to refuse to sail). In the NATO scenario, our objective would be to move adequate reinforcement and supplies to the Army in Europe, secure the flanks and maintain a minimum level of economic support shipping to us and our Allies. Absolute quantitative measures cannot be defined for these objectives, but, as I have indicated in my testimony, our analyses, our net assessment, the results of our fleet exercises, the judgment of our fleet commanders and my own personal experience and judgment indicate that the odds are that we would be unable today to succeed in these goals. If we fail to succeed in these goals the odds are that we would lose central Europe and the northern flank countries.

Chairman MCCLELLAN. In doing the analysis, do you wargame the scenario for as long as necessary for one side or the other side to achieve victory? What were the time spans involved in the war scenarios you actually evaluated?

Admiral ZUMWALT. For the two recent studies of our capabilities in a large scale non-nuclear war with the Soviets, the time span of the hostilities analyzed was 90 days. It has long been a planning assumption that such a high intensity war involving the United States, NATO and the Soviet Union would be concluded in favor of one side or the other, dampen down or escalate within a ninety day period. Both of these analyses were conducted for three successive thirty day periods with the outcome in terms of merchant ships and combatants lost displayed for each thirty day period. Neither Study attempts to determine the ability of opposing forces to achieve a victory at sea in terms of destroying opposing naval forces. Both studies evaluate the ability of the combined U.S. and Allied naval forces to perform the primary naval mission in a war of this sort. This primary naval mission is the protection of shipping to Europe necessary to resupply and reinforce the U.S. and Allied forces conducting a conventional defense of the central European land mass. Of equal importance is the naval mission of protecting and securing the northern and southern flanks while the land war is fought in the center. Our lack of capability to reinforce adequately and to secure the Northern Flanks would have a serious impact on the ability of the land forces to continue fighting.

Chairman MCCLELLAN. Suppose the assumption was made that a war would last only 30 days, 60 days or 6 months. How would this affect the estimate of probability? Under each of these conditions, what would be the likelihood that the war would end with no specific victory for each side?

Admiral ZUMWALT. The duration of hostilities is a critical element in estimating the likely outcome of the war. Our studies show that our ability to perform the primary naval mission in a NATO war—that is, control of the seas in the vicinity of our vital sea lines of communication sufficient to permit the delivery of reinforcing forces, the resupply of all participating forces, and control of the seas in key offshore areas (i.e., the NATO Flanks) where such control is essential to the conduct of the war—[deleted].

In summary our studies examined our existing forces against current enemy forces. Results from these studies clearly indicate that the [deleted], but they have served to guide us in establishing our programs to counter the disadvantages which we see in the current naval balance.

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Allied Naval Capability

Chairman McClellan. Do your assessments and probabilities of war outcomes take into account any Allied naval capabilities? How would inclusion of Allied capabilities affect each of these estimates?

Admiral Zumwalt. Both of the analyses upon which these war outcomes were based took Allied naval capabilities into consideration. My assessments apply either to a war at sea with the Soviets or to the broader sea portion of a NATO war with full Allied assistance. In the latter instance the impact in terms of increased capability provided by the added Allied naval force is cancelled by the much greater tasking (i.e., support of our allies in the execution of their naval missions) of the total allied force in the broader scenario.

Senator Young. Proceed.

Admiral Zumwalt. As I discussed previously, the most demanding conflict would be a major conflict at sea with the Soviets under conditions in which we must use the sea for our objective. Our relative capability in many other missions and scenarios is much greater than the Soviets, with or without opposition. Our concern is that they will soon have a usable capability worldwide except for those circumstances in which we choose to actively oppose them. [Deleted.] Finally in peacetime presence roles, the United States can maintain carrier presence in a limited number of areas at one time. In most of these areas, U.S. presence is generally superior to that which is maintainable by the Soviets. However, there are certain areas close to their bases where the Soviets can maintain numerically superior, [deleted] superior forces. These areas include the eastern Mediterranean and if the Suez Canal is reopened, the Indian Ocean.

The Budget and the Real Meaning of Net Assessment

The present is a watershed year for the Navy. As you saw on the various graphic representations, our program of modernization for which we have sacrificed current capabilities is at the point where we will start to receive a payback. Under these circumstances, it is feasible, we think, to forecast a confidence level [deleted] in the 1980's—if the budgets planned for 1975–78 are appropriated.

In the past, as you are aware, the Navy has been frustrated in some of its efforts to gain a position of naval adequacy. I feel that the modernization and get well programs we have planned will continue on schedule—if the budget for our programs can survive the next step—congressional approval—intact.

Key Modernization Programs

Chairman McClellan. What are the Navy's proposed 1976–1979 budget levels and what are the key modernization programs included in those budgets by year?

Admiral Zumwalt. The current Five Year Defense Plan proposed total obligation authority levels for the Department of the Navy [excluding the United States Marine Corps] for fiscal years 1976 through 1979 as follows:

Total Obligation Authority in Billions of Dollars for U.S. Navy:

Fiscal year 1976 }
Fiscal year 1977 } [Deleted.]
Fiscal year 1978 }
Fiscal year 1979 }

Over the FY 76–79 period we have planned carefully balanced programs which will materially advance our effort to rebuild, modernize, and improve the readiness of our Naval forces. It would be difficult to pick out the key modernization elements from such a highly interdependent program; however, some of the more significant modernization initiatives are included in the procurement plan below:

PROCUREMENT QUANTITIES BY FISCAL YEAR

Item	1976	1977	1978	1979
Aircraft:				
F–14 Tomcat	50	50		
S–3A Viking	41			
P–3C Orion	12	12	24	24
Missile and torpedo systems:				
Trident I missile	[Deleted]			
Phoenix missile	340	340	340	340
Condor missile	325	0	0	0
Harpoon missile	[Deleted]			
Torpedo MK 48				
Captor				
Ships:				
Trident submarine	2	2	2	1
SSN–688 class sub	2	3	2	3
Nuclear frigate DLGN–38 Class [1]	1	([2])	([2])	
Nuclear frigate DLGN (new class)				1
Sea control ship SCS	3	2	2	0
Aircraft carrier CVX (new class)			1	
Destroyer (missile) DGX		1		4
Patrol hydrofoil (missile) PHM	12	12		
Patrol frigate PF	11	10	10	11
Command control communications: Fleet satellite communications		[2] IOC		

[1] Tentative planning to include 1 DLGN in each program year. This fact is not yet reflected in current procurement plan.
[2] Initial operating capability.

Senator YOUNG. Proceed.

Admiral ZUMWALT. We stand now at our point of greatest weakness and in my estimate our greatest jeopardy. With the understanding help of Congress we can move from here into a position where our modernized, well equipped, and well trained forces will again be able to insure a military balance in support of our national interest. To do this takes authorization and appropriation of at least the amounts requested in the President's fiscal year 1975 budget, and strong congressional support in the years beyond.

Thank you, Mr. Chairman.

ADDENDUM I–VI AND CHARTS FOLLOW

[Unclassified attachments to Admiral Zumwalt's statement follow:]

ADDENDUM I

TO

STATEMENT OF ADMIRAL ELMO R. ZUMWALT, JR., U. S. NAVY

CHIEF OF NAVAL OPERATIONS

EFFICIENCIES ACHIEVED

In previous hearings before the respective houses of Congress, the talk of cutbacks and economy have reigned supreme. The wishes of the members of Congress have been heeded and efficiencies have been achieved. This addendum outlines several of these achievements accomplished during the past year.

A. 25% HEADQUARTERS AND FLEET STAFF REDUCTIONS

Incident to FY 73 Budget Hearings, the Senate Armed Services Committee (Report dated July 14, 1972, pg. 132) stated the view that a reduction in military manpower equivalent to 25% of the "command/headquarters" category could be made without adverse effect. The report stressed the desirability of reducing "dual" chains of command and redundancy of staff echelons. Although no reduction was specifically directed, we ordered, in our POM 74 decision, that a 25% reduction be imposed upon both fleet and shore headquarters staffs throughout Navy. The reduction was to be applied against FY 74 manpower, both military and civilian.

In order that the FYDP might reflect this reduction immediately, 25% of FY 73 officer and enlisted end strength in each program element aggregate of the Command Mission Category as displayed in the February 1972 FYDP, was subtracted from FY 74 end strength in that category as displayed in the June 1972 POM. All of this had the effect of deleting over 7,000 requirements (funded military manpower spaces) from the Command Mission

Category with a corresponding reduction in Navy military end strength.

Up to this point, the reduction was horizontal in nature in that the military manpower in each program element in command was cut an even 25 percent. However, it was our desire to achieve reductions in both the size and redundancy of our staff systems through reorganization. We desire also that the major manpower claimants participate fully in the reorganization and streamlining process. Accordingly, two study groups were formed to recommend for consideration specific reorganizations, deletions, consolidations and reductions to best accommodate to the reduced manpower assets. A Fleet Staff Reorganization and Reduction Study Group was formed to study the fleet staff systems and a Washington Area and Field Activity Study Group was formed to examine the shore headquarters. Each group was headed by flag officers and included claimant representation.

As a result of the study group recommendations, a number of reorganizations, consolidations and deletions were approved. Most of the reductions to the Washington area staffs were taken in a horizontal manner, that is, across-the-board. However, on the fleet side, the following steps were taken:

a. Approximately 65 staffs were disestablished.

b. Only a single staff echelon between individual ships/aircraft squadrons and their respective type commanders was premitted.

c. The staffs of COMFIRSTFLT and COMASWFORPAC were consolidated under a single commander.

d. The staffs of COMSECONDFLT and COMASWFORLANT were consolidated under a single commander.

e. COMHAWSEAFRON was disestablished with essential residual functions being assumed by COMFOURTEEN.

These decisions made, the claimants were permitted to effec the necessary reprogramming of their now-reduced billet assets to accommodate the necessary reductions, deletions and reorganizations. The reductions were originally planned to be effected in FY 74. However, as a result of subsequent Congressional/OSD budget decisions, a large percentage of the military portion of these reductions were actually implemented in FY 73 and reflecte as FY 73 end strength reductions. Thus 5520 military billets we deleted from command activities in FY 73, resulting in a substantial streamlining and consolidation of our staff systems. A additional 1618 military billets are being deleted in FY 74.

B. COMBINING NAVY TRAINING UNDER SINGLE MANAGER

Three years ago the decision was made to combine all education and shore training, except medical, under one command. That move has proved to be a sound one. As our Navy becomes more complex in this era of technological advance, our educatio and training requirements have burgeoned. Nevertheless, with centralized management, coupled to decentralized training functions, numerous organizational and production type have bee made to the Navy's Training System to respond to these increase requirements with proportionately less manpower and funding allocations. Efficiencies have occurred because of the following management actions:

a. Reorganizations, consolidations, closures, and establi ments.

b. Course consolidations, revisions, condensations and elimination.

c. Improved throughput (pipeline) management.

d. Improved control of attrition.

e. Use of innovative training methods.

f. Use of interservice training.

Efficiencies have been identified by a downward trend (FY 72 - FY 73) in the cost to train:

Initial Skill Training -3%

Skill Progression - 12%

Initial Skill Training

Officer - 15%

Functional Training - 18%

Effectiveness (quality) improvements have resulted from a systematic approach to training through task analysis; individualized training, and innovative training program development.

The majority of the savings have contributed to fleet manning and the Navy's ability to maintain operational readiness as the personnel end strengths have decreased over recent years.

Despite the efficiencies realized and the increased effectiveness gained, the Navy Education and Training System has had to accommodate ever increasing foreign training and numerous add-on training programs such as EEO and Human Goals Training. The AVF demands increased training efforts for, as the size of the Navy decreases, it predicates additional cross training to meet the demands of the more complex weapons systems of the future. Occupational systems realignment to address these future needs is currently being studied.

C. ENLISTED PERSONNEL DETAILING UNDER CENTRAL MANAGER

A review of the past 18 months under the centralized enlisted detailing concept indicates many tangible and intangible efficiencies have been realized. As a result of this control manager form of detailing, Navy has achieved the capacity of matching total enlisted personnel resources against total requirements with all personnel, with the

exception of non-rateds, exclusively under the detailing of the Chief of Naval Personnel, a function originally performed by four separate distribution commands. With the disestablishment of EPDOCONUS and associated personnel cutbacks at EPDOLANT and EPDOPAC resulting from centralization, approximately 189 billets and 51 civilian positions have been deleted from the enlisted distribution function. This has occurred with no appreciable increase in distribution related headquarters assets. As a result of this consolidation, Navy can now better control the qualitative and quantitative distribution of enlisted personnel throughout the various commands while maintaining an equitable balance between the major fleets to enhance a level degree of readiness.

Through the concentration of Navy's enlisted detailer expertise in one location, we are now better equipped, more knowledgeable and resultantly more responsive to the needs of the enlisted community serving on the ships, squadrons and bases. Indications are that this improved responsiveness and the personalized approach to enlisted detailing has proven favorable toward the retention of enlisted personnel.

Additional efficiencies realized through centralization have been the ability to: centrally process all enlisted orderwriting; better manage the costing of enlisted orders and the MPN (PCS) account; provide greater time-sensitive responsiveness to non-military inquiries regarding Navy enlisted personnel; and more closure ally Navy personnel resources with defense priorities.

D. CONSOLIDATION AND REORGANIZATION OF RESERVE STRUCTURE

1 February 1973 marked the establishment of a new Naval Reserve command and the appointment of the first Chief of

Naval Reserve as the head of the new organization with headquarters in New Orleans, Louisiana. This action resulted from implementation of a plan recommended by the Chief of Naval Operations and approved by the Secretary of the Navy for the purpose of strengthening the Naval Reserve under the Total Force policy by providing a more effective structure for command and control of reserve manpower, training, funds, hardware and other resources. Beginning with a small nucleus staff, the headquarters at New Orleans has built toward an authorized strength of 262 military and civilian personnel by the phased transfer of personnel from the assets of the Commander, Naval Surface Reserve and Commander, Naval Air Reserve with headquarters in Omaha, Nebraska, and Glenview, Illinois, respectively. The transition was completed during January 1974 with the residual operations of the two former separate commands discontinued at that time.

The Chief of Naval Reserve, a three-star Admiral, is assisted by two Rear Admiral Deputies - one for Surface and one for Air. His command has major claimant status. The Chief of Naval Reserve reports directly to the Chief of Naval Operations (CNO). He also occupies the position on the staff of the CNO as "Director of Naval Reserve." In the latter capacity, a Rear Admiral as "Deputy Director of Naval Reserve" assists him in carrying out his responsibility for Reserve Affairs to the CNO.

The consolidation and relocation actions have eliminated a total of 89 billets with an estimated annual savings of slightly less than a million dollars. This savings will amortize consolidation costs in less than four years.

Of necessity, much of the first year of operation of the new command was devoted to transition and establishment

of the headquarters in New Orleans. However, considerable progress has been made in the accomplishment of the objective of improved management through development of command policies, plans and programs and the establishment and strengthening of lines of communications with type commanders and major Navy commands in the interest of enhancing the readiness of the Naval Reserve.

The Navy has recently completed an assessment of the structure and capability of the Naval Selected Reserve to provide the most urgently needed, first-reaction augmentation required by the active forces in an emergency. A plan for resturcturing of the Naval Reserve has resulted from this assessment and study. An objective has been to enhance the reserve contingency response capabilities through maximizing organization and training of units plus an increased hardware orientation of the Naval Reserve.

The new structure of the Naval Reserve consists of eleven programs:

Program 1 - Submarine Forces Program
Program 2 - Mine Forces Program
Program 3 - Service Forces Program
Program 4 - Surface Combatant Forces Program
Program 5 - Air Forces Program
Program 6 - Cargo Handling Forces Program
Program 7 - Construction Forces Program
Program 8 - Amphibious Forces Program
Program 9 - Marine Corps Forces Program
Program 10 - Naval Inshore Warfare Forces Program
Program 11 - Special and General Support Program

Program 1 through 10 are major mission/platform programs and each of these major mission/platform programs is divided into five functional groups: Combat Operations,

Mobile Support, Base Support, Operational Staff, and Mission Training. The new sturcture will have little or no impact on the unit structure of our current combat or support units; i.e., Naval Reserve Force ships, squadrons, mobile construction units, cargo handling battalions, etc. These are identified as Complete Capability Response Units (CRUs) designed to provide complete capabilities upon mobilization. Prior to the restructuring, a substantial segment of the Naval Selected Reserve strength was in units primarily accomplishing individual training with extremely limited hardware orientation. The new structure provides for Ship or Squadron Reinforcement Units (SRUs) and Other (than Platform) Reinforcement Units (ORUs) both of which are task-performing units containing specific mixtures of skills needed by active force commands. The SRU is tailored to a specific ship class or aircraft squadron type. The ORU is structured to a specific type of non-platform activity and provides additional capabilities for such activities as a shipyeard, air station or staff. Both SRUs and ORUs will be provided unit and skill training on equipment and facilities of a reserve or active force parent activity. Both may be recalled and employed in three ways: as integral units, as functional teams, or as skill groupings.

The new Selected Reserve alignment will contain a very significant increase in mission capable, task-performing recallable units.

Complementing and concurrent with the implementation of this new structure is the establishment of a Naval Reserve Readiness Command system composed of a nationwide network of Readiness Commands, Centers and Facilities.

The Readiness Commands are being established geographically commensurate with reserve population concentrations, ship locations, and training opportunities at Navy shore activities. The mission of these commands is to manage designated Naval Reserve programs and training support resources and systems. The Readiness Command has a composite staff of active duty personnel and inactive duty reserve personnel. This system will permit qualitative manning to the mix of skills prescribed for the new units, and development of a comprehensive and integral facility construction and equipment procurement plan. Twenty-two Readiness Commands will be established over a five-year period beginning in FY1974. As of 1 February 1974, eight of these commands have been established with locations: Baltimore, Houston, San Francisco, Philadelphia, Cleveland, Great Lakes, Denver and Seattle.

E. SHORE ESTABLISHMENT REALIGNMENT (SER) I REDUCTIONS

SER I, announced in April 1973, contained 322 Navy shore activity realignment actions; i.e., disestablishments, reductions, relocations, and 145 fleet unit moves. These actions were estimated to cost Navy $79.6M for all appropriations in FY-74 (not including $42.8M SER I MILCON costs). Savings of $89.8M were anticipated for FY-75 and it was estimated savings would increase to $211.6M in FY-76 and to $221.6M in FY-77 and out years. Through 31 January 1974, all scheduled actions were completed as planned and 37 were completed ahead of schedule. The following modifications to the plan have been approved:

The Atlantic Undersea Test and Evaluation Center, West Palm Beach, FL was scheduled to relocate to Fort Lauderdale, FL in December 1973. A "hold" has been

placed on action pending GAO study of the rationale behind relocation.

The Naval Hospital, St Albans, NY, scheduled to be disestablished and the facility disposed of on 30 June 1974, will be transferred to the Veterans Administration (VA) before that date for operation by them as a VA facility.

The Pacific Missile Range, Point Mugu, CA, which was scheduled to convert to civilian contractor operation in December 1974 will continue to be operated by Navy military and civilian personnel in response to the intent of Congress as expressed in the Defense Appropriations Act of 1974.

Major Claimants are executing the plan within their estimated FY-74 costs. Now it is estimated that, instead of SER I savings in FY-75, there will be net costs. Annual savings in excess of $200.0M still are estimated for the out years. These savings are programmed to be invested in fleet modernization and readiness aimed at achieving the goal of an improved balance of a smaller modernized more ready fleet with a more efficient supporting shore establishment.

ADDENDUM II

This addendum provides you with a comprehensive condensation of the many facets which the Soviet Union have used to project their presence and to influence the countries of the world. It also includes a brief summary of each of the areas where they have met success as well as those areas in which they have not been successful.

THE GROWTH OF SOVIET GLOBAL INFLUENCE

A. General Considerations

1. Soviet foreign and military policy is based upon te prime national objectives of preserving the security of the Soviet Union and expanding Soviet political and military influence abroad. Until the last few years, Soviet diplomacy was marked by a self-consciousness that derived from a feeling of strategic inferiority. Now that the Soviets have achieved rough parity with the West in strategic weapons and have increased their capability to project their presence abroad, they are expanding their influence and are fully determined to play to the hilt their new role as one of the world's two global powers. The USSR intends to have a presence and a voice in the resolution of issues everywhere. The Soviets contemplate a world where no important decisions can be made without their interests being taken into account.

2. The growth of Soviet global influence has been greatly accelerated by the USSR's military, technical, and economic aid programs. The flow of modern Soviet weapon systems to Third World countries has been accompanied by the arrival of large numbers of Soviet technicians and by training programs in the USSR for members of foreign armed forces.

3. Another, and more highly visible, contributor to spreading Soviet influence has been the increasing appearance of their naval and merchant fleets on the world's oceans and in many of the world's ports. In the last decade, Soviet naval ship days outside the areas close to the USSR have grown tenfold, and calls by their naval ships in foreign ports have grown a hundredfold.

B. Soviet/Third World Relationships

1. The USSR has been politically active in the Third World for many years, and a new stage was reached in 1955 when it began to become a major supplier of arms to many Third World countries. Only since the mid-1960s, however, have the Soviets made a consistent effort to project their military power into distant areas. This projection has taken the form primarily of naval deployments—not only in the Mediterranean, but also in the Indian Ocean, and, to a lesser degree, off western Africa and in the Caribbean.

2. The growth of Soviet capabilities appropriate to distant areas is in large measure a product of the USSR's efforts to improve its overall military posture vis-a-vis the U.S. across the whole spectrum of international power. The political impact of the Soviet presence in distant areas has owed a good deal to its lack of an overseas colonialist record and, in the case of the Middle East, to a number of fortuitous developments. But Moscow by now considers its military aid program and a military presence as instruments serving broad objectives in the Third World including its role as a great power. And it may expect that, with the attainment of rough parity with the U.S. in strategic weapons, it will be able to secure for itself even wider political and military options in the future through the deployment of military forces in distant areas.

3. For all their problems, measured against the position they held nearly 20 years ago, the Soviets have made impressive progress in developing their presence and influence in the Third World. They succeeded in breaking through the ring of containment constructed by the West and in opening many parts of the Third World to their own influence. Diplomatic and trade ties have been greatly widened and are now very nearly universal. As a result of military aid agreements a number of states now are largely or almost totally dependent on Soviet military equipment and rely on the USSR for logistical and technical support. Moreover, the USSR has, through its military-technical assistance—together with its economic-technical assistance and academic training—exposed many of the nationals of these countries to Communist ideas and techniques—an exposure which Moscow hopes will influence the institutional development taking place in the Third World. Also, it has established important relationships with individuals, particularly military men who hold, or in the future may hold, key positions in their countries.

C. Mediterranean/Middle East

1. The USSR has more at stake in the Eastern Mediterranean and the Middle East than in any other Third World Area. Besides protecting its position as a major player on the scene, it will be looking for opportunities to gain leverage in a region where the West has vital economic interests, oil in particular. The Soviets are also interested in extending their political influence in the western Mediterranean and are thus working to develop their relations with the North African States and with Malta.

2. The most visible and publicized contribution to the expansion of Soviet influence in the area is their highly capable Mediterranean Fleet. This naval presence is directed primarily against NATO naval forces, and the Sixth Fleet in particular. As it continues to extend its operations westward, the Soviet fleet poses an even more formidable threat both to allied naval units and to sea lines of communication throughout the Mediterranean. During the October 1973 Arab-Israeli war, the Soviets amassed an almost overwhelming force in the Mediterranean to demonstrate their ability to challenge U.S. naval power. The fact that the Soviets deployed some 96 units including approximately two dozen submarines into the area at the peak of their buildup certainly was not lost on the countries of the Mediterranean littoral.

During the past year, the Soviets made about 50 port visits involving 80 ships, to countries of this area, excluding Egypt. In the latter country, the Soviet Navy has maintained a continuous presence for the past several years in the ports of Alexandria, Port Said, and Mersa Matruh. From 1968 to 1972, the Soviets flew maritime reconaissance flights on a regular basis from Egypt. Normal transport activity to the Mediterranean area now averages about two flights per week, although the extremely high levels of such activity in last October's Israeli-Arab war demonstrates amply their capability in this regard.

3. In their diplomatic bargain with Mid-East countries, the Soviets use a number of assets. [Deleted.]

4. Egypt will continue to figure prominently in Soviet Middle Eastern policy. It remains a major voice in Arab councils and the focal point of the Arab conflict with Israel, and it occupies a key geographical position with respect to the Mediterranean, the Suez Canal and the Red Sea. [Deleted.]

5. The USSR's relations with Iraq have improved steadily since 1972, when the two countries concluded a 15-year treaty of friendship and cooperation. The treaty calls for wide-ranging cooperation in the political, economic, and military spheres.

6. [Deleted.]

7. The Soviets are striving to maintain some semblance of balance in their relations with countries of the area. [Deleted.]

8. The strategic significance of the Middle East is profound. As has been so vividly demonstrated, the petroleum resources there are vital to the economic well being of much of the Free World. Effective control of these resources—at least to the extent of being able to deny them to the Free World—is a strategic asset, the value of which the Soviets have long recognized.

D. Indian Ocean

1. On the Indian sub-continent [deleted].

2. The centerpiece for Soviet policy in South Asia has been and will remain India. [Deleted.]

3. [Deleted.]

4. [Deleted.]

5. Such extension of influence is aimed at making the USSR the predominant force in an area where it claims to have vital national interests. Since 1968, when the Soviets began maintaining naval forces in the Indian Ocean on a continuous basis, they have relied on the southern route through this area to transfer units from their western fleets to the Pacific rather than via the arduous Northern Sea Route along the Arctic coast as before. In addition to supporting claimed national interests, Soviet Navy operations in the Indian Ocean have served to inject Moscow's influence into littoral nations; to gain worldwide recognition for Soviet capabilities; and to create the impression that the USSR is the predominant outside power in the area.

6. The USSR is hard at work at injecting its influence in the area through military and commercial agreements with other countries of the area. There are regular friendship visits by its warships to some of these countries and occa-

sional visits by its warships to some of these countries and occasional visits to many others. In Somalia, the Soviets are expanding the facilities at the deep water port of Berbera on the Gulf of Aden [deleted] Soviet naval units regularly use the former Royal Navy facilities in the port city of Aden, Peoples Democratic Republic of Yemen, and the Soviet Navy has installed permanent mooring facilities off the coast of Soccotra Island, site of a former British airfield and communications facility.

7. To support operations in areas distant from the USSR, the Soviets have designed a worldwide command and control system [deleted].

8. The Soviets have made about 110 naval visits to Indian Ocean and Red Sea ports, involving 135 ships, during the past year. Since 1968, there have been [deleted] flights by [deleted] Soviet aircraft over the Indian Ocean. Additionally, there are periodic transport flights to Somalia and Aden.

E. West Africa.

1. The Soviets began operating their warships off the west coast of Africa in 1967, and, since 1970 they have maintained a nearly continuous naval presence in, or near, Conakry, Guinea. [Deleted].

2. Elsewhere in Africa, the Soviets see the Chinese fairly busy in developing relations with governments and "liberation" movements, and the USSR has a vested interest in counterbalancing Chinese influence in the area. Accordingly, they probably will continue to be willing, as occasion offers, to respond to requests for help from African governments, as during the Nigerian civil war, or from "liberation" movements, [deleted].

3. The Soviets conducted about 50 visits to West African ports involving 64 ships in 1973. [Deleted]

F. The Caribbean.

1. The USSR is continuing to expand its influence in Cuba. This is reflected in the broad range of Soviet advisory and financial assistance to that country. The USSR is the primary source of Cuba's supply of basic materials for military, industrial and commercial production, and it also assists in the construction of extensive industrial and military facilities. Cuban officers are sent to the USSR for training, and the Soviets monitor and assist in military training on the island.

2. The gradual evolution of Cuba in supporting Soviet naval and air elements operating in the Caribbean and Atlantic is of strategic importance. Events in the autumn of 1962 taught the Soviets a bitter lesson in maritime strategy. The focal point of this confrontation was the Caribbean Sea, which probably still envokes determined attitudes among senior Soviet officials that it will never happen again. [Deleted.]

3. Since July 1969, Soviet surface combatants and submarines have plied the waters of the Caribbean Sea and Gulf of Mexico with only minor reaction from the West. A ballistic missile submarine visited Cuba in May 1972—the first visit of a Soviet SSB to any foreign country. TU–95/BEAR D reconnaissance aircraft are using a Cuban airfield for forward deployment, conducting surveillance flights over the Western Atlantic. Soviet ship days and aircraft days in the Caribbean have increased continuously during the past four and a half years. During the past year, the Soviets made about 70 port visits to Caribbean countries, as well as three countries on the west coast of South America, involving nearly 100 ships. [Deleted.]

4. Overall, the USSR's activities in Cuba indicate continued determination to expand its foothold in the Caribbean. The increased Soviet naval deployments to that area also provide the Soviets support for political initiatives in the Western Hemisphere by generally creating the impression that the USSR is capable of deploying its power to the sea. [Deleted.]

5. [Deleted.]

G. Summary

1. The Soviets are on the move worldwide—determined to acquire the influence that goes with Great Power status. They are rapidly developing distant area maritime capabilities to enlarge their sphere of operations and to expand their influence among the nonaligned countries of the underdeveloped world. And, they have accomplished a great deal in this area. [Deleted.]

2. The gains which the USSR has made during the past two decades are indeed impressive. It can now look to the Third World countries for substantial support in international forums, such as the UN and its various bodies, as well as regional organizations. These Soviet achievements assume greater importance when viewed in light of the direction in which we have been heading. [Deleted.]

ADDENDUM III

Lessons learned in the October crisis

The October 1973 Mid-East war was suddenly thrust upon the world scene with little or no apparent awareness of the warning indicators. I have provided for you in this addendum a resumé of some of the lessons learned as a result of this conflict.

LESSONS LEARNED IN THE OCTOBER CRISIS

The October 1973 Mid-East war was suddenly thrust upon the world scene with little or no apparent awareness of the warning indicators. [Deleted.]

1. [Deleted.]
2. [Deleted.]
3. While Naval forces can provide a wide range of political-military options, they cannot maintain optimum posture for all missions simultaneously. [Deleted.]
4. Where base rights and overflights are vital to the military mission, their availability impacts directly on the kinds of forces the U.S. can bring to bear unilaterally. [Deleted.]
5. Adequacy of our stock levels of naval materials to support our allies need to be examined. [Deleted.]
6. [Deleted.]
7. In the area of technology we have uncovered weaknesses in equipment and planning. [Deleted.]
8. Summary. [Deleted.]

ADDENDUM IV

Readiness Summary

To provide you with an appreciation of the problems that the Navy faces in relation to the readiness of our existing forces, I have had a summary of our latest readiness information prepared for your use.

READINESS ADDENDUM TO FY 1975 CNO POSTURE STATEMENT

Fleet Readiness—An Assessment. Upon the cease-fire in SEASIA, the Navy was at a low readiness state. This condition resulted from a high tempo of operations, a scarcity of funds to meet commitments and a shortage of manning in special skills and experience levels. Through the self-help efforts of the Fleet Readiness Improvement Plan (READIMP), and fleet modernization, the Navy appeared to be arresting the decline in overall readiness as a result of the SEASIA conflict when the Middle East and energy crises commenced. Military assistance sales to Israel and the attendant increase in U.S. Navy operations in the Mediterranean and the Indian Ocean have had and will continue to have an adverse impact on fleet readiness. The downward trend in readiness is attributed in large measure to the loss of adequate underway training op-tempo as a result of the energy crisis and insufficient funds to purchase required quantities of continuously higher priced fuels. The long standing hard core fleet problems still remain: shortage of manning in special skills and experience levels; continued deferrals of necessary repairs, overhauls and reworks, erosion of base support capability and material condition of the fleet and shore establishment; along with declining force levels.

Fleet CINC Problems. Operational readiness to meet JCS approved war plans remains impaired. A prioritized listing of readiness degrading issues common to fleet CINCs is provided below. With the exception of the fuel problem, this list has not changed significantly in the past year.

Fuel funding and allocation problems continue to have an adverse impact on fleet readiness. [Deleted.] While Congress is considering the Readiness Supplemental, OSD has provided temporary relief which allows Navy to incur obligations for fuel at a deficit rate in order to proceed with the necessary day-to-day fleet operations within the reduced op-tempos prescribed. This procedure will require very close monitoring of obligations by the CINCs with prompt and frequent reporting of fuel funding run-out dates. [Deleted.]

Personnel shortfalls remain one of the most serious readiness degrading issues. Shortages of middle grade petty officers continue to affect all enlisted manning. As of 31 December overall distributable enlisted manning was 95%, while E–5/6 distributable manning was 89%, a shortage of 16,355. These shortages are directly traceable to insufficient first term reenlistment and advancement delay actions due to dollar shortfalls. Funding relief has helped to reestablish a more normal advancement cycle, and significant efforts to increase first term retention are ongoing. Failure of Congress to pass the regular officer RIF legislation will result in continued imbalance of officer rank structure if additional manpower cuts are required.

Maintenance slippages and backlogs continue to plaque the fleets. Studies are being conducted to determine optimum length between ship overhauls and duration of overhauls. Also, a study of airline maintenance procedures is in progress in addition to increasing selective rework of aircraft. The Navy budget supplemental request includes $119.6M for ship overhauls and $40M for aircraft rework, and $62M to offset the incremental costs of the Mideast War. This should provide partial relief. Authority for intransit relief vice contact relief for carriers in the Mediterranean from March through September will provide further assistance by permitting greater stabilization of carrier overhaul periods.

Fleet training has been [deleted] degraded by the energy crisis. Reduced tempo of operations has forced cancellation of many training exercises. [Deleted].

ASMD/EW deficiencies are well known and every possible management and R&D effort is being made to expedite corrective measures. Early resolution of this complex problem can not be expected. Detection, hard kill, cover and deception tactics are being emphasized including training in these areas.

Command and Control, and Communication (C^3) shortcomings have been under constant review. Progress is being made towards our goal of an integrated network of facilities which makes the most efficient use of our modern detection and detection and weapons systems. However, certain key programs must be supported now [deleted] and enhance the relative effectiveness of forces vis-a-vis the Soviets.

Naval Reserve Forces. Reserve ship and aircraft operations have been reduced during the second half FY–74 by 25% from the President's FY–74 budget. Subsequent SECDEF action has directed an increased fuel allocation to restore 8% of this reduction. Funding sources are currently being sought.

Fleet Readiness Improvement Plan (READIMP). The fleet READIMP promulgated in March 1973 and initially developed as a self-help program without recourse to additional personnel or funds had, through aggressive efforts by the fleets, appeared to halt the downward trend with incremental improvements in fleet readiness beginning to surface. The brief halt in the downward trend in material readiness, which occurred during the summer of 1973, appears to have been temporary since the reports from our latest Board of Inspection and Survey (INSURV) inspections indicate continued material problems. The self-help efforts of READIMP provided a brief respite. However, progress in READIMP is being hampered by an increased shortfall in O&MN funds due to inflation, the energy crisis, as well as personnel shortfall and instablity.

Fiscal Consideration. In the management of operation and maintenance funds of the Navy, Congress has granted SECNAV the authority to transfer up to 3% of the funds in any budget activity to another budget activity within the O&MN appropriation. No budget activity, however, can be increased by greater than 5% of that amount originally provided for the appropriation and Congressional notification is necessary for each transfer. While this provides some flexibility for unusual funding problems, as a common practice, it is not a solution to our energy/funding problems.

The Secretary of Defense has approved energy consumption levels which provide for continued ship and aircraft operations at the current energy consumption reduction program rates. This action represents the minimum safe

tempo required to maintain readiness at short term acceptable levels and still meet commitments. A return to normal tempo of operations has been provided for in the FY 1975 budget, however, the escalating fuel prices have already created a potential funding shortfall for the coming fiscal year. On the basis of the actual 1 February 1974 prices, the FY 1975 ship, aircraft and shore fuel requirements are underfunded by $72 million. A revised estimate of prices expected to be effective 1 July 1974 will be promulgated by DFSC in March, at which time the magnitude of the fuel cost shortfall for FY 1975 will be more visible. OSD does not intend to address the fuel price situation for FY 1975 until these prices are firm.

Tab A—Impact of Energy Crisis on Fleet Readiness

TAB A—IMPACT OF ENERGY CRISIS ON FLEET READINESS

In late 1973, restrictions were imposed on Navy POL consumption because of budget decisions and the shortage of fuel. These equated to an overall FY–74 reduction of 18.3% below FY–73 levels. Specifically, the Sixth and Seventh Fleets were reduced to [deleted] operating days respectively [deleted]. The Second and Third Fleets were restricted to [deleted] operating days, respectively, vice the desired rate [deleted]. The Naval Reserve Force was restricted to about [deleted] days per quarter for the remainder of the fiscal year vice 21 steaming days per quarter programmed to support requirements. Aircraft operations were degraded to [deleted] Primary Mission Readiness (PMR) for TACAIR and ASW squadrons. Deployed aircraft units were maintained at 100% PMR at the expense of non-deployed units. The foregoing quotas were the minimum acceptable to maintain necessary Fleet readiness.

The price of fuel for Navy operations has increased to about twice the 1 July 1973 level. As a result, fuel costs now override availability as a planning factor. Thus, although restrictions on POL consumption were removed 7 January, current and anticipated fuel costs continue to restrict operations. Without early financial relief, and if continued at the above tempos (considered minimum to maintain near term desired readiness), [deleted]. Even if the FY 1974 budget supplemental is approved as currently proposed, it appears there still could be a substantial dollar deficit because of unanticipated price increases preventing conduct of operations at the above tempo.

[Deleted.]

The Navy is continuing to experience general worldwide difficulty in obtaining commercial bunkering services for its deployed forces. This is particularly acute for ships which are transiting between the Indian and Atlantic Oceans and for ships operating in the Middle East Force. [Deleted.]

Should another POL price increase materialize without an offsetting budget augmentation, readiness will decline severely and the Fleet will lose more capability to respond to contingency operations.

ADDENDUM V

Program Status

A program status sheet on which some of the more critical Navy programs are summarized in tabular form is provided for your use. With these sheets a program can be tracked from the status I reported to you last year, through the actions of the intervening year, to the present status. From this point our future requirements in the programs are projected. I hope you will find this device useful.

[The information follows].

PROGRAM	STATUS LAST YR	WHAT HAPPENED IN THE INTERVENING YEAR	WHERE WE ARE	WHERE WE WOULD LIKE TO GO
Patrol Frigate	Continues to augument surface combatants; will be used to help keep sea lines open. Program calls for 50 ships allocated among 3 contractors.	Contracts awarded for land based test sites (LBTS) in March 1973. FY 74 funding for missile launcher advance procurement denied by Congress. Contract let for lead PF in October 73 for ship delivery Jun 77.	Detail design underway at Bath Iron Works. Requesting funding for first 7 follow ships in FY 75 budget.	Continue with 50-ship program on an orderly basis. Ship in design-to-cost with follow-on ship cost goal of $47.7-million in FY 73 dollars (exclusive of authorized escalation projections).
Sea Control Ships	Contract design conducted with RDT&E. Conducting concept testing in USS GUAM.	Requested $29.3M advance funding for long-lead material and commencement of detail design. Completed phase IV testing in GUAM. Test validated SCS concept.	$29.3M advance funding authorized and appears in FY 74 budget, but release deferred pending HAC staff study of SCS concept. Design effort curtailed awaiting completion of study and release of funds.	Proceed with detail design and award of lead ship construction contract. Planning procurement of 8 ships with a baseline complement of SH-3A helos and V/STOL A/C to exercise sea control in areas outside of aircraft carrier operating coverage. Follow ships constrained to under $100M each in FY-73 dollars (exclusive of authorized escalation projections).
Surface Effect Ship	100-ton test craft program continued. Contracts awarded to 4 major industrial teams in November 1972 for preliminary design of 2000-ton prototype.	Completed 100-ton craft tests. Limited FY 74 funds permitted continuation of preliminary design for 2000-ton ship.	Recent DSARC action permits only continued development of 2000-ton SES-unique systems and related components without proceeding to final contract design stage.	Proceed as rapidly as possible, consistent with orderly design & development process, to construction of two 2,000-ton prototypes.
Patrol Hydrofoil	Two lead ships funded in FY-73/74 RDT&E appropriation	Construction started on both ships by Boeing under February 1973 contract.	FY 74 request is for first 4 SCN-funded ships of a planned 30-ship total program, now approved by DOD.	PHM's required to combat threat of other missile-armed craft and major combatants. Proceed with orderly construction program, with one or two builders, to achieve early capability.

PROGRAM	STATUS LAST YEAR	WHAT HAPPENED IN THE INTERVENING YEAR	WHERE WE ARE	WHERE WE WOULD LIKE TO GO
TRIDENT	TRIDENT program planed to permit first deployment in FY79 to move U.S. in the direction of greater nuclear stability. Advanced funding for lead ships.	Advanced funding of 65.8M enacted in FY 1974 for the first two follow-on ships and $586.8M full funding for lead ship. Building rate changed to 1, 2, 2, 2, 2, 1.	A two phase missile program is planned with TRIDENT I (C-4) for backfit into POSEIDON and TRIDENT II for TRIDENT Submarine.	Under present plans, the first TRIDENT Submarine will deploy in FY 1979. Backfit IOC also established as FY 79.
LAMPS	Plans reorientated to modify H-2 helicopters into SH-2D LAMPS MK-I for use on destroyer type ships. Congress approved $22.6M for SH-2D mods for 30 A/C for total approval of 75 A/C to date.	Modifications to H-2 helos and ships continued on schedule to provide LAMPS MK-I configuration. Continuing engineering development of LAMPS MK-III.	Funds required for final increment of 30 H-2 modifications to LAMPS MK-1 configuration. LAMPS MK-III has been approved for engineering development.	Proceeding as rapidly as funds and authority permit to modify full inventory of 105 H-2 helicopters and helo-configured ships to the LAMPS role.
Overseas Homeporting	-Completed Phase I of Athens Forward Deployment initiative --homeported DESRON 12 (six ship destroyer squadron and staff) and Commander Task Force SIXTY. -USS HOWARD W. GILMORE (AS-16) homeported in Maddalena, Sardinia. -2 AFS's homeported in Sasebo, Japan.	-CVA/CVW homported in Yokosuka, Japan.	- Plans formulated and approved for homeporting a DESRON in Guam. -Awaiting STATE approval to implement Phase II of the Athens initiative, homeporting a CVA/CVW in 1975 and USS SANCTUARY (AH 17) in 1974 in Athens, Greece.	-Continue to refine the program in order to meet our commitments with reduced force levels and permit our sailors to have more time with their families.

( ) = Deleted

PROGRAM	STATUS LAST YEAR	WHAT HAPPENED IN THE INTERVENING YEAR	WHERE WE ARE	WHERE WE WOULD LIKE TO GO
ASMD	To provide ship defense against anti-shipping missiles, program emphasizes self-defense hard kill and passive/active detection improvements.	Hardware testing and procurement have continued. Suites of hardware are specifically designed for each class of ships based on their mission, expected degree of exposure to the threat and their loss value (enemy viewpoint). Cutbacks and stringent testing requirements will cause delays in procurement of some hard-kill systems to FY-76 and later. Design-to-price EW program formalized.	As ships are available for shipyard work and as funds are available, hardware installations are being completed. Funding constraints and equipment procurement delays impact on overhaul schedules such that fewer ships than planned will receive their ASCM defensive packages.	The current ASMD master plan includes over 300 ship installations through FY 79 when installations should be completed. R&D efforts will continue to stress simplicity, low cost and effectiveness.
Standard Surface to Surface Missile Program	Standard Medium Range Missile capability (semi-active version) has been installed on six DE-1052 class ships and two PG's. Two additional PG's have been converted to fire the Standard Arm missiles.	Beginning of last year saw the start of conversion of the twelve DDG's and DEG's to fire the Standard Active/ Standard Arm missiles. Development of the Standard missile Active Seeker is continuing.	Conversion of destroyer type ships continuing. Missile procurement to support the 12 ship DDG/DEG Standard Surface to Surface Missile Program initiated. STD Active procurement / deferred pending results of / problem HARPOON OPEVAL.	STD Active version to be developed as backup to HARPOON to provide an over-the-horizon surface-to-surface missile capability, a requirement which will enhance fleet offensive capability. STD Active is desired as a complement to HARPOON, greatly complicating any potential enemy's defensive
HARPOON	Development of this air, ship or submarine launched cruise missile in design and testing. IOC estimated to be ( ). Submarine version uses the basic ship type missile encapsulated in a rigid shell compatible with submarine torpedo tubes.	Guidance Test launches successfully completed from air and surface platforms. Weapon system development contract awarded which developes prototype missile. Underwater launch of HARPOON prototype capsules has been demonstrated.	Complete contractor and Navy Test and Evaluation of basic HARPOON. Encapsulated program will continue development and test of prototype. Identification and fabrication of shipboard fire control and associated launcher modifications proceeding.	HARPOON will be placed on cruiser, destroyer PHM and PF type ships, P-3, S-3, A-6 and A-7 aircraft and submarines. IOC P-3 and DE-1052 class is ( ). R&D to install HARPOON on A-6/A-7 will be accomplished.

( ) = Deleted

PROGRAM	STATUS LAST YR	WHAT HAPPENED IN THE INTERVENING YEAR	WHERE WE ARE	WHERE WE WOULD LIKE TO GO
Condor	Program to produce an air-launched, electro-optically guided stand-off missile on schedule. Capability planned for [ ] First Navy launch August 1972.	Initial Operational Test and Evaluation (IOT&E) of basic missile completed. Contract for pilot production of 50 missiles was signed on 5 October 1973.	Continue engineering development and development flight tests on the Dual Mode Seeker. OPEVAL/ Development Test and Evaluation (DTE) of full system (AGE TRAM) beginning.	The current estimate of Initial Operational Capability (IOC) is [(deleted)]
Captor	Development of this [(deleted)] mine has continued. Design and fabrication of engineering development models continued and models delivered.	Design fabrication and testing of engineering development models (series 200) have been successfully completed. Following this successful performance, the design for the Technical/Operational Evaluation units (series 300) was frozen and the contractor commenced fabrication in August 73.	Delivery of the Series 300 units is scheduled to commence in April 1974. The Initial Operational Test and Evaluation (IOT&E) is scheduled to continue through [(deleted)]	The Initial Operational Capability is planned for late [ ].
CV Program	Pilot program to partially compensate for lower carrier force levels by providing carriers with the capabilities of operating both ASW and attack aircraft successfully completed on SARATOGA.	Carrier conversion program continued on schedule.	Three carriers have completed the CV conversion. One CVA is in conversion this year.	Remaining carriers in the program to complete conversion by Mid-Year 1977. This will provide the Navy with maximum flexibility to meet a wide spectrum of contingencies.

( ) = Deleted

PROGRAM	STATUS LAST YEAR	WHAT HAPPENED IN THE INTERVENING YEAR	WHERE WE ARE	WHERE WE WOULD LIKE TO GO
PHOENIX/ F-14	Program has one of highest priorities in Navy. F-14/PHOENIX is only fighter flying or on drawing board that can deal with FOXBAT at maximum altitude. Performance has met all tests, despite loss of three F-14's which set program back somewhat.	Board of Inspection and Survey (BIS) and carrier suitability trials successfully completed. OPEVAL commenced. Technical aspects of program continue to be excellent after over 7610 flight hours in over 4523 flights, 33 PHOENIX missiles fired from F-14, 27 successfully intercepted targets. One of the tests was a quadruple launch with all four firings successful and one a launch of six missiles at six targets.	Negotiations with Grumman successfully completed. Grumman has accepted Lot V option for 48 aircraft. Production orders issued March 8, 1973. Navy will not exercise existing contract options beyond Lot V. 134 aircraft will be procured under original contract. 50 aircraft have been procured (FY-74) under a separate contract.	Additional F-14 procurements will be negotiated annually on individual contract basis, dependent on Congressional authorization and appropriations. Near term goal is 12 F-14 Navy and 4 USMC squadrons.
Retention Efforts	Retention of first term enlistees remained consistent from 23% in FY 1972 to 23% in FY 1973.	Reduction in MPN appropriations again caused actions which resulted in early releases, delays in promotions, elimination or reduction in incentives reduction of PCS moves and extensions in arduous tours of duty.	Revision in MPN account management procedures have received the highest level of attention.	Personnel stability must be achieved to maintain a viable, responsive all-volunteer force.
Wartime Use of Merchant Marine	Test of commercial ships on regular trade route in providing delivery of resupply to Fleet Support Ships via VERTREP and/or consolidation were continued.	MSC chartered commercial tankers used in direct support (consolidation mode) of deployed Indian Ocean task group. Communication, availability, and capability difficulties recognized and addressed.	The confidence level of using commercial tankers in a supporting role has improved. Problem areas are being identified and with each new initiative, progress is being made toward resolution.	Continue to develop procedures to provide readily available surge capability by U.S. Merchant Marine.

ADDENDUM VI

Technological generation growth

The Soviets are gaining on the U.S. Navy technologically. This addendum enumerates many examples of the various weapon systems where this can be readily shown.

TECHNOLOGICAL GENERATION GROWTH

The Soviets are gaining on the U.S. Navy technologically. The rate of gain is uneven and therefore difficult to measure but appears to be approximately one half generation (10–12 years) per weapons system generation (20–25 years). Generally, the U.S. lead was 10–12 years in 1950–55, 4–8 years in 1962–67, and disappearing in 1973.

For example, in surface combatants, the Soviet 1951 light cruiser SVERDLOV and 1954 destroyer KOTLIN were similar respectively to the U.S. CLEVELAND and SUMNER classes built approximately ten years earlier. The Soviet 1967 KRESTA I class was a double-ended missile ship similar in size and capability to the DLG 16 built five years earlier, KRESTA was the first Soviet surface combatant to carry an ASW helicopter, which was introduced into the U.S. Navy seven years earlier. The Soviet 1970 KRIVAK class has gas turbines (U.S. 1974). [Deleted.]

Our mature diesel attack submarine technology was almost matched by the Soviets in 1951 in most respects. The Soviet 1951 ZULU IV class surface and submerged speeds [deleted.] However, the U.S. introduced nuclear propulsion (1954) four years before it appeared in the Soviet 1958 NOVEMBER class SSN. The VICTOR class SSN is almost identical to the [deleted]. While the U.S. continues to hold a 6–8 year lead in attack submarine technology in 1973, the Soviets have gained an equivalent lead in submarine [deleted] and those carrying anti-surface-ship missiles.

The U.S. delivered the lead ship SSBN designed initially as an FBM submarine and carrying sixteen 1500-mile missiles, SSBN–608, in 1961. The Soviet equivalent, the YANKEE class, appeared seven years later in 1968. In 1973 the Soviet DELTA class conversion to a longer range strategic missile followed the deployment of the MIRVed POSEIDON missile by two years but preceded the deployment of the equivalent range TRIDENT missile by six years.

The Soviets have not yet started to build an equivalent to the U.S. aircraft carrier. However, they introduced helicopter decks on cruiser-size ships in the late 1960s and are expected to introduce VSTOL aircraft carriers beginning in the mid 1970s.

In surface combatants, attack submarines, and SSBN technologies, the Soviets closed a 10–12 year technological gap in the early 1950s, to a 4–8 year gap in the mid-1960s, to almost zero in the mid-1970s, except for submarine silencing. Now, they have a 6-year lead in surface-to-surface tactical missiles, anti-ship-missile defense [deleted]. During this period, the U.S. Navy has maintained superiority in several critical areas, particularly systems to sink Soviet submarines and in carrier based offensive strike capability. In fact, we have widened our lead in systems critical in submarine-versus-submarine duels. The Soviets have just started to construct aircraft carriers; hence, a comparison in this area is not meaningful.

Senator YOUNG. That was a very thought-provoking statement, Admiral, and I wish every Member of Congress would read it. Your assessment of the world's naval power with our own is certainly tremendously important and one that everybody should seriously consider.

UNITED STATES/ALLIED COMBINED STRENGTHS

Suppose the United States were to become a second-rate naval power, but with the combined naval strength of our allies we were superior to the strength of the Soviets. In the event of war won't they still have an advantage?

Admiral ZUMWALT. Yes, sir, it would in a couple of ways. First, you can visualize a situation in which we had sufficient power together with our allies and if it were all deployed properly, one could prevail, [deleted].

Senator YOUNG. [Deleted.]

Admiral ZUMWALT. Yes, sir, I think that is accurate.

Senator YOUNG. Have France, England and Italy been improving their naval power?

Admiral ZUMWALT. The English have done some modernization in recent years. The French have done some. The Italians more 10 years ago than they have in recent years, but they all have respectable navies but very small. But the addition of NATO navies to our own in a NATO war would add power to ours but, on the other hand, we pick up additional responsibilities in a NATO war because we have to be able to reinforce Europe and I think the additional capability is just about matched by the additional responsibility we pick up [deleted].

Senator YOUNG. They could become increasingly independent in their thinking. They are not as easy to work with as they were a few years ago.

Admiral ZUMWALT. That is correct, sir. I think the allies have tended to go their own way with regard to foreign policy in recent years.

Senator YOUNG. Does that complete your statement?

Admiral ZUMWALT. Yes, Mr. Chairman.

Secretary WARNER. That completes our statement, and for the record I wish to note my general support for the statement just made by the Chief of Naval Operations.

Senator YOUNG. It was a fine statement. I have a few questions then we will proceed with General Cushman's statement.

PERSONNEL COSTS

What percent of the Navy's budget request is personnel costs--military and civilian?

Admiral ZUMWALT. Forty-three percent.

DRUG PROBLEM

Senator YOUNG. Does the Navy have a drug problem?

Admiral ZUMWALT. Yes. Various national surveys indicate a nationwide drug subculture in the 17–22 year old age group. Since the Navy is a part of this society and draws its human resources from this 17–22

year old group it can be assumed that a drug problem exists but not necessarily of the same magnitude as in the country as a whole. There are statistical indications that the drug abuse problem in the Navy has at least been checked and that drug abuse is possibly on the decline; however, I personally do not feel that marijuana usage is included in this decline. In calendar year 1973, 9,846 drug abusers were identified in the Navy and 6,927 or 70 percent were retained on active duty after receiving some form of counseling or rehabilitation assistance. In comparison, in calendar year 1972, 14,105 drug abusers were identified and only 7,728 or 55 percent were retained after receiving assistance for their drug problem.

Senator YOUNG. How does the Navy measure or count the number of personnel using drugs?

Admiral ZUMWALT. The primary means of measuring the number of personnel using drugs is a count of those identified as drug abusers regardless of the means of identification. Navy drug abusers are identified through the voluntary exemption program, through the urinalysis testing program and through normal law enforcement and investigative measures. Over 32,000 have been reported since July 1971.

In addition, several surveys have been conducted under confidential or anonymous conditions. The results of these studies generally indicate that 20 to 30 percent of the Navy population between 17 and 22 years of age has been involved at least with experimental use of drugs. Surveys of this same age group in the population at large have shown, for example, that approximately 67 percent of all college students have been involved at least with the experimental use of drugs. Marihuana by far is the most prevalent substance used.

MENTAL GROUP FOUR RESTRICTION

Senator YOUNG. What effect has the nonhigh school graduate and mental group IV personnel restrictions contained in the fiscal year 1974 appropriations had on the Navy recruiting program?

Admiral ZUMWALT. No effect, sir. fiscal year 1974 results (July 1 through February 28) indicate that 72 percent of Navy accessions have been high school graduates and only 3 percent have been mental group IV. This is well within the limits established in the fiscal year 1974 appropriations. However, I recommend that the restrictions be removed to permit the military services the flexibility of managing their personnel procurements as their individual needs dictate.

MAINTENANCE BACKLOG

Senator YOUNG. Will the Navy continue to have a maintenance backlog in fiscal year 1975? Please provide the committee examples of the number and type of backlog items.

Admiral ZUMWALT. The Navy will enter fiscal year 1975 with a $415 million backlog of urgent but deferred repairs of real property at our shore facilities. That backlog has been building up over the last 8 years at the approximate rate of $40 million per year. Our fiscal year 1975 budget is on that initial effort to reverse that trend of maintenance deferral. We propose to fund approximately a quarter of the backlog

with our budget request of $127.3 million for major facility repairs. With allowances for the repairs which will be generated during fiscal year 1975, we expect our backlog will be reduced to $355 million when we commence fiscal year 1976. An example of the type of repairs to be funded in the 1975 budget is shown in the exhibit below.

Activity and type of repair	*Cost*
NAS Oceana, repair central steamplant	$285,000
NAS Norfolk, repair aircraft parking area	2,600,000
NAVSTA Norfolk, repair pier 10	1,359,000
NAS Alameda, maintenance dredging	2,508,000
NAS Alameda, overlay runway	903,000
NAS North Island, repair steam dist. system	3,500,000
NSC Norfolk, repair jet fuel tanks	683,000
NOS Indian Head, repair river bank erosion	840,000
Naval Regional Medical Center, Philadelphia, repair roof	211,000
Naval Regional Medical Center, Oakland, repair 5 boilers	163,000
Subase New London, repairs to paving and drainage	285,000
Subase New London, repair to Quaywall berth 16	268,000
NAS Norfolk, repair supply bldg. LP-26	182,000
NAS Brunswick, repair fire protection pipeline	153,000
NAVSTA Mayport, repair west gate access road	122,000
NAVSTA Norfolk, repair Navsta streets	1,000,000

SURFACE EFFECTS SHIP STATUS

Senator YOUNG. What is the status of the surface effect ship development?

Admiral ZUMWALT. Four contractors, Aerojet, Bell, Lockheed, and Rohr, each completed a preliminary design of a 2,000-ton prototype surface effect ship (SES) last August. The Navy evaluated them and has concluded that each of them demonstrates that it is feasible to build an oceangoing SES. The program was reviewed by the DSARC in December. The Deputy Secretary of Defense subsequently authorized continued advanced development of the 2,000-ton SES prototype, with financial and program planning to be on the basis of two prototypes, and the issue of the number of prototypes to be addressed at the next DSARC review. The OSD guidance constituted sufficient redirection of the program that it was necessary for the Navy to issue a new request for proposals from the four preliminary design contractors. These proposals are to be submitted on April 1. The Navy will evaluate them, and intends to select two contractors to continue the development of the 2,000-ton prototypes. We expect to spend about a year in development and testing of subsystems and components, and in ship system design, to be followed by a DSARC review to authorize contract design and construction of the prototypes.

R. & D. PRIORITY

Senator YOUNG. On which of the items requested for research and development does the Navy place the highest priority?

Admiral ZUMWALT. Senator, the Navy research and development program is structured to maintain or increase the overall technology edge of the United States over the Soviet Union. Thus my highest priority would have to be [deleted] the Harpoon program and the antiship missile defense programs such as the close-in weapons system and the NATO Sea Sparrow would rank the highest.

Next would be our antisubmarine warfare effort. We urgently need to continue development of the Lamps, MK–III, HSX, Tass, and Captor programs.

Third in the priority would be our antiair warfare development. The Aegis system is one that will significantly enhance the survivability of naval forces in the AAW threat environment that we project for the 1980's. The V/STOL aircraft development effort will also have considerable impact on the shape of the future Navy.

Finally, we need to concentrate on areas that promise the greatest potential technology breakthrough as in the case of the surface effect ship program which holds the possibility of a breakthrough in ship speed that would match the historical transition from sail to steam. High energy lasers also hold great promise.

This is by no means an exhaustive list but does indicate areas which I consider to be the most critical.

Statement of General Cushman

General Cushman. I have a short statement which is just a brief summary of my longer one that was submitted for the record.

Senator Young. Your statement is classified secret, Admiral, and do you have one for the press?

Admiral Zumwalt. Yes, I do, sir, and I am glad to submit it for the record.

General Cushman. Mine is unclassified, Mr. Chairman.

Senator Young. Yes.

Questions by Chairman M'Clellan

Senator Young. General Cushman, Senator McClellan also has some questions he would like you to respond to. I would suggest that the questions and answers be placed at the appropriate places in your testimony.

General Cushman. Very well.

Senator Young. You may proceed.

Marine Corps Mission and Organization

General Cushman. Mr. Chairman, the Marine Corps mission and organization are very specifically defined in the National Security Act. We are a force of "not less than three combat divisions and three air wings and such other land combat, aviation, and other services as may be organic therein * * * organized, trained, and equipped to provide fleet marine forces of combined arms * * * for service with the fleet * * *" It is this primary tasking by the Congress to which we relentlessly direct our greatest effort. Despite certain problems and resource constraints, I am pleased to report that the Marine Corps is still ready and able to carry out its role as the Nation's amphibious force-in-readiness.

We have designed our fiscal year 1975 program to sustain—and enhance—our unique ability to:

Make major contributions to peace through deterrence; or if directed, to project combat power ashore in a selective manner designed to support the Nation's political, diplomatic, and strategic interests.

MARINE CORPS COMBAT READINESS

Senator YOUNG. Where does the Marine Corps maintain combat forces ready for rapid deployment?

General CUSHMAN. The Marine Corps maintains combat forces capable of rapid deployment from the following areas/bases:

Pacific: 3d Marine Division on Okinawa; with one marine amphibious unit and one battalion landing team forward deployed afloat; 1st Marine Air Wing on Japan; 1st Marine Brigade on Hawaii.

West coast: 1st Marine Division at Camp Pendleton, Calif.; 3d Marine Air Wing at El Toro, Calif.

East coast: 2d Marine Division at Camp Lejeune, N.C.; with one Marine amphibious unit forward deployed afloat in the Mediterranean, and one battalion landing team periodically deployed to the Caribbean: 2d Marine Air Wing at Cherry Point, N.C.

The recent Middle East crisis provides us with only the latest example of the absolutely vital utility of our amphibious capability. Amphibious forces of the 6th Fleet, augmented by units from the east coast, were strategically positioned in the Mediterranean to respond rapidly without concern for overflight rights or advance staging and—more importantly—without indications of commitment. Clearly, these naval forces served as a meaningful deterrent to any expansion of the crisis and as a stabilizing influence in the area. No other country in the world possesses a similar amphibious capability and I believe that it is essential to our national well-being that we maintain our unparalleled position.

MARINE CORPS ALERT IN MIDEAST WAR

Senator YOUNG. Was the Marine Corps alerted during the recent Middle East War?

General CUSHMAN. All Marine Corps forces were alerted as the result of the worldwide alert of 25 October 1973. U.S. Marine Corps forces assigned to the Sixth Fleet were augmented by a battalion landing team and helicopter squadron aboard the amphibious assault ship, U.S.S. *Iwo Jima*. Additional marine forces were moved by air to the Mediterranean bringing the total force to Marine Amphibious Brigade size. During the resupply of aircraft to Israel, Marine refueler transports were deployed to provide inflight refueling over the Atlantic and Mediterranean.

MARINE CORPS POLICIES

We have developed our fiscal year 1975 force governed by three policies:

Marine Corps combat forces will be maintained in the highest attainable state of readiness;

These forces will consist of balanced air and ground combat units;

The general support structure will be the minimum required to provide a training and logistic base capable of supporting the operating forces.

PETROLEUM CONSUMPTION

Chairman MCCLELLAN. Provide the total petroleum consumption for fiscal year 1973 and projected for fiscal year 1974 and fiscal year 1975.

General CUSHMAN. The total petroleum consumption for fiscal year 1973 was 1.737 million barrels of equipment fuel and heating oil for both the regular and reserve forces. Projected total consumption for fiscal years 1974 and 1975 is 1.664 and 1.648 million barrels respectively.

Senator YOUNG. Proceed.

RECRUITING SHORTFALLS

General CUSHMAN. The requested end strength of 196,398 will enable us to maintain the three division-wing teams in a combat ready posture. At present one of these teams is undermanned, reflecting the recruiting shortfalls of the past 6 or 7 months. For reasons which I will describe in a moment, I do not expect this shortfall will be overcome by the beginning of the new fiscal year. I do believe, however, that as the year progresses our prospects for recouping are good.

DEFICIENCIES IN COMBAT DIVISION TEAM WINGS

Chairman MCCLELLAN. You indicated that two division-wing teams will be in a substantially combat ready posture, but the third division-wing team will not be fully structured, but could be readied for deployment through emergency manpower actions. In what areas are the two substantially combat ready divisions deficient?

General CUSHMAN. In the shortage of enlisted personnel, particularly noncommissioned officers in technically skilled occupational fields; for example, administration, communication, artillery, supply, utilities, electronics, data systems, aircraft maintenance, aviation ordnance, and air control.

THIRD DIVISION READINESS

Chairman MCCLELLAN. What specific emergency manpower actions would be necessary to ready the third division for deployment?

General CUSHMAN. Basically, three actions would be required. First, extend involuntarily all terms of service by extending enlistments and delaying, for the period of the emergency, retirements, resignations and reserve releases. Second, extend the length of overseas tours. Third, cancel restrictive assignment policies as required.

Chairman MCCLELLAN. How long would these actions take?

General CUSHMAN. The actions can be implemented immediately and the division can obtain a satisfactory readiness posture within six weeks from that date.

MARINE CORPS SECURITY GUARDS

Chairman MCCLELLAN. You indicate that most of the fiscal year 1975 end strength increase in Marine Corps personnel is for additional security guards at embassies. Which embassies are receiving the increase?

General CUSHMAN. I understand that our State Department is still engaged in discussions with some of the host countries, Mr. Chairman. Consequently, I cannot address with precision the specific embassies involved. However, as far as general geographic regions are concerned, the State Department plans to assign 180 additional Marines in Africa; 47 to South America; 43 to East Asia; 49 to Europe; and 113 to the Near East and South Asia.

Senator YOUNG. Proceed.

General CUSHMAN. In recent months we have halted the downward trend in recruiting, turned the corner, and are headed towards a more successful recruiting effort. However, that success may be offset by the

impact of Section 718 of the 1974 Defense Appropriations Act which places limitations on the percentage of mental group IV and nonhigh school graduate enlistments. Since section 718 was enacted midway in the fiscal year, I am doubtful that we can implement its provisions and still meet our recruiting objective.

MARINE RECRUITING GOALS

Senator YOUNG. Will the Marine Corps be able to attain its recruiting goals for fiscal year 1974 without benefit of the draft?

General CUSHMAN. No, sir, we will not. However, we will get back to our planned strength in fiscal year 1975. How early we get back to plan depends upon the Congress' approval of our request to enter into a paid print and outdoor advertising campaign during the last quarter of this year. Likewise we need relief from the statutory requirement to enlist at least 55 percent high school graduates.

As an aside after the most recent conference with my personnel people, I find that our success was only temporary. I am no longer doubtful of the situation, I am sure we can not adhere to the provisions of section 718 and still meet our objective.

Senator YOUNG. You don't believe these provisions are essential?

General CUSHMAN. No, sir, I believe that we have a better measuring stick at hand than this rather rigid one which measures a little bit of amenability to discipline on the part of the recruit, but does not measure his trainability or his intellect. About half of our mental group 4 recruits are high school graduates, so high school graduation does not indicate intelligence. Students are often graduated in many schools by their age group and not by scholastic achievement. So, it just shows they were willing to stick around and do their best but it does not indicate they really learned anything. However, they are usually amenable to discipline.

We find that if they have not been a dropout they tend not to want to drop out of the Marine Corps either. But this does not help when we seek the people with the intellect who can master the harder skills. So I am suggesting that we work out a different criteria, a different measuring stick to get the good that we both want, the Congress and the Marine Corps, which is higher quality.

I would prefer to see a much lower percentage of high school graduates, which gets you those who tend to be amenable to discipline and then the others to be measured by the tests which determine whether they are mental group 1, 2, 3, or 4. This is what determines whether they are smart enough to learn certain skills or not.

RECRUIT FAILURE RATE

Chairman MCCLELLAN. What has been the experience of the Marines as to success or failure in training of recruits with and without possession of a high school diploma? What has been the experience as to the behavior problems of the two groups?

General CUSHMAN. The failure rate in recruit training is higher among those individuals without a high school diploma, Mr. Chairman. During this past year the failure rate for non-high-school graduates was 125 per thousand as compared to 91 per thousand for the high school graduates.

The Marine Corps has found that recruits with high school credentials are more amenable to the demands of the military environment, and consequently are less susceptible to disciplinary problems.

MENTAL GROUP IV PERSONNEL

Senator YOUNG. What has been the Marine Corps experience with non-high-school graduates and mental group IV personnel? What percentage of these people make good marines?

General CUSHMAN. The Marine Corps has found that over 80 percent of the non-high-school graduates perform satisfactorily and that their level of performance is directly proportionate to their mental level. Approximately four out of five mental group IV marines perform satisfactorily; however, many are unable to grow in terms of technical and professional expertise and therefore do not have the potential to enter the career force.

Senator YOUNG. Is there a committee considering this problem?

General CUSHMAN. Well, I have talked to all of the committees, sir, and the House Appropriations Committee was the one that put it in the bill, so I have been concentrating on Chairman Mahon and his staffers over there. They seem to be in agreement with me.

My problem is to get something done now so I don't have a disaster this fiscal year and then of course I would not like to see the present section 718 in the 1975 Appropriations Act, I would like to see it changed.

COMPARISON OF TRAINEE SEPARATION

Chairman MCCLELLAN. As to deterioration of your nonprior service enlistees, provide the total trainees eliminated from the Marines with less than an honorable discharge during fiscal year 1973 and to date in fiscal year 1974. Compare this with the number of mental category IV personnel and nonhigh school graduates eliminated.

General CUSHMAN. In fiscal year 1973, 273 marines were separated during recruit training with less than an honorable discharge. Through February of this fiscal year, 141 such discharges have been effected.

In fiscal year 1973, 47.7 percent of male and female recruits were nonhigh school graduates. Of those recruits who were discharged during recruit training, 55.6 percent were nonhigh school graduates. Of those separated with less than an honorable discharge, 58.6 percent were nonhigh school graduates. During the same year, 14.5 percent of our male and female recruits were in mental group IV. Of all marines discharged during recruit training, 16.1 percent were in mental group IV. Of those recruits separated with less than an honorable discharge, 18.7 percent were in mental group IV.

Through February of this fiscal year, 52.6 percent of our male and female recruits were nonhigh school graduates. Of those recruits who were discharged during recruit training, 61.3 percent were nonhigh school graduates. Of those discharged with less than an honorable discharge, 58.5 percent were nonhigh school graduates. During the same time frame, 7.2 percent of our male and female recruits were in mental group IV. Of all marines discharged during recruit training, 11.7 percent were in mental group IV. Of those recruits separated with less than an honorable discharge, 18.6 percent were in mental group IV.

RECRUITING OBJECTIVE

Chairman MCCLELLAN. Provide the recruiting objective by month for fiscal year 1974 and the actual accessions to date. Indicate the number of mental category IV accessions and high school graduates by month.

General CUSHMAN. I have a table, here, which has those data through February, Mr. Chairman.

[The information follows:]

MARINE CORPS NON-PRIOR-SERVICE ACCESSIONS, FISCAL YEAR 1974

Month	Quota [1]	Actual	High school graduates	Mental group IV
July	5,510	5,122	3,041	309
August	5,510	4,583	2,602	322
September	6,625	4,224	2,596	302
October	5,260	3,618	1,801	329
November	4,560	3,267	1,396	260
December	4,050	3,142	1,237	258
January	4,712	4,601	1,997	387
February	5,712	4,450	1,677	330
March	5,262			
April	4,462			
May	4,462			
June	7,444			

[1] Monthly quotas reflect the figure which was in effect for that particular month. Therefore, they do not add to the yearly quotas of 54,800 male and 1,210 female non-prior-service accessions.

Senator YOUNG. Proceed.

RELIEF FROM SECTION 718

General CUSHMAN. What we need is relief now from the rigid language of section 718 which requires that 55 percent of our enlistees be high school graduates. It is a goal with which I am in full agreement. But as we transition to the All-Volunteer Force, I would much prefer to see it stated as a joint goal—of the Congress and the services—leaving a final judgment to a future time, against the background of greater experience.

GROUP IV PROHIBITION

Senator YOUNG. Should our country identify and set aside a segment of our population, such as non-high-school graduates and mental group IV's, by prohibiting them from serving in our armed forces?

General CUSHMAN. Sir, I think the best answer to your question is that our country should strive for the highest quality it can get in its armed services consistent with the services' requirements. Toward that end, we do, in fact, bar service on the basis of mental group and on other basis such as physical handicap or criminal record. In the case of women, we bar entry into the Marine Corps on the basis of formal education since we can meet our recruiting goals at this level of quality.

The first point at issue, though, with regard to the constraints in section 718 of Public Law 93–238, is whether or not the services would have lowered their enlistment standards in order to bail out the All-Volunteer Force if they ran into trouble in the recruiting market. I wish to assure you that I had no intention of doing any such thing.

The second point at issue is whether or not the constraints in section 718 are too severe. While I agree with the intent implicit in section 718, the 55 percent high school graduate constraint translates into a 6,000 Marine recruiting shortfall this year. In turn, that shortfall soon translates into a 6,000 Marine deficit in our "cutting edge," the junior Ma-

rines in the Fleet Marine Forces. I do not believe that the Congress really intended to generate that kind of effect.

If the non-high-school graduate constraint were waived, I could recruit those 6,000 young men this year and they would all meet the same quality standards I set a year ago when I tightened our enlistment criteria.

SELECTED RESERVE

As we request an end strength of 34,958 for our Selected Reserve, we are concerned about the Reserve due to major shortfalls in recruiting. The impact of the present shortfalls on our capability is not yet critical overall, since we have about 169,000 individuals available in the Ready and Standby Reserve pools to fill our mobilization requirements. Nevertheless, I would be remiss if I failed to note this continuing problem with Reserve recruiting as a major one. As you would expect, we are doing everything we can to seek solutions.

PRIOR SERVICE RECRUITMENT

Chairman MCCLELLAN. The other reserve programs appear to be having success with obtaining prior-service personnel. Provide the percentage of prior-service personnel in the Selected Reserve as of the end of fiscal year 1973 and projected for fiscal year 1974 and fiscal year 1975.

General CUSHMAN. Prior-service enlisted personnel comprised 14 percent of the Selected Reserve at the end of fiscal year 1973 and is projected to be 25 percent in fiscal years 1974 and 1975.

Senator YOUNG. Proceed.

General CUSHMAN. Let me now turn to our requirements for fiscal year 1975 by appropriation.

FISCAL YEAR 1975 BUDGET REQUEST

MPMC funding of $1,728.7 million is required to support our requested end strength. New requirements included in this support are the significantly increased costs relating to: annualization of travel benefits for E–4's with over 2 years service, mileage allowance in lieu of transportation, and, proposed travel benefits for E–1 through E–4 with under 2 years service.

CAREER COUNSELORS

Chairman MCCLELLAN. Provide the total number of career counselors at the end of fiscal year 1973 and projected for the end of fiscal year 1974 and fiscal year 1975.

General CUSHMAN. We needed fiscal year 1973 with 408 career counselors, sir; conforming to the will of Congress, we will reduce that number to 200 by the end of fiscal year 1974 and retain that level through fiscal year 1975.

GRADUATE EDUCATION PROGRAM

Chairman MCCLELLAN. Provide the number of participants and cost of the graduate education program for fiscal year 1973 and projected for fiscal year 1974 and fiscal year 1975.

General CUSHMAN. I will be happy to provide that information for the record, sir.

[The information follows:]

MARINE CORPS GRADUATE EDUCATION PROGRAM, FISCAL YEARS 1973–74

	Participants [1], fiscal year—		
	1973	1974	1975
Special education program	141	99	88
Civilian schools	(74)	(44)	(33)
Navy postgraduate school	(67)	(55)	(55)
Advanced degree program	100	124	112
O. & M.M.C. [2]	$140,000	$82,000	$50,000
MPMC [3]	$2,966,000	$2,869,000	$3,033,000

[1] Total number of marines participating at any time during the year.
[2] Tuition and fees for special education program (civilian school) participants.
[3] Pay and allowances and permanent change of station (PCS) cost of all participants.

PLATOON LEADER CLASS

Chairman MCCLELLAN. Provide the total number of participants in the Platoon Leaders Class program for FY 1973, 1974, and 1975 receiving financial assistance. Provide the number of participants in FY 1973 for which a commission was not tendered.

General CUSHMAN. The number of participants in the Platoon Leaders Class program receiving financial assistance:

Fiscal Year 1973, 701 (Actual); Fiscal Year 1974, 911 (Projected); Fiscal Year 1975, 1,000 (Projected).

During Fiscal Year 1973, commissions were not tendered to nine PLC participants who had received financial assistance. Of those nine, six were enlisted in the Marine Corps and three were found not qualified for enlistment.

OFF DUTY EDUCATION

Chairman MCCLELLAN. What are your plans for accomplishing off-duty education and counseling that was formerly provided by the Armed Forces Institute USAFI?

General CUSHMAN. Actually, sir, we did not rely heavily on USAFI in either of those areas. As far as off-duty education is concerned, we still have the Veterans' Administration's Predischarge Education Program, or PREP. We also have our own tuition assistance program. We will continue to use both of those programs for off-duty education.

The USAFI did provide us with some counseling materials. However, we use the guidance, vocational, and education counselors of local civilian schools almost exclusively.

FUNDING SUMMARY

Senator YOUNG. Proceed.

General CUSHMAN. RPMC funding of $73 million acknowledges the decreased man-years that will impact from fiscal year 1974 into fiscal year 1975.

O. & M.M.C. funding of $446.3 million is required to support our Fleet Marine Force requirements for supplies, maintenance and training, and to provide civilian personnel man-years of 17,145. New items reflected are GSA rental costs and an improved frame pack.

O. & M.M.C.R. funding of $11.4 million is required to support training and maintenance, and to provide supplies and civilian personnel man-years of 73.

PMC funding of $228.8 million supports continued modernization of our tank and antitank capability, our antiair defense missiles and for communications and electronic equipment for command, control and integration of the weapons into a ready fighting force.

Requirements contained in the fiscal year 1974 supplemental will accelerate delivery of many critical items.

SHORTAGE OF SHIPPING

Now I would like to comment on a continuing and serious problem, the paucity of amphibious shipping and a corresponding lack of Military Sealift Command and merchant marine backup. Associated with this shortage is a severely diminished naval gunfire support capability. I reported my concern with these shortages last year and I note them again since they represent a serious deficiency in our national capability. Further, the significance of these deficiencies appears to be increasing as we face new and growing challenges to our position as a maritime power.

On a positive note, I invite your attention to the launching last December of the U.S.S. *Tarawa*. It is the first of five multipurpose amphibious ships, or LHA's, that the Congress has funded which provide a significant increase in our operational effectiveness. These ships will not eliminate the shortage in amphibious shipping, but hopefully their introduction signals an end to the decline in amphibious lift that has prevailed since 1969.

AMPHIBIOUS SHIP INVENTORY

Chairman MCCLELLAN. Provide the number of amphibious ships in service as of the end of fiscal year 1968, the end of fiscal year 1973, and projected for fiscal year 1974 and fiscal year 1975.

General CUSHMAN. Sir, the number of ships is:

1968	157
1973	66
1974	66
1975	66

Senator YOUNG. Proceed.

General CUSHMAN. In closing, let me express my personal thoughts regarding the future. The Marine Corps and its sister Services have set high goals of professionalism and readiness. We share the concerns of the Congress and the interests of our people and will strive to serve the Nation in the highest traditions of our heritage.

ALL-VOLUNTEER FORCE

As a service chief, I would be remiss in my duty to the Congress, however, if I failed to report my concern for the future of the military services in the All-Volunteer environment.

If we are to sustain an effective All-Volunteer Force, there must be an awareness on the part of our citizens, our official circles and our media, that the profession of arms is an honorable one. A military career is a life of purpose whose ultimate goal is the protection of our nation and its traditional values. Such a purpose carries with it a high consciousness of responsibility in the conduct of the people's business. Accordingly, we hold ourselves accountable when valid criticism is directed toward our profesion. We ask only that criticism be the subject of open, honest debate, giving the public the full balance of information it needs to make reasonable judgments.

The maintenance of an effective military establishment does not rest solely on the sophistication of its weaponry or the funds available to attract recruits. It rests fundamentally on the leadership, integrity

and professionalism of its personnel, and on the respect they earn from their countrymen. If the Services are to attract talented young people, we must recognize that basically today's youth seeks two things: a purposeful way to serve their countrymen and the public respect that grows from such service. The All-Volunteer Force will be extremely difficult to sustain if the esteem for a military career becomes the victim of apathy, ignorance of malice. Loss of esteem is a major danger threatening the vitality of the armed services.

In a spirit of partnership with the American people I seek your help in fostering an understanding on the part of all Americans of the basic value of the profession of arms.

That finishes my statement, Mr. Chairman.

Senator YOUNG. We have had a bad period of history during much of the last 10 years. The serviceman was not as respected for his profession as he should have been, particularly on campus. I think that has been turned around almost completely now and the serviceman may soon be honored and respected as he should be.

General CUSHMAN. I think there has been improvement.

Secretary WARNER. There is improvement, Mr. Chairman; however, there is much yet to be done. I would like also the record to reflect I support the comments of the Commandant of the Marine Corps.

Senator YOUNG. Thank you, General Cushman.

General CUSHMAN. Thank you, sir.

QUESTIONS SUBMITTED BY SENATOR THURMOND

Senator YOUNG. Senator Thurmond was unable to be present at this meeting but has asked that questions he has prepared be answered for the record. They will be included at this point.

[The information follows:]

RESERVE PROGRAM JEOPARDY

Senator THURMOND. General Cushman, what do you mean in your statement when you say the Marine Corps Reserve program is "in jeopardy"?

General CUSHMAN. I was referring to the declining manpower strength of the Selected Reserve. The very existence of the Marine Corps Reserve is in jeopardy if the downward trend in personnel strength cannot be reversed.

PROJECTED ENLISTED STRENGTH

Senator THURMOND. What is the projected strength of the active Marine enlisted ranks for June 30, 1974, as compared with that on June 30, 1971?

General CUSHMAN. At the end of fiscal year 1971 we had 190,604 enlisted Marines. Our fiscal year 1974 authorized enlisted strength is 177,135. As of mid-March, we expect to end fiscal year 1974 with about 167,935 enlisted Marines, or some 9,200 fewer than authorized. However, if we were relieved from the statutory requirement to enlist 55 percent high school graduates, we estimate that we would end fiscal year 1974 with about 174,835 enlisted Marines, or 2,300 fewer than authorized for the year.

Senator THURMOND. Why has this enlisted personnel loss taken place and what has been done to arrest it?

General CUSHMAN. The programed reduction from 190,604 enlisted Marines in fiscal year 1971 to 177,135 in fiscal year 1974 resulted from imposed budgetary constraints within the Department of Defense, decreased involvement in the Vietnam conflict and a limited civilian substitution program. Our projected shortfall in fiscal year 1974 of some 9,200, or 2,300 if relieved from the statutory re-

quirement to enlist 55 percent high school graduates, is not all in the recruiting area since we began this fiscal year short and have experienced losses over plan.

In order to improve our recruiting efforts, we have: reoriented our recruiting schools so that they prepare recruiters to be salesmen; prepared a Guidebook for Recruiters so that successful sales techniques are readily available; allocated additional Marines to the recruiting force on a temporary basis to provide surge recruiting capacity; disseminated new recruiting techniques to those trained under the old system; and, we have requested Congress' approval to start a general paid print and outdoor advertising campaign.

Reserve Enlisted Strength

Senator Thurmond. What is the projected strength of the Marine Reserve enlisted ranks for June 30, 1974, as compared with that on June 30, 1971?

General Cushman. The projected enlisted strength for the USMCR–(O)–(Note: includes IADT) on 30 June 1974 is 33,294 in comparison with 44,803 on 30 June 1971.

Senator Thurmond. Why has this enlisted personnel loss taken place and what has been done to arrest it?

General Cushman. The enlisted personnel strength loss is due to the combination of our consistent inability to meet non-prior service quotas, a 25 percent to 35 percent attrition rate during recruit training, and losses from our selected reserve units of reservists completing their period of obligation.

Steps taken to improve recruiting:

a. A concentrated effort is being made to increase the number of first term reenlistments from their static level of about 3 percent.

b. We are increasing the prior service strength of the USMCR-(O)- from the present level of 18 to 25 percent.

c. A message was issued to the field which in effect puts the entire Marine Corps Reserve back into the recruiting effort in support of the Marine Corps Official Consolidated Recruiting Policy. It is noteworthy that this message authorized the use of selected reservists for the first time in history to assist in the recruiting effort during weekend drills on a controlled basis.

d. A message went out to the field suspending all volunteer training unit missions and substituting therefore the primary mission of reserve recruiting support.

e. The Director of Marine Corps Personnel Procurement has just obtained authorization and funding to put 177 more recruiters on the street who will be specifically dedicated to reserve recruiting.

Importance of 4th Marine Division Reserve

Senator Thurmond. How important to the Marines is the 4th Marine Division Reserve reinforced?

General Cushman. Under the total force policy, the 4th Marine Division's role within the Marine Corps has significantly increased. Recent fiscal constraints and the All Volunteer Environment have resulted in a shortfall of personnel strengths among the active forces. Despite the shortfalls the contingency requirements for the Marine Corps have remained unchanged. In order to meet these requirements the 4th Marine Division (Rein) has become the principle augmentation force for Marine Corps ground units. The Reserve, therefore, will continue to play a paramount role in the future readiness of the Marine Corps' ability to meet its requirements.

1974 Reduction Effect

Senator Thurmond. General Cushman, what effect did the $3.4 million cut applied on the Marine Corps Reserve by the Approriation Committee have in fiscal year 1974 relative to your program?

General Cushman. The effect of the $3.4 million cut in our fiscal year 1974 budget request reduced average strength from 39,735 to 36,063. This cut was based on our inability to meet end strength requirements in fiscal year 1973.

4TH DIVISION READINESS IMPACT

Senator THURMOND. Will continuation of your strength decline result in the 4th Division becoming a marginal force in the way of readiness?

General CUSHMAN. A continuing decline in the 4th Marine Division end strength will have a direct impact upon readiness. However, it is not anticipated that the decline would relegate the 4th Division to a marginal force. With the continuing transfer of Marines from active duty to the Individual Ready Reserve, there will remain a sufficient manpower pool available to flesh out the 4th Marine Division. Today in spite of the strength decline, the 4th Marine Division possesses the capability for expansion and will be able to meet its stated mobilization requirements. It is the Marine Corps objective to stem the decline and improve the reserve strength over the next two years.

EDUCATIONAL MEASUREMENT

Senator THURMOND. General Cushman, do you feel that a high school diploma is a proper measure of a prospective recruit's educational level?

General CUSHMAN. As Secretary Schlesinger pointed out in his report, high school graduation appears to be a better indicator of disciplinary amenability than of ability to perform a job. Unfortunately, in some cases the high school diploma represents a certain number of years spent in school rather than scholastic achievement.

PREPARED STATEMENT OF GENERAL CUSHMAN

Senator YOUNG. The prepared statement of General Cushman, together with his biographical sketch, will appear in the record at this point.

[The statement and biography follow:]

STATEMENT OF GENERAL ROBERT E. CUSHMAN, JR.

Mr. Chairman...Members of the Committee:

I appear here today to present my third report on the posture of the Marine Corps, a report that covers a year characterized by unusually dynamic events throughout the world.

Life in the Marine Corps has also been dynamic. It has been a year of intense effort to maintain a high state of combat readiness to insure the constant availability of Marine Forces wherever needed in support of our national policy. Our missions and organization are very specifically defined in the National Security Act. We are a force of "...not less than three combat divisions and three air wings, and such other land combat, aviation, and other services as may be organic therein...organized, trained, and equipped to provide fleet marine forces of combined arms...for service with the fleet...." It is this primary tasking by the Congress to which we relentlessly direct our greatest effort. I am pleased to report therefore, that despite certain problems and resource constraints, the Marine Corps is ready and capable of executing its role as this Nation's amphibious force in readiness.

The program which we submit for consideration is based upon this Congressional mandate and the unique ability of amphibious forces to make major contributions to peace through deterrence. No other country in the world possesses a similar amphibious capability. It is through this unparalleled Navy and Marine Corps amphibious team that the United States has the ability to project, selectively, combat power ashore when needed to support its political, diplomatic and strategic aims. Equally important is the flexibility to disengage and reembark on order, thus assuring the precise level and duration of U.S. military involvement under the positive control of the National Command Authorities.

The Middle East crisis of last October provides us with only the latest example of the absolutely vital utility of the American amphibious capability. Amphibious forces of the Sixth Fleet, augmented by units from the East Coast, were strategically positioned to respond rapidly if needed without concern for overflight rights or advance staging and more importantly, without indications of commitment. Clearly, these naval forces served as a meaningful deterrent and stabilizing influence in the area.

Based upon recent world events and our past experiences we have developed our FY 1975 force within fiscal realities governed by the following three policies:

- Marine Corps combat forces will be maintained in the highest attainable state of readiness.

- These forces will consist of balanced air and ground combat, combat support, and combat service support units.

- The general support structure will be the minimum required to provide a training and logistic base fully capable of supporting the operating forces.

In addition, we intend to insure our continued readiness to support the national interests through:

- Constant training of both individual Marines and Fleet Marine Force units under demanding, realistic conditions;

- Continuous study and reevaluation of tactics, techniques, and potential areas for innovation and improvement;

- Submission of a prudent request for procurement to provide modern, effective weapons systems;

- Efficient management of resources -- men and material -- and,

- Strict adherence to the standards of excellence and high quality performance that have served our Nation well for two centuries.

Accomplishing our mission, which is clearly defined, and the goals which we have set for ourselves is not without problems. There are two that underlie all of our efforts; a shortage of amphibious assault shipping, and the many faceted one of manpower.

AMPHIBIOUS ASSAULT SHIPPING

The paucity of amphibious assault shipping and a corresponding lack of Military Sealift Command (MSC) and Merchant Marine backup to provide follow-on shipping is a continuing problem. I reported my concern with this last year. I note it here again because it represents a serious continuing deficiency in national capability. Further, the significance of these deficiencies appears to be growing as we face new challenges to our position as a maritime power. Associated with this shortage is a severely diminished naval gunfire support capability which I also described in my report to you last year.

Because of the obvious need for alternative methods of

augmenting available amphibious shipping, I would like to express my support for the Build and Charter Legislation to be introduced this session. Meanwhile, we are looking for new means to increase the frequency with which we test the validity of employing MSC support to compensate for the very real shortage in amphibious lift.

On a brighter note, I am pleased to call attention to the launching last December of the USS TARAWA. It is the first of five multi-purpose amphibious ships, or LHA's the Congress has authorized. We hope that with this event the decline in amphibious shipping, which has prevailed since 1969, has stopped. Delivery of these ships signals a new era in amphibious capabilities since the LHA will provide a significant increase in operational effectiveness.

In summary, I would like to stress that there is a need for balance in our Naval forces if we are to achieve the flexibility required to sustain the United States as a worldwide maritime power.

MANPOWER AND THE ALL-VOLUNTEER FORCE

The second principal problem confronting the Corps today centers on our ability to obtain and retain sufficient numbers of high quality young Marines.

To maintain all three active Division-Wing Teams at a desired level of readiness and with a full range of combat capabilities requires a minimum strength of 205,000 Marines.

However, recognizing the current fiscal realities, I have requested authorization for only 196,398 Marines by the end Fiscal Year 1975. This will provide 384 more personnel than we were authorized for the end of this fiscal year. Most of this increase is needed for additional security at our embassies to help safeguard against possible terrorist activity.

The requested end strength will enable us to maintain two Division-Wing Teams in a substantially combat ready posture. The third Division-Wing Team will not be fully structured, but could be readied for deployment through emergency manpower actions.

As you know, during the early months of this fiscal year we experienced some difficulty in meeting our recruiting goals. However, in recent months we halted the downward trend, turned the corner, and are headed towards a more successful recruiting effort. While we probably could not have eliminated the total shortfall which accrued in the early months, we had hoped to make significant inroads and were projecting that the shortfall should not exceed 6,000 men by the end of FY 1974.

Now, when I consider the probable impact of Section 718, Public Law 93-238, the Defense Appropriations Act for Fiscal Year 1974, I am less optimistic. This act places limitations on the percentage of both Mental Group IV and non-high school graduates that may be enlisted.

I fully support the intent of both these goals. The Marine Corps has always enjoyed a well earned reputation for maintaining high standards and I have no intention of lowering them. I would however, like to discuss our ability to attain these goals.

The 18 percent limitation placed on recruitment of Mental Group IV enlistees presents no problem and, in fact, we have maintained our own 10 percent limitation since April 1973. Although I do not wish to underrate the attainment of a high school education, we believe that higher mental group achievement is as valid an indicator of potential performance as is the possession of a high school diploma. It is interesting to note that over 50 percent of the Mental Group IV enlistees we have recruited thus far in FY 1974 are high school graduates. As a result of the requirement to adhere to the 55 percent high school graduate limitation, we may be forced to rescind our 10 percent limitation and take an increased number of Mental Group IV individuals.

Because Section 718 was enacted late in the fiscal year (2 January 1974) we now need to exceed the 55 percent goal for high school graduates for the last six months of the fiscal year to accommodate the deficiency that accrued during the first half. I don't believe it can be done in the time remaining and still meet our total recruiting objective. As a result, we now anticipate a total strength

shortfall of approximately 12,000, rather than 6,000, by the end of Fiscal Year 74.

In sum, I foresee two possible adverse conditions developing from Section 718 each contrary to what both the Congress and the Marine Corps seek to achieve: first, a deterioration rather than improvement in the quality of our non-prior service enlistees; and second, a larger than originally projected shortfall in Fiscal Year 1974 which will carry forth into the next year.

The major impact of both conditions will have to be absorbed by our operating forces with a loss of combat capability and a reduction in readiness. These adverse effects can only be avoided if the Marine Corps is relieved from the provision of Section 718 relating to the requirement to enlist 55 percent high school graduates during Fiscal Year 1974. In fact, we need immediate temporary relief. We fully expect, however, that we can show meaningful progress toward achieving a 55 percent level over a longer period and we will work towards that goal with increased vigor.

Directly related to our ability to attain the requested end strength is the degree of success we achieve in our enlisted retention efforts. While I am not fully satisfied with our results to date, I am convinced that our reenlistment programs have been sound. At this time, however, I am uncertain as to what effect the directed reduction of 234

Career Counsellors will have on those programs. I can assure you that insofar as possible, we have applied the reduction to our supervisors and administrators rather than to those Marines who are engaged in face-to-face counseling.

With regard to our officer procurement, I would like to request your support in providing permanent legislative authority for the Financial Assistance Option available to the participants in our Platoon Leaders Class program. This option provides a $100 monthly stipend for a maximum of 3 nine-month academic years. Its value lies in the provision that once such assistance is accepted, the recipient must accept a commission and serve on active duty.

The legislative authority for this option expires at the end of Fiscal Year 1976; hence, college sophomores entering the program next fall, for example, can only be guaranteed assistance through their junior year. We consider the PLC program our most important civilian-source commissioning program. Our long range plans call for using the PLC program for the procurement of some 58% of all our new officers. Without legislative authority to continue the Financial Assistance Option, it is unlikely that we will be able to meet that goal.

For our Marine Corps Selected Reserve, we are requesting an end strength of 34,958. When considered with the 169,000 individual reservists in the Ready and Standby Reserve pools, our overall Reserve strength will be adequate

to fill our mobilization requirements.

We are, however, experiencing a continuing decline in the enlisted strength of the Selected Reserve due primarily to the lack of new recruits. From a 31 December 1972 high of 36,817 the enlisted strength has declined by approximately 6,500 reservists and further losses are anticipated.

We also place a high premium on obtaining and retaining prior service personnel to provide technical knowledge, skills and leadership required at the noncommissioned officer level within the Reserve. Our goal is to raise the prior service strength from the present level of 15 percent --which is inadequate-- to 25 percent.

If the current status of both non-prior and prior service recruiting are accurate indicators of the future, the Reserve program may be in jeopardy. The impact on our mobilization capability is not yet critical, since we still have a large pool of Ready Reservists who could fill both Regular and Reserve force structures on mobilization. However, to maintain the state of training desired to support mobilization we must maintain the strength of the Selected Reserve. To do this will require an array of tangible incentives to attract career reservists in a draft free environment.

Let me close this discussion of manpower by saying that there is nothing that I am more proud of, or more interested in, than the individual Marine. He is the key to our past

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achievements and our future successes. He contributes much to our national well being and we must ensure that we make a proper contribution to him.

Strong leadership continues to be our hallmark at all levels of command and we will uphold our traditional high standards of personnel readiness and discipline. As a corollary, we are strengthening teamwork through intensive, positive efforts in our human relations programs. In this effort we are making excellent progress. This is not to say that periodic problems don't arise, because they do. The human aspects of the problem are such that they require time, persistence, and sincere knowledgeable attention. We are devoting that kind of attention to improving the quality of life for our Marines. Today's challenges place great demands on our unit leaders and they are responding well.

Let me turn now to what we have done and plan to do in terms of training, modernization, and management.

TRAINING

Marine Corps training is primarily concentrated on programs designed to maintain a high state of readiness. As evidence of this focus, the Fleet Marine Forces will have participated in 27 major exercises by the end of Fiscal Year 1974. For example, an amphibious force consisting of regular and reserve Marines joined with the Navy and units from NATO nations in a well executed amphibious operation

in the Thrace area of Greece and Turkey. This was an outstanding illustration of the Total Force Policy.

Reserve units also participated in a series of other combined and joint exercises such as a desert exercise in southern California and an amphibious operation in North Carolina. These exercises provide valuable training for our active units while concurrently strengthening the capability of the Reserves to operate effectively with their regular counterparts.

I believe that combined Regular and Reserve exercises provide significant contributions to readiness at minimum expense and should be continued. They are the best possible means we have for testing reserve readiness and the ability of regular and reserve units to integrate into an efficient and effective force.

I want to point out here that while our current training programs have been successful, our ability to continue these programs in the future will depend largely on the availability of fuel and the necessary funds to procure it. The precise impact of fuel shortages and price increases on our future readiness is unknown at this time. However, it is clear that if the present limitations on fuel remain in effect for an extended period, or if allocations are decreased for any reason in the future, we can anticipate a significant decrease in combat readiness and capability.

Intense efforts continue to be made for increasing the

proficiency of our individual training and education programs. One significant improvement has resulted from shifting field training for recruits from Camp Lejeune, North Carolina to the Recruit Depot at Parris Island. This has saved training time and reduced transportation costs and fuel requirements at a time when energy savings are so important.

We continue to participate fully in joint service efforts to consolidate training. Historically, about one-third of our formal school training has been conducted for us by the other Services, but we continue to seek further economies.

Various on-the-job training programs -- rather than formal school training -- have been instituted in order to economize initial skill qualification training for graduate recruits and to place these trainees in operational units sooner. However, we recognize that the use of on-the-job programs for conducting more technical training is counter productive since the reduced quality of training incurs costs in readiness and manpower efficiency. We will continue to develop economical, high quality training, striving to couple the best of traditional techniques with innovation.

In response to Congressional direction, we have reduced the number of Marines in graduate training but we will sponsor a small, fully-funded graduate education program to meet the minimum technical needs of the Marine Corps. We

will continue tuition-assisted off duty education while strongly encouraging the use of the GI bill as the principal means of upgrading the general educational level.

MODERNIZATION

To maintain our current capability and to be prepared for the demands of modern warfare we are pursuing a modest modernization program. Particularly, we need to improve our tank and antitank capabilities. The budget request provides for continuing the acquisition of M60A1 medium tanks which was begun last year as a replacement for our aging M48 tanks.

Purchase of TOW and DRAGON missiles will substantially improve our antitank capability. Observations of the recent Middle East conflict indicate that this modernization program is absolutely essential. Today's technology has clearly overtaken the 3.5" rocket launcher and the 106mm recoilless rifle which are the basic antitank weapons in our current inventory.

By the end of FY-75, the two active Marine Corps Light Anti-Aircraft Missle (LAAM) Battalions will be equipped with the Improved HAWK (IH) missile system. Events of the Middle East conflict also reinforce the validity of this program. The Improved HAWK with its faster reaction time, better target handling capabilities, and improved reliability and maintainability will enhance the Marine Corps surface-

to-air defense capabilities.

The most important modernization effort in Marine aviation involves our fighter forces wherein we plan to continue procurement of the F-14A Tomcat. We will receive our first F-14s in FY 1975 and the first squadron will become operational by mid-fiscal year. The 1975 budget also includes the last increment of a rebuild program extending the service life of our older F-4B aircraft.

It is also essential that we continue to modernize our attack aircraft. Therefore, our 1975 budget submission includes a request for A-4Ms, the latest improved version of a light attack aircraft which has provided outstanding service for many years. We are also asking for an additional increment of A-6E all-weather attack aircraft and continuation of the program to update our older A-6A aircraft to the A-6E configuration. This will give needed balance to our attack aircraft inventory.

As the result of previous Congressional action our third AV-8A Harrier squadron was formed in July, increasing our V/STOL attack capability and allowing us to continue our leadership in the development of V/STOL concepts. Initial success with the aircraft with respect to cost, on-schedule production, and operational experience has more than justified our optimism and the decision of the Congress on this program. This successful experience with the Harrier coupled with our need to maintain the inventory

necessary to support authorized force levels in the 1980s provides the basis for our interest in the development of a follow-on V/STOL aircraft. With expected technological advances, an all V/STOL light attack inventory is a reasonable goal. This would fulfill our objective of supporting Marine ground forces with light attack aircraft which provide immediately responsive close air support in the amphibious environment.

Significant progress has been made in the development of our improved assault transport helicopter following a decision to build two prototype CH-53E aircraft. This is an improved version of the CH-53D helicopter currently in Marine Corps units. This helicopter will markedly increase the Marine Corps' vertical assault capability, especially during the extremely critical early stages of amphibious operations. It is expected to have the capability to lift over 93 percent of Marine Division combat essential equipment, as opposed to 41 percent for the present CH-53D.

Our helicopter program also includes procurement of utility UH-1Ns and attack AH-1Js, and requests the continuation of a modernization program extending the service life of our CH-46 assault transport helicopters.

To meet our requirements for refueler transports, we are requesting the second increment of a multi-year buy of KC-130s. The total program is designed to fill a current inventory shortfall and permit the transfer

of older KC-130s from the active to reserve forces.

Funds for C-9Bs and CT-39Gs to modernize fleet tactical support transport aircraft are also included in our request. Although this is a very small portion of the total Marine aviation inventory it has become seriously overaged, to the point where we have been forced to retire aircraft without replacement in the interest of safety.

On the Reserve aviation side, modernization of the fixed wing assets has begun with the introduction of the F-4 fighter into the inventory. The modernization of the reserve light attack units has been delayed because of an unanticipated drawdown in A-4E/Fs and unexpected additional requirements for these aircraft in the active forces.

Other Reserve modernization efforts are underway in the area of communications. As new programs, equipment and techniques are introduced to the Regular establishment, every effort will be made to incorporate these innovations and changes into the Reserve. This concept will ensure that the Marine Corps Reserve is, in fact, a Reserve force-in-readiness.

In the area of research and development, our budget amounts to slightly over one percent of the RDT&E, Navy appropriation and less than one half of one percent of the total Department of Defense RDT&E appropriation. Thus, we rely heavily on the development efforts of the other Services. We pursue only a limited number of unilateral

research and development projects such as the Landing Vehicle Assault (LVA) which is the follow-on system to the LVTP7 family of vehicles. This effort stems directly from our statutory responsibility. You will have an opportunity to review the Marine Corps' R&D budget when you address the Navy's proposed research, development, test, and evaluation program for FY 1975.

MANAGEMENT

Our supply posture is responsive to the needs of the Fleet Marine Forces and is continually improving. Minor logistical deficiencies are within manageable range and are not of a nature which would impair the readiness of active ground forces. Currently, there are no significant deficiencies in major items of equipment and none are foreseen through FY 1975.

In the area of facilities management, improving the habitability of Marine Corps bachelor housing is one of our prime objectives. Excluding those projects in support of health services and pollution abatement, over 50% of our total military construction dollars will continue to be spent in this area. In FY 1975 this will amount to approximately $23 million for bachelor housing. Although we have done much toward meeting desired standards, we estimate that a construction task in excess of $284 million lies ahead if we are to fulfill bachelor housing requirements.

As in the past, the Marine Corps will continue to rely

upon neighboring communities as the primary source for family housing wherever possible. However, 1973 was a good year for Marine Corps personnel and their dependents for whom adequate off-base housing is not available. Construction contracts are underway for 850 new units at three locations, approved by the Congress in the Fiscal Year 1973 program. In addition, the Congress approved in Fiscal Year 1974 one thousand new units at two locations. In an attempt to assist those Marines serving on independent duty and living in the civilian community, over 830 leases were allocated.

In a continuing effort to improve facilities maintenance management we are carefully examining our real property maintenance functions with the objective of consolidating within geographical areas. We have completed three such consolidations and another has been approved for the Camp Lejeune/Marine Corps Air Station (Helicopter), New River, North Carolina complex this year.

Recognizing the continuing depletion of our natural resources, we have established environmental programs to effect conservation wherever possible. These programs include pollution abatement, natural resource management, and pest control. Successful management of natural resources has brought top Secretary of Defense conservation awards to Marine Corps Base, Camp Pendleton in 1971 and Marine Corps Base, Camp Lejeune in 1972, but the real reward

lies in preserving the quality of our environment and that of our neighbors. We will continue to seek better ways to contribute to the conservation of natural resources.

The Marine Corps is actively participating in the overall DOD energy conservation program. We foresee major challenges in this area as we concurrently pursue energy conservation and readiness objectives. Marines at every level of responsibility have been charged with conserving energy to the fullest extent. To date, they have responded extremely well. For example, we have achieved an 18 percent decrease in fuel used for heating during the quarter just ended as opposed to the same period a year ago.

This past year the Marine Corps implemented JUMPS, a centralized automated financial management system for military pay. As desired by the Congress, this military pay system is fully integrated with our personnel accounting system.

Management actions have also been taken in other areas indicated by the Congress in its committee reports on the FY 1974 Defense Appropriations and Authorizations Acts. Reductions have been effected in manpower allocations to counseling, enlisted aides, Defense Agencies, graduate education, and data processing operations while the Human Relations training conducted at the Marine Corps school in San Diego, will be consolidated with the Defense Race

Relations Institute.

With regard to the number of permanent change of station (PCS) moves, we have made reductions in each of the last several years. Unfortunately, costs have not been reduced proportionately. Higher shipping rates and broader entitlements for enlisted personnel permitting larger household shipments, have resulted in increased PCS costs. My policy is to execute only those permanent change of station moves and temporary additional duty travel necessary to maintain operational readiness and professional competence.

FUNDING BY MAJOR CATEGORIES

Our FY 1975 budget request is shown by appropriations:

$Millions

	Revised FY 1974	FY 1975
MPMC	1,677.30	1,728.70
RPMC	65.00	73.00
O&MMC	443.76	446.30
O&MMCR	11.08	11.40
PMC	219.60	228.80
	2,416.74	2,488.20

In summary, our request provides:

- MPMC funds to support 196,134 man-years with an associated end strength of 196,398;

- RPMC funds to support an average strength of 36,703 with an associated end strength of 34,958;

- O&MMC funds to support Fleet Marine Force requirements for supplies, maintenance, training and to provide civilian personnel man-years of 17,145, with an associated end strength of 16,863;

- O&MMCR funds to support training, maintenance and to provide supplies and civilian personnel man-years of 73 with an associated end strength of 75; and

- PMC funds to support continued modernization of our tank and antitank capability, our anti-air defense missiles and for communications and electronic equipment for command, control and integration of these weapons into a ready fighting force.

This budget reflects the 1 January and 1 October 1973 pay raises. It was prepared recognizing the increased awareness of the requirement to balance manpower and modernization. To this end, we have identified and requested the necessary funds to provide for an adequate, responsive force in readiness.

SUMMARY

In closing, let me describe simply the general health of the Corps and my personal thoughts regarding the future.

As to our health, two of our Division-Wing Teams are

in excellent condition. The third Division-Wing Team is in need of manpower to be fully ready. The Reserve Division-Wing Team is short manpower and needs to be modernized. Approval of our Fiscal Year 1975 authorization and appropriation requests will enable us to maintain the condition of those units that already are in a high state of readiness while improving the condition of those units that need it. However, petroleum product shortages and price increases associated with the energy crisis will adversely affect our readiness if military allocations are decreased from their present levels and prices continue to rise.

As to my personal thoughts regarding the future, the Marine Corps and its sister Services have set high goals of professionalism and readiness. We share the concerns of the Congress and the interests of our people and will strive to serve the Nation in the highest traditions of our heritage.

As a Service Chief, I would be remiss in my duty to the Congress, however, if I failed to report my concern for the future of the military services in the all volunteer environment.

If we are to sustain an effective all volunteer force there must be an awareness on the part of our citizens, our official circles and our media, that the profession of arms is an honorable one. A military career is a life of purpose whose ultimate goal is the protection of our nation and its

traditional values. Such a purpose carries with it a high consciousness of responsibility in the conduct of the people's business. Accordingly, we hold ourselves accountable when valid criticism is directed toward our profession. We ask only that criticism be the subject of open, honest debate, giving the public the full balance of information it needs to make reasonable judgements.

The maintenance of an effective military establishment does not rest solely on the sophistication of its weaponry or the funds available to attract recruits. It rests fundamentally on the leadership, integrity and professionalism of its personnel, and on the respect they earn from their countrymen. If the Services are to attract talented young people, we must recognize that basically today's youth seek two things: a purposeful way to serve their countrymen and the public respect that grows from such service. The All Volunteer Force will be extremely difficult to sustain if the esteem for a military career becomes the victim of apathy, ignorance or malice. Loss of esteem is a major danger threatening the vitality of the Armed Services.

In a spirit of partnership with the American people I seek your help in fostering an understanding on the part of all Americans of the basic value of the profession of arms.

Mr. Chairman, this completes my statement. I shall attempt to answer any questions you may have.

BIOGRAPHY OF GENERAL ROBERT E. CUSHMAN, JR., USMC

25TH COMMANDANT OF THE MARINE CORPS

Robert Everton Cushman, Jr., was born December 24, 1914, in St. Paul, Minnesota. After schooling in St. Paul, he was appointed to the U.S. Naval Academy, graduating 10th in his class in June, 1935. He was commissioned a Marine Second Lieutenant, June 6, 1935.

He was aboard the USS PENNSYLVANIA at Pearl Harbor when World War II commenced. Later, during the two years he commanded the 2d Battalion, 9th Marine Regiment, 3d Marine Division, he earned the Navy Cross, Legion of Merit, and Bronze Star Medal during combat on Guam, Iowa Jima and Bougainville, respectively.

During post-war assignments, he was an instructor at Marine Corps Schools, Quantico; served as Head of the Amphibious Warfare Branch, Navy Department, Washington; and was with the Central Intelligence Agency.

In 1951, he served on the staff of Commander in Chief, U.S. Naval Forces, Eastern Atlantic and Mediterranean Fleet, London, England. Returning to the States in 1953, he served on the faculty of the Armed Forces Staff College, Norfolk, and in 1956 became Commanding Officer of the 2d Marine Regiment at Camp Lejeune, N.C.

He was promoted to Brigadier General in 1958 while serving from 1957 to 1961 as Assistant for National Security Affairs on the staff of the Vice President of the United States.

In 1961, General Cushman became Assistant Division Commander of the 3d Marine Division and, upon promotion to Major General, became Division Commander. After returning to the United States in 1962, he served as Assistant Chief of Staff G–2 and G–3 until 1964, when he reported to Camp Pendleton and assumed the dual role of Commanding General, Marine Corps Base and Commanding General, 4th Marine Division Nucleus. In 1966, he formed the 5th Marine Division at Camp Pendleton and additionally served as Commanding General until November of that year.

During April and May, 1967, General Cushman served as Deputy Commander, III Marine Amphibious Force (III MAF) in Vietnam. In June, 1967, he was promoted to Lieutenant General and served until March, 1969 as Commanding General, III MAF. During this period, III MAF became the largest combined combat command ever led by a Marine. For his exceptional service in both capacities, he added to his many decorations the Distinguished Service Medal and Gold Star in lieu of a second award.

General Cushman served as the Deputy Director, Central Intelligence Agency from April, 1969 through December, 1971.

Nominated by President Richard M. Nixon, General Cushman became Commandant of the Marine Corps on January 1, 1972, with four-star rank.

General Cushman and his wife, the former Audrey Boyce of Portsmouth, Virginia, have two children, Roberta Lind and Robert E., III.

SUBCOMMITTEE RECESS

Senator YOUNG. The subcommittee will recess, subject to call of the Chair.

[Whereupon, at 1 p.m., Wednesday, March 13, the subcommittee was recessed, to reconvene at the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1975

TUESDAY, APRIL 23, 1974

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room 1223, Everett McKinley Dirksen Office Building, Hon. John L. McClellan, chairman, presiding.
Present: Senators McClellan and Young.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

BUDGET OVERVIEW

STATEMENTS OF:

REAR ADM. E. W. COOKE, U.S. NAVY, DIRECTOR OF BUDGET AND REPORTS, OFFICE OF THE NAVY COMPTROLLER

VICE ADM. D. H. BAGLEY, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (MANPOWER) AND CHIEF OF NAVAL PERSONNEL

VICE ADM. W. D. GADDIS, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)

VICE ADM. D. W. COOPER, U.S. NAVY, CHIEF OF NAVAL RESERVE

LT. GEN. S. JASKILKA, U.S. MARINE CORPS, DEPUTY CHIEF OF STAFF FOR MANPOWER, HEADQUARTERS, MARINE CORPS

MAJ. GEN. H. C. OLSON, U.S. MARINE CORPS, DEPUTY CHIEF OF STAFF FOR INSTALLATIONS AND LOGISTICS, HEADQUARTERS, MARINE CORPS

MAJ. GEN. M. P. RYAN, U.S. MARINE CORPS, DIRECTOR, MARINE CORPS RESERVE, HEADQUARTERS, MARINE CORPS

CAPT. J. P. TRUNZ, JR., CEC, U.S. NAVY, DIRECTOR, NAVAL PETROLEUM AND OIL SHALE RESERVES

ACCOMPANIED BY:

REAR ADM. S. S. FINE, U.S. NAVY, DIRECTOR, FISCAL MANAGEMENT DIVISION, OFFICE OF THE CHIEF OF NAVAL OPERATIONS

BRIG. GEN. C. S. ROBERTSON, U.S. MARINE CORPS, FISCAL DIRECTOR, HEADQUARTERS, MARINE CORPS

BRIG. GEN. W. F. SIMLIK, U.S. MARINE CORPS, FISCAL DIRECTOR DESIGNATE, HEADQUARTERS, MARINE CORPS

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INTRODUCTION OF WITNESSES

Chairman McClellan. We will proceed.

This morning the subcommittee will receive testimony in support of the "Military Personnel, Navy," and "Operation and Maintenance, Navy," accounts for fiscal year 1975.

The following witnesses are scheduled to appear:

Rear Adm. Edward W. Cooke, Director of Navy Budget and Reports;

Vice Adm. David H. Bagley, Deputy Chief of Naval Operations for Manpower and Chief of Naval Personnel;

Vice Adm. Walter D. Gaddis, Deputy Chief of Naval Operations for Logistics;

Vice Adm. Damon W. Cooper, Director of Naval Reserves;

Lt. Gen. Samuel Jaskilka, Deputy Chief of Staff for Manpower, U.S. Marine Corps;

Maj. Gen. Harry C. Olson, Deputy Chief of Staff for Installation and Logistics, U.S. Marine Corps;

Maj. Gen. Michael P. Ryan, Director, Marine Corps Reserve; and

Capt. J. P. Trunz, Jr., Director, Naval Petroleum and Oil Shale Reserves.

The first witness will be Admiral Cooke, who will give a brief overview of the entire Navy fiscal year 1975 budget.

Admiral, you may proceed.

BUDGET OVERVIEW

Admiral Cooke. Mr. Chairman, the Navy has one witness here for each of the appropriations you are going to hear this morning. Additional backup witnesses would be available but we would have to call them from the Pentagon.

Chairman McClellan. I don't imagine we will need to call any more people from the Pentagon with as many as you have here.

Admiral Cooke. Since we are going through several, there is one witness for each appropriation. I am going to start with the brief overview of the entire Navy request.

READINESS OF NAVY FORCES

In the application of the budget resources the size are structure of the Navy forces and their level of readiness and important considerations. This chart shows a comparison with previous years of the personnel, ships, and aircraft that are supported by the 1975 budget.

Chairman McClellan. Give us the significance of the figures in the final column on the right.

Admiral Cooke. The top number there, minus 10,323, is the number of personnel reduction in the total Navy Department in fiscal year 1975 based on fiscal year 1974. The last column is the difference between 1974 and 1975.

Chairman McClellan. What is it compared to fiscal year 1964? I think it would be well if you had another column.

Admiral COOKE. I could provide that. I could also do it from observation. It was 857,000 in fiscal year 1964 and now we are down to 736,000. so we are 121,000 total personnel less.

Chairman MCCLELLAN. Less than in 1964?

Admiral COOKE. Yes.

Chairman MCCLELLAN. May I suggest, Admiral, that you revise that chart and extend it as indicated.

Admiral COOKE. I will be happy to do that.

[The chart follows:]

DEPARTMENT OF THE NAVY
COMPOSITION OF THE NAVY AND MARINE CORPS
FY 1964 - FY 1975

	1964	1968	1974	1975	DIF 74/75	DIF 64/75
Active Military Personnel (E/S)	857,373	1,072,484	747,101	736,778	-10,323	-120,595
Navy	667,596	765,232	551,087	540,380		
Marine Corps	189,777	307,252	196,014	196,398		
Reserve Personnel (Avg)	168,504	172,097	151,975	144,229	-7,746	-24,275
Navy	123,277	123,904	116,857	107,526		
Marine Corps	45,227	48,193	35,118	36,703		
Civilian Personnel, DH (E/S)	332,678	419,546	325,695	323,529	-2,166	-9,149
Active Fleet Ships (End Year)	917	976	511	508	-3	-409
Naval Reserve Ships (End Year)	85	75	62	68	+6	-17
Average Operating Aircraft	7,030	6,561	5,618	5,435	-183	-1,595
Marine Corps Divisions (Active)	3	4	3	3	-	-
Marine Corps Air Wings (Active)	3	4	3	3	-	-
Marine Corps Reserve Divisions/Air Wings	1	1	1	1	-	-

Chairman McClellan. Are all of the items reduced from last year?

Admiral Cooke. That is correct. We have 7,746 fewer Reserve personnel. We have 2,166 fewer civilian personnel. Our active fleet ships is only three less than in——

Chairman McClellan. Let us consider civilian personnel. You plan to have 2,166 fewer for fiscal year 1975 than in fiscal year 1974?

Admiral Cooke. Yes, sir.

Chairman McClellan. You indicated that you will have how many active military personnel fewer than in fiscal year 1964?

Admiral Cooke. 121,000.

Chairman McClellan. How many fewer civilian personnel do you plan than in fiscal year 1964?

Admiral Cooke. We have about 9,000, sir.

Chairman McClellan. Reduction there has not been as significant, has it?

Admiral Cooke. That is correct.

Chairman McClellan. Why can't we reduce the civilian personnel more? Is that because we hire civilians, such as KP's to replace military personnel?

Admiral Cooke. We have done that. In those figures there are 10,000 people in 1973 and 1974, civilian personnel who were added replacing military personnel. So we really had—for 2 years we had the deliberate program of replacing military personnel with civilian personnel. That was a program directed by——

Chairman McClellan. In reducing the military personnel you have replaced them by civilians in civilian-type jobs?

Admiral Cooke. That is correct.

Chairman McClellan. Do you find that economical?

Admiral Cooke. We have figures, Mr. Chairman, that show there are savings involved in the year we are implementing the substitution program. In the long run I am not sure that it is economical. I am not an expert on that point. Perhaps I should provide for the record what it would show in the long run. But we do have figures that show a slight savings in the year in which we implement the program.

Now, the problem is if we replace a military enlisted man by a civilian hire of a GS–5 or 7, or something like that, we base our numbers on that. Frequently we have a problem finding a man for the civilian job who can do the job who is at that grade level. Therefore we may have to hire someone at a higher grade level and it may cost us more, and our figures go out the window.

Chairman McClellan. Admiral Gaddis indicated he wanted to say something.

Admiral Gaddis. Civilian substitution for military personnel which was in the 1974 program which Admiral Cooke talked to was duplicated also in the 1968–69 time frame to the tune of 26,000 substitution of civilians for military.

Additionally, the Navy is heavily committed to doing much of its work with civil service personnel under Naval Industrial Funding of the personnel. Just over half of the civilians hired by the Navy are under the Naval Industrial Fund where we pay them for executing a

program rather than paying a contractor to hire people to execute a program.

NAVAL INDUSTRIAL FUND

Chairman McCLELLAN. Describe the Naval Industrial Fund.

Admiral GADDIS. It is a revolving fund of the Navy and every service has one. We use it more than the other services do because we have our own shipyards, our own Naval Air Rework Facilities and our own productive work at Naval Ordnance Plants, and also we use it for 15 Navy laboratories.

Chairman McCLELLAN. This fund is not appropriated each year?

Admiral GADDIS. It is a revolving fund which is zero based. There is no money involved except as you pay program money in to do work, and then pay the people under the revolving fund for performing that work. The workers in a naval shipyard, for instance.

MEMORANDUM

Chairman McCLELLAN. I don't fully understand the source of the funds. I think you had better prepare a complete explanation of it in a memorandum and let that memorandum be inserted in the record at this point, so there will be no confusion about it. Whoever reads the record can see the explanation.

[The information follows:]

An Industrial Fund is a working capital fund and a revolving fund. It is designed so that industrial and commercial-type activities in DOD may be operated and managed like similar activities in private industry. As a revolving fund it is used to provide payment for materials and services which are later billed to applicable appropriations. Each industrially funded activity is provided, at inception, working capital composed of donated assets, consisting of indirect supplies paid for by prior appropriations but on hand at inception and cash (checking account with U. S. Treasury). All costs, except military pay allowances, depreciation, and capital improvements are financed initially by this working capital. The working capital feature of industrial funds is intended to eliminate the many sources of funds that would be needed to finance day to day functions of the activities.

The industrial fund is also a revolving fund inasmuch as the working capital is continuously being replenished by reimbursements from the ordering agencies' budgetary appropriations, thereby permitting an industrial fund activity to finance a continuing cycle of operations in which orders are placed by more than one agency and are reimbursed from more than one appropriation.

The industrial fund is designed to provide the tools to enable management of each industrial fund activity to control the cost and efficiency of the activity's operation by means of pertinent cost data produced by the funds accrual cost accounting system. The industrial fund provides dollar control of assets and liabilities and places the fund's accounting on a basis comparable with private industry through the use of balance sheets, profit and loss statements, and analysis of orders, sales, accounts receivable, accounts payable, inventories, and cash. Industrial Fund expenditures are controlled through the appropriation allotments of the ordering

agencies, thereby placing an incentive on these agencies to spend their alloted funds economically. As a means by which Congress controls the amount of money spent by the military departments for stores or services provided by working capital funds, Section 2208 of Title 10 U. S. Code contains a provision prohibiting a requisitioning agency from incurring any greater cost for items drawn from inventory or for work on services performed by activities than the amount of appropriations available for such purposes.

Within the Navy Department there are now two Industrial Funds; the Navy Industrial Fund, established in 1949, and the Marine Corps Industrial Fund consisting of two Depot Maintenance Activities located at the Marine Corps Supply Centers, Albany, Georgia and Barstow, California which was established in 1968 with a volume of business of approximately $20.0 million per year. Following is the detail and pertinent financial information regarding the Navy Industrial Fund:

Navy Industrial Fund Activities
As of 1 January 1974
($ in 000's)

	NIF Implemented	Cash Allocation	Estimated Sales FY 1975
Shipyards (10)		$82,000	$1,239,381
(Under NAVSHIPS Management)			
Philadelphia, Pennsylvania	Apr 1952	8,500	
Charleston, South Carolina	Jul 1953	5,500	
Norfolk, Virginia	Jul 1953	8,000	
Portsmouth, New Hampshire	Apr 1954	7,600	
1/ Boston, Massachusetts	Apr 1954	17,800	
Puget Sound, Washington	Jul 1954	6.500	
Long Beach, California	Aug 1954	4,600	
Mare Island, California	Feb 1970	10,000	
1/ Hunters Point, California	Feb 1970	8,000	
Pearl Harbor, Hawaii	Dec 1954	5,500	
Military Sealift Command (1)	Jul 1951	31,000	624,388
(Under SecNav Management)			
Aircraft Maintenance (7)		40,700	607,506
(Under NAVAIR Management)			
1/ Quonset Point, Rhode Island	May 1959	3.300	
Alameda, California	Mar 1962	8,300	
North Island, San Diego, California	Apr 1962	6,900	
Norfolk, Virginia	Jul 1962	10,700	
Cherry Point, North Carolina	Aug 1962	2,600	
Jacksonville, Florida	Oct 1962	2,400	
Pensacola, Florida	Nov 1962	6,500	
Ordnance Plants (13)		25,050	532,810
(Under NAVORD Management)			
Indian Head, Maryland	Oct 1953	4,450	
Louisville, Kentucky	Feb 1957	2,200	
Yorktown, Virginia	Apr 1959	2,850	
Keyport, Washington	Jan 1960	3,500	
Crane, Indiana	Jul 1967	850	
Earle, New Jersey	Jul 1967	900	
Hawthrone, Nevada	Jul 1967	600	

NAVY INDUSTRIAL FUND ACTIVITIES
AS OF 1 JANUARY 1974
($ in 000's)

	NIF Implemented	Cash Allocation	Estimated Sales FY 1975
Ordnance Plants (13) (cotinued)			
McAlester, Oklahoma	Jul 1967	2,650	
1/ Oahu, Hawaii	Jul 1967	750	
Charleston, South Carolina	Jul 1967	400	
Concord, California	Jul 1967	2,500	
Seal Beach, California	Jul 1967	1,800	
Port Hueneme, Claifornia	Jul 1969	1,600	
Polaris Missile Facilities (3)		2,155	15,586
(Under Special Projects Office Management)			
Atlantic, Charleston, South Carolina	Jul 1967	675	
Pacific, Bangor, Washington	Jul 1967	280	
Navy Strategic Systems Navigation 1/ Facility, Brooklyn, New York	Jul 1970	1,200	
Research Activities (16)		43,400	1,630,639
(Under SECNAV Management)			
NRL, Washington D.C.	Jan 1953	6,600	
(Under NAVAIR Management)			
NAFI, Indianapolis, Ind.	Jul 1955	3,300	
NAPTC, Trenton, New Jersy	Jul 1959	1,200	
NATC, Patuxent River, Maryland	Jul 1969	1.500	
NAEC, Philadelphia, Pa.	Jul 1969	5,000	
NMC, Point Mugu, Calif.	Jul 1971	4,000	
(Under DLP Management)			
NWC, China Lake, Calif.	Jan 1969	3,000	
NSRDC, Washington, D.C.	Jul 1957	2,000	
NCSL, Panama City, Fla.	Jul 1968	700	
NURDC, San Diego, Calif.	Jul 1969	1,700	
NELC, San Diego, Calif.	Jul 1969	1,000	
NADC, Warminster, Pa.	Jul 1969	2,900	
NOL, White Oak, Maryland	Jul 1969	4,000	
NWL, Dahlgren, Va.	Jul 1969	2,000	
NUWSC, Newport, Rhode Is.	Jul 1971	4,000	
(Under NAVFAC Management)			
NCEL, Port Hueneme, Calif.	Jan 1974	500	

NAVY INDUSTRIAL FUND ACTIVITIES
AS OF 1 JANUARY 1974
($ in 000's)

	NIF Implemented	Cash Allocation	Estimated Sales FY 1975
Base Services (8)		14,050	224,206
(Under NAVFAC Management)			
PWC, Norfolk, Virginia	Jul 1957	2,906	
PWC, Pearl Horbor, Hawaii	Nov 1958	1,800	
1/ PWC, Newport, R.I.	Jul 1959	900	
PWC, Guam, M.I.	Apr 1962	2,000	
PWC, Subic Bay, R.P.	Jul 1962	2,750	
PWC, San Diego, Calif.	Jul 1963	1,700	
PWC, Great Lakes, Ill.	Jul 1967	1,000	
PWC, Pensacola, Fla.	Jul 1967	1,000	
Printing Plants (35)		1,725	68,404
(Under NAVSUP Management)			
Navy Publications and Printing 2/Service		1,225	
Philadelphia, Pennsyvania (2)	Sep 1951		
Norfolk, Virginia	Sep 1951		
New Orleans, Louisiana	Nov 1951		
Pensacola, Florida	Sep 1952		
Charleston, South Carolina	Nov 1952		
Brooklyn, New York	Dec 1952		
Washington, D.C.	Dec 1952		
Boston, Mass.	Jan 1953		
Great Lakes, Ill.	Feb 1953		
Bremerton, Wash.	Mar 1953		
San Diego. Calif.	Apr 1953		
Vallejo, Calif.	May 1953		
Pearl Harbor, Hawaii	Jun 1953		
Naples Italy	Sep 1953		
Defense Printing Service		500	
Subtotal (93 Activities)		240,080	4,942,920
Unallocated Cash		98,741	
Losses on closed activities		4,948	
TOTAL		343,769	4,942,920

1/ In process of dissolution
2/ Includes 19 branch plants not listed

EXPLANATION OF FUNDS

Chairman McClellan. I don't recall previous discussion of this fund.

Admiral Cooke. We make a report each year on the status of funds which includes the Naval Management Fund. I will provide a brief explanation for you.

Chairman McClellan. Make a brief explanation of each of these funds so the record will reflect it. Proceed.

Admiral Cooke. Moving down the list, Mr. Chairman, the active fleet ships we have three fewer in 1975.

DECLINES IN PERSONNEL END-STRENGTHS

In fiscal year 1975 the number of active duty Navy and Marine Corps personnel declines to an end strength of 736,778, a net decrease of 10,323 from 1974. Within this total, there is a small increase in Marine Corps manning, but a large reduction in Navy military end strength. Navy strength declines in fiscal year 1975 due to decreased requirements, primarily in the areas of recruit, specialized and professional training, and in intelligence and communications.

Navy and Marine reserve personnel paid drill strength also declined in 1975—from an average of 151,975 man-years in 1974 to 144,229 in 1975, a net decrease of 7,746. While the Marine Corps is projecting a small increase in average strength in fiscal 1975, Navy requirements decrease by about 9,000 man-years. Our 1975 estimate represents what we feel is an appropriate level, considering the decline in active duty strength and the increased emphasis on improving reserve hardware through better repair and maintenance capabilities and improved equipment.

Concerning civilian personnel, the Navy continues its downward trend in fiscal year 1975 with a decrease of 2,166 direct hire end strength below fiscal year 1974 level. This reduction reflects workload changes at industrially funded activities and decreases at headquarters activities.

The budget provides for 508 active fleet ships by the end of fiscal 1975, a reduction of 3 ships from end fiscal year 1974. This reduction is the net of 17 new ships joining the Active Forces and the return of 2 converted DLGS to the fleet, offset by the inactivation, transfer, or strike of 22 older ships.

Chairman McClellan. What is the difference between a transfer and a strike?

Admiral Cooke. The transfer is if we were to transfer a ship to another nation. We have done some of that. A strike, we strike them from the list of active vessels and they are scrapped. Inactivation, we put them in reserve where we could activate them again.

Chairman McClellan. So you are losing 3 ships. That is the total?

Admiral Cooke. Yes, sir.

NAVY STRIKING POWER

Chairman McClellan. What are you losing, if anything, in striking power? I use the term striking power to mean the effectiveness of the use of a weapon in the function of the Navy.

Admiral GADDIS. The net is a slight improvement, Mr. Chairman, on the basis that we are losing 22 older ships and coming into the Active Navy are 19 newer ships.

Chairman MCCLELLAN. That is sufficient. I just wanted to understand whether we are weakening our Navy or strengthening it or holding our own.

Admiral COOKE. I think in this case, in this year we are about holding our own. We are getting rid of—we are reaching the lower part of that curve where we are coming down in force levels and that deliberate decision was made by the Navy to reduce the number of ships and get new ships and start to modernize.

The increase in the Reserve Fleet in 1975 from 62 to the planned level of 68, relates to the transfer of 6 more minesweepers from the active fleet.

AIRCRAFT

Turning to aircraft, the number of average operating aircraft declines from 5,618 in fiscal year 1974 to 5,435 in fiscal year 1975. This reduction of 183 aircraft reflects the continuing trend toward reduced force levels.

There is no change in the number of Active and Reserve Marine Corps divisions of air wings.

Chairman MCCLELLAN. Our air support of the Navy is weakened some by that reduction?

Admiral COOKE. It is reduced in numbers.

Chairman MCCLELLAN. You don't seem to have any replacements. Are any replacements coming in?

Admiral COOKE. Yes, sir, we are getting new aircraft but the total numbers are coming down. Perhaps I should ask for some assistance in total.

Admiral GADDIS. I think the best example that can be given, Mr. Chairman, is the fact that by the end of fiscal year 1975 we will have 137 operational F–14 aircraft in the Navy. This is a significant improvement over the F–8's which are going out of the inventory which the F–14 will replace.

Chairman MCCLELLAN. In other words, the air wing of the Navy is not being weakened by this reduction in ships. New planes with improved weaponry are replacing these planes. Our striking power is not being weakened. Is that right?

Admiral COOKE. That is right.

Senator YOUNG. Has the Navy negotiated a new contract with Grumman? What kind of a contract do you have now to build more?

Admiral GADDIS. All of the deliveries in fiscal year 1975 are from the fiscal year 1972/1973 contracts before the renegotiations with Grumman. Fiscal year 1974 and subsequent F–14 procurements will be negotiated annually on an individual contract basis.

Senator YOUNG. All these deliveries are from the last two operations of the original contract, for the same price.

Admiral GADDIS. Admiral Houser who will be here tomorrow will provide that information for you.

Senator YOUNG. I would like to have it.

Admiral COOKE. Tomorrow we will have our procurement contracts representative for aircraft procurement, weapons procurement, and other procurement. We will have a witness here. If you wish any detail on any of these we will be glad to give it to you.

Senator YOUNG. I want to know if we will pay more for them.

Admiral GADDIS. There was provision for price adjustment in the contract, sir, and I would like to have Admiral Houser answer that for you tomorrow when he is here.

Senator YOUNG. I thought there was a fixed price and Grumann refused to continue building at that price.

Admiral COOKE. Tomorrow at our procurement hearing, Admiral Houser will be here, Senator Young, to answer those questions.

Moving to the next chart, we are going to take up each one of these appropriations separately this morning, but I will answer any questions you have now on the totals.

BUDGET SUMMARY BY APPROPRIATION

This chart displays a summary of our budget by appropriation. The fiscal 1975 request of $28,985,000,000 is approximately $1.4 billion above 1974. Substantial increases are requested in the "Operations and Maintenance," Navy; "Other Procurement," Navy; and "Research, Development, Test and Evaluation," Navy appropriations.

[The chart follows:]

DEPARTMENT OF THE NAVY
TOA COMPARISON
(IN MILLION DOLLARS)

APPROPRIATION	FY 1974	FY 1975	DIFFERENCE
MILITARY PERSONNEL, NAVY	5,720.1	5,765.2	+45.1
MILITARY PERSONNEL, MARINE CORPS	1,677.3	1,728.7	+51.4
RESERVE PERSONNEL, NAVY	223.3	209.7	-13.6
RESERVE PERSONNEL, MARINE CORPS	65.0	73.0	+8.0
OPERATION & MAINTENANCE, NAVY	6,635.6	7,291.0	+655.4
OPERATION & MAINTENANCE, MARINE CORPS	443.8	446.3	+2.5
OPERATION & MAINTENANCE, NAVY RESERVE	207.3	238.4	+31.1
OPERATION & MAINTENANCE, MARINE CORPS RESERVE	11.1	11.4	+.3
NAVAL PETROLEUM RESERVE	-	24.2	+24.2
AIRCRAFT PROCUREMENT NAVY	3,060.8	2,960.6	-100.2
WEAPONS PROCUREMENT NAVY	837.8	833.9	-3.9
SHIPBUILDING CONVERSION NAVY	3,492.9	3,562.6	+69.7
OTHER PROCUREMENT NAVY	1,505.6	1,684.5	+178.9
PROCUREMENT MARINE CORPS	219.6	228.8	+9.2
RESEARCH, DEVELOPMENT TEST & EVALUATION, NAVY	2,743.4	3,261.9	+518.5
MILITARY CONSTRUCTION, NAVY	680.8	643.9	-36.9
MILITARY CONSTRUCTION, NAVY RESERVE	22.9	20.8	-2.1
TOTAL	27,547.3	28,984.9	+1,437.6

REASONS FOR INCREASE

Chairman McClellan. Give us the principal reasons for the increase over fiscal year 1974. Inflation is one, of course.

Admiral Cooke. Price inflation is the primary factor.

Chairman McClellan. Does that account for nearly all of it?

Admiral Cooke. Nearly all of it. If you were to look at a curve of current dollars and constant dollars, our budget for 1975 is approximately level from where it was in 1974. We have some slight changes but the price inflation is the vast majority of it. We can identify price inflation in various appropriations of about $1 billion out of that 1.4.

Chairman McClellan. Then be prepared to give us what the other four represent.

AIRCRAFT PROCUREMENT, NAVY ACCOUNT

Admiral Cooke. Yes, sir, we will talk about that. You will note one decrease of approximately $100 million is planned in the "Aircraft Procurement," Navy account.

Chairman McClellan. How did that decrease come about?

Admiral Cooke. The decrease here is in aircraft procurement. We are spending considerably less money for A–4 aircraft than we did, about $50 million less. We are spending less money for P–3 patrol aircraft. Those are the major reductions that took place.

Chairman McClellan. You are curtailing procurement of these two weapons?

Admiral Cooke. Yes, sir.

Chairman McClellan. Reducing the number.

Admiral Cooke. Yes, sir. In our balance of forces we are buying fewer quantities of those aircraft. We bought 44 A–4 aircraft in 1974, and in 1975 we are buying only 24.

Senator Young. May I ask a question about the F–14 sales to Iran. Are those priced by the Navy or do they buy them directly from the company? If they are sold through the Navy, does it show up in your budget?

Admiral Cooke. The F–14 aircraft will be a sale to Iran. They will not show up in our budget. They will be arranged through the U.S. Government but the purchase will be from the Grumman Co. and the dollars will not show in our purchase.

Senator Young. It amounts to a direct sale from Grumman to Iran?

Admiral Cooke. That is correct.

PETROLEUM RESERVE

Of interest to the committee is the appearance of a new appropriation in fiscal year 1975, the Navy "Petroleum Reserve" appropriation, for which $24.2 million is requested.

Chairman McClellan. How is that different from last year?

Admiral Cooke. Last year the naval petroleum reserve—the money required to operate the naval petroleum reserve was carried in the "Operation and Maintenance" account. It was budgeted in another appropriation. This year we have it as a separate appropriation and it will be handled differently from now on. There was a joint resolution in Congress that we start production of oil in our naval petroleum reserve but we still do not have the authorization for that. But we are

handling it as a separate appropriation. Captain Trunz, Director of Petroleum Reserve, is here and will talk about that.

Chairman McClellan. You keep that money to buy petroleum to keep in reserve?

Admiral Cooke. No, sir, this is money to maintain the petroleum reserves we have in California, our Elk Hills reserve in Alaska, the Alaskan reserve, Naval Petroleum Reserve No. 4. There is maintenance of these reserves including offshore drilling, to be sure that oil is not——

Chairman McClellan. It is not a reserve stockpile?

Admiral Cooke. No, sir, it is to maintain the reserves that belong to the Navy.

Now, not broken out on this chart—I am digressing from the statement—not broken out separately on this chart but if you added up all the Marine Corps it would come to $2.5 billion. It is not shown on here but within those if you add that up it is $2.5 billion.

Chairman McClellan. They are included.

Admiral Cooke. Yes, sir.

Chairman McClellan. Out of the $28.9 billion, you say $2.5 of that is for the Marine Corps?

Admiral Cooke. Right. So Marine Corps share of the total Department of the Navy budget request for 1975 equates to 8.6 percent of the total shown on the chart, compared with 8.8 percent in fiscal 1974. Thus, the distribution between Navy and Marine Corps remains relatively stable between years. In addition, the Marine Corps also receives support from other Navy appropriations.

Within our aircraft procurement for Navy there are purchases for the Marine Corps.

Chairman McClellan. These charts will be printed in the record, of course.

[The chart follows:]

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PROCUREMENT SUMMARY - TOA

($ MILLIONS)

APPROPRIATION	FY 1974	FY 1975	DIFF
AIRCRAFT PROCUREMENT, NAVY	3,060.8	2,960.6	-100.2
WEAPONS PROCUREMENT, NAVY	837.8	833.9	-3.9
SHIPBUILDING AND CONVERSION, NAVY	3,492.9	3,562.6	+69.7
OTHER PROCUREMENT, NAVY	1,505.6	1,684.5	+178.9
PROCUREMENT, MARINE CORPS	219.6	228.8	+9.2
TOTAL	9,116.7	9,270.4	+153.7

OPERATING VERSUS INVESTMENT COSTS

Admiral COOKE. The following chart breaks the Navy's budget by operating versus investment costs and shows trends in these categories since 1964. Operating costs have increased during the past decade due to increased costs of military and civilian manpower. While operating costs have increased, the percentage of total funds devoted to investment costs decreased over the same period, and now represent less than 50 percent of our total budget.

[The chart follows:]

TRENDS IN OPERATING VERSUS INVESTMENTS COSTS

Category	Fiscal year—				
	1964	1968	1973	1974	1975
Operating: Percent of budget	48	53	52	54	54
Investment: Percent of budget	52	47	48	46	46
Procurement	(40)	(35)	(36)	(33)	(32)
Research	(11)	(9)	(10)	(10)	(12)
Construction	(1)	(3)	(2)	(3)	(2)

PROCUREMENT

Chairman MCCLELLAN. What do you mean by "investment costs"?

Admiral COOKE. Investment is our procurement, our research and our military construction.

Chairman MCCLELLAN. That does not relate just to weapons and to ships, then? It is for all procurement?

Admiral COOKE. All procurement, ships, aircraft, missiles, everything we put in stock and keep as separate from operating expenses which are manpower costs, cost of fuel which we consume, cost of consumable spares, repair parts, and that sort of thing.

Within the investment category, nearly one-third of the Navy's fiscal 1975 budget is allocated to procurement programs and there has been an increase in research for the continued development of future weapons to meet our military requirements.

Mr. Chairman, this summary statement provides an overview of the entire Navy budget for fiscal 1975. The appropriations sponsors will explain the requirements in greater detail for each of the individual appropriations.

BIOGRAPHY AND PREPARED STATEMENT

Chairman MCCLELLAN. The biography and prepared statement submitted by Admiral Cooke may be printed in the record at this point, together with questions submitted by the committee and the responses thereto.

[The biography and statement follows:]

BIOGRAPHY OF REAR ADMIRAL EDWARD W. COOKE

Rear Admiral COOKE, a native of Fonda, Iowa, graduated from the U.S. Naval Academy in 1945. After service in the battleship IDAHO and command of the minesweeper MERGANSER, he completed submarine training and served

in the CABEZON, GREANDIER, and HARDHEAD. In 1956–58 he was the Commanding Officer of the Nuclear Power Training Unit, Idaho Falls, Idaho.

Rear Admiral COOKE has commanded three submarines. The first was the USS HARDER, a conventionally powered fast attack class. The next was the USS SKATE, a nuclear powered attack class ship. His last submarine command was the USS GEORGE WASHINGTON, also nuclear powered and the nation's first Polaris submarine.

In 1966 and 1967 he was a student at the Naval War College. In June 1967 he moved to Washington, D.C. and became Executive Assistant to the Assistant Secretary of the Navy for Installations and Logistics. He served in that capacity for two years and was then ordered to Harvard University Graduate School of Business Administration.

In February 1970 he became Commander Submarine Squadron FIVE at San Diego, California. He became Commander Submarine Flotilla ONE in March of 1971 and remained in that assignment until July of 1972 when he became Director of Budget and Reports in the Office of the Comptroller of the Navy in Washington, D.C.

In addition to his Naval Academy degree, Rear Admiral COOKE has a Master of Science degree from George Washington University and is a graduate of Harvard University's Advanced Management Program.

Rear Admiral and Mrs. COOKE have three sons and three daughters. They reside in Potomac, Maryland.

Prepared Statement

Mr. Chairman and members of the Committee, I appreciate the opportunity to appear before this Committee to present an overview of the Department of the Navy's budget estimates for fiscal year 1975. I will use several charts in order to invite your attention to the more important points. My intention is to provide the financial highlights of our 1975 budget request. Justification of the program requirements and estimates for each of the appropriations will be provided in detail by other witnesses who will appear in later hearings.

Chart 1—Department of the Navy, TOA Summary

Fiscal year 1974 appropriations	$25, 640, 000, 000
Supplemental request	1, 866, 000, 000
Other adjustments	41, 000, 000
Total	27, 547, 000, 000
Fiscal year 1975 estimate	28, 985, 000, 000
Difference	+1, 438, 000, 000

The Navy's request for fiscal 1975 is $28 billion 985 million and is $1.4 billion above the 1974 figure. The 1974 amount includes $1.9 billion in a supplemental request which has been presented to the Congress. A further adjustment of $41 million represents budget financing, the largest single item is a transfer to the research and development appropriation directed by the Congress.

Other Adjustments

Senator McClellan. Explain the $41 million "other adjustments" shown on chart 1.

Admiral Cooke. The other adjustments include transfers of accounts receivable from prior years of $12.6 million, Section 735 transfers of $21.8 million, other transfers of $4.8 million and net reprogrammings and recoupments of $2.1 million. I will provide for the record specific details as to how these amounts were determined.

[The information follows:]

[In millions of dollars]

Appropriation	Net accounts receivable from prior years	Public Law 93-238, sec. 735 transfers	Other transfers	Reprogramming or recoupments	Total
MPMC	+0.8				+0.8
O. & M., N	+2.7	−5.1	−0.1		−2.5
O. & M., MC	+2.0	+.1			+2.1
O. & M., NR		+3.0			+3.0
APN	+3.6			+3.5	+7.1
WPN	+3.5				+3.5
R.D.T. & E., N		+23.8			+23.8
MCON			+4.9	−1.4	+3.5
Total	[1] 12.6	[2] 21.8	[3] 4.8	[4] 2.1	41.3

[1] These resources were credited to the fiscal year 1974 appropriations pursuant to the authority contained in Public Law 87-651, Title II, sec. 207(a) 76 Stat. 520. Furthermore, the Office of the Secretary of Defense specifically approved these actions on Sept. 21, 1973 pursuant to their established instructions which implemented the provisions of the statutory authority.

[2] These transfers have been made pursuant to sec. 735 of Public Law 93-238. The largest transfer was $23,200,000 for the CIWS program from the fiscal year 1973 OPN appropriation to the fiscal year 1974 R.D.T. & E., N. appropriation as directed in the House Appropriations Committee report on the fiscal year 1974 DOD Appropriation Act.

[3] The $1,000,000 transferred from O. & M., N. to GSA is a functional transfer for space rental accomplished under the authority of title 10 United States Code, sec. 126. Defense agencies appropriation under authority of the appropriation language for that account.

[4] The $3,500,000 increase in APN represents reimbursable orders carried forward from prior year programs. The $1,400,000 decrease in MCON is the net result of anticipated fiscal year 1974 program reductions of $7,300,000 offset by reprogramming increases of $5,900,000 financed by fiscal year 1973 and prior year funds.

Chairman McClellan. Proceed.

Admiral Cooke. Over $1 billion of the supplemental is for pay raises, increased fuel prices, and other cost increases. These additional costs have had a direct bearing on our 1975 estimates. Pay raises and inflation have combined to produce a significant effect on the buying power of the funds we are requesting in this budget. The increase of $1.4 billion is not an increase in program when viewed in constant dollar terms.

In the application of budget resources, the size and structure of our forces and their level of readiness is an important consideration.

Readiness Evaluation

Chairman McClellan. Explain the various measures used by the Navy to evaluate "readiness."

Admiral Cooke. The Navy uses many methods to evaluate readiness of the fleet. On a *quantifiable* basis, the Navy measures current fleet *resource* readiness by using the JCS Force Status and Identity Report (FORSTAT).

The purpose of the combat readiness portion of the FORSTAT reporting system is to provide information in a reasonably current, automated data base, on the *availability of basic necessary resources* assigned to each combat unit. In general terms, an evaluation is made of available equipment and supplies on hand, and personnel, as compared to current allowances. Certain subjective estimates are made regarding mission essentiality of these goods and personnel which result in a C-rating reported in FORSTAT (see attachment (1) for C-rating definitions).

Similar subjectivity is permitted in determination of C-ratings reported in equipment readiness and the state of unit training. The overall readiness rating is derived from an evaluation of these four aforementioned measured area ratings. A determination is then made of the measured resource area exerting the most severe impact on overall readiness.

The FORSTAT report does not, and is not designed to report on unit operational effectiveness or material condition. Results of operational performance are in virtually no way included in these reports. Combat units are undergoing frequent evaluation by their operational and administrative commanders in formal and informal management inspections, in underway operational evaluations, and in almost daily observation by immediate superiors in command. Fleet commanders use all of these sources of information, including FORSTAT reports, in assessing overall readiness of specific units or task forces.

In summary, C-ratings as reported in FORSTAT provide only an indication of the availability of those basic resources required to operate combat units, tempered differently with subjective judgments by all commanding officers. Its use is to call attention to general areas that require further study and evaluation. The FORSTAT report does not include results of the variety of operational and administrative evaluations used to gage the true effectiveness of a unit. However, the FORSTAT is valuable in that it contributes to overall assessments of combat readiness made at command echelons in the Navy.

[The FORSTAT report follows:]

READINESS TERMS & CRITERIA

FORSTAT - JCS TERMS

Rating Codes

C-1	Fully Ready
C-2	Substantially Ready
C-3	Marginally Ready
C-4	Not Ready

Resource Area Definitions

Pers	- Assigned compared to structured strength (M+12 authorizations).
Trng	- Training vs Prescribed Standards.
Sup/Equip	- On hand vs Miss. Essent. Allowances.
Equip Read	- Equip oper ready and available vs Miss. Essent. Allowance.

NAVY CRITERIA

(OPNAVINST 3501.2C - 11 DEC 72)

Overall C-Rating (Judgment)

A Unit Commander's subjective evaluation of the composite capability of his unit to perform its mission

Mission Definitions

MISSION: A general statement of the purposes for which a unit is organized or designed as specified in NWP 11-20 series.

MISSION AREA: Major subdivisions of a mission that generally parallel the traditional naval warfare and support areas: example - ASW.

PRIMARY MISSION AREA: A mission area in which a unit must be capable of performing in order to carry out its mission completely.

SECONDARY MISSION AREA: A mission area in which a unit may be expected to perform but which is not essential to the accomplishment of its mission.

Measured Resource Area C-Ratings (Objective)

General

(1) Deficiencies in resource areas below and (2) resulting degradations in Mission Areas

- **C-1** Unit capable of effective performance in all primary mission areas for prescribed sustained periods.
- **C-2** Unit has minor deficiencies in one or more primary areas; however, these do not cause a loss of any primary area.
- **C-3** Unit has major deficiencies in one or more primary mission areas; however, these do not cause a loss of more than one primary mission area.
- **C-4** Unit has deficiencies worse than C-3 which cause a loss of two or more primary mission areas.

Personnel Assigned

	Structured Strength	PO's (E5 - E9)	Essent. NEC Shortages
C-1	95 - 100%[1/]	95 - 100%[1/]	None
C-2	85 - 94%	90 - 94%	Minor
C-3	65 - 84%	75 - 89%	Major
C-4	(WORSE THAN C-3)		

Training

		Aviation Units - % of Authorized Crews Ready
C-1	No deficiencies	85 - 100
C-2	Minor deficiencies	70 - 84
C-3	Major deficiencies	55 - 83
C-4	(WORSE THAN C-3)	

Equipment & Supplies on Hand

	Mission Essential Material	Possessed Aircraft plus Miss. Essent. Sub-Sys vs Auth A/C
C-1	No mission essential shortages	100%
C-2	Minor shortages	83 - 99%
C-3	Major shortages	55 - 82%
C-4	(WORSE THAN C-3)	

Equipment Readiness

	Mission Essential Equipment	A/C Miss. Essent. Sub-Sys
C-1	No deficiencies	75 - 100%
C-2	Minor deficiencies	57 - 74%
C-3	Major deficiencies	41 - 56%
C-4	(WORSE THAN C-3)	

1/ Full wartime authorization (M+12)

(Additional classified information was furnished to the Committee.)

VALUE OF READINESS MEASURE

Chairman MCCLELLAN. For each measure of readiness, give its value in 1964, 1968, 1974 and 1975.

Admiral COOKE. The JCS FORSTAT reporting system was not fully developed until 1970. Therefore, FORSTAT readiness data for 1964 and 1968 can not be provided.

The FORSTAT reporting system provides only current and historical fleet readiness data. It lacks the capability to forecast, therefore, FORSTAT data for 1975 is not available.

Attachment (2) is a summary of the readiness data for all active ships, less those in overhaul and extended maintenance, for 29 April 1974. The C-ratings are provided for the four measured resource areas (Personnel, Supplies, Equipment, and Training) in addition to an overall composite rating which is titled Current Readiness. The data is provided by Fleets, Atlantic and Pacific. The first column lists the various ships, by type, of which the fleet is composed. The second column lists the total number of reporting ships within each type. The following columns provide the number of units by type, reporting a 1, 2, 3 or 4 C-rating in the overall and four resource areas.

Chairman MCCLELLAN. Proceed.

CHART 2

Admiral COOKE. The next chart shows a comparison with previous years of the personnel, ships and aircraft that are supported by the 1975 budget.

CHART 2.—DEPARTMENT OF THE NAVY, COMPOSITION OF THE NAVY AND MARINE CORPS, FISCAL YEARS 1964–75

	1964	1968	1974	1975	Difference 1974–75
Active military personnel (end strength)	857,373	1,072,484	747,101	736,778	−10,323
Navy	667,596	765,232	551,087	540,380	.....
Marine Corps	189,777	307,252	196,014	196,398	.....
Reserve personnel (average)	168,504	172,097	151,975	144,229	−7,746
Navy	123,277	123,904	116,857	107,526	.....
Marine Corps	45,227	48,193	35,118	36,703	.....
Civilian personnel, DH (end strength)	332,678	419,546	325,695	323,529	−2,166
Active Fleet ships (end year)	917	976	511	508	−3
Naval Reserve ships (end year)	85	75	62	68	+6
Average operating aircraft	7,030	6,561	5,618	5,435	−183
Marine Corps Divisions (Active)	3	4	3	3	.....
Marine Corps Air Wings (Active)	3	4	3	3	.....
Marine Corps Reserve Divisions/Air Wings	1	1	1	1	.....

NAVY STRENGTHS

Admiral COOKE. In FY 1975, the number of active duty Navy and Marine Corps personnel declines to an end strength of 736,778, a net decrease of 10,323 from 1974. Within this total, there is a small increase in Marine Corps manning, but a large reduction in Navy military end strength. Navy strength declines in FY 1975 due to decreased requirements, primarily in the areas of recruit, specialized and professional training, and in intelligence and communications.

Navy and Marine reserve personnel paid drill strength also decline in 1975—from an average of 151,975 man-years in 1974 to 144,229 in 1975, a net decrease of 7,746. While the Marine Corps is projecting a small increase in average strength in fiscal 1975, Navy requirements decrease by about nine thousand man-years. Our 1975 estimate represents what we feel is an appropriate level, considering the decline in active duty strength and the increased emphasis on improving

reserve hardware through better repair and maintenance capabilities and improved equipment.

Concerning civilian personnel, the Navy continues its downward trend in FY 1975 with a decrease of 2,166 direct hire end strength below the FY 1974 level. This reduction reflects workload changes at industrial activities and decreases at headquarters activities.

Moving to force levels supported, the budget provides for 508 active fleet ships by the end of fiscal 1975, a reduction of 3 ships from end FY 1974. This reduction is the net of 17 new ships joining the active forces and the return of 2 converted DLGs to the Fleet, offset by the inactivation, transfer or strike of 22 older ships.

List of 17 New Ships

Chairman McClellan. List the 17 new ships joining the active forces and describe them, including their missions.

Admiral Cooke. The seventeen (17) new ships joining the active forces are as follows:

Hull, number	Name	Description
CVAN 68	Nimitz	Nuclear carrier.
DD 963	Spruance	Destroyer (963 class nonmissile).
DD 964	Paul F. Foster	Destroyer (963 class nonmissile).
DD 965:	Kincade	Destroyer (963 class nonmissile).
DE 1095	Truett	Destroyer escort.
DE 1096	Valdez	Destroyer escort.
DE 1097	Moinester	Destroyer escort.
DLGN 37	South Carolina	Nuclear guided missile frigate.
LHA 1	Tarawa	Amphibious assault ship.
PHM 1	Delphinus	Patrol hydrofoil missile ship.
PHM 2	Hercules	Patrol hydrofoil missile ship.
SSN 683	Farche	Nuclear submarine.
SSN 685	Glenard P. Lipscomb	Nuclear submarine.
SSN 686	L. Mendel Rivers	Nuclear submarine.
SSN 687	Richard B. Russell	Nuclear submarine.
SSN 688	Los Angeles	Nuclear submarine.
SSN 690	Philadelphia	Nuclear submarine.

Admiral Cooke. The Nuclear Carrier *Nimitz* mission is to support and operate aircraft, to engage in attacks on targets afloat and ashore which threaten our control of the sea, and to engage in sustained operations in support of other forces.

The destroyer's mission is to operate offensively with strike forces, hunter/killer groups, in support of amphibious assault operations, and screen support forces and convoys against submarine, air and surface threats.

The Destroyer Escorts screen support forces and convoys and operate offensively against submarines.

The Nuclear Guided Missile Frigate operates offensively, independently or with anti-submarine, or amphibious forces against submarine, air, and surface threats.

The Amphibious Assault Ship's general mission is to embark, deploy and land elements of a Marine landing force in an assault by helicopters, landing craft, amphibian vehicles and by combinations of these methods.

The Patrol Hydrofoil Missile Ships conduct high speed, mobile, special warfare operations.

The Nuclear Submarine's mission is to locate and destroy ships, particularly other submarines.

The increase in the Reserve Fleet in 1975 relates to the transfer of 6 more minesweepers from the active fleet.

Operating Aircraft

Turning to aircraft, the number of average operating aircraft declines from 5,618 in FY 1974 to 5,435 in FY 1975. This reduction of 183 aircraft reflects the continuing trend toward reduced force levels. The most significant reduction is in attack aircraft. Additionally, replacement of the S–2 aircraft with the much more capable S–3 aircraft, along with the continued shift to the multi-purpose carrier concept, reduces the numbers of ASW aircraft.

There is no change in the number of active and reserve Marine Corps divisions or air wings.

LEGAL REMOVAL OF SHIP (STRIKE)

Chairman MCCLELLAN. Explain the inactivation, transfer and strike of 22 older ships—where these ships are going and which ones are being inactivated. What does "strike" mean in this context?

Admiral COOKE. Inactivation involves removal of perishable supplies and materials, installation of dehumidifying equipment, making necessary repairs and preservation of the ship and shipboard equipment.

Ships transferred are either leased to the Military Sealift Command or added to the Naval Reserve Fleet. "Strike" is legal removal of a ship from the Naval Vessel Register. These ships are scrapped or sold.

The following depicts the disposition of the 22 ships:

Disposition and Hull No.	Name
Inactivation:	
AD 16	Cascade.
AD 27	Yellowstone.
CA 148	Newport News.
CG 12	Columbus.
LPSS 574	Grayback.
Transfer to MSC:	
AO 105	Mispillion.
AO 109	Waccamaw.
ATF 76	Ute.
Transfer to MSC:	
ATF 149	Atakapa.
AF 56	Denebola.
Transfer to Naval Reserve:	
MSO 433	Engage.
MSO 437	Enhance.
MSO 442	Fearless.
MSO 446	Fortify.
MSO 449	Impervious.
MSO 456	Inflict.
Strikes:	
AGSS 419	Tigrone.
AO 61	Severn.
DE 1033	Claude Jones.
DE 1036	Mc Morris.
SS 343	Clamagore.
SS 416	Tiru.

CHART 3.—DEPARTMENT OF THE NAVY TOA COMPARISON

[In million dollars]

Appropriation	Fiscal year 1974	Fiscal year 1975	Difference
MPN	5,720.1	5,765.2	+45.1
MPMC	1,677.3	1,728.7	+51.4
RPN	223.3	209.7	−13.6
RPMC	65.0	73.0	+8.0
O. & M.N	6,635.6	7,291.0	+655.4
O. & M.N.C	443.8	446.3	+2.6
O. & M.N.R	207.3	238.4	+31.1
O. & M.M.C.R	11.1	11.4	+.3
NPR		24.2	+24.2
APN	3,060.8	2,960.6	−100.2
WPN	837.8	833.9	−3.9
SCN	3,492.9	3,562.6	+69.7
OPN	1,505.6	1,684.5	+178.9
PMC	219.6	228.8	+9.2
R.D.T. & E.N	2,743.4	3,261.9	+518.5
MCON	680.8	643.9	−36.9
MCNR	22.9	20.8	−2.1
Total	27,547.3	28,984.9	+1,437.6

Admiral COOKE. This chart displays a summary of our budget by appropriation. As previously stated, the fiscal 1975 request of $28 billion, 985 million is approximately $1.4 billion above 1974. Substantial increases are requested in the Opera-

tion and Maintenance, Navy; Other Procurement, Navy; and Research, Development, Test and Evaluation, Navy appropriations. A decrease of approximately $100 million is planned in the Aircraft Procurement, Navy account. I will discuss these and other changes in some detail later in my statement.

The Marine Corps share of the total Department of the Navy budget request for 1975 equates to 8.6% of the total shown on the chart, compared with 8.8% in fiscal 1974. Thus, the distribution between Navy and Marine Corps remains relatively stable between years. In addition, the Marine Corps also receives support from other Navy appropriations.

Of interest to the Committee is the appearance of a new appropriation in FY 1975—the Naval Petroleum Reserve Appropriation—for which $24.2 million is requested. In FY 1974, this program was funded under the Operation and Maintenance, Navy appropriation.

Before discussing each appropriation, I would first like briefly to review the Department of the Navy's FY 1975 budget objectives.

CHART 4—BUDGET OBJECTIVES

Improve the readiness of active forces
Improve material condition of reserve forces
Improve the quality of Navy personnel and continue improvements in living and working conditions
Procurement to meet term objectives of a modern navy
Provide R. & D. resources for future weapons systems

BUDGET OBJECTIVES

The priorities and objectives considered during the development of the budget were to continue the momentum of improving the readiness of our current forces and the pace of modernization. Specifically, Navy budget objectives are:

Emphasis on readiness of our active forces through improvements in ship and aircraft maintenance and the supporting shore establishment.

Improvement of the material condition of the reserve forces by providing more and better equipment, and increased maintenance funding.

Improvement of the quality and life of military personnel by increased entitlements for junior enlistees and improved sea-shore rotation.

Meeting the long term objectives of a modernized Navy through procurement of ships, aircraft and modern weapon systems—especially on the "lo" end of the "hi-lo" mix.

Providing R&D resources to develop the technological base for weapon systems of the future.

HI-LO MIX

Chairman MCCLELLAN. Describe the ships, aircraft and modern weapons systems being developed and procured at the "lo" end of the "hi-lo" mix. Compare their costs and capabilities with the "hi" systems being procured, developed, or which are currently in the inventory.

Admiral COOKE. The weapons systems on the low end of the balanced high-low force mix consist of the Sea Control Ship (SCS), the Patrol Frigate (PF), the Patrol Hydrofoil (PHM), and the Light Airborne Multi-Purpose System (LAMPS).

SEA CONTROL SHIP

The Sea Control Ship is designed to provide expanded sea based air capability in the face of declining carrier force levels and fiscal limitations. The Sea Control Ship resulted from analysis of a wide range of alternatives for providing expanded Sea Control Capabilities in the form of low cost sea based air for use in the lower air threat areas of the world. This will free the limited number of carrier task groups for use in the high air threat areas where their more expensive, high capabiilty systems are more effectively utilized.

The SCS utilizing near term aircraft provides the greatest improvement in ASW of all the alternatives examined. In addition, it will provide limited air intercept capability and long range anti-surface attack with VSTOL fighters. Like a carrier, the SCS air group can be tailored to meet many mission requirements and can be easily updated as aviation technology progresses. The SCS, developed under design-to-cost discipline, will cost approximately $100M per ship. The aircraft carrier, with its larger size, catapaults and arresting gear, can

accommodate the latest, most modern aircraft in our inventory—the F–14, A–7, and S–3—with the concomitant increase in effectiveness. CVAN 70, currently in the building program, will cost on the order of $1 Billion.

Patrol Frigate

The Patrol Frigate is designed to fill the qualitative and quantitative requirement for surface combatants. The Navy needs from 240–320 surface combatants to provide ASW, Air and Surface Protection for Carriers, Underway Replenishment Groups, Amphibious Groups and Convoys. Of these, from 84–98 should be capable of operating with a Carrier Task Group. Including our existing fleet of post World War II ships and those ships authorized (DLGNs and DD–963s) we will have 173 ships including 103 capable of operating with a carrier. The need then is for a large number of low mix non-carrier capable Harpoon equipped surface combatants. Further, these ships should complement the ASW oriented capabilities of the 46 DE–1052 class, our existing low mix ship. Each characteristic of the PF was carefully selected to fill this need. The modern MK–92 fire control system provides area air defense not incorporated in the DE–1052 class. Its high frequency SQS–53 sonar complements the low frequency SQS–26 sonar on the DE–1052. Its two LAMPS helos provide the extended range capability needed to prosecute long range submarine targets. The use of design-to-cost and modern technology has allowed us to design a very capable ship at a cost of approximately $50M.

The Spruance Class of general purpose destroyers currently in the shipbuilding program will have the propulsion capability and redundancy necessary to escort carrier task groups. They are equipped with the most modern, sophisticated ASW capabiilty available, and have significant potential for modernization. The unit cost of a Spruance Class destroyer is approximately $100M.

Patrol Hydrofoil

The Patrol Hydrofoil program will provide the U.S. and its NATO allies with a low cost, high speed ship that has a strong offensive punch that can deal equally well with large combatants and fast missile boats. Hydrofoil technology gives this small ship the seagoing capability of a large one, even in rough seas. The HARPOON missle with its 60nm range and its excellent ability to penetrate missile defenses gives the PHM the offensive punch of a major combatant. It can accomplish many sea control missions formerly assigned to major combatants. A small number of these ships can control areas such as the entrances to the Baltic and Black Seas. With its high speed, the PHM can control the surface threat in major ocean areas such as the Eastern Mediterranean, the North African Littoral, Aegean Sea and if needed, the Caribbean Sea.

Also procured under design-to-cost discipline, the PHM follow on unit cost is approximately $19M. The PHM has to directly comparable high-mix program.

Lamps MK I Program

The LAMPS MK I program utilized the existing inventory of SH–2 utility helicopters modified through installation of available "off the shelf" equipment. This has provided an immediate improvement in fleet capability giving our surface fleet "eyes in the sky" and extending our range of weapon delivery. LAMPS MK I program include 105 modified utility helicopters for use on 73 existing ships and successfully performs these multiple roles:

Reactive ASW.
Radar/Visual Surveillance.
Gunfire Spotting.
Replenishment/Personnel Transfer.
Medical Evacuation.
Search and Rescue.

A LAMPS MK III is program planned to provide a replacement helicopter with increased capability as the MK I helicopters reach the end of their service life in the 80's and to equip 85 additional new ships to be constructed in the interim. The Army UTTAS being considered as a candidate to take advantage of the possible cost savings in a joint program, but airframe selection, hence costs, are not yet firm. The cost to convert an SH–2 helicopter to a LAMPS vari-

ant is approximately $0.9M, significantly less than the cost of a new helicopter.

Chairman McClellan. Proceed.

Admiral Cooke. I will discuss the request, by appropriation, pointing up the highlights of the programs addressed in each appropriation and the major changes between our FY 1974 and FY 1975 requests.

Chart 5—Military Personnel, Navy

[Millions of dollars]

Fiscal year 1974	5,720.1
Fiscal year 1975	5,765.2
Difference	+45.1
Significant Items:	
Full year cost of Oct. 1, 1973 pay raise	+56.0
Full year cost of commuted ration rate increase	+22.7
New entitlements for junior enlisted personnel	+30.9
PCS—Rate/tariff increases	+36.6
Strength reduction of 10,707	−85.7
PCS—Reduction in number of moves	−21.4

Military Personnel, Navy

For the Military Personnel, Navy appropriation, the request supports an end strength of 540,380 people. Although personnel requirements are 10,707 below fiscal 1974 needs, requested funding is $45 million above the 1974 program. The increase in funding is necessary to support the full-year cost of the 1 October 1973 pay raise and the commuted ration rate increase, plus new entitlements for junior enlisted personnel and the impact of PCS rate and tariff increases. These increases are partially offset by the reduction in personnel strength and in the number of PCS moves. As previously mentioned, the lower manning level primarily relates to reduced training and intelligence and communications requirements.

In addition to the Budget Authority requested to fund the FY 1975 program, a request has been included in the submission for appropriations to liquidate prior year deficiencies in the amount of $51 million. This represents the required funding to cover outstanding obligations for nongovernment bills incurred and chargeable to the FY 1969, 1971 and 1972 accounts.

Chart 6—Military Personnel, Marine Corps

[Millions of dollars]

Fiscal year 1974	1,677.3
Fiscal year 1975	1,728.7
Difference	+51.4
Significant items:	
Increase of 3,798 man-years	+16.3
Full year cost of 1 October 73 pay raise	+19.5
New entitlements for junior enlisted personnel	+10.4
Full year cost of commuted ration rate increase	+6.8
PCS—Rate/Tariff increases	+7.0
Reduced payments for separation pay and reenlistment bonus	−6.6

Military Personnel, Marine Corps

For the Military Personnel, Marine Corps appropriation, the funds are programmed to support an end strength of 196,398 personnel. The program cost increases by $51 million above the 1974 level. An increase of 3,798 man years is programmed in fiscal 1975. The Marine Corps intends to make up the current shortfall in strength by the end of fiscal 1974 and to retain that strength throughout fiscal 1975, thereby generating the programmed man year increase. As in the case of the Military Personnel, Navy account, other increases relate primarily to the full-year impact of the 1 October 1973 pay raise, new entitlements for junior enlisted personnel, full-year cost of commuted ration rate increase, and PCS rate and tariff increases. Miscellaneous reductions including reduced payments for separation pay and reenlistment bonuses, partially offset these increases.

Chart 7—Reserve Personnel, Navy

[Millions of dollars]

Fiscal year 1974	223.7
Fiscal year 1975	209.7
Difference	−13.6

Significant items:

Average strength—reduction of 9,331 man-years in average paid drill strength.

Funding:

Pay Group A Strength	−34.6
Pay Group B Strength	+16.1
Pay Group F Recruits	+3.4

Variation in Reserves Pay Groups

Chairman McClellan. Admiral Cooke, would you explain the difference between each pay group in the Reserves?

Admiral Cooke. The reserve account includes four pay group categories. Pay Group A is made up of members drilling in selected reserve units. These members attend a minimum of 48 Inactive Duty Training periods per year and attend a two week active duty tour per year. Pay Group B is the same as Pay Group A except that the number of Inactive Duty Training periods is 24 vice 48. Pay Group D includes reservists who train for two weeks per year without attending any other paid drills during the balance of the year. Pay Group F is comprised of enlisted personnel performing their Initial Active Duty Training for periods of from four to ten months prior to reverting to Pay Group A or B status.

Chairman McClellan. Proceed.

Reserve Personnel, Navy

Admiral Cooke. Average paid drill strength for the Navy reserves is targeted at 107,526 man years for fiscal 1975, 9,331 below the level programmed for fiscal 1974. The decline in average drills is primarily due to a continuation of transforming the selected reserves by providing new and better training equipment for smaller numbers of reservists and to a change in policy which aligns reserve manning requirements more closely to fleet needs in the Surface Program area.

Reserve Manning Requirements

Chairman McClellan. Describe how Reserve manning requirements are being aligned to more closely meet needs in the surface program area. Why was this done? Could it be done in other areas?

Admiral Cooke. Total Force considerations and a smaller active Navy require that the Naval Reserve assume responsibility for providing the most crucially needed, first-reaction capabilities required by the active forces in an emergency. Prior to the restructure, the Surface Reserve was essentially an individual augmentation pool with its training keyed to advancement in grade vice active force mission requirements. As such, it was not considered to be a Ready Combat or Combat Support Force on which to draw in emergencies. The restructure of Reserve programs provides support to all significant force elements—air, surface and submarine forces. Recallable units have been designed to meet urgent mobilization requirements in these force elements and training is designed to support force missions. The result is a quick reaction augmentation force which can be deployed either into forward areas or provide back-up support in secondary areas.

Chairman McClellan. Proceed.

Admiral Cooke. The requested funding to support the drill program in FY 1975 is $210 million. This is $13 million below the FY 1974 program cost. The reduced funding relates mainly to the decrease in Pay Group A paid drills.

Chart 8—Reserve personnel, Marine Corps

[Millions of dollars]

Fiscal year 1974	65.0
Fiscal year 1975	73.0
Difference	+8.0
Significant items:	
Average strength—increase of 1,585 in average paid drill strength.	
Dollars:	
Pay group A enlisted strengths	+2.3
Pay group F recruits	+3.4
Transfer of Special Tours Function from MPMC	+2.0

RESERVE PERSONNEL, MARINE CORPS

$73 million is requested to fund an average paid drill program of 36,703 man-years for Marine reserves. This represents an increase of $8 million and 1,585 average drill-pay strength over the fiscal 1974 program. No significant changes to requirements have occurred. The added drills relate to the Marine Corps' objective to achieve desired manning levels in 1975 as opposed to accepting a reduced level in 1974 due to recruiting problems.

Chart 9—Operation and maintenance, Navy

[Millions of dollars]

Fiscal year 1974	6,635.6
Fiscal year 1975	7,291.0
Difference	+655.4
Significant items:	
Full year cost of fiscal year 1974 civilian pay raises	+42.6
Civilian substitution program, full year cost	+38.7
Full year impact of fiscal year 1974 increased fuel costs	+141.4
Increased emphasis on real property maintenance	+110.3
Ship maintenance and alteration	+104.1
Restoration of flying program to minimum readiness levels	+42.2
Ship consumables and repair	+43.1
Initial support for Federal building fund	+33.6
Separate appropriation for petroleum reserves	−82.5

OPERATION AND MAINTENANCE, NAVY

In terms of program accomplishment, the impact of the $655 million increase over FY 1974 is significantly modified by the effects of price inflation. For example, $43 million of the increase reflects the impact of classified and wage board pay raises enacted in FY 1974 and the full-year costs of the Civilian Substitution Program add another $39 million. The bulk of the remaining escalation increase is due to the spiraling cost of petroleum products.

In the area of energy consumption, the Navy is making every effort to reduce consumption in all operational areas. The fiscal 1974 program, now reflecting petroleum consumption of 50.7 million barrels, is 20% less than in fiscal 1973; fiscal 1974 cost, however, is substantially higher than prior year due to price increases. In terms of ship and aircraft operations, the fiscal 1974 program level, if sustained for any appreciable period of time, would severely degrade fleet readiness and, of necessity, must be considered temporary. Accordingly, the fiscal 1975 request projects a 4.4 million barrel increase to 55.1 million barrels, in order to return us to the minimum acceptable level of 88% primary mission readiness for Navy/Marine Corps tactical air units and allow minimum operating tempos for our ships. It should be noted that this level is still about 14% below the base FY 1973 consumption level, although total program costs rise $141 million due, primarily to increased fuel costs.

Primary Mission Readiness

Chairman McClellan. Explain what is meant by a certain percent level of Primary Mission Readiness.

Admiral Cooke. The term Primary Mission Readiness (PMR) is used to define the amount of flying hours required by Navy/Marine TACAIR/ASW forces to achieve and maintain the minimum acceptable level of crew readiness to perform safely the primary assigned mission; including carrier deployment and all-weather operations, where applicable. In the Budget submission, the term applies to the overall TACAIR/ASW requirement; therefore, a percentage of PMR equates to a percentage of the total requirement.

In terms of individual pilot flight activity, for example, an A–6 all-weather attack crew, the Primary Mission Readiness requirement is 25 hours per month. In a fiscally constrained program which provides only 88% of PMR, the requirement of 25 hours per month is not reduced; but, there is only 22 hours per month available, therefore, the A–6 pilot's readiness would be reduced 12%.

Percent of PMR for Tactical Air Units

Chairman McClellan. What has been the percent of Primary Mission Readiness for Navy/Marine Corps tactical air units during fiscal years 1972–1975?

Admiral Cooke. The percent of Primary Mission Readiness for Navy/Marine Corps tactical air units for FY–72 through FY–75 are as follows:

[In percent]

	Congressional budget submission	Influence	Resultant
1972	88	Plus South East Asia increment	92 [1] (actual).
1973	88	Plus South East Asia increment	94 [1] (actual).
1974	88	Minus energy conservation action	80 [2] (estimated).
1975	88		88 (requested).

[1] The planned and budgeted level of primary mission readiness was 88 percent. The incremental for high tempo of Southeast Asia operations resulted in the overall PMR as percentage indicated.

[2] The degradation to 80 percent PMR was accepted for the short term (last half fiscal year 1974) as a result of energy conservation. This level of readiness cannot be sustained beyond end fiscal year 1974 without serious, long-range effects on readiness and safety.

Minimum Operating Tempos

Chairman McClellan. What are the minimum operating tempos of naval ships, by type of ship. Compare these minimum operating tempos with the tempos experienced during the war in the Middle East.

Admiral Cooke. Operating tempos of Naval ships reflect the Joint Chiefs of Staff assignments, fleet exercises and training requirements for a composite of ship types relaying at specific intervals of planned deployment within operational funding limitations. Excluded from tempo restrictions are submarines, mine warfare ships and some auxiliary types.

The FY 1975 Congressional Budget projects an average quarterly operating tempo for ships by fleet as follows: Pacific—Third, 27 Days per Quarter, Seventh, 45 Days per Quarter. Atlantic—Second, 30 Days per Quarter; Sixth, 38 Days per Quarter.

During the Mid-East Crisis in FY 1974 Sixth Fleet operations increased to 51.6 days per quarter.

Chairman McClellan. Proceed.

Admiral Cooke. In further regard to petroleum costs, it must be recognized that all pricing data underlying estimates for both fiscal years are predicated upon Defense Fuel Supply Center cost advisories available at the time of budget submission. More recent data indicate that these costs may have been understated. This, coupled with the highly unstable petroleum situation, in general, causes concern that budgeted resources may prove inadequate to support even the minimum required operating levels.

In fiscal 1975 we are requesting $274 million for maintenance and repair of shore facilities, an increase of $110 million over 1974 levels. This major emphasis is a reflection of the need to arrest the continued deterioration of the

Navy's physical plant, over half of which is of World War II vintage. This backlog of maintenance and repair has grown over the last ten years to $387 million. Funding increases now requested will reduce this to $324 million by end fiscal 1975.

In other maintenance areas, the budget contains $1,443 million of ship maintenance and alteration, a $104 million increase over the prior year. Ninety-five ship overhauls are planned for fiscal 1975, three more than in fiscal 1974. The increase reflects both the larger number of overhauls as well as a greater degree of complexity in overhaul ship types.

Other significant program changes included an increase of $42 million to restore the Flying Program to minimum readiness levels, increased ship repair and consumable parts support of $43 million, initiation of budgeting for GSA building rental charges in FY 1975 of $33 million and a decrease of $82 million due to establishment of the Navy Petroleum Reserve appropriation in FY 1975.

Minimum Readiness Levels on Flying Programs

Senator McClellan. What are the minimum readiness levels of the flying program? What would be the impact of not restoring the flying program to these levels?

Admiral Cooke. The requirement is 100% of Primary Mission Readiness hours. During the past several years, it has been accepted by the Secretary of Defense that, for Navy Squadrons, 88 percent of the hours required for Primary Mission Readiness represents a minimum readiness posture for the long term. By shifting hours from non-deployed to deployed squadrons and those in work-up preparatory to deployment the Navy has been able to maintain a high state of readiness among deployed units while keeping non-deployed units at an acceptable level, thereby providing some surge capability. Example:

A–6 (all weather attack) Crew	*Hours/Month*
Deployed	25
Workup	25
Nondeployed	17

Note.—A Crew is deployed for an average of 6 months and in Work-up for 3 months prior to deployment.

Shore Facilities Maintenance and Repairs

Chairman McClellan. What is the optimal backlog of maintenance and repair each year during the past ten years, and what is it programmed to be during each of the next ten years?

Admiral Cooke. We have selected a target for optimum backlog of $200 million. We think that is close to the amount which combines the least life cycle cost of maintaining our facilities with minimum impact on the mission and readiness of our forces. It is about 1% of the replacement value of our facilities; it is a sufficient backlog to allow for orderly selection of priorities and prudent budgeting for repair, and it would not require deferral of work beyond the time of most economic cost of repair, i.e., repair could be accomplished before serious deterioration had occurred. Our backlog for the past ten years has been:

Fiscal year 1964—$164 million including Naval Reserve Activities
Fiscal year 1965—$169 million including Naval Reserve Activities
Fiscal year 1966—$173 million including Naval Reserve Activities
Fiscal year 1967—$184 million including Naval Reserve Activities
Fiscal year 1968—$223 million including Naval Reserve Activities
Fiscal year 1969—$264 million including Naval Reserve Activities
Fiscal year 1970—$274 million including Naval Reserve Activities
Fiscal year 1971—$337 million including Naval Reserve Activities
Fiscal year 1972—$359 million including Naval Reserve Activities
Fiscal year 1973—$361 million does not include Naval Reserve Activities
Fiscal year 1974—$387 million (est.) does not include Naval Reserve Activities
Fiscal year 1975—$324 million (est.) does not include Naval Reserve Activities

Within our anticipated budgeting limits in FY–1976 and later years we have programmed sufficient funds for maintenance of real property to keep backlog at least stable with conditions at the end of FY–1975, and hopefully enough to make

a slight reduction. We do not envision that we will approach the optimum backlog target within our programming years.

Chairman McClellan. Proceed.

Admiral Cooke. In FY–74 energy conservation measures reduced the flying hours program to 80 percent of the Primary Mission Readiness requirement. This was acceptable only for the short term period of the last half of FY–74. At this level of PMR, the same non-deployed A–6 crew in the previous example would receive 11 hours per month. This crew is virtually unsafe to fly because 11 hours are barely sufficient to maintain the fundamental motor skills for daylight visual flying in high performance aircraft; and precludes any significant combat capability.

The impact of not restoring the flying hour program to the requested 88% PMR level would be a force equipped with the finest, most versatile hardware available and only trained and ready to utilize a small portion of the potential capability of that hardware. Further reductions in flight hours will result in Naval Aviation returning to the readiness posture of early 1950; a posture wherein a small segment of the force was fully qualified for night and all-weather operations, and the major portion of the force was restricted to daylight and limited all-weather operations.

Night and/or all-weather capability with versatile weapons delivery techniques can be deleted; emphasis could be placed on fleet defense vice force projection, or a little of both; ASW forces could concentrate on status quo operation vice development of new tactics to counter the submarine threat; tactical reconnaissance could be diminished on the assumption that strategic systems could provide the on-scene commander with required information. All of these alternatives are possible and some are inevitable if the reduced flying trend continues. The net result of any combination of them is, however, a *second rate force* incapable of meeting the threat of the seventies.

Chart 10—Operation and Maintenance, Marine Corps

[Millions of dollars]

Fiscal year 1974	443.8
Fiscal year 1975	446.3
Difference	+2.5
Significant items:	
Fleet Marine force equipment	−13.4
Depot level repair	−4.8
Full year cost of fiscal year 1974 civilian pay raises	+3.7
Civilian substitution program, full year cost	+4.8
Initial support for Federal building fund	+4.0
Full year impact of fiscal year 1974 increased fuel costs	+1.8
Increased emphasis on real property maintenance	+2.7
Lightweight pack	+2.0

Operation and Maintenance, Marine Corps

Admiral Cooke. The fiscal year 1975 budget request of $446.3 million for the Marine Corps is a net increase of $2.5 million above the proposed funding level for FY 1974. This supports approximately the same forces as in FY 1974.

Increased funding requirements for this appropriation approximating $35 million have been mostly offset by decreases of $32.5 million in various programs.

The significant items indicate reductions of $13.4 million compared to FY 1974 in equipment costs due to one-time procurement in FY 1974 to bring stocks of unit equipment up to prescribed allowance levels. A $4.8 million reduction is due to a lower requirement for major repair of equipment at the two Marine Corps depots.

Increases fall into several areas. For civilian personnel support, an additional $3.7 million is required for the full-year impact of wage increases that commence in FY 1974 and $4.8 million for the full-year cost of civilian billets converted from military billets during FY 1974. Approximately $4 million is required due to Public Law 92–313 which transferred financial support responsibility for building space rentals from GSA to user agencies. The full-year impact of FY 1974 price increases in fuel necessitate an additional $1.8 million; improvements to real property facilities require increased FY 1975 funding of $2.7 million.

Lastly, $2.0 million is requested for a new lightweight individual clothing and equipment pack for the deployable Fleet Marine Force units.

Lightweight Pack

Chairman McClellan. Compare the new lightweight pack with what Marine Force units are now using. What is the unit cost of the new lightweight pack? Will the $2.0 million requested outfit all deployable FMF units? Describe your plan for this pack.

Admiral Cooke. The new pack is a lightweight, nylon, combat pack designed to provide the individual Marine with a modern, functional load carrying system. The pack has quick release features, three exterior pockets, and is designed for optional attachment to a lightweight metal frame.

The M1941 pack is of heavy fabric with limited durability. It has an inadequate load carrying capacity, is uncomfortable to wear and does not possess the flexibility features of the new pack.

The unit cost of the new lightweight pack is $32.20.

The $2.0 million requested will not outfit all deployable units. Requirements to outfit the FMF totals approximately 120,000 packs. The $2.0 million requested will outfit approximately 62,423 FMFPAC personnel.

The Marine Corps plan for this pack is spread over a three year period and is shown below:

	Fiscal year 1975	Fiscal year 1976	Fiscal year 1977	Total
Quantity	62,423	40,373	40,373	143,169
O. & M.M.C.	$2.0	$1.3	$1.3	$4.6

Chart 11—Operation and maintenance, Navy Reserve

[Millions of dollars]

Fiscal year 1974	207.3
Fiscal year 1975	238.4
Difference	+31.1
Significant items:	
Ship overhauls and alterations	+26.2
Civilian substitution program, full year costs	+4.1
Full year impact of increased fuel costs	+5.0
Real property maintenance	+1.5
Outfitting for readiness centers	+1.0
Aircraft reworks	−1.3
Nonscheduled ship repairs	−3.8
Ship consumables and repair parts	−2.0

Operation and Maintenance, Navy Reserve

Chairman McClellan. Proceed.

Admiral Cooke. The increase in fiscal 1975 funding of $31.1 million includes $26.0 million for 12 additional ship overhauls and associated alterations. Other significant increases include an additional $4.1 million for the full-year cost of the civilian substitution program and a net increase in fuel costs of $5.0 million. Also included are additional funds for maintenance of real property, and outfitting for Readiness Centers.

Readiness Command/Readiness Center

Chairman McClellan. Describe a Readiness Command and a Readiness Center.

Admiral Cooke. The mission of a Readiness Command is to manage designated Naval Reserve programs, training support resources, and systems; and to perform other tasks as may be assigned by the Chief of Naval Reserve. Twenty-two

Readiness Commands are planned nationwide. Within each Readiness Command there will be one or more Readiness Centers.

A "Readiness Center" is an unofficial term that has been used to distinguish the 75 Naval Reserve Centers that, when equipped, will serve as centralized drill sites. It is planned to equip each of these sites with a Ship Operational Trainer and Common Skill Shop. Reservists from neighboring reserve centers will be transported periodically to the centralized drill sites for practical team training utilizing the hardware available at these sites. This concentration of high value equipment in 75 of the 237 Reserve Centers maximizes training opportunities for Naval Reserve enlisted members at the least cost.

Eight of a projected total of twenty-two Reserve Readiness Commands have been budgeted with five more scheduled for activation in fiscal 1975. The objective of the Readiness Command System is to redirect Surface Reserve resources into better equipped, centralized activities. Each command will manage designated programs, training support resources and systems. These increases are partially offset by various reductions including aircraft reworks, non-scheduled ship repairs and ship consumables and repair parts.

Chart 12—Operation and maintenance, Marine Corps Reserve

[Millions of dollars]

Fiscal year 1974	11.1
Fiscal year 1975	11.4
Difference	+.3
Significant items:	
Full year impact of fiscal year 1974 pay raises and fuel cost increases	+.3
Expansion of recruiting and training programs	+.7
Travel and miscellaneous decreases	−.7

OPERATION AND MAINTENANCE, MARINE CORPS RESERVE

Admiral COOKE. For the Marine Corps, the increased FY 1975 requirements will support additional costs of pay raises and fuel price increases, and will provide additional emphasis on recruiting and training efforts. These increases have been largely offset by a reduction in travel and facility improvement programs.

The next chart covers a new appropriation added in fiscal 1975—Naval Petroleum Reserves.

CHART 13.—NAVAL PETROLEUM RESERVES

[In millions of dollars]

Significant items	Fiscal year— 1974 (comparable)	1975	Difference (comparable)
Total	[1] 82.5	24.2	−58.3
Operating costs of petroleum reserves	10.5	6.9	
Exploration, development, and production of petroleum reserves	72.0	17.3	

[1] Carried in O. & M.N. appropriation in fiscal year 1974.

NAVAL PETROLEUM RESERVES

As I indicated earlier, this is a newly established appropriation; funding for the Naval Petroleum Reserves was previously included in O&M.N. This new appropriation stems from Joint Resolution 176 now before the Congress which would authorize further exploration and development of the Petroleum Reserves and production of oil for national defense. In conjunction with the Resolution, Congress appropriated $72 million in fiscal 1974 for these purposes. However, a portion of the funds (relating to production and sale of 160,000 barrels-a-day for one year) requires authorization currently awaiting approval by the Armed Services Committees.

Shifting to fiscal 1975, $6.9 million of the $24.2 million request is for the same functions carried under O&M, Navy in previous years. $17.3 million is for further exploration in California and Alaska. We are requesting that this $17.3 million be made available from receipts realized from the sale of petroleum products from the reserve.

CHART 14.—PROCUREMENT SUMMARY, TOTAL OBLIGATIONAL AUTHORITY

[In millions of dollars]

Appropriation	Fiscal year— 1974	1975	Difference
Aircraft procurement, Navy	3,060.8	2,960.6	−100.2
Weapons procurement, Navy	837.8	833.9	−3.9
Shipbuilding and conversion, Navy	3,492.9	3,562.6	+69.7
Other procurement, Navy	1,505.6	1,684.5	+178.9
Procurement, Marine Corps	219.6	228.8	+9.2
Total	9,116.7	9,270.4	+153.7

Procurement Summary—TOA

This chart compares the fiscal 1975 procurement request with 1974. The procurement budget continues an on-going modernization program. The fiscal 1975 request is $9.3 billion, which is slightly less than one-third of the total Navy 1975 budget. Increases are shown in Shipbuilding and in Other Procurement, Navy appropriations. These are offset in part by a decrease in Aircraft Procurement, Navy. I will now discuss the highlights for each of the procurement accounts.

CHART 15.—AIRCRAFT PROCUREMENT

[In millions of dollars]

Item	Quantity	Fiscal year 1974 cost	Quantity	Fiscal year 1975 cost
Combat aircraft:				
A–4M (Skyhawk)	44	106.9	24	57.2
A–6E (Intruder)	24	116.2	12	127.5
A–7E (Corsair II)	30	126.4	34	138.2
F–14A (Tomcat)	50	584.9	50	639.3
P–3C (Orion)	18	175.8	12	138.4
S–3A (Viking)	45	402.6	45	429.4
EA–6B (Prowler)	6	101.6	6	121.7
E–2C (Hawkeye)	9	134.4	6	107.1
UH–1N (Iroquois)	24	19.0	20	14.9
AH–1J (Sea Cobra)	15	20.8	20	24.9
Advance procurement		127.0		151.9
Airlift aircraft:				
C–9B (Skytrain)			7	41.6
CT–30 (Sabreliner)			6	10.5
Other aircraft: KC–130R (Hercules)	10	65.0	6	39.1
All other aircraft	50	136.7		
Modification of aircraft		319.1		338.5
Aircraft spares, equipment, and facilities		624.4		580.3
Total	314	3,060.8	248	2,960.6
Difference		−100.2		

Aircraft Procurement

Procurement of 248 aircraft is planned along with various items of support equipment.

Procurement of the proven A–4M Skyhawk, A–6E Intruder and A–7E Corsair continue a modest attack aircraft inventory modernization program. The F–14 buy represents the 5th consecutive production request for this fighter aircraft; 172 have been approved for production through 1974. These 50 F–14s will be used to equip the 7th and 8th Navy and 2nd Marine Corps F–14 squadrons. The

ASW program includes 12 P–3C Orion land-based patrol aircraft and 45 S–3A carrier-based aircraft. The S–3A procurement, which is the 4th production increment, will allow the outfitting of the 5th through the 8th operational S–3A squadrons.

Antisubmarine Warfare Program

Chairman McClellan. Describe the Navy's total antisubmarine warfare program in layman's terms, explaining the requirement for and mix of land-based and sea-based forces.

Admiral Cooke. The submarine, particularly the nuclear type, poses a unique threat not amenable to simple countermeasures. Antisubmarine warfare operations are characterized by four basic problem areas: *detecting* the presence of a possible target; *classifying* it as an enemy submarine, by type if possible, so as to determine the kind of threat (e.g., long or short-range missile, torpedo attack, diesel, or nuclear submarine); finitely *locating* the submarine to an area small enough to permit delivery of a weapon against it; and finally, *weapon delivery* itself. There is no one solution to all of these problems. Each of the Navy platforms and systems employed in the total antisubmarine warfare program has strengths in one or more of these areas but weaknesses in others. The coordinated employment of the strengths of differing platforms and systems tends to overcome the weaknesses and results in increased effectiveness over that of one platform or group of similar platforms operating together. For example, the SOSUS [deleted].

The P–3C, S–3A, and nuclear attack submarine, our best stand alone platform, are strong in the ability to localize and attack. Employment of these latter platforms to pursue SOSUS contacts increases total ASW effectiveness. Surface escorts are strong in endurance, localization, and attack, and the LAMPS helicopter coupled with the escort provides the needed rapid reaction and classification ability. The tactical towed array system and on-going sonar improvements will provide increased detection capabilities.

The thrust of the antisubmarine warfare program is to increase capabilities in each of the four basic problem areas through new or improved systems on new or improved platforms such as the Sea Control Ship, commensurate with reasonable cost alternative determinations. The SOSUS and the P–3C are our primary land-based forces. We need the SOSUS to provide [deleted]. The P–3C is required to provide rapid transit speeds, high endurance at long ranges, and large area coverage for ocean surveillance as well as localization and attack capabilities. It performs these functions effectively within the operating range limitations imposed by available patrol bases, both U.S. and overseas. The carrier-based S–3A aircraft provides capabilities similar to these of the P–3C, but operation from the carrier permits operations in areas beyond the range of the P–3C. Further, *close* ASW support of high value units is more efficiently conducted by S–3A aircraft and/or SCS helicopters coupled with surface escorts operating near the high value unit. Thus the land-based P–3C and the sea-based systems perform complementary, not duplicative, roles in the performance of the antisubmarine warfare missions. The mix is based on scenario study of anticipated tactical and strategic situations.

Similarly, the towed array passive system will provide [deleted]. Again, this will be complementary not duplicative and the mix will be determined by scenario study.

Capabilities of P–3C and S–3A

Chairman McClellan. Describe the differences in capabilities of the P–3C and S–3A aircraft.

Admiral Cooke. The Navy views these two systems as complementary and supplementary rather than competitive. Tactical employment of our two air systems is different, in order to optimize the unique advantageous features of each. Fleet commanders coordinate their employments so that the two complement one another, and supplement each other when needed.

The S–3's forte is its ability to operate from our mobile sea-going airfields. This gives us the capability to achieve an intense concentration of air ASW sensors and weapons, in areas of our choosing, where response time must be a matter of minutes. Here the search and attack capability of the entire task group, with its centralized tactical control and the ability to operate large numbers of aircraft simultaneously, can provide a high level of ASW effectiveness.

The roles which the P–3 performs effectively and can accomplish better than any other weapons system include long-range search and surveillance, semi-permanent air barrier operations, SOSUS coordination, and others which require the long-term continuing presence over widely separated ocean areas.

P–3C/S–3A Comparison

The P–3C and S–3A will enjoy approximately equivalent capabilities when on station. This has been made possible by certain trade-offs. The difference in crew size (10 in the P–3C and 4 in the S–3A) is offset by automation of S–3A avionics. The reduced range and endurance of the S–3A finds compensation in the inherent mobility of the carrier and the capability of the air wing to provide on-station relief aircraft as required.

A comparison of the two systems is as follows:

	P–3C	S–3A
Take-off gross weight	135,000 lb.	42,000 lb.
Normal cruise speed	324 kn.	370 kn.
Effective mission endurance	12 hr.	7.9 hr.
Torpedoes carried	[Deleted]	
Wing pylon stations	[Deleted]	
Passive sensor channels processed	[Deleted]	
Directional LOFAR	Yes	Yes.
Magnetic anomaly detector	ASQ–81	ASQ–81.
Command activated active sonobuoy	Yes	Yes.
Radar	APS–115	APS–116.*
Night sensor system	LLLTV[1]/FLIR[2]	FLIR[2].
Maximum range	4,860 nmi.	2,687 nmi.

[1] Low-light-level television.
[2] Forward-looking infrared.
*The APS–116 radar is the [deleted].

EA–6B

Chairman McClellan. Provide evidence from operational tests and operational deployments in Southeast Asia to support the statement that the EA–6B tactical electronic jamming aircraft is highly successful. Compare EA–6B effectiveness with that of its predecessor aircraft.

Admiral Cooke. The operational evaluation of the EA–6B tactical electronic warfare aircraft Phase II and Phase III, Project O/V–92 was assigned by Chief of Naval Operations to Commander, Operational Test and Evalution Force for prosecution. The results of Phase II have recently been received. Phase III, which is the evaluation of the Expanded Capability (EXCAP) version of the EA–6B is on-going.

Phase II of O/V–92 reported that the Tactical Jamming System of the EA–6B demonstrated a significant capability and potential for performing tactical jamming missions in both the Stand-off and the escort roles. [Deleted.]

The EA–6B was deployed in South East Asia in 1972 and participated in the bombing strikes against North Vietnam in the operation known as linebacker II. [Deleted.]

The EA–6B replaces the EKA–3B in the Navy inventory. The EKA–3B is a tanker aircraft modified as an interim measure during the Vietnam war until the EA–6B could be designed and produced. [Deleted.]

Chairman McClellan. Proceed.

Admiral Cooke. The remaining combat aircraft include the highly successful EA–6B tactical electronic jamming aircraft, the sophisticated E–2C early warning aircraft and the twin engine UH–1N utility and AH–1J gunship helicopters—these latter two aircraft are for the U.S. Marine Corps. The $152 million included for advance procurement components in FY 1975 will permit the orderly production and delivery of 217 combat aircraft planned for procurement in FY 1976.

The budget also requests funds to procure 13 airlift aircraft; 7 medium C–9B transports for priority transit of cargo and personnel; and 6 CT–39 light jet transports to provide fast reaction fleet support aircraft to move high priority personnel and light cargo.

The 6 KC–130R Marine tankers complete a 2 year, 16 aircraft procurement program required to provide the Marine Corps with adequate quantities of modern tanker aircraft to meet current force level requirements.

The $339 million for aircraft modifications provides selected components and subsystems to increase the capability and safety of our aging aircraft inventory. Funds for modification programs reduce procurement of expensive combat aircraft by updating earlier versions of the same aircraft to meet current and future mission requirements. For example, the A–6 A-to-E modifications will provide older A–6A aircraft with A–6E avionics systems and A–7B and C aircraft will be modified to two place TA–7C aircraft, thereby avoiding procurement of replacement A–7E aircraft.

Unit Cost of Modifying A–6A

Chairman McClellan. What is the unit cost of modifying A–6A aircraft with the A6E avionics systems and A–7B and C aircraft to two-place TA–7C configuration?

Admiral Cooke. The A6A to E modification unit cost for a total program of 192 aircraft is $1.3 million. The A7A and B to TA–7C modification unit cost for a total program of 81 aircraft is $1.2 million.

Chairman McClellan. Proceed.

Admiral Cooke. The total of $580 million for Aircraft Spares, Equipment and facilities, includes $177.0 million for Initial Spares required to provide initial carrier and land site outfittings for new aircraft and $197 million for replenishment spares in support of aircraft operations. $206 million is also requested for common ground equipment, such as the VAST computerized test system, and additional amounts for continued engine component improvement effort on operational engines to correct unforeseen problems arising after engine development is completed and as a result of fleet operations.

CHART 16.—WEAPONS PROCUREMENT

[In millions of dollars]

	Fiscal years—		
	1974	1975	Difference
Total	837.8	833.9	−3.9
Ballistic missiles	253.4	84.7	−168.7
Polaris	2.1	1.0	
Poseidon	185.5	48.0	
Trident	5.0	12.6	
Modification, spares, and other support	60.8	23.1	
Other missiles	354.9	535.9	+181.0
Air-to-air	132.9	165.1	
Air-to-surface missiles	46.1	44.9	
Surface-to-air missiles	56.8	32.3	
Surface-to-surface missiles	4.3	118.4	
Fleet satellite communications	36.6	68.0	
Modification, spares, aerial targets and other support	78.2	107.2	
Torpedoes and related equipment	200.7	187.7	−13.0
Other weapons	28.8	25.6	−3.2

Weapons Procurement, Navy

Ballistic Missile requirements have dropped to $85 million in FY 1975 from $253 million in fiscal 1974. This is a result of the conclusion of procurement of POSEIDON missiles in 1974 and a reduced level of POSEIDON modifications in 1975. However, $48.0 million is included for support of POSEIDON missiles previously procured. $12.6 million in production support funds is requested in support of the TRIDENT missile initial production increment scheduled for fiscal 1976. The balance of the funds is for POSEIDON reliability improvements and increased testing capability.

Other missiles, totaling $536 million, represents a procurement of 2,861 tactical air and surface launched missiles, as well as aerial target requirements and related support. This is comprised of 1,440 air-to-air missiles, including 300 SPARROW 7F missiles, continued procurement of 800 highly reliable solid-state versions of the heat-seeking SIDEWINDER 9H missile, and 340 PHOENIX

missiles for F–14 squadrons. The PHOENIX missile capability continues to be singularly impressive with a demonstrated high success rate, including multiple missile firings and hits on multiple targets.

Continued procurement of the CONDOR TV guided missile and SHRIKE anti-radiation missile make up the FY 1975 request of $44 million for air-to-surface missiles.

Within the FY 1975 request of $32 million are 200 STANDARD Medium Range missiles, the only model of surface-to-air missile requested for procurement this year.

Included in the surface-to-surface category is the first production increment of 150 missiles of the urgently required HARPOON cruise missile for fleet operational evaluation and initial fleet deployment. These missiles will be deployed with surface ships, P–3 aircraft squadrons and, in an encapsulated version, in submarines. Continued procurement of STANDARD SSM Anti-Radiation Missiles completes the program to outfit 4 PG class ships and 12 DDG/DEGs with a passive homing missile capability. Due to the urgent requirement to provide an effective surface-to-surface missile capability for Navy ships, the first production increment of 74 STANDARD active missiles is requested for DDGs and DEGs. This missile, utilizing an active radar seeker, is capable of engaging hostile ships at over-the-horizon ranges.

The first procurement of Navy communications satellites is requested in 1975 with a buy of three satellites. Launch vehicles for these satellites were procured in prior years.

The primary element of torpedoes and related equipment provides for continued procurement of 450 MK–48 torpedoes.

CHART 17.—SHIPBUILDING AND CONVERSION

[Dollar amounts in millions]

Item	Quantity	Total cost	Fiscal yea 1975 reques
New construction	30		$2,933.8
Trident	2	$1,065.0	927.0
SSN	3	580.5	502.5
DD–963	7	655.4	457.1
DLGN	1	268.0	152.3
SCS	1	172.2	142.9
PHM	4	96.2	92.3
PF	7	436.5	436.5
FPG	2	14.3	14.3
AD	1	116.7	116.7
AO	1	81.4	81.4
ATF	1	10.8	10.9
Conversion	4		122.8
SSBN	3	187.5	104.6
AS (FBM)	1	29.2	18.3
Other			505.9
Advance procurement			331.8
Escalation			71.9
All other			102.2
Total shipbuilding			3,562.6

Note: The following shows difference between fiscal years 1974 and 1975:

	Millions
Fiscal year 1974	$3,492.9
Fiscal year 1975	3,562.6
Difference	+69.7

Shipbuilding and Conversion

Although the total dollar request is only slightly higher than in 1974, the increase in the number of new ships is substantial. Fiscal 1975 provides for 30 new ships compared with only 14 in fiscal 1974. The increase in new ship con-

struction reflects the first major production of several smaller, less costly escort ships and procurement of several new support ships.

Thirteen of these ships, including the second and third TRIDENT submarines, are highly complex warships intended for operation in high threat areas. Through improvements in the sonar, ship silencing, and the capacity for a longer range missile, the new TRIDENT submarines will enhance our sea-based strategic deterrent capability by operating in a larger ocean area and by avoiding detection more readily than existing ballistic missile firing submarines.

The remaining high threat ships include three 688 class nuclear attack submarines, the last seven DD 963 destroyers and the fourth ship of the DLGN 38 Class. The 688 Class SSNs are being built to operate against enemy submarines and surface ships for protracted periods and at high speed. These ships possess, in addition to their higher speed, an improved sensor system, improved acoustic countermeasures, and advanced fire control system and a central computer complex to integrate navigation, fire control and command display subsystems. The DD 963 destroyers have been designed as carrier-capable ASW escorts, with emphasis on seakeeping, ship silencing, efficient integration of weapon systems, reduced manning and ease of maintenance. They will replace our over-age destroyers.

One DLGN and $92.0 million in advance procurement funds for a follow-on buy are included. The Congress provided advance procurement funds for both of these ships in the FY 1974 Appropriations Act.

In the next category are fourteen new warships which are intended to operate in lower threat situations.

High Threat Versus Low Threat Situations

Chairman McClellan. Explain the specific difference between high threat situations and low threat situations. What would happen if a low threat ship were used in a high threat area?

Admiral Cooke. The specific difference between high and low threat situations is the degree to which Soviet air forces can conduct a coordinated, concentrated air attack on U.S. Navy forces, and is basically a function of range from Soviet land bases. Forces in low threat areas are subject to and must be capable of dealing with air attacks, as well as surface and submarine attacks, for which they are optimized, but their level of intensity and frequency would be governed by the range limitations of the attacking platform and the amount of attrition suffered enroute. If a ship whose characteristics are optimized for operations in low threat situations were to be utilized in high threat areas, it would have to be supplemented with forces appropriate to the higher level of air threat.

Chairman McClellan. Proceed.

Admiral Cooke. By virtue of its helicopters and V/STOL aircraft, the Sea Control Ship will provide an anti-submarine warfare, anti-air warfare, surveillance and surface strike capability not currently available to surface forces operating without an aircraft carrier in company. The Patrol Hydrofoil Missile Ships (PHMs) will operate against major surface combatants and conduct surface surveillance and blockade straits or littoral areas. The PF will supplement other planned and existing escort ships in the protection of amphibious forces, underway replenishment groups and military and merchant convoys. The PF will be equipped with an advanced fire control system, a 76 MM gun and improved sensors and missile launching system. Two Patrol Gunboats identified as FPGs are for South Vietnam.

The next category is support ships. Two of the three ships—the AO fleet oiler and the ATF, or oceangoing tugboat, represent the first of new ship classes. They will replace ships whose ages range upward from 28 years. The AD is a follow ship in a program to modernize our destroyer tender fleet.

The four conversions in this year's request bring to a close the POLARIS to POSEIDON conversion program. The four conversions include the last three submarines and a submarine tender. When completed, the program will have encompassed the conversion of 31 of the 41 ballistic missile firing submarines, four submarine tenders and one Range Instrumentation Ship.

The fiscal 1975 budget contains advance procurement funds for the fourth through seventh TRIDENT submarines and for the fifth ship of the DLGN–38 Class.

The $71.9 million shown in the escalation line item was deferred by the Congress last year because the funds were not required for obligation. These funds are requested to fully fund the currently approved shipbuilding programs.

The $102.2 million balance of funding for shipbuilding is for small craft, outfitting material and post delivery work.

CHART 18.—OTHER PROCUREMENT

[In millions of dollars]

	Fiscal years—		
	1974	1975	Difference
Total	1,505.6	1,684.5	+178.9
Major shipboard equipment	617.1	657.0	+39.9
Reactor plant equipment	154.1	166.9	
Radars	19.3	23.1	
Sonars	79.8	115.1	
Surface missile systems equipment	99.3	45.6	
Other shipboard equipment	264.6	306.3	
Ordnance	319.9	330.0	+10.1
Air-launched ordnance	179.0	197.1	
Ship gun ammunition	65.2	53.4	
Other ordnance	75.7	79.5	
Fleet ballistic missile equipment	44.5	135.3	+90.8
Spares and repairs parts	129.6	128.9	−.7
Other support equipment	394.5	433.3	+38.8

Other Procurement

The FY 1975 Other Procurement, Navy request is $179 million over the revised FY 1974 program. This appropriation is vital to the efficient operation of our ships and shore establishment, in addition to providing the ammunition to meet training and combat requirements. Included is a variety of procurement items, from simple office equipment to sophisticated electronics systems.

This request continues to emphasize modernization and improvement of fleet readiness and can be summarized in broad categories as follows: the first is Major Shipboard Equipment at $657 million, an increase of $40 million over FY 1974. Major programs in this category include reactor power units and components, radars, sonars, and surface missile systems equipment.

The next major category is Ordnance at $330 million, $10 million over the FY 1974 programs. The budget provides for training consumption and an incremental step towards achieving the inventory objective. Air launched ordnance includes substantial amounts for the ROCKEYE and Anti-Personnel/Anti-Material cluster bombs. These modern weapons, as well as smaller procurements of WALLEYE data link modifications and Laser Guided Bomb Kits, will provide significant qualitative and quantitative improvements in readiness. The Ship Gun Ammunition funding is primarily for five inch ammo.

The next category is Fleet Ballistic Missile Equipment. The $135 million will continue support for the POLARIS/POSEIDON program, as well as provide the first major support for the TRIDENT program, thus the large increase in funding of $91 million. TRIDENT support is required for the most part to provide training equipment to meet the first submarine delivery.

Under spares and repair parts, we include both initial outfitting for new equipment being introduced to the fleet and replenishment of existing spares used in daily operations. Supply effectiveness of 80% can be achieved at the budgeted level of $129 million, virtually the same funding level as in FY 1974.

Other support equipment, funded at $433 million, up $93 million, includes such items as shore electronics and communications equipment ($125 million); production facilities ($20 million); vehicular equipment ($49 million); training equipment ($92 million); cryptologic and cryptographic equipment ($40 million); and other miscellaneous support equipment.

CHART 19.—PROCUREMENT, MARINE CORPS

[In millions of dollars]

	Fiscal year—		
	1974	1975	Difference
Total	219.6	228.8	+9.2
Significant items:			
Tank (W60A1), W–88 recovery vehicle and associated ammunition	54.4	91.0	
Hawk missile system	30.1	20.6	
Dragon missile system		19.8	
TOW missile system	22.3	30.8	
Communications and electronics equipment	35.2	13.5	
Support vehicles/enaineer and other equipment	56.1	43.0	
Other ammunition	21.5	10.1	

Procurement, Marine Corps

Significant Marine Corps programs are the M60A1 tank and the Improved HAWK, DRAGON, and TOW missile systems. The M60A1 tank was introduced to the Marine Corps in FY 1974; the funds here are for 154 tanks. This procurement is the second year of a three year buy and is required to modernize the U.S. Marine Corps tank fleet. Associated procurements include tank ammunition and 40 Tank Recovery Vehicles.

The Improved HAWK Missile System is in its fourth year of a five year buy. The improvement involves major modification of the Basic HAWK ground equipment and a new missile. The Improved HAWK will provide the U.S. Marine Corps with an all weather day and night low-to-medium altitude air defense capability.

The DRAGON Missile System is a lightweight man-portable antitank missile which will provide antitank/assault fire at the infantry battalion level for employment against tanks and hard point targets.

The TOW Missile System is a heavy, long range antitank/assault missile capable of employment against armored vehicles and fortified point targets.

The remainder of the request is for continued modernization of communications and electronic systems, support equipment, and replenishment of ammunition stocks.

CHART 20.—RESEARCH AND DEVELOPMENT

[In millions of dollars]

	Fiscal years—		
	1974	1975	Difference
Total appropriation	2,743.4	3,261.9	+518.5
Significant items:			
Trident missile	527.7	648.8	
Trident submarine	126.3	107.2	
Fighter prototype	0	34.0	
Surface effect ship	60.9	58.0	
Harpoon	81.1	57.7	
V/STOL	30.2	27.2	
PHM	18.9	15.7	
Aegis	40.2	67.0	
Funding realinement	0	84.2	

RESEARCH AND DEVELOPMENT

The $3.3 billion request for RDT&E compares with $2.7 billion in 1974. The $518.5 million change reflects not only major program changes as shown on the chart, but also pay increase costs, funding transfers from other appropriations, and price inflation. The program reflects our continuing objective to modernize strategic and tactical Naval Forces and to provide the technologic base for future weapons systems.

Since this appropriation includes 234 budget sub-activities or line items, many of which include more than one project, I will touch on only a few of the more significant programs.

The TRIDENT missile development funding represents the largest single item in the RDT&E program and includes full scale propulsion tests, fabrication and assembly of the first R&D missile, and missile re-entry body flight tests. TRIDENT submarine effort, now approaching the procurement phase, will include continuation of engineering and design of the functional subsystems, completion and testing of the prototype missile tube and completion of sonar design and factory testing.

The Fighter Prototype program is being initiated to define and develop a lower cost alternative fighter to replace the F–4 and augment the F–14A force. Initial effort will examine industrial capability to provide such an aircraft and evaluate contractor proposals.

The revolutionary Surface Effect Ship concept could provide a major breakthrough in surface warfare. The results of our preliminary design efforts for 2,000-ton sized SES Prototypes and testing of the two 100-ton Prototype test craft indicate that the effort should be continued. The program has been extended twelve months to insure acquisition of more test data before starting the next phase, contract design and construction of a 2,000 ton SES.

The development of the HARPOON air-launched, surface-launched and sub-surface-launched missile has progressed well and is nearing the production phase. We are now in the contractor test and evaluation phase of this anti-ship missile. Subsequent to completion of this phase in fiscal 1975 we will undertake operational evaluation and initiate pilot line production. The introduction into the fleet of this versatile missile will provide our air, surface and sub-surface units with a counter to the Soviet surface forces.

In the field of Air R&D, development of V/STOL Technology for high performance V/STOL fighter and attack aircraft is included. The Thrust Augmented Wing (TAW), the Lift plus Lift-cruise, and the improved HARRIER types are under advanced development.

The NATO PHM hydrofoil provides a continuing effort toward sea control in a coastal/narrow sea scenario. Construction of the two lead ships is now underway. The overall program is a joint venture with the Germans and the Italians. The basic ship and some installed equipment will be common to all three navies; however, weapons and electronics suits will differ in some respects.

The AEGIS is a versatile anti-air defense system using an advanced concept radar system, which can be used in conjunction with all contemporary weapons including HARPOON and the Standard Missile Two (SM–2). It will provide our fleet with defense against the air and surface threats—both missiles and aircraft—of the 1980's. The DG construction program has been restructured in line with AEGIS development, thus providing a platform/weapon system of synchronized availability. The AEGIS Engineering Development model is now installed in USS NORTON SOUND for tests this year.

The funding realignment refers to programs which were previously included in procurement and operating accounts and have been moved into RD in accordance with Congressional and DOD guidance.

CHART 21.—MILITARY CONSTRUCTION

[In millions of dollars]

	Fiscal years—		
	1974	1975	Difference
Military construction, Navy and Navy Reserve	703.7	664.7	−39.0
Program by activities:			
Major construction	604.1	572.4	
Minor construction	15.0	17.0	
Planning and design	59.7	51.5	
Access roads	2.0	3.0	
Navy reserve	22.9	20.8	
Significant programs:			
Trident	123.1	107.3	
Troop housing	81.9	76.8	
Medical modernization	41.8	87.5	
Cold iron	25.9	22.1	
Pollution abatement	82.7	59.2	
Shipyard modernization	18.4	16.8	
NARF modernization	10.0	10.0	
Planning for University of Health Sciences		6.0	

Military Construction

The Navy's fiscal 1975 budget includes $664.7 million for military construction; within this total there is $20.8 million for the reserve forces. The broad categories of military construction funding are shown at the top of the chart under the "Program by activities" line.

Looking at the significant programs, there is $107 million for TRIDENT. This is for the continued planning and construction of the refit facility at Bangor, Washington from which the TRIDENT submarines will operate. This is the second increment of funding for construction of this facility; the first increment was requested in the fiscal 1974 program.

A substantial portion of the construction budget is for facilities to support Navy and Marine Corps personnel. Almost $77 million is being requested for bachelor housing and dining facilities. $87.5 million is being requested for modernization of medical activities. This is the second increment of a SECDEF directed program to improve medical facilities. Also related to the Navy's efforts to improve conditions for personnel is the on-going Cold Iron Program for which $22.1 million is requested. This program provides utilities at pierside so that ships can shut down their power plants while in port, allowing a reduction of watchstanders and permitting maintenance to be performed on ships machinery at dockside.

This year's construction budget contains over $59 million for projects to abate air and water pollution.

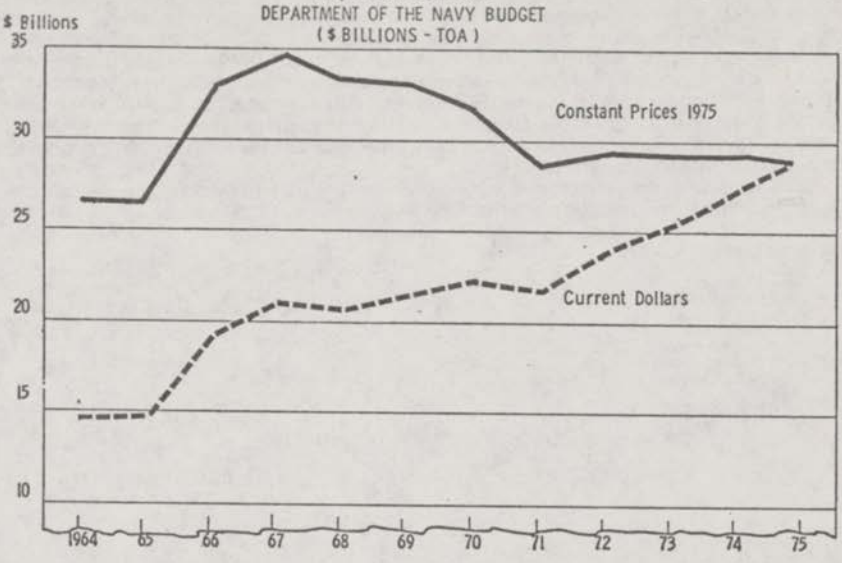
A modest amount is again included in the construction budget for continuing the modernization of the Navy's shipyards and aircraft rework facilities.

The fiscal 1975 Navy construction budget includes, for the first time, funds for the new Uniformed Services University of Health Sciences, authorized by Public Law 92–426 and to be constructed at Bethesda, Maryland. Six million dollars is requested for planning and design of the University. Funds for construction are expected to be requested next year.

This completes the portion of my presentation covering individual appropriations. In the next two charts I would like to summarize in a different perspective.

CHART 22

FINANCIAL SUMMARY
DEPARTMENT OF THE NAVY BUDGET
($ BILLIONS - TOA)



COMPARISON OF CONSTANT AND CURRENT DOLLARS

The lower line of this chart shows the Navy's budget for the past seven years in terms of current dollars. The upper line adjusts these estimates for the same period to constant Fiscal 1975 prices; i.e., it expresses past program values in terms of Fiscal 1975 purchasing power. This allows review of budget trends since 1964 on a comparable basis. The chart shows that while the current dollars devoted to the Navy's budget continue to increase, the actual purchasing power expressed in constant dollars decreases slightly below the Fiscal 1974 level, and substantially below the high point of 34.7 billion in Fiscal 1967. The two primary reasons for this reduced buying power are price inflation and pay increases for our civilian and military personnel.

CHART 23.—TRENDS IN OPERATING VERSUS INVESTMENTS COSTS

Category	Fiscal years—				
	1964	1968	1973	1974	1975
Operating percent of budget	48	53	52	54	54
Investment percent of budget	52	47	48	46	46
Procurement	(40)	(35)	(36)	(33)	(32)
Research	(11)	(9)	(10)	(10)	(12)
Construction	(1)	(3)	(2)	(3)	(2)

TRENDS IN OPERATING VERSUS INVESTMENT COSTS

This chart breaks the Navy's budget by operating vs. investment costs and shows trends in these categories since 1964. Operating costs have increased during the past decade due to increased costs of military and civilian manpower. While operating costs have increased, the percentage of total funds devoted to investment costs decreased over the same period, and now represent less than 50% of our total budget. Within the investment category, nearly one-third of the Navy's Fiscal 1975 budget is allocated to procurement programs and there has been an increase in research for the continued development of future weapons to meet our military requirements.

Mr. Chairman, this concludes my statement. I will be pleased to answer any questions which you may have with respect to our fiscal 1975 budget.

Military Personnel, Navy

Chairman McClellan. The next appropriation to be considered will be that for "Military personnel, Navy."

PROGRAM AND FINANCING

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

32-383 O - 74 - 14

MILITARY PERSONNEL, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	IDENTIFICATION CODE 07-05-1453-0-1-051	1973 ACT	1974 EST	1975 EST
	PROGRAM BY ACTIVITIES:			
	DIRECT PROGRAM:			
	1. STRATEGIC FORCES	169,659	178,309	183,909
	2. GENERAL PURPOSE FORCES	2,758,856	2,862,154	2,847,802
	3. INTELLIGENCE AND COMMUNICATIONS	250,393	253,910	242,424
	4. AIRLIFT AND SEALIFT	4,983	4,933	4,808
	5. GUARD AND RESERVE	169,853	173,724	179,715
	6. RESEARCH AND DEVELOPMENT	70,551	71,640	72,058
	7. CENTRAL SUPPLY AND MAINTENANCE	126,531	124,171	119,835
	8. TRAINING, MEDICAL, AND OTHER GENERAL PERSONNEL ACTIVITIES	1,792,940	1,916,309	2,014,834
	9. ADMINISTRATION AND ASSOCIATED ACTIVITIES	96,659	94,411	85,298
	10. SUPPORT OF OTHER NATIONS	21,037	14,039	14,517
	TOTAL DIRECT PROGRAM	5,461,462	5,693,600	5,765,200
	REIMBURSABLE (TOTAL)	37,974	44,300	45,000
10	TOTAL OBLIGATIONS	5,499,436	5,737,900	5,810,200
	FINANCING:			
	RECEIPTS AND REIMBURSEMENTS FROM:			
11	FEDERAL FUNDS	-18,384	-23,650	-24,350
13	TRUST FUNDS	-299	-500	-500
14	NON-FEDERAL SOURCES	-19,291	-20,150	-20,150
22	UNOBLIGATED BALANCE TRANSFERRED FROM OTHER ACCOUNTS	-31,921	.....	.....
25	UNOBLIGATED BALANCE LAPSING	24,663	.....	.....
	BUDGET AUTHORITY	5,454,204	5,693,600	5,765,200
	BUDGET AUTHORITY:			
40	APPROPRIATION	5,429,060	5,261,450	5,765,200
41	TRANSFERRED TO OTHER ACCOUNTS	-1,756	.....	.....
42	TRANSFERRED FROM OTHER ACCOUNTS	26,900	.....	.....
43	APPROPRIATION (ADJUSTED)	5,454,204	5,261,450	5,765,200
44.30	PROPOSED SUPPLEMENTAL FOR MILITARY PAY RAISES	.....	432,150	.....
	RELATION OF OBLIGATIONS TO OUTLAYS:			
71	OBLIGATIONS INCURRED, NET	5,461,462	5,693,600	5,765,200
	OBLIGATED BALANCE, START OF YEAR			
72.40	APPROPRIATION	109,689	181,749	223,349
72.49	CONTRACT AUTHORITY	.....	1,735	1,735
	OBLIGATED BALANCE, END OF YEAR			
74.40	APPROPRIATION	-181,749	-223,349	-255,949
74.49	CONTRACT AUTHORITY	-1,735	-1,735	-1,735
77	ADJUSTMENTS IN EXPIRED ACCOUNTS	-5,647	-1,190	.....
83	DEFICIENCY IN EXPIRED ACCOUNTS, START OF YEAR	-95,718	-59,736	-51,026
84	DEFIENCY IN EXPIRED ACCOUNTS, END OF YEAR	59,736	51,026	.....
85	DEFICIENCY APPROPRIATION	42,399	9,900	51,026
85	DEFICIENCY APPROPRIATION	1,735	.....	.....
90	OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL	5,390,172	5,226,350	5,726,100
91.30	OUTLAYS FROM MILITARY PAY RAISE SUPPLEMENTAL	.....	425,650	6,500

Statement of Vice Adm. D. H. Bagley

BIOGRAPHY AND PREPARED STATEMENT

Chairman McClellan. The principal witness for this appropriation will be Vice Adm. D. H. Bagley, Deputy Chief of Naval Operations for Manpower. Your biography and prepared statement, together with questions, will be inserted at this point in the record.

Admiral Bagley. I am submitting my statement for the record and I have a few slides to which I would like to talk.

Chairman McClellan. The full statement of Admiral Bagley may be printed in the record at this point. You may highlight it, summarize it and present your charts.

[The biography and statement follows:]

Biography of Admiral Bagley

David Harrington Bagley was born in Raleigh, North Carolina, on December 7, 1920. He attended the Naval Academy and was graduated and commissioned Ensign on June 9, 1943. He attended the Naval War College (1953–1954).

He advanced to the rank of Vice Admiral on February 2, 1972, when he assumed the duties of Deputy Chief of Naval Operations (Manpower and Naval Reserve) and Chief of Naval Personnel. Prior to his present assignment, Rear Admiral Bagley served as Assistant Deputy Chief of Naval Operations (Personal Services) and Assistant Chief of Naval Personnel for Personal Affairs. In this latter position, he served as the Navy's OMBUDSMAN, providing a single contact point between the top management echelons and all Navymen and their dependents. Other significant positions of responsibility have included assignments in the Office of the Joint Chiefs of Staff; in the Office of the Assistant Secretary of Defense (International Security Affairs); and as Executive Assistant and Naval Aide to the Under Secretary of the Navy.

In SEASIA combat operations he commanded Crusier-Destroyer Flotilla NINE; Cruiser-Destroyer Group, SEVENTH Fleet; and the USS OKLAHOMA CITY.

During World War II, he served on the destroyer USS RINGGOLD, participating in Pacific raids at Hollandia, Leyte, Iwo Jima, Okinawa and the THIRD Fleet operations against Japan. Additionally, he commanded the guided missile ship USS LUCE and the destroyer USS HENDERSON. Vice Admiral Bagley has been awarded the Legion of Merit, with four Gold Stars in lieu of subsequent awards, as well as numerous campaign, service and theater medals.

Vice Admiral Bagley is married to the former Charlotte Lee Hartwell, of San Mateo, California. They have five children, Marie Louise, David, Peter, Christopher and Laura.

Prepared Statement

Introduction

Admiral Bagley. Mr. Chairman and members of the Subcommittee; I am Vice Admiral David H. Bagley, Chief of Naval Personnel and Deputy Chief of Naval Operations for Manpower. I have the privilege of appearing and testifying in support of the FY 1975 Military Personnel, Navy, appropriation request.

My statement will consist of an overview of the FY 1975 MPN budget request, including the manpower and personnel requirements provided for therein; a discussion of financial management of the MPN appropriation; a review of major personnel problem areas, including personnel management improvements; and concluding recommendations. Additionally, Attachment (1), hereto, identifies Navy responses to specific directions of the Congress in providing the FY 1974 MPN appropriation and active duty military strength authorization.

FY 1975 MPN Budget Request

A. *Budget Summary.* An MPN appropriation of $5,765,200,000 is requested to support 554,026 man years and 540,380 officer, enlisted and midshipmen end-strength in FY 1975. This represents a reduction of 10,707 in end strength from FY 1974, as currently planned, and 25,940 less than our initial FY 1974 request last year. However, our funding requirements have increased by $45,100,000. This net increase consists of a reduction of $123,939,000 related to a lower strength and other program decreases, offset by annualization of the 1 October 1973 military pay raise and various other authorized increases, as detailed on page 1–13 of the FY 1975 MPN budget submit. As may be expected, the FY 1975 estimate does not include provision for the October 1974 projected pay raise, though it is understood that the President has provided for this item in the overall federal budget.

Cost of Projected Pay Raise

Chairman McClellan. Estimate the Military Personnel, Navy, cost of the projected October 1974 pay raise.

Admiral Bagley. The FY 1975 MPN estimated cost for the projected October 1974 pay raise is $239.6 million.

Chairman McClellan. Proceed.

Admiral Bagley. A summary of these data is provided:

MILITARY PERSONNEL NAVY BUDGET SUMMARY, DIFFERENCES—FISCAL YEAR 1974 VERSUS FISCAL YEAR 1975

[Dollar amounts in thousands]

	Fiscal years—			
	1973	1974	1975	Changes 1974 versus 1975
Man-years	579,667	562,246	554,026	−8,220
End strength	564,308	551,087	540,380	−10,707
Dollars [1]	$5,461,462	$5,720,100	$5,765,200	+45,100

[1] Excludes reimbursables.

B. Navy Manpower Requirements

(1) *General.* The FY 1975 MPN budget request is based on approved Navy manpower requirements which are a function of required force levels and mix. These requirements reflect the need to be responsive during military contingencies anywhere in the world, the requirement to conduct sustained operations at sea, and the training and education of our officer and enlisted personnel.

Supplemental Funds

Chairman McClellan. Why were additional funds requested for the Navy's operations during the Middle East war of last October if the budget is predicated on the need to be responsive to military contingencies and conduct sustained operations at sea?

Admiral Bagley. There were no requests for additional FY 1974 MPN funds related to the Middle East operation. However, supplemental funds were requested for pay raises and other increased costs.

Chairman McClellan. Proceed.

Admiral Bagley. We must also provide a "pipeline" for nonstructure manpower, or "Individuals": Transients, Patients, Prisoners, Recruits, Students and Midshipmen. A table of Navy military manpower requirements by major categories or subcategories is provided on page 3.

(2) *Requirements Determination.* We have developed analytical procedures to establish the manpower requirements for ships, squadrons and shore stations after the force level and mix have been determined.

Force Level Determinations

Chairman McClellan. Explain who determines the Navy's force level and mix and how it is determined.

Admiral Bagley. The overall strategy and fiscal guidance is issued by the Secretary of Defense. Based upon this guidance, the Secretary of the Navy, with the recommendations and advice of the Chief of Naval Operations and the Commandant of the Marine Corps, proposes a force level mix that maximizes threat satisfaction within resource availabilities. The Secretary of Defense, in consideration of the Secretary of the Navy's recommendations, determines the total force mix structure for the Department of Defense and, of course, the Navy.

Navy Military Manpower Requirements[a]/
(Active Duty End Strengths in Thousands)

	FY 73 (Actual)	FY 74	FY 75
Strategic Forces	19	19	19
General Purpose Forces	255	247	247
Land Forces	2	3	3
Tactical Air Forces	63	67	68
Naval Forces	190	177	176
Mobility Forces	*	*	*
Auxiliary Forces	33	33	30
Intelligence & Security	13	12	10
Centrally Managed Communications	10	11	11
Research & Development	7	7	7
Support to Other Nations	*	*	*
Geophysical Activities	2	2	2
Mission Support Forces	77	72	77
Reserve Components Support	8	8	8
Base Operating Support	39	36	41
Crew & Unit Training	13	14	14
Command	16	14	14
Central Support Forces	89	91	84
Base Operating Support	5	5	5
Medical Support	20	20	19
Personnel Support	7	7	7
Individual Training	41	44	38
Command	9	8	8
Logistics	7	6	6
Federal Agency Support	1	1	1
Individuals	91	89	84
Transients	32	25	26
Patients & Prisoners	6	4	3
Trainees & Students	50	56	50
Cadets	3	4	4
Total Navy	564	551	540

* Indicates less than 500 spaces.
a/Includes Navy personnel serving with the Marine Corps.
Note: Details may not add to totals due to rounding.

Chairman McCLELLAN. Proceed.

Admiral BAGLEY. Although the actual methodology for ships and squadrons is different than that used for shore stations, the concept is similar. Each employs a common empirical approach which evaluates the mission of the unit, quantifies the workload, and assigns the numbers and types of billets and positions based on that necessary workload.

The basic methodology is one of documentation of all the required workload using accepted industrial engineering techniques. Trained teams gather workload data in the actual operating environment. The observed workload is used directly to compute manpower requirements in the ship and squadron programs, or converted to uniform staffing standards which form the basis for establishing shore requirements. Where appropriate the on-site observations are supplemented by data gathered through other Navy management information systems such as the Maintenance and Material Management (3-M) System.

Once the required workload has been validated for a given activity, the approved Navy work week of 74 hours (watchstander) and 66 hours (non-watchstander) afloat and the goal of 40 hours ashore are applied in a series of calculations to derive the manpower requirement. The calculations also take into account human performance factors such as productivity, training, and other service diversions.

MANPOWER REQUIREMENTS

Chairman McCLELLAN. Explain how manpower requirements take into account productivity and training. Can this be used to reduce manpower requirements? Give a specific example of how these things affect manpower requirements.

Admiral BAGLEY. In general, workload requirements provide the documentation for the largest portion of the manhour requirements for unit operations, maintenance and support. These hours do not, however, represent the full sum of impositions upon any individual's time. Additional elements impose manpower requirements to be absorbed by the crew under the general heading of *Allowances*. The *Productive Allowance* factor is a percentage allowance applied to the basic productive work requirements to reflect delays arising from fatigue, environmental effects and unavoidable interruptions which serve to increase the time required for work accomplishment. It is based on data gathered from the fleet and is comparable to accepted industrial standards. The factor applied is currently being validated by a work study effort conducted by Navy Manpower and Material Analysis Center, Pacific. The *Training Allowance* provides for an activity of a practical or instructional nature which contributes directly to combat readiness or personnel effectiveness, but which otherwise detracts from individual productivity. Formal training, proficiency training, and drills and practices are included in this category. The allowances are accounted for in the Navy Standard Workweek shown below and used in the development of ship and aircraft squadron manning documents.

[Hours per week]

	Ships at sea		Aircraft squadrons at sea	
	Watchstanders	Nonwatch-standers	Group IX personnel	Administrative or support personnel
Watches	56.00			
Training	2.00	3	3.50	3
Service diversions	2.50	3	4.50	3
Work	11.25	50	52.00	50
Productive allowance	2.25	10	10.00	10
Total	74.00	66	70.00	66

To attempt to reduce manpower requirements by decreasing these allowances would be unrealistic.

SERVICE DIVERSIONS

Chairman McCLELLAN. What is meant by "other service diversions"?

Admiral BAGLEY. Service Diversions are those actions required of personnel by regulations or the nature of shipboard/squadron routine which must be or are normally accomplished during off-watch normal working hours and which

therefore deduct from individual capacity to do productive work. This category includes, but is not limited to, inspections, sick call, quarters, pay line, and time spent in participation on boards and committees. The Standard Navy Workweek, as promulgated by OPNAVINST 5330.8 (series), delineates the allowance to be applied to individual weekly work balances.

Chairman McCLELLAN. Proceed.

Admiral BAGLEY. This statement of manpower requirements, termed organization manning, represents the minimum spaces necessary for a unit to meet its approved mission and tasking.

(3) *Force Manpower Changes.* There was concern expressed last year, when I was testifying before the committees, as to why force manpower did not decrease proportionately with the decrease in active ships. A change in force manpower is a function of the mix of ship types in the force, not the number. The ship types that have been dropped in the past several years were predominantly World War II carriers, destroyers and minesweepers. Thus, while the number of units dropped was large, the average manpower per unit was less than the manpower required for new ships. While we are operating fewer ships, the remaining ships, plus new ones coming into the force, are more complex weapons platforms. They require more people to operate and maintain. Another contributing factor is the upgrading of equipment of existing hulls and aircraft. You can see why force manpower has not decreased the same percentage as the percentage reduction in ships and aircraft. Illustrative examples are listed below:

Force manpower per unit

CVA–19	1,985
DD–692	282
LST 1156	151
F–4 Squadron	274
A–4 Squadron	198
CVAN 68	3,089
DDG	338
LST 1179	223
F–14 Squadron	284
A–7 Squadron	249

SHIP EQUIVALENCE

Chairman McCLELLAN. Provide measures of mission capabilities of each ship shown in the above chart. Tell how many CVA–19s it would take to perform the same mission as a CVAN–68, etc., for each ship type.

Admiral BAGLEY. The following measures of mission capabilities are provided for the ships indicated. The ship-equivalence is indicated by showing the older ship with a value of "1", the newer ship as a multiple of the old.

	CVA–19	CVAN–68
Single strike capability	1.0	2.0
Ordnance endurance	1.0	3.8
Jet fuel endurance	1.0	5.2
Steaming endurance	1.0	(1)
	DD–692	**DDG–2**
Antiair warfare:		
Missile	0	Tartar
Gun range	1.0	1.5
Antisubmarine warfare:		
Sonar range	1.0	2.0
Tube torpedo range	1.0	1.0
Rocket thrown torpedo	0	Asroc
	LST 1156	**LST 1179**
Troop capacity	1.0	1.1
Vehicle storage	1.0	1.5
Cargo	1.0	4.2
Speed (maximum)	1.0	1.5
Endurance (at equal speed)	1.0	1.0
Helicopter spots	1.0	2.0

[1] Virtually unlimited.

Chairman McClellan. Proceed.

(4) Combat/Support Ratio

Admiral Bagley. Preliminary to any discussion of the combat to support ratio, a definition of terms is needed.

The force manpower categories, Strategic, General Purpose, Auxiliary, Mission Support and Central Support, are described in Part B, Chapters IV, V, VI, VII and VIII of the FY 75 Defense Manpower Requirements Report. These chapters provide an understanding of allocation of Navy manpower between forces and support.

There is continuing attention to the ratio of manpower in the combat forces to that in the support forces. In recent years there has been some concern voiced that support manpower is unproductive overhead which diverts resources from combat forces. When one examines a modern, complex military force, it becomes clear that without adequate, effective support it would not be able to carry out its assigned missions. Furthermore, the Navy is unique in that it is neither possible to build complete system support into combat ships and aircraft, nor to house all required support manpower aboard. The essential question is how much support is enough and in particular how much support manpower is required.

I believe that the most meaningful definition of combat forces appears in Part C, Chapter XIII of the DOD Manpower Requirements Report for FY 1975 under the caption "Manpower Categories II." This includes only Strategic and General Purpose Forces. All ships and aircraft fall under this definition except those involved in training, research and development, transportation, and weather and oceanographic work. Some tactical support units also are included: Mobile Construction Battalions, Explosive Ordnance Disposal Units, and Amphibious Landing Beachmasters. The manpower in these combat forces is referred to as force mission manpower. *The combat forces of the Navy, as so defined, utilize 49.2% of the military personnel in FY 75.*

Navy Combat Force Percentages

Chairman McClellan. Provide historical data showing the percent of combat forces of the Navy from FY 1960 through FY 1975. What is considered the optimum percentage?

Admiral Bagley.

	Percent		*Percent*
1960–61	(1)	1969	50.3
1962	49.6	1970	46.5
1963	49.6	1971	46.2
1964	49.7	1972	46.7
1965	49.5	1973	48.5
1966	50.7	1974 (Projected)	48.4
1967	51.6	1975 (Projected)	49.2
1968	50.3		

[1] Data not available.

There is no optimum percentage. Optimally, there should be as few non-combat personnel as possible, provided that the combat forces are properly manned, trained, and supported. In order to attract and retain high caliber people in the peacetime Navy it is necessary that sufficient shore duty billets be available to keep family separation down to a tolerable level. The rapid changes in end strength since FY 1969 have resulted in wide fluctuations in new accession needs. This causes fluctuations in percentages as the Individuals accounts fluctuate. All in all, history indicates that in peacetime a *range* of 48.5% to 49.7% is optimum.

Chairman McClellan. Proceed.

Non-Combatants

Admiral Bagley. The remaining 50.8% of Navy manpower can be divided into three categories: Direct Support, Indirect Support and "Individuals".

"Direct Support" manpower is immediately in support of combat forces and is found in a wide number of units and stations. The tactical staffs afloat actually direct combat operations of the force. Centrally Managed Communications exist primarily to provide command and control channels to the combat forces. Intelligence manpower collects, evaluates and disseminates information about the enemy, or potential enemy, without which the combat forces could not be employed effectively.

Most base operations manpower is also in direct support of combat forces. Naval stations, naval air stations, and fleet support activities whose mission is to berth, provision, fuel and otherwise support the combat units are in this category. Crew and unit training is in the same category because it involves combat training for ships and aviation squadrons rather than skill training for "Individuals". Direct support requirements account for 17% of the military manpower requested in the FY 75 Budget. Thus, *combat forces and direct support generate 66.2% of the manpower requirements.*

Indirect support includes all other manpower (except "Individuals") not immediately involved in daily support of the operating forces. Research labs, hospitals and clinics, recruiting, departmental headquarters and staffs, individual training activities, shipyards, supply depots, and personnel assigned outside the Department of Defense are all included. Although these activities are not in direct support of the forces, they are necessary if the combat forces are to be able to carry out their missions.

Navy Personnel Reductions in Washington Area

Senator Young. Has the Navy reduced personnel in headquarters here in Washington as well as other locations? If so, please provide the committee with a listing of such reductions.

Admiral Bagley. Since 1969, those activities defined as headquarters in the context of the recent DOD Headquarters Review have been subjected to periodic reviews, reorganizations and reductions. Incident to the FY 73 Budget Hearings, the Senate Armed Services Committee (report dated July 14, 1972, pg. 132), stated the view that a reduction in military manpower equivalent to 25% of the "command/headquarters" could be made without adverse effect. The report stressed the desirability of reducing "dual" chains of command and redundancy of staff echelons. Although no reduction was specifically directed, the CNO ordered, in his POM reductions, that a 25% reduction be imposed upon all Navy activities in the mission category "command" which included the entire headquarters definition and lower echelon staffs and command activities as well.

Attached is a listing of Navy Headquarters activities now in the headquarters definition showing military manpower for each fiscal year from 1969 through 1975. FY 69 through 73 figures represent actual on board totals while FY 74–75 are projected levels. Aggregate headquarters military manpower data are summarized as follows:

Fiscal year:	
1969	13,943
1971	13,343
1972	12,406
1973	11,680
1974	9,951
1975	9,772
1975 proposed reduction	582
Total (1975)	9,200

The current 572 proposed headquarters reduction is in the process of being allocated to specific headquarters. These reductions will apply to FY 75 and the out years. Hence, from FY 72 through FY 75, headquarters manpower will have been reduced by 3,206 or 26%. Since FY 69, the reduction totals 4,743 or 34%.

In addition to these substantial reductions, the FY 73 Fleet Staff Reductions deleted 4,081 billets from Command Mission Category activities under the three Fleet Commanders in Chief. Included in this category were the following staffs

also contained in the current headquarters definition: The 3 Fleet CINCS, The 4 Numbered Fleets, The Type Commands.

These staffs were reduced in the current DOD Headquarters Review and most of them were also reduced and reorganized incident to last year's Fleet Staff Reduction and Reorganization. However, the greater portion of the 4,081 billet Fleet Staff Reduction was applied to lower echelon staffs and command activities in the Mission Category Command in order to respond to Senate Armed Services Committee desires to reduce redundancy and overlapping of staff echelons. In this process, over 55 staffs were disestablished in FY 73. A listing of these is also attached.

[The information follows:]

HEADQUARTERS OPS & ADMIN
Military Personnel, Navy

	ACTUAL FY 69	ACTUAL FY 71	ACTUAL FY 72	ACTUAL FY 73	PROJECTED FY 74	PROJECTED FY 75	REDUCTION FY 69-75	REDUCTION FY 72-75
NAVY HEADQUARTERS								
BUMED	164	144	149	135	135	135	- 29	- 14
BUPERS	724	676	583	578	409	409	-315	-174
NPPSA	493	762	904	812	711	701	+208	-203
SECNAV/STAFF OFFICES	402	337	297	274	251	251	-151	- 46
NAVMAT	151	122	117	95	82	81	- 70	- 36
OCEANAV	16	14	16	15	14	14	- 2	- 2
NAVINTCOM	146	119	106	94	72	82	- 64	- 24
NAVTELCOM	164	141	125	106	97	96	- 68	- 29
COMSC	72	67	48	47	51	49	- 23	+ 1
OPNAV	1380	1247	1235	1205	950	950	-430	-285
NAVSECGRU	480	506	426	347	274	271	-209	-155
WEASERVCOM	35	31	28	27	21	23	- 12	- 5
HQ MARCORPS	14	15	15	14	16	16	+ 2	+ 1
NAVAIR	364	324	310	241	138	137	-227	-173
NAVELECS	54	77	62	36	43	43	- 11	- 19
NAVFAC	85	77	80	70	53	53	- 32	- 27
NAVORD	141	141	126	88	74	71	- 70	- 55

HEADQUARTERS OPS & ADMIN
Military Personnel, Navy

	ACTUAL FY 69	ACTUAL FY 71	ACTUAL FY 72	ACTUAL FY 73	PROJECTED FY 74	PROJECTED FY 75	REDUCTION FY 69-75	REDUCTION FY 72-75
NAVY HEADQUARTERS (Con't)								
NAVSHIPS	288	209	211	99	81	81	-207	-130
NAVSUP	142	124	119	88	70	70	- 72	- 49
ONR	44	43	36	40	38	40	- 4	+ 4
COMCRUDESLANT	439	352	361	344	291	287	-152	- 74
COMNAVAIRLANT	542	562	546	525	388	369	-173	-177
COMPHIBLANT	262	234	195	177	126	126	-136	- 69
COMSERVLANT	235	220	206	169	147	146	- 89	- 60
COMINWARFOR	221	218	117	110	95	91	-130	- 26
COMSECONDFLT	142	165	138	215	175	172	+ 30	+ 34
CINCLANTFLT	758	706	645	462	352	352	-406	-293
COMSUBLANT	315	339	328	284	236	235	- 80	- 93
COMTRALANT	49	43	39	43	42	41	- 8	+ 2
FMFLANT	15	15	15	15	16	16	+ 1	+ 1
COMCRUDESPAC	405	388	336	405	269	269	-136	- 67
COMNAVAIRPAC	663	629	605	512	407	406	-257	-199
COMPHIBPAC	315	231	223	256	156	152	-163	- 71
COMSERVPAC	502	424	395	307	297	297	-205	- 98

HEADQUARTERS OPS & ADMIN
Military Personnel, Navy

	ACTUAL FY 69	ACTUAL FY 71	ACTUAL FY 72	ACTUAL FY 73	PROJECTED FY 74	PROJECTED FY 75	REDUCTION FY 69-75	REDUCTION FY 72-75
NAVY HEADQUARTERS (Con't)								
COMTHIRDFLT	151	146	126	176	193	181	+ 30	+ 55
COMSEVENTHFLT	429	323	314	261	222	216	-213	- 98
CINCPACFLT	708	565	523	507	414	410	-298	-113
COMSUBPAC	268	273	247	262	244	241	- 27	- 6
COMTRAPAC	65	68	60	51	50	48	- 17	- 12
FMFPAC	55	64	52	34	33	33	- 22	- 19
CINCUSNAVEUR	172	223	199	204	158	158	- 14	- 41
COMSIXTHFLT	178	206	192	189	170	170	- 8	- 22
CNET	119	102	120	143	150	149	+ 30	+ 29
CNTECHTRA	74	78	144	153	168	164	+ 90	+ 20
CNATRA	206	210	84	118	115	115	- 91	+ 31
CHNAVTRASUPP	0	0	8	112	334	323	+323	+315
CHIEF NAVAL RESERVE	204	163	186	167	117	117	- 87	- 69
COMUSNAVSO/COMFIFTEEN	106	94	89	87	96	96	- 10	+ 7
DIS CMDTS	755	930	749	804	746	672	- 83	- 77
MSC LANT	67	62	50	51	50	48	- 19	- 2
MSC PAC	56	53	41	40	38	36	- 20	- 5

HEADQUARTERS OPS & ADMIN
Military Personnel, Navy

	ACTUAL FY 69	ACTUAL FY 71	ACTUAL FY 72	ACTUAL FY 73	PROJECTED FY 74	PROJECTED FY 75	REDUCTION FY 69-75	REDUCTION FY 72-75
NAVY HEADQUARTERS (Con't)								
MSC EIM	25	23	24	32	26	24	- 1	-
MSC FAREAST	83	58	56	54	50	39	- 44	- 17
NAVY HEADQUARTERS TOTAL	13,943	13,343	12,406	11,680	9,951	9,772	-4,171 (30%)	-2,634 (2)
PROPOSED FY 75 REDUCTIONS						-572	-572	-572
						9,200	-4,743 (34%)	-3,206 (2)

STAFFS DISESTABLISHED OR MOVED (LANT)

NEWPORT/QUONSET POINT

COMCRUDESLANT (Move to Norfolk)

COMASWGRU 4

CVSG 56

NEW LONDON

COMSUBDIVS 21, 22, 23, 101, 102

CHARLESTON

COMDESRON 18

COMINEDIV 24

COMSUBDIVS 41, 42, 43

NORFOLK

COMCRUDESFLOT 4

COMDESRON 2

COMSUBDIVS 61, 62

LITTLE CREEK

COMPHIBOPSUPLANT

COMNAVSPECWARGRU 2

COMIUWGRU 2

KEY WEST

COMSUBRON 12

COMSUBDIV 121

STAFFS DISESTABLISHED (PAC)

SAN DIEGO

COMCVSGS 53, 59

COMASWGRU 3

COMDESRONS 1, 3

COMPHIBOPSUPPAC

COMTACGRU 1

COMSERVRON 9

COMSUBFLOT 1 *

COMSUBDEVGRU 1

COMSUBDIVS 31, 32, 51, 52

LONG BEACH

COMDESRONS 19, 29

ALASKA

COMFAIR ADAK

MOFFETT FIELD

COMFAIRWING 10

ALAMEDA (S.F.)

COMFAIR ALAMEDA

COMSERVRON 7

COMSUBDIV 71, 72

PEARL HARBOR

COMDESRON 11

COMCORTRON 1

COMSERVRON 5

COMSUBFLOT 5

COMSUBRON 7

COMSUBDIVS 11, 12, 13

COMFAIRHAW

* CONSOLIDATED AS COMSUBGRU 1 AT SAN DIEGO

Staffs disestablished: (EUR); disestablished COMPATDIV 21; COMCORTRON 8.

Reduced and collocated: COMFAIRMED, COMSERVRON 6, MOTU 6, COMSUBFLOT 8.

INDIVIDUAL TRAINING STAFFS

Chairman MCCLELLAN. Proceed.

Admiral BAGLEY. The most significant manpower investment in this category relates to individual training staffs. This includes not only instructors but also all of the personnel needed to command, administer, budget, guard, and maintain the stations where the training takes place. Students are excluded. In addition to recruit training, which teaches military fundamentals, skill and specialized training facilities are required to provide people who are qualified to operate, maintain, and repair the increasingly complex equipment and weapons systems in our combat forces. Indirect support, as defined here, accounts for 18.3% of the military manpower requested.

Another category of manpower is titled "Individuals" and is not considered as force or support. This category comprises transients, patients, prisoners, recruits, students and midshipmen.

The principal difference between force and support categories and "Individuals" is that while the force and support structure is planned analytically, "Individuals" are estimated. Those estimates are based partly on historical data (e.g., average days per move, casualty rates, etc.) and partly on current manpower plans (e.g., projected number of enlistments by month). Therefore, while structure manpower can be planned with some precision, "Individuals" must be estimated using averages or ranges because of the uncertainties involved in computing these accounts.

While the "Individuals" category, *comprising 15.5% of total Navy manpower*, offers an attractive target for short term reductions, it must be understood that they are a real requirement. In the main, "Individuals" can be reduced only by producing a larger *career* force—by increasing retention, thereby reducing recruits and students—and through the resultant stability, greatly reducing transients.

Summarizing the foregoing, and comparing to selected prior years, the following breakdown of Navy military manpower results:

[In percent and fiscal years]

	Actual		1975 budget	
	1963	1973	1974	1975
Combat forces	49.6	48.5	48.4	49.2
Direct support	[1] 50.4	16.7	16.2	17.0
Indirect support	(1)	18.6	19.2	18.3
Individuals	(1)	16.2	16.2	15.5

[1] Unable to divide into subcategories.

If "Individuals" are dropped from this computation, as discussed above, the distribution of Navy manpower in structure spaces becomes:

FISCAL YEAR 1975 BUDGET

[In percent]

	Fiscal year—	
	1974	1975
Combat forces	58	58
Direct support	19	20
Indirect support	23	22

PERSONNEL STRENGTHS

C. *Navy Military Personnel Strength.* In support of the total Navy military manpower requirements, the MPN appropriation request reflects a total active end-strength of 540,380 personnel for FY 1975, which includes 66,154 officers, 469,983 enlisted personnel and 4,243 midshipmen at the Naval Academy. An overview of pertinent officer and enlisted planning is provided in this paragraph.

OFFICERS

(1) *Officer Strength.* The requested officer end strength is the lowest in the last quarter of a century and represents *a reduction of over 20,000 since 31 July 1969.* This reduction is illustrated on page 10. I view this as a major accomplishment since increases in Navy's officer strength during the Vietnam conflict were relatively moderate.

VIETNAM WAR AUGMENTATIONS

Chairman MCCLELLAN. How many Navy personnel were directly attributable to the Vietnam war? Show officers and enlisted separately and provide the data for each fiscal year of the war.

Admiral BAGLEY. Navy military end strength was augmented for the Vietnam War starting in FY 66. As the following table shows, the end strength added for Vietnam has been eliminated.

	Officers	Enlisted men
End of fiscal year—		
1966	2,949	59,355
1967	6,624	77,820
1968	7,043	84,777
1969	10,498	96,320
1970	5,338	63,476
1971	2,733	17,349
1972	1,677	7,709
1973	14	7
1974	14	[1]7
1975	14	[1]7

[1] Projected.

Admiral BAGEY. As shown in table on page 11, "Officer End Strength by Fiscal Year", the Navy will stay within the senior officer strength limitations (0–4 through 0–10) desired by the Congress for FY 1974, and is planning further reductions in FY 1975. For the three year period ending in FY 1975, the Navy will have reduced these senior officers by over 2,400, or about an 8% reduction, as indicated in the table. This has been accomplished without benefit of officer continuation authority. With such legislation, now before the Congress, we can and want to do more to balance the officer structure and combat "grade creep".

GRADE CREEP

Chairman MCCLELLAN. Explain how officer continuation legislation would help combat "grade creep".

Admiral BAGLEY. Force reductions have resulted in curtailment of officer procurement and augmentation. It has also been necessary to release officers prior to completion of their obligated service. As a consequence, the Navy has forced attrition of junior officers and produced small new year groups, while senior officers must be retained because of tenure. It is essential that the Navy have the personnel management flexibility provided by this legislation in order to more effectively manage the officer corps and maintain a desirable grade balance.

Availabiilty of the 0–5/0–6 continuation authority will allow the service to assess portions of future strength reductions against the senior grades thus reducing impacts on our younger junior officer structure.

Flag Officer Requirements

Chairman McClellan. Explain how flag officer requirements are determined.

Admiral Bagley. Flag officer requirements are determined by the same process as that used for other officer billets. This process addresses five principal questions: Is it a valid manpower requirement? Is it a military, as opposed to civilian, manpower requirement? What is the military skill needed? What is the level of military skill and experience needed? What personnel management considerations may modify the other considerations?

To assist in answering these questions, criteria generally common to all sponsors are applied to potential requirements for flag officer positions. These criteria are grouped into three general categories as listed below:

Nature of the Position

1. Type, scope, and level of function.
2. Grade and position of superiors, principal subordinates, and lateral points of coordination.
3. Proximity and degree of supervision over the position.
4. Nature, extent, and level of officer relations with U.S. and foreign governmental officials and with the public.
5. Reflection of national emphasis and determination.
6. Special qualifications required by the position.

Magnitude of Responsibilities

7. Missions of the organization and special requirements of the position.
8. Number, type, and value of resources managed and employed.
9. Geographical area of responsibility.
10. Authority to make decisions and commit resources.
11. Auxiliary authorities and responsibilities inherent to the position.

Significance of Actions and Decisions

12. Impact on national security or other national interests.
13. Importance to present and future effectiveness and efficiency of the national defense establishment.
14. Effect on the prestige of the nation or the armed forces.

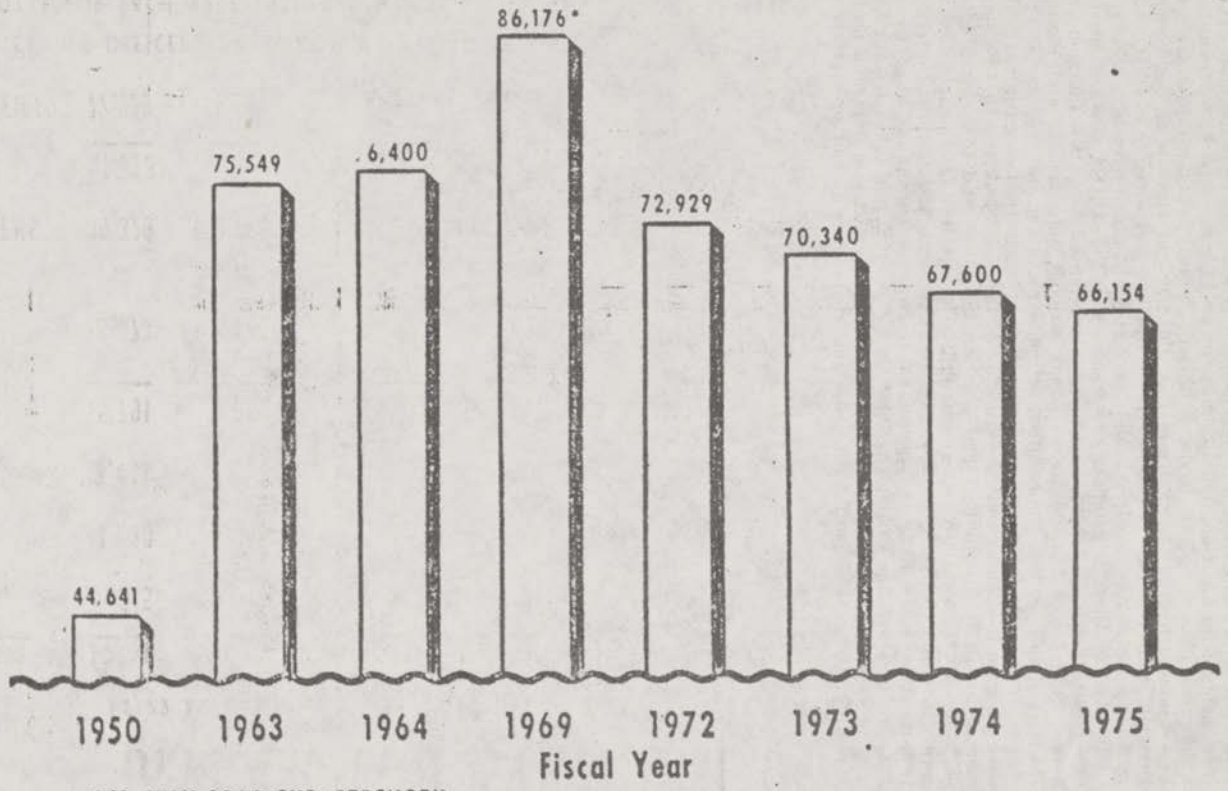
Flag officer positions required by all organizations which report to or through the Joint Chiefs of Staff (including the Defense Communications Agency [DCA], the Defense Intelligence Agency [DIA], and the Defense Nuclear Agency [DNA]), are evaluated and validated when they are initially established and annually thereafter. Guided by policies and procedures promulgated by the Joint Chiefs of Staff, the process originates with the commanders/directors of all using activities. Their recommendations are staffed by the Joint Staff, and by the manpower and functional staffs of all the Services. In evaluating the validity of positions in JCS activities, the Services apply the same criteria and standards, and make the same type of judgments, that they employ in evaluating in-Service positions.

The cooperative review by the Joint Staff and the Services culminates in a recommendation to the Joint Chiefs of Staff either to accept or reject each flag officer position recommended by the activity concerned. Upon acceptance by the Joint Chiefs of Staff, a recommended position becomes approved Joint authorization, and is manned on a preferential basis by the Service designated. In addition to the detailed, annual administrative review, flag positions in JCS activities are subjected to periodic on-site manpower surveys conducted by the JCS with the participation of all the Military Services. It was also noted that many of these positions have been designated "key positions" by the Joint Chiefs of Staff, and these come under their personal consideration whenever personnel assignment action is required.

Approval authority for all OSD sponsored flag positions is vested in the Secretary of Defense, and specific requirements may emanate from his office. The requirements determination and validation process for these positions is subject to unique considerations and is decentralized. Requirements within OSD proper are validated by the Position and Pay Management Branch of the Personnel Division, ASD(C). The Defense agencies which report directly to OSD, i.e., the Defense Supply Agency (DSA) and the National Security Agency (NSA), initially identify their flag officer requirements to the ASD(C) as the need for new positions arises. In the case of positions required for a new function or for a new agency, the Directorate of Organizational Management and Planning, DASD(C), may initiate the required action. Finally, for all three-star and four-star positions, DASD(M&RA) monitors the nominative process required by law.

In addition to sponsor controls over flag officer positions, Title 10, USC, implemented by DOD Instruction 1320.4, designates three- and four-star billets as positions of "importance and responsibility" necessitating a nomination and review process, including approval by the President and confirmation by the Senate. Also, since 1969, the Secretary of Defense has annually asked each Service Secretary, the Chairman, Joint Chiefs of Staff, and the Assistant Secretary of Defense (M&RA), to answer a series of questions on flag rank posture, including requirements, utilization, assignment policies and other matters.

OFFICER END STRENGTH TREND



*31 JULY 1969 END STRENGTH

OFFICER END STRENGTH BY FISCAL YEAR [1]

GRADE	FY 72 ACTUAL TOTAL [2]	FY 72 ACTUAL MC/DC	FY 73 ACTUAL TOTAL [2]	FY 73 ACTUAL MC/DC	FY 74 PLAN TOTAL [2]	FY 74 PLAN MC/DC	FY 74 PLAN CEILING [3]	FY 75 PLAN TOTAL [2]	FY 75 PLAN MC/DC
FLAG	315	19	309	21	294	21	303	285	20
CAPT	4,230	655	3,952	661	3,941	732	4,000	3,940	759
CDR	8,441	688	8,137	660	7,790	776	8,000	7,612	799
LCDR	15,791	2,060	15,424	2,144	14,789	1,860	14,800	14,494	2,383
TOTAL SENIOR OFFICERS	28,777	3,422	27,822	3,486	26,814	3,389	27,103	26,331	3,961
LT LTJG ENS	39,329	2,125	38,289	2,395	36,958	1,685		36,324	1,506
WARRANT	4,823	...	4,229	...	3,828	...		3,499	...
TOTAL OFFICERS	72,929	5,547	70,340	5,881	67,600	5,074		66,154	5,467

[1] EXCLUDES OFFICERS PAID FROM RPN BUDGET.

[2] TOTAL FOR EACH YEAR INCLUDES MC/DC.

[3] FOURTH QUARTER STRENGTH CEILING ESTABLISHED BY HOUSE APPROPRIATIONS COMMITTEE

Admiral BAGLEY. As an added demonstration of our commitment to reduce the senior grades, we will have made a reduction of 30 flag officers during the period FY 1973 through FY 1975. Plans call for a further decrease in FY 1976 of 10.

REDUCTION IN ADMIRAL RANK

Senator YOUNG. Has the Navy reduced the number of Admirals on active duty? If so, how many and of what rank.

Admiral BAGLEY. Since the end of FY 1972, the Navy will have reduced the number of flag officers by 30 by the end of Fiscal Year 75. The reductions will occur in the O–7 and O–8 pay grades.

Senator YOUNG. What other officer reductions has the Navy implemented?

Admiral BAGLEY. Since the end of FY 1972, the Navy will have reduced the number of officers, other than flag officers, by 6,745 by the end of FY 1975.

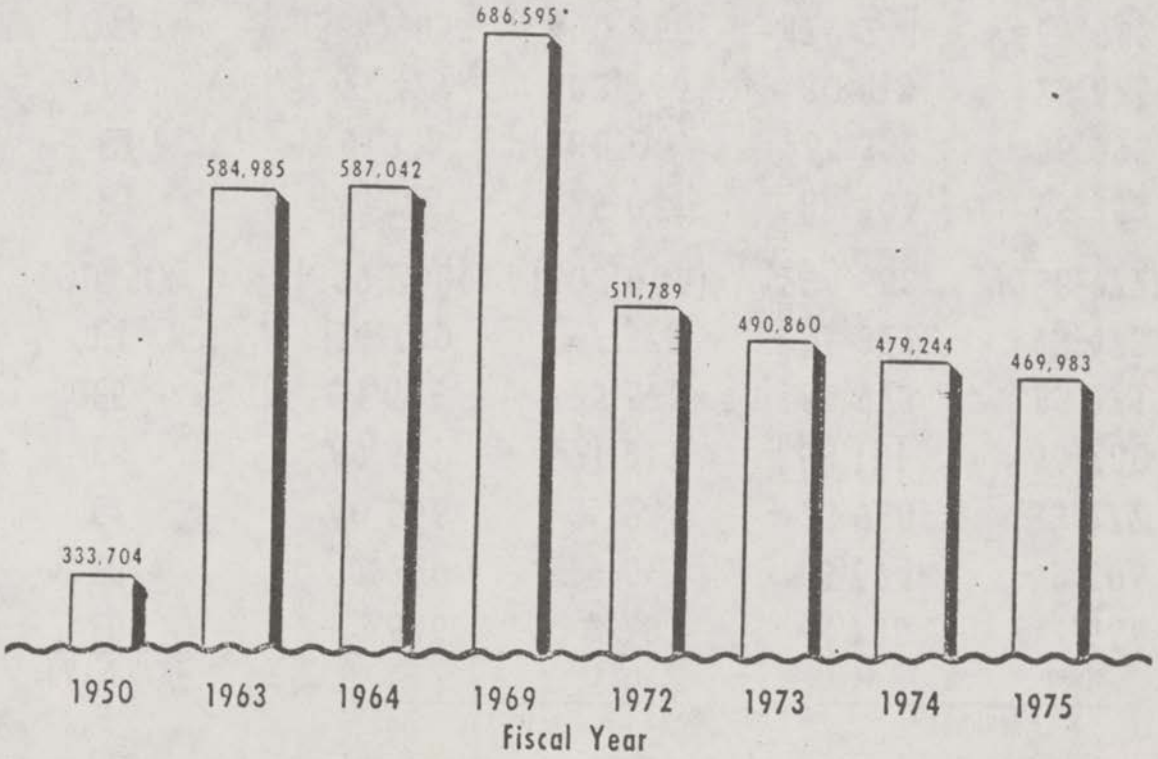
NAVAL OFFICERS ON ACTIVE DUTY

Senator YOUNG. How many officers does the Navy have on active duty that are not considered in the ceiling? Please provide the information by rank.

Admiral BAGLEY. There are 251 reserve officers on active duty who are legally excluded from the Congressionally authorized end-strength. The total by rank is as follows:

FLAG	3
CAPT	49
CDR	115
LCDR	74
LT	10
Total	251

ENLISTED END STRENGTH TREND



*31 JULY 1969 END STRENGTH

ENLISTED STRENGTH

PAY GRADE	ACTUAL FY 63	ACTUAL FY 73	PLANNED FY 74	PLANNED FY 75
E9	2,546	3,702	3,738	3,666
E8	7,269	9,001	8,674	8,506
E7	40,366	35,244	33,930	33,272
E6	69,612	71,913	68,101	66,780
E5	94,685	85,573	84,923	83,275
E4	114,790	97,573	95,322	93,473
TOP SIX	(329,268)	(303,006)	(294,688)	(288,972)
E3	143,145	75,081	88,406	95,343
E2	91,143	80,007	65,332	56,993
E1	21,429	32,766	30,818	28,675
TOTAL	584,985	490,860	479,244	469,983
TOP SIX RATIO	(56.29)	(61.72)	(61.49)	(61.49)

ENLISTED MEN

Admiral BAGLEY. The planned enlisted end-strength follows the historical trend previously reported for officers. Enlisted strength requested for FY 1975 is 469,983, a reduction of over 216,000 or about one-third since the SEASIA peak attained in July of FY 1969. Enlisted strength changes and strength by pay grade are indicated on pages 13 and 14. While we have not reflected a proportionate reduction in our pay grades E–4 through E–9, referred to as "Top Six", when compared to FY 1963, we are maintaining the ratio of petty officers to total enlisted personnel at 61.49%. Of note is the fact that we are planning about a 4% reduction in our planned E–8 and E–9 personnel compared to FY 1973, generally the same percentage cut applied to the total top six pay grades. Without a reduction in readiness this will be difficult to do in view of the officer reduction which I have mentioned. More petty officers will be required to assume responsibilities previously exercised by junior officers, but our current top six ratio is below our validated requirement of 66% even without taking into account the fewer officers. Continuing emphasis is being placed on the justification for such requirements.

APPROPRIATION FUNDING

D. MPN FUNDING REQUIREMENTS BY BUDGET ACTIVITY

(1) *General.* The FY 1975 MPN request is for an appropriation of $5,765,200,000 in new obligational authority. This subparagraph provides explanations on funding required for selected budget activities, and the chart on page 16 reflects funds requested for all six budget activities, as well as the percent of each to the total program.

(2) *Pay and Allowances of Officers.* $1,290,308,000 is requested to support planned officer strength in FY 1975. This represents a net reduction of about $7.2M from the FY 1974 level. Details on cost increases and decreases are provided on page 1–15 of the MPN Budget Request. The funds required in this budget activity are primarily based on the monthly strength planning and resultant man-years indicated in the chart on page 17.

The dotted line on that chart represents man-years we would have required had the computation been on a "straight line" basis between the end-strength of the current year and that of the budget year. However, our budgeted man-years on the solid line are 67,915, or 1,038 higher than the straight line computation.

DERIVATION OF 1038 NUMBER

Chairman MCCLELLAN. Explain how the 1038 number was derived.

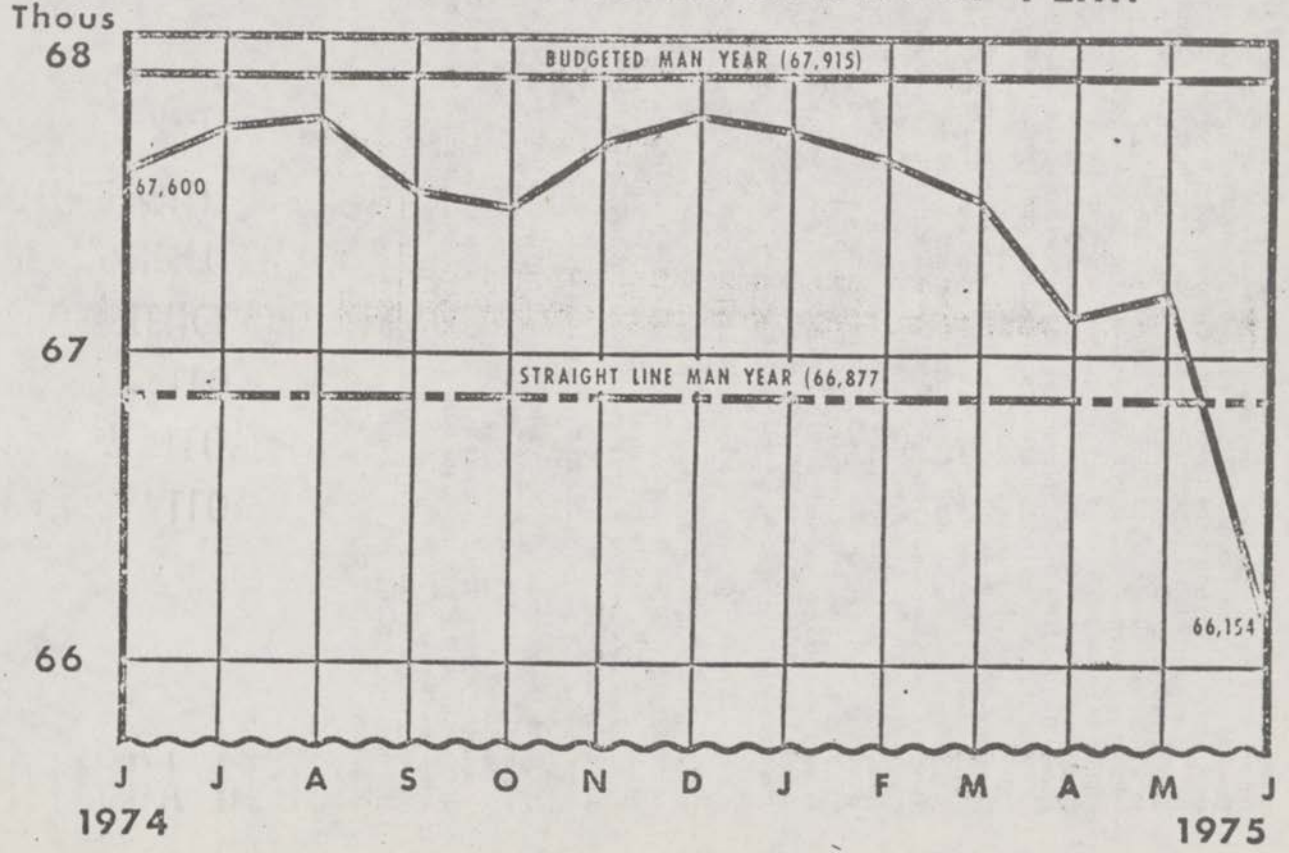
Admiral BAGLEY. The number of 1038 was derived from our experience with officers coming on active duty and leaving active duty. Retirements normally occur on the last day of the month while gains occur at various times during the month. The average gain occurs approximately one week earlier than the average loss. This overlap causes a hump relative to the straight line average during the month. We also experience a surge of gains in the early part of the fiscal year because officers who graduate from college in the May/June period report on board in the next few months causing strength to peak in the early part of the fiscal year relative to the annual begin and end strength. The net effect of these phenomena is 1038 man years above the straight line average.

MILITARY PERSONNEL NAVY $ BY BUDGET ACTIVITY

FISCAL YEAR 1975

BUDGET ACTIVITY	$ THOUSANDS	%
1. PAY & ALLOWANCES OFFICERS	$1,290,308	22.4
2. PAY & ALLOWANCES ENLISTED	3,740,625	64.9
3. PAY & ALLOWANCES MIDSHIPMEN	19,625	.3
4. SUBSISTENCE OF ENLISTED	344,934	6.0
5. PERMANENT CHANGE OF STATION TRAVEL	363,883	6.3
6. OTHER MILITARY PERSONNEL COSTS	5,825	.1
TOTAL DIRECT PROGRAM	$5,765,200	100%
REIMBURSABLES	45,000	
TOTAL FINANCIAL PROGRAM	$5,810,200	

FY 1975 OFFICER STRENGTH PLAN



Admiral BAGLEY. This hump, if you will, results from a combination of two factors. First, about 65% of our "healing arts" accessions necessarily are planned for July and August consistent with the schooling cycle. Second, and probably most important, we now have a computerized process which recognizes that we gain officers early in the month and our officer losses occur later in the month. This has the net effect of increasing officer man-years, and therefore the funds to support our personnel while they are actually on board.

(3) *Pay and Allowances of Enlisted Personnel.* Planned enlisted strength will require $3,740,625,000 in FY 1975. This represents a net reduction of about $7.5M from the FY 1974 level. Details on cost increases and decreases are provided on page 1–31 of the MPN Budget Request. The funds required in this budget activity are primarily based on the monthly strength planning and resultant man-years indicated in the chart on page 19.

As in the case of officers, the dotted line on the enlisted chart represents man-years we would have required had the computation been on a "straight line" basis between the end-strength of the current year and that of the budget year. However, our budgeted man-years are 481,961, or 7,347 higher than a straight line computation. This results primarily from the practical requirement to "front load" our recruiting plan for enlisted accessions. We must be in a position to procure the well-qualified high school graduates who are available and desire to enter the Navy during the summer and fall months, and our plan reflects recruiting one-third of our total planned annual chargeable accessions during the first quarter. Additionally, in FY 1975 we have a unique loss pattern in that a large number of USNR losses are expected to occur at the very end of the fiscal year.

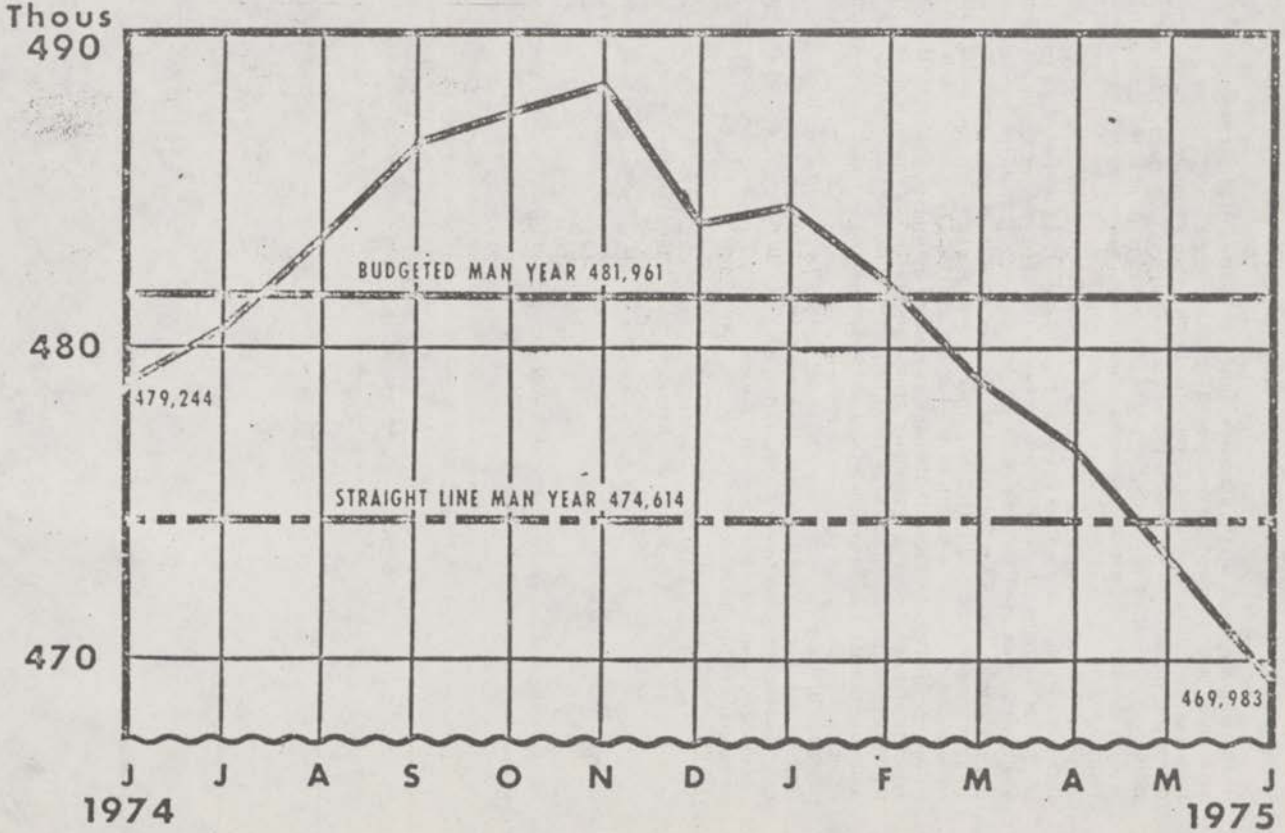
(4) *Subsistence of Enlisted Personnel.* Subsistence costs are estimated to continue to increase despite enlisted man-year reductions, $344,934,000 will be required in FY 1975, a net increase of about $19M compared to FY 1974. As indicated on page 1–52 of the MPN Budget Request, the primary reason for this net increase is the cost of the annualization of the Commuted Ration Rate Increase. This was based on a rate increase from $1.65 to $2.28 per day, effective 1 January 1974.

RESERVE LOSSES

Chairman MCCLELLAN. Why are a large number of U.S. Naval Reserve losses expected at the end of FY 1975? What makes this such a unique year and what is the cause?

Admiral BAGLEY. The number of U.S. Naval Reserve losses at the end of FY 1975 are unusually large due to the large number of USNR personnel (4573) who were transferred to MPN from RPN on 1 July 1975. Previously, these personnel were supported under the RPN account. These personnel will be separated in the May–June 75 timeframe, inasmuch as they have a two year active duty obligation.

FY 1975 ENLISTED STRENGTH PLAN



Chairman McClellan. Proceed.

PCS Moves

Admiral Bagley. (5) *Permanent Change of Station Moves (PCS)*. The Congress has been particularly concerned with the permanent change of station moves of the military services in recent years. Our program has been the subject of critical internal review and we have made significant progress in the management and control of moving our people. We continue to aim for the minimum moves required to sustain readiness and provide sea/shore rotational opportunity.

FY 1975 funds required in support of PCS moves will be $363,883,000, a net increase of about $46 million over the FY 1974 level. As indicated on page 1–60 of the MPN Budget Submit, this increase is the net result of increased entitlements and costs ($67.3M), as offset by a 22,000 reduction in the required numbers of moves ($21.4M). Additionally, further escalation influenced by the continuing energy crisis will probably affect the budget request that you are now considering.

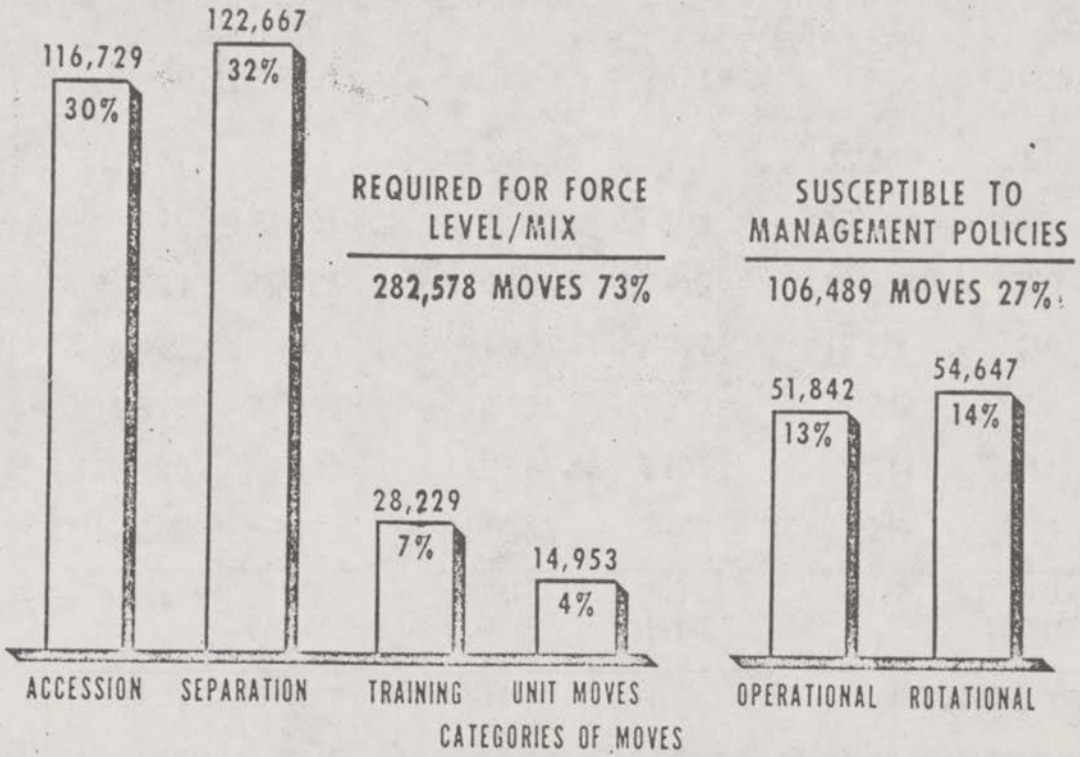
There are six categories of Permanent Change of Station moves and the percentage of total moves programmed for each category is indicated in the chart on page 21. The table shows that only about 27% of FY 1975 moves (Operational and Rotational) are susceptible to short term management decisions and policy changes.

Moves in other categories are driven by actions required to reach or maintain a given force level and force mix, and to provide the training necessary to adequately man approved forces and installations.

Let us look at personnel moves by category, with the associated average cost, as depicted in the chart.

[The chart follows:]

FY 1975 PCS MOVES



REQUIRED FOR FORCE LEVEL/MIX

282,578 MOVES 73%

SUSCEPTIBLE TO MANAGEMENT POLICIES

106,489 MOVES 27%

TOTAL MOVES — 389,067 (100%)

PERMANENT CHANGE OF STATION MOVES COSTS BY TRAVEL CATEGORY

CATEGORY	FY 74 ESTIMATE MOVES	FY 74 ESTIMATE AVERAGE COST	FY 75 ESTIMATE MOVES	FY 75 ESTIMATE AVERAGE COST	DIFFERENCE MOVES	DIFFERENCE AVERAGE COST
ACCESSIONS	113,212	$269	116,729	$343	+3,517	+74
SEPARATIONS	126,480*	$431	122,667**	$502	-3,813	+71
TRAINING	32,878	$1,082	28,229	$973	-4,649	-109
OPERATIONAL	69,956	$877	51,842	$1,053	-18,114	+176
ROTATIONAL	48,054	$2,292	54,647	$2,672	+6,593	+380
UNIT MOVES	20,687	$1,291	14,953	$2,204	-5,734	+913
TOTAL MOVES	411,267		389,067		-22,200	
COMPOSITE AVERAGE COSTS		$775		$932		+$157

* EXCLUDES 50,763 REENLISTMENT MOVES
** EXCLUDES 52,951 REENLISTMENT MOVES

Compared to FY 1974, we are planning essentially the same aggregate number of accession and separation moves in FY 1975, with accessions up by about 3% and separations down by about 3%. Training moves and their costs are down due to DOD standardization of definitions of move categories which required shifting of overseas training moves to the rotational move category. Rotational moves are up, primarily due to the moves in other categories that were redefined as rotational moves. The reduction in operational moves in FY 1975 results largely from two factors which caused the relatively high number of moves in FY 1974. First, operational moves were fiscally constrained in FY 1973, and many were delayed until FY 1974.

Fiscal Constraints for Operational Moves

Chairman McClellan. Describe the impact of fiscal constraints for operational moves on the operating Navy forces in FY 1973. Did this affect readiness?

Admiral Bagley. Yes sir. Fiscal constraints forced billet vacancies and manning of some billets at less than the required skill levels. Some officers completing command tours were temporarily assigned within the same locale until funds were available to move them to their next permanent duty. These and other personnel management inefficiencies caused by inadequate funding adversely affected readiness.

Chairman McClellan. Proceed.

Admiral Bagley. Second, the FY 74 Shore Establishment Realignment (SER) created a sizeable increase in number of moves in FY 74. Unit moves scheduled for FY 75 are down compared to this year because the major portion of the Shore Establishment Realignment has been completed. Although the total numbers of moves has decreased, cost growth driven by the inflationary spiral has increased the average cost of a move by $157, from $775 to $932. The PCS program in the budget represents firm requirements, and funds requested are sufficient to support the program at today's cost levels. However, no provision has been made for future inflation-induced cost increases.

Financial Management of the Military Personnel, Navy Appropriation

A. *General.* The MPN appropriation, as you know, is chartered to pay, feed, clothe, move and provide for specified miscellaneous personnel expenses for all navy members. Funds appropriated annually under this account are now approaching $6 billion, or about 20% of the total Navy annual budget. There has been a tendency to look at this appropriation request as "overstated" and susceptible to relatively painless reductions. I assure you that this is not the case. It can be demonstrated that the great bulk of the total appropriation is automatically committed to entitlements of personnel for pay and allowances and food, and essential permanent change of station moves. More succinctly stated, assuming attainment of approved strength levels, the Navy is pre-committed to spend 95% of the appropriation. The remaining amount is planned for essential personnel programs, but may be considered to represent some management flexibility to partially compensate for any inflation (we are prohibited from including funds for estimated inflation) or other cost growths, and to fund new initiatives or other unprogrammed costs.

New Entitlements

Chairman McClellan. What types of new initiatives can you envision in this appropriation?

Admiral Bagley. New entitlements for which the services have been authorized only if they can be funded within the existing budget. An example would be increased lump sum VRB payments. This would increase the funds required in a given fiscal year, but would reduce requirements in subsequent years—anniversary payments. No increase in the total bonus paid to an individual would be involved.

Chairman McClellan. Proceed.

Admiral Bagley. As a general rule, if budget cuts are exacted by the Congress, or other appreciable cost increases occur, my primary alternative, in the absence of a supplemental appropriation, or the approval of a reprogramming action, is to reduce the military strength of the Navy, without regard to the Congressional strength authorization or the operating needs of the fleet or shore estab-

lishment. This is the only way to avoid a violation of Section 3679 of the Revised Statutes.

LATE PASSAGE OF LEGISLATION

B. *Effect of Late Appropriation.* A factor that has inhibited effective management of the appropriation in recent years is passage of the Appropriations Act well into the fiscal year. Later Congressional action on the appropriations request makes efficient use of authorized funds virtually impossible. For FY 1974, the appropriation was not approved until 2 January 1974. Meanwhile, it was necessary to operate under Continuing Resolutions with inherent restrictive effects on personnel programs. Some typical examples of problems which are generated when the Congress does not appropriate funds prior to the beginning of the budget year are:

1. The need to anticipate possible budget cuts and plan for them at the beginning of the fiscal year in order to avoid taking the impact of reductions over only part of the year. Such planning often involves, of necessity, operating below the level prescribed by Continuing Resolutions.

ACTION IN ABSENCE OF APPROPRIATION

Chairman MCCLELLAN. Describe specific FY 1974 actions taken by the Navy in early FY 1974 to plan for future FY 1974 budget cuts to be made by Congress. What do you plan to do in FY 1975 if the appropriations act is not passed by July 1, 1974?

Admiral BAGLEY. In the absence of an appropriation, and operating under Continuing Resolutions, it was necessary to plan and execute a revised and conservative personnel program during the first six months of FY 1974. Those actions had the cumulative effect of undermanning the fleet and therefore degrading fleet readiness: contributing to overall strength shortfalls and were counter productive to our programs designed to improve the morale and welfare of Navy members and dependents and, therefore, career motivation. More specifically, the following actions were taken:

1. Recruiting quotas were reduced during the first quarter of the year when we historically obtain the best results and should maximize our efforts.
2. Enlisted advancements were suppressed by 2–3000 per month, thus reducing qualitative manning and penalizing qualified and eligible personnel.
3. Only the minimum input to OCS was permitted and a voluntary early release program for officers was implemented.
4. Large numbers of low cost and no cost moves during this period were dictated by austerity considerations and were not optimum personnel management actions.

In respect to FY 1975, if the appropriations is not available prior to the beginning of the fiscal year, it will be necessary to implement similar actions as a hedge against personnel program cuts by the Congress.

Chairman MCCLELLAN. Proceed.

2. Such anticipatory planning prohibits the Navy from maximizing recruiting quotas during the first quarter of the fiscal year when historically the best recruiting results are obtained.
3. Some promotions must be delayed.
4. Uncertainty as to the availability of PCS funding necessitates postponing some moves thus losing the opportunity to move personnel during the desirable summer months when schools are not in session and housing is most available.
5. Personnel planning and budgeting for subsequent fiscal years is speculative in the absence of approved personnel strengths and funds for the budget year. Additionally, long-range manpower planning has little utility without a timely expression of Congressional desires for the budget year.

All in all, it is clear that late budget actions produce inefficient planning and uneconomic management of resources which results in the waste of significant numbers of dollars each year.

FINANCIAL MANAGEMENT IN THE NAVY

C. *Financial Management Improvements.* With respect to the internal financial management of the Military Personnel, Navy appropriation, the Congress was advised last year of extensive improvements that we had instituted and were implementing, particularly in the areas of PCS and interim financial ac-

counting and reporting procedures. Many of these are short term in nature. From a long term point of view, the Navy has undertaken a Five Year Financial Management Improvement Plan through the establishment of the Integrated Financial Management Improvement System (IFMS). This system encompasses all Navy appropriations, including the Military Personnel, Navy Financial Management Control Subsystem. The objective is to provide financial management and manpower information to managers that is timely, complete, accurate and suitable for program analysis. The system will expand the financial management role of manpower and personnel program managers, and will assist these managers in the control of MPN throughout the planning, programing, and budget formulation and budget execution processes. Implementation of this system is on schedule and currently planned to be fully operational on 1 July 1975.

JUMPS

A vital component of the MPN subsystem of the IFMS project is Joint Uniform Military Pay System (JUMPS) which is being developed and implemented on a modular basis and is also planned to be in operation in 1975. I would like to emphasize that it is the successful implementation of JUMPS that will establish a near real time accounting base and permit the Navy for the first time in history to present actual costs, by budget line item, in future MPN budget requests. I am confident that these long range improvements will result in overall efficiencies in the management of personnel and dollar resources.

While we are placing great credence in our longer range financial management system improvements in process, to which I have referred, our initial short term efforts to control the funds appropriated in the MPN account have been successful. There was no over-obligation for FY 1973.

STATUS OF DEFICIENT ACCOUNTS

D. *Status of MPN Deficient Accounts.* Finally, I would like to report on the current status of the over-obligations/expenditures which were reported to the Congress in December 1972, for FYs 1969, 1971 and 1972, in accordance with the requirements of the Anti-Deficiency Statute (R.S. 3679). Pertinent financial data as of 28 February 1974, are set forth in the following table.

	Fiscal year—			
	1969	1971	1972	Total
Projected net deficiency stated in violation reports	$7,947	$72,001	$30,400	$110,348
Supplemental funds granted:				
Public Law 93-50	151	20,000	21,248	41,399
Public Law 93-238	41	9,756	103	9,900
Net increases or decreases	+242	−780	−7,691	−8,229
Revised projected net deficiency as of Feb. 28, 1975	7,997	41,465	1,358	50,820

These violations totaled $110,348,000. During the last fiscal year $41,399,000 was provided by the Congress by P.L. 93-50 in response to our supplemental request for the full deficiency amount. Additionally, the Department of Defense Appropriation Act, 1974, P.L. 93-238, specified that no more than $9,900,000 of the total amount appropriated for MPN should be utilized in making the necessary payments to the Internal Revenue Service for unpaid withholding taxes for the deficient fiscal years. Therefore, about $51M remains as the deficit for those years. We are anxious that the Congress, in its wisdom, will look favorably on our request for funding authority to liquidate the deficiencies which is included as an addition to the FY 1975 MPN Budget Request. Congressional approval of this request would alleviate the additional detailed accounting workload now required because of the continuing deficiency status of these accounts.

ACCOUNTING WORKLOAD

Chairman MCCLELLAN. Describe the current detailed accounting workload (description, manyears and cost) associated with the deficiency status of this appropriation. Describe the financial and other impacts of not providing appropriations to cover the deficiency.

Admiral BAGLEY. Payment of all non-Government bills and authorization of shipment of household goods for fiscal years 1969 and 1971 must be approved by the Chief of Naval Personnel prior to payment and/or shipment of HHGs, which requires weekly reporting by Navy activities worldwide. In addition, monthly reports are required from all activities holding unpaid Government bills for fiscal years 1969, 1971 and 1972. Special controls must be maintained and special mechanized listings of expenditure transactions reviewed to ensure that payments are in accordance with authorizations.

Because the appropriations for the deficient fiscal years cannot merge to the "M" Accounts, maintenance of ledgers and preparation of official reports, a special report on the deficiencies, and internal management reports is required.

Approximately 174 manhours a month with costs of approximately $1,200 are expended to maintain special handling and controls at departmental levels. There are additional costs involved at the field level in processing and transmission costs.

If appropriations are not provided to cover the deficiencies, payment of Government bills cannot be made, thereby creating increased correspondence from other Government agencies requesting payment or reasons for nonpayment. The special handling and controls maintained at departmental level at monthly costs of approximately $1,200 would continue. Personnel required to maintain the special handling would not be available for other current work; thus, creating a backlog of work. To eliminate the backlog, overtime would be required, which would increase the monthly cost to approximately $1,800.

PERSONNEL MANAGEMENT

IV. *Major Personnel Management Considerations.*

Admiral BAGLEY. A. *General.* Good personnel management is the planning and execution of programs which result in the availability of highly motivated and skilled officers and men in sufficient numbers to satisfy the manpower requirements of the Navy. The two most important of the programs are the recruiting of qualified personnel and the retention of proven performers in the career force. I will address our major achievements and the problems we face in attaining our goals in recruiting and retention as well as other programs in the personnel field.

B. *Uniqueness of the Navy.* A meaningful report of Navy personnel programs must be presented in context of the unique conditions inherent in a life at sea. Sea duty provides us additional challenges in both the recruitment and retention of personnel, not faced by the other services. Though opportunities in the Navy are numerous, the rigors of shipboard assignment serve as real enlistment and retention deterrents. Ship deployments result in *separation from family and home.* The table below presents the latest available data concerning time at sea and in homeport and covers the five year period of 1968–1972.

PERCENTAGE OF TIME IN HOMEPORT

	All Atlantic Fleet			All Pacific Fleet		
	Sea	Home port	Other ports	Sea	Homeport	Other ports
CVA	38.6	39.6	21.8	49.0	29.3	21.7
CA/CL	29.4	37.0	33.6	39.4	37.6	23.0
DD/DE	28.6	47.0	24.4	37.6	45.7	16.7
Amphibs	24.7	49.5	25.8	34.7	43.7	21.6
Serv for	30.5	45.3	24.2	38.3	36.3	25.4
Submarines	28.2	55.0	16.8	32.5	45.1	22.4

Note: While percentages of time spent in home port indicated above are below 50 percent in most cases, that time is not fully available for members to spend with their families. Crewmembers necessarily spend about 25 percent of their home-port time on board ship in an overnight-duty status. Deployed periods in the 6th and 7th Fleets typically average about 6 mo duration with occasional extensions of 2 to 3 mo due to contingency situations.

LEAVE STATUS OF CREW MEMBERS

Chairman MCCLELLAN. When crew members are in homeport and not in a duty status, are they on leave to do as they choose?

Admiral BAGLEY. Yes, within the military regulations established by the senior military commander in the area and within the laws of the host country in overseas homeporting.

SEA AND HOMEPORT DUTY

Chairman MCCLELLAN. Give an example of at sea and homeport duty showing the time spent at sea working, off duty hours, time in homeport working and on leave—all in terms of hours.

Admiral BAGLEY. A Navy standard, or objective, workweek has been established. It provides an equitable allowance of time for watch or work, sleep, messing and personal needs, and Sunday routine.

STANDARD WORKWEEK

[In hours]

	At sea[1]	In port
Watchstander	74	45
Nonwatchstander	66	41

[1] The at-sea difference of 8 hr per week arises from the observance of holiday routine aboard ship on Sunday during which time no routine work is scheduled.

STANDARD WORKWEEK ROUTINE

[In hours]

	Watchstander		Nonwatchstander	
	At sea	In port	At sea	In port
Watch	56.00	9.33		
Training	2.00	2.83	3.00	3.00
Service diversions	2.50	3.37	3.00	3.50
Scheduled work	13.50	28.67	40.50	31.00
Unscheduled work		.80	19.50	3.50
Total workweek	74.00	45.00	66.00	41.00

WORKWEEK ALLOWANCE (AT SEA)

	Watchstander	Nonwatchstander
Total weekly hours	168	168
Less:		
Sleep (7 days)	56	56
Messing (6 work days)	12	12
Personal needs (6 work days)	18	18
Sunday (free time)	8	16
Available for watch/work	74	66

LIBERTY (IN PORT)

Week Days: 1600 to 0730=15.5 hours per day
Weekend [1]: 1200 Saturday to 0730 Monday=43.5 hours for weekend
1 in 4 Duty Section [2] (1.9 days per week—must stay aboard)
1 in 6 Duty Section [2] (1.25 days per week—must stay aboard)

In addition to the hours spent watchstanding in port, the members in a duty status must stay aboard ship on the days (and nights) he has the duty. For instance, a member on a 3 year sea tour on a carrier in the 1970–71–72 time period in the Pacific Fleet would have been away from Home Port 759 out of 1095 days. Of those 336 days in Home Port, he would have spent 84 of those aboard with

[1] Special weekend liberty, 1600 Friday to 0730 Monday=63.5 hours.
[2] Function of the percent of manning allowance.

the duty in a one in four rotation situation. In the Atlantic Fleet a member would have been away from Home Port 676 out of 1095 days.

Chairman McCLELLAN. Proceed.

Admiral BAGLEY. The working hours aboard ship are long and often exceed 100 hours per week when watches are counted. Recreation facilities are minimal and living spaces crowded with virtually no personal privacy. When I joined the fleet in 1943, such inconveniences were accepted as a fact of life but today these characteristics of the sea-going life impact much differently. Counterbalancing them in order to attract high potential men into its ranks is a perennial challenge for the Navy.

RECRUITING

(1) *General.* The Navy had few problems recruiting personnel before the draft phase-out due to many draft induced "volunteers". Now that we are relying entirely on true volunteers, recruiting has evolved into a tough sales-oriented/marketing operation. To meet both quantity and quality requirements in this new environment is challenging to say the least. The Navy must share the market with other services, as well as compete with private industry. Our efforts to meet this new challenge have included expanding and upgrading of the recruiting force, initiating paid advertising, introducing a three-year enlistment, and other initiatives.

ENLISTMENT OPTIONS

Chairman McCLELLAN. Describe the Navy's enlistment and reenlistment options.

Admiral BAGLEY. The Navy currently has 2, 3, 4, 5, and 6 year enlistment options. The 2-year contract is for the reserves on active duty. The 3 and 4 year options are the dominant options utilized by USN Non-prior service recruits. The 6-year option is primarily for Nuclear Power and Advanced Electronics Program enlistees.

The Navy reenlistment program has three segments when speaking of options available.

1. 1st term reenlistees have the option of a 2, 3, 4, 5 or 6 year contract.
2. 2nd and subsequent reenlistments up to and including the 10th year have 3, 4, 5 and 6 year contracts.
3. After ten years, 4, 5 and 6 year options are available.

The reenlistment eligibility and options of personnel is geared to Navy needs for career personnel in each skill area.

Chairman McCLELLAN. Proceed.

(2) *Recruiting Force.* Although we have a long way yet to go in achieving our recruiting goals, no increase in the size of the recruiting force is planned for FY 1975.

RECRUITER STRENGTHS

Chairman McCLELLAN. Show authorized and actual recruiting personnel strength FY 1971–1974 to date.

Admiral BAGLEY. The following figures include all personnel assigned to Navy Recruiting Command including civilians:

Fiscal years	Authorized personnel strength	Actual strength June 30
1971	3,593	3,593
1972	4,526	4,526
1973	5,955	5,818
1974	5,988	[1] 5,828

[1] As of Apr. 30, 1974.

Recruit Costs

Chairman McClellan. What is the cost per recruit?

Admiral Bagley. The average cost per accession follows:

Fiscal year:	
1971	$548.27
1972	541.67
1973	804.37
1974 [1]	877.72
1974 (estimated)	935.70
1975 (estimated)	959.26

[1] Through December 1973.

Note. Fiscal year 1974 and fiscal year 1975 figures include cost and accessions for Reserve reaffiliations (CADRE).

Admiral Bagley. The following chart shows recruiting force data and reflects the increased costs in dollars and manpower needed to compete in the draft-free environment. The figures reflect most of naval reserve recruiting costs, including travel, training, vehicles, advertising, recruiting materials, and support.

RECRUITING PERSONNEL STATISTICS FISCAL YEARS 1972–75

[Dollar amounts in thousands]

Military end strength	Fiscal year— 1972 actual	1973 actual	1974 projected	1975 projected
Military end strength:				
Officer	514	538	548	548
Enlisted	3,562	4,857	4,877	4,877
Production	(2,534)	(3,454)	(3,544)	(3,544)
Supervisor	(300)	(300)	(285)	(285)
Support	(728)	(1,103)	(1,048)	(1,048)
Total	4,076	5,395	5,425	5,425
Civilian	450	423	563	583
Grand total	4,526	5,818	5,988	6,008
RECRUITING COSTS				
Media	$7,051	$23,017	$30,032	$31,832
DOD institutional	0	0	(1,800)	(1,800)
Agency	(1,876)	(15,916)	(18,003)	(18,003)
Inhouse printing and publishing preparation	(5,028)	(5,953)	(8,229)	(10,029)
Local advertising	(147)	(1,148)	(2,000)	(2,000)
Vehicles	1,670	6,125	6,145	6,830
Civilian personnel	3,205	3,906	5,223	6,052
All other	7,159	12,841	13,466	14,210
Total (O. & M.N)	19,085	45,889	54,866	58,924
MP,N	36,838	45,878	50,471	51,935
OP,N	79	1,004	1,571	1,253
Total recruiting	56,002	92,771	106,908	112,112

Recruiting of Prior Service Personnel

(3) *Quantity.* The regular recruiting force is responsible for obtaining all enlisted and officer non-prior service personnel for the Active Navy and Naval Reserve, as well as broken service reenlistees. Recruiting for prior service reserve personnel is a province of the Naval Reserve Command, though funding and vehicle support are provided by the Navy Recruiting Command. Through the first nine months of FY 1974, we have attained 98% of our USN and USNR active duty enlisted quota as shown in the table on the following page.

ENLISTED ACCESSIONS (JULY 1973 TO MARCH 1974)

	Goal	Attained	Percent of goal
USN Quebecs [1]	56,700	54,874	96.8
Waves	4,065	4,343	106.0
Reenlistments	5,400	5,508	102.0
Filipinos	315	314	99.7
Total USN	66,480	65,039	97.8
USNR:			
2X6 (active duty)	6,983	7,476	107.1
3X6 (active duty)	224	246	109.8
Ready Mariner	2,505	1,991	79.5
Total USNR	9,712	9,713	100.0
Total Navy	76,192	74,752	98.1

[1] Nonprior service males.

In addition to the above, approximately 33,000 annual USNR reaffiliations are financially supported by recruiting funds. Total USN, non-prior service male accessions for the active force have been reduced from 91,690 in FY 1973 to 69,824 in FY 1974. Lower accessions would initially appear to make the recruiting task easier in FY 1974. However, as I mentioned earlier, life at sea, with its family separation and other personal hardships, has made the Navy more difficult to sell. Also, of key importance is that the out-year petty officer requirements (which must be "grown" from current recruits) remain relatively constant and generate a need for a very high proportion of quality recruits. This continuing quality requirement and the absence of draft pressure combine to pose a most difficult challenge to our recruiters. Illustrative of this problem is that in the middle 1960s we estimated that between 50 and 100 contacts were required to enlist one recruit but today about 300 are required.

Recruiter Contacts

Chairman McClellan. What is a "contact"? Is each phone call one contact? Must it be face to face? When a recruiter visits a basketball game where 5,000 students are in attendance, does that count as 5,000 contacts?

Admiral Bagley. Each completed phone call is considered a contact but total attendance at large public gatherings is not. Contacts are generated by "leads" which are obtained through advertising responses, school presentations, referrals, high school lists and other means of obtaining names of potential recruits that become available to the recruiter on the local level. From these sources the recruiter will then attempt to arrange face-to-face interviews or at least discuss programs available during a telephone conversation. In arriving at the rough estimate of 300, repeated contact with the same person would be additive.

Chairman McClellan. Proceed.

Admiral Bagley. Although recruiting is becoming increasingly more difficult, we anticipate that we will be at or near established quotas for most programs.

(4) *Quality.* While there have been some expressions of Congressional concern that the military services would be forced to lower quality standards to obtain the required numbers of recruits, this has not been the case in the Navy. We have, in fact, maintained or increased our standards and intend to continue to do so. Through the first nine months of FY 1974, 69% of accessions were high school graduates compared to 68% for the same period last year. For that same period, 83% of our recruits have been determined eligible to attend Class "A" schools as compared to 72% last year. Only 3.1% Mental Group IVs were enlisted during the first nine months of this fiscal year compared to 19% during the same period last year. We would prefer to accept no more than 8–10%.

Non-High School Graduates and Mental Group II Personnel

Senator Young. Does the Navy recommend continuance of the FY 74 appropriation bill restriction on the number of non-high school graduates and mental group IV personnel that can be recruited?

Admiral Bagley. Navy opposes the restriction on the number of non-high school graduates and mental group IV personnel that can be recruited. Although the constraint has not been a limiting factor, Navy's position is that the policy should be rescinded, and the services be permitted the flexibility to select recruits based on "whole man" evaluation.

Chairman McClellan. Proceed.

(5) Officer Procurement

Admiral Bagley. Procurement programs are generally providing an adequate number of officers to meet the Navy's needs, particularly in this period of declining strength. Although we are experiencing difficulties in obtaining medical personnel, as well as nuclear officer candidates, selectivity continues high for student inputs to the Naval Academy and the NROTC (Scholarship) Program, the primary sources for regular Navy officers.

Officer Shortfalls

Chairman McClellan. Provide specific data on medical personnel and nuclear officer shortfalls during the past three years and projected through 1975.

Admiral Bagley. The Nuclear Officer Program by Calendar Year:

	Procurement goal	Attainment
Fiscal year—		
1972	525	402
1973	528	401
1974	544	[1] 460
1975	548	[2] 500

[1] Estimated.
[2] Projected.

The Nuclear Officer Program is a voluntary program and the shortages currently being experienced are due to a lack of applicants with the required qualifications.

MEDICAL CORPS PROCUREMENT BY FISCAL YEAR

	Procurement goal	Attainment
Fiscal year—		
1972	1,468	1,420
1973	1,189	980
1974	1,157	[1] 833
1975	1,139	[2] 1,139

[1] Estimated.
[2] Projected.

A combination of the above procurement shortfall and a low retention rate of about 10% has created the physician shortages in the past. Passage of the continuation Bonus for physicians is anticipated to improve procurement and lead to higher retention which will alleviate the shortages experienced in the past.

Chairman McClellan. Proceed.

Admiral BAGLEY. This year we had 7,286 nominees to the Naval Academy and 1,438 were appointed. There were 24,224 NROTC applications and 1,650 scholarships were awarded.

(6) *Recruiting Problems.* The foregoing data notwithstanding, there are significant recruiting problems facing us. In the enlisted area, we have not been able to attract sufficient numbers of the extremely high quality people required into the nuclear and advanced electronics programs. Longer enlistments (six years) are necessary to be cost effective in these programs because of the highly technical and lengthy training required. We believe that approval of the Selective Enlistment Bonus, which is now before the Congress, should help in those fields and also with other hard-to-fill, basically sea-going rating requiring four-year enlistments. Our major problem in officer procurement is obtaining sufficient physicians to meet requirements. We are accelerating efforts, particularly with advertising and promotions within the medical community; but with the civilian practice monetary advantages, our task is extremely difficult. Legislation is before the Congress to increase the monthly special pay and annual continuation pay to narrow the salary gap and make a Navy medical career more attractive to young doctors. *I urge your favorable consideration of this proposal.*

UTILIZATION OF ENLISTED AIDES

Chairman MCCLELLAN. Will you provide a copy of DOD Instruction 1315.9 of 4 January 1974 on enlisted aides.

Admiral BAGLEY. See the attached.

[The information follows:]

January 4, 1974
NUMBER 1315.9

ASD(M&RA)

Department of Defense Directive

SUBJECT Utilization of Enlisted Personnel on Personal Staffs of General and Flag Officers

Refs: (a) 10 USC 3012, 3639, 7579, 8012 and 8639
(b) United States v. Robinson, 6 USCMA 347, 20 CMR 63
(c) Conference Report to accompany H.R. 9286, 93d Congress, 1st Session, House Report No. 93-588, October 13, 1973
(d) DoD Directive 1315.9, subject as above, August 16, 1973 (hereby cancelled)

I. REISSUANCE AND PURPOSE

This Directive reissues reference (d) to update and amend policies governing the utilization of enlisted personnel who are assigned to duty in public quarters and on the personal staff of general and flag officers to assist such officers in the discharge of their official duties and responsibilities. (These enlisted personnel are hereinafter referred to as "enlisted aides.") Reference (d) is hereby superseded and cancelled.

II. APPLICABILITY

The provisions of this Directive apply to the Military Departments on a continuing basis.

III. POLICY

A. Enlisted aides are authorized for the purpose of relieving general and flag officers of those minor tasks and details which, if performed by the officers, would be at the expense of the officers' primary military and official duties. The duties of these enlisted personnel

shall be concerned with tasks relating to the military and official responsibilities of the officers, to include assisting general and flag officers in discharging their official DoD social responsibilities in their assigned positions. The propriety of such duties is governed by the official purpose which they serve rather than the nature of the duties. (References (a) and (b).)

B. Under the applicable statutes and the relevant case in references (a) and (b) above, no officer may use an enlisted member as a servant for duties which contribute only to the officer's personal benefit and which have no reasonable connection with the officer's official responsibilities.

C. Assignment of enlisted aides to the public quarters staff of general and flag officers will be determined on the basis of the following factors:

1. Occupancy of public quarters by officers.

2. Size and age of public quarters.

3. Representational responsibilities of duty assignment.

D. Under regulations prescribed by the Secretaries of the Military Departments, in connection with military and official functions and duties, enlisted aides may be utilized to:

1. Assist with the care, cleaniness, and order of assigned quarters, uniforms, and military personal equipment.

2. Perform as point of contact in the officer's quarters. Receive and maintain records of telephone calls, make appointments, and receive guests and visitors.

3. Assist in the planning, preparation, arrangement, and conduct of official social functions and activities, such as receptions, parties, and dinners.

4. Assist in purchasing, preparing, and serving food and beverages in the general and flag officer's assigned quarters.

5. Accomplish tasks which aid the officer in the performance of his military and official responsibilities, including performing errands for the officer, providing security for the quarters, and providing administrative assistance.

E. Only volunteers will be assigned as enlisted aides.

F. Nothing contained in this Directive precludes the employment of enlisted personnel by officers on a voluntary paid off-duty basis.

IV. ADMINISTRATION AND RESPONSIBILITIES

A. Effective no later than March 1, 1974, the number of enlisted aides assigned in accordance with this Directive shall not exceed the DoD ceiling of 1245 and the Service allocations within this ceiling as prescribed in enclosure 1; and as soon as possible, but not later than June 30, 1974, the number of enlisted aides assigned in accordance with this Directive shall not exceed the DoD ceiling of 675 established by reference (c) and the Service allocations within this ceiling as prescribed in enclosure 2. All other provisions of this Directive are effective immediately in accordance with Section V. below.

B. The Secretary of each Military Department is responsible for the administration of the policies announced in this Directive.

V. EFFECTIVE DATE AND IMPLEMENTATION

This Directive is effective immediately. Two copies of the implementing regulations will be forwarded to the Assistant Secretary of Defense (Manpower and Reserve Affairs) within 90 days. Each such regulation will establish provisions for regulatory supervision to ensure compliance with the policies herein.

K. P. Clements, Jr.

Deputy Secretary of Defense

DoD Enlisted Aide Ceiling and Service Allocations
(Effective March 1, 1974)

DoD Enlisted Aide Ceiling 1,245

Service Allocations

Army. 473

Navy. 278

Marine Corps 62

Air Force 432

DoD Enlisted Aide Ceiling and Service Allocations
(Effective June 30, 1974)

DoD Enlisted Aide Ceiling . . . . . 675 (reference (c))

Service Allocations

Army 256

Navy. 151

Marine Corps. 34

Air Force. 234

ENLISTED RETENTION

Admiral BAGLEY. (1) *Enlisted.* We have made progress over the past three years in increasing the retention of enlisted personnel. First term reenlistments improved from 10% in FY 1970 to 23% in 1972 and have remained at about that level. The career reenlistment rate is expected to drop to about 87% in FY 1974. Enlisted retention statistics, together with our goals, are shown on the next page.

Chairman MCCLELLAN. Proceed.

ENLISTED RETENTION

[Fiscal year, basic percentages]

	1968	1969	1970	1971	1972	1973	Goals 1974	Goals 1975
1st term	17	16	10	17	23	23	31	32
Career	79	78	84	90	91	92	90	90
Overall	36	34	27	39	43	45	54	57

Admiral BAGLEY. These aggregated statistics mask experience shortages in critical sea-going ratings, such as Boiler Technician and Machinist's Mate. The term "rating" is used to describe enlisted occupational specialties. Currently, 36 of the 85 ratings are experiencing severe problems in overall manning, first term retention, and career manning. These problems are manifested in terms of fleet readiness. Currently, approximately 40% of our combat forces afloat are classed as marginally ready or not ready in one or more primary mission areas due to impaired manning. I will provide more on this later.

A large majority of our men and women stay for a career after completing a second enlistment. Therefore, to ensure that those seeking first reenlistment are suitable, quality control criteria have been established. For example, after completion of the first enlistment, a member cannot reenlist without his commanding officer's endorsement and is serving in pay grade E–4; has passed an examination for that pay grade; or is recommended for waiver by his commanding officer. Other criteria include performance ratings and conduct marks. The quality controls placed on reenlistment eligibility reduce the numbers of personnel eligible to reenlist, and computation of the rates shown above reflect this reduction.

It is patently clear that we must do more to improve our retention of highly skilled personnel. A number of programs have been implemented. For example, reducing the number of years spent at sea. As late as the 1960s it was not uncommon for many of our people to spend 14–15 years of a career at sea. Today's young man simply is not attracted by such a prospect, and the quality of person we seek has other more attractive employment options. Current policy calls for a maximum of five consecutive years on sea duty, and we are moving toward a goal of three years at sea followed by three years ashore. Additional shore billets for deprived ratings (one where the 3/3 ratio is exceeded in terms of years required at sea) have been established in Fleet Maintenance Assistance Groups (FMAGs) as the Congress was advised last year. This budget includes 1,000 shore billets for those deprived ratings at shore installations other than FMAGs. To maintain fleet readiness any overall reduction to our strength authorization request must be absorbed ashore. Thus, we would be forced to delay progress toward a 3/3 sea/shore rotation. Further efforts to reduce family separations—and increase career attractiveness—are implicit in the Navy Forward Deployment (or Overseas Homeporting) program.

OVERSEAS ASSIGNMENTS

Chairman MCCLELLAN. List all overseas homeports, ships assigned, and number of military personnel and dependents by homeport, FY 1973–FY 1975.

Admiral BAGLEY. This information will be provided.

[The information follows:]

Homeport	FY 73 Personnel	Ships	FY 74 Personnel	Ships	FY 75 Personnel	Ships	Dependents*
Athens, Greece	1814	3 DDs 1 DDG 1 DE 1 DEG	1814	3 DDs 1 DDG 1 DE 1 DEG	1814	3 DDs 1 DDG 1 DE 1 DEG	752
Gaeta, Italy	968	1 CLG	966	1 CLG	968	1 CLG	174
Naples, Italy	1566	1 AD 1 AGP 3 DEs 5 PGs	1027	1 AD 1 AGP - 4 PGs	1173	1 AD 1 AGP - 4 PGs	773
La Maddalena, Italy	980	1 AS 1 YTB	969	1 AS -	969	1 AS -	
Rota, Spain	1236	1 AS	1167	1 AS	1167	1 AS	1040
Holy Loch, Scotland	1228	1 AS	1228	1 AS	1228	1 AS	797
Bahrain Island	388	1 AGF	388	1 AGF	388	1 AGF	147

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Homeport	FY 73 Personnel	FY 73 Ships	FY 74 Personnel	FY 74 Ships	FY 75 Personnel	FY 75 Ships	Dependents*
Agana, Guam	1686	1 ARS 1 AS 4 MSO 7 PG	1692	1 ARS 1 AS 4 MSO 7 PG	1209	1 ARS 1 AS 0 0	1286
Sasebo, Japan	826	2 AFS	826	2 AFS	830	2 AFS	496
Yokosuka, Japan	2861	1 CLG 4 DD 1 DDG 1 DLG	5410	1 CLG 1 CVA 4 DD 1 DDG 0 DE 1 DLG	5327	1 CLG 1 CVA 2 DD 1 DDG 2 DE 1 DLG	1159
Subic Bay, Philippines	88	1 LPSS	88	1 LPSS	0	0	55

* Dependents of personnel assigned to homeported ships as of 30 September 1973.

Admiral BAGLEY. Approximately 15,000 members are now affected and further deployments are planned.

Retention experience to date indicates that we need Congressional help for significant improvement. The Selective Reenlistment Bonus would provide needed assistance and more cost-effective utilization of bonus monies by including second-term enlistees and giving the services the flexibility to use bonuses when needed. A dramatic example of the efficiency of a second-term reenlistment bonus is the Nuclear Petty Officer Continuation Pay program which was approved by the Congress in FY 1973.

NUCLEAR CONTINUATION PAY

Chairman MCCLELLAN. Describe how nuclear petty officer continuation pay is paid and how much it is.

Admiral BAGLEY. Nuclear Petty Officer Continuation Pay is paid to certain nuclear trained enlisted personnel whose length of service is between the 6 and 10 year point. The pay is based on the individual's basic pay on the day before the effective date of reenlistment and paid in equal annual installments. Members receive 6 months basic pay for every year of reenlistment provided the reenlistment is for at least three years. Members do not receive any continuation pay for obligated service beyond the 12 year point. The average payment for a four year reenlistment is $12,800.

It resulted in a dramatic increase in retention and, because of longer reenlistment contracts, it provided an increase in FY 1973 of more than five times the man-years realized the preceding year. The Selective Reenlistment Bonus proposal now being considered by the Congress is similar and is designed to promote second-term enlistments for up to six years for persons in critical skills.

OFFICER RETENTION

(2) *Officer.* Turning now to officer retention, our progress since FY 1970 has generally been encouraging. Officer retention experience is as follows:

[In percent]

	Fiscal year—		
	1970	1973	1974[1]
Pilots only	25	43	47
Submariners	33	47	[2]
Surface	16	14	16
Physicians	6	10	10
Dentists	6	10	10

[1] Through Dec. 31, 1973.

[2] Fiscal year 1974 submarine retention statistics are excluded, inasmuch as Naval Academy graduates commissioned in fiscal year 1968 are not included because this was the 1st class reflecting the increase from 4 to 5 years of obligated service following graduation. This is particularly significant in the nuclear submarine community where over ½ of the officer accessions have been Academy graduates.

As the data above indicate, we are still encountering severe problems in the surface warfare and medical communities. Even so, we have a long way to go in meeting goals for each officer community. The Navy has not been retaining sufficient junior officers at the critical career decision point in any of the three major warfare communities, and this deficiency is reflected in middle grade officer shortages.

Officer Shortages

Chairman McClellan. Provide specific middle grade officer shortages by specialty.

Admiral Bagley. As of 31 March 1974 shortages in the middle grades (LCDR and LT) by specialty were as follows:

Surface/Sub Warfare	1,545
Aviation Warfare	821
Aeronautical Engineering (Aviation Maintenance)	83
Cryptology	44
Intelligence	21
Geophysics	41
Medical Corps	262
Dental Corps	212
Medical Service Corps	66
Nurse Corps	620
JAG Corps	52
Supply Corps	41
Chaplain Corps	130
Civil Engineer Corps	17
Total	3,955

Chairman McClellan. Proceed.

Officer Resignations

Admiral Bagley. In connection with junior officers leaving the service soon after completion of obligated service, it is worthy of note that approximately one-third of the resignations received this year have stated that the primary reason for leaving the Navy is to obtain post-graduate education. I am well aware of and share the concern of the Congress that graduate education being provided at Navy expense does not exceed our requirements. We are engaged in refining our graduate education requirements now and expect to have preliminary results in June. The Navy's objective is to send only those officers to graduate schools who possess the potential and have demonstrated the performance to rise to the senior grades and who will utilize the education received in subsequent duty assignments. Incident to implementing the Operational/Technical/Managerial System (OTMS), which provides greatly improved management of the officer corps, a policy was promulgated over a year ago requiring each officer completing graduate education at Navy expense to serve in a billet calling for that education in his next tour ashore. This policy also envisions that most officers so educated will serve repeated tours in their subspecialty. Graduate education is a strong retention factor as evidenced by the fact that approximately 92% of the officers completing post-graduate work remain with us for at least 20 years. These facts should be carefully weighed prior to considering any further reduction in officer education programs.

Efforts to Increase Retention

We have offered increased incentive and responsibility to top performing officers by providing them command opportunity at the earliest feasible time. We have also implemented a strengthened policy requiring individualized counseling of each junior officer in connection with his performance evaluation. This has also proved to have positive retention effects, together with other programs designed to improve the satisfaction and challenge of officer duties, enhance professional prestige, and improve quality control of officers.

E. *Fleet Manning.* The recruiting and retention difficulties already discussed are best demonstrated by the degree to which we are successful in making available sufficient numbers of highly motivated personnel with the necessary skills to man our operating units. Our enlisted personnel manning problems are described in terms of total shortages, petty officer shortages, skill mismatches, and how these matters relate to unit combat readiness.

At the end of December 1973, enlisted fleet manning was at 96.2%, and total distributable manning stood at 95.5%, a shortfall of 18,121 personnel. Distributable manning is defined as those personnel available for assignment to force structure billets, and excludes students, transients, patients, and prisoners. Non-rated manning is presently 114.8% or 9,755 personnel in excess of normal requirements.

NON-RATED MANNING

Chairman MCCLELLAN. Explain what non-rated manning is.

Admiral BAGLEY. Non-rated manning refers to the numbers of personnel in pay grades E–1 through E–3 (non-rated and non-designated in a skill area) who are serving in an onboard for duty status. The percentage figure reflects the actual numbers of these personnel assigned to Navy activities versus the requirements. Personnel in a training and/or transient status are not included in this category.

Chairman MCCLELLAN. Proceed.

Admiral BAGLEY. Additionally, excesses in overmanned ratings number 6,171 with 28 ratings manned at 100% or better. Personnel in excess are encouraged and, in some cases, forced to change to ratings with deficit inventories and re-enlistments are carefully controlled. In the aggregate, the Navy has an existing deficit of 34,047 personnel in various skills. Twenty-seven ratings are currently manned below 90%, 20 of which are below 85% of requirements. The shortage of experienced senior enlisted personnel will be exacerbated due to heavier than normal losses of Korean War service personnel transferring to the Fleet Reserve and excessive first term losses from peak recruiting years 1969–1970. The chart of the following page illustrates billet requirements, inventory, and shortages for nine of the 20 ratings manned below 85%. These ratings are critical to fleet unit readiness.

FLEET MANNING SHORTAGES - EXAMPLES

AS OF 31 DECEMBER 1973

	ALLOWANCE	ON BOARD	SHORTFALL	MANNING %
MACHINIST MATE (MM)	16,858	14,277	2,581	84.7
BOILER TECHNICIAN (BT)	11,530	9,541	1,989	82.7
AVIATION BOATSWAIN MATE (ABE) (LAUNCH & RECOVERY EQUIP.)	1,409	1,169	240	83.0
• HULL TECHNICIAN (HT)	10,520	8,889	1,631	84.5
GUNNER'S MATE (TECHNICAL) (GMT)	1,804	1,290	514	71.5
GUNNER'S MATE (MISSILE) (GMM)	1,229	797	432	64.8
FIRE CONTROL TECHNICIAN (MISSILE) (FTM)	3,000	2,241	759	74.7
AVIATION ANTISUBMARINE WARFARE TECHNICIAN (AX)	1,337	848	489	63.4
SHIP'S SERVICEMAN (SH)	4,769	3,391	1,378	71.1

FLEET READINESS

Admiral BAGLEY. In terms of fleet personnel readiness, as of the end of January, 1974, approximately 40% of fleet units were marginally ready or not ready in one or more primary mission areas due to personnel problems. Although this reflects improvement over the 50.5% of fleet units reporting in such condition in September, 1973, it still represents a degradation of personnel readiness which must be corrected. Unless we can improve, there will be no marked change in enlisted manning in the near term.

Officer manning has not presented the critical problems we are experiencing with enlisted personnel. Overall officer manning, as of 31 December 1973, was at 98.3%. Even so, we are experiencing grade imbalances in several areas. For example, there is an inventory deficiency in the grades of LT and LCDR in all warfare communities—our middle grade officers. The net effect of this imbalance is the continued necessity of filling billets for such officers with more junior officers and Limited Duty (LDO) and Warrant Officers.

f. *Human Resource Management.* Highly motivated sailors are essential to an effective fighting Navy. With the rising personnel costs in our nation and in the military, it is imperative that we increase the overall effectiveness of these sailors and their retention as career personnel.

In seeking attainment of these objectives our efforts to improve the management of our people are worthy of discussion. Studies indicate that if we can hold our own in the areas of compensation and reduction of family separation, it is in the area of improved leadership and management, that we can improve our retention above the present 23% platcau. The conclusion of the technical report entitled "Organization Practices and the Decision to Reenlist", dated December 1973, and conducted by the University of Michigan, indicated that where first term enlisted Navy men and women experienced satisfaction with their work, their relationships with their co-workers, their opportunities for advancement, and the importance the command attached to human resources, 66% would reenlist after the first term and over half indicated intentions of a full Navy career.

STUDY ON REENLISTMENT

Chairman MCCLELLAN. Would you provide a copy of the December 1973 University of Michigan study referred to?

Admiral BAGLEY. Yes, sir.

[The study follows:]

ORGANIZATIONAL PRACTICES AND THE DECISION TO REENLIST

As discussion at the national level turns to the consequences thus far of having ended military conscription and returned to the historically more typical situation of the all-volunteer force, attention quite naturally gravitates toward recruitment successes and difficulties. A number of reasons seem to account for this, among them the highly evident displays of intensified recruiting efforts, the fact that the armed forces draft has served primarily as a means of obtaining new manpower increments, not of keeping the already skilled, and the more immediate visibility of impact of an all-volunteer condition upon early steps in the military service sequence (such as initial enlistment).

Although understandable, this focus omits an equally fundamental aspect of the problem, retention of trained manpower. Despite its simplicity and obviousness, the point is an important one since, in an all-volunteer setting, the Navy's recruitment problems, whatever they may be, are multipled by its retention problems. Competing as it now must do with a large array of civilian occupations into which young men (and women) might go, it must either retain its trained and experienced manpower or endure the expense and disruption of constantly replacing large numbers who leave.

The problem looms nowhere larger than among first-term enlisted men. Both folk wisdom and concrete data suggest that a high proportion of enlisted Navymen in their first term of service intend to, and do, leave the Navy at the end of their enlistment.

The present report proposes to build upon two earlier efforts and to explore in some depth the correlations to reenlistment intention of organizational practices and preferences.

Methods

Data from the Navy Sample were collected from both ship and shore stations between November 1972 and February 1973.* The surveys were personally administered by personnel from the Institute for Social Research.

Ships were included from both the Atlantic and Pacific Fleets. Individuals in the sample were chosen in proportion to the number of personnel assigned to each ship type. For example, if 35 percent of the personnel assigned to ships were aboard destroyers, 35 percent of the individuals in the sample were selected so as to come from destroyers. Ships themselves were chosen largely on the basis of availability, with the specific ship selection occasionally influenced by the logistics of moving Organizational Development Research Program Staff from one ship to another. As may be imagined, weather was also an occasional element in determining whether the necessary connections between two selected ships could be made.

For at least two reasons, an effort was made to maximize in the sample as many ships as possible currently deployed away from their home ports. First, larger proportions of the billets are in fact filled on deployed ships than on ships in port. Second, personnel aboard deployed ships are more likely to have had a period of exposure to the organizational variables being measured. For these reasons, more than half of the ships sampled were deployed at the time of the administration of the survey.

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* A detailed description of the sampling techniques as well as a description of the fit of the samples to their respective populations is presented in an accompanying technical report: A Methodology for the Studies of the Impact of Organizational Values, Preferences, and Practices on the All-Volunteer Navy (Michaelsen 1973).

Shore stations were included from eight shore station commands (Atlantic Fleet, Pacific Fleet, Training, Materiel, Personnel, Medicine and Surgery, Security, and Communications) and from the CNO staff. Individuals in the sample were chosen in proportion to the number of personnel assigned to each command. Specific shore stations were randomly selected from those available in four geographical areas--East Coast, Memphis-Pensacola, San Diego, and Hawaii.

Personnel actually surveyed aboard a particular site were members of intact organizational subunits, consisting of work groups related to one another through supervisors who are, at the same time, a superior of the group they supervise and a subordinate in the group immediately above. In this fashion, one may conceive of the organization as a structure of such overlapping groups, a pyramid of interlaced pyramids. For purposes of identifying and selecting intact units for the study's analytic aims, the sampling basis was designated as a "module," by which is meant a "pyramid" of groups three echelons tall. Thus, members from four adjacent levels were included, with the module head defined as the person at the apex of that particular three-tier pyramid. Yet another criterion for the selection of a module was that the person at the apex (the module head) had been at his current assignment for at least three months.

A list of all personnel at a site who met the criteria for module head was obtained from manpower authorization documents and from organizational charts, and from these rosters an appropriate number of module heads were randomly selected. If a particular module did not provide a large enough sample of personnel required for the particular site, another module head was selected by the same method. Thus, the sample from a site consisted of one or more modules.

This sampling procedure resulted in data collection from 38 different Navy sites and a total sample size of 2522 Navy personnel.

Statement of the Problem

An earlier technical report explored the relationship of personal characteristics, such as age and education, to values and preferences of Navymen and civilians concerning the work setting (Bowers, 1973). The conclusions of that report form a suitable starting point for the present study:

1. Younger persons are less willing to accept autocratic, directive management practices than their elders are, and young Navymen are the least accepting of all. Not only does this show up in the latter's exceptionally low scores on the authoritarianism measure, it shows up as well in a cluster of other preferences. More even than their civilian age counterparts, young Navymen attach importance to being able to control their personal lives, to not being "bossed," to having adequate free time, and to not being hemmed in by long-standing rules and regulations which no one seems able to explain.

2. Self-selection (operationalized in the form of expressed intent to reenlist) bears considerable relationship to preferences for leadership behavior from supervisor and peers. As originally expressed, this could be envisaged as taking the form: those who do not want the delineated characteristics have opted out of the Navy. Yet it is a two-edged sword, as easily taking the form: those who do want it have remained. Although "tracking" as a methodological explanation finds little clear support, reenlistment intention relates, in net, as strongly to actual leadership received as it does to preference. The more parsimonious explanation, therefore, is that intention to remain in the Navy is in part a function of the leadership behavior which one receives from one's supervisor and co-workers, and that one sets his preferences in part in relation to his experience base.

3. Rank also emerges an an important predictor of values and preferences, particularly those values and preferences with a more "mission-oriented" character: desire for goal-emphasis, desire for a challenging job, and importance attached to serving one's country. These effects remain even after the effects of age, education, and self-selection have been remove removed. As such, they must reflect at least in part the added commitment that comes with higher status and perceived greater centrality to the organization and its purposes. Little more of a definitive kind can be said at this point concerning rank and its impact, although future analyses may well shed additional light. Among the points to be kept in mind, however, are the following:

    a. Rank apparently has an effect over and above sheer self-selection, education, and age.

    b. By virture of what its statistical removal in part does to the age curve, rank in the Navy apparently has an impact (of a positive kind) which status differences do not obviously produce in civilian life.

4. Age has, in and of itself, additional impact. With greater age comes the desire for closer collaborative relations with one's peers and for more effective teamwork.

Yet another technical report in the same series reported statistically significant correlations between organizational practice indices and actual reenlistment rates of Navymen aboard ships contained in the survey sample (Drexler & Bowers, 1973).

The larger study of which the present effort is a part contains in its questionnaire instrument a question dealing with reenlistment intention at the end of the current term:

What do you plan to do when you complete this enlistment?

1. Reenlist and make the Navy a career
2. Reenlist or extend but undecided about making the Navy a career
3. Reenlist or extend but do not intend to make the Navy a career
4. Return to civilian life
5. Retire

Paired with an additional question which asks about the respondent's present enlistment or extension status, it is possible to examine the extent to which expressed intention to reenlist is a function of other conditions, practices or preferences expressed by the respondent in other parts of the same survey instrument. In general terms, the strategy to be employed involves selecting from the total sample those 1080 cases comprising only first-term enlisted personnel and then to employ multiple regression techniques in an attempt to identify both the extent to which organizational practices and preferences account for reenlistment intention and the most parsimonious array of such variables which account at the individual, group and organizational levels for variance in the expressed intention to reenlist or not. The basic analysis strategy is outlined in Table 1, where it is depicted as occurring in five stages at three levels of aggregation (individual, work group, and total organization).

Stage 1 contains a single step viewed as necessary for establishing at least reasonable grounds for assuming the validity of the reenlistment intention measure from the questionnaire. Because retention statistics for ships contained in the overall study sample were available (having been used in an earlier technical report: Drexler & Bowers 1973), it was possible to correlate the mean reenlistment intention score for ships, calculated for first-term enlisted personnel only, with first-term actual retention rates for those same ships. If in fact, reenlistment intention is a reasonable indicator of actual retention rate, one would expect a significant and sizeable correlation. Stated otherwise, if a person's expressed intention to remain in the Navy or to leave it is a reasonably accurate forecast of his decision to do so, then one ought find a statistically significant relationship between the average of such expressed intentions and the actual retention rate for operating units. This was in fact done. For purposes of the present study, category 5 of the Reenlistment Intention measure--"retire"--was eliminated. The remaining response categories then formed a crude scale, running from intention to make the Navy a career to intention to return to civilian life.

The Pearson Product Moment correlation of reenlistment intention with actual reenlistment rates of first-term Navymen by ship is .76 and directionally appropriate: that is, reenlistment rates are higher aboard ships whose first-term enlisted personnel express on the average a more frequent intention to remain in the Navy.

This provides, therefore, some basis for assuming that reenlistment intention as measured by the questionnaire item is a reasonable approximation of what actually transpires in Navy units. In the analyses to be pursued for first-term personnel as individuals, as collectivities in the form of work groups, or as whole organizational units on shore as well as aboard ship, it would appear to suffice.

As the further entries in Table 1 indicate, the basic procedure to be follow lowed in this present report in analyses at the individual and group levels is that of multiple regression. The statistical literature suggests two potential problems of which the researcher must be wary:

1. The tendency of multiple regression procedures to capitalize upon random error.

2. The tendency of the obtained weights to be to some extent sample-unique.

The first problem is presumably handled by the procedure of correcting obtained multiple correlation coefficients for shrinkage (McNemar, 1969).

Taking account of the propensity for findings to be sample-unique is a bit more complicated. It becomes a problem principally to the extent that predictors are selected for inclusion in the multiple regression from a pool of predictors on the basis of their correlation with the criterion. Several variations upon some form of cross-validation procedure are suggested within the statistical literature. The strategy employed within the present report is that of subdividing the total array of cases into randomly selected halves and replicating the analysis.* Thus, at the individual level, the total 1080 cases are, for these purposes, randomly divided into two sets of 540 each. In certain instances this procedure has been done twice. After the initial drawing, all cases were replaced and the process repeated. The result, therefore, was four random sets of 540 cases each.

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* In addition, the analyses have been "double cross-validated," in that the weights derived from each sample have been used to generate predicted scores for the other sample, which scores have then been correlated with actual reenlistment intention measures for that other sample. These results are presented as Appendix B together with another indicator of stability, the simple intercorrelation of beta weights across samples.

TABLE 1

STAGES IN THE BASIC ANALYSES

Analysis	Levels and Procedures		
	Individual	Group	Organizational
Stage 1	---	---	Correlate mean reenlistment intention with actual retention rates (first-termers only) by ship.
Stage 2	Divide total sample of first-term enlisted men into two random halves, run multiple regressions for each, predicting Reenlistment Intention from combination of all variables within a cluster, for each cluster separately.	Divide total array of groups into two random halves, run multiple regressions for each, predicting Reenlistment Intention (group mean) from combination of group means on all variables within a cluster, for each cluster separately. Replicate for (a) all groups, and (b) all groups greater than 1.	Compute zero-order correlations coefficients to Reenlistment Intention for all predictors for the 43 organizations (ships and shore stations) represented in the sample.
Stage 3	Select best predictors within each cluster and combine into overall multiple regression for each random half.	Select best predictors within each cluster and combine into an overall multiple regression for each random half, for groups greater than 1.	---
Stage 4	Divide total sample into two alternative random halves, run multiple regressions for each, combining all 31 predictors, regardless of cluster (to check for suppressor effects).	Run multiple regressions for each random half, combining all 31 predictors, regardless of cluster (to check for suppressor effects).	---
Stage 5	Select next-stage best predictors and re-run the resulting limited list for all four random halves and for the total sample.	Select next-stage best predictors and re-run the resulting limited list for both random halves and for the total sample.	---

At the group level, the same basic procedure has been followed, namely that of dividing the total array of groups into two random halves. The procedure becomes a bit more complicated at the group level, however, because our sample, like the Navy, contains a number of groups whose membership consists of a single person (that is, a "group" made up of the single deputy reporting to a superior, as, for example, the situation which obtains between a Commanding officer and his Executive officer). Thus, of the 266 groups represented in the total sample, 87 contain but a single person. 179 groups contain two persons or more. In line with the procedure described in relation to individual-level analyses, both the total array (266 groups) and the subset consisting of groups with membership greater than one (179 groups) have been randomly divided into two half-samples and the analysis replicated for each. At the individual level, the number of cases (ships and shore stations) is too small to permit either replication within random halves or the use of a multiple regression procedure. For this reason analyses at the organizational level take the form of zero-order Product Moment correlation coefficients for the total sample of 43 ship or shore station units.

As Table 1 indicates, for the individual and group analytic levels the second stage involves multiple regression analyses in which the predictors are various clusters of organizational practice variables (e.g., organizational climate, economic job factors, etc.) and the criterion or dependent variable is reenlistment intention. Multiple regressions within this stage were conducted separately for each of the five conceptual clusters into which the organizational practice variables may be arrayed:

Organizational Climate

Intragroup Interpersonal Processes

Non-economic Job Factors

Economic Job Factors

Life Style Factors

From this Stage 2 analysis, best predictors within each cluster were then selected and combined into an overall multiple regression for each random half. Because there were grounds for suspecting that certain variables in an array as large as this might act as suppressors, Stage 4 in Table 1 indicates that the next step at both the individual and group levels was to combine all 31 predictors into a single large multiple regression, predicting, as before, the reenlistment intention criterion.

Stage 5 of the basic analyses consisted of selecting next-stage best predictors from the analyses run up to this point and then rerunning this resulting limited list for the random half samples and for the total sample of respondents or groups.

Multiple Regression Results at the Individual Level

Table 2 presents the results of Stages 2 through 5 of the analysis strategy conducted at the individual respondent level. Several facts are observable from the data there presented. First, comparing Stages 2 and 4, we find little reason for believing that combining all 31 predictors into a single large regression substantially raises the overall level of the multiple correlation coefficient corrected for shrinkage. For the two random half samples whose data are listed in the Stage 4 section of the table, the adjusted multiple correlation coefficients using all 31 predictors and .38 and .50 respectively, whereas, the separate cluster coefficients (Stage 2) range from .23 to .38. One must conclude from this fact, therefore, that there exists considerable overlap among the conceptual categories separately analyzed in Stage 2.

Table 2

RESULTS OF MULTIPLE REGRESSIONS, BY ANALYTIC STAGE,
(INDIVIDUAL LEVEL)

Measures	Stage 2				Stage 4			
	Sample 1		Sample 2		Sample 3		Sample 4	
	Beta	p	Beta	p	Beta	p	Beta	p
Organizational Climate	(R, R_{adj} = .32, .31 (N = 527)		.35, .34 (N = 522)		.44, .38 (N = 498)		.55, .50) (N = 492)	
Human Resources Primacy	-.17	.002	-.14	.01	-.02	--	-.16	.003
Communication Flow	.01	--	-.04	--	.00	--	.00	--
Motivational Conditions	-.19	.001	-.12	.03	-.09	--	-.02	--
Decision-Making Practices	.04	--	-.10	.05	.02	--	-.05	--
Lower-Level Influence	-.08	--	-.07	--	.01	--	-.14	.003
Intra-Group Interpersonal Processes	(R, R_{adj} = .37, .35 (N = 533)		.39, .37) (N = 528)					
Supv. Support	-.04	--	.01	--	-.12	--	-.01	--
Supv. Goal Emphasis	.02	--	-.01	--	.07	--	.00	--
Supv. Work Facil.	.11	--	.09	--	.08	--	.07	--
Supv. Intera. Facil.	-.04	--	-.05	--	-.03	--	-.02	--
Peer Support	-.05	--	.04	--	-.02	--	-.03	--
Peer Goal Emphasis	.04	--	-.06	--	-.01	--	.04	--
Peer Work Facil.	.10	--	.00	--	.06	--	.01	--
Peer Intera. Facil.	-.14	.05	-.10	--	-.08	--	-.03	--
Group Process	.13	--	.06	--	.04	--	.08	--
Satisfaction	-.39	.0001	-.37	.0001	-.14	.05	-.17	.01

Table 2 (continued)

Measures	Stage 2				Stage 4			
	Sample 1		Sample 2		Sample 3		Sample 4	
	Beta	p	Beta	p	Beta	p	Beta	p
Non-Economic Job Factors	(R, R_{adj} = .40, .38 (N = 529)		.40, .38 (N = 524)					
Job Challenge	-.16	.001	-.15	.002	-.08	--	-.03	--
No One to Boss Me	.14	.001	.02	--	.09	.04	.11	.01
Lots of Free Time	-.16	.001	-.04	--	-.07	--	-.03	--
Opp. to Control Life	-.15	.001	-.20	.0001	-.09	--	-.20	.0001
No Endless Referrals	.03	--	.06	--	.04	--	.06	--
No Red Tape	-.04	--	-.04	--	.07	--	-.06	--
Rules Not Constraining	-.08	--	-.06	--	.00	--	-.09	--
Prestigious Job	-.04	--	-.08	--	-.04	--	-.11	.03
Friendly People	-.06	--	-.09	.04	.00	--	-.08	--
Economic Job Factors	(R, R_{adj} = .24, .23 (N = 533)		.30, .29 (N = 532)					
Good Pay	-.14	.002	-.22	.0001	-.04	--	-.02	--
Steady Employment	.04	--	.16	.0001	.06	--	.09	.02
Good Fringe Benefits	-.15	.001	-.12	.01	.00	--	.02	--
Life Style Factors	(R, R_{adj} = .28, .27 (N = 532)		.32, .31 (N = 528)					
Theory X	-.06	--	-.08	--	-.06	--	.03	--
Opp. to Serve Country	-.08	--	-.01	--	-.02	--	.08	--
Opp. to Make World Better	-.21	.0001	-.27	.0001	-.10	--	-.08	--
Permits Stay One Place	.01	--	-.08	--	-.03	--	.13	.003

Table 2 (continued)

Measures	Stage 3			
	Sample 1		Sample 2	
	Beta	p	Beta	p
	(R, R_{adj} = .43, .40 (N = 526)		.46, .45) (N = 513)	
Human Resources Primacy	-.08	--	-.08	--
Motivational Conditions	-.08	--	-.04	--
Satisfaction	-.10	--	-.18	.004
Peer Intera. Facil.	.07	--	-.04	--
Job Challenge	-.10	--	-.01	--
No One to Boss Me	.13	.002	.03	--
Lots of Free Time	-.14	.002	.02	--
Opp. to Control Life	-.12	.01	-.18	.0001
Good Pay	-.03	--	-.07	--
Good Fringe Benefits	.00	--	.03	--
Opp. to Make World Better	-.08	--	-.08	--

Measures	Stage 5									
	Sample 1		Sample 2		Sample 3		Sample 4		Total	
	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p
	(R, R_{adj} = .38, .38 (N = 537)		.43, .43 (N = 533)		.37, .37 (N = 532)		.45, .45 (N = 528)		.40, .40) (N = 1070)	
Human Resources Primacy	-.10	.03	-.10	.04	-.03	--	-.15	.001	-.10	.003
Satisfaction	-.23	.0001	-.25	.0001	-.29	.0001	-.20	.0001	-.24	.0001
Opp. to Control Life	-.15	.001	-.20	.0001	-.13	.003	-.22	.0001	-.17	.0001

1 The significance levels of the β are computed on the basis of "t" which is the quotient of β divided by the standard error.

Turning to Stage 2 itself, we find that the first three predictor categories --Organizational Climate, Intragroup Interpersonal Processes and Non-economic Job Factors--once corrected for shrinkage (i.e., numbers of cases in relation to numbers of predictors) do similarly and moderately well in predicting the criterion and do, on the whole, a better job of predicting that criterion than do Economic Job Factors or Life Style Factors similarly corrected for shrinkage. In each of the five categories, no more than four of the measures in the categories appear to do the job of the entire array. Directionality is in general appropriate in that, with two exceptions, all of the statistically significant beta weights are negative: that is, the greater the presence of the factor as named, the more likely it is that the respondent intends to reenlist. Furthermore, the two exceptions in which the coefficient is significant and positive are instances in which the relationship itself is not replicated in the other half-sample.

The Stage 3 section of the table shows the results of combining the best predictors from the five separate categories into a single multiple regression for each of the two half-samples. As is apparent from the data, the overall coefficient remains approximately the same, perhaps rising slightly as one might expect by combining predictors from different categories. Yet within each of the two half-sample regressions, only a handful of predictors produce statistically significant beta coefficients.

From the Stage 3 and Stage 4 results, a much more limited array of predictors were selected, specifically, three: Human Resources Primacy (a measure from the Organizational Climate array), Satisfaction (a measure from the Intragroup Interpersonal Process array), and Opportunity to Control Personal Life (from the Non-economic Job Factors array). As the four replicated half-samples and the total sample replication indicate, little predictability is lost by limiting the regression to these three predictors. At the individual level, therefore, we would conclude that the organizational practice measures account for approximately 16 percent of the variance in individual reenlistment intention and that three measures do the work of the total array, that is, Human Resources Primacy--the extent to which the individual feels that that portion of the organization in which he lives and works attaches importance to people as human resources, Satisfaction--the extent to which he is in general satisfied with the Navy, with his job, with his supervisor, with his fellow Navymen in the basic work group, his advancement opportunities, and the Opportunity to Control his Personal Life.

Multiple Regression Results at the Group Level

As in the case of results at the individual level, results presented in Table 3 at the group level indicate somewhat more substantial relationships produced by variables within the first three conceptual categories, that is Organizational Climate, Intragroup Interpersonal Processes and Non-economic Job Factors. Somewhat lower, and once more similar, findings occur with regard to Economic Job Factors and Life Style Factors. Furthermore, the results, although clear when only groups with memberships larger than one are the subject of analysis, are nearly as clear when all groups are encompassed. Unlike results at the individual level, Stage 4 results at the group level (that is, the effect of combining all 31 predictors in a single multiple regression) indicate a fairly substantial gain in the overall coefficient.

As in the early analysis, however, little is lost and somewhat less gained by combining a more limited array of best predictors from the several categories into a single and somewhat more limited, similarly parsimonious prediction scheme.

The Stage 5 results at the group level indicate that when an even more limited array of predictors are selected, two predictors in combination (Opportunity to Control Personal Life and having Friendly People to work with) account for approximately 25 percent of the variance.

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Table 3

RESULTS OF MULTIPLE REGRESSIONS
BY ANALYSIS STAGE
(GROUP LEVEL)

Measures	STAGE 2							
	Groups Greater Than 1				All Groups			
	Sample 1		Sample 2		Sample 1		Sample 2	
	Beta	p	Beta	p	Beta	p	Beta	p
Organizational Climate	(R, R_{adj} = .51, .48 (N = 93)		.55 (N = 86)	.52	.37 (N = 134)	.33	.55 (N = 132)	.53
Human Resources Primacy	-.10	--	-.43	.001	-.13	--	-.42	.0001
Communication Flow	-.09	--	.19	--	-.05	--	.02	--
Motivational Conditions	-.24	--	.05	--	-.15	--	-.06	--
Decision-Making Practices	-.21	--	-.05	--	-.06	--	.11	--
Lower-Level Influence	.08	--	-.27	.02	-.06	--	-.26	.01
Intra-Group Interpersonal Processes	(R, R_{adj} = .66, .61 (N = 93)		.54 (N = 86)	.46	.38 (N = 135)	.29	.52 (N = 135)	.47
Supv. Support	-.57	.0001	-.42	.0003	-.37	.0001	-.45	.0001
Supv. Goal Emphasis	.38	.06	.42	.02	.04	--	.15	--
Supv. Work Facil.	-.11	--	.29	.06	-.02	--	.15	--
Supv. Inter. Facil.	.12	--	-.11	--	.06	--	-.19	--
Peer Support	.21	--	.01	--	.13	--	.18	--
Peer Goal Emphasis	-.13	--	-.23	--	-.06	--	-.10	--
Peer Work Facil.	-.21	--	-.21	--	-.03	--	-.05	--
Peer Inter. Facil.	-.34	.02	-.05	--	-.20	--	-.30	.02
Group Process	.33	.05	-.16	--	.20	--	-.25	--
Satisfaction	-.26	--	.00	--	-.08	--	-.22	--

Table 3 (Continued)

Measures	STAGE 2							
	Groups Greater Than 1				All Groups			
	Sample 1		Sample 2		Sample 1		Sample 2	
	Beta	p	Beta	p	Beta	p	Beta	p
Non-Economic Job Factors	(R, R_{adj} = .66, .62 (N = 93)		.59 (N = 86)	.53	.42 (N = 134)	.35	.48 (N = 133)	.43)
Job Challenges	-.26	.02	-.22	.06	-.12	--	-.21	.03
No One to Boss Me	.04	--	.15	--	.04	--	.02	--
Lots of Free Time	-.18	.06	-.29	.004	-.09	--	-.11	--
Opp. to Control Life	-.17	--	-.34	.004	-.06	--	-.29	.01
No Endless Referrals	.01	--	.27	--	-.12	--	.04	--
No Red Tape	-.11	--	-.20	--	-.16	--	-.03	--
Rules Not Constraining	-.02	--	.01	--	.00	--	-.10	--
Prestigious Job	-.01	--	.04	--	-.06	--	.21	.03
Friendly People	-.27	.004	-.26	.02	-.10	--	-.17	--
Economic Job Factors	(R, R_{adj} = .52, .50 (N = 93)		.33 (N = 86)	.30	.30 (N - 134)	.28	.30 (N = 134)	.28)
Good Pay	-.35	.001	-.12	--	-.13	--	-.19	.04
Steady Employment	.18	.05	.18	--	.19	.02	.13	--
Good Fringe Benefits	-.25	.02	-.20	--	-.17	--	-.12	--
Life Style Factors	(R, R_{adj} = .57, .55 (N = 93)		.45 (N = 86)	.42	.35 (N = 134)	.32	.33 (N = 135)	.30)
Theory X	-.08	--	-.18	.07	-.05	--	-.11	--
Opp. to Serve Country	-.10	--	.02	--	-.03	--	-.08	--
Opp. to Make World Better	-.42	.01	-.30	.02	-.29	.01	-.15	--
Permits Stay One Place	-.10	--	-.21	.04	-.08	--	-.20	.02

Table 3 (Continued)

Measures	STAGE 3							
	Groups Greater Than 1				All Groups			
	Sample 1		Sample 2		Sample 1		Sample 2	
	Beta	p	Beta	p	Beta	p	Beta	p
	(R, R_{adj} = .71, .67 (N = 86)		.64 (N = 93)	.59	.59 (N= 86)	.53	.72 (N = 93)	.69)
Human Resources Primacy	.09	--	-.18	--	-.06	--	-.04	--
Lower-Level Influence	-.03	--	-.24	.03	-.11	--	-.06	--
Supv. Support	-.08	--	.08	--	.08	--	-.25	--
Supv. Goal Emphasis	.29	.003	.18	--	.19	--	.28	.003
Job Challenge	-.22	--	-.15	--	-.06	--	-.24	.05
Lots of Free Time	-.15	--	-.24	.02	-.17	--	-.12	--
Friendly People	-.34	.001	-.20	--	-.39	.002	-.17	--
Good Pay	-.21	.05	-.08	--	-.17	--	-.13	--
Opp. to Make World Better	-.26	.04	-.10	--	-.21	--	-.12	--
Organizational Climate	(R, R_{adj} = .77, .61 (N = 86)		.81 (N = 93)	.70)				
Human Resources Primacy	.07	--	-.18	--				
Communication Flow	.03	--	.04	--				
Motivational Conditions	.45	.01	.13	--				
Decision-Making Practices	-.29	--	.17	--				
Lower-Level Influence	-.17	--	.07	--				

Table 3 (Continued)

Measures	STAGE 4							
	Groups Greater Than 1				All Groups			
	Sample 1		Sample 2		Sample 1		Sample 2	
	Beta	p	Beta	p	Beta	p	Beta	p
Intra-Group Interpersonal Processes								
Supv. Support	-.12	--	-.36	--				
Supv. Goal Emphasis	.24	--	.44	.02				
Supv. Work Facil.	.06	--	-.03	--				
Supv. Inter. Facil.	.00	--	.05	--				
Peer Support	-.30	--	.16	--				
Peer Goal Emphasis	-.04	--	-.19	--				
Peer Work Facil.	-.32	--	.08	--				
Peer Inter. Facil.	-.04	--	.00	--				
Group Process	.34	--	-.30	--				
Satisfaction	.08	--	-.16	--				
Non-Economic Job Factors								
Job Challenge	-.09	--	-.15	--				
No One To Boss Me	.02	--	.17	--				
Lots of Free Time	-.04	--	-.14	--				
Opp. To Control Life	-.32	.04	-.24	.07				
No Endless Referrals	-.03	--	-.10	--				
No Red Tape	-.10	--	.12	--				
Rules Not Constraining	.22	--	-.05	--				
Prestigious Job	-.30	--	.05	--				
Friendly People	-.39	.02	.06	--				

Table 3 (Continued)

Measures	STAGE 4							
	Groups Greater Than 1				All Groups			
	Sample 1		Sample 2		Sample 1		Sample 2	
	Beta	p	Beta	p	Beta	p	Beta	p
Economic Job Factors								
Good Pay	-.25	--	-.21	.05				
Steady Employment	.10	--	.14	--				
Good Fringe Benefits	.07	--	.02	--				
Life Style Factors								
Theory X	-.21	--	.02	--				
Opp. to Serve Country	.15	--	-.15	--				
Opp. to Make World Better	-.10	--	.06	--				
Permits Stay One Place	-.05	--	-.06	--				

Table 3 (Continued)

Measures	STAGE 5							
	Groups Greater Than 1				All Groups			
	Sample 1		Sample 2		Sample 1		Sample 2		Total	
	Beta	p	Beta	p	Beta	p	Beta	p	Beta	p
	(R, R_{adj} = .54, .52 (N = 86)		.53 (N = 93)	.51					.56 (N = 179)	.55
Supv. Goal Emphasis	.13	--	.13	--					.16	--
Opp. To Control Life	-.33	.0001	-.31	.002					-.37	.0001
Friendly People	-.40	.0001	-.44	.0002					-.37	.001

1 The significance levels of the β are computed on the basis of "t" which is the quotient of β divided by the standard error.

The Effects of Combining Individual and Group Level Predictors

Thus we arrive, having looked at the individual and group-level multiple regressions, at a very limited array of variables which account for variance predicted by all 31. It would seem likely that the intention to reenlist would be highest among persons who feel that the Navy (at least that portion of it which they experience) attaches considerable importance to people as human resources, who are satisfied with their supervisors and their job in the Navy, who feel that they personally experience considerable opportunity to control their personal lives, and who work in groups in which most persons view relationships as friendly and see persons generally (not simply individually) as having a better than average opportunity to control their personal lives. The converse would also be true--we would expect reenlistment intention to be lowest for those persons who live and work in groups in which most persons perceive that they have little opportunity to control their personal lives, where relationships among Navymen are other than friendly, and who, as individuals, experience a low opportunity to control their personal lives, are dissatisfied generally with the conditions they experience, and feel that that portion of the Navy in which they live and work attaches little or no importance to people as human resources.

In an effort to evaluate the effect of these variables at the group and individual level in combination, first-term enlisted men were assigned coded scores based upon median splits for the five appropriate predictor measures. For those two measures whose effects were visable at the group level (Opportunity to Control Personal Life and Friendly People) individual first-term Navymen were assigned scores of zero if the groups to which they belong have mean scores which fell at, or below, the median of the distribution of group scores on the measures. They were assigned a score of 1 if their group reflected a mean that fell above the median of group scores on the variable. Thus, at the group level, individuals could accumulate scores ranging from 0 to 2. A similar procedure was followed for the three individual level measures. Individuals were arrayed in order of score; the median score was identified; and individuals at or below the median on any of the three variables were assigned a score of zero. Those above the median were assigned a score of 1. For variables identified as best predictors at the individual level, therefore, an individual member of the sample could accumulate a score ranging from 0 to 3. Combining scores for the group and individual level predictors produced an array of scores from 0 to 5; for data processing convenience, a constant of 1 was added to each such score, producing categories from 1 through 6, which represent lowest to highest situational favorability on the five measures combined. There was then obtained a frequency and percentage spread for these six categories of Navymen on the reenlistment intention measure.

The results are presented in Table 4. A graphic comparison of the six situational favorability categories on percentage intending to reenlist is presented as Figure 1. The results are dramatic indeed. Combining response categories 1 and 2 on the reenlistment intention measure (those who say their intention is to reenlist and make the Navy a career, plus those who say they intend to reenlist and possibly make the Navy a career) we find that for category 6, the most situationally favorable, over 54 percent say that they intend to reenlist. Adding those from response category 3--persons who intend to reenlist but not make the Navy a career--produces results which are even more startling. In the least favorable category no more than two percent state an intention to reenlist, whereas 98 percent in this low category state their intention to return to civilian life. The importance of situational favorability, assessed in these terms, is perhaps reinforced by the rather steady progression of percentages intending to reenlist as one moves from least to most situationally favorable categories, rising to a high of 66 percent in the most favorable category.

TABLE 4

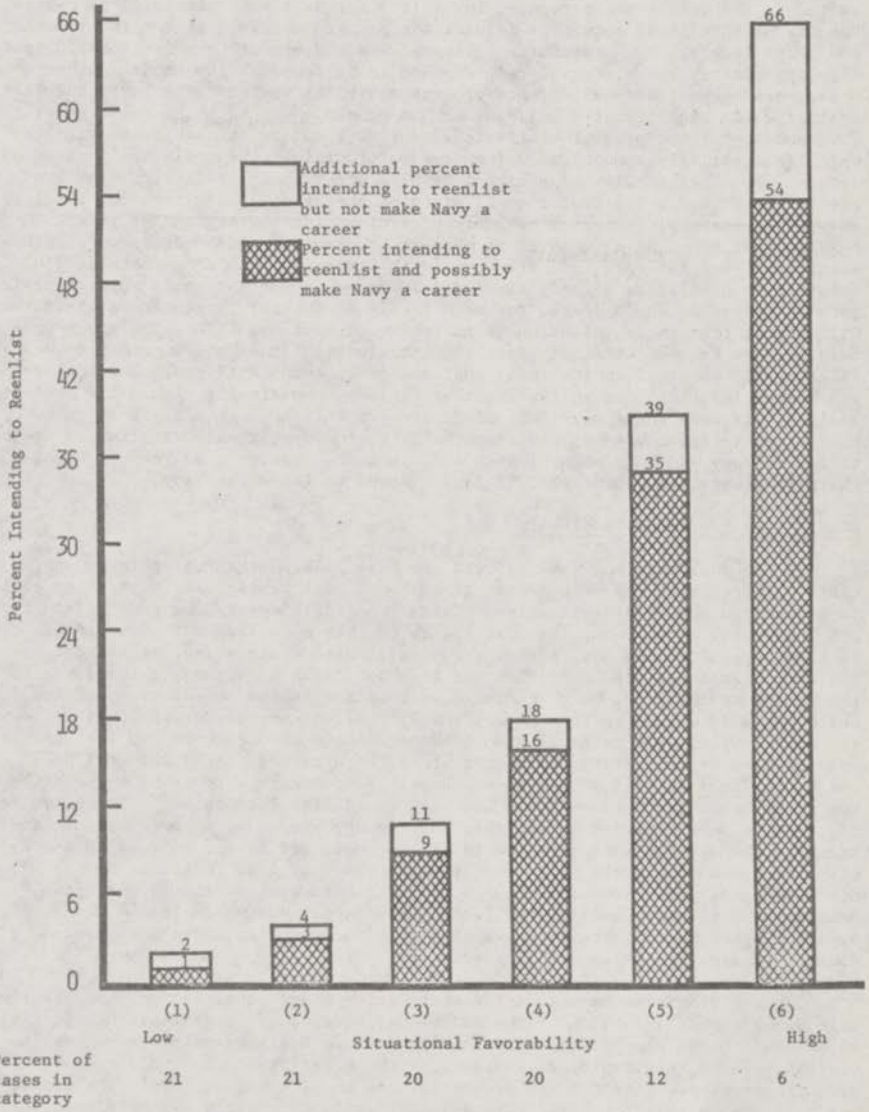
SITUATIONAL FAVORABILITY AND

REENLISTMENT INTENTION

		Percentages By Situational Favorability Category					
		(1)	(2)	(3)	(4)	(5)	+ (6)
	Reenlistment Intention Category						
Reenlist and make Navy a career	(1)	0	1	1	5	9	19
Reenlist but undecided about making Navy a career	(2)	1	2	8	11	26	35
Reenlist but not make Navy a career	(3)	1	1	2	2	4	12
Return to Civilian life	(4)	98	96	89	82	61	34
N		229	223	222	211	129	68

Figure 1

PERCENT INTENDING TO REENLIST BY SITUATIONAL FAVORABILITY CATEGORY
(First-Term Enlisted Men Only)



Results at the Organizational Level

As mentioned earlier in the report, multiple regression procedures could not be followed at the organizational level principally because of the small number of cases. Zero-order correlations for the 43 ships and shore stations represented in the sample are presented in Table 5 for variables clustered as before. Results at this level reinforce in part the pattern observed at the individual and group levels. Human Resources Primacy as a measure of Organizational Climate displays clearly the strongest relationship to be found in the table. Other measures of organizational climate present a similar pattern at a lower and less statistically significant level. Among Non-economic Job Factors, only two of the "bureaucracy" items present statistically significant relationships--variables which interestingly enough did not emerge as crucial at the individual and group levels. No statistically significant results occur among predictors clustered within the Economic Job Factor or Life Style categories. Results among the Intragroup Interpersonal Processes category present an interesting and at first puzzling pattern. Both measures of support, supervisory and peer, show marginally significant coefficients that are reverse in direction from those obtained in relation to predictors already studied. The more supportive one's supervisor is seen as being, or one's peers, the more likely it is that first-term enlisted men will report that their intention is to return to civilian life! The group process measure behaves similarly, yet the satisfaction index shows much the same relationship observed in the individual and group level analyses. The most reasonable explanation, one which cannot be explored empirically within the present analysis, is that the supervisors of first-term enlisted men are likely to be themselves relatively young and sympathetic to the essentially civilian or orientation of many of their subordinates and, in fact, provide a degree of support which is greater for those who, in fact, intend to leave the Navy.

Discrepancy Scores as Predictors

In the analyses thus far reported, we have looked at actual perceptions, that is, perceptions by respondents of how much of a particular factor they feel is present in their work situation. There remains, however, the possibility that not the actual amount, but the discrepancy of that actual amount from preferences, is the appropriate and most potent predictor. Stated otherwise, it may not be the actual amount of job challenge per se which leads a Navyman to reenlist, but the amount of challenge which he feels in relation to the amount of challenge which he wants which predicts more strongly. All of the leadership indices (supervisory, as well as peer) and the Non-economic and Economic Job Factors, as well as Life Style Factors, have present in the array of survey measures preferred or ideal as well as actual measures. Respondents were asked to describe how "things are now," as well as "how they would like them to be." These two sets of measures were employed to generate discrepancy scores by a procedure of subtracting the actual level from the ideal, or preferred level, and adding a constant of 4. On the scale which results, the score of 4.00 indicates no discrepancy at all. Scores from 0 to 3.99 indicate a situation in which the actually experienced level of the factor exceeds the amount desired. Scores of 4.01 through 8.00 indicate the obverse situation, that is, where the level desired exceeds the level experienced.

Table 6 presents the results of correlating discrepancy scores thus obtained with reenlistment intention at the individual, group, and organizational levels. As before, in the case of the individual and group analyses multiple regression procedures have been employed, whereas, at the organizational level zero-order product-moment coefficients are presented. At the individual level, the resulting multiple correlation coefficients do not indicate greatly enhanced predictive capacity. Coefficients fall at, or below, the levels of the simple, actual predictors. In general, the relationships are, as we might expect, reflective of a positive relationship, that is, the more the ideal exceeds the actual, the more likely it is that the individual will return to civilian life. However, a few reverse discrepancy relationships appear in the total array. Within the category of Economic Job Factors, steady employment presents one such instance and, among Life Style Factors, the opportunity to serve one's country takes a negative form as well.

TABLE 5

ZERO-ORDER CORRELATIONS OF PREDICTORS WITH REENLISTMENT INTENTION (ORGANIZATIONAL LEVEL)

N = 43 SHIPS AND SHORE STATIONS

Measure	Correlation With Reenlistment Intention	
	r	p
Organizational Climate		
Human Resources Primacy	-.61	.0001
Communication Flow	-.34	.02
Motivational Conditions	-.38	.01
Decision-Making Practices	-.18	--
Intra-Group Interpersonal Processes		
Supervisory Support	.34	.03
Supervisory Goal Emphasis	.23	--
Supervisory Work Facilitation	.26	--
Supervisory Interaction Facilitation	.05	--
Peer Support	.31	.04
Peer Goal Emphasis	.05	--
Peer Work Facilitation	.25	--
Peer Interaction Facilitation	-.03	--
Group Process	.30	.05
Satisfaction	-.36	.02
Non-Economic Job Factors		
Job Challenge	-.04	--
No One To Boss Me	-.17	--
Lots of Free Time	.26	--
Opportunity to Control Personal Life	-.19	--
No Endless Referrals	-.27	--
No Red Tape	-.45	.003
Rules Not Constraining	-.51	.001
Prestigious Job	-.23	--
Friendly People	.16	--
Economic Job Factors		
Good Pay	-.26	--
Steady Employment	.29	--
Good Fringe Benefits	.38	--
Life Style Factors		
Theory X	.15	--
Opportunity to Serve One's Country	.15	--
Opportunity to Make World Better	-.05	--
Permits Me To Stay in One Place	-.18	--

TABLE 6

RESULTS OF MULTIPLE REGRESSIONS FOR DISCREPANCY SCORE PREDICTORS, AT INDIVIDUAL, GROUP AND ORGANIZATIONAL LEVELS, AND OF ZERO-ORDER CORRELATIONS WITH CRITERION AT ORGANIZATIONAL LEVEL

Measures	LEVEL					
	Individual				Group				Organization	
	Sample 1		Sample 2		Sample 1		Sample 2			
	Beta	p	Beta	p	Beta	p	Beta	p	r	p
Intra-Group Interpersonal Processes	(R, R_{adj} = .13, .06 (N = 509)		.16, .11 (N = 524)		.54, .48 (N = 86)		.43, .34) (N = 93)			
Supv. Support	.04	--	.08	--	-.01	--	.06	--	.25	--
Supv. Goal Emphasis	-.08	--	.05	--	.05	--	-.17	--	.46	.003
Supv. Work Facil.	-.02	--	-.05	--	-.09	--	-.30	--	.34	.03
Supv. Intera. Facil.	.12	.05	.08	--	.37	.01	.44	.01	.58	.0001
Peer Support	.01	--	.05	--	.50	.0002	.14	--	.48	.002
Peer Goal Emphasis	-.06	--	-.04	--	.12	--	-.15	--	.35	.03
Peer Work Facil.	.03	--	-.01	--	-.56	.002	.19	--	.12	--
Peer Intera. Facil.	.04	--	.05	--	.07	--	.08	--	.41	.007
Goal Integration									-.26	--
Non-Economic Job Factors	(R, R_{adj} = .37, .35 (N = 507)		.44, .43 (N = 518)		.57, .50 (N = 86)		.68, .64) (N = 93)			
Job Challenge	.15	.001	.13	.004	.13	--	.40	.0001	.13	--
No One to Boss Me	.03	--	-.05	--	-.06	--	.01	--	.16	--
Lots of Free Time	.17	.001	.11	.01	.19	--	.30	.002	-.06	--
Opp. to Control Life	.16	.001	.26	.0001	.40	.002	.37	.001	.33	.03
No Endless Referrals	-.04	--	-.04	--	-.30	.01	-.01	--	.23	--
No Red Tape	-.06	--	.06	--	.23	--	-.21	--	.55	.0001
Rules Not Constraining	.11	.05	.06	--	-.18	--	-.02	--	.43	.004
Prestigious Job	.02	--	.07	--	-.02	--	-.08	--	.34	.03
Friendly People	.03	--	.08	--	.39	.001	.07	--	.05	--

TABLE 6 (Continued)

Measures	LEVEL					
	Individual				Group				Organization	
	Sample 1		Sample 2		Sample 1		Sample 2			
	Beta	p	Beta	p	Beta	p	Beta	p	r	p
Economic Job Factors	(R, R_{adj} = .26, .25 (N = 528)		.24, .23 (N = 528)		.32, .28 (N = 86)		.42, .40) (N = 93)			
Good Pay	.23	.0001	.21	.0001	.32	.005	.26	.02	.35	.02
Steady Employment	-.12	.004	-.13	.002	-.07	--	-.27	.008	.08	--
Good Fringe Benefits	-.01	--	.02	--	-.13	--	.12	--	-.43	.005
Life Style Factors	(R, R_{adj} = .23, .22 (N = 525)		.28, .27 (N = 517)		.37, .34 (N = 86)		.51, .49) (N = 93)			
Opp. to Serve Country	-.11	.03	-.12	.02	-.30	.009	-.12	--	-.46	.002
Opp. to Make World Better	.21	.0001	.23	.0001	.34	.003	.26	.02	-.10	--
Permits Stay One Place	.11	.01	.17	.0001	-.02	--	.44	.0001	.29	--

1 The significance levels of the β are computed on the basis of "t" which is the quotient of β divided by the standard error.

At the group level, much the same pattern presents itself: predictive capacity is little enhanced by the use of discrepancy scores. Significant results are obtained, to be sure, but in general such results do not replicate from one random half-sample to the other.

At the organizational level, the discrepancy score picture is both more interesting and more mixed. Clearly, discrepancy scores are better predictors at the organizational level than are their actual score counterparts. Of the eight leadership measures, six are better predictors in discrepancy score form, in some cases much better predictors than are actual scores for the same measures. Among the remaining job and life style factors, the results are rather mixed, as often better as worse.

To further clarify this picture, we present in Table 7 the ideal scores--that is, the other portion of the discrepancy scores--as predictors. We find, from these data, that organizational-level ideal scores alone are the best predictors. The direction of the relationship for those which are statistically significant is such that the higher the level of leadership the first-term Navy man desires, whether from supervisor or from peers, the more likely it is that he will leave the Navy, regardless of what he experiences on these dimensions in the course of his service.

This finding is quite perplexing. One possibility, of course, is that it reflects the effects of national issue postures of these same first-term enlisted men, a possibility which will be explored in the following section. Another possibility is that it reflects indirectly the attitudes and postures of supervisors, showing up in the present instance in the preference differences of those whom they supervise.

This latter possibility requires, for its exploration, the matching of supervisors' responses with those of their subordinates, on analysis stratagem which is planned for the next phase of analysis, but is clearly beyond the scope of the present report.

Relationship to National Issue Measures

As the original proposal and reports prepared since its submission and approval indicate, the overall research study encompassed national issues measures as well as organizational and job perceptions. Preliminary findings in relation to these national issues have been summarized in a technical report (Bachman 1973). In an effort to determine the relationship which these national issue measures may, or may not, have to the organizational practices and preferences which are the focus of the present study, marker variables (obtained from presently ongoing factor analyses which are the subject of a forthcoming technical report by Bachman) were placed within the same type of analytic framework at the individual level previously used for the organizational measures. That is, random sample halves were employed in a multiple regression analysis using national issue marker measures as predictors. From the total array of such marker variables, successive subsets of best predictors were selected and the final subset was combined with the three previously identified best individual-level, organizational variable predictors in a joint multiple regression.

The results are presented as Appendix A to the present report. They indicate that a great deal of overlap exists between best national issue predictors of reenlistment intention and organizational predictors of that same criterion. More specifically, the national issue measure entitled "Military Job Opportunity" appears to overlap in substantial measure the Human Resources Primacy index in the organizational array. When combined, the six predictors (three from the national issues array, three from the organizational array) do little better than either subset of three taken singly. For present purposes, therefore, it would appear that little, if any, additional predictive power is obtained by joining both sets of predictors (national issues measures and organizational practices and preferences) in a combined multiple regression.

TABLE 7

RESULTS OF MULTIPLE REGRESSIONS FOR IDEAL PREDICTORS AT INDIVIDUAL AND GROUP LEVELS, AND OF ZERO-ORDER CORRELATIONS WITH CRITERION AT ORGANIZATIONAL LEVEL

Measures	LEVEL								Organization	
	Individual				Group					
	Sample 1		Sample 2		Sample 1		Sample 2			
	Beta	p	Beta	p	Beta	p	Beta	p	r	p
Intra-Group Interpersonal Processes	(R, R_{adj} = .19, .15 (N = 522)		.14, .08 (N = 531)		.21, .20 (N = 86)		.31, .15) (N = 93)			
Supv. Support	-.10	--	.01	--	.04	--	-.04	--	.59	.0001
Supv. Goal Emphasis	.02	--	-.09	--	-.03	--	.02	--	.58	.0001
Supv. Work Facil.	.02	--	-.01	--	-.24	--	.20	--	.55	.0002
Supv. Intera. Facil.	.06	--	.07	--	.24	--	.08	--	.67	.0001
Peer Support	.02	--	.07	--	-.02	--	.01	--	.65	.0001
Peer Goal Emphasis	-.14	.03	-.03	--	-.21	--	-.35	--	.41	.008
Peer Work Facil.	-.09	--	.06	--	.26	--	.13	--	.35	.02
Peer Intera. Facil.	-.15	.02	-.14	.05	-.13	--	.06	--	-.11	--
Non-Economic Job Factors	(R, R_{adj} = .33, .31 (N = 521)		.24, .21 (N = 529)		.39, .25 (N = 86)		.52, .45) (N = 93)			
Job Challenge	-.06	--	.03	--	-.02	--	-.01	--	.07	--
No One To Boss Me	.17	.0001	.01	--	.20	--	.15	--	.08	--
Lots of Free Time	.06	--	.11	.02	.10	--	.15	--	.41	.007
Opp. to Control Life	.13	.008	.19	.0001	.28	.04	.25	.03	.25	--
No Endless Referrals	.02	--	.00	--	-.16	--	.11	--	-.09	--
No Red Tape	.06	--	.00	--	-.06	--	-.26	--	.34	.03
Rules Not Constraining	.16	.002	.05	--	.17	--	.15	--	.04	--
Prestigious Job	-.07	--	-.01	--	-.02	--	-.26	.02	.04	--
Friendly People	-.06	--	-.11	--	.03	--	-.04	--	.28	--

TABLE 7 (Continued)

Measures	LEVEL								Organization	
	Individual				Group					
	Sample 1		Sample 2		Sample 1		Sample 2			
	Beta	p	Beta	p	Beta	p	Beta	p	r	p
Economic Job Factors	(R, R_{adj} = .19, .18 (N = 533)		.20, .19 (N = 538)		.35, .32 (N = 86)		.27, .27) (N = 93)			
Good Pay	.14	.002	.16	.001	.24	.03	.17	--	.29	--
Steady Employment	-.04	--	-.05	--	.03	--	-.15	--	.48	.001
Good Fringe Benefits	-.18	.0001	-.19	.0002	-.35	.003	-.23	.05	-.26	--
Life Style Factors	(R, R_{adj} = .30, .29 (N = 530)		.34, .34 (N = 531)		.38, .35 (N = 86)		.53, .51) (N = 93)			
Opp. to Serve Country	-.29	.0001	-.28	.0001	-.42	.001	-.32	.009	-.38	.01
Opp. To Make World Better	.03	--	.04	--	.08	--	-.05	--	-.22	--
Permits Stay One Place	.13	.003	.26	.0001	.06	--	.39	.0001	.33	.03

1 The significance levels of the β are computed on the basis of "t" which is the quotient of β divided by the standard error.

Discussion and Conclusions

At the individual and group levels, the results of the present study are clear, straightforward, and reasonably simple. They indicate that there are vast differences in the intention to reenlist, differences which are seemingly closely tied to the work situation experienced by the first-term enlisted Navyman. The variables which describe situations which predispose Navymen toward reenlisting or leaving the service are in no way mysterious. They have, instead, to do with what, at least for some, are familar topics. They include the importance which his unit attaches to human resources, the amount of satisfaction that he experiences in his work, in his relations with the people around him, and in relation to his opportunities, the nature of the relationship which he has with his coworkers in terms of a cohesive versus a conflictful experience, and the opportunity to be the master of his own personal life.

Those who would argue that the all-volunteer, or no draft, situation is unmanageable or unlivable, on the grounds that necessary manpower cannot be obtained, or retained if in fact recruited, need only look at the statistics reflected in Figure 1, wherein a difference between most and least favorable situations described in the terms just mentioned is a difference of 54 to 1. Stated more simply, if the situations experienced by first-term enlisted Navymen were in general as favorable as those experienced by those whom we have labeled "category 6," over half of the first-term enlisted men would choose to remain in the Navy.

Unfortunately, of course, conditions are not that positive. Yet, as has been mentioned above, the situational conditions which would appear to predispose for, or if negative, against, reenlistment are not mysterious nor difficult ones. If retention is a criterion--and it must be kept in mind, of course, that it is but one of many criteria--the action steps explicit in the findings would appear to be the following:

1. Do those things calculated to demonstrate to the first-term enlisted Navyman that the Navy attaches importance to its personnel as human resources. More specifically, the Navy as an organization ought make certain that its policies and procedures convey in their form and in the behavior of those who interpret and administer them that the Navy has a real interest in the welfare and happiness of its first-term enlisted personnel. These policies and their behavioral interpretation by those subordinate echelons ought to be aimed at improving working conditions for the first-termer, as well as aimed at organizing his work activities in forms which are more sensible to him.

2. Policies, procedures, and the behaviors that go with them, ought be those which enhance close, friendly relationships among Navymen, and reduce conflict.

3. Finally and perhaps most controversial, they ought permit the widest possible latitude or opportunity for the Navyman to control his personal life. Admittedly difficult for any organization whose behavior and appearance is constantly in the public eye, it may, nevertheless, amount in some instances to a choice between a Navy which is effective, though not necessarily consistent in appearance with standards of what is pleasing in the public eye, and a Navy, on the other hand, which though attractive is undermanned and, in fact, less effective.

Future research will attempt to identify those behaviors and characteristics which more clearly lead to the conditions identified in the present investigation. A search will be made for those behaviors and conditions more specifically associated with satisfaction, with the perception that importance is attached to human resources, and with the perception that one has, in fact, an opportunity to control one's personal life. For the moment, however, the general conclusion of the present report must be that desirable retention rates seem feasible and accomplishable, provided that the practices and conditions necessary for their attainment--for creating the kinds of situations conducive to retention--are acceptable and, in fact, implemented.

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APPENDIX A

MULTIPLE REGRESSION RESULTS
PREDICTING REENLISTMENT INTENTION FROM NATIONAL ISSUE MARKER VARIABLES
AND ORGANIZATIONAL BEST PREDICTORS
(INDIVIDUAL LEVEL)

Measures	NATIONAL ISSUE MARKER PREDICTORS					
	Sample 1		Sample 2		Total	
	Beta [1]	p	Beta	p	Beta	p
	(R, R_{adj} = .40, .38 (N = 504)		.44 (N = 513)	.42	.41 (N = 1,017)	.40)
Military Job Opp.	-.25	.0000	-.18	.001	-.20	.0000
Unjust Trust Set Rights	-.04	--	-.12	.02	-.08	.02
Military Leaders Are Smart	.02	--	-.12	.02	-.06	--
Trust Military Leaders	-.03	--	.01	--	.00	--
U.S. Mil. Power vs. U.S.S.R.	.03	--	.00	--	.00	--
U.S. Mil. Power vs. Others	.09	.07	.05	--	.07	.05
U.S.-War to Protect Others	.04	--	-.02	--	.00	--
U.S.-Defend Only U.S.	.04	--	-.09	.04	-.03	--
Punish Draft Dodgers	.09	--	.01	--	.05	--
Grant Amnesty	-.07	--	-.01	--	-.03	--
Obey Without Question	.05	--	.07	--	.06	.07
Anti Vietnam	.02	--	.08	--	.05	--

1 The significance levels of the β are computed on the basis of "t" which is the quotient of β divided by the standard error.

APPENDIX A

MULTIPLE REGRESSION RESULTS
PREDICTING REENLISTMENT INTENTION FROM NATIONAL ISSUE MARKER VARIABLES
AND ORGANIZATIONAL BEST PREDICTORS
(INDIVIDUAL LEVEL)

Measures	SUBSET OF BEST NATIONAL ISSUE PREDICTORS					
	Sample 1		Sample 2		Total	
	Beta	p	Beta	p	Beta	p
	(R, R_{adj} = .37, .36 (N = 504)		.44 (N = 513)	.43	.40 (N = 1,017)	.39)
Military Job Opp. Ideal	-.25	.0000	-.19	.0001	-.22	.0000
Unjust Trust Set Rights	-.02	--	-.12	.01	-.07	.04
Military Leaders Are Smart	-.03	--	-.12	.01	-.08	.02
U.S. Mil. Power vs. Others	.12	.01	.08	.06	.09	.002
U.S. Defend Only U.S.	-.01	--	-.11	.01	-.06	.03
Obey Without Question	.08	.06	.08	.06	.08	.01

Measures	JOINT EFFECTS OF BEST NATIONAL ISSUE AND BEST ORGANIZATIONAL PREDICTORS					
	Sample 1		Sample 2		Total	
	Beta	p	Beta	p	Beta	p
	(R, R_{adj} = .40, .39 (N = 504)		.49 (N = 513)	.48	.44 (N = 1,017)	.44)
Military Job Opp. Ideal	-.11	.04	-.13	.01	-.12	.001
U.S. Mil. Power vs. Others	.12	.01	.10	.01	.11	.0002
U.S. Defend Only U.S.	-.01	--	-.11	.01	-.06	.02
Human Resources Primacy	-.02	--	-.14	.002	-.08	.01
Satisfaction	-.22	.0001	-.13	.01	-.18	.0000
Opp. to Control Per. Life	-.10	.02	-.18	.0000	-.14	.0000

APPENDIX B

Table B-1

CORRELATION OF BETA WEIGHTS ACROSS HALF-SAMPLES, FOR INDIVIDUAL AND GROUP LEVELS

Level	Measures	Samples	r	N	
Individual	Organizational Climate	1x2	.68	5	--
	Intra-Group Interpers. Processes	1x2	.91	10	.01
	Non-Economic Job Factors	1x2	.74	9	.05
	Economic Job Factors	1x2	.95	3	--
	Life Style Factors	1x2	.78	4	--
	All Measures	1x2	.79	31	.01
	All Measures	3x4	.51	31	.01
Group (Greater Than 1)	Organizational Climate	1x2	-.43	5	--
	Intra-Group Interpers.	1x2	.53	10	--
	Non-Economic Job Factors	1x2	.86	9	.01
	Economic Job Factors	1x2	.89	3	--
	Life Style Factors	1x2	.63	4	--
	All Measures	1x2	.00	31	--

Table B-2

CROSS-VALIDATION OF STAGE 2 MULTIPLE REGRESSION RESULTS
(DEPENDENT VARIABLE = REENLISTMENT INTENTION)

Independent Variable Cluster	Level	Original R = (Unadj)	Samples: Prediction Combination	r
Organizational Climate	Individual	.35	1 → 2	.33**
		.32	2 → 1	.30**
	Group	.55	1 → 2	.34*
		.57	2 → 1	.29*
Intra-Group Interpers. Processes	Individual	.39	1 → 2	.36**
		.37	2 → 1	.33**
	Group	.54	1 → 2	.40**
		.66	2 → 1	.49**
Non-Economic Job Factors	Individual	.40	1 → 2	.36**
		.40	2 → 1	.37**
	Group	.59	1 → 2	.52**
		.66	2 → 1	.62**
Economic Job Factors	Individual	.30	1 → 2	.27**
		.40	2 → 1	.37**
	Group	.33	1 → 2	.32*
		.52	2 → 1	.50**
Life Style Factors	Individual	.32	1 → 2	.31**
		.28	2 → 1	.26**
	Group	.45	1 → 2	.40**
		.52	2 → 1	.52**

* Significant beyond .01 level of confidence

** Significant beyond .001 level of confidence

Table B-3

CROSS-VALIDATION OF STAGE 5 MULTIPLE REGRESSION RESULTS
(DEPENDENT VARIABLE = REENLISTMENT INTENTION)

Criterion from Sample	Original R (Unadjusted)	Samples: Prediction Combination	r
1	.38	2 → 1	.38**
		3 → 1	.37**
		4 → 1	.37**
2	.43	1 → 2	.43**
		3 → 2	.42**
		4 → 2	.43**
3	.37	1 → 3	.37**
		2 → 3	.36**
		4 → 3	.35**
4	.45	1 → 4	.44**
		2 → 4	.44**
		3 → 4	.43**

** Significant beyond .001 level of confidence

References

Bachman, J.G. Values, Preferences and Perceptions Concerning Military Service. Ann Arbor, Michigan, The University of Michigan, The Institute for Social Research, June, 1973.

Bowers, D.G. Values and their impact for Navy and civilian respondents. Ann Arbor, Michigan, The University of Michigan, The Institute for Social Research, June, 1973.

Drexler, J.A. and Bowers, D.G. Navy retention rates and human resources management. Ann Arbor, Michigan, The University of Michigan, The Institute for Social Research, May, 1973.

McNemar, Q. Psychological statistics, fourth edition. John Wiley and Sons, Inc., New York, 1969.

Michaelsen, L.K. A methodology for the studies of the impact of organizational values, preferences, and practices on the all-volunteer Navy. Ann Arbor, Michigan, The University of Michigan, The Institute for Social Research, June, 1973.

Navy Human Goals Plan

Admiral Bagley. Proper leadership and management are essential for the achievement of the results envisioned by the University of Michigan studies. We intend to improve leadership with our Human Goals Plan.

Costs of Human Goals Plan

Chairman McClellan. What specific costs have been and are contemplated to be associated with implementation of the Human Goals Plan? Please provide by fiscal year.

Admiral Baggley. I will provide that for the record.

(The information follows:)

HUMAN GOALS PERSONNEL COSTS

[Costs in millions of dollars]

	Fiscal year 1973				Fiscal year 1974				Fiscal year 1975			
	Officers	Enlisted	Civilian	Costs	Officers	Enlisted	Civilian	Costs	Officers	Enlisted	Civilian	Costs
Human resource management:												
Equal opportunity	22	0	0		22	0	0		22	0	0	
Race relations	107	672	5		107	522	5		106	510	5	
Organizational development and management	81	37	4		79	59	4		82	55	4	
Intercultural relations	41	36	6		0	0	0		0	0	0	
O & MN				4.227				7.966				9.144
Milpers				10.945				7.250				9.173
Total				15.172				15.216				18.317
Alcohol prevention	34	177	50		52	266	71		52	226	82	
O & MN				2.418				3.238				3.181
Milcon				.150				.310				0
R.D.T. & E				.025				.050				.045
Milpers				1.986				2.790				2.800
Total				4.579				6.388				6.026
Drug abuse control	166	714	135		196	814	137		182	775	137	
O & MN				7.586				6.048				5.856
Milcon				.690				0				0
R.D.T. & E				.114				.095				.105
Milpers				9.420				10.774				10.194
Total				17.810				16.917				16.155
Project Transition	16	31	76		14	29	39		0	0	0	
O & MN				.997				.893				0
Milpers				.567				.556				0
Total				1.564				1.449				0
Total:												
Personnel	467	1,667	276		470	1,650	256		444	1,566	228	
Costs:												
O & MN				15.228				18.145				18.181
Milpers				22.918				21.370				22.167
Milcon				.840				.310				0
R.D.T. & E				.139				.145				.150
Grand total				39.125				39.970				40.498

Chairman McClellan. Proceed.

Admiral Bagley. We have used this name because the efforts to increase the capability of our leadership throughout the Navy to deal with young people with new and changing attitudes towards authority, towards the military, towards education, towards the value of openness, etc., and to mold these men into an effective team in support of Navy missions will include all of the tests of the DOD Human Goals Credo. The Navy Human Goals Plan, then, is first and foremost a well considered leadership plan. It is designed to attack head-on the leadership problems confronting our Navy in today's world. Its aim is to strengthen the leadership throughout the chain-of-command. The result will be the overall improved effectiveness of the Navy, improved combat readiness, and maintenance of good order and discipline. These must be achieved concomitantly with increased motivating opportunities of each member that will cause him to be more effective and to remain in the Navy. In other words, the result should be command excellence with improved retention.

Thrust of Plan

This plan recognizes that some new developments in our society have created new problems and challenges for our leaders in today's Navy. In addition to the changes in attitudes already cited, drug abuse is a part of the culture of many of our young people. Equal opportunity for women and racial minorities is a key and dynamic issue and, unfortunately, lack of trust across racial lines is prevalent and overtly manifest. There is a thrust for individual recognition, and freedom of choice is a major motivational force. And, finally, there must be an appreciation of the difference in values between age groups. *The plan also recognizes that in handling the above spectrum of leadership challenges, they must be handled in such a way that we maintain . . . responsive, effective, combat capability and overall mission effectiveness.*

In order to accomplish these goals, we must work in two areas:

1. Managing better our organization through better management of the people in them; and

2. When feasible, assisting those people who have become ineffective through drug or alcohol usage, or other social problems, to be rehabilitated and restored to full, effective duty.

Implementation of Plan

The specific implementation of this integrated human resource management program is being implemented by a dual effort, namely: (1) in introducing improved course material on leadership, good order and discipline, responsibility and authority, equal opportunity, better race relations, drug and alcohol abuse control, etc., into all of our officer and enlisted source schools and middle and upper leadership schools, while (2) working with commands at the local level to assist commanding officers in strengthening their chain-of-command and overall leadership to handle the problems described and to improve their organizational effectiveness.

Drug and Race Relation Force Sizes

Chairman McClellan. Provide the size of the drug specialist and race relations specialists forces for FY 1972–FY 1975.

Admiral Bagley.

	Fiscal year 1972		Fiscal year 1973		Fiscal year 1974		Fiscal year 1975	
	Officer	Enlisted	Officer	Enlisted	Officer	Enlisted	Officer	Enlisted
Drug abuse education	0	108	12	224	12	219	[1] 12	[1] 198
Race relations specialist	37	268	107	672	107	522	106	510

[1] Drug abuse education billets will be further reduced 50 percent by Dec. 31, 1974 and 50 percent by June 30, 1975.

Chairman McClellan. Proceed.

Admiral Bagley. The success of these programs today, even though they are in their infancy, proves the wisdom of continuation. For example, in calendar year 1973 nearly 7,000 identified drug abusers and nearly 2,000 identified alco-

holics were returned to full effective duty. Three years ago 65% of these would have been administratively discharged and their training and experience lost. Second, as a result of our race relations training, we are starting to see workable affirmative action plans at all levels throughout the Navy. These are resulting in successful approaches to equal opportunity that were lacking prior to the inception of this training. The improved management and leadership resulting from our work with some of our commands has met with great success and enthusiasm. For example, one command after working with one of our Human Resource Management and leadership teams strengthened its chain-of-command and improved its leadership to the point that first term reenlistments went from 15% to 48%. At the same time, command readiness improved.

As a result of these programs and other efforts over the past year, misunderstandings concerning a strong chain of command have been cleared up. We have received virtually no complaints about by-passing chains of command. More importantly, incidents growing out of group challenges made against command have been greatly curtailed and in the few that were initiated, prompt and firm command action quickly defused them.

Utilization of Specialists

The initial implementation of the Human Goals Plan was based on the utilization specialists and race relation education specialists to assist commanding officchallenges and problems new to our leadership. We have had drug abuse education specialists and race relation education specialists to assist commanding officers throughout the fleet. As the officer and enlisted leadership of the Navy becomes better prepared to handle these new societal challenges, specialist assistants will be phased out. It is planned that the drug specialists will be gone within the next two years. We are now finishing the first phase of our race relation seminars and we will need to retain Race Relation Education Specialists at the present level at least through FY 1977.

I feel confident that we have a good integrated program for achieving a significant improvement in the capability of our leadership throughout the Navy to meet the challenges of the 1970's. Moreover, as we continue this training, the Navy will benefit through improved effectiveness and improved retention of our experienced Navy men. The Human Resource Management programs are cost effective, and are a vital part of the overall strategy in the achievement of Navy excellence. I ask for your support in this area.

Women in the Navy

G. *Utilization of Women.* The Navy is continuing to implement its policy of providing equal opportunity for women. The table below shows that in FY 75 it is planned that the number of women, other than nurses, will nearly triple from the number onboard at the end of FY 72. Tentative planning is for more women in subsequent years but the increases will be calculated to assure sufficient billets to continue our sea/shore rotation improvement for our men.

Specialties Open to Women

Chairman McClellan. How many naval occupational specialties are open to women? Which ones are not? Of the total number of Navy personnel strengths, what is your personal estimate of the number that could be successfully filled by women?

Admiral Bagley. All ratings are open to women enlisted members. However, pending enactment of legislation authorizing assignment of women to duty in vessels other than hospital ships and transports, women enlisted members will not be assigned to Class "A" Schools for the following ratings:

AW—Aviation Antisubmarine Warfare Operator
EW—Electronics Warfare Technician
FTB—Fire Control Technician B (Ballistic Missile)
FTG—Fire Control Technician G (Gunfire)
FTM—Fire Control Technician M (Surface Missile)
GMG—Gunner's Mate G (Guns)
GMM—Gunner's Mate M (Missiles)
GMT—Gunner's Mate T (Technician)
IM—Instrumentman

ML—Molder
MT—Missile Technician
OM—Opticalman
PM—Patternmaker
ST—Sonar Technician

The entire student output of these schools is required to fill the billets in ships other than hospital ships and transports. Entry into these ratings through on-the-job training and rating conversion (provided no formal schooling is involved) may be authorized, except into those ratings where completion of Class "A" School is a prerequisite for rating entry.

It is estimated that approximately 4.25% (20,000) of the enlisted strength can be filled by women. The Navy expects to arrive at this percentage by end FY 1976.

Of the total officer strength, it is estimated that approximately 2.5% (1600) can be filled by women. The Navy expects to arrive at this percentage by end of FY 1977.

Chairman McClellan. Proceed.

Admiral Bagley. Increases over FY 72 are as follows:

WOMEN IN THE NAVY

	Fiscal year—				Increase over 1972
	1972	1973	1974	1975	
Officer	752	930	1,067	1,114	362
Enlisted	5,723	8,835	13,176	17,222	11,499
Total [1]	6,475	9,765	14,243	18,336	11,861

[1] Excludes women health professionals.

We placed eight women in the Naval flight training program. Two have recently graduated, and four are still progressing well. There are two women officers, and 58 enlisted women assigned to the ship's company of the USS SANCTUARY. A Wave Lieutenant is the Operations Officer/Navigator aboard that ship. All NROTC campuses at coed colleges are now open to women with 30 women in the four-year scholarship program and 133 in the two-year college program. Also, the first coed graduation at the Officer Candidate School, Newport, Rhode Island, occurred the first week in November 1973.

Personnel Management

H. *Personnel Management Improvements.* I have indicated a number of problems in Navy personnel management and some corrective programs. I want to discuss some other improvements we have implemented and are working on for the future.

While numerous personnel management initiatives have been implemented during the last four years, and have generally been institutionalized in our overall personnel system, much remains to be done in the basic management system. In the enlisted area we are in the final planning stage prior to implementing a wholesale revision of the Navy Enlisted Occupational Classification System. The new system will eliminate outmoded features of our current enlisted personnel identification structure and will have a profound and beneficial effect on our methods and policies related to training. Additionally, we have this year installed a revised computerized personnel accounting system for our enlisted personnel which should improve the efficiency of our enlisted personnel management procedures. In connection with officer management, we are in the second year of the Operational/Technical/Managerial System, to which I referred previously, which provides a quantum increase in our ability to manage officer professional development.

R&D Programs

In looking to the future, we have placed great emphasis on developing a research and development program. For the first time in recent years, the Chief of Naval Personnel possesses the capability to influence directly the projects approved for personnel and manpower R&D and to monitor them from a user standpoint as they progress towards completion.

Personnel and Manpower R&D Program Elements

Chairman McClellan. List all research and development program elements related to personnel and manpower FY 1973–FY 1975.

Admiral Bagley. The following Navy research and development program elements relate to personnel and manpower; and they represent the manpower/personnel program over which the Human Resources R&D Advisory Council will exert substantial influence in defining requirements and establishing priorities:

	Fiscal year—		
	1973	1974	1975
61153N—Psychological sciences	3.0	3.1	3.1
62763N—Human resources	5.1	6.3	5.8
63707N—Manpower effectiveness	1.7	2.7	3.2
Total	9.8	12.1	12.1

Chairman McClellan. Proceed.

Admiral Bagley. My emphasis is on *future* capability. Current projects include developing a manpower management technology which will vastly improve our ability to translate manpower requirements into programs which are achievable from the standpoint of funding the billets and acquiring and training the personnel necessary to fill those billets. We are also developing personnel systems which will improve our manpower utilization and better match personnel with job requirements.

Conclusion and Recommendations

A. *General.* In concluding, I want to briefly stress several important considerations, at least from the point of view of myself as the Navy manpower and personnel manager. They are:

1. Prognosis for AVF success.
2. Approval of the FY 1975 MPN Budget Request.
3. Timely appropriations.
4. Service flexibility within Broad Policy and Budget Guidance.

B. *Prognosis for AVF Success.* We are cautiously optimistic that we will be able to attain our personnel programs in the absence of the draft. But, we cannot do it alone. As I have indicated, we are slightly below our recruiting goals in terms of numbers of new recruits, but quality is remaining relatively high, though we are having trouble in obtaining sufficient numbers of the longer term enlistments. We feel that we are in partnership with the Congress in making AVF successful. It is a joint responsibility. Navy has implemented many initiatives to this end, but we need your help where only you can function—providing monetary and other incentives, as well as helping to improve the military image to the public. There has been criticism of the AVF as being the primary reason for the increasing cost of manpower. This simply is not true. The vast majority of higher personnel costs derive from equity considerations and began prior to AVF. Even so, if the military services are going to successfully compete in the marketplace for young people, the nation must be prepared to pay the price in the form of pay comparable to private industry, and other incentives. Early approval of incentive legislation—healing arts pay, Selective Enlistment Bonus, Selective Reenlistment Bonus, Aviation Career Incentive Pay, etc.—and officer continuation authority is recommended.

Need for Stability

We are in dire need of a long-range period of strength and budget stability during which we can fully implement and evaluate the many manpower and personnel programs and initiatives undertaken during the last four years and planned for the future under a fully volunteer Navy concept. With this concept and precipitous strength and budget reductions since FY 1969, as well as the reconstitution of a smaller, but more modern operating Navy, many difficult

problems dealing with people and their welfare require solution. Top Navy management, as a priority objective, is concentrating on these problems, and a stable operating atmosphere with full support of Congress and the public would be most helpful and appreciated.

C. *Approval of FY 1975 MPN Budget Request.* I urge the Congress to approve our FY 1975 MPN budget request and related strength, as submitted. As previously indicated, we have tailored our strength requirements to the very minimum required to perform the Navy's world-wide commitments. It should be noted that the fiscal year 1975 MPN budget has been the subject of intensive scrutiny at the highest levels of management within Navy, as well as within the Office of the Secretary of Defense and the Office of Management and Budget. The resultant budget product reflects a judicious balance between manpower requirements and fiscal realities.

Prior Year Problem Area

In prior fiscal years effective management of the Navy's personnel appropriation has been hampered by a number of systemic ills. Chief among these ills has been an inadequate management information system which has contributed significantly to an historical understatement of the true cost of the personnel program. In the absence of accurate and timely feedback of actual costs incurred in past and current years, the forecasting and defense of budget year and out-year costs has been extremely difficult, at best. Therefore, in an environment of declining strength and rigid fiscal constraints, past personnel budgets have understated the eventual actual cost of the approved personnel program. The difficulties caused by such undercosting were significantly aggravated by late action on the appropriation request and by rampant inflationary pressures which further escalated the actual costs as expenditures materialized.

A major contributing factor to the MPN R.S. 3679 violations in fiscal years 1969, 1971 and 1972 was this undercosting syndrome. Unfortunately, the problem has been a particularly pernicious one because of its circular nature. Clearly, an undercosting in any one year caused a depressed budget base which resulted in artifically constrained rates on which subsequent budgets were formulated and reviewed. This, of course, perpetuated the undercosting problem in subsequent years.

We have devoted considerable effort towards the objective of breaking out of this vicious cycle. We have improved our capability to forecast manpower requirements and we have finally achieved utilization of realistic rates in budget formulation. We are still faced with the continuing problem of an inadequate mechanism for accommodating increased costs of strong inflationary pressures which impact most heavily on the Permanent Change of Station and the Subsistence portions of the MPN appropriation account.

D. *Timely Appropriations.* I have previously discussed the inefficiencies generated by the absence of an MPN appropriation prior to the beginning of the fiscal year. It is heartening to note indications of Congressional intent to accelerate the budget review process. An example is the relatively early date for this hearing. Thus, we are hopeful of timely approval of the fiscal year 1975 budget, a factor which, in combination with a much more realistic budget submission, should result in an effective and orderly executive of the fiscal year 1975 program.

Service Flexibility

E. *Service Flexibility within Broad Policy and Budget Guidelines.* Finally, I strongly recommend that the military services be permitted the flexibility to manage their military programs under broad Congressional policy and budget guidance. We are grateful for the many past considerations provided the Navy by the Congress, but I believe that some specific directions resulting from the review of the FY 1974 MPN appropriation and active strength requests are counterproductive to our overall efforts to develop and maintain viable personnel inventories with which to man the approved operating forces in the current environment. I believe the directed reductions in career, race relations and intercultural relations counselors, and cutbacks in educational incentives, were extremely damaging to our retention efforts and left us no room for orderly

advance planning and execution. I am hopeful that this subcommittee and the Congress will reconsider such actions in acting on our FY 1975 request.

Mr. Chairman, this concludes my statement. Now, I would be pleased to try and answer any questions you may have.

PERSONNEL STRENGTHS

Chairman McCLELLAN. You may proceed with your statement, Admiral Bagley.

Admiral BAGLEY. The first chart summarizes the "Military Personnel, Navy" budget for the last 2 fiscal years and shows fiscal year 1975.

As you have seen from Admiral Cooke's presentation, we have a net decrease in personnel of 10,707 from 1974 to 1975.

[The chart follows:]

FY 1975 MILITARY PERSONNEL NAVY BUDGET SUMMARY

	END STRENGTH	MANYEARS	($000) DOLLARS
FY 1973	564,308	579,667	5,461,462
FY 1974	551,087	562,246	5,720,100
FY 1975	540,380	554,026	5,765,200
DIFF FY74 - FY75	-10,707	-8,220	+45,100

Chairman McCLELLAN. Does that include the Marine Corps?

Admiral BAGLEY. No, sir; this is strictly Navy.

The end strength and man-year average of personnel is going down through these 3 years. Yet the costs are going up somewhat. The increase in dollars. $45.1 million, is due entirely to pay raises and to inflationary costs, primarily the movement of people and feeding them.

Chairman McCLELLAN. What pay raise is involved in that $45 million? Did one come into effect recently?

Admiral BAGLEY. This would be the one that came into effect last year, sir.

Admiral COOKE. October 1, 1973.

Chairman McCLELLAN. Last year it was not for a full year. Now this year it is for a full year.

Admira BAGLEY. Yes, sir.

Chairman McCLELLAN. So that increases personnel cost.

Admiral BAGLEY. Yes, sir; effective last October.

Chairman McCLELLAN. About three-fourths of the year then.

Admiral BAGLEY. Exactly.

Chairman McCLELLAN. Does that represent about——

Admiral BAGLEY. That is an algebraic sum of inflationary costs of moving people, increased costs of food as well as the pay raises, offset by the force reductions of about 10,000 people.

COMMUTED RATION RATE

Chairman McCLELLAN. For the record, what is the cost of feeding military personnel?

Admiral BAGLEY. I believe it is about $2.31 a day.

Chairman McCLELLAN. I believe I heard a figure the other day of $2.28. That was as of the first of the year, as I recall.

Admiral COOKE. On January first the commuted-leave ration rate went to $2.28. That was the number given to you.

EFFECTS OF INFLATION

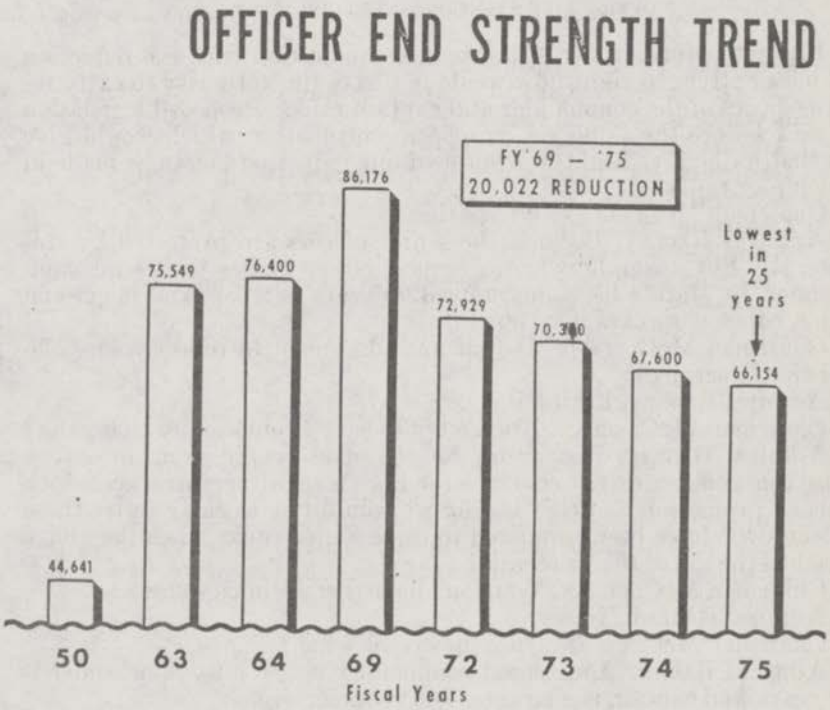
Senator YOUNG. Do you have any percentage figure for the cost of inflation, aside from pay raises. Do you have figures in your budget?

Admiral BAGLEY. No, sir; we do not have inflation figures specifically in our budget, but the effect varies from one budget activity to another. In the PCS category, the cost of moving has increased markedly from last year. I don't have a specific figure for that. It is on the order of approximately 15 percent per annum. The cost of the average daily ration has gone up over the past year about 14 percent. Since in my appropriation I have food, moves, pay allowances and this type of thing, it is hard to give an aggregated figure of inflation.

Admiral GADDIS. As a general benchmark, you might recall that February to February last year to this year the Bureau of Labor Statistics average was a 9.2-percent increase.

FUEL PRICE INCREASE

Senator YOUNG. Fuel costs are up how much?
Admiral COOKE. At least one-third.
Admiral GADDIS. Well over 100 percent in the last year, to the Navy.
Chairman MCCLELLAN. That is for what?
Admiral GADDIS. This is for the distillate fuel we burn in ships and JP–5 which is the primary fuel for Naval aircraft.
Chairman MCCLELLAN. Proceed with your chart.



OFFICER STRENGTHS

Admiral BAGLEY. I would like to move to the second chart, which depicts the officer strength. I want to point out that our requested officer end strength for fiscal year 1975 of 66,154 will be the lowest in 25 years.

Additionally, as a matter of interest to the committee, the Navy is complying with the limitation on the numbers of officers in the senior grades.

Chairman MCCLELLAN. I notice a reduction of only about 1,500 from last year.

Admiral BAGLEY. That is correct. We started in 1972, at the end of 1972, to reduce our officer strength by approximately 10,000 in 5 years. We are pretty well along in accomplishing that objective.

Chairman McCLELLAN. You reduced it by 8,700 since then, haven't you?

Admiral BAGLEY. Yes, sir, from fiscal year 1969 through 1974. That would be an 8,576 reduction, to be exact.

Chairman McCLELLAN. You are going to meet your reduction goal?

Admiral BAGLEY. To about 66,000 by the end of fiscal year 1975.

Chairman McCLELLAN. For 5 years. You will make it?

Admiral BAGLEY. Yes, we will.

OFFICER CONTINUATION LEGISLATION

I might point out, Mr. Chairman, in connection with the reduction of officer strength right now we do not have the authority to early retire officers in the commander and captain ranks. Proposed legislation is now before the Congress on officer continuation which would give us that authority. Right now most of our reduction has to be made in the junior ranks.

Chairman McCLELLAN. Why is that?

Admiral BAGLEY. Because the senior officers are protected by statute, sir. For example, when a regular officer makes lieutenant commander, by statute he is guaranteed 20 years' service. And it goes on up. A captain is guaranteed 30 years.

Chairman McCLELLAN. Is that an inducement to retain young officers in the service?

Admiral BAGLEY. I think it is.

Chairman McCLELLAN. And to try to earn promotion to that rank?

Admiral BAGLEY. It operates for the good people as an incentive. Also some officers do not continue the high level of performance which earned promotion and that is why we would like to early retire those officers who have been promoted to these senior ranks when they have reached the top of their potential.

Chairman McCLELLAN. You don't have that authority now?

Admiral BAGLEY. No, sir.

Chairman McCLELLAN. Once they reach what?

Admiral BAGLEY. Lieutenant commander is 20 years, commander is 26 years, and captain is guaranteed 30 years service.

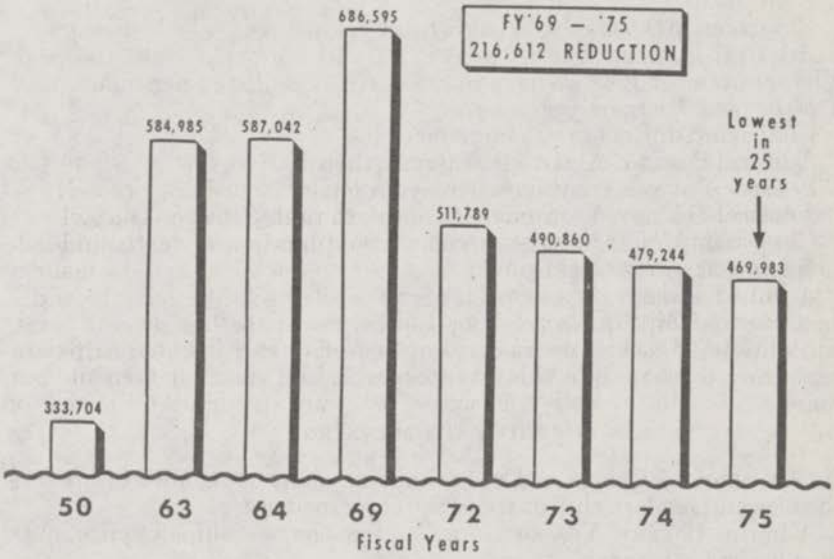
Chairman McCLELLAN. But after they once reach that grade, you cannot remove them because of inefficiency. You don't have to promote them, do you?

Admiral BAGLEY. No, sir, we don't and we have a number of officers that are not promoted in those grades but we can't discharge them short of court-martial proceedings.

Chairman McCLELLAN. There is no way to get rid of them; we are just stuck with their limited ability for that duration?

Admiral BAGLEY. Yes sir, for captains and commanders. However, promotion boards have statutory authority to select out of the service lieutenant commanders whose performance is unsatisfactory in grade. Very few officers are removed in this manner.

ENLISTED END STRENGTH TREND



Chairman McClellan. Would you see that we secure the comparable figures from the Air Force and the Army with respect to this reduction of officer personnel? Will the staff make a note and see that we get that?

[The information follows:]

Air Force officer end strength and strength reduction.[1]

Fiscal year 1969	135,185
Fiscal year 1974	110,959
Total reduction	24,776
Fiscal year 1974	110,959
Fiscal year 1975	107,300
Total reduction	3,659

Army officer end strength and strength reduction:

Fiscal year 1969	172,367
Fiscal year 1974	106,100
Total reduction	66,267
Fiscal year 1974	106,100
Fiscal year 1975	101,550
Total reduction	4,550

[1] Data for fiscal year 1974 and fiscal year 1975 are from the fiscal year 1975 President's budget.

ENLISTED STRENGTHS

Admiral BAGLEY. The next slide depicts the enlisted end strength. Similar to the situation with officers, our enlisted request for 469,983 enlisted personnel for fiscal year 1975, will be the lowest in 25 years.
[See p. 305.]

Chairman MCCLELLAN. What is this?

Admiral BAGLEY. The enlisted. You will note that since the peak Vietnam year of 1969 we have reduced 216,612 enlisted personnel. 1969 was the peak Vietnam year.

Chairman MCCLELLAN. You reduced it——

Admiral BAGLEY. About 216,000 since then.

Senator YOUNG. Are you meeting your goals?

Admiral BAGLEY. I am going to speak to that, Senator Young.

Chairman MCCLELLAN. Are you contemplating any further reduction or has it leveled off?

Admiral BAGLEY. It has pretty well leveled off. We have been decreasing the active force levels in the Navy over the last several years, while we built new more modern and effective ships. Those ships are beginning to come into the inventory and will continue into the out years.

SHIPBOARD MANNING

Chairman MCCLELLAN. Does it take as many personnel to operate the new and modern ship as it did the older models?

Admiral BAGLEY. Yes, sir; in most cases the new ships require more people for a comparable type.

Chairman MCCLELLAN. I thought with so much electronics and other sophisticated equipment, they would probably require fewer personnel.

Admiral BAGLEY. No, sir; it works the other way. The more electronics you have the more people you need to operate them, to maintain and repair them.

Chairman MCCLELLAN. Proceed.

Admiral BAGLEY. I would like to go to the next slide, Mr. Chairman.

RECRUITING

(JUL 73 - MAR 74)

	GOAL	ATTAINED	% OF GOAL
REGULAR NAVY MALE ENLISTMENTS	62,415	60,696	97%
REGULAR NAVY FEMALE ENLISTMENTS	4,065	4,343	107%
TOTAL USN	66,480	65,039	98%
TOTAL USNR	9,712	9,713	100%
TOTAL ONE NAVY	76,192	74,752	98%

RECRUITING

Admiral BAGLEY. Here I just want to summarize the status of recruiting. This indicates our results for the first 9 months of the current fiscal year. As you can see, we are overall 98 percent. Now the Navy Recruiting Service obtains recruits for both the reserve and the regular forces.

Chairman MCCLELLAN. Does it include the Marines?

Admiral BAGLEY. No, sir; this is just Navy. We have attained 98 percent of our total planned enlistments for the first nine months in the regular Navy and 100 percent——

Chairman MCCLELLAN. You are talking about the current fiscal year?

Admiral BAGLEY. Yes, sir, the current fiscal year. These total figures, though, do mask a problem that we are running into of increasing difficulty in attracting and enlisting qualified young men for longer term enlistments, the 4- and 6-year enlistments. Those are the ones we have to obtain so that our expensive and long training becomes cost effective.

We consider that if we are going to train a man in one of our advanced skills he should come into the Navy for a minimum of 4 years. This is getting more difficult. We are running about 32 percent short.

Chairman McCLELLAN. Why? Don't they want to be committed for that long a period?

Admiral BAGLEY. No, sir; I think they would like to take a look at us and the Navy and what it has to offer and then make a decision whether to stay longer.

Chairman McCLELLAN. They want to make their decision after they have had Navy experience.

Admiral BAGLEY. Yes, so a lot of our enlistments have been for the 3-year period, which is our minimum regular Navy enlistment.

FIRST ENLISTMENT EDUCATION

Chairman McCLELLAN. Can you afford to send personnel to school and educate them very much on a 3-year enlistment?

Admiral BAGLEY. I would prefer not to. Obviously it is more costly. For that reason, we do not send 3-year enlistees to advanced training schools.

Chairman McCLELLAN. How much of that 3-year period does it take for them to complete their schooling so as to be qualified in their work?

Admiral BAGLEY. The schooling varies. The basic training is nine weeks. Personnel who don't go to technical school receive 2–4 weeks apprenticeship training and are then assigned to appropriate regular billets. Those who enlist for longer than 3 years are eligible to go to schools which, for particular skills, run from 8 weeks to 52 weeks.

Chairman McCLELLAN. You give as much as a year's training and education to someone?

Admiral BAGLEY. Yes, sir. In return for that we require a 6-year obligation. That is the nuclear program, for example.

Chairman McCLELLAN. Otherwise you feel you could not afford to give them a year's special training just for them to serve 2 more years.

Admiral BAGLEY. No, sir; we must require the additional 2 years because even after training, when they report aboard their ship or aircraft squadron, it takes time to apply that training to be a useful sailor.

Chairman McCLELLAN. So you would really not get but about 1 year's real work out of them.

Admiral BAGLEY. Yes, sir.

Chairman McCLELLAN. And you are having trouble securing from them a 6-year commitment of service.

ENLISTMENT BONUS

Admiral BAGLEY. Yes, sir, 4 and 6 years. Yes. We have very high hopes that the new enlistment bonus, which is now before the Congress will give us the tool to attract these people for the longer term.

Chairman McCLELLAN. How much of a bonus are you proposing?

Admiral BAGLEY. Within selected skill areas for a 6-year enlistment we would propose $3,000. For a 5-year enlistment we propose $1,500. And we would not use that under 5 years although the law would authorize it for as short a time as 4 years.

MINORITY ENLISTMENTS

Senator YOUNG. What percent of the enlistments are black now?

Admiral BAGLEY. Approximately 10 percent of the enlistments. Additionally about 8.1 percent of the Navy enlisted population is black, Senator.

Senator YOUNG. That is lower in the Navy than in the Army.

Admiral BAGLEY. Very much so.

WOMEN ENLISTEES

Chairman MCCLELLAN. I notice you have less trouble getting female enlistments.

Admiral BAGLEY. We have no trouble at all in getting very high quality females.

Chairman MCCLELLAN. How are the other services faring in regard to women in uniform?

Admiral BAGLEY. I think all the Services are having success.

Chairman MCCLELLAN. Keep up the competition.

Senator YOUNG. Are there female Navy service women on ships?

Admiral BAGLEY. No, sir; only on the *Sanctuary* which is a hospital ship. We are prohibited by law from having women serve in combatant ships or aircraft.

RECRUITING QUALITY PROFILE

	FY 1973 (THRU MAR 73)	FY 1974 (THRU MAR 74)
HIGH SCHOOL GRADUATE	68% ↑	69%
SCHOOL ELIGIBLE	72% ↑	83%
MENTAL GROUP IV	19% ↓	3.1%

RECRUITING QUALITY

Mr. Chairman, I would like to turn to the next slide, which depicts recruiting quality and compares it to a comparable period last year with the current fiscal year. As you see, the percentage of high school graduates is up. The school eligible enlistees are up. By school eligible we mean those that score high enough on their entrance tests to give us high confidence that they will be successful in technical skills.

Chairman MCCLELLAN. Do they have the basics for further education and training?

Admiral BAGLEY. Yes, sir.

Finally, the mental group IV, which are the lowest mental group we take in. We have had a significant reduction.

Chairman McClellan. Apparently then the volunteer service is working all right for the Navy.

Admiral Bagley. Yes, sir. It is working well. We have not fully achieved it. I was going to discuss that at the end of my presentation.

Chairman McClellan. You are acquiring very few personnel in mental group IV.

Admiral Bagley. Yes, sir. All of those that we do take are high school graduates.

Chairman McClellan. Describe the group 4 category.

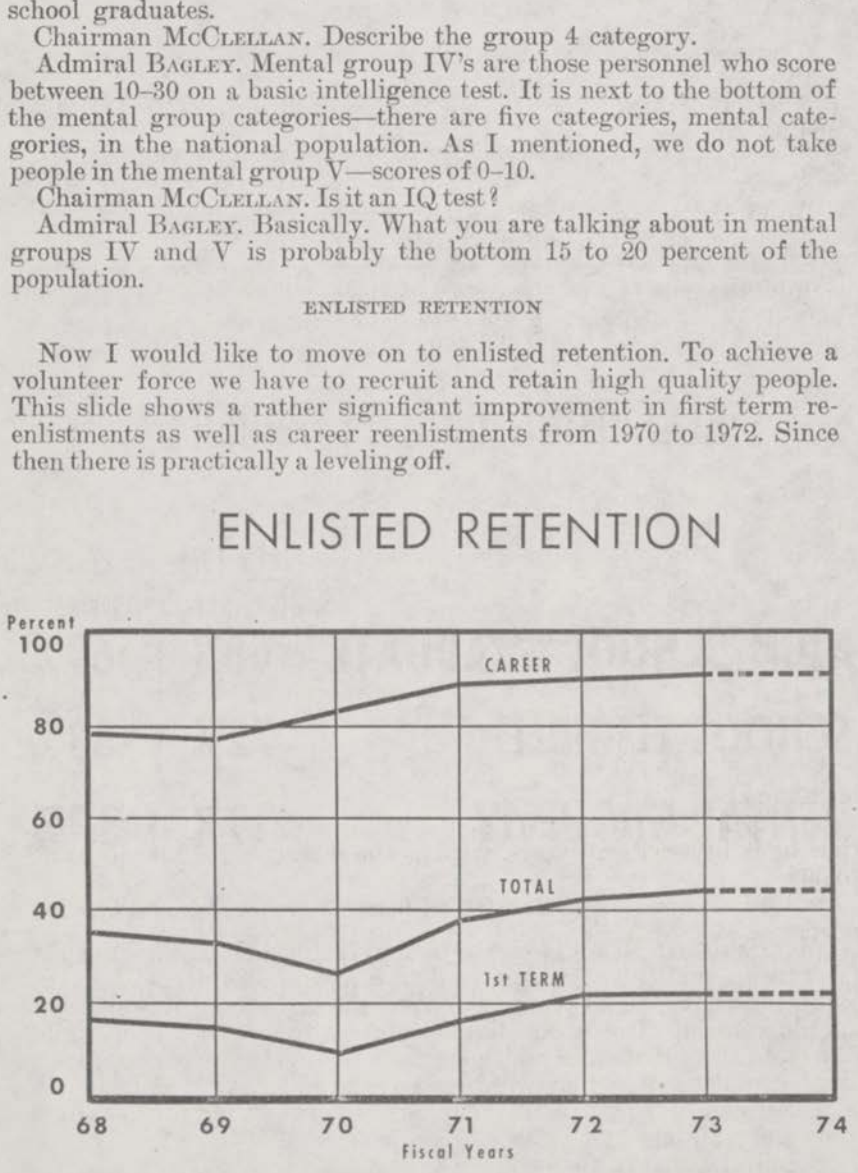
Admiral Bagley. Mental group IV's are those personnel who score between 10–30 on a basic intelligence test. It is next to the bottom of the mental group categories—there are five categories, mental categories, in the national population. As I mentioned, we do not take people in the mental group V—scores of 0–10.

Chairman McClellan. Is it an IQ test?

Admiral Bagley. Basically. What you are talking about in mental groups IV and V is probably the bottom 15 to 20 percent of the population.

ENLISTED RETENTION

Now I would like to move on to enlisted retention. To achieve a volunteer force we have to recruit and retain high quality people. This slide shows a rather significant improvement in first term reenlistments as well as career reenlistments from 1970 to 1972. Since then there is practically a leveling off.



Admiral BAGLEY. Our first term reenlistment rate, which is the critical measure, that is the man who reenlists after his first enlistment, stands now at about 26 percent.

Chairman MCCLELLAN. First term refers to how many years?

Admiral BAGLEY. This is a man who has completed a first tour in the Navy. It could have been 3 years, 4 years or 6 years. And he finishes that tour. If he reenlists, that is what we would call a first-term reenlistment.

Chairman MCCLELLAN. He is already in.

Admiral BAGLEY. Yes, sir.

SECOND TERM REENLISTMENTS

Chairman MCCLELLAN. What percent of them reenlist for a second term?

Admiral BAGLEY. Approximately 26 percent of those eligible. For the career, which is an aggregation of all other reenlistments, in other words the second or subsequent reenlistment, it is running about 90 percent.

Chairman MCCLELLAN. Ninety percent career.

Admiral BAGLEY. Yes, sir. Those are people who have had 8 years or more in the service.

Chairman MCCLELLAN. You mean 90 percent of this group will reenlist?

Admiral BAGLEY. Yes, sir.

Chairman MCCLELLAN. After 8 years or more in the service?

Admiral BAGLEY. Yes, sir. That shows you the effect and the need for these bonuses that we have had, that Congress has given us.

Chairman MCCLELLAN. Consider a man who has served 8 years. What do you pay him to reenlist? What is his bonus?

Admiral BAGLEY. It depends on his skill level. Everybody under the present law gets $2,000 reenlistment money over a career.

Chairman MCCLELLAN. Each time?

Admiral BAGLEY. No, sir. A total of $2,000 over a career. If you have an electronics man who has had extensive training, he is highly trained, he is in short demand. He could get up to $10,000 over a career for reenlistment under the variable reenlistment bonus program.

Chairman MCCLELLAN. A career of how many years?

Admiral BAGLEY. Twenty years or thirty years. There is a maximum.

Chairman MCCLELLAN. If he draws down the total bonus by the time he is in service 20 years, what is the incentive for him to go on to 30?

Admiral BAGLEY. None, as far as bonuses are concerned. The importancce of the bonus as depicted in the 26 percent first term versus the 90 percent career reenlistment is that if we can get a man to stay in the Navy up to the 8-year point with that $10,000, or whatever it may be, we have a very high probability of keeping him for at least 20 years.

Chairman McCLELLAN. After an individual has been in the service 8 or 10 years, he would then begin to think in terms of retirement. He gets no retirement if he quits after 8, 10, or 15 years.

Admiral BAGLEY. That is correct.

Chairman McCLELLAN. So he would have half of his retirement earned. He might as well stay and earn the other half. But the incentive primarily is to retain an individual to that point.

Admiral BAGLEY. Yes, sir.

Chairman McCLELLAN. And then he will stay on with the incentive of retirement.

Admiral BAGLEY. Yes, sir.

DOCTOR RETENTION

Senator YOUNG. Do you have a problem recruiting and retaining doctors.

Admiral BAGLEY. Yes, sir. we have a large problem with the doctors.

Senator YOUNG. Is it getting worse?

Admiral BAGLEY. Yes, sir. To give you an example: the latest information I have is that a young doctor finishing medical school and his residency and internship starts at about $38,000 a year now on the outside, so obviously we cannot compete money-wise. However, the Congress is now considering the physicians bonus bill, which will give physicians up to $13,500 a year to stay in the Navy. Even with that bonus we will still be below the average the young civilian doctors are paid on the outside. However, for those that like the service, we have a very good training program in service medicine. We hope to retain many more than we are today.

SCHOLARSHIP PROGRAM

Senator YOUNG. Is there a possibility you may have to go back to the draft for doctors in all the services?

Admiral BAGLEY. Possibly, sir. On the other hand, last year the bonus—rather, a health profession scholarship program was passed by Congress. This program subsidizes most of the medical and dental school costs for a young man. All of the scholarships we have been allocated are nearly full now. So there are a lot of young men who are willing to obligate themselves for duty in the service medicine in return for subsidization of their medical school training.

Senator YOUNG. After they finish training, what is there to stop them from leaving the Navy?

Admiral BAGLEY. A contract, sir. Legal contract. In return for subsidizing his education they must stay in the Navy for a specific period of time.

Chairman McCLELLAN. What is that period of time, generally?

Admiral BAGLEY. I believe, Mr. Chairman, it is 1 year service for 1 year subsidized education for a total of 4 years of obligated service.

Chairman McCLELLAN. What is the lowest rank you offer them after they come out of school?

Admiral BAGLEY. They get credit for their medical school, that would be 4 years, and they would come in just about at the time to be made full lieutenant, or O–3 pay grade.

Chairman McClellan. A full lieutenant is comparable to captain in the Army, is it not?

Admiral Bagley. Yes, sir.

Chairman McClellan. It is my recollection the Army gives a doctor a captaincy to start with.

Admiral Bagley. Yes, sir.

Chairman McClellan. Does it pay any more for a doctor than it does for another type captain?

Admiral Bagley. Yes, sir. He gets the same pay as any captain or full lieutenant in the Navy would get. He gets, after he has completed internship, a monthly special pay for physicians which varies according to the time he has been in the service. $100 to $350 extra.

Chairman McClellan. A month.

Admiral Bagley. Yes, sir. In addition, that would be increased by the new physicians bill if it is passed by the Congress and approved by the President. That bill also provides for a variable incentive pay (VIP) of up to $13,500 per year for certain physicians. However, the Armed Forces Health Scholarship participants would not be eligible for VIP until completion of 4 years of active duty. An unsubsidized physician volunteer could be eligible for VIP upon commencement of active duty. So he could receive about $27,000 at the outset.

Chairman McClellan. Initially?

Admiral Bagley. In the early part of his service, sir.

OTHER BENEFITS

Chairman McClellan. He has the fringe advantage that the Navy supplies all of his equipment.

Admiral Bagley. Yes, sir, and the monetary considerations I have mentioned.

Chairman McClellan. He has no investment in equipment. What other advantage does he have over the civilian doctor?

Admiral Bagley. He has the military retirement plan. He has the same entitlement as any other Naval officer for 20 years service. He has a very attractive subsidized specialized training for example, after he comes into the Navy. If he does well and wants to further obligate he can go to specialized courses at civilian medical schools to expand his medical qualifications in a particular field.

Chairman McClellan. In civilian life many doctors today make a minimum of $50,000 on up, don't they? I refer to young doctors who have recently graduated.

Admiral Bagley. Even the young ones are starting in the high 30's in terms of salaries.

Chairman McClellan. How much would they receive in the Navy?

Admiral Bagley. In the Navy they would not be anywhere near that. Subsidized Medical Corps Officers would earn in the order of $16,000 to start with, and building up to about $20,000 after 2 years of service, or as much as $34,000 for those without a training pay-back obligation.

Chairman McClellan. Well, most any doctor in civilian life now can make $25,000 even if he worked a half day, I would think, the way they charge.

COUNSELORS

Admiral BAGLEY. I have one other point on enlisted retention that I would like to bring to the attention of the committee, if I may. Last year, as a result of congressional action on the 1974 budget request, the Navy had their career counselors reduced by 372 personnel. It is my understanding that action was based on the application of a formula used by another service, that one counselor was needed for 1,000 people. One career counselor for every 1,000 people.

Chairman MCCLELLAN. One counselor for every thousand enlisted personnel?

Admiral BAGLEY. Yes, sir.

Chairman MCCLELLAN. What kind of counselors are those?

Admiral BAGLEY. These are people who go to about a 4-week school and are thoroughly knowledgeable of all of the rights, the benefits, the opportunities that the Navy has to offer a man and his dependents, and they are a walking encyclopedia of information of such detail and depth that the average Naval officer or enlisted man could not absorb and keep up to date in this very fast-changing situation.

Chairman MCCLELLAN. In other words, they are truly counselors to the enlisted men. They are advisors of the rights of enlisted personnel?

Admiral BAGLEY. And benefits, opportunities, how to become an officer, how to improve to get promoted, the opportunities for education and training, and so forth. A whole array of opportunities.

Chairman MCCLELLAN. They are almost like a father advisor.

Admiral BAGLEY. Yes, sir.

Chairman MCCLELLAN. You want to get them back?

Admiral BAGLEY. I certainly do, sir. We need at least 372 back. My plea would be, sir, that we not specify a ceiling on this program. I respectfully request this committee to take positive action to reverse the reductions to career counselors directed by the Congress for fiscal year 1974. We have the same motivation that the Congress has of reducing personnel and costs, but in this very vital field of retention of enlisted personnel particularly, we need all the help we can get.

Chairman MCCLELLAN. Until this reduction.

Admiral BAGLEY. But because of this reduction we can no longer afford to put them on destroyers that have 200 or 300 people. We do not have enough to go around. And that is where it really hurts.

Chairman MCCLELLAN. What is their rank?

Admiral BAGLEY. Petty Officer in the E–5 to E–7 pay grades.

Chairman MCCLELLAN. They are petty officers, not commissioned officers.

Admiral BAGLEY. Yes, sir.

RECOMMENDATIONS

1. APPROVAL OF MILITARY PERSONNEL APPROPRIATION REQUEST

2. SERVICE FLEXIBILITY WITHIN BROAD POLICY AND BUDGET GUIDANCE

3. EARLY APPROVAL OF INCENTIVE PROPOSALS--HEALING ARTS PAY, EB, SRB, AVIATION CAREER INCENTIVE PAY, ETC.-- AND OFFICER CONTINUATION LEGISLATION

CONCLUSION

I would conclude by making three recommendations: that the military personnel appropriation request for the Navy be approved; and that the Services be given the flexibility within broad policy and budget guidance to manage their personnel programs. Again, as an example, I refer to the action taken by the Congress last year with respect to our career counselors. We are all different, each of the services. The Navy, for example, has a lot of small commands, independent ships. We have a different problem than the Army, for example, which deploys their forces on division and brigade strength. So I would ask that we not be limited in these special programs which I believe are key to achieving an all-volunteer force.

Finally, I would ask this committee to support the Defense Department's request for the current incentive pay legislative proposals that are before you now.

Chairman McCLELLAN. Those are legislative proposals?

Admiral BAGLEY. Yes, sir, they are the physicians pay, the aviation career officer incentive pay, the selective enlistment and reenlistment bonuses and, finally, if we are going to restructure the officer community in the proper manner, and reduce the senior ranks, we do need the officer continuation authority, sir.

That concludes my statement, sir.

Chairman McCLELLAN. Senator Young, any questions?

Senator YOUNG. No questions.

QUESTIONS SUBMITTED BY SENATOR THURMOND

Chairman McCLELLAN. I will insert into the record at this point a series of questions from Senator Thurmond, and ask that you respond.

Admiral BAGLEY. We will be happy to do so, sir.

[The questions and answers follow:]

MANPOWER CUT

Senator THURMOND. Admiral Bagley, what percent of the Congressionally imposed manpower cut during FY 1974 was taken by the Navy?

Admiral BAGLEY. Navy's part of the manpower cut was 25%.

ADJUSTMENT IN NAVY PLANNING AND PROGRAMS

Senator THURMOND. What adjustments in Navy planning and programs was necessary as a result of this cut?

Admiral BAGLEY. The Navy reduced the FY 1974 military personnel strength from 566,320 requested in the FY Congressional budget to 551,087 in the FY 1974 column of the FY 1975 Congressional budget request, a reduction in end-strength of 15,233. Of this total, 10,900 was reported by OSD to the Congress as the Navy share of the 43,000 total OSD reduction exacted by the Congress to the initial active strength authorization request. Except for the 7327 manpower cuts directed by the Congress against specific Navy programs, it is not possible to identify the remainder of the 10,900 OSD allocated reduction. However, the total 1974 reduction of 15,233 was distributed as follows:

Changes in fiscal year 1974 end strength

Fiscal year 1974 budget request	566,320
Specific reductions by Congress	−7,327
Career, race, intercultural counselors	−588
Education/training (grad enlisted degree, general)	−4,662
Sea/support other nations	−1,099
Defense agencies/other Government agencies	−467
Enlisted aides	−356
Shortfall in doctors	−110
Project transition	−45
Other reductions	−7,906
Transients	−3,085
Combat forces	−1,357
Auxiliary forces	−525
Shore establishment realignment	−2,919
Alcohol abuse	−20
Fiscal year 1974 column of fiscal year 1975 budget request	551,087

NOTE.—The above reduction was reflected in detailed personnel, planning through a combination of reduced accessions, both officer and enlisted, and revised losses, including a voluntary early release program for officers scheduled to leave the Navy after fiscal year 1974.

EFFECT OF SIMILAR CUTS FOR FY 1975

Senator THURMOND. What would be the effect of a similar cut imposed for FY 1975?

Admiral BAGLEY. Senator, I urge this Committee and the Congress to approve the requested Navy active military end strength, as submitted. The manpower requested for FY 1975 represents the minimum end strength necessary to perform the Navy mission now and to adequately develop the trained personnel for the future. A reduction from this end strength will result in a functional degradation of the Navy's capability to perform its mission.

The FY 75 Budget request is already five percent below end strength identified by ship manning documents and squadron manning documents required to man fleet units. By these standards Navy ships and aircraft squadrons currently record a deficiency of 13,000 billets. If any billet excess existed in support, you can be assured that Navy would reprogram these billets to the fleet. The current balance is the best that we have been able to achieve considering the necessity for adequate support and sea shore rotation. The reason the Navy has elected not to request these additional billets to meet requirements fully is twofold: the desire to keep down manpower costs and to utilize the dollars saved to provide overall balance in Navy programs. This approach is consistent with the CNO's past testimony to the Congress that short term adjustments must be made to fund modernization, readiness, and increased future force levels. Further, it is also consistent with the Congressional mandate that manpower costs must be reduced where feasible. We believe that the manpower program developed for the FY 75 budget represents the best possible compromise between adequately meeting manpower requirements and reducing manpower costs.

The above notwithstanding, if the Navy is required to make a reduction in end strength the questions are where and how would these reductions be made.

In addressing the "where", the Department of the Navy, this Committee, and the Congress, as a whole share a common philosophy that wherever feasible, manpower reductions sould be made in the support structure. To this end the Navy has made significant cuts over recent years. Since 1969 fleet and shore headquarters have experienced net reductions of nearly 30% each. Four-thousand military fleet staff billets have been eliminated, major fleet operating staffs have been consolidated and approximately 65 lesser fleet staffs have been eliminated. Within the shore headquarters, military and civilian billets have been abolished and major shore commands consolidated. The Shore Establishment Realignment Plan (SER) has effected base closures and consolidations such as the closing of the Naval Station complexes at Key West, Newport and Long Beach, closing the Naval Shipyards at Boston and Hunter's Point and the disestablishment of supply centers, hospitals, and an air rework facility. In addition to these past actions, 1,054 military/civilian positions are expected to be eliminated from Navy-wide headquarters staffs by end FY 75 and economies achieved will be applied to improve fleet manning and to increase combat capability. Therefore, it is our firm conviction that significant support reductions can no longer be made without concomitant cuts in the forces supported. Any further manpower reductions will impact on both the support establishment and the combat forces.

As I said previously, any reductions in end strength will require functional degradation of Navy mission capabilities. Any reduction can be taken only in two ways: Further undermanning of ships and shore activities and/or further reductions in force levels, cutting functional activities in the shore establishment and closing bases.

Regardless of the method used there must be a balanced reduction in both the force and non-force areas.

In any end strength reduction the first area reduced would be "individuals" based on the size of the cut. The remainder would be apportioned between the force and non-force depending on the magnitude of the reduction. The extent of force reductions and support consolidations is dependent on how much of the reduction is absorbed by undermanning. There is a point beyond which the degree of undermanning is unacceptable and force and/or support levels must be reduced. As outlined above, Navy is now at the point where further undermanning, either ashore or afloat will have significant adverse impact. I have indicated generally where the billets would be taken in the event of manpower cuts by the Congress. Going to the question of how reductions could be made, we would, of course, be required to reduce our accessions and plan involuntary early release programs to the extent required. The impact of such actions would depend upon the magnitude of the cuts applied. For the reasons I have addressed herein, I am hopeful that the Congress will not reduce the requested Navy manpower for FY 1975.

Reduction of Support Facilities

Senator Thurmond. Admiral Bagley, how does the Navy record for reducing support facilities, headquarters and overseas installations compare with that for the Army and Air Force during the past two fiscal years?

Admiral BAGLEY. A measure of the reductions which the Navy has made in various support activities, is the proportion of end strength which is programmed into support. The following table shows how the Navy has been reducing the proportion of military manpower assigned in a support role.

Percent of total end strength in support role

Fiscal year:	
1973 (actual)	51.5
1974	51.6
1975	50.8

As discussed in Chapter XIII of the FY 1975 Defense Manpower Report, there are various ways to compute a combat/support ratio, but I prefer and have utilized the Manpower Categories (II), defined at the top of page XIII-3 of that report. All manpower categories, except Strategic and General Purpose Forces, are considered support. I cannot compare Navy support ratios to those of other services, inasmuch as I am not aware of their methodology in deriving combat/support ratios.

MANPOWER CUTS

Senator THURMOND. If further manpower cuts are imposed on the Navy, in what areas would they be taken?

Admiral BAGLEY. There is no known "fat" that Navy could eliminate. Given a reduction, it would be implemented in three steps.

1. Based on the size of the overall reduction, Individuals (trainees, students, transients, etc.) would be reduced.

2. *About* 45% of the remainder would be taken by reducing forces.

3. The remainder would automatically fall out as support manpower no longer required because of the reduction in forces.

NAVAL RESERVE STRENGTH

Senator THURMOND. Admiral Bagley, for the past two years Naval Reserve strength has been reduced solely for the reason of shifting funds to overhaul and maintenance accounts. This appears to be an unrealistic approach to manning. Do you follow the same procedure with the regular Navy and if so, provide examples for the record?

Admiral BAGLEY. Senator, in the regular Navy we do not reduce active military strength solely for the purpose of shifting funds for other than military personnel purposes. If Navy active strength is reduced, it is either a result of determining the manpower required to man the approved operating forces and shore installations with program and fiscal guidance provided by the Office of the Secretary of Defense, or such reductions are directed by the Congress in the Military Personnel, Navy appropriation and/or the active military strength authorization.

With respect to reduction of Naval Reserve strength, it has not been effected solely for the reason of shifting funds to other areas. The recommended cuts in Selected Reserve strength were a result of a year-long study in 1972 to determine the quantity and skills required of Selected Reservists to augment the active forces in time of crisis or to meet a contingency situation.

REGULAR NAVY FORCES

Senator THURMOND. Admiral Bagley, recognizing the high cost of regular Navy forces, why has the Navy not taken more advantage of establishing some of these forces at greatly reduced cost levels in the Naval Reserve structure?

Admiral BAGLEY. The Navy is very interested in obtaining the best possible balance of active and reserve forces. There has been progress in this area, but many of the possible trade-offs require in-depth analysis prior to action. Factors that must be considered very seriously in structuring the active/reserve Navy include the peacetime commitments of the United States and the reaction time of our naval forces in event of hostilities or periods of increased tensions associated with national interests.

The concept of a Naval Reserve which can relieve active forces of duties not essential to peacetime commitments is very attractive. With this concept, however, must be balanced the necessity of maintaining the fleet in a high state of

readiness. Since peacetime commitments are major factors in determining the size and composition of active naval forces then the Reserve forces must be structured in the best way to aid this effort or to augment the active force in emergencies. Both concepts are being considered to attain the best balance. In pursuit of the goal for emergency augmentation the shortened reaction time of Reserve forces is being sought.

A program to provide the Naval Reserve with substantial capability in any particular area of naval warfare while drastically diminishing, or even eliminating, that capability from the active force has serious implications. If it were necessary to mobilize in order to obtain a given capability then it is quite possible that that capability would not be realized. Mobilization in itself may be politically or diplomatically unpalatable in a given situation or it may exacerbate a period of international tension. In other cases it might merely be distasteful. One might speculate on reactions to mobilize naval reserve mine forces for the clearing of Haiphong harbor or the Suez Canal.

At the present time there is a considerable commitment of the naval reserve to provide forces and support required in emergencies. For instance the Mobile Construction Battalions and Cargo Handling Battalions of the Reserve are far in excess of the similar active force and would be essential to fulfill emergency requirements. Other examples are the anti-submarine warfare program of Naval Control of Shipping Offices and the logistic program of Military Sealift Command offices. The Inshore Undersea Warfare program with mine countermeasures units and mobile mine assembly groups and the coastal river squadrons are other good examples of vesting the naval reserve with predominant capability in areas of naval warfare.

The Navy is very serious about striking the best overall balance between active and reserve force, but is equally serious in attempting to avoid hasty or ill-conceived action for the sake of action. Progress is being made and hopefully new initiatives will be presented in the near future.

Naval Reserve Force Structure

Senator Thurmond. Admiral Bagley, as Chief of Navy Manpower, would you explain for the record why the Naval Reserve force structure is less than 50 percent of that required for the first 30 days of mobilization whereas the other services have developed Reserve forces ranging from 70 to 90 percent of the 30 day requirement?

Admiral Bagley. As you are well aware, the determination of proper active and Reserve Force manpower levels is a very complex and difficult subject.

Manpower requirements are expressed in the existing Navy system in the context of full mobilization. If confronted with that situation, we would recall the Ready Reserve as well as the Selected Reserve to expand the manpower base to the M+1 level or whatever level was necessary and achievable. But in building the new Selected Reserve to provide the initial and primary means of expanding the Navy, development was focused on those mission-capable, task-performing units that meet our most crucial needs for capabilities to reinforce the active forces in any emergency. The key point here is "unit capabilities" as distinguished from only adding manpower.

It is therefore implicit that these units must contain the requisite mix of skills, proficiency levels, and operational equipment so that they can respond in a matter of hours if necessary, take station and become fully functional in a matter of days. In terms of this new concept therefore, mobilization planning is not merely a matter of a metered input of manpower; rather it is the vastly more complex process of identifying those unit capabilities which are most critically needed and which are also practically attainable.

Sometimes we are mission limited in being able to provide a Reserve capability. In other instances, we are skill limited. That is, the necessary personnel do not exist in sufficient quantity or in the right geographical location or the demand for technical currency is too high or too perishable to make the capability achievable. In other cases, employable/deployable equipments are in short supply.

In brief, all of these feasibility issues must be satisfied or the attainment of the capability within the Reserve is not possible.

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There are many areas in which additional capabilities would be desired if they could be provided. With the new Selected Reserve it is evident that we are turning mobilization policy, planning and the statement of requirements away from the gradual and uniform expansion of forces philosophy of the past.

The essential point is that Navy is no longer managing its drill pay programs as a manpower pool, but is reshaping its Selected Reserve as a quick reaction response force. Our present design is admittedly short in capabilities, but it is a force that can be successfully created and operated in the immediate future. Out-year reviews will almost certainly bring about changes in its size and character.

Therefore, a comparison of the percentage support of stated requirements with that of our sister services may be misleading. Of course the Naval Air Reserve is in most respects the same or similar to the Air Force Reserve, in terms of units and complete capabilities. But the rest of the Naval Reserve is not really comparable to the specialized missions of the Air Force nor is it as heavily manpower oriented as the Army.

The need of active Naval forces for additional capabilities in an emergency is the paramount consideration. Thus the structure for the Naval Reserve is, and must be, based upon considerably different criteria than that of our sister services. Since the mission of the Navy embraces every warfare discipline, weapons platform and technology known to modern man, its most crucial mobilization needs cannot be expressed solely in terms of manpower. Rather, the Navy needs its men and women in properly tailored packages, joined in a unit capability that is more than just the sum of their individual skills, and outfitted with all of the tools to do the job. It is to this end that the Naval Reserve has been structured. That is, to provide the most urgently needed reinforcement capabilities for Naval forces in an emergency. Certainly, in creating such a Reserve force the degree of support of the stated requirements for the first thirty days was only of incidental interest and served as neither a design parameter nor a constraint.

Senator THURMOND. Admiral Bagley, in your statement you indicated that late appropriations by the Congress make efficient use of authorized funds virtually impossible. Assuming the Defense Department budget request is approved by July, what sums could you save in FY 1975 as a result of this earlier action?

Admiral BAGLEY. Senator, I don't believe positive savings could be identified. However, as I indicated in response to your question on the Budget Committee Proposal, timely appropriations will create efficiencies and avoid wasteful practices.

BUDGET COMMITTEE PROPOSAL

Senator THURMOND. Admiral Bagley, I presume you are aware of the Budget Committee proposal. Do you feel this plan will result in significant savings from the standpoint of the Navy?

Admiral BAGLEY. Senator, I can only speak with reference to the Military Personnel, Navy account. I do not believe that the Budget Committee proposal, if approved, will necessarily result in quantifiable savings to this account. I do think that the provision which establishes the fiscal year beginning 1 October, and the timetable for the Congressional budget process, if adhered to, should avoid the deleterious effects of late appropriations on Navy personnel management to which I refer on pages 24 and 25 of my formal statement which I have submitted for the record to this Committee. More positively stated, I believe that the timely appropriations principle inherent in the budget committee proposal should permit more efficient utilization of resources and management of Navy personnel.

Recruiting Costs

Senator Thurmond. Admiral Bagley, your recruiting costs were projected at $106 million in FY 1974. Provide for the record a chart indicating the recruiting cost per man.

Admiral Bagley. The average cost per accession follows:

Fiscal year:	
1973 (Actual)	$804.37
1974 (Actual)	877.72
1974 (Estimate)	935.70
1975 (Estimate)	959.26

The FY 1973 cost is actual as reported on the DD 804 Report (Personnel Procurement Cost Report). FY 1974 actual costs through December 1973 were $877.72 FY 1974 and 1975 estimates include workload and costs associated with Veteran Recruiting (CADRE), for the Reserves.

Reserve and Regular Recruiting

Senator Thurmond. Admiral Bagley, most of the services are separating Reserve and Regular recruiting. Does the Navy have any plans to do likewise?

Admiral Bagley. No, the Navy has a One Navy Recruiting Program wherein the Navy Recruiting Command is responsible for all recruiting for non-prior service programs, both Reserve and Regular. Reserve units are responsible for contacting and motivating veterans to affiliate with the Reserve unit. This has proved to be an excellent organizational arrangement.

JUSTIFICATION

Chairman McClellan. Thank you, Admiral.

Admiral Bagley. Thank you, Mr. Chairman.

Chairman McClellan. At this point in the record there will appear certain information from the justifications for Military Personnel, Navy.

[The justification follows:]

Justification

INTRODUCTORY STATEMENT

(In Thousands)

	1973 Actual	1974 Estimate	1975 Estimate
Total obligations	$ 5,499,436	$5,764,400	$ 5,810,200
Reimbursable program	-37,974	-44,300	-45,000
Total direct obligations	5,461,462	5,720,100	5,765,200
Unobligated balance lapsing	24,663	---	---
Transfers from other accounts	-31,921	---	---
January 1973 and October 1973 military pay act increase supplemental	---	-432,150	---
Proposed supplemental	---	-26,500	---
Appropriation (adjusted)	5,454,204	5,261,450	5,765,200

This appropriation finances the costs of active military personnel of the Navy. The program and financing schedule for this appropriation reflects budget activity classifications which are identical to the ten major program classifications used for management purposes throughout the Department of Defense.

The remainder of this book contains material in the form that has been used for a number of years to present the requirements for the Military Personnel appropriation.

Navy military personnel are engaged in programs for Operation of the Navy, Operation of Defense Agencies, Research and Development, Navy and Research and Development, Defense Agencies. A number of military personnel are assigned to duties with Government agencies outside the Department of Defense. The costs of these personnel are included as a part of the reimbursable program for this appropriation, with reimbursements received from the agencies to which such personnel are assigned.

Obligations for military personnel are distributed to each of the major defense programs on the basis of average officer and enlisted rates. These rates are multiplied by the average strength for officer and enlisted personnel assigned in each defense program. Obligations for permanent change of station travel and support of allies are excluded from these average rates and entered directly in the applicable defense program.

The justification of estimates for fiscal year 1974 reflects a decrease in end strength of 15,233 in fiscal year 1974 since the original submission of requirements, reflecting Congressional decisions during the fiscal year 1974 budget review process and other adjustments.

Permanent Change of Station (PCS) move requirements reflect a number of policy changes implemented to reduce numbers of moves and maintain forces in readiness. Navy is continuing to refine the PCS management and control system for most economical execution of the program.

The following highlights the significant changes by FYDP program between fiscal years 1974 and 1975:

Programs 1, 4, 5, 9, and 10 vary only slightly from fiscal year 1974.

Program 2 increases over fiscal year 1974 primarily because of definition changes: Navy Development and Training Center and its Fleet Maintenance Assistance Groups (FMAG) detachment moves from Individual Training (Program 8) to Base Operations (+4,388); the Naval Ammunition Depot Oahu has moved from Logistics (Program 7) becoming the Magazine Oahu under CINCPACFLT (+230); and security group activities which are in direct support of Program 2 activities were moved from Program 3 (+968). These increases were partially offset by the transfer of USNAVTRACOM Morocco to Communications (Program 3) (-393). The program was further reduced by deletion of career counselors and intercultural relations counselors in compliance with P.L. 93-238.

Program 3 decreased below fiscal year 1974 because of the transfers to Program 2, noted above, the transfer of training activities to Specialized Training (Program 8), and because of reductions to the GDIP and CCP by elimination of relatively lower priority tasking.

Program 6 was reduced in compliance with the manpower program to decrease the number of personnel in the Research and Development programs.

Program 7 declined in fiscal year 1975 primarily because of the Shore Establishment Realignment.

Program 8 shows a large decline between fiscal year 1974 and fiscal year 1975. Part of the decline was because of transfers to Program 2 as noted above. The Shore Establishment Realignment deleted about 800, and there were substantial reductions in recruit, specialized and professional training (-11,000).

In compliance with the expressed desires of Congress, the fiscal year 1974 program has been reduced by $9,900,000 for payment to the Internal Revenue Service of unpaid withholding taxes for fiscal years 1969, 1971, and 1972.

SUMMARY OF MILITARY PERSONNEL STRENGTH

	FY 1973 Actual		FY 1974 Planned		FY 1975 Planned	
	Man-Years	End Strength 30 June 1973	Man-Years	End Strength 30 June 1974	Man-Years	End Strength 30 June 1975
DIRECT PROGRAM						
Officers	71,290	70,133	69,386	67,368	67,682	65,921
Enlisted	503,204	490,027	487,476	478,172	480,897	468,927
Midshipmen	4,098	3,108	4,142	4,243	4,150	4,243
Total Direct Program	578,592	563,268	561,004	549,783	552,729	539,091
REIMBURSABLE PROGRAM 1/						
Officers	191	207	211	232	233	233
Enlisted	884	833	1,031	1,072	1,064	1,056
Total Reimbursable Program	1,075	1,040	1,242	1,304	1,297	1,289
TOTAL PROGRAM						
Officers	71,481	70,340	69,597	67,600	67,915	66,154
Enlisted	504,088	490,860	488,507	479,244	481,961	469,983
Midshipmen	4,098	3,108	4,142	4,243	4,150	4,243
Total Program	579,667	564,308	562,246	551,087	554,026	540,380

1/ Military personnel assigned to agencies outside of Department of Defense on a reimbursable basis under the provisions of 10 U.S.C. 5416.

End Strengths by Grade 1/

Total Program

Commissioned Officers	30 June FY 1973	Reimbursables Included	30 June FY 1974	Reimbursables Included	30 June FY 1975	Reimbursables Included
O-10 Admiral	9		10		10	
O-9 Vice admiral	46	1	43	1	43	1
O-8 Rear admiral (UH)	103	2	101	3	104	3
O-7 Rear admiral (LH)	151	1	140	3	128	3
O-6 Captain	3,952	16	3,941	19	3,940	17
O-5 Commander	8,137	26	7,790	34	7,612	35
O-4 Lieutenant commander	15,424	56	14,789	54	14,494	55
O-3 Lieutenant	16,644	48	14,041	82	14,826	82
O-2 Lieutenant (JG)	11,181	27	13,111	14	12,137	14
O-1 Ensign	10,464	20	9,806	16	9,361	17
Total	66,111	197	63,772	226	62,655	227
Warrant Officers						
W-4 Chief Warrant Officer	61		40	3	110	3
W-3 Chief Warrant Officer	929	1	2,213	1	2,241	1
W-2 Chief Warrant Officer	2,228	6	1,375	1	848	1
W-1 Warrant Officer	1,011	3	200	1	300	1
Total	4,229	10	3,828	6	3,499	6
Total Officer Personnel	70,340	207	67,600	232	66,154	233
Enlisted Personnel						
E-9 Master Chief Petty Officer	3,702	2	3,738	4	3,666	4
E-8 Senior Chief Petty Officer	9,001	15	8,674	21	8,506	20
E-7 Chief Petty Officer	35,244	86	33,930	103	33,272	101
E-6 Petty Officer 1st class	71,913	204	68,101	178	66,780	179
E-5 Petty Officer 2nd class	85,573	185	84,923	244	83,275	249
E-4 Petty Officer 3rd class	97,573	143	95,322	146	93,473	138
E-3 Seaman	75,081	85	88,406	108	95,343	100
E-2 Seaman-Apprentice	80,007	110	65,332	268	56,993	265
E-1 Seaman-Recruit	32,766	3	30,818		28,675	
Total	490,860	833	479,244	1,072	469,983	1,056
Total Officer and Enlisted	561,200	1,040	546,844	1,304	536,137	1,289
Midshipmen	3,108	-	4,243	-	4,243	-
Total End Strengths	564,308	1,040	551,087	1,304	540,380	1,289

1/ Includes Reimbursable active duty military pay strengths, but excludes active duty military personnel paid from Reserve Appropriations.

Man-Years Strengths by Grade 1/

Total Program

Commissioned Officers	Man-years FY 1973	Reimbursables Included	Man-years FY 1974	Reimbursables Included	Man-years FY 1975	Reimbursables Included
O-10 Admiral	9		10		10	
O-9 Vice admiral	46	2	44	1	43	1
O-8 Rear admiral (UH)	106	2	108	2	102	3
O-7 Rear admiral (LH)	150	1	141	1	133	3
O-6 Captain	4,110	16	3,892	18	3,900	18
O-5 Commander	8,339	28	8,067	30	7,653	34
O-4 Lieutenant commander	15,559	40	15,025	48	14,694	55
O-3 Lieutenant	18,738	53	16,743	55	16,746	82
O-2 Lieutenant (JG)	10,451	22	10,989	31	11,278	14
O-1 Ensign	9,496	18	10,426	18	9,596	17
Total	67,004	182	65,445	204	64,155	227
Warrant Officers						
W-4 Chief Warrant officer	99	-	52	1	91	3
W-3 Chief Warrant officer	708	1	1,624	1	2,318	1
W-2 Chief Warrant officer	2,658	6	1,889	3	1,110	1
W-1 Warrant officer	1,012	2	587	2	241	1
Total	4,477	9	4,152		3,760	
Total Officer Personnel	71,481	191	69,597	211	67,915	233
Enlisted Personnel						
E-9 Master Chief Petty officer	3,725	2	3,747	4	3,702	4
E-8 Senior Chief Petty officer	9,044	13	8,885	20	8,590	20
E-7 Chief Petty officer	36,718	96	34,616	99	33,601	102
E-6 Petty officer 1st class	73,910	211	69,844	171	67,441	179
E-5 Petty officer 2nd class	85,943	196	84,882	235	84,099	247
E-4 Petty officer 3rd class	101,348	153	96,019	140	94,398	142
E-3 Seaman	92,160	104	80,804	104	97,529	104
E-2 Seaman-apprentice	61,306	107	70,727	258	59,408	266
E-1 Seaman-recruit	39,934	2	38,983		33,193	
Total	504,088	884	488,507	1,031	481,961	1,064
Total Officer and Enlisted	575,569	1,075	558,104	1,242	549,876	1,297
Midshipmen	4,098	-	4,142	-	4,150	-
Total Man-years	579,667	1,075	562,246	1,242	554,026	1,297

1/ Includes Reimbursable active duty military pay strengths, but excludes active duty military personnel paid from Reserve Appropriations.

SUMMARY OF REQUIREMENTS BY BUDGET PROGRAM
(In Thousands of Dollars)

Title	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
DIRECT PROGRAM			
Pay and Allowances of Officers	$1,259,272	$1,297,531	$1,290,308
Pay and Allowances of Enlisted	3,645,727	3,748,146	3,740,625
Pay and Allowances of Midshipmen	16,871	18,921	19,625
Subsistence of Enlisted Personnel	266,625	326,026	344,934
Permanent Change of Station Travel	263,843	318,021	363,883
Other Military Personnel Costs	9,124	11,455	5,825
Total Direct Program	$5,461,462	5,720,100	5,765,200
REIMBURSABLE PROGRAM			
Pay and Allowances of Officers	3,114	5,102	5,455
Pay and Allowances of Enlisted	5,529	8,726	9,158
Subsistence of Enlisted Personnel	24,448	24,772	4,687
Permanent Change of Station Travel	4,883	5,700	5,700
Total Reimbursable Program	37,974	44,300	45,000
TOTAL PROGRAM			
Pay and Allowances of Officers	1,262,386	1,302,633	1,295,763
Pay and Allowances of Enlisted	3,651,256	3,756,872	3,749,783
Pay and Allowances of Midshipmen	16,871	18,921	19,625
Subsistence of Enlisted Personnel	291,073	350,798	369,621
Permanent Change of Station Travel	268,726	323,721	369,583
Other Military Personnel Costs	9,124	11,455	5,825
Total Obligations	$5,499,436	$5,764,400	$5,810,200

SCHEDULE OF INCREASES AND DECREASES
(In Thousands of Dollars)

		Amount
FY 1974 Direct Program		$5,720,100
Increases:		
Annualization of 1 October 1973 pay raise	$55,987	
Annualization of commuted ration rate	22,666	
New entitlements for junior enlisted personnel	30,904	
PCS - rate/tariff charges	36,651	
FICA base change in accordance with P.L. 93-233	5,013	
Full year entitlement for E-4 over 2 years service - PCS	5,956	
Separation payments - officer and enlisted	4,496	
Food costs	3,846	
Special pay - officers continuation pay	2,210	
Initial clothing - enlisted	1,280	
Midshipmen man-years	30	
Total Increases		+169,039
Decreases:		
Strength reduction of 8,275 man years	$85,154	
PCS - number of moves	21,435	
Termination of Savings Deposit Program (except MIA's)	3,279	
Servicemen's Group Life Insurance	1,881	
Separation payments - officer lump sum terminal leave payments	3,804	
Pro-pay for adjustments in skill coverage	1,381	
Reenlistment bonuses	534	
Special Pay - primarily due to deletion of hostile fire payments	2,610	
Subsistence	2,229	
Miscellaneous adjustments	1,632	
Total Decrease		-123,939
FY 1975 Direct Program		$5,765,200

BUDGET ACTIVITY 1: PAY AND ALLOWANCES OF OFFICERS
SUMMARY OF ACTIVITY BY PROJECTS

(In Thousands)

	Budget Project Title	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
1-A	Basic pay	$ 933,186	$ 975,094	$ 970,275
1-B	Incentive pay for hazardous duty	53,168	49,213	48,382
1-C	Special pay	31,296	26,232	29,030
1-D	Basic allowance for quarters	119,428	117,317	112,842
1-E	Basic allowance for subsistence	41,070	39,988	39,021
1-F	Station allowances overseas	7,347	7,982	7,982
1-G	Uniform allowances	1,645	1,608	1,533
1-H	Family separation allowances	4,734	3,530	3,445
1-I	Separation payments	32,763	36,884	35,490
1-J	Social security tax - employer's contribution	37,749	44,785	47,763
	Total Obligations	$1,262,386	$1,302,633	$1,295,763
	Less Reimbursable Obligations	3,114	5,102	5,455
	Total Direct Obligations	$1,259,272	$1,297,531	$1,290,308

SCHEDULE OF INCREASES AND DECREASES
(In Thousands of Dollars)

1. PAY AND ALLOWANCES OF OFFICERS			Amount
FY 1974 Direct Program			$1,297,531
Increases:			
Annualization of 1 October 1973 Pay Raise		$12,932	
Separation Payments		3,456	
Lump Sum to Reservists due to denial of extension request precipitated by force level decrease.	(2,207)		
Severance Pay - Failure of Promotion - promotion zone to O-4 was higher, selection percentage lower than FY 1974 group.	(1,225)		
Severance Pay - Disability - projected increase of two payments.	(24)		
Special Pay - Continuation Pay for physicians, dentists, and nuclear qualified officers.		2,210	
FICA Base change in accordance with P.L. 93-233.		5,013	
Total Increases			+23,611
Decreases:			
Strength reduction of 1,704 man years		$25,673	
Uniform allowances adjustments due to reduced inputs.		75	
Separation Payments - Lump Sum Terminal Leave - decreased number of losses eligible to receive payment.		3,804	
Miscellaneous adjustments.		1,282	
Total Decreases			-30,834
FY 1975 Direct Program			$1,290,308

(In Thousands of Dollars)

PROJECT: 1-A Basic Pay

Estimate - FY 1975 $970,275
Estimate - FY 1974 $975,094
Actual - FY 1973 $933,186

PART I - PURPOSE AND SCOPE

The funds requested provide basic compensation for officers on active duty including length of service increments under provisions of 37 U.S.C. 201, 205. Included in the estimate are the Reserve components on active duty for purposes of other than training. The estimate excludes those Reserve officers on active duty assigned to selected headquarters locations and where engaged in the administration and training of Reserves.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1975 program is based on a beginning strength of 67,600 officers, and an end strength of 66,154 and 67,915 man-years. The costs are calculated on the basis of grade distribution within each longevity step for each fiscal year. The average rates utilized are from longevity reports.

PROJECT: 1-B Incentive Pay for Hazardous Duty

Estimate - FY 1975 $48,382
Estimate - FY 1974 $49,213
Actual - FY 1973 $53,168

PART I - PURPOSE AND SCOPE

The funds requested for incentive pay - hazardous duty provide payment to officers under provisions of 37 U.S.C. 301 for these types of duty:

(1) Flying duty as crew member or non-crew member involving frequent and regular participation in aerial flights.

(2) Submarine duty when attached to a submarine in an active status.

(3) Duty involving parachute jumping as an essential part of military duty.

(4) Duty inside a high or low pressure chamber; duty involving acceleration or deceleration experiments, or thermal stress experiments.

(5) Duty involving the demolition of explosives as a primary duty including training for such duty.

(6) Duty involving participation in flight operations on the flight deck of an aircraft carrier.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Hazardous duty pay is computed on the average number of officers eligible for each type payment. Average rates for flying duty for crew members and personnel entitled to payment for submarine duty pay are based on statutory rates by pay grade with each longevity step. All other hazardous duty is computed at the statutory rate of $1,320 per annum for each man-year.

(In Thousands of Dollars)

PROJECT: 1-C Special Pay

Estimate - FY 1975 $29,030
Estimate - FY 1974 $26,232
Actual - FY 1973 $31,296

PART I - PURPOSE AND SCOPE

The funds requested will provide for special pay:

(1) To physicians, dentists, and optometrists, under provisions of 37 U.S.C. 302 and 302(a).

(2) To officers holding positions of unusual responsibility authorized by 37 U.S.C. 306.

(3) For personal money allowances for certain flag officers under provisions of 37 U.S.C. 414(a).

(4) For diving duty to members assigned under provisions of 37 U.S.C. 304.

(5) To officers on duty subject to other special pay under provisions of 37 U.S.C. 310

(6) To officers serving in certain positions as authorized by 37 U.S.C. 414(b).

(7) For continuation pay for physicians and dentists pursuant to 37 U.S.C. 311 and for nuclear qualified submarine and surface officers pursuant to 37 U.S.C. 312.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Special pay for physicians and dentists is computed by multiplying the statutory rates for members within each applicable longevity step. Other special pays are based on statutory rates prescribed for each entitlement as applicable.

PROJECT: 1-D Basic Allowance for Quarters

Estimate - FY 1975 $112,842
Estimate - FY 1974 $117,317
Actual - FY 1973 $119,428

PART I - PURPOSE AND SCOPE

The funds required are to provide payments of basic allowance for quarters authorized under provision of 37 U.S.C. 403 to officers with and without dependents and to officers occupying inadequate family housing. Public Law 93-166 provides that the Secretary of a service designate certain housing as inadequate public quarters.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Basic allowance for quarters is computed by multiplying the number of eligible officers by pay grade at the statutory rates. Eligibility by pay grade is determined by statistical sampling percentages less housing adjustments.

(In Thousands of Dollars)

PROJECT: 1-E Basic Allowance for Subsistence

Estimate - FY 1975 $39,021
Estimate - FY 1974 $39,988
Actual - FY 1973 $41,070

PART I - PURPOSE AND SCOPE

The funds requested will provide for subsistence allowance as authorized by 37 U.S.C. 402.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Basic allowance for subsistence is computed by multiplying the total officer man-year strength by the statutory rate of $574.56 per annum.

PROJECT: 1-F Station Allowances, Overseas

Estimate - FY 1975 $7,982
Estimate - FY 1974 $7,982
Actual - FY 1973 $7,347

PART I - PURPOSE AND SCOPE

The funds requested will provide for payments of a per diem allowance to members and their dependents on duty outside the United States for increased cost of living, housing and temporary lodging allowances. Authorization is provided under provision of 37 U.S.C. 405 and the Joint Travel Regulations.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Overseas station allowances are computed using cost factors based on past experience with the numbers planned to draw each of the three types of overseas station allowances.

PROJECT: 1-G Uniform Allowances

Estimate - FY 1975 $1,533
Estimate - FY 1974 $1,608
Actual - FY 1973 $1,645

PART I - PURPOSE AND SCOPE

This item provides for an initial clothing allowance to Reserve officers upon commissioning and an active duty clothing allowance to Reserves upon entry or reentry on active duty for a period of 90 days or more. Officers commissioned USN from the Regular NROTC Program also receive the initial and active duty clothing allowance. Authorization for this allowance is contained in 37 U.S.C. 415 and 416.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Uniform allowances are computed by multiplying the number of personnel eligible in each category by the authorized rates.

(In Thousands of Dollars)

PROJECT: 1-H Family Separation Allowance

Estimate - FY 1975 $3,445
Estimate - FY 1974 $3,530
Actual - FY 1973 $4,734

PART I - PURPOSE AND SCOPE

The funds requested are to provide Family Separation allowance payments to officers with dependents for added separation expenses when:

(1) The movement of dependents to the permanent duty station or a place near the station is not authorized at Government expense under the Joint Travel Regulations and his dependents do not reside at or near that station.

(2) The member is on duty on board a ship away from the home port of the ship for a continuous period of more than 30 days.

(3) He is on temporary duty or temporary additional duty away from his permanent station for a continuous period of more than 30 days and his dependents do not reside at or near his temporary or temporary additional duty station.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Family separation allowances are determined by computing the number of members eligible based on statistical sampling procedures at the statutory rate.

PROJECT: Separation Payments

Estimate - FY 1975 $35,490
Estimate - FY 1974 $36,884
Actual - FY 1973 $32,763

PART I - PURPOSE AND SCOPE

The funds requested will provide:

(1) For lump sum terminal leave payments to officers under provisions of 37 U.S.C. 501.

(2) For lump payment to Reservists who are involuntarily released from active duty after having completed at least five years of continuous active duty as provided under provisions of 37 U.S.C. 6871.

(3) For severance pay for failure of promotion or for reasons other than physical disability under provisions of 10 U.S.C. 6382-6385 and 6401.

(4) For severance pay for disability for members on active duty and temporary disability retired list who are separated for physical reasons under the provisions of 10 U.S.C. 1212.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Separation payments are computed on the basis of the number of members eligible for each applicable separation payment at rates based on past experience.

32-383 O - 74 - 22

(In Thousands of Dollars)

PROJECT: 1-J Social Security Tax - Employer's Contribution

Estimate - FY 1975 $47,763
Estimate - FY 1974 $44,785
Actual - FY 1973 $37,749

PART I - PURPOSE AND SCOPE

The funds requested represent the Government's contribution (as an employer) as required by the Federal Insurance Contribution Act under provision of 26 U.S.C. 3101,3111, and Public Law 93-233.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The Government's contribution is based on the percentage rate set by law on member's salary for a calendar year. The applicable rates are as follows:

Calendar year 1973 - 5.85% on first $10,800
Calendar year 1974 - 5.85% on first $13,200
Calendar year 1975 - 5.85% on first $13,200

BUDGET ACTIVITY 2: PAY AND ALLOWANCES OF ENLISTED PERSONNEL
SUMMARY OF ACTIVITY BY PROJECTS

(In Thousands of Dollars)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
2-A	Basic pay	$2,695,509	$2,819,711	$2,821,250
2-B	Incentive pay for hazardous duty	34,830	36,037	35,932
2-C	Special pay	78,047	45,403	42,768
2-D	Proficiency pay	45,665	38,922	37,541
2-E	Reenlistment bonus	88,657	101,834	101,687
2-G	Basic allowance for quarters	367,335	357,801	343,533
2-H	Station allowances overseas	18,526	19,471	25,685
2-I	Clothing allowances	62,789	65,965	66,917
2-J	Family separation allowances	12,428	10,623	10,453
2-K	Separation payments	98,883	96,367	98,974
2-L	Social security tax - employer's contribution	148,587	164,738	165,043
	Total Obligations	$3,651,256	$3,756,872	$3,749,783
	Less Reimbursable Obligations	5,529	8,726	9,158
	Total Direct Obligations	$3,645,727	$3,748,146	$3,740,625

Schedule of Increases and Decreases
(In Thousands of Dollars)

2. PAY AND ALLOWANCES OF ENLISTED PERSONNEL		Amount
FY 1974 Direct Program		$3,748,146
Increases:		
Annualization of 1 October 1973 pay raise	$42,812	
Station allowances for junior enlisted on the same basis as other enlisted personnel	6,214	
Initial clothing allowances for increased number of planned gains	1,280	
Separation payments for increased number of entitlements to lump sum terminal leave payments	1,040	
Total Increases		+51,346
Decreases:		
Strength reduction of 6,579 man years	$54,067	
Special pay primarily due to deletion of hostile fire payments	2,610	
Pro-pay - adjustments in skill coverage as directed by the Office of the Secretary of Defense	1,381	
Reenlistment bonuses - adjustment in coverage for variable reenlistment bonus	534	
Incentive pay and family separation allowance	275	
Total Decreases		-58,867
FY 1975 Direct Program		$3,740,625

PROJECT: 2-A Basic Pay

Estimate -	FY 1975	$2,821,250
Estimate -	FY 1974	2,819,711
Actual	FY 1973	2,695,509

PART I - PURPOSE AND SCOPE

The funds requested will provide for basic compensation of enlisted personnel on active duty, including length of service increments under provision of 37 U.S.C. 203.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1975 program is based on a beginning strength of 479,244 enlisted personnel and an end strength of 469,983 and 481,961 man years. Costs are determined on the basis of grade distribution by longevity for each fiscal year. The average rates utilized are derived from the latest experienced longevity.

(In Thousands of Dollars)

PROJECT: 2-B Incentive Pay for Hazardous Duty

Estimate - FY 1975 $35,932
Estimate - FY 1974 $36,037
Actual - FY 1973 $34,830

PART I - PURPOSE AND SCOPE

The funds requested will provide for pay to enlisted personnel under provision of 37 U.S.C. 301 for these types of duty:

(1) Duty involving frequent and regular participation in aerial flight as a crew or non-crew member.

(2) Duty on board a submarine, including submarines under construction from the time builder's trials commence.

(3) Duty involving parachute jumping as an essential part of military duty.

(4) Duty as high or low pressure inside observer, human acceleration or deceleration experimental subject, and human test subject in thermal stress experiments.

(5) Duty involving the demolition of explosives as a primary duty, including training.

(6) Duty involving participation in flight operations of the flight deck of an aircraft carrier.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Hazardous duty pay is computed on the basis of the average number of enlisted personnel who are eligible for payment. Average rates for flying duty crew members and submarine duty are those prescribed by law, based on average years of service by pay grade. All other hazardous duty pay is computed at the statutory rate per man-year.

PROJECT: 2-C Special Pay

Estimate - FY 1975 $42,768
Estimate - FY 1974 $45,403
Actual - FY 1973 $78,047

PART I - PURPOSE AND SCOPE

The funds requested will provide for special pay to enlisted personnel while on sea duty or duty at certain places outside the contiguous 48 states and the District of Columbia as designated by the Secretary of Defense under the provision of 37 U.S.C. 305; for diving duty pay as prescribed by the Secretary of the Navy under the provision of 37 U.S.C. 304; and for duty subject to other special pay under the provision of 37 U.S.C. 310. Provide nuclear petty officer continuation pay for nuclear trained petty officers who reenlist for 2-4 years after 6 and not more than 10 years of service payable in a lump sum or equal annual installments under provisions of 37 U.S.C. 312a. Under regulations prescribed by the Secretary of the Navy for nuclear petty officer continuation pay, no lump sum payments will be made.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Special pay is computed by applying statutory rates to the average number of personnel who are eligible for payment. Nuclear bonus is computed based on the number of years the member reenlists times 6 months basic pay for each year of reenlistment not to exceed $15,000.

(In Thousands of Dollars)

PROJECT: 2-D Proficiency Pay

Estimate - FY 1975 $37,541
Estimate - FY 1974 $38,922
Actual - FY 1973 $45,665

PART I - PURPOSE AND SCOPE

These funds will provide proficiency pay for enlisted personnel in critically undermanned skills as authorized by the Secretary of Defense under the provisions of 37 U.S.C. 307.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The estimate is based on the average number of personnel planned to occupy skills for which proficiency pay is authorized. The decrease in the FY 1975 program is due to a planned reduction in Shortage Specialty pay and partially offset by increased requirements in numbers of Termination payments and the full year impact of Special Duty assignment pay for Recruit canvassers. Beginning in FY 1975 the termination of SS Active award payments will be made for one year at one half the rate of the active payment vice the current phased reduction of $25 per year.

PROJECT: 2-E Reenlistment Bonus

Estimate - FY 1975 $101,687
Estimate - FY 1974 $101,834
Actual - FY 1973 $ 88,657

PART I - PURPOSE AND SCOPE

These funds will provide;

(1) A bonus to enlisted members who reenlist in the Navy within three months after the date of discharge or release from compulsory or voluntary active duty (other than for training) or for enlisted members extending enlistments for at least two years. Cumulative amount which may be paid for first and subsequent reenlistments may not exceed $2,000. Bonus will not be paid for that portion of a reenlistment that will extend over a period of 20 years active Federal service. This pay is in accordance with the provisions of 37 U.S.C. 308.

(2) Variable reenlistment bonus authorized under Public Law 89-132, August 21, 1965, provides that a member who is serving in a rating designated by the Secretary of the Navy as having a careerist shortage and who is entitled to a bonus upon his first reenlistment may be paid an additional bonus of not more than four times the amount of the regular reenlistment bonus. This additional bonus is to be paid in equal yearly installments or as a lump sum payment where appropriate.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Reenlistment bonuses are computed on the basis of the number of members eligible for payment. Average rates by pay grade are derived from past experience.

PROJECT: 2-G Basic Allowance for Quarters

Estimate - FY 1975 $343,533
Estimate - FY 1974 $357,801
Actual - FY 1973 $367,335

PART I - PURPOSE AND SCOPE

The funds requested provide for basic allowance for quarters authorized under provisions of 37 U.S.C. 403 to enlisted personnel with and without dependents. Public Law 93-166 provides that the Secretary of a Service may designate certain housing as inadequate public quarters.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Basic allowance for quarters is computed by multiplying the number of eligible personnel by the statutory rates by pay grade. Eligibility is determined based on statistical samples and adjusted by number of members occupying public quarters.

(In Thousands of Dollars)

PROJECT: 2-H Station Allowances, Overseas

Estimate - FY 1975 $25,685
Estimate - FY 1974 $19,471
Actual - FY 1973 $18,526

PART I - PURPOSE AND SCOPE

The funds requested will provide a per diem allowance for cost of living, housing and temporary lodging for members assigned to certain permanent duty stations outside the continental United States as prescribed in the Joint Travel Regulations under provision of 37 U.S.C. 405.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Overseas station allowances are computed based on experience by each type of allowance. The increase in FY 1975 is due to the entitlement of junior enlisted personnel (pay grade E-1, E-2, E-3, and E-4 under 2 years) to this allowance on the same basis as other enlisted members effective 1 July 1974.

PROJECT: 2-I Clothing Allowances

Estimate - FY 1975 $66,917
Estimate - FY 1974 $65,965
Actual - FY 1973 $62,789

PART I - PURPOSE AND SCOPE

The funds requested will provide enlisted personnel with prescribed clothing as authorized by the Secretary of Defense under provision of 37 U.S.C. 418. Included are:

(1) Initial clothing upon enlistment, advancement to chief petty officer (pay grade E-7) and civilian clothing allowance when authorized by competent orders;

(2) Basic maintenance allowance is payable to member upon completion of six months active duty and accrues during the remainder of the first three years of continuous service; and standard maintenance allowance payable to a member upon completion of 36 months of active duty and continues during the remainder of continuous active duty.

(3) Supplementary clothing allowances payable to members assigned to special duty where additional items of clothing are required.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Initial clothing allowances are based on planned numbers by type of accession at rates prescribed by the Secretary of Defense. Clothing maintenance allowances are computed based on past experience for number of members entitled. Supplementary clothing allowances are based on numbers planned for assignment to these special duties.

(In Thousands of Dollars)

PROJECT: 2-J Family Separation Allowances

Estimate - FY 1975 $10,453
Estimate - FY 1974 $10,623
Actual - FY 1973 $12,428

PART I - PURPOSE AND SCOPE

The funds requested will provide enlisted personnel (E-4 with 4 years and above) an allowance under provisions of 37 U.S.C. 427 to compensate for added expenses incurred because of enforced separation from dependents when:

(a) The movement of dependents to the permanent duty station or a place near that station is not authorized at Government expense under the Joint Travel Regulations and his dependents do not reside at or near that station.

(b) The member is on duty on board a ship away from the home port of the ship for continuous period of more than 30 days.

(c) He is on temporary duty or temporary additional duty away from his permanent station for continuous period of more than 30 days and his dependents do not reside at or near his temporary or temporary additional duty station.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Family separation allowance is computed on the basis of the planned number of members eligible for payment at the statutory rate. Eligibility is determined from statistical samples of members entitled to this allowance.

PROJECT: 2-K Separation Payments

Estimate - FY 1975 $98,974
Estimate - FY 1974 $96,367
Actual - FY 1973 $98,883

PART I - PURPOSE AND SCOPE

The funds requested will provide enlisted personnel:

(1) Lump sum terminal leave payment for unused accrued leave, not to exceed 60 days, at time of discharge, reenlistment, or death under provisions of 37 U.S.C. 501.

(2) Severance pay disability - payment to member separated (not retired) for physical disability under provisions of 10 U.S.C. 1212.

(3) Discharge gratuity donation not to exceed $25, to member separated with a dishonorable, bad conduct, or undesirable discharge for reasons of security, unfitness, etc., under provisions of 10 U.S.C. 6297.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Separation payments are computed on the basis of the number of members eligible for payment at the average rates derived from past experience.

(In Thousands of Dollars)

PROJECT: 2-L Social Security Tax - Employer's Contribution

Estimate - FY 1975 $165,043
Estimate - FY 1974 $164,738
Actual - FY 1973 $148,587

PART I - PURPOSE AND SCOPE

The funds requested represent the Government's contribution (as an employer) to Social Security under provisions of 26 U.S.C. 3101, 3111 and Public Law 93-233.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Social security tax contribution is based on percentage rate set by law on member's salary for a calendar year. The amount is based on salary for basic pay purposes as follows:

Calendar year 1973 - 5.85% on first $10,800
Calendar year 1974 - 5.85% on first $13,200
Calendar year 1975 - 5.85% on first $13,200

BUDGET ACTIVITY 3: PAY AND ALLOWANCES OF MIDSHIPMEN
SUMMARY OF ACTIVITY BY PROJECTS

(In Thousands of Dollars)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
3-B	Midshipmen	$16,871	$18,921	$19,625
	Total Obligations	$16,871	$18,921	$19,625
	Less Reimbursable Obligations	-	-	-
	Total Direct Obligations	$16,871	$18,921	$19,625

SCHEDULE OF INCREASES AND DECREASES
(In Thousands of Dollars)

3. PAY AND ALLOWANCES OF MIDSHIPMEN		Amount
FY 1974 Direct Program		$18,921
Increases:		
Annualization of 1 October 1973 Pay raise	$227	
Annualization of Commuted Ration Rate increase effective 1 January 1974	447	
Increase in authorization of 8 manyears	30	
Total Increases		+704
FY 1975 Direct Program		$19,625

(In Thousands of Dollars)

PROJECT: 3-B Midshipmen

Estimate - FY 1975	$19,625
Estimate - FY 1974	18,921
Actual - FY 1973	16,871

PART I - PURPOSE AND SCOPE

The funds requested are to provide for basic pay under the provisions of 37 U.S.C. 422 and 203; commuted rations allowance under the provisions of 37 U.S.C. 422; and for employer's contribution of FICA as provided by Federal Insurance Contribution Act.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The fund requirement was determined by applying statutory rates to the projected man years. Provision is made for an average of 4,150 midshipmen in fiscal year 1975. It is estimated that 893 midshipmen will be graduated during the year and 750 will be commissioned in the Navy.

BUDGET ACTIVITY 4: SUBSISTENCE OF ENLISTED PERSONNEL
SUMMARY OF ACTIVITY BY PROJECTS

(In Thousands of Dollars)

Budget Project Title	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
4-A Basic Allowance for Subsistence	$124,905	$157,851	$177,500
4-B Subsistence in Kind	166,168	192,947	192,121
Total Obligations	$291,073	$350,798	$369,621
Less Reimbursable Obligations	24,448	24,772	24,687
Total Direct Obligations	$266,625	$326,026	$344,934

SCHEDULE OF INCREASES AND DECREASES
(In Thousands of Dollars)

4. SUBSISTENCE OF ENLISTED PERSONNEL		Amount
FY 1974 Direct Program		$326,026
Increases:		
Annualization of Commuted Ration Rate effective 1 January 1974	$22,219	
General mess food costs due to selective use of "choice" beef	3,242	
Net increase in value of inventory aboard ship	604	
Total Increases		+26,065
Decreases:		
Strength reduction of 6,579 manyears	$ 4,928	
Exclusion of medical augmentation and variance between BAS rates and actual food costs due to parity of ration rates in FY 1975	2,229	
Total Decreases		-7,157
FY 1975 Direct Program		$344,934

PROJECT: 4A Basic Allowance for Subsistence

Estimate - FY 1975 $177,500
Estimate - FY 1974 $157,851
Actual - FY 1973 $124,905

PART I - PURPOSE AND SCOPE

The funds requested for this project provide for the payment of subsistence allowances under the provisions of 37 U.S.C. 402 to enlisted personnel under the following conditions: (1) when authorized to mess separately, (2) while on authorized leave, (3) when rations in kind are not available, and (4) for the augmentation of subsistence allowance for meals taken separately. The commuted and leave ration rate is increased from $1.65 to $2.28 per day effective 1 January 1974.

PART II. - JUSTIFICATION OF FUNDS REQUESTED

The fund requirement is based on the average number of enlisted personnel entitled to receive the several types of allowances. Distribution of personnel is developed on the basis of statistical sampling and actual experience data.

(In Thousands of Dollars)

PROJECT: 4-B Subsistence in Kind

Estimate - FY 1975 $192,121
Estimate - FY 1974 $192,947
Actual - FY 1972 $166,168

PART I - PURPOSE AND SCOPE

The funds requested for this project provide for subsistence in kind furnished active duty enlisted personnel when they do not receive an allowance for subsistence, and inactive retired and Fleet Reserve enlisted personnel when under treatment in Federal hospitals. Funds are included for the custom foods program which provides for the testing of new food items, for the replacement of emergency rations, and the rotation of operational rations. The additional cost of subsisting submarine enlisted personnel is included in supplemental allowances to identify the cost which is in excess of that required for surface ships. Funds to cover losses of subsistence inventories are also included.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The fund requirement is based on the number of rations to be furnished enlisted personnel entitled to be subsisted at government expense. The distribution of personnel by category is projected based on actual experience. Daily ration rates based on the average cost of the Basic Daily Food Allowance for September - November 1973 adjusted to include open market procurement of butter due to the non-availability of surplus butter and the selective use of "choice" beef in FY 1975 used in estimating requirements for the project are as follows:

Ashore U. S.	$2.34
Ashore overseas	$2.36
Afloat	$2.29

BUDGET ACTIVITY 5: PERMANENT CHANGE OF STATION TRAVEL
SUMMARY OF ACTIVITY BY PROJECTS

(In Thousands of Dollars)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
5-A	Accession travel	$ 35,363	$ 30,441	$ 39,988
5-B	Training travel	33,306	35,586	27,466
5-C	Operational travel	45,399	61,327	54,602
5-D	Rotational travel	69,479	110,133	146,033
5-E	Separation travel	64,868	59,529	68,543
5-F	Travel of Organized Units	18,426	26,705	32,951
	Prior Year Obligations	1,885	-0-	-0-
	Total Obligations	$268,726	$323,721	$369,583
	Less Reimbursable Obligations	-4,883	-5,700	-5,700
	Total Direct Obligations	263,843	318,021	363,883

SCHEDULE OF INCREASES AND DECREASES
(In Thousands of Dollars)

5. PERMANENT CHANGE OF STATION TRAVEL		Amount
FY 1974 Direct Program		$318,021
Increases:		
New Entitlements for junior enlisted personnel pay grades E-1, E-2, E-3, and E-4s under 2 years service effective 1 July 1974.	$24,600	
Rate - Tariff increases:	28,942	
Domestic Air - 6% increase effective December 1973		
Mileage allowance increase effective 1 July 1974		
MAC passenger - 12½% effective 1 January 1974		
HHE Line Haul - 4% increase effective 1 November 1973		
MAC cargo - 22.4% increase effective 1 January 1974		
HHE Break Bulk - 9% increase effective 1 January 1974		
Port Handling - 4% increase effective 1 July 1974		
Increased cost of Organized Unit moves - due to moves of greater distances	7,709	
Increased cost for entitlements to E-4s over 2 years service for full year annualization.	5,956	
Total Increases:		+67,297
Decreases:		
Decreased number of Organized Unit Moves due to completion of most of the Shore Establishment Realignment in FY 74. Shore Establishment Realignment also caused FY 74 movement of members who normally would have been scheduled to move in FY 75. Policy changes which lengthen tours under certain circumstances have decreased move requirements.	$21,435	
Total Decreases		-21,435
FY 1975 Direct Program		$363,883

EXHIBIT E1 & E2

PERMANENT CHANGE OF STATION TRAVEL
SUMMARY OF PROJECT REQUIREMENT MOVES

(Amount of Thousands of Dollars)

	FY 1973 Actual		FY 1974 Estimate		FY 1975 Estimate	
	No. Moves	Amount	No. Moves	Amount	No. Moves	Amount
A/ Accession Travel	137,507	$ 35,363	113,212	$ 30,441	116,729	$ 39,988
Training Travel	32,878	33,306	32,878	35,586	28,229	27,466
Operational Travel Between Duty Station	49,130	45,399	69,956	61,327	51,842	54,602
Rotational Travel to and from Overseas	30,910	69,479	48,054	110,133	54,647	146,033
B/ Separation Travel	155,240	60,305	126,480	54,549	122,667	61,617
C/ Travel of Organized Units	8,423	18,426	20,687	26,705	14,953	32,951
Subtotal	414,088	262,278	411,267	318,741	389,067	362,657
Reenlistment Travel Payments	(46,515)	4,563	(50,763)	4,980	(52,951)	6,926
Prior Year Obligations		1,885		-0-		-0-
Total Olbigations	414,088	268,726	411,267	323,721	389,067	369,583
Less Reimbursements		-4,883		-5,700		-5,700
Total Direct Program	414,088	$263,843	411,267	$318,021	389,067	$363,883

A/ & B/ Includes Midshipmen Accession and Separation moves.
C/ Reflects Number of Family moves.

PERMANENT CHANGE OF STATION TRAVEL
SUMMARY OF REQUIREMENTS BY TYPES OF COSTS
(In Thousands of Dollars)

	FY 1973 Actual		FY 1974 Estimate		FY 1975 Estimate	
	Number	Amount	Number	Amount	Number	Amount
Travel of Military Member a/	408,846	$85,563	398,962	$85,186	379,713	$94,863
Travel of Dependents (family)	85,775	16,649	106,677	20,695	111,748	26,434
Transportation of Household Goods	-	131,029	-	173,482	-	195,536
m tons - MSC	352,450	(11,222)	495,120	(15,928)	600,923	(20,185)
s tons - MAC	20,827	(11,182	19,326	(15,871)	22,822	(20,113)
Other Shipments	92,902	(108,625)	118,866	(141,683)	126,712	(155,238)
Dislocation Allowance	52,496	8,585	79,319	12,473	76,902	12,074
Trailer Allowance	1,565	952	2,615	1,455	2,476	1,654
Transportation of POV's	15,590	5,684	17,840	7,196	21,782	8,945
Non Temporary Storage	6,496	4,020	7,278	4,771	11,047	6,150
Port Handling Charges	-	9,796	-	13,483	-	17,001
Subtotal		262,278		318,741		362,657
Reenlistment Travel Payments	46,515	4,563	50,763	4,980	52,951	6,926
Prior Year Obligations		1,885		-0-		-0-
Total Obligations		268,726		323,721		369,583
Less: Reimbursements		-4,883		-5,700		-5,700
Total Direct Program		263,843		318,021		363,883

a/ Includes Midshipmen

JUSTIFICATION

Purpose and Scope of Work

For expenses incident to permanent change of station travel of military personnel, individually or as organizational unit. PCS travel costs include mileage; monetary allowance in lieu of transportation; transportation by common carrier (rail, bus, air, or water, including Military Airlift Command and Military Sealift Command); per diem allowances, cost of subsistence while in a travel status; miscellaneous reimbursable expenses authorized by JTR Ch 4, Part I, for PCS Travel; issue of meal tickets in lieu of subsistence; travel of dependents and transportation of baggage and household goods, baggage and privately owned automobiles passing through CONUS MTMTS terminals; payments of dislocation allowances; authorized transportation of dependents and personal and household effects of deceased military personnel; costs of contract packing, crating, handling and temporary storage of household goods; cost of non-temporary storage of household goods; cost of trailer allowances; travel incident to organizational movements on permanent change of station whether for training or non-training purposes; expenses incident to PCS movement of any military group traveling under one order from the same point of origin to the same destination; minor supplies and services incident to PCS movements; expenses and allowances incident to separation travel, including payments of mileage upon reenlistment, discharge or release. Also included is all authorized Temporary Duty Travel directly related to and an integral part of PCS movements of individuals or organizational units. Excludes Temporary Duty Travel other than that directly related to and an integral part of PCS movements. All authorized PCS travel expenses provided for under this budget program account shall be charged to the same sub-program account cited in PCS travel order of the military member. The only exception is cost of contract commercial storage of household goods on a non-temporary basis. The term "CONUS" (Continental United States) referred to herein applies to the United States Territory, including the adjacent territorial waters located within the North American Continent between Canada and Mexico (Ref. AR 320-1, OPNAVINST 3020.1A and AFP 5-1-1).

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(In Thousands of Dollars)

PROJECT: 5-A Accession Travel

1975 - Estimate $39,988
1974 - Estimate $30,441
1973 - Actual $35,363

PART I - PURPOSE AND SCOPE

a. Officers. Covers PCS Movements of (1) officers appointed to a commissioned grade from civil life, service academies, and Reserve officers called or recalled to extended active duty, from home or point where orders were received to first permanent duty station or training school, of twenty weeks or more duration and (2) officers or warrant officers appointed or recalled from enlisted status from station where they served as enlisted to new permanent duty station or training school of twenty weeks or more duration. (Includes officers appointed from enlisted status upon graduation from OCS or basic flying training.)

b. Enlisted. Covers PCS Movements of (1) enlistees, reenlistees, and prior service personnel from recruiting station or place of enlistment to first permanent duty station or training school of twenty weeks or more duration and (2) recalled enlisted reservists from home to first permanent duty station or training school of twenty weeks or more duration.

c. Midshipmen. Covers PCS Movements of (1) individuals selected as Academy Midshipmen upon entry into the Academy (2) individuals who travel to the academy but fail to pass the Entrance Physical Examinations and required to return home.

PART II - JUSTIFICATION OF FUNDS REQUESTED

PCS moves for members entering active duty. Accession moves are primarily due to total annual separations, and changes in total structure end strength between fiscal years. For a steady strength level, accession move requirements are driven entirely by separations. Thus, in the short run, accession moves can only be reduced by reducing total strength. Average rates are based on statistical data, ratios and percentages that have been generated from actual PCS moves during a given accounting period.

PROJECT: 5-B Training Travel

1975 - Estimate $27,466
1974 - Estimate $35,586
1973 - Actual $33,306

PART I - PURPOSE AND SCOPE

a. Officers. Covers CONUS PCS Movements of (1) officers and warrant officers from previous permanent duty station to formal service or civilian schools, including technical schools, flying training schools, factory training, and other approved courses of instruction, of 20 weeks duration or more; and (2) officer and warrant officer school to their next permanent CONUS duty station. (Excludes Academy graduates, OCS, NROTC graduates and others chargeable as Accession Travel.)

b. Enlisted. Covers PCS Movements of (1) enlisted personnel from previous CONUS permanent duty station to formal service or civilian schools, including technical schools, flying training schools, factory training, and other approved courses of instruction, of 20 weeks duration or more; (2) enlisted school graduates and eliminees from school to their next CONUS permanent duty station; and (3) enlisted personnel ordered to training leading to a commission if such training period is of 20 weeks duration or more.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The estimate is based on planned training inputs for officer and enlisted personnel that are necessary to maintain the needed skill levels and educational requirements of the Navy.

(In Thousands of Dollars)

PROJECT: 5-C Operational Travel

1975 - Estimate $54,602
1974 - Estimate $61,327
1973 - Actual $45,399

PART I - PURPOSE AND SCOPE

a. Officers. Covers PCS Movements of (1) officers, and warrant officers to and from permanent duty stations located within the United States; (2) officers and warrant officers to and from permanent duty stations located within an overseas area when no transoceanic travel is involved; and (3) dependents, household goods, personal effects, trailer allowances and privately owned vehicles of officers and warrant officers who are interned, missing, or captured when no transoceanic travel is involved. Oceanic travel by member from homeport to station is proper.

b. Enlisted. Covers PCS Movements of (1) enlisted personnel to and from permanent duty stations located within the United States; (2) enlisted personnel to and from permanent duty stations with an overseas area when no transoceanic travel is involved; and (3) dependents, household goods, personal effects, trailer allowances and privately owned vehicles of enlisted personnel who are interned, missing, or captured when no transoceanic travel is involved. Oceanic travel by member from homeport to station is proper.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Operational moves are PCS moves for individuals going from one duty station to another within the same theater (e.g., CONUS or Europe). Operational moves also include individuals reassigned within a given theater resulting from force structure changes. Operational moves are primarily a function of requirements to balance grade and skill inventories with vacancies. Since the requirements for other types of moves are more severely constrained, the number of Operational moves is normally first considered when funding reductions or unfunded cost increases occur and it becomes necessary to reduce the total number of PCS moves in the absence of reduced PCS move requirements. This tends to result in severe morale problems, and a sub-optimal utilization of manpower. Average rates are based on statistical data, ratios and percentages that have been generated from actual PCS moves during a given accounting period.

PROJECT: 5-D Rotational Travel

1975 Estimate $146,033
1974 Estimate $110,133
1973 Actual $ 69,479

PART I - PURPOSE AND SCOPE

a. Officers. Covers PCS Movements of (1) officers and warrant officers from permanent duty stations in CONUS to permanent duty stations overseas; (2) officers and warrant officers from permanent duty stations overseas to permanent duty stations in CONUS; (3) officers and warrant officers from permanent duty stations in one overseas area to permanent duty stations in another overseas area when transoceanic travel is involved; and (4) dependents, household goods, personal effects, trailer allowances and privately owned vehicles of officers and warrant officers who are interned, missing or captured when transoceanic travel is involved.

b. Enlisted. Covers PCS Movements of (1) enlisted personnel from permanent duty stations in CONUS to permanent duty stations overseas; (2) enlisted personnel from permanent duty stations overseas to permanent duty stations in CONUS; (3) enlisted personnel from permanent duty stations in one overseas area to permanent duty stations in another overseas area when transoceanic travel is involved; and (4) dependents, household goods, personal effects, trailer allowances and privately owned vehicles of enlisted personnel who are interned, missing or captured when transoceanic travel is involved.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Rotational travel moves are PCS moves for personnel going from CONUS to an overseas assignment, or returning from an overseas assignment to CONUS. Rotational moves are a function of overseas strengths in accompanied (long tour) areas and in unaccompanied (short tour) areas. Average rates are based on statistical data, ratios and percentages that have been generated from actual PCS moves during a given accounting period.

(In Thousands of Dollars)

PROJECT: 5-E Separation Travel

1975 - Estimate $68,543
1974 - Estimate $59,529
1973 - Actual $64,868

PART I - PURPOSE AND SCOPE

a. Officers. Covers PCS Movements of (1) officer and warrant officers upon release or separation from the service from last permanent duty station to home of record or entry into service or to home of selection when authorized by law; and (2) dependents, household goods, trailer allowances and personal effects of officers and warrant officers who are deceased.

b. Enlisted. Covers PCS Movements of (1) enlisted personnel upon release or separation from the service from last permanent duty station to home of record or point of entry into service, or to home of selection when authorized by law; and (2) dependents, household goods, trailer allowances and personal effects of enlisted personnel effects of enlisted personnel who are deceased. Also includes payments, upon reenlistment with no break in service of mileage to home of record or point of entry into active duty where the member is not required to perform travel and where no entitlement to movement of dependents and HHG accrues. The number of reenlistment payments are shown separately and not included in the number of separation moves.

c. Midshipmen. Covers PCS Movements of (1) eliminated Academy midshipmen to home of record or point of entry into service.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The estimate is based on planned personnel losses and reenlistments.

PROJECT: 5-F Travel of Organized Units

1975 - Estimate $32,951
1974 - Estimate $26,705
1973 - Actual $18,426

PART I - PURPOSE AND SCOPE

a. Officers. Covers PCS Movements, CONUS or Overseas, of (1) officers directed to move as members of an organized unit movement; (2) officer and warrant officer fillers and replacements directed to move as part of the unit move.

b. Enlisted. Covers PCS Movements, CONUS or Overseas, of (1) enlisted personnel directed to move as members of an organized unit movement; (2) enlisted fillers and replacements directed to move as part of the unit move.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Organized unit moves are PCS moves associated with transferring the families and belongings of personnel assigned to units which are relocated from one station to another. These moves are a function of known changes in projected force positioning due to operational requirements. Average rates are based on a point-to-point pricing of each unit move utilizing statistical data, ratios, and percentages that have been generated from actual PCS moves during a given period.

BUDGET ACTIVITY 6: OTHER MILITARY PERSONNEL COSTS
SUMMARY OF ACTIVITY BY PROJECTS

(In Thousands of Dollars)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
6-A	Apprehension of military deserters, absentees and escaped military prisoners	$ 320	$ 320	$ 320
6-B	Interest on uniformed services savings deposits	5,295	5,071	1,792
6-C	Death gratuities	2,433	2,809	2,339
6-D	Servicemen's Group Life Insurance	1,076	3,255	1,374
	Total Obligations	$9,124	$11,455	$5,825
	Less Reimbursable Obligations	-	-	-
	Total Direct Obligations	$9,124	$11,455	$5,825

SCHEDULE OF INCREASES AND DECREASES
(In Thousands of Dollars)

6. OTHER MILITARY PERSONNEL COSTS		Amount
FY 1974 Direct Program		$11,455
Increases:		
Annualization of 1 October 1973 Pay Raise	$ 16	
Total Increases		+16
Decreases:		
Termination of Savings Deposit Program except for members in a missing status	$3,279	
Servicemen's Group Life Insurance	1,881	
Miscellaneous Adjustments	486	
Total Decreases		-5,646
FY 1975 Direct Program		$ 5,825

(In Thousands of Dollars)

PROJECT: 6-A Apprehension of Military Deserters, Absentees, and Escaped Military Prisoners

Estimate - FY 1975 $320
Estimate - FY 1974 $320
Actual - FY 1973 $320

PART I - PURPOSE AND SCOPE

The funds requested are to provide for expenses in connection with the apprehension of deserters, absentees and escaped military prisoners and for their delivery to military control including cost of subsistence furnished during the period an enlisted member is detained in civil confinement for safekeeping when so requested by military authority, costs of rewards and reimbursements for expenses incurred and cost of transportation, lodging and subsistence of a guard sent in pursuit of member.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Prior year costs are utilized as the basis for developing the estimates.

(In Thousands of Dollars)

PROJECT: 6-B Interest on Uniformed Services Savings Deposits

Estimate - FY 1975 $1,792
Estimate - FY 1974 $5,071
Actual - FY 1973 $5,295

PART I - PURPOSE AND SCOPE

Members of the uniformed services who are serving on a permanent duty assignment outside the United States or its possessions may deposit savings in amounts of $5 or more with the disbursing officer. Interest at 10 percent per annum, compounded quarterly, is paid on sums deposited. The maximum amount upon which interest may be paid to any member (except personnel in a missing in action status) is $10,000 and such interest shall terminate 90 days after the member returns to the United States or its possessions.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The estimate is based on actual experience as to the average number of participants in the program and the average interest payment. The estimate assumes termination of the program on 30 June 1974 except for members in a missing status.

PROJECT: 6-C Death Gratuities

Estimate - FY 1975 $2,339
Estimate - FY 1974 $2,809
Actual - FY 1973 $2,433

PART I - PURPOSE AND SCOPE

The fund request for this project provides for payment of death gratuities to beneficiaries of military personnel. The death gratuity payment is based on six months' basic (plus special pay and incentive pay, as applicable) at the rate to which the decedent was entitled on the date of his death. The Servicemen's and Veterans' Survivors Benefit Act provides that the gratuity may not be less than $800 nor more than $3,000.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Fund requirements are based on current experience as to number of deaths and average cost per payment.

(In Thousands of Dollars)

PROJECT: 6-D Servicemen's Group Life Insurance

Estimate - FY 1975 $1,374
Estimate - FY 1974 $3,255
Actual - FY 1973 $1,076

PART I - PURPOSE AND SCOPE

The Servicemen's Group Life Insurance program established by Public Law 89-214, became effective on 29 September 1965 and automatically insured any member of the uniformed services on active duty for over 30 days against death in the amount of $10,000 unless such member elected in writing (1) not to be insured, or (2) to be insured in the amount of $5,000. Public Law 91-291 increased the coverage effective 25 June 1970 to the amount of $15,000 unless such member elects in writing (1) not to be insured, (2) to be insured in the amount of $5,000, or (3) to be insured in the amount of $10,000. The cost of the premium to each member insured is $.85 for each $5,000 coverage per month. This project provides for the Government's contribution for the cost of such insurance which is traceable to the extra hazard of active duty in the uniformed services. Public Law 92-315 of 20 June 1972 provides for SGLI coverage for midshipmen at the Naval Academy.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The cost of the Government's contribution, a percentage established by the Veterans Administration, is based on 12% for the last half of fiscal year 1973, 12% for July and August and 20% for September to June in fiscal year 1974 and 8% in fiscal year 1975 of the total amount paid by the insured members.

Special Analyses

	FY 1973	FY 1974	FY 1975
1. Military Personnel Assigned to Communications Activities (end strengths) 1/			
Officers	870	1,036	1,006
Enlisted	11,726	13,876	13,295
TOTAL	12,596	14,912	14,301
2. Military Personnel Assigned to ADP Activities (end strengths) 2/			
Officers	566	512	496
Enlisted	3,111	2,815	2,732
TOTAL	3,677	3,327	3,228
3. Military Personnel Assigned to Intelligence Activities (end strengths) 3/			
Officers	1,162	1,066	883
Enlisted	10,696	9,903	7,999
TOTAL	11,858	10,969	8,882

1/ Communications Activities Program is the manpower associated with Navy's shore based communications and excludes those personnel on ships and aircraft associated with communications. Data excludes support to Defense Communications Agency.

2/ The purpose of the program is to provide ADP support in almost every aspect of Navy operations and logistics including supply, intelligence processing financial management, maintenance workload control, and communications.

3/ The personnel assigned to Intelligence Activities represent the combination of the Consolidated Cryptologic Program (CCP) and the General Defense Intelligence Program (GDIP) as defined by chapter 515 of DOD 7110-1-M. The significant reduction in end strength between fiscal year 1974 and 1975 reflects the transfer of personnel to Program 2. These are the security group personnel which are on direct support of Navy Program 2 Activities.

MILITARY PERSONNEL ASSIGNED TO HEADQUARTERS ACTIVITIES
(Strength in Whole Numbers)

Departmental Administration	FY 1973 Actual End Strength Off	Enl	Total	Civilian E/S Total	FY 1974 Estimate End Strength Off	Enl	Total	Civilian E/S Total	FY 1975 Estimate End Strength Off	Enl	Total	Civilian E/S Total
Navy Personnel Assigned to Defense Activities												
Office of Secretary of Defense	152	70	222	-	131	57	188	-	130	64	194	-
Office of Joint Chiefs of Staff	184	139	323	-	199	133	332	-	202	135	337	-
International Military Headquarters												
NATO Military Committee	15	16	31	-	11	11	22	-	15	18	33	-
SACLANT	75	182	257	6	72	194	266	6	72	194	266	6
CINCCENT	3	6	9	-	3	7	10	-	3	7	10	-
HQAFNORTH	10	13	23	-	11	14	25	-	11	14	25	-
SHAPE (SACEVR)	25	47	72	-	22	43	65	-	22	43	65	-
CENTO	1	3	4	-	1	3	4	-	1	3	4	-
HQAFSOUTH	33	218	251	-	32	233	265	-	32	233	265	-
SEATO	2	1	3	3	3	3	6	3	1	1	2	3
Total International Military Headquarters	164	486	650	9	155	508	663	9	157	513	670	9
Unified Commands												
USSAG	8	6	14	-	11	10	21	-	11	10	21	-
USSOUTHCOM	16	9	25	3	17	10	27	3	17	10	27	3
USFORJAPAN	8	4	12	17	8	4	12	24	8	4	12	24
USFORKOREA	25	22	47	56	30	40	70	74	30	40	70	74
USFORAZORES	5	4	9	5	5	4	9	5	5	4	9	5
ICELANDDEFFOR	14	21	35	5	14	22	36	8	14	22	36	8
ANTILLESDEFCMD	1	1	2	-	2	1	3	-	2	1	3	-
TAIWANDEFCMD	27	50	77	18	19	23	42	17	19	23	42	17
USMACTHAI	15	14	22	155	15	14	29	-	15	14	29	-
CINCEUR	76	89	165	-	70	77	147	87	70	76	146	87
CONAIRDEFCOM	26	12	38	-	27	8	35	-	25	8	33	-
USREDCOM	7	3	10	-	9	2	11	-	9	2	11	-
CINALASKA	9	4	13	-	8	3	11	-	8	3	11	-
CINCPAC	126	198	324	162	126	196	322	170	130	197	327	166
CINCLANT	106	124	230	29	97	114	211	32	97	113	210	32
Total Unified Commands	469	561	1,030	450	458	528	986	420	460	527	987	416
Defense Agencies												
Defense Communications Agency	38	12	50	-	38	11	49	-	38	11	49	-
Defense Nuclear Agency	29	21	50	-	24	11	35	-	20	10	30	-
Defense Mapping Agency	9	1	10	-	11	2	13	-	11	2	13	-
Defense Intelligence Agency	198	167	365	-	177	144	321	-	174	139	313	-

Defense Agencies (continued)	FY 1973 Actual End Strength Off	Enl	Total	Civilian E/S Total	FY 1974 Estimate End Strength Off	Enl	Total	Civilian E/S Total	FY 1975 Estimate End Strength Off	Enl	Total	Civilian E/S Total
Defense Investigative Agency	2	1	3	-		1	1	-	-	-	-	-
National Security Agency /Central Security Service	174	683	857	-	168	483	651	-	168	523	691	-
Defense Supply Agency	34	-	34	-	34	-	34	-	34	-	34	-
Total Defense Agencies	484	885	1,369	-	452	652	1,104	-	445	685	1,130	-
Total DOD Headquarters	1,453	2,141	3,594	459	1,395	1,878	3,273	429	1,394	1,924	3,318	425
Navy Personnel Assigned to Navy Activities												
SECNAV/STAFF OFF	201	73	274	696	192	59	251	755	192	59	251	759
HQMARCORPS	9	5	14	1,061	11	5	16	1,189	11	5	16	1,150
OPNAV	911	294	1,205	797	720	230	950	836	720	230	950	750
Sealift Command												
COMSC	25	22	47	310	30	21	51	296	29	20	49	281
MSCLANT	13	38	51	352	19	31	50	338	18	30	48	313
MSCPAC	18	22	40	275	18	20	38	293	17	19	36	276
MSCEUR	6	26	32	21	10	16	26	21	10	14	24	21
MSCFAREAST	18	36	54	280	17	33	50	246	11	28	39	124
Total MSC	80	144	224	1,238	94	121	215	1,194	85	111	196	1,015
Navy Material Command												
NAVMAT	95	-	95	328	82	-	82	317	81	-	81	286
AIRSYSCOM	238	3	241	1,580	137	1	138	1,528	136	1	137	1,375
ORDSYSCOM	86	2	88	852	72	2	74	799	69	2	71	742
SHIPSYSCOM	95	4	99	1,111	79	2	81	1,028	79	2	81	893
ELECSYSCOM	36	-	36	680	43	-	43	654	43	-	43	597
SUPSYSCOM	87	1	88	412	67	3	70	380	67	3	70	350
FACENGCOM	64	6	70	666	47	6	53	601	47	6	53	518
ONR	37	3	40	411	36	2	38	413	38	2	40	413
Total NAVMAT	738	19	757	6,040	563	16	579	5,720	560	16	576	5,174
Chief of Naval Reserve	27	140	167	92	26	91	117	83	26	91	117	83
Training												
CNT	69	74	143	143	83	67	150	157	83	66	149	157
CNTECHTRA	72	81	153	113	83	85	168	121	81	83	164	121
CNATRA	65	53	118	94	72	43	115	103	72	43	115	103
CNTS	26	86	112	69	39	295	334	76	39	284	323	76
Total Training	232	294	526	419	277	490	767	457	275	476	751	457

	FY 1973 Actual				FY 1974 Estimate				FY 1975 Estimate			
	End Strength			Civilian	End Strength			Civilian	End Strength			Civilian
	Off	Enl	Total	E/S Total	Off	Enl	Total	E/S Total	Off	Enl	Total	E/S Total
BUPERS	327	251	578	1,369	238	171	409	1,332	238	171	409	1,230
NPPSA	206	606	812	31	181	530	711	80	171	530	701	72
NAVINTCOM	50	44	94	59	37	35	72	59	42	40	82	56
BUMED	103	32	135	314	105	30	135	283	105	30	135	283
NAVSECGRU	132	215	347	143	114	160	274	149	112	159	271	154
NAVAL DISTRICTS												
Naval District Washington	28	31	59	26	20	15	35	28	20	15	35	28
COMUSNAVSO/ COMFIFTEEN	41	46	87	17	41	55	96	17	41	55	96	17
District Commandants/less NDW	420	325	745	514	383	328	711	528	332	305	637	488
Total Naval Districts	489	402	891	557	444	398	842	573	393	375	768	533
NAVTELCOM	58	48	106	229	51	46	97	230	50	46	96	203
OCEANAV	13	2	15	46	12	2	14	45	12	2	14	40
NAVWEASERVCOM	18	9	27	16	19	2	21	17	20	3	23	17
PAC Staffs												
COMCRUDESPAC	81	324	405	25	63	206	269	33	63	206	269	33
COMNAVAIRPAC	164	348	512	65	139	268	407	105	139	267	406	105
COMPHIBPAC	90	166	256	29	64	92	156	35	63	89	152	35
COMSERVPAC	97	210	307	46	97	200	297	45	97	200	297	45
COMTHIRDFLT	59	117	176	33	70	123	193	34	65	116	181	34
COMSEVENTHFLT	51	210	261	-	45	177	222	-	44	172	216	-
CINCPACFLT	190	317	507	42	159	255	414	47	159	251	410	47
COMSUBPAC	84	178	262	26	76	168	244	39	74	167	241	38
COMTRAPAC	18	33	51	1	17	33	50	3	17	31	48	3
FMFPAC	11	23	34	19	12	21	33	19	12	21	33	19
Total PAC Staffs	845	1,926	2,771	286	742	1,543	2,285	360	733	1,520	2,253	359

	FY 1973 Actual				FY 1974 Estimate				FY 1975 Estimate			
	End Strength			Civilian	End Strength			Civilian	End Strength			Civilian
	Off	Enl	Total	E/S Total	Off	Enl	Total	E/S Total	Off	Enl	Total	E/S Total
Europe Staffs												
CINCUSNAVEUR	105	99	204	28	88	70	158	28	88	70	158	28
COMSIXTHFLT	40	149	189	-	33	137	170	-	33	137	170	-
Total Europe Staffs	145	248	393	28	121	207	328	28	121	207	328	28
LANT Staffs												
CINCLANTFLT	142	320	462	82	124	228	352	103	124	228	352	105
COMCRUDESLANT	86	258	344	20	77	214	291	45	73	214	287	46
COMNAVAIRLANT	180	345	525	72	141	247	388	66	133	236	369	66
COMPHIBLANT	63	114	177	21	54	72	126	39	54	72	126	40
COMSERVLANT	78	91	169	47	70	77	147	62	69	77	146	63
COMINWARFOR	39	71	110	20	36	59	95	27	34	57	91	28
COMSECONDFLT	62	153	215	16	61	114	175	15	58	114	172	15
COMSUBLANT	91	193	284	24	83	153	236	34	82	153	235	34
COMTRALANT	16	27	43	2	18	24	42	7	18	23	41	7
FMFLANT	8	7	15	1	9	7	16	1	9	7	16	1
Total LANT Staffs	765	1,579	2,344	305	673	1,195	1,868	399	654	1,181	1,835	405
Total Navy Headquarters	5,349	6,331	11,680	13,726	4,620	5,331	9,951	13,789	4,520	5,252	9,772	12,769
Total Navy/DOD Headquarters Operation and Administration	6,802	8,472	15,274	14,185	6,015	7,209	13,224	14,218	5,914	7,176	13,090	13,193

Military Personnel Assigned to Other DOD Activities (end strengths)

Other DOD Activities	FY 1973 Actual			FY 1974 Estimate			FY 1975 Estimate		
	Officer	Enlisted	Total	Officer	Enlisted	Total	Officer	Enlisted	Total
Office of Secretary of Defense	152	68	220	131	57	188	130	64	194
Office of Joint Chiefs of Staff	184	139	323	199	133	332	202	135	337
Defense Nuclear Agency	91	72	163	80	48	128	90	60	150
Defense Communications Agency	96	221	317	111	224	335	112	237	349
Defense Intelligence Agency	273	237	510	264	215	479	261	210	471
Defense Supply Agency	239	23	262	272	25	297	272	25	297
National Security Agency	174	683	857	168	483	651	168	523	691
Defense Mapping Agency	31	46	77	31	44	75	31	42	73
Defense Investigative Service	7	14	21	10	17	27	10	0	10
TOTAL OTHER DOD ACTIVITIES	1,247	1,503	2,750	1,266	1,246	2,512	1,276	1,296	2,572

Schedule of Combat and Non-Combat Forces

(End Strengths)

Type of Unit (based on fiscal guidance categories)	FY 1973	FY 1974	FY 1975
1. Force Mission (combat forces)	273,927	266,396	265,933
a. Europe and Related Areas	29,496	30,268	29,972
b. Western Pacific	24,726	33,875	33,996
c. Other Foreign Countries	4,841	1,653	1,653
d. United States, Territories, and SEA	214,864	200,600	200,312
2. Other Mission	31,297	31,503	28,224
a. Europe and Related Areas	5,020	4,961	4,734
b. Western Pacific	3,182	2,800	2,501
c. Other Foreign Countries	1,924	1,804	1,121
d. United States, Territories, and SEA	21,171	21,938	19,868
3. Training	111,492	121,060	109,539
a. Europe and Related Areas	39	29	29
b. Western Pacific	68	73	73
c. Other Foreign Countries	4	23	27
d. United States, Territories, and SEA	111,381	120,935	109,410
4. General Support (other than training)	147,592	132,128	136,684
a. Europe and Related Areas	6,259	7,000	6,881
b. Western Pacific	8,649	7,374	7,540
c. Other Foreign Countries	1,165	1,340	1,331
d. United States, Territories, and SEA	131,519	116,414	120,932
Total	564,308	551,087	540,380

1. The Force Mission category consists of Strategic, Land, Tactical, Air, Naval and Mobility forces.

2. The Other Mission category consists of Intelligence, Communications, Research and Development, Support of Other Nations, Security and Geophysical activities.

3. The Training category consists of Force Support Training, Individual Training, Trainees/Students and Midshipmen.

4. The General Support category consists of Base Operating, Command, Medical Support, Personnel Support and Logistical activities.

Distribution of Military Personnel by Geographical Area 1/

Region and Country	Number of Personnel (End Strength) FY 1973	FY 1974	FY 1975
Europe and Related Areas:			
United Kingdom	2,195	2,388	2,525
Italy	3,222	3,591	3,532
Spain	3,618	4,058	3,991
Turkey	101	112	109
West Germany	590	593	593
Personnel Afloat	26,958	27,132	27,132
Other Europe and Related Areas	4,130	4,384	3,734
Total Europe and Related Areas	40,814	42,258	41,616
Western Pacific:			
Japan	8,291	7,017	7,115
South Korea	267	241	233
Philippines	5,003	4,528	4,431
Ryukyu Islands	----------included in Japan totals----------		
Taiwan	735	587	582
Personnel Afloat	22,329	31,749	31,749
Other Western Pacific	0	0	0
Total Western Pacific	36,625	44,122	44,110
Near East and South Asia	2,541	1,739	1,070
Other Pacific	2,046	592	582
Western Hemisphere	3,343	2,477	2,468
USSR and East Europe	4	12	12
Other Personnel Afloat	169,591	140,630	140,906
United States, Territories, and SEA	271,950	289,915	280,353
Undistributed	37,394	29,342	29,263
Total	486,869	464,707	454,654
GRAND TOTAL	564,308	551,087	540,380

1/Number of personnel distributed by region and by country.

GAINS AND LOSSES BY TYPE FOR OFFICERS, ENLISTED AND MIDSHIPMEN

OFFICERS	FY 1973	FY 1974	FY 1975
Beginning Strength	72,929	70,340	67,600
Gains:			
Naval Academy	755	837	750
Officer Candidate School	2,112	1,694	1,852
College Training programs	1,844	1,866	1,812
Staff Corps Procurement	2,570	2,329	2,350
Vol. Recall to active duty	265	478	194
Warrant Off. from enlisted	34	200	100
Gain Adjustments	271	73	0
Total Gains	7,851	7,477	7,058
Losses:			
Resignation	1,155	1,609	1,381
Early Release	3,105	570	0
Normal Release	2,426	4,164	4,075
Promotion Passover	254	396	351
Revert to Enlisted	85	125	107
Retirement	2,684	2,649	2,189
Normal Attrition	326	555	401
*Loss adjustments	405	149	0
Total Losses	10,440	10,217	8,504
End Year Strength	70,340	67,600	66,154

Note: * Adjustments result from data which the computer cannot identify as a specific category of gain or loss. They are counted as file corrections and placed in a correction file for further research.

Enlisted (Including Officer Candidates)	FY 1973	FY 1974	FY 1975
Beginning Strength	511,789	495,433 1/	479,244
Gains:			
Enlistments			
Prior Service (USN) 2/	3,057	7,464	7,645
Non-Prior Service-Male (USN)	93,183	71,084 3/	77,432 3/
Non-Prior Service-Female (USN)	4,864	6,000	6,653
Officer Candidate Program	2,859	2,278	2,458
Non-Prior Service Reserves (2X6, 3X6)	18,607	10,098	15,000
Prior Service (USNR)	3,217	1,219	1,233
Returned from Dropped Rolls (Returned Deserters)	6,085	5,815	5,701
Gain Adjustments	--	7,618 4/	--
Total Gains	131,875	111,576	116,122
Losses:			
Separation or Expiration of Term of Service or Normal Early Release	62,089	69,105	72,058
Programmed Early Release	24,209	0	0
To Commissioned Officers/Off. Cand./ Midshipmen Programs	831	970	563
Retirements (Over 20 years)	7,858	10,503	10,633
Attrition	47,833	33,085	33,786
Officer Candidate Program	3,128	2,387	2,343
Declared Deserters	6,856	7,428	6,000
Loss Adjustments	0	4,287 4/	0
Total Losses	152,804	127,765	125,383
End Year Strength	490,860	479,244	469,983

1/ Includes 4,573 reserves changed from RPN to MPN funding.

2/ Includes 2-90/0V 90 day USN reenlistments and 1st enlistment USN with prior service.

3/ Includes 1,260 Filipinos in FY 74; 1,705 Filipinos in FY 75.

4/ Adjustments result from data which the computer cannot identify as a specific category of gain or loss. They are counted as file corrections and placed in a correction file for further research.

Midshipmen	FY 1973	FY 1974	FY 1975
Beginning Strength	3,099	3,108	4,243
Gains:			
Input	1,311	2,531	1,378
Losses:			
Graduates	900	919	893
Attrition	402	477	485
Total Losses	1,302	1,396	1,378
End Year Strength	3,108	4,243	4,243
Grand Total End Strength	564,308	551,087	540,380

ACTIVE DUTY MILITARY PERSONNEL MANPOWER
BY (FYDP) PROGRAM AND BUDGET ACTIVITY

(Dollars in thousands; End strengths in whole numbers)

Budget Activity/ Operating Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Direct Program			
1. Strategic Forces			
Operation of the Navy			
Costs	$169,659	$179,031	$183,909
End Strengths:			
Officer	1,711	1,712	1,721
Enlisted	17,458	17,520	17,619
Total	19,169	19,232	19,340
2. General Purpose Forces			
Operation of the Navy			
Costs	$2,758,856	$2,873,658	$2,847,686
End Strengths:			
Officer	29,115	26,958	26,722
Enlisted	284,344	273,493	278,601
Total	313,459	300,451	305,323
Operation of Defense Agencies			
Costs	-0-	$ 114	$ 116
End Strengths:			
Officer	0	6	6
Enlisted	0	0	0
Total	0	6	6
Total General Purpose Forces			
Costs	$2,758,856	$2,873,772	$2,847,802
End Strengths:			
Officer	29,115	26,964	26,728
Enlisted	284,344	273,493	278,601
Total	313,459	300,457	305,329

(continued)

Budget Activity/ Operating Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Direct Program			
3. Intelligence and Communications			
Operation of the Navy			
Costs	$228,543	$234,252	$220,784
End Strengths:			
Officer	2,458	2,475	2,242
Enlisted	22,081	22,243	19,535
Total	24,539	24,718	21,777
Operation of Defense Agencies			
Costs	$21,262	$19,868	$20,980
End Strengths:			
Officer	637	610	624
Enlisted	1,225	987	1,028
Total	1,862	1,597	1,652
Research and Development, Defense Agencies			
Costs	$588	$758	$660
End Strengths:			
Officer	18	28	22
Enlisted	33	27	27
Total	51	55	49
Total, Intelligence and Communications			
Costs	$250,393	$254,878	$242,424
End Strengths:			
Officer	3,113	3,113	2,888
Enlisted	23,339	23,257	20,590
Total	26,452	26,370	23,478

Operating Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
4. Airlift and Sealift			
Operation of the Navy			
Costs	$4,983	$4,943	$4,808
End Strengths:			
Officer	151	172	160
Enlisted	242	208	180
Total	393	380	340
5. Guard and Reserve			
Operation of the Navy			
Costs	$169,853	$174,484	$179,715
End Strengths:			
Officer	1,623	1,615	1,583
Enlisted	16,911	17,611	17,473
Total	18,534	19,226	19,056
6. Research and Development			
Research and Development, Navy			
Costs	$70,125	$71,405	$71,568
End Strengths:			
Officer	1,285	1,282	1,250
Enlisted	5,684	5,581	5,300
Total	6,969	6,863	6,550
Research and Development, Defense Agencies			
Costs	$426	$478	$490
End Strengths:			
Officer	17	19	19
Enlisted	15	14	14
Total	32	33	33
Total Research and Development			
Costs	$70,551	$71,883	$72,058
End Strengths:			
Officer	1,302	1,301	1,269
Enlisted	5,699	5,595	5,314
Total	7,001	6,896	6,583

(continued)

Budget Activity/ Operating Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Direct Program			
7. Central Supply and Maintenance			
Operation of the Navy			
Costs	$122,044	$119,072	$114,344
End Strengths:			
Officer	3,781	3,288	3,324
Enlisted	6,347	6,139	5,887
Total	10,128	9,427	9,211
Operation of Defense Agencies			
Costs	$4,487	$5,341	$5,472
End Strengths:			
Officer	239	271	271
Enlisted	23	25	25
Total	262	296	296
Research and Development, Defense Agencies			
Costs	-0-	$19	$19
End Strengths:			
Officers	0	1	1
Enlisted	0	0	0
Total	0	1	1
Total, Central Supply and Maintenance			
Costs	$126,531	$124,432	$119,835
End Strengths:			
Officer	4,020	3,560	3,596
Enlisted	6,370	6,164	5,912
Total	10,390	9,724	9,508
8. Training, Medical and Other General Personnel Activities			
Operation of the Navy			
Costs	$1,792,940	$1,927,933	$2,014,789
End Strengths:			
Officer	25,359	25,451	24,542
Enlisted	131,015	129,902	118,972
Midshipmen	3,108	4,243	4,243
Total	159,482	159,596	147,757

(continued)

Budget Activity/ Operating Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Operations of Defense Agencies			
Costs	-0-	$44	$45
End Strengths:			
Officer	0	1	1
Enlisted	0	3	3
Total	0	4	4
Total, Training, Medical and Other General Purpose Activities			
Costs	$1,792,940	$1,927,977	$2,014,834
End Strengths:			
Officer	25,359	25,452	24,543
Enlisted	131,015	129,905	118,975
Midshipmen	3,108	4,243	4,243
Total	159,482	159,600	147,761
9. Administration and Associated Activities			
Operation of the Navy			
Costs	$88,955	$86,776	$77,140
End Strengths:			
Officer	3,023	2,740	2,692
Enlisted	3,712	3,477	3,311
Total	6,735	6,217	6,003
Operation of Defense Agencies			
Costs	$7,366	$7,540	$7,841
End Strengths:			
Officer	319	315	317
Enlisted	203	187	196
Total	522	502	513
Research and Development, Defense Agencies			
Costs	$338	$309	$317
End Strengths:			
Officer	17	15	15
Enlisted	4	3	3
Total	21	18	18

(continued)

Budget Activity/ Operating Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Direct Program			
Total, Administration and Associated Activities			
Costs	$96,659	$94,625	$85,298
End Strengths:			
Officer	3,359	3,070	3,024
Enlisted	3,919	3,667	3,510
Total	7,278	6,737	6,534
10. Support of Other Nations			
Operation of the Navy			
Costs	$21,037	$14,075	$14,517
End Strengths:			
Officer	380	409	409
Enlisted	730	752	753
Total	1,110	1,161	1,162
Direct Program Summary			
Operation of the Navy			
Costs	$5,356,870	$5,614,224	$5,657,692
End Strengths:			
Officer	67,615	64,820	63,395
Enlisted	482,838	471,345	462,331
Midshipmen	3,108	4,243	4,243
Total	553,561	540,408	529,969
Operation of Defense Agencies			
Costs	$33,115	$32,907	$34,454
End Strengths:			
Officer	1,915	1,203	1,219
Enlisted	1,451	1,202	1,252
Total	2,646	2,405	2,471
Research and Development, Navy			
Costs	$70,125	$71,405	$71,568
End Strengths:			
Officer	1,285	1,282	1,250
Enlisted	5,684	5,581	5,300
Total	6,969	6,863	6,550

(continued)

Budget Activity/ Operating Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Research and Development, Defense Agencies			
Costs	$1,352	$1,564	$1,486
End Strengths:			
Officer	52	63	57
Enlisted	52	44	44
Total	104	107	101
Total, Direct Program			
Costs	$5,461,462	$5,720,100	$5,765,200
End Strengths:			
Officer	70,133	67,368	65,921
Enlisted	490,027	478,172	468,927
Midshipmen	3,108	4,243	4,243
Total	563,268	549,783	539,091
Reimbursable Program			
Costs	$37,974	$44,300	$45,000
End Strengths:			
Officer	207	232	233
Enlisted	833	1,072	1,056
Total	1,040	1,304	1,289
Total, Navy			
Costs	$5,499,436	$5,764,400	$5,810,200
End Strengths:			
Officer	70,340	67,600	66,154
Enlisted	490,860	479,244	469,983
Midshipmen	3,108	4,243	4,243
Total	564,308	551,087	540,380

MILITARY PERSONNEL ASSIGNED TO OTHER GOVERNMENT AGENCIES

(End Strength)

	FY 1973 Actual			FY 1974 Estimate			FY 1975 Estimate		
	Officer	Enlisted	Total	Officer	Enlisted	Total	Officer	Enlisted	Total
Non-Reimbursable Personnel									
White House & Executive Office	15	1	16	15	-	15	15	-	15
State Department	2	-	2	3	-	3	3	-	3
Justice Department	2	-	2	2	-	2	2	-	2
Commerce Department	3	2	5	3	2	5	3	2	5
Interior Department	3	-	3	1	-	1	1	-	1
Atomic Energy Commission	9	1	10	8	1	9	8	1	9
Cost of Living Council	2	-	2	1	-	1	-	-	-
Enviromental Protection Agency	1	-	1	1	-	1	1	-	1
Total Non-Reimbursable	37	4	41	34	3	37	33	3	36
Reimbursable Personnel									
Arms Control and Disarmament Agency	-	-	-	2	2	4	4	2	6
State Department	3	82	85	3	122	125	3	152	155
Transportation Department	28	-	28	26	-	26	26	-	26
Commerce Department	8	-	8	6	1	7	6	1	7
National Aeronautics and Space Administration	16	9	25	16	-	16	16	-	16
National Science Foundation	116	672	788	106	651	757	106	609	715
Canal Zone Government	2	-	2	1	-	1	1	-	1
Selective Service Commission	9	-	9	7	-	7	6	-	6
Physicians Office, U.S. Capitol	1	-	1	1	-	1	1	-	1
U.S. House of Representatives	1	-	1	1	-	1	1	-	1
National Aeronautics and Space Council	2	-	2	-	-	-	-	-	-
Veterans Administration	14	63	77	28	253	281	28	253	281
Classified Activities	6	-	6	10	1	11	10	1	11
Field Advisory Team, Kiel	1	7	8	1	7	8	-	-	-
Technical Field Assistance Team, Tehran	-	-	-	13	8	21	14	11	25
Saudi Navy Expansion Program	-	-	-	11	27	38	11	27	38
Total Reimbursable	207	833	1040	232	1072	1304	233	1056	1289
Total Non-Reimbursable and Reimbursable	244	837	1081	266	1075	1341	266	1059	1325

Operation and Maintenance, Navy

BUDGET REQUEST

Chairman McClellan. The next appropriation to be considered will be that for "Operation and Maintenance, Navy."

PROGRAM AND FINANCING

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

OPERATION AND MAINTENANCE, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	IDENTIFICATION CODE 07-10-1804-0-1-051	1973 ACT	1974 EST	1975 EST
	PROGRAM BY ACTIVITIES:			
	DIRECT PROGRAM:			
	1. STRATEGIC FORCES	317,867	340,898	469,398
	2. GENERAL PURPOSE FORCES	1,808,500	2,401,086	3,061,360
	3. INTELLIGENCE AND COMMUNICATIONS	288,082	311,756	346,066
	7. CENTRAL SUPPLY AND MAINTENANCE	2,051,342	2,117,178	2,246,391
	8. TRAINING, MEDICAL, AND OTHER GENERAL PERSONNEL ACTIVITIES	722,688	824,066	918,669
	9. ADMINISTRATION AND ASSOCIATED ACTIVITIES	178,150	258,965	228,456
	10. SUPPORT OF OTHER NATIONS	43,525	22,001	20,660
	TOTAL DIRECT PROGRAM	5,410,154	6,275,950	7,291,000
	REIMBURSABLE (TOTAL)	1,260,926	1,288,800	1,308,700
	SUBTOTAL	6,671,080	7,564,750	8,599,700
	INTRAFUND OBLIGATIONS	-669,149	-670,000	-670,000
10	TOTAL OBLIGATIONS	6,001,931	6,894,750	7,929,700
	FINANCING:			
	RECEIPTS AND REIMBURSEMENTS FROM:			
11	FEDERAL FUNDS	-551,077	-560,982	-600,400
13	TRUST FUNDS	-18,224	-18,000	-18,000
14	NON-FEDERAL SOURCES	-40,727	-24,300	-20,300
21	UNOBLIGATED BALANCE AVAILABLE, START OF YEAR	.....	-18,251	.....
22	UNOBLIGATED BALANCE TRANSFERRED FROM OTHER ACCOUNTS	-101,077	.....	.....
24	UNOBLIGATED BALANCE AVAILABLE, END OF YEAR	18,251	.....	.....
25	UNOBLIGATED BALANCE LAPSING	6,005	.....	.....
	BUDGET AUTHORITY	5,315,082	6,273,217	7,291,000
	BUDGET AUTHORITY:			
40	APPROPRIATION	5,244,754	6,076,950	7,291,000
41	TRANSFERRED TO OTHER ACCOUNTS	-23,973	-5,233	.....
42	TRANSFERRED FROM OTHER ACCOUNTS	94,301	.....	.....
43	APPROPRIATION (ADJUSTED)	5,315,082	6,071,717	7,291,000
44.10	PROPOSED SUPPLEMENTAL FOR WAGE-BOARD PAY RAISES	.....	76,895	.....
44.20	PROPOSED SUPPLEMENTAL FOR CIVILIAN PAY RAISES	.....	124,605	.....
	RELATION OF OBLIGATIONS TO OUTLAYS:			
71	OBLIGATIONS INCURRED, NET	5,391,903	6,291,468	7,291,000
	OBLIGATED BALANCE, START OF YEAR			
72.40	APPROPRIATION	784,775	981,388	1,587,356
72.49	CONTRACT AUTHORITY	77,352	64,859	64,859
	OBLIGATED BALANCE, END OF YEAR			
74.40	APPROPRIATION	-981,388	-1,587,356	-2,187,356
74.49	CONTRACT AUTHORITY	-64,859	-64,859	-64,859
77	ADJUSTMENTS IN EXPIRED ACCOUNTS	-11,726	.....	.....
90	OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL	5,196,056	5,524,900	6,650,100
91.10	OUTLAYS FROM WAGE-BOARD PAY RAISE SUPPLEMENTAL	.....	63,295	13,600
91.20	OUTLAYS FROM CIVILIAN PAY RAISE SUPPLEMENTAL	.....	97,305	27,300

BIOGRAPHY AND PREPARED STATEMENT

Chairman McCLELLAN. As our principal witness we shall hear the testimony of Vice Adm. W. D. Gaddis, Deputy Chief of Naval Operations for Logistics.

Admiral Gaddis, do you have a statement?

Admiral GADDIS. I have a full statement and a long statement.

Chairman McCLELLAN. Let the long statement be printed in the record in full and you can proceed to highlight it with your short statement.

[The statement follows:]

BIOGRAPHY OF VICE ADM. WALTER D. GADDIS

Walter Donald Gaddis was born in Worland, Wyoming, on September 8, 1917. He attended the University of Wyoming prior to entering the U.S. Naval Academy on an appointment from his native state in 1937. Following graduation from the Naval Academy in 1941, he joined the USS PENNSYLVANIA (BB–38), and was attached to that battleship at Pearl Harbor on December 7, 1941. During the remainder of World War II he also served on the USS BARNES (CVE–20), and as Gunnery Officer of the USS WASP (CV–18).

Prior to attaining flag rank, other afloat commands in which he served include: USS CONE (DD–866); Staff of Commander Destroyer Force, U.S. Atlantic Fleet; USS K. D. BAILEY (DDR–713) as Commanding Officer; Destroyer Division 302 as Commander; USS YOSEMITE (AD–19) as Commanding Officer, and Destroyer Squadron EIGHT as Commander.

During the same period he obtained extensive experience in assignments ashore, which include: The Naval Postgraduate School as a student; Naval Inspector of Ordnance, Northern Pump Company; Joint Staff, Office of JCS; Assistant Director, Budget and Reports, Office of the Comptroller; and was Director of Programming and Finance, Naval Material Command when he was promoted to Rear Admiral in January 1968.

A few months later he reported as Director of Budget and Reports, Office of the Navy Comptroller. He was detached from this assignment in the Fall of 1970 to command Amphibious Group ONE until August 1972 when he became Assistant Deputy Chief of Naval Operations (Logistics). On 11 April 1973 he assumed the duties of Deputy Chief of Naval Operations (Logistics), and was promoted to the rank of Vice Admiral.

Vice Admiral Gaddis wears the Legion of Merit with three gold stars, Bronze Star with Combat V, the Navy Commendation Medal with gold star and Combat V in addition to numerous other awards and medals. He received the degree of Master of Science in Metallurgical Engineering from Carnegie Tech in 1949 and holds membership in Phi Kappa Phi and Pi Mu Epsilon fraternities.

His home address is 703 South Sixth Street, Laramie, Wyoming. He is married to the former Dorothy Giesler of Laramie, and they have six children: Captain Walter D., Jr., USA, Thomas A., Rita E. (Gaddis) Grimm, Mary E., John Q., and Jane Ann.

STATEMENT OF ADMIRAL GADDIS

Mr. Chairman, Gentlemen; it is a pleasure for me to appear once again before this Committee to present the Navy's Operation and Maintenance budget and program for fiscal year 1975—a program designed to support our long-term maritime objectives and improve fleet and material readiness. I would emphasize that, while this appropriation does not draw the attention of other programs, it is in effect the life blood of our operating forces. The level of operations and maintenance is of paramount importance in our ability to control the sealanes and preserve the peace.

FISCAL YEAR 1975 REQUEST

The fiscal year 1975 request for Operation and Maintenance, Navy is 7 billion, 291 million dollars. The fiscal year 1974 funding levels include the FY 1974 Congressionally approved base, transfer modifications, plus pay raise and readiness supplementals. The Congress approved 6 billion, 077 million dollars for

fiscal year 1974. The proposed supplemental appropriation of 359.6 million dollars for readiness and 201.5 million dollars for civilian wage increases and a net transfer of —2.5 million dollars to other accounts, establishes the current fiscal year 1974 funding level at 6 billion 636 million dollars.

Planned obligations contained in this request are 655.4 million dollars above the fiscal year 1974 level. However, this will only provide funding to support our forces and programs at approximately the same level as in fiscal year 1974.

I would like now to make some general comments about several areas of this appropriation request before dealing with the individual budget activities.

Ship Maintenance Funding

An increase of $39.0 million in ship maintenance funding is reflected in fiscal year 1975, primarily related to change in mix of ships in the overhaul program. We plan to overhaul 95 ships, including 2 fleet ballistic missile submarines, 10 nuclear attack submarines, and 2 Kitty Hawk class attack carriers. An increase of $65.1 million in ship alterations relates to types of ships in overhaul and increased installation requirements and design services. This increase reflects the ship alterations segment of the Navy's thrust toward modernization of its forces.

Ship Alterations

Senator Young. What type of ships and how many ships are included in this budget request? Please provide the committee a listing of alterations and a description of the alterations.

Admiral Gaddis. The following types of ships and number of hulls by type in this budget request are: SSBN–2, AD–2, AFS–3, AG–1, AO–2, AOE–2, AOR–2, ARS–5, AOG–1, CV–2, DD–7, DDG–13, DE–12, DEG–2, DLG–5, LCC–1, LKA–3, LPD–2, LPH–3, LSD–4, LST–4, PG–5, MSO–1, SS–1, SSN–10.

A listing of ship alterations by capability and description to be accomplished on the above ships is:

Capability:	*Amount (millions)*
Communications (CAP)	$30.6
ECM	5.4
AIMS	4.0
Other TIP	8.6
Radar	7.7
Antiair warfare (AAW)	15.7
Antisubmarine warfare (ASW)	44.8
Aviation	33.9
Hull machinery	3.2
Improved replenishment program (IRP)	.6
Other MIP	12.0
Ship safety	5.9
Personnel safety	16.4
Habitability alterations (HIP)	17.5
Improvements in mission reliability	64.4
Submarine safety	3.1
Submarine silencing	15.7
Deep submergence systems alterations	.6
Pollution abatement	63.0
Nuclear alts	40.6
Ordnance	11.7
Design service alts	55.0
COSAL (initial spares)	11.8
Total	472.2

Alteration, Overhaul and Repair Funding

Chairman McClellan. The FY 1974 Department of Defense Appropriations Act provided explicit funding floors for alteration, overhaul, and repair of naval vessels in Navy, and private shipyards. What are the amounts for fiscal years 1974 and 1975 to be funded to Navy and private shipyards? Has the inclusion of these floors in the Appropriations Act created scheduling problems for input of naval vessels for alteration, overhaul and repair?

Admiral GADDIS. The information as included in the FY 1975 budget follows: (O&M,N, O&M,NR, RDT&E,N).

	Navy	Private
Fiscal year 1974	1,020,170	409,264
Fiscal year 1975	1,179,454	395,294

Flexibility is mandatory in the execution of the Fleet Overhaul and Modernization Program to manage the uneven flow of repair and alteration work on ship types ranging from tugs to complex carriers and nuclear submarines. The assignment of shipwork to industrial activities must take into account the capabilities and limitations of the industrial activities, the requirements of Fleet operational schedules which must respond to changing operational requirements, the accomplishment of essential unscheduled repair work (RA/TA), and the ability to respond to major casualty restoration such as major fire damage. The Navy has consistently complied with both the letter and spirit of SECNAVINST 4860.42A in maintaining at least the required 70–30 Navy-private split in conversion, alteration and repair. Since FY 1967 the private sector has received 100 percent of the Navy new construction, and in excess of 70 percent of the total Navy ship dollars since FY 1970.

The real controversy is not so much the total dollar value of Navy work available to the private shipyards; but more the distribution of this work within the private sector. During the period of reductions in size of the active Fleet and assignment of all Navy new construction to the private sector, Naval shipyard employment has declined about 25 percent while the private shipyards have only suffered an overall 3 percent reduction.

The Navy is and has been opposed to legislative restrictions or restrictive language in the Appropriations Bills such as in FY 1974. The following are specific difficulties encountered in the prosecution of Navy-Private legislation:

1. Lack of manpower and skill. Private shipyards, with but few exceptions, cannot man a large ship properly to complete the work in durations dictated by operational commitments, and either lengthening the overhauls or reducing the size of work packages is often required. In addition to total manning there are problems in obtaining the specific skilled manpower.

2. Drydock and facilities limitations in private yards. There is a shortage of drydocks for large service force and amphibious ships. This situation severely restricts the competitive bidding process and results in higher cost, or requires additional time to be taken from operational commitment to make these ships available at other than overhaul periods to accomplish required drydocking. There are numerous occasions when difficulty is encountered when assigning a large ship requiring drydocking to the private sector.

Since FY 1967 the size of the active Fleet has decreased approximately 33 percent. There has been a 48 percent reduction in the number of auxiliary, amphibious and small noncombatant ships normally assigned to the smaller private shipyards. Additionally, the older C2, C3, and T2 auxiliary and amphibious ship hulls are being replaced by larger, more complex amphibious and combatant support ships. With regard to facilities required by the increased complexities of new ships in Fiscal Year 1972 about 65 percent of the total conversion, alteration, and repair budget was allocated to aircraft carriers, submarines, nuclear surface work and complex missile ship maintenance. This work by virtue of the facilities and capabilities required is limited to public and a few large private shipyards. The percentage of maintenance funds allocated to this category of work is expected to increase in future years as the current building programs introduce more nuclear powered and complex missile system ships into the Fleet replacing the World War II carriers, destroyers, and submarines.

3. Administration and accounting. Insuring that only a specified amount of alteration and repair funds is expended in both Naval shipyards and private shipyards would create a serious administrative problem. There are considerable fluctuations in the ship overhaul program due to growth in authorized repair work, alteration program changes, repair program changes, civilian pay raises, and ship overhaul reassignments and rescheduling due to Fleet operational schedule revisions. Additionally, approximately 15 percent of the total alteration and repair funds are allocated to Fleet control in the form of RA/TA funds which

are administered by the Fleet in accomplishing unscheduled ship repair work. Assignment of these funds depends on the availability of specific capacity in the time frame and in geographic location of the ships when repairs are required. Thus, legislative limitations in the amount spent in private and Naval shipyards seriously impacts the ability of Fleet commanders to accomplish required unscheduled work. The administrative burden required to insure compliance with restrictive language would be a nightmare to control and might well be self defeating in an attempt to keep limitations in balance.

4. Capacity in homeport. Private industrial capacity is generally overloaded in the areas of Fleet concentration. This condition, of course, leads to excessive overhaul costs, and can be combatted only by rescheduling or district-wide bidding. This usually results in the ship going out of homeport which aggravates the Navy's "homeport policy." While it is desirable to distribute the workload evenly to areas of less dense Navy population, it becomes a very visible morale problem for the ships when they must overhaul in a location other than their homeport.

5. Schedule adherence. Because of the difficulties cited in administering and accounting under a required distribution for both Navy and private shipyards, schedule changes would have to be made sometimes on relatively short notice to constantly insure legislative requirements are met. Though not desirable, shifting from one Naval shipyard to another can be done in a more efficient manner than shifting from Navy to private due to the requirements of specification preparation, contractor inspection and bid submittal. Normally, a shift from Navy to private cannot be done without a serious delay in the ship's overhaul schedule. This jeopardizes operational commitments, plays havoc with in-house resources, and usually results in higher costs for the customer.

6. Crew messing and berthing problems. Few of the private shipyards have any facilities for messing, berthing, laundry or recreation for crews during overhaul. This problem is particularly critical during the next few years with major emphasis on habitability and pollution abatement alterations which make the ship virtually uninhabitable during overhaul. For ships being overhauled in private shipyards in homeport areas this problem is reduced greatly due to proximity to crews' residences which reduces the numbers of personnel requiring berthing and messing facilities. Additionally, Navy berthing is normally available in Naval facilities in these areas which can be utilized, although this greatly reduces ship's force productivity due to sometimes excessive transit times from berthing accommodations to the ship's location in the private shipyard. In private shipyards remote from government berthing facilities, crews must be accommodated on Navy-owned living barges, if available, or housed in commercial facilities. The cost of berthing crews under overhaul in out of homeport sites where government facilities are not available in FY 1974 is approximately $4.0 million.

Chairman McCLELLAN. Proceed.

FORCE LEVELS

Admiral GADDIS. Reflected in this request is a decrease in ships operating in the active fleet from 511 in fiscal year 1974 to 508 in fiscal year 1975. Some 19 ships are expected to join the Fleet from new construction or conversion, while 22 older ships will leave the active fleet. The number of steaming hours supported from Operation and Maintenance funds is 1.22 million hours compared to 1.18 million hours for fiscal year 1974.

SHIP STEAMING HOURS

Chairman McCLELLAN. What were the ship steaming hours supported from Operation and Maintenance funds in FY 1973?

Admiral GADDIS. The ship steaming hours supported from the Operation and Maintenance funds in FY 1973 were 1,542,338 hours.

Chairman McCLELLAN. Proceed.

Admiral GADDIS. Aircraft operating funds in this request will support approximately 2.23 million flying hours at a cost of $480.0 million, compared to 2.01 million hours and $371.0 million in fiscal year 1974.

Aircraft Flying Hours

Chairman McClellan. What were the aircraft flying hours supported from Operation and Maintenance funds in FY 1973?

Admiral Gaddis. The aircraft flying hours that were supported by Operation and Maintenance funds in FY 1973 were 2,227,756 hours.

Chairman McClellan. Proceed.

Admiral Gaddis. Active aircraft inventory decreases from 4,912 in fiscal year 1974 to 4,757 in fiscal year 1975.

Maintenance Backlogs

Senator Young. What will be the status of the Navy maintenance backlog in FY 1975 assuming this budget is approved as requested? Provide the committee a detailed breakout of these backlog items.

Admiral Gaddis. In an effort to reverse a steadily increasing backlog of maintenance and repair of real property and deterioration of Navy facilities, the Navy has programmed an increase of $110.3 million in real property maintenance funds. It is estimated that this increased funding will reduce the backlog by $62.4 million by end of FY 1975 to a level of $324.3 million.

In ship overhauls, the backlog or bowwave projected for FY 1975 is 52, an increase of 13 over FY 1974. These figures also assume approval of the FY 1974 readiness supplemental.

The projected Navy backlog in the aircraft rework program is also steadily increasing. In FY 1975 the projected backlog, i. e., those units available and requiring repair due to being either beyond prescribed maintenance cycle or material condition is as follows:

	Fiscal year 1975	
	Without 1974 supplemental	With 1974 supplemental
Aircraft	752	602
Engines	1,729	1,494
Components	94,150	69,400

Chairman McClellan. Proceed.

Admiral Gaddis. The number of military personnel to be supported is planned to decrease from an end strength of 551,087 in fiscal year 1974 to 540,380 end strength in fiscal year 1975.

Civilian employment directly funded in this appropriation, including 9,624 indirect hire foreign nationals, is estimated at 136,722 for end fiscal year 1975. This compares to an approved level of 135,928 for fiscal year 1974.

Despite the fact that the planned fiscal year 1974 employment calls for the conversion of approximately 8,100 military positions to civilian status, the end strength total of 135,928 is over fiscal year 1973 actual by only 4,194 spaces. The plan for fiscal year 1975 shows a net increase of 794 spaces over fiscal year 1974. This is composed of increases amounting to approximately 2,000 spaces. Of these increases, about 1,400 represent new requirements primarily in the areas of logistics, military training and medical support while the balance, or about 600 positions, are identified with a transfer from the NIF account. The increases are offset by decreases of about 1,200 spaces including a decrease in headquarters activities of 757 positions.

I will now address in detail the seven individual budget activities that comprise the operations and maintenance appropriation. These budget activities are consistent with the Department of Defense's Five Year Defense Program.

Budget Activity 1—Strategic Forces

This budget program finances the fleet operation, maintenance, alteration and support costs of the forty-one Fleet Ballistic Missile submarines that constitute the Navy's strategic deterrent forces. In addition, this program funds the support costs of the Strategic Systems Project Office, the SSBN Ship System Maintenance

Monitoring System and the TRIDENT program. Funds also provide for strategic command and control; the operation and maintenance of five tenders and various support ships; and the charter of Military Sealift Command ships.

The fiscal year 1975 Operation and Maintenance, Navy request for budget activity 1 is $469.4 million, a net increase of $120.9 million over fiscal year 1974.

The requirements for SSBN overhauls have increased by $47.5 million over last year. This change reflects the increase in the number of overhauls from one in fiscal year 1974 to two in fiscal year 1975. This change is also influenced by the increased requirements for out-year overhauls as we shift the bulk of the strategic submarine shipyard effort from the POSEIDON conversion program to the overhaul program. The funding for the POSEIDON conversion program under the Ship Construction, Navy appropriation terminates in fiscal year 1975 upon the authorization of the last three ships in that thirty-one ship program. The change in the number of ships and scope of our SSBN overhaul program is also seen in an increase of $28.4 million in our ship alteration program. The alteration program is an integrated effort combining military and technical improvement to enhance the capability and ensure the survivability of our sea-based strategic deterrent forces.

SSBN Extended Operating Cycle

This year we are taking a step to increase the percentage of time our POSEIDON SSBN's remain deployed and consequently reduce our expenditures by increasing the interval between shipyard overhauls. This program is called the SSBN Extended Operating Cycle and it should allow us to more fully utilize the long-life reactor cores that are now being installed. This extension of interval between shipyard overhauls is accomplished by a dedicated and sophisticated monitoring system and by industrial level maintenance at the deployed sites vice the shipyards. With this program, we expect to reduce the number of POSEIDON submarine overhauls commencing in fiscal year 1976.

Current SSBN Cycles

Chairman McClellan. What is the current interval between POSEIDON submarine overhauls and the interval anticipated to be achieved under the SSBN Extended Operating Cycle commencing in FY 1976?

Admiral Gaddis. The current overhaul interval is six years. Under the SSBN Extended Operating Cycle the POSEIDON submarines are overhauled at an interval of 6 to 9 years. For various technical reasons and to maintain more constant deployed and overhaul levels, the 9 year interval between overhauls will not be expanded to include all POSEIDON submarines until after their next overhaul.

In this year's program is a request for the initial phases of the Strategic Weapon System logistics support requirements development for the TRIDENT system. Also included is the establishment of the performance criteria and system verification of the Strategic Weapon System training program. These efforts contribute an increase of $14 million over last year's submission.

By the end of fiscal year 1974, there will be eight deployed POLARIS submarines and twenty-one that will have been converted to POSEIDON configuration and redeployed. There will be seven SSBNs undergoing conversion or preparing to redeploy after completing conversion, and there will be five in overhaul or preparing to redeploy after completing overhaul. During fiscal year 1975, four SSBNs are scheduled to deploy with POSEIDON missiles, each of which is several times as effective as the POLARIS missile it replaced. At the end of fiscal year 1975, there will be five SSBNs off-line for POSEIDON conversion, and two for overhaul. A total of thirty-four POLARIS and POSEIDON SSBNs will be deployed.

Budget Activity 2—General Purpose Forces

This budget activity finances the support of forces and shore activities under the operating force commanders, and support of the unified commands. This activity is divided into eight major budget programs. The fiscal year 1975 Operation and Maintenance, Navy request for Budget Activity 2 is 3 billion 61.4 million dollars, a net increase of $426.3 million from fiscal year 1974. This increase is due to the annualization of fuel price increases, increased support for Military Sealift Command ships, active fleet ship maintenance, modernization costs, resources to reduce more facility maintenance backlog, annualization of civilian substitution, and supporting programs.

Aircraft Operating Costs

The Aircraft Forces program provides for operating costs—fuel, oil, consumable supplies and other direct support—for Navy and Marine aircraft assigned to the active fleet. The resources requested reflect in dollar terms Navy and Marine Corps requirements to provide for combat readiness of attack and anti-submarine warfare carrier squadrons, shore-based anti-submarine and early warning squadrons, Marine Corps air wings, and supporting aviation units. $349.7 million is requested in fiscal year 1975, a net increase of $75.8 million. Within this total, the amount for aircraft operations in fiscal year 1975 is $327.0 million in support of 1,145,000 flying hours, an increase of $74.9 million and 126 thousand flying hours from fiscal year 1974. Energy conservation measures have made it necessary for the Navy to reduce flying hours at some cost to readiness during fiscal year 1974.

Energy Conservation Measures

Senator Young. What is the Navy doing to conserve energy? What units of measure have been employed to conserve fuel?

Admiral Gaddis. The Navy has a viable and aggressive program established for the conservation of energy. This includes petroleum products as well as other energy sources, electricity, coal, natural gas and purchased steam. As a result of the President's directed seven percent energy reduction, the Navy implemented world-wide conservation measures. Additional actions were taken to ensure that the Navy's conservation accomplishments will meet or exceed the overall Department of Defense fifteen percent energy conservation goals as related to fiscal year 1973 consumption.

The most significant actions taken include:

Limit ships transit Speed of Advance (SOA) to most economical speed which operational considerations will permit.

Require maximum use of shore or tender utility facilities while in port.

Reduce all support flight operations.

Reduce scheduled days underway for ships operating in vicinity of homeports.

Limit carrier and air wing operations to minimum essential for safety of flight mission essential training.

Utilize conventional vice jet aircraft, where feasible and available.

Reduce speed of all Government motor vehicles not to exceed 50 miles per hour (except in emergencies).

Reduce thermostat setttings to 65–68 degrees fahrenheit.

Cooling systems activated only when absolutely required for equipment operation, personal health, and safety.

Establishment of Command Energy Conservation Panels consisting of representatives of major organizational elements and supported activities to insure continuous review and involvement in the Command Energy Conservation Program.

A 15% heating reduction in bachelor and married quarters and 25% reduction in space heating has been directed.

The performance for the first nine months of fiscal year 1974, July through March, received from Navy field commands has documented a substantial reduction in energy consumption as related to the comparable period in fiscal year 1973. For example, aircraft consumption reflected a 16.6 percent reduction and ship fuel usage was down 40.2 percent. Significant reductions were also reflected in installation and Navy Base Operations.

Admiral Gaddis. As a result of these actions, the revised fiscal year 1974 estimate has been depressed 155,000 hours below the original fiscal year 1974 request. Thus, the fiscal year 1975 flying hour program actually represents a 29,000 hour reduction from the originally requested fiscal year 1974 program.

Effects of Aircraft Reductions on Readiness

Senator Young. What will be the effect on readiness with the reduction of 155 aircraft and 29,000 flying hours in FY–75?

Admiral Gaddis. The factors contained in the question should be identified because they are not directly related. The 155 aircraft reduction is against the total inventory, whereas the 29,000 hour reduction is against Budget Activity 2, General Purpose Forces.

A portion of the reduction in inventory was programmed phase-out of older aircraft, but the major portion was precipitated by budget constraints. To minimize the impact of these reductions on combat readiness, the majority of the reductions were in Fleet Tactical Support aircraft.

Navy intends to operate the reduced FY–75 inventory at a tempo which will support our approved minimum readiness goals of 88% Primary Mission Readiness TACAIR/ASW units. Even though there are fewer total aircraft, readiness of the active inventory will not be degraded. The force reduction does, however, result in reduced overall fleet readiness by restricting our capability to provide fully the broad spectrum of support requirements. Even though a smaller number of aircraft are flying approximately the same monthly hours *per aircraft*, there are less total hours available for services such as airlifts, target tracking, fleet exercises, etc. Reductions in these areas also impact as reduced readiness of surface units which depend upon aircraft services for logistic and target services.

Chairman McClellan. Continue.

Admiral Gaddis. $22.8 million is included to support aviation personnel travel, force commands, and resources for the provisioning of aircraft repair parts for Fleet Marine Air Wings.

Ship Operating Costs

The Ship Forces program provides for the operating and maintenance expenses of active Fleet ships. An amount of $1,800.5 million is requested, an increase of $180.9 million from fiscal year 1974.

$453.7 million is requested for ship operating expenses, an increase of $119.0 million. These resources provide fuel, utility services, supplies and equipage for active fleet ships. The increase basically reflects the fuel price increases, parts and material for increased intermediate maintenance support, utility cost increases, inventory and supplies related to force changes.

Ship Repair and Alteration Costs

$857.7 million is requested for fiscal year 1975 ship repair costs, a decrease of $10.5 million from fiscal year 1974. Ninety-three overhauls are scheduled at an estimated cost of $659.8 million, as compared to ninety overhauls at an estimated $634.9 million in fiscal year 1974. The major impact of the additional three overhauls is the inclusion of one additional aircraft carrier, and thirteen conventionally powered cruisers/destroyers. Funds requested for non-scheduled repairs total $197.9 million, a decrease of $35.3 million from fiscal year 1974. The higher expenditures in fiscal year 1974 primarily reflected Mid East contingency activity, increased number of service craft overhauls, interim drydockings and distillate fuel conversions and the fire damage repair of the USS *Saratoga*.

Ship Alteration Costs

$421.6 million is requested for ship alterations, an increase of $40.4 million over fiscal year 1974 which will provide for the cost of design services and the installation of new equipment which enhances the capability and effectiveness of active fleet ships. Alterations such as pollution abatement, habitability improvements, 1200 PSI steam propulsion plants, and the initial repair part support for new equipments are funded by this request. $67.5 million is requested for initial provisioning and support: repair parts for carrier-assigned aircraft ($16.8 million), logistic type aircraft operations ($1.3 million), fleet personnel travel ($6.1 million), costs associated with the charter of ships from the Military Sealift Command ($38.2 million) and other technical support ($5.1 million). These figures represent a $31.9 million increase over fiscal year 1974 due to the charter of five additional ships from the Military Sealift Command ($22.1 million), initial outfitting of aircraft repair parts for the USS NIMITZ ($5.0 million), and increase in technical support ($4.8 million).

MSC Charters

Additional Ships From MSC

Chairman McClellan. What is the reason for the charter of five additional ships from the Military Sealift Command in FY 1975?

Admiral GADDIS. The transfer of five (5) active fleet ships to the Military Sealift Command represents the continuing emphasis on community of interest between the Navy and Merchant Marine or Military Sealift Command so vital to our country. Every Naval task that can be performed by the Military Sealift Command, with primarily civilian manning, releases comparable military manpower for combatant ship assignments. It also provides peacetime efficiencies due to the Military Sealift Command's higher utilization rate as they do not require professional military training to maintain their readiness for combat. Additionally, because of the rigors of military life and long family separations particularly in the Navy we try to maintain a 1 in 3 deployment pattern. Because Merchant Marines are hired specifically to go to sea—and are paid on that basis—they remain at sea for longer periods. For example, a Navy oiler operates about 150 days per year while the MSC tanker operates about 240 days per year at sea.

Chairman MCCLELLAN. Proceed.

BASE OPERATIONS COSTS

Admiral GADDIS. The Base Operations program provides resources for the operation and maintenance costs of Fleet Support Activities. The fiscal year 1975 request is $599.8 million, an increase of $115.4 million from fiscal year 1974. This increase is due to a long delayed increase in maintenance of real property, a transfer of financial responsibility for support of three Naval support activities from Budget Activity 9, transfer of the human goals program from Budget Activity 8, support for F–14 programs, cost sharing for NATO activities, overhaul of service craft, fuel price increases, and the civilian substitution program.

REAL PROPERTY MAINTENANCE

Chairman MCCLELLAN. Provide the amount of backlog of maintenance of real property which existed at the end of FY 1973 and the amount projected for FY 1974 and FY 1975.

Admiral GADDIS. The backlog of maintenance of real property was $361 million at the end of FY 1973, will grow to $387 million at the end of FY 1974, and will, with the funding budgeted, be reduced to $324 million during FY 1975.

Chairman MCCLELLAN. Proceed.

SPECIAL COMBAT FORCES

Admiral GADDIS. The Special Combat Support Forces program provides for the operating costs of forces consisting of Construction Battalions, Special Warfare Groups, and Sea-Air-Land (SEAL) teams. It also provides support funds for landing craft associated with Amphibious Commands. An amount of $39.0 million is requested, an increase of $5.3 million from fiscal year 1974. This increase is primarily related to the overhaul and repair of combatant craft, support for construction battalions, and the civilian substitution program.

TRAINING COSTS

The Training program provides support for Fleet Air, Surface, and Sub-Surface Training units and squadrons in order to maintain Fleet readiness. The fiscal year 1975 request is $92.3 million, an increase of $22.0 million from fiscal year 1974. The increase relates to $13.6 million for the fuel price increase, $6.5 million to return to the Standard Navy Training Syllabus, and $1.9 million for annualization of the civilian substitution program and pay raises.

NAVY TRAINING SYLLABUS

Chairman MCCLELLAN. Describe the need for the $6.5 million required to return to the Standard Navy Training Syllabus.

Admiral GADDIS. The syllabus hours for each type of aircraft are substantially the same for FY–75 as they were in FY–74. The $6.5 million represents 11,717 hours required to meet increased training requirements in the F–14, S–3, and AV–8 and 14,300 hours to achieve an increased percentage of training requirements.

The FY–74 column of the FY–75 budget represents hours sufficient to achieve 87% of training syllabus requirements. The original request for FY–74, sub-

mitted to the Congress in January 1973, contained hours sufficient to achieve 96% of training syllabus requirements. We have not accepted a degradation of training quality to accommodate this decremented program; but have accepted a reduced student output. This has resulted in a backlog in CRAW squadrons and pipeline delays.

Chairman McClellan. Continue.

Major Command Costs

Admiral Gaddis. The Unified and Operational Commands program provides resources in support of Service and Force Commands, Unified Commands, and Fleet Air Wings and assigned aircraft. The fiscal year 1975 request is $134.8 million, a net increase of $11.3 million. Increases are associated with the World Wide Military Command and Control System, annualization of the civilian substitution program, pay raises, and support for the Fleet Combat Direction Systems support activities.

Undersea Surveillance System

The Undersea Surveillance System program provides for the operating and maintenance costs of twenty-two Naval Facilities involved in the collection and processing of data associated with underwater surveillance. The fiscal year 1975 request is $44.8 million, a net increase of $15.7 million. $8.8 million of this increase is for the charter of three Military Sealift Command ships transferred from the Other Procurement, Navy appropriation along with $1.5 million of support material. Other increases include overhaul and repair of equipment and operation of a shipboard data collection and processing system.

Budget Activity 3—Intelligence and Communications

This budget activity finances operations of the Navy's Cryptologic; Intelligence; Communications; Oceanography; Weather Service and Special Support Activities. These special functional programs are performed in response to both national security tasking and specific specialized information and service requirements for fleet operations. The fiscal year 1975 request of $346.1 million for these programs is $30.9 million above the fiscal year 1974 level, primarily due to civilian substitution, pay raises, expanded communications facilities and installation of equipment, intelligence gathering capabilities, and new collection procedures for oceanographic data.

Cryptologic Program Costs

The Consolidated Cryptologic program provides funds in direct support of the national cryptologic effort and the Fleet Commanders in Chief. The fiscal year 1975 request is $27.9 million, a $0.2 million increase over the fiscal year 1974 level, primarily for the civilian substitution program and pay raise.

Intelligence Program Funding

The General Defense Intelligence Program (GDIP) includes funds for the Naval Intelligence Support Center, Intelligence Data Handling Systems, the Human Intelligence collection program, and several other intelligence activities and programs conducted by the Director of Naval Intelligence and the unified and fleet commanders.

The fiscal year 1975 request for the GDIP is $38.2 million, which is an increase of one million dollars above last year. The increase is for an expansion of the human intelligence collection program and the analysis of Soviet developments in sensors. I will provide additional details on these programs later in my areas of special interest.

Naval Communications Funding

In the Naval Communications Program, funds are requested for the operating costs of the Navy Communications System, procurement of leased communications services, and the installation/automation of communications equipment at Naval shore activities, worldwide. For fiscal year 1975, $175.6 million is requested for this program, an increase of $25.6 million over fiscal year 1974. This increase

will provide for the lease of satellite communications channels known as GAP FILLER; realignment of the Naval Telecommunications shore establishment; annualization of the civilian substitution program; civilian pay increases and shore fuel price increases.

Oceanography

Funds in the Oceanography program provide for the collection, processing, analysis, and publication of acoustic, geophysical, and other oceanographic data to support U.S. Naval operating forces as well as civil, scientific and maritime needs. Also included is the Mapping, Charting and Geodesy funding to provide for the collection and reduction of hydrographic, bathymetric, gravimetric, magnetic, and navigational data taken through coastal and deep ocean surveys in direct support of the operating forces and civilian maritime interests. For fiscal year 1975, $64.6 million is required for these programs, an increase of $2.7 million. This will provide for full year costs of the October 1, 1973 classified pay raise, implementation of new prototype equipment and techniques which will increase capability to collect data in support of the strategic deterrent forces, and increased survey ship operating costs due to escalation of fuel and maintenance costs.

The Naval Weather Service program provides the operating forces with a complete environmental information service including a full range of weather and oceanographic forecasting services and climatological studies for operational commanders. The fiscal year 1975 estimate of $9.0 million reflects a net decrease of $.1 million. The reduction is attributed to reduced requirement of the Satellite Data Collection System and reduction in the Climatological Program.

Support Activities

The Specialized Support Activities for which funding is requested are the Naval Investigative Service, Naval Command Systems Support Activity, the Department of Defense Computer Institute and Defense/Navy War Games. The fiscal year 1975 estimate of $30.8 million is an increase of $1.5 million from the fiscal year 1974 estimate. This increase will provide 50 additional Naval Investigative agents and associated support and alleviate serious deficiencies in manpower which have made it impossible to keep up with the current request rate for criminal security investigations in the Navy and Marine Corps.

Naval Investigative Service Manning

Chairman McClellan. Provide the number of Naval Investigative Agents authorized at the end of FY 1973 and projected at the end of FY 1974 and FY 1975. Is not a large portion of the duties formally performed by these agents now performed by the Defense Investigative Service?

Admiral Gaddis. For FY 1973 there were 432 Naval Investigative Agents on board, for FY 1974 and FY 1975 the budget reflects 435 and 485 respectively. In FY 1972 there were 747 Naval Investigators supported prior to the transfer of personnel security investigation functions to the Defense Investigative Agency. The Navy is responsible for investigating a wide variety of criminal cases arising from major violations of the Uniform Code of Military Justice, the equivalent of felonies, and incidents of sabotage, espionage, and subversion as well as conducting personnel security investigations overseas.

Chairman McClellan. Continue.

Admiral Gaddis. Also included in the increase is annualization of the civilian substitution program.

Budget Activity 7—Central Supply and Maintenance

This activity supports readiness of deployed Naval forces through the operation of the Navy's Supply System, centrally managed maintenance and overhaul programs, and technical and engineering assistance to the Fleet. Maintenance and overhaul responsibility includes active fleet aircraft and their support equipment, missiles, ammunition and repairable components for surface, sub-surface and aviation forces.

Funds requested are administered by the Headquarters and six Systems Commands of the Naval Material Command. The request in this activity is 2 billion 246.4 million dollars, a net increase of $42.7 million from fiscal year 1974. This

increase is comprised of $19.0 million for annualization of the October 1973 classified pay raise and fiscal year 1974 wageboard increases; $11.6 million for fuel price increases whose primary impact is on transportation rates in this budget activity; and $19.1 million to complete the transfer of engineering services and repair costs from procurement appropriations. These increases total $49.7 million and are partially offset by program adjustments netting to a $7.0 million decrease. This decrease results from deletion of one time Mid East supplemental requirements and of one time prior year nuclear fuel costs. Significant program increases occur in Facilities Engineering Technical Support for major shore repair projects and collateral equipment; in Supply Support for efforts to increase readiness through improved reparables asset management; and in Ordnance Technical Support for the MK–48 torpedo.

The Central Supply and Maintenance budget activity is divided into seven major budget programs following the fleet support functional specialties of the Systems Commands. These programs are Air, Ordnance, Ship, Electronics, and Facilities Technical Support, Supply Support, and Material Command and Support.

Air Systems Technical Support

The Air Systems Technical Support Program is budgeted at $859.7 million in fiscal year 1975, a net decrease of $46.8 million below the fiscal year 1974 funding level. This is primarily the result of a $37.8 million transfer to Supply Support to consolidate management and budgeting for Second Destination Transportation. Increases to complete the transfer of contractor engineering technical services and certain contractor repair costs from the aircraft procurement appropriation are more than offset by one time Mid East costs, logistics and headquarters reductions. Within Air Systems Technical Support, we are requesting $583.5 million for the depot level overhaul and progressive rework of aircraft, engines, and their repairable components. This request, together with $21.3 million in reimbursements, principally for the rework of aircraft supporting research and development projects, provides $604.8 million to sustain the active forces aircraft and engine inventory at current readiness levels.

The Airframes portion of the rework of aircraft is programmed at $213.2 million to support the average operating aircraft strength. Criteria such as age and/or individual model peculiarities generally govern the type and extent of rework the individual model receives. Aircraft are scheduled for rework on a months-in-service tour basis depending on the type of aircraft and mission. In this regard we are developing an Aircraft Condition Evaluation (ACE) Program. This program provides for a depot team to evaluate the condition of individual aircraft on a case by case basis and determine minimum rework and modifications required to extend the rework interval. This work is accomplished either at the Depot or at the operational site, depending on the content. This procedure tailors the work content by aircraft condition and provides a significant extension of tour end date for a given aircraft. The program is still developmental and certain unknowns exist such as long term effects. Future analysis will enable determination of the effects of ACE versus PAR/overhaul. The number of aircraft reworks to support fleet operations in fiscal year 1975 is 1,560 as compared with 1,561 in fiscal year 1974.

Aircraft Rework Deferrals

Senator Young. How many aircraft were deferred from the normal PAR cycle in FY 1974? If any were deferred, what happened to the funds approved in the FY 1974 appropriations for that purpose?

Admiral Gaddis. Our original budget request for FY 1974 was for the rework of 1,594 aircraft. Our current plan is for 1,561. This includes a supplemental request of 150 aircraft, indicating a slippage of 183 aircraft in our base program which will have to be deferred to FY 1975.

Funding for the 183 aircraft has been used within the rework program to pay for the increased cost of escalation and the increased manhours required. You may recall that earlier this year Navy submitted an amended budget requesting $36.2 million to pay for these increased costs. The Congress reduced our request by $20.7 million, approximately the amount required for the 183 aircraft.

Deferred Aircraft in FY 1975

Senator Young. How many aircraft does the Navy plan to defer in FY 1975?

Admiral Gaddis. Our FY 1975 budget is for 1,560 aircraft. An additional 602 is required but will have to be deferred due to funding constraints.

Chairman McClellan. Continue.

Admiral Gaddis. The engine program is based on the number of overhauls and repairs required to support the aircraft flying hour program with sufficient operable engines plus a minimum reserve pool. Support of the fiscal year 1975 flying hour program requires $82.4 million for the overhaul/repair of 5,284 aircraft engines on a regularly scheduled basis as compared with 5,678 engines in fiscal year 1974.

The component repair program is also based on aircraft flight operations. To support the fiscal year 1975 flying hours program, $220.9 million is requested as compared with $213.3 million for fiscal year 1974.

Funding of $88.3 million is also requested in the aircraft rework program for other supporting programs, including $26.0 million for modification kit installations. The balance of $62.3 million is for preservation of aircraft for shipment overseas, emergency aircraft repairs, technical services for fleet activities, and the processing of material on a priority basis to relieve critical supply shortages.

Naval aviation support programs other than aircraft rework are budgeted at $276.2 million in fiscal year 1975. This represents a net decrease of $29.0 million from fiscal year 1974, primarily because of the previously mentioned transfer of Second Destination Transportation to the Naval Supply Systems Command partially offset by the annualization of engineering services previously funded in procurement.

Ordnance Technical Support

We are requesting $293.0 million for ordnance related programs, an increase of $23.1 million over fiscal year 1974. Our request is in support of: (a) ordnance rework and maintenance, (b) field operations, (c) anti-submarine warfare systems rework and maintenance, and (d) surface missile systems rework and maintenance.

The largest of these projects, ordnance rework and maintenance, is budgeted at $136.4 million in 1975. Through depot level repair, the fleet is provided with ready-for-issue ammunition and other shipboard ordnance, including guns and fire control equipment. Also provided are receipt, segregation, stowage, and issue of ammunition, quality evaluation, calibration, explosive and weapons safety. An increase of $8.7 million in ordnance rework and maintenance for 1975 results from the necessity to include direct funding for a portion of the cost of disposal of surplus property and costs for updating ordnance disposal publications.

The request for field operations is $27.5 million in 1975. This provides for the Naval Ordnance Systems Command Headquarters, inspection and contract administration and project management functions. The 1975 estimate is approximately level with fiscal year 1974 funding after accommodating classified pay and wage board increases.

ASW Systems

The ASW Systems Rework and Maintenance effort is budgeted at $51.6 million, an increase of $10.1 million over 1974. The objective of this effort is to attain and maintain an acceptable level of ASW Readiness in the active fleet. To accomplish this, funds are budgeted for development of corrective fixes for operational deficiencies on in-service ASW ordnance equipments: set up of maintenance facilities for new weapons such as the MK–48 torpedo: turn-around and repair of a large inventory of torpedoes, fire control systems, missiles and launchers. They also provide for on-going systems engineering effort, and tests of actual ASW Combat system readiness and effectiveness. The increase of $10.1 million reflects additional requirements for the MK–48 torpedo intermediate and depot-level repair capability and initiation of in-service engineering for this torpedo.

Surface Missile Systems

The Surface Missile Systems Rework and Maintenance project is budgeted at $77.4 million in 1975, an increase of $4.8 million over the fiscal year 1974 level. This project provides for the rework of surface missiles and their associated fire

control, launchers and test equipment as well as search radars. Additionally, engineering and support services required for the maintenance of an effective overall fleet operational readiness position are provided. Missile systems supported include the medium and extended range STANDARD missile, the TARTAR, TERRIER, and TALOS missiles, the Point Defense Missile, and the Anti-Ship-Missile Defense program. The increase of $4.8 million is primarily related to search radar engineering services and to additional maintenance of increasing numbers of shipboard missile weapon systems in the Fleet.

SHIP TECHNICAL SUPPORT

The request of $345.1 million for ship systems technical support will fund field operations of the Naval Ship Systems Command, ship maintenance and repair projects and technical and engineering support of the Active and Inactive Fleets. The field operations budget project includes the headquarters of the Naval Ship Systems Command and field activities, primarily supervisors of shipbuilding. The fiscal year 1975 request for field operations of $80.8 million is $1.1 million above the fiscal year 1974 level. Reductions in Command and Administration and Naval Ship Engineering Center personnel are offset by annualization of the October 1973 classified pay raise and increased requirements at Supervisors of Shipbuilding offices. Ship maintenance programs are budgeted at $108.9 million in fiscal year 1975, an increase of $.6 million above fiscal year 1974. Included are the repair of electronic, hull, machinery and electrical equipment; maintenance of the Inactive Fleet; planning and engineering for complex ship overhauls and alterations; and other maintenance services supporting the operating forces.

Ships technical programs are budgeted at $155.4 million in fiscal year 1975. These programs include technical training, military and other supporting services for non-industrial portions of Naval shipyards, nuclear engineering and technical support of the Shipboard Nuclear Propulsion program, ship design and other engineering and logistic support. The fiscal year 1975 request for technical programs is $16.6 million below fiscal year 1974, basically reflecting the one time costs in fiscal year 1974 of a change in Atomic Energy Commission billing procedures for nuclear core processing.

ELECTRONIC SYSTEMS TECHNICAL SUPPORT

The fiscal year 1975 request for Electronic Systems Technical Support is $72.7 million. This program provides for the installation and major repair of electronic shore and shipboard equipments and components as well as related engineering and technical services. This budget program also supports the operation of electronic engineering field activities and the headquarters of the Naval Electronic Systems Command. The $72.7 million fiscal year 1975 request is an increase of $1.8 million from fiscal year 1974 primarily because of wage board and classified pay increases.

FACILITIES TECHNICAL SUPPORT

The request of $141.8 million for Facilities Technical Support will fund centrally managed facilities programs, field engineering offices and the headquarters of the Naval Facilities Engineering Command, and Construction Battalion Centers. Centrally managed programs include collateral equipment outfitting, pollution abatement projects, non-industrial costs at public works centers, and various planning, design and major repair programs. The fiscal year 1975 request of $141.8 million is $21.8 million more than that for fiscal year 1974. Increases occur primarily in two programs: Collateral Equipment to outfit new construction, and Major Repair Projects. The increase in Collateral Equipment is required to meet the schedule of buildings being completed under Military Construction, Navy appropriation during fiscal year 1975.

COLLATERAL EQUIPMENT

Chairman MCCLELLAN. What are examples of Collateral Equipment to outfit new buildings being completed in FY 1975?

Admiral GADDIS. I would like to submit examples for the record. The information follows:

Project No.	Location	BOD	Equipment included
P-245	NAS Patuxent River, Academy/gen instr bldg	9/74	Projector printer, photo print dryer, drafting table, bulletin board, screens, desk, chair.
P-302	NAS Miramar, applied instr bldg	11/74	
P-040	NAVSUPPACT, New Orleans, comm centr expan-fac.	7/74	Desk, chair, credenza, bookcase.
P-041	NAS North Island, flgt cont and resc	9/74	Bunks, fire extinguisher.
P-145	NAVDET Souda Bay, arcft fire/crash	5/75	Refrig, chair, filing cabinets, tables.
P-058	NAVCOMMTRACEN, Pensacola, elec warfare training.	10/74	Student carrels, desk, chair, table, bookcases.
P-212	NAS Meridian, oper flgt train bldg	7/74	Instr table, typewriter.
P-194	NAS Miramar, oper train bldg	7/74	Adding mach, microphone w/stand, bulletin board.
P-747	COMSYSTO Sigonella, comm store add	3/75	Shelving, case, counter, chair.
P-830	NAS Lemoore, cal, integ avionics	10/74	Magnifying workbench lamp.
P-301	NAS Miramar, avionics shop add	10/74	Drill press with stand, bench grinder.
P-001	NAVHOSP Pensacola, Hosp PH II	1/75	X-ray intensity spot light, X-ray illuminator, desk chair, table.
P-151	NAS Meridian, admin bldg., NATTC	10/74	Typewriter, adding machine, desk, filing cabinets, table, calculator.
P-007	NAVSTA Guantanamo Bay, elem. school	9/74	Chair, table, cabinet, book shelving, reading center.
P-155	NAVSUBASE, New London, EEQ-PHIII	2/75	Bunkbed, mattress, chair, table, drapes and access.
P-012	NAVFAC Punta Borinquem (Ramey) maintenance facility.	9/74	Gas welding and cutting rig, arc welder, jack crane, floor crane.
P-157	NAVSUBASE New London, ship wastewater col	3/75	Hose, hose supports.
P-734	NAVCOMMSTA Norfolk, sewage system improv	9/74	Colorimetric analyzer, pH meter, D.O. analyzer, BOD test equip.

Admiral GADDIS. Major Repair Projects have been increased in fiscal year 1975 in line with an effort under all budget activities to reduce the respective segments of the backlog of essential maintenance in the shore establishment.

SUPPLY SUPPORT

We are requesting $479.2 million under the supply support program for service-wide supply functions administered by the Naval Supply Systems Command. This Command has responsibility for eight stock points located in the United States engaged in the receipt, storage, and distribution of military supply items to meet fleet operating and material repair demands. Also included are the operation of Navy Inventory Control Points engaged in the management of supply requirements and weapon systems support. Other responsibilities of the Naval Supply Systems Command include financing the intra-Navy movement of stock material, aviation and ordnance material, ships support material, and construction material, and the transportation of military mail; Navy commissary store operations; and supporting activities and services.

For fiscal year 1975, all Budget Activity 7, Second Destination Transportation previously funded by the Naval Air, Ordnance, Ships and Facilities Engineering Systems Commands has been centralized under the Supply Support Program and will be managed by the Naval Supply Systems Command. This step has been taken to unite transportation management under one command. The transfer of transportation budget responsibility accounts for $53.6 million of a total $57.1 million increase for Supply Support in fiscal year 1975.

ECONOMIES OF CENTRALIZATION

Chairman MCCLELLAN. Can any economies be effected by the centralization of transportation management under the Naval Supply Systems Command?

Admiral GADDIS. Basically the purpose of the centralization is to improve the management of the transportation function by placing budget formulation and execution responsibilities under the cognizance of the organization identified as the manager of Navy Material Transportation. The objective of this centralization is the realization of an efficient transportation operation that will adequately support the Navy at the most economical cost possible. Improved management is to be gained by placing the information on funds available and funds expended in the hands of the people who make policy decisions and are aware of the ramifications of operational and policy decisions. In this connection it is believed that centralized management of transportation funds will result in better control of funds necessitating fewer reprogramming of funds with their resultant disruptive

effects on other programs. Additionally it is believed that centralized control will permit development of system-wide data collection and usage analyses not possible under a decentralized system.

Chairman McClellan. Proceed.

Admiral Gaddis. The balance of the increase in this budget program provides for improvements in reparables asset management, Navy commissary store operations, pay raise annualization, non labor cost increases and increased maintenance and repair funding.

Funding Support for Commissaries

Chairman McClellan. Describe the need for funding support of Navy Commissary Store operations. What amount is included in the FY 1975 budget for this purpose?

Admiral Gaddis. Funding support requested for Navy Commissary Stores in FY 1975 covers payment of salaries and fringe benefits of civilian employees of Navy Commissary Stores and reimbursement to the Navy Resale System Office, a non-appropriated fund activity, for support it provides to the Navy Commissary Store program. The reimbursement is in accordance with the recommendation of House Report No. 91–77 of 22 December 1970. The FY 1975 budget includes $39.164 million for support of the program. Funding support required over FY 1974 level is related to:

	Millions of dollars
Fiscal year 1974	$35.1
Salary increases/nonlabor price escalation	1.0
Workload increase	0.6
Standards of Service Deficiencies (To maintain FY 1973 standards)	2.0
NAVRESO Support	0.5
Total fiscal year 1975	39.2

Chairman McClellan. Proceed.

Admiral Gaddis. These increases are partially offset by decreases in Military Sealift Command Mid East Readiness charges and savings from base closures.

Naval Material Command and Support

Budget Activity 7 also includes a $54.9 million request for Naval Material Command and Support, including the headquarters of the Chief of Naval Material and field support projects. The fiscal year 1975 request provides $7.8 million for headquarters reflecting a $.3 million reduction and a 10 percent decrease in civilian end strength. The balance of the estimate of $47.1 million provides $17.0 million for the Naval Material Command Support Activity and $30.1 million for reimbursement to the employees compensation fund of the Department of Labor.

Budget Activity 8—Training, Medical, and Other General Personnel Support

The fiscal year 1975 request for Training, Medical, and Other General Personnel Support totals $918.7 million, which is an increase of $85.7 million over the estimate for fiscal year 1974. The most significant increases include $14.6 million for full year costs of the program to replace military with civilians in selected areas; $21.6 million of adjustments and transfers related to Shore Establishment Realignment and regionalization of medical facilities.

Medical Regionalization Funding

Chairman McClellan. What is the need for the increased funds to support medical regionalization?

Admiral Gaddis. Of the $10.4 million increase for medical regionalization, $7.4 million is a realignment of funds from other appropriations: NIF RDT&E,N, O&M,NR, O&M,MC, and $.5 million is a realignment of O&M,N funds from Budget Activity 2, recognizing the transfer of the medical function to BUMED. The $2.5 million balance is required to upgrade the medical facilities gained by regionalization. The upgrading of these facilities is essential to fulfill the concept of regionalization.

Chairman McClellan. Proceed.

Admiral GADDIS. A figure of $9.9 million for increased aviation fuel costs and flying hours in Flight Training; $11.7 million for improvements in personnel, training, and financial management systems and techniques; $5.1 million to cover civilian pay increases; $11.1 million for medical care in non-service facilities; $5.2 million to implement an enrollment system for all medical program beneficiaries; $7.9 million for expansion and full year costs of on-going programs to improve medical facilities/services and provide assistance to doctors; $7.7 million for maintenance of real property in an effort to reduce backlog of repairs, and $22.9 million for other additional requirements including recruiting, occupational health and safety and expenses for the Uniformed Services University of Health Sciences.

OVERSEAS DEPENDENTS EDUCATION PROGRAM

Major offsetting decreases include $18.9 million due to transfer of the Navy's portion of the Overseas Dependents Education Program to the Secretary of Defense sponsorship, and $13.1 million due to the USS LEXINGTON overhaul in fiscal year 1974.

TRAINING AND EDUCATION

In order to fulfill our role in National Defense, the Navy must provide training and education opportunities to the young men and women of our volunteer service. The importance and complexity of Naval training and education continue to grow each year as modern defense systems are introduced into service use. In addition, we are introducing new and improved instructional techniques to ensure the best return possible for our investment.

Training and education programs for which we are requesting $240.3 million in fiscal year 1975 include a variety of programs such as recruit training; educational opportunities at the high school, college, under-graduate and graduate level; operation of the aircraft which support our pilot training program and support for our Naval Academy, Naval Training Centers, Naval Air Stations of the Naval Education and Training Command and Naval Schools Command.

FULL TIME GRADUATE PROGRAMS

Chairman MCCLELLAN. Describe the full time college, undergraduate and graduate programs for which funds are requested and indicate the number of new entrants into each program for FY 1973, 1974, and 1975.

Admiral GADDIS. The Navy's full time graduate programs for which funds are requested include the Naval Postgraduate School at Monterey, California and certain postgraduate instruction offered at civilian institutions. The mission of the Postgraduate School is to conduct and direct advanced technical and scientific education for officer students.

At the PB School postgraduate instruction is provided in two major areas:

(1) Engineering with curricula including: mechanical electronics, aeronautical, ordnance, aerological, nuclear engineering, communications, and operations analysis.

(2) Management, with curricula and programs appropriate to all officer designators.

Instruction is provided for personnel of other services, foreign nationals and civilians as well as for Navy personnel.

Postgraduate instruction at civilian institutions provides for instruction for naval officers at civilian universities in technical and scientific subjects. In addition, courses are provided in civilian universities for which it is uneconomical to establish instruction at the Naval Postgraduate School.

Full time undergraduate programs for which funds are requested include the Navy Enlisted Scientific Education Program (NESEP), and Associate Degree Completion Program (ADCOP) and in FY 73 and FY 74 only, the BS/BA Program.

The NESEP Program provides training for highly qualified enlisted personnel in fields of science or engineering, including systems engineers for advanced fire control systems, advanced armament (including nuclear weapons), digital computers, and nuclear propulsion. Emphasis is placed on the broader aspects of science, mathematics, and engineering education leading to a baccalaureate degree. Candidates are sent to a designated college or university for up to 4 consecutive years. Program was initiated in fiscal year 1957 as the Navy Enlisted

Advanced School Program with an enrollment of 54 students. The Navy Enlisted Advanced School Program has been combined with the Navy Enlisted Scientific Education Program to achieve maximum benefit for the Navy. Upon receipt of a baccalaureate degree, graduates are commissioned in a category commensurate with their education and special qualifications and the needs of the service, and therefore this program is an important officer acquisition program for career enlisted personnel.

The purpose of ADCOP is to raise the general educational level of enlisted naval personnel by providing opportunity for highly-qualified and career motivated enlisted personnel to attain an associate degree in a junior college. The length of the program is 2 years or less, depending on previous college credits and advanced standing granted for successful completion of service school training. Eligibility includes: (1) Career petty officer second class or above; (2) Enlisted in Regular Navy and have completed at least one or more enlistments and (3) Must agree to extend period of enlistment or reenlist for 6 years at the time of entry into ADCOP. Colleges participating are: Southwestern College, Chula Vista, California; Palomar Junior College, San Marcos, California; Grossmont College, El Cajon, California; Del Mar College, Corpus Christi, Texas; and Pensacola Junior College, Pensacola, Florida. The Program was initiated in 1967 with 75 students. The field of study is restricted to management field or career related specialty.

The number of entrants into O&M,N Funded Navy-Sponsored fully funded Graduate and Undergraduate College Programs for FY 73–75 are as follows:

	Fiscal year—		
	1973	1974	1975
NPGS (graduate)	[1] 765	[1] 793	[1] 764
Civilian institution (graduate)	203	223	177
Subtotal graduate	968	1,016	941
NPGS (B.S./B.A.)	135	100	[2] 0
ADCOP	1,714	1,106	1,425
NESEP [3]	415	390	300
Subtotal undergraduate	2,264	1,596	1,725
Grand total	3,232	2,612	2,666

[1] Includes the following numbers of other service, foreign and civilian entrants: fiscal year 1973, 223; fiscal year 1974, 174; fiscal year 1975, 205.
[2] Discontinued at congressional direction; no future entrants planned.
[3] While considered here as fully funded college education, this is actually an important officer acquisition program for career enlisted personnel.

Chairman McClellan. Proceed.

Admiral Gaddis. Sponsorship for the Department of Defense Atlantic Overseas Dependents Schools which was funded in this budget activity in fiscal year 1974 has been transferred to Operation and Maintenance (Defense Agencies).

Recruit Training

In fiscal year 1975 approximately 103,000 new Navy personnel, including Naval Reservists, will enter recruit training. A daily average of approximately 41,000 officers and enlisted men will receive specialized training in areas ranging from nuclear power and electronic warfare to prevention of drug and alcohol abuse. The Naval Academy will provide undergraduate education to an average of 4,150 midshipmen to prepare them for professional military careers. In the field of aviation, our flight training program will produce 1,654 aviators and 706 Naval Flight Officers capable of operating the most modern aircraft under all weather conditions.

NROTC

In addition, an average of 8,100 young men will participate in the Naval Reserve Officers Training Corps leading to careers as commissioned officers of the Navy and Marine Corps. At the high school level, 32,200 students will participate

in the Junior NROTC Program, receiving instructions in citizenship and military subjects.

MEDICAL SUPPORT FUNDING

In the area of medical support, our responsibility is to provide the best possible care for our active duty people and other authorized beneficiaries. In order to promote better utilization of our scarce medical resources and, at the same time, increase the availability of medical services to beneficiaries, our fiscal year 1975 budget reflects continued regionalization of medical facilities within specific geographic areas. For fiscal year 1975, we are requesting $427.4 million for support of medical activities under command of the Surgeon General, including 34 naval hospitals, 17 medical centers, 2 regional medical clinics, 2 naval dispensaries, 12 dental activities, and various specialized medical activities. The request also includes provision for in-patient and out-patient care in non-service facilities, care of the dead, training and education in medical fields, and for the first time, in fiscal year 1975, the Board of Regents and Executive Agent costs for the Uniformed Services University of Health Sciences.

Our naval hospitals will have an average daily patient load of 7,694, will provide care for approximately 18.1 million out-patients and render about 54.3 million services for these out-patients.

HOSPITAL PATIENT WORKLOADS

Chairman MCCLELLAN. Provide the daily patient load and out-patient care in Naval hospitals for fiscal years 1973 through 1975.

Admiral GADDIS. In Naval hospitals the average daily patient load is 7,785 in FY 1973, 7,656 in FY 1974, and 7,694 in FY 1975. The average daily out-patient visits are 27,844 in FY 1973, 29,533 in FY 1974, and 29,730 in FY 1975.

Chairman MCCLELLAN. Proceed.

Admiral GADDIS. An additional daily patient load of 3,912 will be provided care in other federal and civilian institutions.

The remaining $251.0 million under this budget activity includes $58.9 million to recruit military personnel for naval service; and $28.6 million for various personnel support related functions such as drug and alcohol rehabilitation, programs in human relations, centralized personnel distribution, and morale and discipline functions of personnel management. In addition, $163.4 million is included for base operations costs of training activities and commands under the Chief of Naval Education and Training, field personnel support activities, and the Headquarters, Bureau of Naval Personnel.

BUDGET ACTIVITY 9—ADMINISTRATION AND ASSOCIATED ACTIVITIES

This budget activity funds a wide range of administration, services, and fleet support functions provided Navy-wide by both headquarters and field activities. The majority of these activities are organized under, and responsible to, the departmental headquarters of the Navy—either the Secretary of the Navy or the Chief of Naval Operations. Within the Navy Secretariat, financial services and support functions are provided by Navy-wide finance activities. These functions include provision of central, regional, and local disbursing services; payment of dealers' bills, government bills of lading and transportation requests; performance of fleet, central, and field accounting; examination and consolidation of disbursing and store returns; and payment of both military and civilian personnel. Also included in the area of the Navy Secretariat are services provided by the Naval Audit Service, the Regional Offices of Civilian Manpower Management and numerous other specialized and general support activities. Organizational elements responsible to the Chief of Naval Operations in this budget activity include Naval Districts and field activities with a support, specialized, or technical mission such as the Boards of Inspection and Survey, and the Naval Safety Center. Budget Activity 9 also includes funds for the official mail expenses of the Department, the Federal Building Fund, audio-visual program at the Naval Photographic Center, public affairs, community relations, and the American Revolution Bicentennial celebration.

The fiscal year 1975 request for this budget activity is $228.5 million, a net decrease of $49.7 million. This decrease reflects the net effect of: decreases in funding for Navy Secretariat activities totaling $81.8 million, decreases in fund-

ing for activities of the Chief of Naval Operations totaling $2.4 million, an increase in funding for the Naval Photographic Center amounting to $.5 million, and initiation of funding for the Federal Building Fund of $33.6 million. Funding requested for this budget activity is distributed into the following four major budget programs: Department Administration; Field Headquarters and Activities; Servicewide Support; and Other Support Activities.

Departmental Administration Funding

$31.8 million is being requested in Departmental Administration in fiscal year 1975 to support the Offices of the Secretary of the Navy and Chief of Naval Operations. The decrease of $.4 million in funds requested from the fiscal year 1974 level of support is the result of a $.9 million reduction in civilian employment and administration support and transfer of the Naval Petroleum Reserves to a separate appropriation offset by an increase for annualization of civilian pay increases and the formation of a Contract Appeals Division in the Navy Secretariat.

The fiscal year 1975 request for Field Headquarters and Activities totals $35.1 million, a net increase of $3.3 million from fiscal year 1974. This increase is mainly attributable to escalating costs of base support.

Service Wide Support

$118.6 million is being requesed for Service Wide Support in fiscal year 1975, a decrease of $89.0 million from fiscal year 1974. This large reduction is due principally to the transfer of the Naval Petroleum and Oil Shale Reserves from Operation and Maintenance, Navy to a separate appropriation. There is also a decrease of $4.6 million in official mail expenses. Increases total $4.1 million including the final increments of the Joint Uniform Military Pay System, the financial management career training program, and an increase to the Internal Audit effort. In the field of civilian personnel management, $1.2 million is being requested for the continued operation of the Centralized Co-Op Project of the Minority Relations Program, whereby college students are hired on a part-time trainee basis. In addition, there are increases to provide support costs of the attendees at the Labor Relations Training Center, to improve civilian manpower information systems.

The fiscal year 1975 request for Other Support Activities total $43.0 million, a net increase of $36.4 million. Public law 92–313 revised the budget basis for funding space occupied by federal agencies in G.S.A. leased facilities. In fiscal year 1975, the Military Departments are budgeting for these costs in the Federal Building Fund for reimbursement to G.S.A. The Navy presently occupies space, the costs for which have been estimated by G.S.A. in the amount of $33.6 million in fiscal year 1975. This does not reflect any recent or projected increases or decreases of G.S.A. leased-space occupied by Navy. Funds are also requested in this budget program for the first time to support Navy participation in the celebration of the American Revolution Bicentennial. These requested funds amount to $2.5 million and are for initiatives in various Navy-wide national, state, local, and international events supporting the bicentennial celebration program during the years 1975–1976.

Budget Activity 10—Support of Other Nations

This budget activity provides funds for the support of allies; contributions and support of international military headquarters; and support of Military Assistance Advisory Groups, Missions and Military Assistance Groups. The Support of Allies program provides funds for military assistance support of the Vietnamese Navy.

The fiscal year 1975 request for this budget activity is $20.7 million, a decrease of $1.3 million from the fiscal year 1974 level. This decrease, principally in the Support of Allies area, is the result of changes in military assistance support funding.

Areas of Special Interest

Mr. Chairman, in recognition of the Committee's continuing interest in several of our functional areas, I would like to take this opportunity to discuss those areas and, where appropriate, actions we have taken to ensure compliance with

your desires. The first area I will cover is Energy Conservation and Resource Requirements.

Energy Conservation and Resource Requirements

The Navy has a viable and aggressive program established for the conservation of energy—petroleum products as well as other energy sources, electricity, coal, natural gas and purchased steam.

As a result of the President's directed 7 percent energy reduction, the Navy has implemented worldwide conservation measures. We have further reduced our energy goals so that our conservation programs will meet or exceed the recently implemented overall DOD reduction of 15 percent in total energy for the remainder of fiscal year 1974.

The performance for the first half fiscal year 1974, July through December received from Navy field commands has documented a substantial reduction in energy consumption as related to the comparable period in fiscal year 1973. For example, aircraft consumption reflected a 16.8 percent reduction and ship fuel usage was down 21.6 percent. Significant reductions were also reflected in installation and Navy base operations.

Restrictions on Underway Steaming

We have reduced our underway steaming days for ships to a level lower than that recommended by the Fleet Commanders to maintain necessary fleet readiness. Since late 1973, restrictions have been imposed on Navy fuel consumption as a result of both fuel and budget allocation constraints which forced the Fleet Commanders to significantly reduce their operating days at sea from those levels planned in the budget for the current fiscal year. I would like to emphasize that the maximum reduction was taken in the Second and Third Fleets, those ships operating and training near the Continental United States rather than in the Sixth and Seventh Fleets which are deployed overseas. Our Naval Reserve ships have been similarly restricted.

Erosion of Readiness in Air Squadron

Deployed operational air squadrons have been maintained at primary mission readiness levels at the expense of non-deployed units. This has caused a gradual erosion of readiness in non-deployed squadrons paced by fuel related constraints as well as by factors addressed in the Chief of Naval Operations Fiscal Year 1975 Posture Statement.

In consideration of these readiness reductions, the Secretary of Defense has authorized ship and air operations to be executed at a level which will provide maximum achievable readiness in the short range for the remainder of fiscal year 1974. The fiscal year 1975 Fuel Budget supports further improvement in Fleet Readiness.

It must be pointed out that there is one overriding factor which controls our conservation program and that is the cost of fuel. Significant price increases were experienced on 1 February 1974. For example, a barrel of Navy distillate fuel cost $5.54 on 1 July 1973; it now costs $12.04. This is an increase of 117 percent. The total fiscal year 1975 request for fuel is $868.2 million including all appropriations for the Navy and Marine Corps. The total includes $677.1 million in the Operation and Maintenance, Navy appropriation. This is an increase of $183.6 million over our fiscal year 1974 Operation and Maintenance, Navy request. The increase consists of $87.0 million for aircraft fuel, $77.7 million for ships fuel and $18.9 million for fuel used in base operations.

I must also emphasize, that the fiscal year 1975 fuel program was based on an estimated 1 February 1974 fuel price increase. The actual fuel price increase on 1 February 1974 exceeded this estimate. As a result, we anticipate a shortfall in fiscal year 1975 of approximately 70 million dollars to meet budgeted requirements supporting our fiscal year 1975 fuel consumption program.

Real Property Maintenance

Commencing with fiscal year 1963 the Congress has provided in the Appropriation Act that a specified minimum amount be expended in each fiscal year for the maintenance and repair of real property. The Navy has complied with this

directive and usually exceeds the established amount by the reprogramming of funds when available from other programs for use on urgent maintenance. In addition, a continuous review is made of our facility requirements and consolidation, closure, and excessing actions are taken wherever practicable. Due to priority modernization and operational requirements of the Fleet and the overall limited funding for the past several years, the maintenance of the Shore Establishment has deteriorated as a matter of necessity. However, the Navy fiscal year 1975 Real Property Maintenance O&M,N budget of $274.5 million includes a requirement of $127.3 million for major repair projects. This amount is a significant increase over prior year funding and is a direct recognition by the Navy and of the Office of the Secretary of Defense of the neglected repair of Navy facilities and the effect of this condition on habitability, readiness, safety and long term economy. The amount being requested for Real Property Maintenance is a summation of all requirements originated by commands that operate Navy facilities under the operation and maintenance appropriation. Approval of fiscal year 1975 funding will reverse the unfavorable trend of increasing growth of deferred maintenance (backlog) of Navy facilities.

CHAMPUS

The Department of Defense plans to revise the CHAMPUS program during this year, in an effort to reduce costs. However, the actual cost avoidance amount is unpredictable at this time. Many factors, such as population location, timeframe for implementation, and military physician availability are unknown, and will impact heavily on requirements.

There is an increase of $7.8 million in fiscal year 1975 over that appropriated in fiscal year 1974. $1.3 million is proposed for a population study and enrollment plan, $.3 million for increased contractor cost to initiate a quality control program, and the remaining $6.2 million is the result of increased workload generated by retired personnel and their dependents. No provision is made for any price increase almost certain to occur in 1975. This could amount to a sizable sum based upon the rate of inflation which prevails. For example, a 6 percent price increase would result in a shortfall of $10 million in fiscal year 1975.

Headquarters Operations and Administration

In March, 1973, the Deputy Secretary of Defense, directed the establishment of a committee to develop a plan to include a DOD-wide definition of management headquarters activities and a common method of accounting for headquarters manpower authorization. On 8 November 1973, a DOD-wide definition of management headquarters activities and an initial determination of specific headquarters organizations throughout DOD to be included under such definition was promulgated. The initial application of the management headquarters definition to the Navy components has resulted in a significant expansion of headquarters organizational coverage over that previously reported in "headquarters" displays.

The extended coverage relates principally to inclusion of numerous intermediate fleet staffs (e.g., Numbered Fleets, Type Commands, Area Command staffs of the Military Sealift Command). The Navy has certain reservations concerning the appropriateness of including the Numbered Fleet Staffs and the Military Sealift Command area offices which are considered to be operational headquarters and not management headquarters. Additionally, inclusion of the Navy Personnel Programs Support Activity as a "headquarters staff support" activity appears inappropriate in that the principal functional concern of this activity is in implementing operating military personnel administration programs. However, it should be mentioned that the DOD management headquarters review effort is continuing with the objective of determining further refinements in organizational and functional coverage. Upon the completion of this effort, or phase II of the committee's action, certain issues causing us concern, may be resolved.

Headquarters Staffing

Concerning the size of the Navy headquarters staffs, the functions, structure and staffing of headquarters organizations has been the subject of detailed scrutiny since September, 1970. In 1973, the Navy initiated significant reductions in the Command Mission Category within the fiscal years 1973–1974–1975 time

period, with the principal reductions taken in fiscal year 1973. Evidence of this action is apparent when you compare the total of about 28,100 Navy and Marine Corps military and civilian personnel assigned to Navy headquarters activities in fiscal year 1971 with a planned number for these activities of about 22,700 in fiscal year 1974 and 21,600 in fiscal year 1975. Essentially, it is considered that Navy initiatives to reduce headquarters staffing achieved a headquarters manning level which is at a minimum consistent with functions assigned and in balance with planned total force structure.

Fleet Modernization Program

The Fleet Modernization Program provides the dollars to install equipments into all the ships of the active and reserve forces. It also provides for initial spare parts support, installation planning and design and publications updates required by equipment installation. It is important to note that this request is to install equipments procured from prior year's appropriations.

The Fleet Modernization Program submission for fiscal year 1975 is $472.2 million. This is split between Budget Activities 1, 2, and 8, with Budget Activity 2 accounting for approximately 90 percent of the total request. The fiscal year 1975 request is $65.1 million greater than fiscal year 1974. These increases can be attributed to such things as:

1. Increased work on pollution abatement. We are required by law to have our ships equipped with collection, holding and transfer tanks by 1980. This also includes many smaller pollution abatement alterations to prevent accidental oil and waste water spillage into our harbors and seaways.
2. Increased emphasis on shipboard habitability. These alterations improve living conditions in the crews living and sanitary spaces on all ships.
3. Installation of satellite communications equipments.
4. Improve reliability of ships propulsion plants through installation of 1200 PSI ship alterations. This is coordinated with the repair work planned on the 1200 PSI engineering plants.
5. Included in this increase is a richer mix of ships, e.g., more guided missile destroyers and aircraft carriers than in fiscal year 1974 necessitating an increase in alteration installation dollars.

Intelligence

We are asking $38.2 million for the General Defense Intelligence Program (GDIP) in fiscal year 1975. This is an increase of one million dollars over last year's level and represents an essentially stable program. Our civilian manpower is unchanged between fiscal years. The dollar increases cover increased emphasis in two important areas of collection and analysis. The first is our human intelligence collection against currently unsatisfied worldwide requirements. The second is the study and analysis of certain developments in the field of electro-optical sensors.

As was the case last year, intelligence requirements for this budget request were developed to meet expanding Soviet naval capabilities which are of special concern to the United States Navy. We recognize the necessary limitations on manpower and look toward the world of technology to keep abreast of the constant increase of intelligence requirements in both volume and complexity.

In this connection, the Secretary of Defense has directed reductions in GDIP and other intelligence-related manpower, both military and civilian, to ensure that reasonable budgets in future years can accommodate increasing personnel costs and at the same time provide technological and other resources essential for an effective intelligence program. The fiscal year 1975 budget reflects these reductions.

Automatic Data Processing

The total fiscal year 1975 request for Automatic Data Processing is $367.8 million including all appropriations, Navy and Marine Corps. (This reflects the full year effect of the civilian pay raise approved October 1973.) This total includes $171.9 million in Operation and Maintenance, Navy funds. There is a net increase of $14.4 million (or 9.2 percent) in Operation and Maintenance, Navy funds between fiscal year 1974 and fiscal year 1975. This is consistent with overall price escalation being experienced throughout the Navy (including wages and vendors' price increase.)

No new automatic data systems will be introduced in fiscal year 1975. However, the Navy will undertake some increased innovative/improvement efforts with respect to ongoing systems. These efforts were only approved after being subjected to a highly formalized and exhaustive evaluation of the required benefits analyses. The most significant increased operating costs are related to:

1. One time costs for transportation, personnel transfers and separations related to the consolidation of certain personnel management information system functions at New Orleans.

2. Additional rental equipment at the Naval Air Technical Training Center, Memphis, Tennessee for computer managed instruction, which has demonstrated savings in both instructor overhead and the student pipeline.

3. Extension of automated medical clinical applications, including computer assisted interpretation of EKG's and upgrade of leased equipment to accomplish this task.

4. Lease of additional equipment in accordance with Phase II of the JUMPS acquisition plan and maintenance of the new Bratenahl site at Cleveland.

5. Increase in engineering workload at all Naval Ship Engineering Center activities relative to Fleet Modernization Program accounting, design services allocation improvement program and cost analysis/estimating.

The most significant increase in Navy's fiscal year 1975 ADP Budget involves the procurement of additional memory for WWMCCS computers already installed. This involves 8 WWMCCS baseline installations, which represent the Navy's portion of the DOD WWMCCS ADP update program consisting of 35 computer systems. $6.3 million requested by Navy is for bulk core capacity and terminals required to provide the necessary capacity for WWMCCS computers installed at Norfolk, Honolulu, London, and Washington headquarters. Assuming that the WWMCCS funding deficiency included in the fiscal year 1974 budget supplemental is approved, the fiscal year 1975 procurement will complete the phased optimization of the WWMCCS baseline computers.

Degree Seeking Training

The fiscal year 1975 request for degree seeking programs is $15.5 million, a reduction of $1.8 million below the current estimate for fiscal year 1974. In compliance with the Committee's report on the Fiscal Year 1974 Appropriation Act, the planned student load average on board (AOB) for fiscal year 1975 is 5,058 compared to 5,438 for fiscal year 1974, or an average reduction of 380 students.

In general, the Committee stated that it considered the increasing cost of DOD training and education was attributable in part to the emphasis placed on these programs as necessary incentives to the All Volunteer Force concept. On the premise that the military service is a profession, the Committee considered that the services do not incur an obligation to training personnel in disciplines that are not directly related to that profession. Further, that the time had come to reduce the scope of older programs established under a draft environment. Accordingly, a 20 percent reduction was imposed on degree seeking training programs.

Complying With Congressional Intent

In order to comply with the Committee's expressed desires both officer and enlisted full time degree seeking programs were reduced in scope. The fiscal year 1975 request reflects a continuation of these reductions, and programs are being re-examined in light of Committee recommendations. However, if the military services are to be recognized as a profession, it must retain quality personnel. Thus, it is important that as the older programs are reduced, viable alternatives are instituted to encourage professional growth. The Navy has developed and is using the Operations Technical Management System (OTMS) which is designed to identify and measure officer skills against position requirements and still take into consideration sea–shore rotation requirements.

Officer Training

In the field of officer graduate training, position requirements have been under continuous scrutiny to ensure that only the necessary education level is reflected. The scope of officer education and training programs for the future is being further reviewed by a recently convened Officers' Professional Development Board. Included in this review will be the future role of the Naval Post-

graduate School and the graduate program at civilian institutions. The Navy is examining all cost aspects of the postgraduate programs to assure that the maximum amount of quality education and training are received on a cost effective basis in consonance with Navy requirements. In keeping with the Committee directive, the baccalaureate degree program at the Naval Postgraduate School is being phased down leading to its discontinuation with the last students graduating in December 1975. Future requirements for baccalaureate training will be obtained at the civilian colleges and universities.

Enlisted Training

The scope of enlisted personnel degree seeking programs has also been reduced. The Associate Degree Completion Program curriculum is being modified to reflect training necessary to the positions of senior petty officers. The Enlisted Degree Completion Program has been cancelled, and the Navy Enlisted Scientific Education Program has been reduced.

In recognition of the belief that it would be a serious mistake to obtain as career personnel only those who did not aspire to more education and training we will seek programs which provide a balance between the needs of the Navy and the encouragement offered by a program which will permit an individual to fulfill his own needs and desires while serving his country over a full career.

Civilian Substitution

In response to a request in the Senate Armed Services Committee Report on the Department of Defense Authorization Bill for fiscal year 1973, a study was conducted to identify Navy military billets which could be converted to civilian spaces. The result of the study was to substitute civilian spaces for 10,000 military billets assigned to Navy shore activities. The plan was implemented over a period of two fiscal years beginning in January 1973. A conversion of 1,000 military to civilian positions was planned for fiscal year 1973 with an additional 9,000 conversions planned for fiscal year 1974.

Elimination of Officer Positions

Chairman McClellan. Of the 10,000 conversions of military billets to civilian in the FY 1973/1974 program, how many officer positions were eliminated?

Admiral Gaddis. There were no officer billets eliminated and none were planned.

Chairman McClellan. Continue.

Admiral Gaddis. Military billets were selected on a Navy-wide basis to permit proper distribution at all paygrades and between petty officer and non-petty officer billets and to insure a minimum effect on advancements. Further, billets were selected which were considered neither a military necessity nor required for rotational purposes (deprived). These billets were taken on a "fair share" basis from activities and from individual ratings. Those ratings whose reduction had the least impact on sea/shore rotation were used.

Even though accomplishment through 31 December 1973 represents only 28 percent of the 10,000 Civilian Substitution Program, it is presently planned that the program will be completed by 30 June 1974.

Summary

In summation, the Operation and Maintenance requirements of the Navy during fiscal year 1975 total 7.291 billion dollars to accomplish our ongoing programs. These requirements have been stringently reviewed by the Navy, the Office of the Navy Comptroller, the Office of Secretary of Defense and the Office of Management and Budget. We feel these requirements are realistic and represent minimum needs to ensure mission accomplishment.

Mr. Chairman, this concludes my formal statement and we will attempt to answer your questions.

BUDGET REQUEST

Chairman McClellan. You may proceed, Admiral Gaddis.

Admiral Gaddis. It is a pleasure for me to appear once again before this Committee to present the Navy's Operation and Maintenance

budget and program for fiscal year 1975—a program designed to support our long term maritime objectives and improve fleet and material readiness. I would emphasize that, while this appropriation does not draw the attention of other programs, it is in effect the lifeblood of our operating forces. The level of operations and maintenance is of paramount importance in our ability to control the sealanes and preserve the peace.

FISCAL YEAR 1975 REQUEST

The fiscal year 1975 request for Operation and Maintenance, Navy, is 7 billion, 291 million.

Chairman McClellan. That does not include the procurement of any ships.

Admiral Gaddis. No, sir, but it pays all the consumables and the support for military personnel and, of course, here is most of the civilian personnel to support the Navy.

Planned obligations contained in this request are $655.4 million above the fiscal year 1974 level. However, this will only provide funding to support our forces and programs at approximately the same level as in fiscal year 1974.

Chairman McClellan. Is that increase due primarily to inflation?

EFFECTS OF INFLATION

Admiral Gaddis. The vast majority of it is inflationary. For instance, the increased fuel costs of $183.6 million as reflected in this appropriation. The increased cost of ship maintenance and alterations is $104 million and $110 million for the maintenance and repair of real property. Now, almost all of that $110 million is designed to support a long list of repair projects to correct deficiences at naval stations, naval bases, and naval operating facilities, ashore.

You gentlemen have been on naval stations. You, I am sure, have seen situations of disrepair. We have succeeded this year in obtaining support for improved repair projects on naval stations. We feel this is most important.

Almost all the rest of the increased cost is for pay of people, and inflation.

SHIP MAINTENANCE

An increase of $39 million in ship maintenance funding is reflected in fiscal year 1975, primarily related to change in mix of ships in the overhaul program. We plan to overhaul 95 ships, including 2 fleet ballistic missile submarines, 10 nuclear attack submarines, and 2 Kitty Hawk class attack carriers. An increase of $65.1 million in ship alterations relates to types of ships in overhaul and increased installation requirements and design services. This increase reflects the ship alterations segment of the Navy's thrust toward modernization of its forces.

Chairman McClellan. What would be the total for the overhaul of the 95 ships?

Admiral Gaddis. The total for both maintenance and modernization is $1.443 million. It is $750.4 million for overhaul only.

Senator YOUNG. Does overhaul include conversion of submarines?

Admiral GADDIS. No, sir. The normal cost of shipwork in a shipyard when a ship goes into overhaul is divided between overhaul costs, namely, returning that ship to first-class operating condition, and alteration costs, which is the cost of installing new equipment, improved capability, and to insuring proper safety of personnel. They are about equal in the total amount of work required in the ship and also about equal in cost on the ship.

BUDGET REFLECTS SHIP REDUCTIONS

Also reflected in this request is a decrease in ships operating in the active fleet from 511 in fiscal year 1974 to 508 in fiscal year 1975. Some 19 ships are expected to join the fleet from new construction or conversion, while 22 older ships will leave the active fleet. The numbers of steaming hours supported from operation and maintenance funds is 1.22 million hours, compared to 1.18 million hours for fiscal year 1974.

Chairman MCCLELLAN. That amounts to 40,000 fewer hours?

Admiral GADDIS. Forty thousand hours less; yes, sir.

I would note the reason, Mr. Chairman, that the steaming of ships and the flying hours of aircraft were reduced in fiscal 1974 in support of the energy conservation program. The proposal for 1975 is not as high as the original budget proposal for 1974 but it is an increase because the Secretary of Defense, the CNO, and the Chairman of the Joint Chiefs all recognize that our prime objective is to maintain readiness for combat. We have projected some increase in steaming and flying in 1975 over 1974.

NUCLEAR SHIP STEAMING HOURS

Senator YOUNG. And the steaming hours for nuclear powered vessels have been reduced the same as the others?

Admiral GADDIS. No, sir; because the nuclear vessel operates on its core and is not involved with fossil fuels and therefore really is not a factor in the energy crisis approach. We have continued to maintain our nuclear vessel steaming at the budgeted rate and the scheduled core depletion allowances.

Senator YOUNG. One of the advantages of having nuclear powered ships.

Admiral GADDIS. A very clear advantage, Senator Young; yes, sir.

AIRCRAFT FLYING HOURS

Aircraft operating funds in this request will support approximately 2.23 million flying hours at a cost of $480 million, compared to 2.01 million hours and $371 million in fiscal year 1974.

The rationale for the increase in flying hours is the same as for ships.

Active aircraft inventory decreases from 4,912 in fiscal year 1974 to 4,757 in fiscal year 1975.

PERSONNEL

The number of military personnel to be supported is planned to decrease from an end strength of 551,087 in fiscal year 1974 to 540,380 end strength in fiscal year 1975.

Civilian employment directly funded in this appropriation including 9,624 indirect hire foreign nationals, is estimated at 136,722 for end fiscal year 1975, a net increase of 794 spaces.

As an aside, you noted the overall Navy Department reduction in personnel. This appropriation is the exception. This appropriation increases.

Chairman McClellan. What is the reason for this increase?

Admiral Gaddis. It is a net of a lot of pluses and minuses, sir. Primarily it is related to increase in program. For instance, we have a few more people dedicated to Trident, to foreign military sales, to education and training, commissary stores and so forth—I can provide a list for the record—offset against rather significant reductions in headquarters personnel both military and civilian.

[The information follows:]

INCREASES	
Trident	+37
Foreign Military Sales	+48
Energy Conservation	+33
Federal Buildings Administration	+8
SER Transfer: from PWC Newport (NIF) to NETC Newport (O&M,N)	+560
Occupational Health Services	+123
Uniformed Services University of Health Sciences	+24
Secretarial Assistance for Health Officers	+100
Education and Training	+200
Supervisors of Shipbuilding	+150
Installation of Satellite Fleet Broadcast Receivers	+145
Improved Reparables Asset Management Program	+213
Commissary Stores	+287
Criminal Inspectors	+74
Total Increases	+2,002
DECREASES	
Headquarters	-757
Supply Depot Operations	-162
Construction Battalion Centers	-216
Misc.	-73
Total Decreases	-1,208

Admiral GADDIS. In other words, 2,002 increases, 1,208 decreases, for a net increase of 794.

I will now address the seven individual budget activities that comprise the operations and maintenance appropriation.

BUDGET ACTIVITY 1—STRATEGIC FORCES

This budget program finances the fleet operation, maintenance, alteration, and support costs of the 41 fleet ballistic missile submarines that constitute the Navy's strategic deterrent forces.

The fiscal year 1975 operation and maintenance, Navy request for budget activity 1 is $469.4 million, a net increase of $120.9 million over fiscal year 1974.

The requirements for SSBN overhauls have increased by $47.5 million over last year. This change reflects the increase in the number of overhauls from one in fiscal year 1974 to two in fiscal year 1975. The change in the number of ships and scope of our SSBN overhaul program is also seen in an increase of $28.4 million in our ship alteration program. The alteration program is an integrated effort combining military and technical improvement to enhance the capability and insure the survivability of our sea-based strategic deterrent forces.

BUDGET ACTIVITY 2—GENERAL PURPOSE FORCES

This budget activity finances the support of forces and shore activities under the operating force commanders, and support of the unified commands. The fiscal year 1975 operation and maintenance, Navy request for budget activity 2 is $3,061.4 million, a net increase of $426.3 million from fiscal year 1974. This increase is due to the annualization of fuel price increases, increased support for Military Sealift Command ships, active fleet ship maintenance, modernization costs, resources to reduce shore facility maintenance backlog, annualization of civilian substitution, and supporting programs.

AIRCRAFT FORCES

The aircraft forces program provides for operating costs—fuel, oil, consumable supplies and other direct support—for Navy and Marine aircraft assigned to the active fleet; $349.7 million is requested in fiscal year 1975, a net increase of $75.8 million. The amount for aircraft operations in fiscal year 1975 is $327 million in support of 1,145,000 flying hours, an increase of $74.9 million and 126,000 flying hours from fiscal year 1974. Energy conservation measures have made it necessary for the Navy to reduce flying hours at some cost to readiness during fiscal year 1974. Thus, the fiscal year 1975 flying hour program actually represents a 29,000 hour reduction from the originally requested fiscal year 1974 program.

SHIP FORCES

The ship forces program provides for the operating and maintenance expenses of active fleet ships. An amount of $1,800.5 million is requested, in increase of $180.9 million from fiscal year 1974.

Ship operating expenses account for $119.0 million of this increase. These resources provide fuel, utility services, supplies and equipage for active fleet ships. The increase basically reflects the fuel price increases, parts and material for increased intermediate maintenance support, utility cost increases, inventory and supplies related to force changes.

SHIP REPAIRS

The sum of $857.7 million is requested for fiscal year 1975 ship repair costs, a decrease of $10.5 million from fiscal year 1974. Ninety-three overhauls are scheduled at an estimated cost of $659.8 million, as compared to 90 overhauls at an estimated $634.9 million in fiscal year 1974. Funds requested for nonscheduled repairs total $197.9 million, a decrease of $35.0 million from fiscal year 1974.

SHIP ALTERATIONS

The sum of $421.6 million is requested for ship alterations, an increase of $40.4 million over fiscal year 1974 which will provide for the cost of design services and the installation of new equipment which enhances the capability and effectiveness of active fleet ships. $67.5 million is requested for initial provisioning and support, a $31.9 million increase over fiscal year 1974 due to the charter of five additional ships from the Military Sealift Command, initial outfitting of aircraft repair parts for the *U.S.S. Nimitz*, and increase in technical support.

BASE OPERATIONS

The base operations program provides resources for the operation and maintenance costs of fleet support activities. The fiscal year 1975 request is $599.8 million, an increase of $115.4 million. This increase is due to a long delayed increase in maintenance of real property, a transfer of financial responsibility for support of three Naval support activities from Budget Activity 9, transfer of the human goals program from Budget Activity 8, support for F–14 programs, cost sharing for NATO activities, overhaul of service craft, and fuel price increases.

TRAINING PROGRAM

The training program provides support for fleet air, surface, and sub-surface training units and squadrons in order to maintain fleet readiness. The fiscal year 1975 request is $92.3 million, an increase of $22 million from fiscal year 1974. The increase relates to $13.6 million for the fuel price increase, $6.5 million to return to the Standard Navy Training Syllabus for active fleet pilots, and $1.9 million for annualization of the civilian substitution program and pay raises.

MAJOR COMMANDS

The Unified and Operational Commands request is $134.8 million, a net increase of $11.3 million associated with the World Wide Military Command and Control System, annualization of the civilian substitution program, pay raises, and support for the Fleet Combat Direction Systems Support Activities.

The undersea surveillance system program request is $44.8 million, a net increase of $15.7 million. $8.8 million of this increase is for the charter of three military sealift command ships along with $1.5 million of support material. Other increases include overhaul and repair of equipment and operation of a shipboard data collection and processing system.

BUDGET ACTIVITY 3—INTELLIGENCE AND COMMUNICATIONS

This budget activity finances operations of the Navy's cryptologic; intelligence; communications; oceanography, weather service and special support activities. The fiscal year 1975 request of $346.1 million for these programs is $30.9 million above the fiscal year 1974 level, primarily due to civilian substitution, pay raises, expanded communications facilities, and new collection procedures for oceanographic data.

The consolidated cryptologic program provides funds in direct support of the national cryptologic effort and the Fleet Commanders in Chief. The fiscal year 1975 request is $27.9 million, a $0.2 million increase over the fiscal year 1974 level.

The general defense intelligence program (GDIP) includes funds for the Naval Intelligence Support Center, intelligence data handling systems, and the human intelligence collection program. The fiscal year 1975 request for the GDIP is $38.2 million, an increase of $1 million for expansion of the human intelligence collection program and the analysis of Soviet developments in sensors.

$175.6 million is requested for the naval communications program, an increase of $25.6 million over fiscal year 1974 primarily for the lease of satellite communications channels known as Gapfiller and realinement of shore communications.

The oceanography program provides for the collection, processing, analysis, and publication of acoustic, geophysical, and other oceanographic data to support U.S. naval operating forces as well as civil, scientific, and maritime needs. $64.6 million is required for these programs, an increase of $2.7 million.

The naval weather service program fiscal year 1975 estimate of $9 million reflects a net decrease of $0.1 million.

Specialized support activities estimate of $30.8 million is an increase of $1.5 million primarily to provide 50 additional naval investigative agents and alleviate serious deficiencies in manpower which have made it impossible to keep up with the current request rate for criminal security investigations.

BUDGET ACTIVITY 7—CENTRAL SUPPLY AND MAINTENANCE

This activity supports readiness of deployed naval forces through the operation of the Navy's supply system, centrally managed maintenance and overhaul programs, and technical and engineering assistance to the fleet.

The request in this activity is $2 billion 246.4 million dollars, a net increase of $42.7 million from fiscal year 1974. Significant program in-

creases occur in facilities engineering technical support for major shore repair projects and collateral equipment; in supply support for efforts to increase readiness through improved reparables asset management; and in ordnance technical support for the MK–48 torpedo.

The air systems technical support program is budgeted at $859.7 million in fiscal year 1975, a net decrease of $46.8 million primarily the result of a $37.8 million transfer to supply support to consolidate management and budgeting for second destination transportation. Within air systems technical support, we are requesting $583.5 million for the depot level overhaul and progressive rework of aircraft, engines, and their repairable components to sustain the active forces aircraft and engine inventory at current readiness levels.

The number of aircraft reworks to support fleet operations in fiscal year 1975 is 1,560 as compared with 1,581 in fiscal year 1974.

Naval aviation support programs other than aircraft rework are budgeted at $276.2 million in fiscal year 1975, a net decrease of $29 million primarily because of the transfer of second destination transportation to the Naval Supply Systems Command.

We are requesting $293 million for ordnance related programs, an increase of $23.1 million over fiscal 1974 in support of: (a) ordnance rework and maintenance, (b) field operations, (c) antisubmarine warfare systems rework and maintenance, and (d) surface missile systems rework and maintenance.

ORDNANCE REWORK AND MAINTENANCE

The largest of these projects, ordnance rework and maintenance, is budgeted at $136.4 million in 1975. An increase of $8.7 million results from the necessity to include direct funding for a portion of the cost of disposal of surplus property and costs for updating ordnance disposal publications.

ASW SYSTEMS

The ASW systems rework and maintenance effort is budgeted at $51.6 million, an increase of $10.1 million to attain and maintain an acceptable level of ASW readiness in the active fleet. The increase of $10.1 million reflects additional requirements for the MK–48 torpedo intermediate and depot-level repair capability and initiation of inservice engineering for this torpedo.

SURFACE MISSILE SYSTEMS

The surface missile systems rework and maintenance is a project budgeted at $77.4 million in 1975, an increase of $4.8 million, is primarily related to search radar engineering services and to additional maintenance of increasing numbers of shipboard missile weapon systems in the fleet.

SHIP TECHNICAL SUPPORT

$345.1 million for ship systems technical support will fund field operations of the Naval Ship Systems Command, ship maintenance and repair projects and technical and engineering support of the Ac-

tive and Inactive Fleets. The request for field operations of $80.8 million and ship maintenance programs, budgeted at $108.9 million are essentially level funded compared with fiscal year 1974.

Ships technical programs are budgeted at $155.4 million in fiscal year 1975, a decrease of $16.6 million, basically reflecting the one time costs in fiscal year 1974 of a change in Atomic Energy Commission billing procedures for nuclear core processing.

ELECTRONICS SUPPORT

The fiscal year 1975 request for electronic systems technical support is $72.7 million and provides for the installation and major repair of electronic shore and shipboard equipments and components.

FACILITIES TECHNICAL SUPPORT

Facilities technical support funds centrally managed facilities programs, field engineering offices and the headquarters of the Naval Facilities Engineering Command, and construction battalion centers. The fiscal year 1975 request of $141.8 million is $21.8 million more than that for fiscal year 1974. Increases occur primarily in two programs: Collateral equipment to meet the schedule of buildings being completed under military construction, Navy appropriation during fiscal year 1975 and major repair projects in line with an effort under all budget activities to reduce the respective segments of the backlog of essential maintenance in the shore establishment.

We are requesting $479.2 million under the supply support program for servicewide supply functions administered by the Naval Supply Systems Command.

SECOND DESTINATION TRANSPORTATION

For fiscal year 1975, all budget activity 7, second destination transportation previously funded by the Naval Air, Ordnance, Ships, and Facilities Engineering Systems Commands has been centralized under the supply support program and will be managed by the Naval Supply Systems Command. This step has been taken to unite transportation management under one command. The transfer of transportation budget responsibility accounts for $53.6 million of a total $57.1 million increase for supply support.

$54.9 million is requested for Naval Material Command and Support, including the headquarters of the Chief of Naval Material and field support projects.

BUDGET ACTIVITY 8—TRAINING, MEDICAL, AND OTHER GENERAL SUPPORT

The fiscal year 1975 request for training, medical and other general personnel support totals $918.7 million, which is an increase of $85.7 million over the estimate for fiscal year 1974. The most significant increases include $14.6 million for full year costs of the program to replace military with civilians in selected areas; $21.6 million for adjustments and transfers related to shore establishment realinement

and regionalization of medical facilities; $9.9 million for increased aviation fuel costs and flying hours in flight training; $11.7 million for improvements in personnel, training, and financial management systems and techniques; $5.1 million to cover civilian pay increases; $11.1 million for medical care in nonservice facilities; $5.2 million to implement an enrollment system for all medical program beneficiaries; $7.9 million for expansion and full year costs of ongoing programs to improve medical facilities/services and provide assistance to doctors; $7.7 million for maintenance of real property in an effort to reduce backlog of repairs, and $22.9 million for other additional requirements including recruiting, occupational health and safety, and expenses for the uniformed services university of health sciences.

Training and education programs for which we are requesting $240.3 million in fiscal year 1975 include a variety of programs.

RECRUIT TRAINING

Approximately 103,000 new Navy personnel, including naval reservists, will enter recruit training. A daily average of approximately 41,000 officers and enlisted men will receive specialized training in areas ranging from nuclear power and electronic warfare to prevention of drug and alcohol abuse. The Naval Academy will provide undergraduate education to an average of 4,150 midshipmen to prepare them for professional military careers. In the field of aviation, our flight training program will produce 1,654 aviators and 706 naval flight officers.

MEDICAL SUPPORT

In the area of medical support, our fiscal year 1975 budget reflects continued regionalization of medical facilities within specific geographic areas. We are requesting $427.4 million for support of medical activities including 34 naval hospitals, 17 medical centers, 2 regional medical clinics, 2 naval dispensaries, 12 dental activities, and various specialized medical activities.

OTHER COSTS

The remaining $251.0 million under this budget activity includes $58.9 million to recruit military personnel for naval service; $28.6 million for various personnel support related functions, and $163.4 million is included for base operations costs of training activities and commands.

BUDGET ACTIVITY 9—ADMINISTRATION AND ASSOCIATED ACTIVITIES

This budget activity funds a wide range of administration, services, and fleet support functions provided Navy-wide by both headquarters and field activities.

The fiscal year 1975 request for this budget activity is $228.5 million, a net decrease of $49.7 million. This decrease reflects the net effect of: Decreases in funding for Navy Secretariat activities totaling $81.8 million, principally the transfer of the naval petroleum and oil shale reserves from operation and maintenance, Navy to a separate

appropriation, decreases in funding for the activities of the Chief of Naval Photographic Center amounting to $0.5 million, and initiation of funding for the Federal Building Fund of $33.6 million.

BUDGET ACTIVITY 10—SUPPORT OF OTHER NATIONS

This budget activity provides funds for the support of allies; contributions and support of international military headquarters; and support of military assistance advisory groups, missions and military assistance groups.

The fiscal year 1975 request for this budget activity is $20.7 million. A decrease of $1.3 million, principally in the support of allies area, is the result of changes in military assistance support funding.

SUMMARY

In summation, the operation and maintenance requirements of the Navy during fiscal year 1975 total $7.291 billion to accomplish our ongoing programs. These requirements have been stringently reviewed by the Navy, the Office of the Navy Comptroller, the Office of Secretary of Defense, and the Office of Management and Budget. We feel these requirements are realistic and represent minimum needs to insure mission accomplishment.

Mr. Chairman, this concludes my summary statement and we will attempt to answer your questions.

Chairman McClellan. Is there anything you want to highlight in addition to what you said here?

MAINTENANCE OF REAL PROPERTY

Admiral Gaddis. I already mentioned maintenance and repair of real property which is a significant program to us this year, and I would hope you would see fit to support the increase for this good cause.

Chairman McClellan. Is that to take care of your plants?

Admiral Gaddis. This is to do repairs to our shore plant, yes, sir.

FUEL PRICE INCREASES

I think that you would be interested in the point that even though we have budgeted for an increase of $183.6 million in 1975 over 1974 for fuel, we estimate that this will be short of our fuel requirements—if today's fuel price increase stays the same—through fiscal 1975 by $225 million for aircraft and ship operations.

Chairman McClellan. You will be short that much?

Admiral Gaddis. Yes, sir.

Chairman McClellan. You will have to come back for a supplemental?

Admiral Gaddis. Yes, sir. Either that, or a section 735 transfer. Some comparable funding requirement to maintain our ability to fly aircraft and to steamships.

Chairman McClellan. If the price stays at the same level now?

Admiral GADDIS. Today's price, sir. I would note that the price of Navy special fuel oil on July 1, 1973, the start of the current fiscal year was $3.85 a barrel. The price we are paying today is $14.94.

Chairman MCCLELLAN. About 4 times as much.

Admiral GADDIS. Yes, sir. That is the largest increase. JP–5 jet fuel has risen from $6.80 a barrel to $14.28 a barrel.

FUEL SUPPLY SOURCES

Senator YOUNG. Are most of your supplies acquired from other countries?

Admiral GADDIS. Under normal conditions, and these certainly are not normal times. In other words, pre-Yom Kippur war a little over 50 percent of our fuel was procured overseas.

Senator YOUNG. That increase that you mentioned is a little beyond——

Admiral GADDIS. Under the embargo this reduced our program and we had to request the allocation of fuel supplies for our reduced program from the Federal Energy Office. We are now going back to receiving more of our supplies from overseas, I do not have the exact percentage. I would estimate that it is approximately 80 percent today.

Senator YOUNG. And it costs you more for overseas oil?

Admiral GADDIS. No, sir, it costs the Navy precisely the same amount of money regardless of the source of fuel because we pay for the fuel to the Defense Fuel Supply Center, who operates the Defense Stock Fund. He prescribes average standard prices for fuel. Now, he pays a different price for fuel depending on the source, but today overseas fuel and domestic fuel under defense allocation authority is running just about the same price.

Senator YOUNG. You are getting some through Singapore?

Admiral GADDDIS. We are getting some through Singapore. We are getting considerable deliveries from Iran and Saudi Arabia and we are almost back to normal for aircraft fuel out of the Italian refineries in the Mediterranean. The two Greek refineries are in final negotiation for resumption of contracts in the Mediterranean.

Chairman MCCLELLAN. Thank you very much.

Admiral GADDDIS. Thank you, Mr. Chairman.

JUSTIFICATION

Chairman MCCLELLAN. At this point in the record there will appear certain information from the justifications.

[The justification follows:]

Justification

PERSONNEL SUMMARY

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions	115,619	122,106	125,365
Full-time equivalent of other positions	6,771	6,820	2,990
Average paid employment	126,078	124,812	126,775
Average GS grade	7.4	7.2	7.2
Average GS salary	$12,355	$12,904	$12,859
Average salary of ungraded positions	$ 9,492	$10,351	$10,545

INTRODUCTORY STATEMENT

(In Thousands of Dollars)

	1973 Actual	1974 Estimate	1975 Estimate
Total Direct Obligations	$5,410,154	$6,635,550	$7,291,000
Proposed Supplemental for New Programs	-	-359,600	-
Proposed Supplemental for Civilian Pay Increases	-	-201,500	-
Proposed Transfer to Other Accounts	+23,973	+5,233	-
Proposed Transfer from Other Accounts	-94,301	-	-
Unobligated Balance	+6,005	-	-
Unobligated Balance Transferred from Other Accounts	-101,077	-2,733	-
Appropriation	$5,244,754	$6,076,950	$7,291,000

The purpose of this appropriation is to operate, maintain, and support Naval Forces. These forces, consisting of men, ships and aircraft, represent the Navy's capability to project the national policy of the United States virtually anywhere in the world. In most locations, seapower is on the scene continuously, providing a range of choices for implementation of U. S. policy objectives. These include the fast carrier task force as a prime example. In addition, reliable and ready Fleet ballistic missile submarines at sea are virtually impregnable, combining mobility with concealment in performance of the strategic deterrent mission.

The budget activity structure for the Operation and Maintenance, Navy appropriation in fiscal year 1975 is aligned essentially with the Department of Defense's Five Year Defense Program as presented in fiscal year 1974. Of the ten programs identified in the Five Year Defense Program, seven are applicable to this appropriation. These are budget activities: 1 - Strategic Forces; 2 - General Purpose Forces; 3 - Intelligence and Communications; 7 - Central Supply and Maintenance; 8 - Training, Medical, and Other General Personnel Activities; 9 - Administration and Associated Activities; and 10 - Support of Other Nations.

Requested FY 1975 funding for the Operation and Maintenance, Navy account supports forces at approximately the same level as in FY 1974. Planned end fiscal year 1975 active fleet ship inventory is 508 or 3 fewer ships than currently planned for fiscal year 1974. Active aircraft inventories decline slightly from 4912 in FY 1974 to 4757 in FY 1975.

The O&M,N budget reflects continued emphasis on energy conservation. The current FY 1974 program reflects a 20% reduction in petroleum consumption below FY 1973 base levels and, in most cases, these measures are also assumed for FY 1975. Ship operations remain at about 1.2 million steaming hours in both years. The flying program, however, reflects an increase of 215 thousand hours in FY 1975: FY 1974 levels, if sustained for any appreciable time, would severely compromise fleet readiness, and the 2.23 million flying hours requested for FY 1975 are required to achieve minimum primary mission readiness levels. Notwithstanding this increase, total FY 1975 petroleum consumption remains about 13% below the FY 1973 baseline.

Provision is made for 95 regular ship overhauls including 2 fleet ballistic missile submarine, 10 nuclear attack submarines and 2 KITTY HAWK class attack carriers. Overall, the overhaul schedule increases by three overhauls in fiscal year 1975. With respect to aircraft operations, the FY 1975 budget supports the rework of 1,560 aircraft and 5,284 aircraft engines. This workload represents the minimum required to provide the operating forces with mission capable aircraft. Air and ship launched missiles, guns, bombs, and other ordnance will require maintenance, overhaul, test and check out to assure safe and reliable operation.

In addition to Fleet operations, training is provided to Naval personnel at shore based training activities. In fiscal year 1975, an average student load of approximately 68,000 officers, enlisted personnel and midshipmen will receive some form of specialized, technical or professional training, and an average of approximately 19,000 recruits will receive military training. Training support programs are significantly increased over fiscal year 1974 as are the medical programs. These primarily provide for increased costs of these functions including the program to replace military personnel with civilians

in selected areas, shore establishment realignment, and civilian pay increases as well as some program improvements. There is also an increase in the cost of medical care in non-service facilities.

Funds to operate and maintain the Naval Shore Establishment are also included here. The latter's mission is to provide supply, overhaul, modernization, repair, training and other support services for Naval and Marine Corps air stations, Naval hospitals, supply centers and depots, Naval stations and support activities, and communications.

The planned obligations contained in the appropriation request for fiscal year 1975 are $655.4 million above fiscal year 1974. The major increases and decreases in millions are: annualization of civilian substitution $+38.7; annualization of civilian pay raises $+42.6; maintenance and repair of real property $+110.3; intermediate aircraft maintenance $+22.0; increased fuel costs $+183.6 most of which is due to price increases; medical operations $+41.9; ship maintenance and alteration $+104.1; training and personnel support $+48.4; TRIDENT program $+14.0; communications $+17.2; additional ships for Military Sealift Command and rate adjustments $+29.0; increased ship repair parts and consumable support costs $+43.1 funds for payment to Federal Building Fund for space rental $+33.6; transfer of Navy Petroleum Reserve to a new appropriation $-82.3; net adjustment for other minor transfers of budget responsibility $+20.8; and miscellaneous increases and decreases $-11.6.

Summary of Civilian Manpower Increases
Fiscal Year 1974 to Fiscal Year 1975

Operation or Activity	Year End Increases
Trident	+37
Foreign Military Sales	+48
Energy Conservation	+33
Federal Buildings Administration	+8
SER Transfer: from PWC Newport (NIF) to NETC Newport (O&M,N)	+560
Occupational Health Services	+123
Uniformed Services University of Health Sciences	+24
Secretarial Assistance for Health Officers	+100
Education and Training	+200
Supervisors of Shipbuilding	+150
Installation of Satellite Fleet Broadcast Receivers	+145
Improved Reparables Asset Management Program	+213
Commissary Stores	+287
Criminal Inspectors	+74

SUMMARY OF OBLIGATIONS
(In Thousands)

Budget Activity No.	Budget Activity	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 compared with 1974
1	Strategic Forces	$317,867	$348,500	$469,398	$+120,898
2	General Purpose Forces	1,808,500	2,635,047	3,061,360	+426,313
3	Intelligence and Communications	288,082	315,170	346,066	+ 30,896
7	Central Supply and Maintenance	2,051,342	2,203,678	2,246,391	+ 42,713
8	Training, Medical and Other General Personnel Activities	722,688	833,018	918,669	+ 85,651
9	Administration and Associated Activities	178,150	278,136	228,456	- 49,680
10	Support of Other Nations	43,525	22,001	20,660	- 1,341
	Total direct obligations in budget document	$5,410,154	$6,635,550	$7,291,000	$+655,450

BUDGET ACTIVITY 1: STRATEGIC FORCES
SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 compared with 1974
A Fleet Ballistic Missile System	$278,316	$302,873	$408,585	$+105,712
B Support Ships	24,999	29,119	42,151	+ 13,032
C FBM Control System Communications	9,185	10,768	12,864	+ 2,096
D Missile and Space Defense	3,624	4,008	4,078	+ 70
E Command	1,743	1,732	1,720	- 12
Total direct obligations in budget document	$317,867	$348,500	$469,398	$+120,898

Budget Activity 1: Strategic Forces

(In Thousands)
FY 1975 Estimate - $469,398
FY 1974 Estimate - $348,500
FY 1973 Actual - $317,867

Introduction

This program provides for the operation and maintenance support of the Navy's strategic offensive forces. Included in this support are 41 FBM submarines, 5 submarine tenders, logistic and engineering backup for the POLARIS, POSEIDON, and TRIDENT and command and control effort.

Budget Program A: Fleet Ballistic Missile System

(In Thousands)
FY 1975 Estimate $408,585
FY 1974 Estimate $302,873
FY 1973 Actual $278,316

Purpose and scope of work

This budget program finances the Fleet operation, maintenance, alteration and support costs of SSBN submarines and the technical support costs of the Strategic Systems Project Office, the SSBN Ship System Maintenance Monitoring System and the TRIDENT program.

Justification of funds

A functional breakdown of resources is as follows:

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
(1) Operating Forces	$110,352	$84,867	$172,151
Ship Operations	8,417	9,012	12,106
Regular Ship Overhauls	94,347	43,103	90,594
Non-scheduled Ship Repairs	2,039	2,678	7,467
Supporting Programs	3,861	4,204	4,087
Ship Alterations	*(27,438)	22,070	50,497
Submarine Maintenance Monitoring System	1,688	3,800	7,400

* OPN funded in FY 1973

Ship Operations ($12.1 million)

This program provides for repair parts and general supplies and equipage required for day-to-day maintenance of SSBN submarines. The increase of $3.1 million reflects a general increase in operating costs for the 32 operating SSBN ship years in both years (approximately $70 thousand per ship year) and additional cost to fund 4 additional operating ship years in FY 1975.

Regular Ship Overhauls ($90.6 million)

This program provides for overhaul of POLARIS/POSEIDON submarines scheduled on a cyclical basis to coincide with the repair requirement, nuclear core replacement dates and operation commitments.

The increase of $47.5 million relates to one SSBN overhaul in FY 1974 compared to two SSBN overhauls in FY 1975 and increases for multi-year funding on prior and subsequent year inductions.

Non-Scheduled Ship Repairs ($7.5 million)

This program is composed of emergent non-scheduled repairs as well as planned repairs both of which are accomplished by a shore industrial activity, generally a shipyard. The restricted availability, either emergent or planned is generally of short duration.

The increase of $4.8 million provides for one additional SSBN interim drydocking ($.3 million) and $4.5 million is required to provide restricted availabilities due to extended operating cycles (EOC)related to the SMMS Program.

Supporting Programs ($4.1 million)

This program provides funds for two POLARIS Material Offices and travel for SSBN crew rotations, administration travel, and training requirements. This program is essentially level funded. The reduction is basically associated with reduced travel allowance.

Ship Alterations ($50.5 million)

The ship alteration program is an integrated program combining military and technical improvements. New equipments are installed to enhance the capability and effectiveness of active Fleet ships. The program includes cost of design services and the initial repair parts support for new equipments. The requested funds relate to nuclear alterations, submarine silencing, MK-48 torpedo capability, sonar improvements, and other alterations. The increase of $28.4 million represents an increase of one SSBN in the FY 1975 overhaul program, and increases for design services and advanced planning for two different classes of SSBN's in the outyears.

SSBN Ship System Maintenance Monitoring System (SMMS) ($7.4 million)

The Submarine Maintenance Monitoring System Program has as its objective the extension of SSBN overhaul cycles to periods corresponding to refueling cycles of long-life cores and to reduce life cycle costs. In order to ascertain the viability of achieving this objective safely, this program conducts in-depth engineering reviews of critical system and component designs and develops sophisticated test and monitoring procedures to determine the extent to which these systems and components can have their operational lives extended without overhaul. This data is then to be used in conjunction with an engineered logistics support plan to determine feasibility of extending cycles. The increase of $3.6 million covers the phasing into evaluation of additional specific systems (18 in FY 74, 42 in FY 75) as the program develops.

(In Thousands)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
(2) Strategic Systems Technical Support	$165,227	$214,256	$218,725
Performance Evaluation	21,207	36,296	41,692
Surveillance on Weapons Systems Equipment	1,914	5,859	5,985
Weapon System Equipment Overhaul	12,796	11,804	17,627
Logistics	16,730	18,001	18,516
Reliability Maintenance	40,113	58,104	58,866
Repair	23,075	24,626	21,202
Missile Processing	10,651	16,355	16,071
Fleet Personnel Support	11,154	10,300	8,941
Transportation (second destination)	3,055	2,913	2,912
Maintenance and Repair of Real Property	523	393	318
Fleet Targeting Support	1,584	2,097	2,183
Administration	22,425	24,159	24,412
Shore Establishment Realignment	0	3,349	0

This program supports the operational reliability of the FBM weapon system on the 41 SSBN's that constitute the Navy's strategic deterrent forces. The funds pay for maintenance and repair of weapon system components, operational testing; the specialized training of FBM crews; technical services required to measure, analyze and maintain the reliability of the FBM weapon systems, and support costs of the Strategic Systems Project Office.

By the end of fiscal year 1974, there will be eight deployed POLARIS submarines and twenty-one that will have been converted to POSEIDON configuration and redeployed. There will be seven SSBNs undergoing conversion or preparing to redeploy after completing conversion, and there will be five in overhaul or preparing to redeploy after completing overhaul. During FY 1975, four SSBNs are scheduled to deploy with POSEIDON missiles, each of which is several times as effective as the POLARIS missile it replaced. At the end of FY 1975, there will be 5 SSBNs off-line for POSEIDON conversion, and two for overhaul. A total of thirty-four POLARIS and POSEIDON SSBNs will be deployed.

Requirements accommodated within the FY 1975 budget request include the support of prescribed test programs, gathering and analyzing data from tests and reporting systems, corrective actions where necessary, management of system configuration, including the updating of associated documentation, standard repair programs, logistics control procedures, support of the weapons system in scheduled overhauls, surveillance requirements to include testing and evaluating material returned from operational use, training of crew personnel and the operating costs of headquarters and field activities within the current command and administration constraints.

The Strategic Systems Project Office has developed an operational support system for Fleet Ballistic Missile forces designed to maintain the readiness and reliability required to meet program objectives and to support the testing necessary to determine whether the system is working as intended. With this system, the operating forces, as well as SSPO, are able to evaluate with confidence the performance of the FBM forces and to anticipate problems before they materially degrade that performance. Given such a support system, both strategic planners and the operating fleet are assured of a reliably functioning weapon system and the continued credibility of the strategic deterrent to any potential enemy is confirmed.

A functional breakdown of requirements is as follows:

Performance Evaluation ($41.7 million)

Performance evaluation has as its purpose the identification of problems or problem areas. It identifies deficiencies in design, operating procedures or maintenance operations which reduce, or are potentially capable of reducing, FBM system readiness or reliability. Included in this function are the planning and support of flight test operations; and the collection, recording and evaluation of system data coming from testing programs, fleet exercises, deployed SSBNs, maintenance facilities, missile processing facilities and training facilities. The increase of $5.4 million from fiscal year 1974 to fiscal year 1975 is primarily related to the transfer of charges previously budgeted by national ranges to the program sponsor budget.

Surveillance on Weapons Systems Equipment ($6.0 million)

Surveillance efforts are aimed at determining the service life characteristics and the effect of age and environmental exposure on weapon system equipments. In order to meet these objectives, tests and analyses are conducted on equipments removed from operational SSBNs and stock systems. The POLARIS testing supported by the budget request is currently at the minimal level necessary to assure statistically valid demonstration of characteristics of deployed equipment. This program is essentially level funded.

Weapon System Equipment Overhaul ($17.6 million)

Overhaul requirements provide for the refurbishment or replacement of installed weapon system equipment. In many cases these equipments will be removed from the submarine and returned to a repair facility for refurbishment, which often involves complete disassembly and inspection, repair or replacements of parts and the incorporation of approved modifications. The overhaul funding increases are associated with class planning efforts for the 598-Class third and 627 Class second overhauls and SSBN-unique sonar RAV/Refit planning and installation changes. In fact, the vastly increased scope of the SSBN-unique sonar program affects the funding profile in many of the functional categories.

Logistics ($18.5 million)

This category provides management and engineering services for logistics support of deployed ships, shore installations and training activities. This support assures a continual supply of material to sustain the operations of the FBM system. Engineering services provided in this category include accumulation, determination and analysis of usage data, correlation of failure rates and performance data for application in determining support requirements, maintenance of provisioning documentation, inventory management and the preparation of allowance documentation. Funding adjustments relate to weapon system population changes.

Reliability Maintenance ($58.9 million)

Reliability maintenance has as its purpose the resolution of problems concerning the weapon system and related components installed in deployed SSBNs, support ships and shore facilities. This responsibility covers a broad spectrum of services among which are included configuration control; engineering and services involved in the preparation, design, documentation, proofing and implementation of alterations (SPALT's) to the weapon system; system integration aimed at resolving interface problems as changes have potential effects across sub-system lines; preparation of documentation changes; printing and maintenance of operating and repair manuals which are affected by changes to equipments or procedures; support of programs designed to evaluate reliability and safety; vendor qualification; maintenance engineering, and continuing assessment of vendor product quality programs. POSEIDON requirements also reflect a transition of funding from other accounts. Design disclosure effort has shifted from RDT&EN to O&M,N upon completion of the POSEIDON development program and certain logistics, repair and evaluative services shift from SCN to O&M,N as additional POSEIDON submarines become operational upon deployment. The increase from fiscal year 1974 to fiscal year 1975 primarily relates to unique SONAR system and deployed population changes.

Repair ($21.2 million)

The maintenance program for the POLARIS and POSEIDON programs provides for equipment repair aboard the SSBN principally through module replacement from repair parts carried aboard each SSBN. Components which fail tests aboard the SSBN and are replaced in operating equipments are returned to the tender where specially trained technicians with access to more sophisticated

test equipment are able to trace faults to lower level components, repair some and replace others, test and return equipments to the SSBN's. Equipment and component repairs beyond the capability of the tender are returned to the government industrial repair facilities ashore, which have been established to provide a repair capability for major components such as missiles and guidance inertial instruments. Contracted repairs by equipment vendors are utilized when a repair capability does not exist at a government facility and the cost to acquire the necessary specialized facilities and establish the required capability is not economical, or when provision for a back-up capability is required. Repair functions in this budget include inspection, testing, repair, modification, alteration and refurbishment of items by third or fourth level repair facilities. The reduction is a combination of evaluating operational systems, failure rates, returns from overhaul and ready-for-use items avilable for the FY 1975 program.

Missile Processing ($16.1 million)

Missile processing funding includes all government and contractor services performed at the POLARIS Missile Facilities (POMFPAC and POMFLANT) for the purpose of supporting missile and guidance operations. Specific efforts funded under this category include the receipt, inspection, checkout, maintenance, testing,packaging, assembly, disassembly, modification, repair, outloading and offloading complete fleet ballistic missiles and missile components including guidance, re-entry systems and shipping continers. This program is essentially level funded.

Fleet Personnel Support ($8.9 million)

Fleet personnel support provides the effort necessary to establish and maintain the capability to assure that fully-trained crews are available to man FBM submarines and tenders. The highest degree of reliability and maintainability is required for the effectiveness of the FBM system as a deterrent force. Precision in operation of SSBNs ultimately depends on crews that are thoroughly trained prior to deployment to master this complex equipment. This is achieved by thoroughly training personnel on tactical equipment prior to their first patrol as well as reinforcing their knowledge and skill by refresher training between patrols. The reduction in FY 1975 reflects completion of major training efforts at Charleston POSEIDON Trainer and installation of LORAN phase ship system, $-1.4 million.

Transportation ($2.9 million)

Funding is required to move missiles and related equipments between Naval activities, repair depots and operational locations after the initial delivery of these items. Program level funded from FY 74 to FY 75.

Maintenance and Repair of Real Property ($.3 million)

Maintenance and repair support is provided to the Naval Astronautics Group at Point Mugu as well as for the three tracking and injection stations (Prospect Harbor, Maine; Rosemont, Minnesota; and Wahiawa, Hawaii), which are associated with the navigation satellite system. The funds budgeted provide for utilities operation, recurring maintenance, minor construction, auto-

motive transportation, utilities equipment and other similar support for headquarters and the three detachments. Program essentially level funded.

Fleet Targeting Support ($2.2 million)

Funding in this category includes support for the periodic targeting update prescribed by the Joint Chiefs of Staff. The National Strategic Targeting and Attack Policy (NSTAP) which provides the guidance from the Joint Chiefs of Staff for the preparation of the Single Integrated Operational Plan (SIOP), tasks the Director, Strategic Target Planning (DSTP) to prepare, review and amend the SIOP as necessary to keep the plan current. These funds provide for the POLARIS and POSEIDON targeting data preparation effort. Program essentially level funded.

Administration ($24.4 million)

Requirements include funding associated with SSPO field and headquarters activities for civilian salaries, travel, cash awards, program analysis, office equipment, communications, printing, office supplies and other day-to-day needs of a recurring nature. The increase over FY 1974 is related to the October 1973 classified pay raise.

Shore Establishment Realignment ($0 million)

This is a temporary category established for the purpose of identifying costs projected to occur relative to shore establishment (SER) directives in FY 1974. No costs are involved in FY 1975.

(3) TRIDENT

(In Thousands)

FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
$2,737	$3,750	$17,709

The TRIDENT system is comprised on a CONUS based nuclear submarine equipped with long ranged strategic missiles and facilities necessary to support the TRIDENT Submarine and Strategic Weapons Systems.

The increase of $14 million is primarily defined as follows: (a) ($11.6 million) for the initial phases of strategic Weapons System logistics support requirements determination. This includes system definition, establishment of personnel criteria and system verification of the Strategic Weapons System (SWS) training program. It is essential in FY 1975 to support definition of the SWS, equipment scheduled for FY 75 procurement for the TRIDENT training facility, Bangor, Washington, and a variety of necessary tasks for definition and initial development of the SWS material support system. (b) The increase also includes approximately $1.8 million for the final increment in the build-up of a dedicated TRIDENT logistics support organization at Mechanicsburg, Pa., in support of the TRIDENT Submarine System. This $1.8 million also includes initial civilian staffing

and management support at the TRIDENT Support Site at Bangor, Washington. (c) The remaining $.6 million is for miscellaneous adjustments.

Budget Program B: Support Ships

(In Thousands)

FY 1975 Estimate - $42,151
FY 1974 Estimate - 29,119
FY 1973 Actual - 24,999

Purpose and scope of work

This budget program provides for the operation and maintenance of five Fleet Ballistic Missile submarine tenders (repair ships), various other support ships, and the charter of Military Sealift Command (MSC) ships.

Justification of funds

A functional breakdown of resources is as follows:

(In Thousands)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Ship Operations	$10,073	$12,993	$16,353
Regular Overhaul	-	-	-
Non-scheduled Ship Repairs	1,508	1,261	8,468
Supporting Programs	13,418	14,865	17,330
	$24,999	$29,119	$42,151

Ship Operations ($16.4 million)

This program provides for fuel and supplies for day-to-day operation, maintenance of SSBN and support ships. The increase of 3.4 million reflects a $1.4M fuel price increase (5 months in FY 74 and 12 months in FY 1975), $.9M increase in Tender self maintenance such as wardrobe lockers and $1.1M for increased repair parts and equipment to support 3 additional operating SSBN's and support costs slated for extended operating cycles (EOC) of SSBN.

Non-Scheduled Ship Repairs ($8.5 million)

Restricted availabilities are relatively short periods of repair accomplished at a shore repair activity, normally a shipyard. This increase of $7.2 million provides $1.7M for a selected restricted availability (SRA) for USS PROTEUS (AS-19) and $5.5M for overhaul of AFDB-7 an auxiliary floating drydock which will support SSBN refits as part of the extended overhaul cycle program. There are no service craft overhauls or tender SRA's in FY 1974.

Supporting Programs ($17.3M)

This program supports the charter of Military Sealift Command (MSC) resupply ships and general support costs and engineering services, repair efforts and weapon system overhaul requirements necessary for these ships to support the POLARIS and POSEIDON programs. These ships include the AG-153 (Compass Island) which serves as a test bed for the navigational sub-system, the TAGM-22 (operational Test Instrumentation Ship) utilized in the gathering of test data during operational and follow-on tests, four TAKs (supply ships) required for the movement of equipments and five tenders which serve as second echelon facilities as well as supply ships. An increase of $1.5M is required to support current charter rates by MSC and $1.0M is related to class planning for the unique SONAR program and incorporation of this program into the Capabilty and Proficiency program (CAPE). Unique Sonar is being introduced in FY 1975.

Budget Program C: FBM Control System Communications

(In Thousands)
FY 1975 Estimate - $12,864
FY 1974 Estimate - 10,768
FY 1973 Actual - 9,185

Purpose and scope of work

This program supports Fleet Ballistic Missile (FBM) Control System Communications. These funds provide for operating and support costs of aircraft, engineering and related technical services, and administration of the Special Communications Project Office.

Justification of funds

A functional breakdown of requirements is as follows:

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	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Aircraft Operating and Support Costs	$2,995	$3,971	$5,180
Supporting Programs	6,190	6,797	7,684
TOTAL	$9,185	$10,768	$12,864

Aircraft Operating and Support Costs ($5.2 million)

Funds requested for aircraft operations and support are for aircraft used for FBM System Communications and travel of military personnel. The 1.2 million increase reflects an increase of 2100 hours for a total flying hour program of 16,670 hours and the annualization of the February 1974 fuel price increase.

Supporting Programs ($7.7 million)

This program provides funds for engineering and related technical services in support of an improved communication systems for FBM Command and Control. Included in these funds are direct administration costs for the operation of Special Communication Project Office.

The fiscal year 1975 increase of $.9 million is for the classified pay raise and additional engineering and management efforts required to support the program.

Budget Program D: Missile and Space Defense

(In Thousands)

FY 1975 Estimate - $4,078
FY 1974 Estimate - 4,008
FY 1973 Actual 3,624

Purpose and scope of work

This program supports the U. S. Naval Space Surveillance System which is a Naval component force of the North American Air Defense Command. The primary mission of this operational Naval Command is to detect, identify, and compute orbits for artificial earth satellites; to provide observations and other information on objects in orbit to meet both Navy and national requirements.

Justification of funds

Funds requested provide for the operation and maintenance costs of the Headquarters of the Naval Space Surveillance System and its field stations. The fiscal year 1975 estimate includes an increase of $70 thousand for annualization of the classified pay raise and increased operating costs.

Budget Program E: Command

(In Thousands)

FY 1975 Estimate - $1,720
FY 1974 Estimate - 1,732
FY 1973 Actual - 1,743

Purpose and Scope of work

This program provides for the operating costs of the Commanders of Submarine Flotillas and Squadrons of the Atlantic and Pacific Fleets for the Fleet Ballistic Missile Systems. These Commanders coordinate all matters concerning readiness, training, personnel, communications and logistic support for units assigned. These operational commands also control assigned units during refit trials and underway training.

Justification of funds

Funds requested provide for office administration, equipment rental, printing, military personnel travel, operation and repair of service craft, and cost of port services. Fiscal year 1975 estimate reflects essentially level funding with fiscal year 1974.

BUDGET ACTIVITY 2: GENERAL PURPOSE FORCES
SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 compared with 1974
A Aircraft Forces	$239,703	$ 273,977	$ 349,734	$+ 75,757
B Ship Forces	974,695	1,619,609	1,800,479	+ 180,870
C Base Operations	420,337	484,352	599,790	+ 115,438
D Special Combat Support Forces	35,309	33,748	39,008	+ 5,260
E Training	53,106	70,323	92,325	+ 22,002
F Unified and Operational Commands	73,315	123,491	134,784	+ 11,293
G Undersea Surveillance System	11,750	29,112	44,783	+ 15,671
H JCS Directed and Coordinated Exercises	285	435	457	+ 22
Total direct obligations in budget document	$1,808,500	$2,635,047	$3,061,360	$+426,313

Budget Activity 2: General Purpose Forces

(In Thousands)
FY 1975 Estimate - $3,061,360
FY 1974 Estimate - $2,635,047
FY 1973 Actual - $1,808,500

Introduction

Resources requested in this activity provide for the annual operation and maintenance costs of active fleet ships, air forces, and stations, bases and commands under the operating forces Commanders, namely the Commanders in Chief, U.S. Atlantic Fleet, U.S. Pacific Fleet, and U.S. Naval Forces Europe; and for costs of the Navy share of the unified commands.

Budget Program A: Aircraft Forces

(In Thousands)
FY 1975 Estimate - $349,734
FY 1974 Estimate - $273,977
FY 1973 Actual - $239,703

Purpose and scope of work

The budget program provides for aircraft POL, intermediate maintenance costs, repair parts, and related support costs. The primary objective of the Navy's aircraft operations program is to maintain active squadrons in high state of operational readiness. The principal combat type forces supported include Navy Carrier Squadrons, Aircraft Patrol Squadrons, and Marine Corps Air Wings.

Justification of funds

A functional breakdown of resources follows:

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Aircraft Operating Costs	$219,471	$252,138	$326,971
Flight Operations Support Cost	20,232	21,839	22,763
TOTAL	$239,703	$273,977	$349,734

The fiscal year 1975 program request of $349.7 million reflects an increase of $75.8 million.

Aircraft Operations ($327.0 Million)

The fiscal year 1975 request of $327.0 million provides for 1.145 million flying hours. The impact of FY 74 fuel price increase has escalated the total cost of the program, however, energy conservation measures have made it necessary for the Navy to reduce flying hours and readiness during fiscal year 1974. As a result of these actions, the revised fiscal year 1974 estimate has been depressed to 1.019 million hours (155,000 hours below the original FY 74 request). Projection of these prices into FY 1975 results in a program cost increase of $74.9 million.

The significant items that equate to the increase of $75.0 million are: $45.2 million for fuel price increases, and $29.7 million and 126,000 additional flying hours which will return this program to an acceptable level of readiness.

Flight Operations Support ($22.8 million)

The resources requested provide for per diem and travel costs of military personnel assigned to fleet squadrons and maintenance and operating costs of targets and drones used in fleet exercises. The fiscal year 1975 request increases by $.9 million reflecting increases related to additional AVCAL requirements, MAC rate increases, annualization of the fiscal year 1974 civilian substitution program, partially offset by decreases associated with reduced TAD.

Budget Program B: Ship Forces

(In Thousands)
FY 1975 Estimate - $1,800,479
FY 1974 Estimate - 1,619,609
FY 1973 Actual - 974,695

Purpose and scope of work

This budget program provides the resources to operate and maintain combatant and non-combatant ship forces including carriers, submarines, destroyers, amphibious, auxiliary, and patrol ships. The resources are required for aircraft operations, flight operations, support for carrier-based planes, ships fuel, utilities, repair parts, scheduled overhauls, restricted availabilities, ship alterations and other related support.

Justification of funds

A functional breakdown follows:

	(In Thousands) FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Aircraft Operations	$ 1,309	$ 1,197	$ 1,342
Flight Operations Support	9,647	11,276	16,784
Ship Operations	288,499	334,669	453,659
Regular Ship Overhauls	404,210	634,921	659,777
Non-scheduled Ship Repairs	261,120	233,225	197,919
Ship Alterations (*OPN funded)	(254,909)*	381,193	421,588
MSC Charter	3,910	16,101	38,177
Supporting Programs	6,000	7,027	11,233
TOTAL	$974,695	$1,619,609	$1,800,479

Aircraft Operations ($1.3 million)

Resources requested for this program support logistic type aircraft assigned to attack and LPH ships. The net increase is primarily related to the FY 74 fuel price increase.

Flight Operations Support ($16.8 million)

This program provides for initial provisioning and updating of allowance lists for aircraft consumable material and repair parts on aircraft carriers. The FY 1975 request reflects an increase of $5.5 million over FY 1974, provides $5.0 million for the initial deckload for USS NIMITZ (CVAN 68) and $.5 million for other deckload changes.

Ship Operations ($453.7 million)

This program provides the resources required for intermediate shipboard maintenance and day-to-day operating costs of active fleet ships and service craft. Day-to-day operating costs include fuel, utilities, repair parts, medical/dental and general supplies.

The Navy is planning to support 455.6 ship years and 1,024,399 steaming hours in this program in fiscal year 1975. The net increase of $119.0 million in FY 1975 is based upon the following factors:

The dominant factor responsible for the increase in ship operating costs is the fuel price increase essentially doubling in cost per barrel in February 1974 and the resulting annualized impact through FY 1975. Also the conversion to distillate from Navy special fuel still has some impact in FY 1975. The total increase for fuel is $75.0 million. The Fleet Maintenance Assistance Program (FMAG) was established in August 1972. Its purpose is to improve sea to shore rotation of military assignments and improve the material condition of the fleet. The increase of $13.5 million relates to additional parts and material to support the increased FMAG personnel assignments. The balance of $30.5 million represents increased utility costs, increased costs in support of cold iron facilities, cost of material transferred from the Appropriation Purchase Account to the Navy Stock Fund, replacement of wardrobe lockers, cost of SSN weapon systems test and MK 48 proficiency firings (not fleet responsibility in FY 1974) and replacement of inventory and other operating costs.

Regular Ship Overhauls ($659.8 million)

This program covers scheduled overhauls for ships assigned to General Purpose Forces. Each ship is scheduled for an overhaul based upon a prescribed cycle of operating months. A carrier, for example, has an operating cycle of 48 months, and a destroyer 37 months. The actual cycle is based upon engineering judgment, past maintenance experience, and operational commitments.

With varying cycles among ship types, the schedule for a given year may contain more or less ships than a preceeding year and the schedule may differ in terms of the complexity of the ships to be overhauled. FY 1975 is particularly illustrative of both of these factors as compared to FY 1974.

Ship Type	FY 1974 No. O/H	FY 1974 Amount	FY 1975 No. O/H	FY 1975 Amount	Difference No. O/H	Difference Amount
Carriers	1	$ 25,631	2	$ 57,785	+1	$32,154
Nuclear Submarines	13	229,184	10	175,052	-3	-54,132
Nuclear Guided Missile Destroyer	1	25,910	-	-	-1	-25,910
Diesel Submarines	2	15,249	1	8,320	-1	- 6,929
Cruisers/Destroyers	26	145,708	39	235,595	+13	+89,887
Fleet Ocean Tug	7	9,709	-	-	-7	- 9,709
Balance of Program	40	183,530	41	183,025	+1	- 505
TOTAL	90	$634,921	93	659,777	+3	+24,856

The comparison is, in effect, from carriers to fleet ocean tugs. As shown by the above illustration and based upon operational cycles, FY 1974 is dominated by submarines, particular nuclear, and a nuclear frigate overhaul whereas FY 1975 is dominated by destroyer overhauls.

With respect to complexity, the unit cost of carriers, guided missile destroyers, and destroyer escorts has shown an average increase over FY 1974 for overhauls of these ship types in FY 1975 based upon more extensive repairs required for the 1200 PSI propulsion plants of these ships. This program is designed to enhance the material readiness of these ships.

Non-scheduled Ship Repairs ($197.9 million)

Non-scheduled repairs are those repairs required between scheduled overhauls which are beyond the capability of the ship's force and are accomplished by an industrial activity. The decrease of $35.3 million in FY 1975 compared to FY 1974 is based upon the following factors:

Mid East activity in FY 1974 not included in FY 1975	$-13,000
USS SARATOGA (CV 60) FY 1974 fire damage repairs	- 5,116
Increased cost of selected restricted availabilities	+ 2,712
Decreased number of service craft overhauls	- 9,324
Reduced number of interim drydockings	- 5,228
Reduction in distillate fuel conversions	- 5,668
Other revisions	+ 318
Net	-35,306

Ship Alterations ($421.6 million)

The ship alteration program is an integrated program combining military and technical improvements. New equipments are installed to enhance the capability and effectiveness of active fleet ships. The program includes the cost of design services and the initial repair part support for the new equipments.

The FY 1975 requested funds will significantly increase installation of alterations in the following areas: pollution abatement, habitability, 1200 PSI steam propulsion plants, anti-submarine warfare, communications, conflagration control, improved weapon handling and aviation support.

As discussed in the Regular Ship Overhaul account, the richer "mix" of ships in the overhaul schedule, primarily carrier and destroyer types, also impacts in the alteration account.

MSC Charter ($38.2 million)

This program supports charter of ships from Military Sealift Command. The increase represents an increase of 5 ships leased from MSC (2 AO's, 1 AF, 2 ATF's) the charter cost for these and the POL increases related to all chartered ships.

Supporting Programs ($11.2 million)

This title includes resources for per diem and travel costs of military personnel assigned to Fleet units, the Integrated Maintenance and Modernization Planning (IMMP) for destroyers and Electronics Shipboard Support in logistics validation and reliability improvement for the Fleet units.

The increase of $4.2 million reflects the initial implementation of the Destroyer (IMMP) program ($.6 million) and the Electronics Ship Board Support ($+3.3 million) for its first operational year of validation, correcting deficiencies, inspections, reliability problems and improvements and manual changes for Fleet electronics equipments, and ($.3 million) for adjustments in Fleet TAD requirements.

Budget Program C: Base Operations

(In Thousands)
FY 1975 Estimate - $599,790
FY 1974 Estimate - $484,352
FY 1973 Actual - $420,337

Purpose and scope of work

The Base Operations program provides resources for the operation and maintenance costs of fleet support activities. The resources requested for fleet support activities encompass a wide range of services and direct fleet support at activities such as Naval Stations, Naval Air Stations, Amphibious and Submarine Bases, Ranges, and support activities in the U.S. and overseas. Services provided are personnel processing, legal, educational, medical, and waterfront, harbor and port services, recreational facilities, installation and repair of air navigational aids, and support to the Fleet.

Justification of funds

A functional breakdown of resources follows:

(In Thousands)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Aircraft Operating & Support Costs	$ 7,528	$ 7,357	$ 8,833
Ground Electronics	-	10,382	11,486
Station Operations	338,415	393,223	429,227
M&R of Real Property	74,394	73,390	150,244
TOTAL	$420,337	$484,352	$599,790

Aircraft Operating and Support Costs ($8.8 million)

The fiscal year 1975 request of $8.8 million supports 98,980 flying hours compared to 92,061 flying hours in fiscal year 1974. The net increase is related primarily to the annualization of the February 1974 fuel price increase and restoration of fleet logistic flights deleted during FY 1974 as a result of energy conservation measures.

Ground Electronics ($11.5 million)

This program provides for planning, installation design, and installation of air navigation tactical communications, air traffic control systems and ancillary equipments at Naval and Marine Corps Air Activities.

The increase of $1.1 million includes $.3 million for annualization of the fiscal year 1974 classified and wage board pay raises, and $.8 for installation of air traffic control beacon systems.

Station Operations ($429.2 million)

This program provides for costs associated with functions such as personnel administration, fire protection, guard services, supplies and materials, travel, operation of various ranges and public works functions. This request reflects a net increase of $36.0 million related to annualization of classified and wage board pay raises, $3.5 million; continuation of the civilian substitution program, $11.2 million; fuel price increases, $7.5 million; increased cost of utility rates and service contracts, $7.6 million; support of new functions and repair of service craft, $3.7 million; net realignments of $9.8 million as a result of transferring into Budget Activity 2 Naval support activities from Budget Activity 9, financial responsibility for the human goals programs from Budget Activity 8, and support for physical security systems from the Other Procurement, Navy, appropriation. The Naval Training Center Morocco was moved from this program into Budget Activity 3. The above increases are partially offset by decreases in personnel costs due to lump sum leave and severance pay of $2.2 million and Shore Establishment Realignment (SER) Actions of $-5.2 million.

Maintenance and Repair of Real Property ($150.2 million)

The fiscal year 1975 request reflects increases necessary to reduce the growth of backlog in maintenance and repair projects and for recurring maintenance. Funding levels in recent year has resulted in a limited maintenance program which basically provided for failures or emergency type repair. This increase will provide for a significant improvement in plant facilities and allow for reinstatement of a normal planned maintenance program.

Budget Program D: Special Combat Support Forces

(In Thousands)
FY 1975 Estimate - $39,008
FY 1974 Estimate - $33,748
FY 1973 Actual - $35,309

Purpose and scope of work

The primary objective of the Navy's Special Combat Support Forces is to conduct special operations and provide support to military operations by construction and maintenance of roads, bridges, logistic airstrips, and other tactical support facilities. These forces consist of units such as Construction Battalions, Special Warfare Groups, Underwater Demolition Teams, Sea-Air-Land (SEAL) teams, Explosive Ordnance Disposal Groups, Airborne Mine Countermeasures, Amphibious and Construction Battalion Commanders, and associated landing craft.

Justification of funds

A functional breakdown of resources follows:

(In Thousands)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Aircraft Operations	$ 539	$ 1,177	$ 1,490
Combatant Craft Repairs	4,450	5,154	5,982
Secret Service Support	24	6	6
Special Combat Support Forces	30,296	27,411	31,530
	$35,309	$33,748	$39,008

Aircraft Operations ($1.5 million)

The resources requested for this function support 8,290 flying hours for 21 helicopters. An increase is included for an additional 1,100 hours and the annualization of the February 1974 fuel price increase.

Combatant Craft Repairs ($5.9 million)

This program provides for repair and overhaul of service craft supporting the special combat forces. Fiscal year 1975 reflects an increase due to a change in the mix of craft being overhauled and the cyclic nature of the requirement.

Special Combat Support Forces ($31.5 million)

The fiscal year 1975 request reflects an increase of $4.1 million for increased airborne mine countermeasures ($.8 million), the civilian substitution program ($.4 million) and $2.9 million for support of construction battalion deployments.

Budget Program E: Training

(In Thousands)
FY 1975 Estimate - $92,325
FY 1974 Estimate - $70,323
FY 1973 Actual - $53,106

Purpose and scope of work

This program provides for the support of Fleet Air, Surface, and Sub-surface Training Activities. These include Navy and Marine Air Readiness/Replacement Training groups and squadrons, Nuclear Weapons Training Centers, and other training activities.

Justification of funds

A functional breakdown of requirements follows:

(In Thousands)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Aircraft Operations	$46,044	$62,374	$82,482
Flight Operations Support Costs	5,919	6,759	8,486
Ship Operations, Repair and Support	754	731	811
Base Operations	389	459	546
TOTAL	$53,106	$70,323	$92,325

Aircraft Operations ($82.5 million)

The fiscal year 1975 request of $82.5 million supports 273,642 flying hours compared to $62.4 million and 247,625 hours in the fiscal year 1974 estimate. The increase of 26,017 flying hours in fiscal year 1975 is the result of a depressed program in fiscal year 1974 due to energy conservation measures and the establishment of Marine AV-8A CRAW training squadron and increased training requirements in the F-14/S-3A programs. The $20.1 million increase provides for the annualization of February 1974 fuel price increases ($13.6 million) and $6.5 million in order to provide for a normal training syllabus for active fleet pilots in FY 1975.

Flight Operations Support Costs ($8.5 million)

This program finances operating costs of Fleet Aviation Training Groups. Costs include personnel salaries, travel of personnel, supplies and aviation outfitting items (tools, test equipment) for the Fleet Marine forces. The fiscal year 1975 request of $8.5 million reflects an increase of $1.7 million due to annualization of the FY 1974 civilian substitution program and civilian classified pay raise of $1.5 million and increased utilization of the additional class A school quota ($.2 million).

Ship Operations, Repair and Support ($.8 million)

These costs provide for the operation and repair of targets and travel of fleet personnel. The increase of $.1 million reflects the annualization of the FY 1974 civilian substitution and the 1 October 1973 classified pay raise.

Base Operations ($.5 million)

This program provides the operating costs of fleet training commands, nuclear weapons training centers and other fleet training groups and activities. The increase of $.1 million is due to annualization of the FY 1974 civilian substitution program and the 1 October 1973 classified pay raise.

Budget Program F: Unified and Operational Commands

(In Thousands)
FY 1975 Estimate - $134,784
FY 1974 Estimate - $123,491
FY 1973 Actual - $ 73,315

Purpose and scope of work

This program provides support for the Commanders in Chief, Atlantic and Pacific, the Commanders in Chief, Atlantic and Pacific Fleets, and U.S. Naval Forces, Europe. Also included is support for Service and Force Commands and Staffs, Fleet Operational Control Centers, Fleet Combat Direction Systems Support Activities, Fleet Air Wings and command units for attack and anti-submarine warfare air forces and assigned aircraft.

Justification of funds

A functional breakdown of requirements follows:

(In Thousands)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Aircraft Operating and Support Costs	$ 3,688	$ 4,382	$ 3,740
Ship Operations and Support Costs	3,968	3,268	3,620
Commands/Staffs	65,659	115,841	127,424
TOTAL	$73,315	$123,491	$134,784

Aircraft Operating and Support Costs ($3.7 million)

This program provides for the operation of aircraft assigned to Fleet Air Wings, Command Units for Attack and ASW Airforces, and the Command staffs. Also included are funds to finance the initial provisioning of aircraft repair parts for the Fleet Marine Forces.

A total of $.7 million is requested to support 5,523 aircraft flying hours. This represents an increase of $.2 million from fiscal 1974. A request for $.5 million is included for initial provisioning of aircraft repair parts for the Fleet Marine forces, which is $.4 million less than estimated for fiscal 1974. Additionally $2.6 million is included for aviation TAD. This represents a decrease from fiscal 1974 of $.4 million.

Ship Operations and repairs ($3.6 million)

This program finances the operation and support of fleet service craft. The costs include approximately $.3 million for operation of the craft and $2.3 million for repairs and support which is $.3 million increase from fiscal 1974. This increase relates to overhauling two service craft in fiscal 1975; no overhauls were accomplished in fiscal 1974.

Commands and staffs ($127.4 million)

These costs provide for support of the Unified Commands, Commanders in Chief, Atlantic and Pacific Fleets, and Naval Forces Europe, as well as the Services and Force Commanders, Fleet Air Wings and Command units for Attack and ASW Forces. Operating expense items include maintenance of facilities, travel/per diem, and civilian personnel support. Funds requested for fiscal year 1975 represent a net increase of $11.6 million from the fiscal year 1974 estimate. The increases are related to such areas as: annualization of the fiscal year 1974 civilian substitution program, civilian classified pay raises and fuel price increase $2.3 million, increase requested for the Fleet Combat Directional Systems Support Activities at San Diego and Dam Neck $1.7 million. These activities plan, design, construct, test and deliver combat direction system computer programs to the operating forces, including training program.

Additionally, increases are requested for Marine Corps Ground Support Equipment $.4 million, communications support for Navy Airborne Command Post $.9 million and funding of an operational exercise $.9 million. Also increases are requested for Fleet Operation Centers/World Wide Military Command and Control System $.7 million, Ocean Surveillance Information System $2.0 million, Anti-Submarine Warfare - Centers Command Control Systems $1.8 million, functional transfer $.7 million and other miscellaneous net adjustments of $.2 million.

Budget Program G: Undersea Surveillance System

(In Thousands)
FY 1975 Estimate - $44,783
FY 1974 Estimate - $29,112
FY 1973 Actual - $11,750

Purpose and scope of work

This program provides for the operation and maintenance of 22 naval facilities and the staffs of Commanders, Ocean Systems, Atlantic and Pacific, and for the installation, maintenance, operations, and training assistance for equipments and systems at

both domestic and overseas stations. Technical services for the restoration and overhaul of the equipment and the charter of ships are also included in this program.

Justification of funds

A functional breakdown of requirements follows:

(In Thousands)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Base Operations	$ 5,761	$ 7,304	$ 8,195
Supporting Programs	5,989	21,808	36,588
TOTAL	$11,750	$29,112	$44,783

Base Operations ($8.2 million)

These functional programs provide for the operation and maintenance of the facilities, travel, per diem and civilian personnel salaries. Fiscal year 1975 reflects increases for the civilian substitution program of $.6 million, annualization of classified and wage board pay increases of $.1 and $.2 million for maintenance and repair of property.

Supporting Programs ($36.6 million)

This program provides funds for the technical support required in the operation and maintenance of the Undersea Surveillance Program, the Towed Array Surveillance System, and the Shipboard Surveillance Program at domestic and overseas stations, and for the lease of cable ships. It also funds the installation of communication equipments and the restoration and overhaul of teletype, motor alternators, and engine generators at Naval facilities.

The increase of $14.8 million in fiscal year 1975 includes transfer of funds from the Other Procurement, Navy appropriation of $8.8 million for the charter of ships, supporting material, and an operational shipboard data collection and processing system. Other increases are reflected for repair and overhaul of equipment of $1.4 million; the reconnaissance and electronic warfare program, $1.5 million; engineering and technical services and the ship towed array surveillance system, $.7 million; and annualization of operating costs for charter ships of $2.4 million in fiscal year 1975.

Budget Program H: JCS Directed and Coordinated Exercises

(In Thousands)
FY 1975 Estimate - $457
FY 1974 Estimate - $435
FY 1973 Actual - $285

Purpose and scope of work

The program provides for expenses incurred as a result of Navy participation in the Joint Chiefs of Staff (JCS) Coordinated/ Directed exercises. The funds requested are for above normal operations expenses such as temporary additional duty travel and per diem and the cost of acquiring access to private land by U.S. military personnel engaged in exercises.

Justification of funds

The fiscal year 1975 program includes funds for eleven exercises. Fiscal year 1975 estimate reflects relatively level funding with fiscal year 1974.

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BUDGET ACTIVITY 3: INTELLIGENCE AND COMMUNICATIONS
SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	1973 Actual	1974 Estimate	1975 Estimate	Difference 1974 compared with 1975
A Consolidated Cryptologic Program	$26,141	$27,773	$27,934	$+161
B General Defense Intelligence Program	29,985	37,187	38,161	+974
C Naval Communications	135,063	149,979	175,598	+25,619
D Oceanography	54,556	61,881	64,536	+2,655
E Weather Service	6,946	9,081	9,049	-32
F Specialized Support Activities	35,391	29,269	30,788	+1,519
Total direct obligations in budget document	$288,082	$315,170	$346,066	$+30,896

Budget Activity 3: Intelligence and Communications

(In Thousands)

FY 1975 Estimate - $346,066
FY 1974 Estimate - 315,170
FY 1973 Actual - 288,082

Introduction

This budget activity provides funds for the Cryptologic, Intelligence, Communications, Oceanography, Weather, and Specialized Support programs. These special functional programs are operated at the direction of higher authority and also provide specific specialized information and services required for fleet operations.

Budget Program A: Consolidated Cryptologic Program

(In Thousands)

FY 1975 Estimate - $27,934
FY 1974 Estimate - 27,773
FY 1973 Actual - 26,141

Purpose and Scope of Work

This budget program provides operating funds in support of: (1) Cryptologic support to Navy operating forces; (2) the BULLSEYE system which supports the Navy's ASW Program and the Ocean Surveillance Information System; (3) Navy cryptologic responsibilities to the Director, National Security Agency (DIRNSA); (4) the Navy's share of the tri-service operation of the Armed Forces Courier Service; (5) Cryptologic Communications; (6) installation of cryptologic and communications equipment at Naval Security Group elements world-wide; and (7) cryptologic training for Navy officer and enlisted personnel and selected personnel of other services and agencies.

Justification of Funds

Funds requested are for the operation and maintenance of Naval Security Group activities, departments, and detachments world-wide, and for operation of the Navy Courier Service and Naval Security Group Command Headquarters. These funds also provide for cryptologic training as well as design and installation of cryptologic and communications equipment for both national mission tasking and direct cryptologic support of Navy missions and tasks.

The fiscal year 1975 program reflects a net increase of $.2 million primarily for: (1) termination of operations at the Naval Facility Cyprus; (2) reduction in funds for equipment installation; (3) annualization of the Civilian Substitution Program; (4) annualization of civilian graded and ungraded pay raises; (5) increased cost of utilities, primarily fuel; (6) reimbursement to the U. S. Air Force and U. S. Army for inter-service support, previously provided on a non-

reimbursable basis to the Navy Service Cryptologic Agency; (7) funds for the contracting of security guards to replace civilian billets lost at the Naval Security Station, Washington, D. C.; (8) support for new mission equipment partially offset by mission tasking reductions; (9) transfer of funds for fleet military personnel in support of cryptologic effort to Budget Activity 2 - General Purpose Forces; and (1) CRITICOMM leased lines funds to reimburse Defense Communications Agency (DCA) for the user's proportionate share of the cost of DCA multiplexing trunks.

Budget Program B: General Defense Intelligence Program

(In Thousands)

FY 1975 Estimate - $38,161
FY 1974 Estimate - 37,187
FY 1973 Actual - 29,985

Purpose and Scope of Work

This budget program provides operating funds for the Naval Intelligence Command and for General Defense Intelligence Programs conducted by the unified and fleet commanders. Field activities of the Naval Intelligence Command include: the Navy Intelligence Support Center, Suitland, Maryland; the Naval Intelligence Processing System Support Activity, Alexandria, Virginia, and Suitland, Maryland; the Navy Field Operational Intelligence Office, Fort Meade, Maryland, and Suitland, Maryland; and the Fleet Intelligence Support Activity, Alexandria, Virginia (with forward area support teams situated in Honolulu, Norfolk, and Naples). The Naval Investigative Service, which is also a field activity of the Naval Intelligence Command, is no longer part of the General Defense Intelligence Program, and its operating costs are found in Budget Program F, Specialized Support Activities.

General Defense Intelligence Programs and dollar costs in this appropriation are as follows:

Program and Title	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate	FY 1975 Change From FY 1974
Imagery	$3,743	$4,426	$4,963	$+537
Human Intelligence (HUMINT)	1,991	2,798	3,303	+505
Technical Sensor Collection	678	564	902	+338
Fleet Intelligence Support Activity	2,541	3,091	3,314	+223
Defense Special Security System	301	307	407	+100
Electronic Intelligence (ELINT) Centers	341	291	338	+47
Intelligence Production	2,874	3,868	3,857	-11
Intelligence Management and Support	1,400	1,485	1,474	-11
Intelligence Data Handling Systems	7,412	8,089	8,036	-53

Program and Title	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate	FY 1975 Change From FY 1974
Scientific and Technical Intelligence	6,982	9,957	9,817	-140
Intelligence Communications	1,722	2,311	1,750	-561
TOTAL	$29,985	$37,187	$38,161	$+974

Justification of Funds

a. Imagery.

This program covers imagery exploitation for national and Navy tasking at the Naval Intelligence Support Center, including strategic arms limitation verification. The increase of $.5 million in fiscal year 1975 reflects increased external assistance in electro-optical data analysis and digital imagery processing and the maintenance of advanced imagery exploitation equipment procured in fiscal year 1974.

b. Human Intelligence (HUMINT)

This program covers a sensitive collection effort, which broadened its operations in fiscal year 1974. The increase of $.5 million in fiscal year 1975 reflects full-year operating costs of the expanded operation.

c. Technical Sensor Collection

This program contains operating expenses of the undersea warfare intelligence unit attached to the Navy Field Operational Intelligence Office and other costs associated with technical reconnaissance and surveillance. The increase of $.3 million in fiscal year 1975 will provide external assistance for evaluation of sensor system capabilities, options, and trade-offs and for a feasibility study and site survey associated with a newly developed over-the-horizon sensor system, Project CLUSTER BOOT.

d. Fleet Intelligence Support Activity.

This organization provides immediate, on-scene support to fleet commanders in Norfolk, Honolulu, and Naples for processing and analyzing sensor data gathered on fleet collection missions which involve airborne, surface, and subsurface platforms. Support is furnished primarily by forward area support teams assigned to locations cited above, deployed when necessary to other collection areas. The increase of $.2 million in fiscal year 1975 is for external assistance in such areas as the development of light weight analysis kits and advanced analysis techniques, photogrammetric system support, and advanced net technical assessment techniques.

e. Defense Special Security System

This program contains Navy expenses in the worldwide Defense Special Security System. The increase of $.1 million in fiscal year 1975 covers the cost of two additional civilian manyears related to the civilian substitution program instituted in fiscal year 1974 and an increase in the cost of supplies furnished by the Naval Intelligence Command to Special Security Offices in the field which are not fully supported by Navy hosts.

f. Electronic Intelligence (ELINT) Centers

This program covers the operation of the Atlantic Command ELINT Center, Norfolk, and the Pacific Command ELINT Center, Honolulu (which is being absorbed by the newly consolidated Joint Intelligence Center, Pacific). Both centers are joint service facilities under the direct operational control of the respective commanders in chief. ELINT Center personnel analyze and evaluate non-communications electromagnetic radiations and publish intelligence reports based on these data. The increase of $47 thousand in fiscal year 1975 reflects the transfer of four civilian positions from the Intelligence Production program at the Fleet Intelligence Center in Honolulu to the Joint Center.

g. Intelligence Production

This program contains operating costs for the Navy Field Operational Intelligence Office, the Naval Ocean Surveillance Information Center, and the merchant shipping branch of the Naval Intelligence Support Center (all being elements of the Naval Intelligence Command); Ocean Surveillance Information System components operated by fleet commanders in Norfolk, Honolulu, Rota (Spain), London, and Kami Seya (Japan); and the Fleet Intelligence Centers at Norfolk, Jacksonville, and Honolulu. Through fiscal year 1974, this program also contained expenses of the Fleet Intelligence Center Pacific Facility at Cubi Point, Philippines, now disestablished. The Fleet Intelligence Centers in Norfolk and Jacksonville will be merged at Norfolk during fiscal year 1975. Program costs are essentially level. Savings of approximately $.2 million from closing Cubi Point have been offset by the requirement for external assistance supporting the analysis of Soviet Naval tactics and doctrine at the Navy Field Operational Intelligence Office and by the transfer into this program of 14 civilian merchant shipping analysts formerly in the Imagery program.

h. Intelligence Management and Support

This program contains operating costs for Headquarters, Naval Intelligence Command, Alexandria, Virginia. Funding for fiscal year 1975 is slightly below the previous year's level.

i. Intelligence Data Handling Systems

This program covers operating expenses of the Naval Intelligence Processing System Support Activity, which has its headquarters in Alexandria, Virginia, and its automatic data processing center at Suitland, Maryland. The center supports the

Ocean Surveillance Information System and other naval intelligence projects. This program also contains resources for the automatic data processing facilities operated by the Naval Intelligence Support Center at Suitland (acoustic intelligence and missile analysis) and by the Unified and Fleet commanders. This program is the second highest consumer of operation and maintenance dollars in the General Defense Intelligence Program of the Navy. The small decrease of $53 thousand in fiscal year 1975 reflects government ownership of certain equipment previously leased.

j. Scientific and Technical Intelligence

The Scientific and Technical Intelligence program is the largest consumer of operation and maintenance dollars in the General Defense Program of the Navy. The program is conducted by the Naval Intelligence Support Center at Suitland, Maryland, which constitutes the Navy's sole analysis and production activity concerned with foreign scientific and technical applications to the naval and maritime environment and the threat posed by these applications to the United States. Major areas of effort and resource application are missiles, undersea warfare, and space. After a decade of steadily expanding capabilities, the program reached an operation and maintenance level of $10 million in fiscal year 1974 and is slightly below this level ($9.8 million in fiscal year 1975.) External assistance for this program decreases in fiscal year 1975, as in-house civilian manyears approach authorized end strength.

k. Intelligence Communications

This program contains the Special Intelligence Communications Network, Intelligence Data Handling System communications, Ocean Surveillance Information System communications, and all other communications used primarily to transmit intelligence information, including ordinary telephones. The decrease of $.6 million in fiscal year 1975 reflects completion in fiscal year 1974 of data communications serving the Ocean Surveillance Information System in the Pacific.

Budget Program C: Naval Communications

(In Thousands)
FY 1975 Estimate - $175,598
FY 1974 Estimate - 149,979
FY 1973 Actual - 135,063

Purpose and Scope of Work

This budget program provides for the operation and maintenance of the Naval Shore Communications System and for the cost of installation design and the installation of communications and electronic equipment at Naval Shore activities world-wide. The Naval Shore Communications System is the principal element of Naval Telecommunications and is an integrated network of systems forming the world-wide framework of communications facilities designed to provide control of Naval forces in Naval and joint operations whenever the mobility of these forces demands. It consists of:

a. Shore terminals supporting Navy tactical forces to provide (1) ship/shore, (2) broadcast, (3) air communications terminals, and (4) weapons systems communications.

b. The Navy assigned components of the Defense Communications System.

The Naval Shore Communications System must provide communications for the command and control of Naval Operating Forces through the continued operation of Communications Stations and Units. The total communications facilities support strategic and tactical offensive, combatant and supporting Naval and Marine Forces. Additionally, the system must implement and support assigned portions of the Department of Defense programs including the Defense Satellite Communications Program and Automatic Switching Program (AUTOVON, AUTODIN and AUTOSEVOCOM).

Justification of Funds

The requested funds will provide for operating costs of communications activities, maintenance of electronic equipment and antenna systems, procurement of commercial leased communications services required to complement government owned facilities and installation of communications equipment. Also included is telephone monitoring to prevent compromise of classified information and the Navy's Tempest program.

(1) Station Operations

	(In Thousands)
FY 1975 Estimate -	$83,787
FY 1974 Estimate -	74,699
FY 1973 Actual -	66,075

The fiscal year 1975 estimates reflect an increase of $9.1 million in the Communications station operations primarily associated with: (1) realignment of Shore Communications; (2) transfer of Naval Training Command, Morocco from Budget Activity 2, General Purpose Forces; (3) increased maintenance of real property in an attempt to reduce the backlog of major repair projects and minor maintenance of facilities; (4) annualization of the civilian substitution program; (5) utility cost increases; and (6) shore fuel price increases. These increases are offset by reduction for the closure of a communications facility at Asmara, Ethopia.

(2) Leased Communications

	(In Thousands)
FY 1975 Estimate -	$71,738
FY 1974 Estimate -	58,586
FY 1973 Actual -	56,189

The fiscal year 1975 estimates reflect an increase of $13.0 million for leased communications. This increase consists of the following: (1) GAP FILLER Satellite - this is an interim leased satellite from COMSAT Corporation pending initial launch of the Fleet Satellite; (2) realignment of the Naval Telecommunications System shore establishment; improved automating of

communications message processing (Naval Communications Processing and Routing System, NAVCOMPARS, and Local Digital Message Exchange, LDMX); and (3) increased payment by Navy for the Federal Telephone System to the General Services Administration.

(3) Equipment Installation

	(In Thousands)
FY 1975 Estimate -	$20,073
FY 1974 Estimate -	16,694
FY 1973 Actual -	12,799

The fiscal year 1975 increase for installation of communications equipment is directly related to the continuation and/or culmination of prior years efforts and expenditures for military construction or alteration and procurement of electronic equipment at twenty-three communications activities throughout the free world.

Budget Program D: Oceanography

	(In Thousands)
FY 1975 Estimate -	$64,536
FY 1974 Estimate -	61,881
FY 1973 Actual - -	54,556

Purpose and Scope of Work

This budget program provides funds for the Oceanography program which includes collection, processing, and publication of acoustic, geophysical, and other oceanographic data. Data are analyzed and converted to formats required to support tactial and strategic anti-submarine warfare weapons and surveillance systems, strategic deterrent forces and amphibious, mine warfare and air operations, and to the maximum extent possible, are made available for civil, scientific, and maritime needs. In addition, the data support various military and weapon systems research and development projects. Products include special operational oceanographic charts, atlases, and other publications, long range surveillance oceanographic studies, and implementation of environmental forecasting techniques and services. Requirements for surveys to support tactical and strategic ASW and undersea surveillance are long term and of significant magnitude.

This budget program also provides funds for the Navy's Mapping, Charting and Geodesy (MC&G) effort. Responsibilities and functions related to chart production and distribution and the associated personnel and facilities were transferred to the Defense Mapping Agency (DMA) on 1 July 1972. The Oceanographer of the Navy retains the mission of hydrographic, marine geodetic and geophysical data collecting and reduction. The data collection is responsive to the DMA, and is in direct support of the operating forces and civilian maritime interests in accordance with statutory charting requirements. The program provides for processing of hydrographic, bathymetric, gravimetric, magnetic, and navigational data taken through coastal and deep ocean surveys and supports strategic deterrent (POLARIS/POSEIDON) and amphibious forces, anti-submarine warfare, and maritime safety.

Geodetic surveys support a wide range of activities among which are the precise positioning of hardware for Naval operating bases and test facilities, determining center-of-mass coordinates for long range (i.e. Loran and Omega) navigation systems. The surveys conducted support operational and developmental programs within the Navy Department and Department of Defense through data collection for maintenance of charts and publications by which environmental and navigational information are promulgated to Navy, DOD, and Merchant Marine.

This program also provides support for the U. S. Naval Observatory. The U. S. Naval Observatory performs continuous observations of natural and artificial celestial bodies, derives and publishes such data as will afford to United States Naval vessels and aircraft, as well as other users, means of safe navigation, including the provision of accurate time. While pursuing its primary function, the U. S. Naval Observatory contributes material to the general advancement of navigation and astronomy.

Justification of Funds

Funds are provided for the headquarters operating costs of the Oceanographer of the Navy and the operating costs of the Naval Oceanographic Office. This includes the salaries of the scientific and technical personnel aboard six survey ships and two aircraft supporting the Oceanographic effort and six survey ships and one aircraft supporting the Mapping, Charting and Geodesy effort, the Military Sealift Command Charter and Hire costs of the ships and a data reduction staff at NAVOCEANO. The fiscal year 1975 increase reflects no expansion in program effort but is primarily attributed to increased MSC ship operating costs, particularly the cost of POL. A minor increase for the procurement of spare parts and related consumable materials is also necessary because of depleted inventories. The Naval Observatory has a slight increase in fiscal year 1975 to provide full year funding of civilian personnel and the annualization of the classified pay raise.

Budget Program E: Naval Weather Service

(In Thousands)

FY 1975 Estimate -	$9,049
FY 1974 Estimate -	9,081
FY 1973 Actual -	6,946

Purpose and Scope of Work

This budget program funds operating costs of the Naval Weather Service Command, comprised of a Headquarters, four (4) Fleet Weather Centrals, eight (8) Fleet Weather Facilities/Naval Weather Service Facilities, the Fleet Numerical Weather Central and sixty-one (61) Naval Weather Service Environmental Detachments, and also provides for technical direction of meteorological functions on Naval ships, at Fleet Staffs and Unified Command Staffs. The major tasks of the Command include the provision of a weather information and dissemination system including the preparation and issuance of analyses, prognoses and forecasts for the

Navy and for other meteorological agencies as directed; the preparation and issuance of warnings of hazardous or destructive weather conditions; the provision of operational oceanographic forecasts for the Armed Services of the Department of Defense; and, the provision of climatological studies for operational Commanders as requested.

Justification of Funds

Fiscal year 1975 O&M,N requirements reflect a decrease of $32,000 from the fiscal year 1974 program level attributed to reduced requirements of the Satellite Data Collection System (primarily in initially-required contracted services), and reductions in the Climatological Program. These reductions are offset in part by increased costs of facilities management (particularly utilities), personnel salaries, and increased aviation fuel.

Budget Program F: Specialized Support Activities

(In Thousands)

FY 1975 Estimate -	$30,788
FY 1974 Estimate -	29,269
FY 1973 Actual -	35,391

Purpose and Scope of Work

This budget program provides resources for: the Naval Investigative Service; Naval Command Systems Support Activity; Department of Defense Computer Institute; Strategic Analysis Support Group and Defense/Navy War Games.

The Naval Investigative Service (NIS) provides the professional investigative capability for the Department of the Navy and the operating forces of the Navy and Marine Corps for investigations of major criminal violations, primarily those arising under the Uniform Code of Military Justice, of incidents of sabotage, espionage, and subversion, and of frauds and related offenses committed against naval property or installations. The NIS is also responsible for supporting those investigations and overall Department of the Navy security requirements through a broad range of technical and specialized security services; for performing counterintelligence operations designed to frustrate hostile intelligence acts; for providing counterintelligence warnings to naval commands on threats to their security; and for conducting personnel security investigations overseas in support of Department of Defense needs. The great majority of NIS productive effort is devoted to criminal investigations. They cover such offenses as homicide, robbery, narcotics, and drug abuse, larceny, burglary, assault, sex offenses, and arson. NIS investigations and operations are performed by a corps of professional, civilian Special Agents.

The NIS operates a worldwide organization, with operating locations wherever there are significant concentrations of Navy and Marine Corps personnel. NIS is centrally managed and directed through a Headquarters at Alexandria, Virginia. There are 12 major NIS field commands, the Naval Investigative Service Offices (NISO's), and 123 field operating components, the Naval

Investigative Service Resident Agencies (NISRA's), in the U.. S. and overseas. NISRA's, which are not commands, are set up, closed down, or changed in size and scope by the Director, NIS, as needed to meet changes in investigative workload. Fifteen of the NISRA's are located afloat - one on each carrier in the Navy. These are one man operations - the NIS Special Agent afloat program.

The Naval Command Systems Support Activity provides support to the Joint Chiefs of Staff, Secretary of the Navy, the Chief of Naval Operations, and Commanders of major commands in the development and implementation of Navy sponsored command systems, including systems applications, techniques, standardization, evaluation, testing and continuing programming. The Naval Command Systems Support Activity also provides such support in direct response to requirements as determined by the Chief of Naval Operations or higher authority.

The Department of Defense Computer Institute provides instructions in the fundamentals of digital computer capabilities, limitations and applications to senior military and civilian Department of Defense officials.

The Strategic Analysis Support Group assists the Deputy Chief of Naval Operations (Plans and Policy) in the conduct of war game analyses of planned naval operations.

Justification of Funds

The requested funds will provide an increase of $1.3 million for the Naval Investigative Service (NIS) for additional manpower and support costs. The additional funding, and manpower, reflects an attempt to redress serious deficiencies in NIS resources to enable NIS to satisfy minimum requirements for investigation of criminal offenses and security incidents. Specific changes are discussed below. The increase in civilian pay reflects the costs of the 77 additional civilian personnel authorized for NIS in FY 1975, costed at 75% of a full year's level. Most (50) of the additional personnel will be Special Agents, to conduct investigations and counterintelligence operations. The remaining additional personnel will be in the clerical/ administrative area, except for four foreign nationals whose services are essential to bridge the language and cultural gap in conducting investigative leads and liaison in the Far East. The additional clerks will be needed to type and file the investigative reports which the new agents will generate, to maintain the NIS central files system for both completed and ongoing investigations, and to assist in managing and accounting for NIS resources. The balance of the increase, $.2 million, is required for annualization of the civilian substitution program, annualization of the classified pay raise offset by computer rental and maintenance of a UNIVAC 1108.

Budget Activity 7: CENTRAL SUPPLY AND MAINTENANCE
SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 Compared With 1974
A. Air Systems Technical Support	$781,467	$906,488	$859,704	$-46,784
B. Ordnance Systems Technical Support	281,024	269,913	293,010	+23,097
C. Ship Systems Technical Support	330,328	360,029	345,081	-14,948
D. Electronics Systems Technical Support	72,379	70,919	72,698	+1,779
E. Facilities Technical Support	119,116	120,031	141,829	+21,798
F. Supply Support	423,150	422,086	479,158	+57,072
G. Material Command & Support	43,878	54,212	54,911	+699
Total direct obligations in budget document	$2,051,342	$2,203,678	$2,246,391	$+42,713

Budget Activity 7: Central Supply and Maintenance

(In thousands)
FY 1975 Estimate - $2,246,391
FY 1974 Estimate - $2,203,678
FY 1973 Actual - $2,051,342

Introduction

This program finances the supply, maintenance, technical and other logistic support required by the operating forces of the Navy. Responsibility is assigned, depending on its nature, to one of the six Systems Commands for central management. Examples are: rework of missiles and overhaul of Naval and Marine Corps aircraft; installation of equipment and modification kits for in service aircraft and missiles; the rework of air and ship ordnance, electronic and other components; the operation of the Navy's supply system; and the provision of engineering and technical support for equipment and weapons. Support is provided through supply depots and stations throughout the United States, six Naval Aviation Rework Facilities, nine Naval Shipyards, twelve ammunition and ordnance depots and weapons stations, and private industrial contractors.

The functions financed by this budget activity are presented in a program structure which is descriptive of the wide range of logistics support provided to the Fleet as well as the functional specialities of the Systems Commands and Project Offices comprising the Naval Material Command.

The fiscal year 1975 budget request of $2,246.4 million is $42.7 million more than the fiscal year 1974 program, however; included in this request is $49.7 million cost of a non-discretionary nature. These include such things as $19.0 million for annualization of the October 1973 classified pay raise and wage board increases, $11.6 million fuel price increases, $13.4 million for the full year costs of engineering services transferred from procurement appropriations and $5.7 million contractor repair of aviation components previously funded under procurement appropriations. Adjusting for these, this program is decreasing by a net of $7.0 million from fiscal year 1974.

The significant program changes, other than the non-discretionary type are increases of $16.6 million for major repair projects to correct serious facility deficiencies related to safety, habitability and readiness, $10.1 million for additional support of the MK-48 ASW torpedo program, $10.0 million related to efforts to improve reparable asset management, and $9.7 million to provide collateral equipment for approved military construction projects. These increases are more than offset by decreased Mid-East costs of $32.4 million, one time costs in FY 1974 due to a change in the billing procedures for nuclear fuelof $16.0 million; and a headquarters reduction of $7.9 million in staffing.

This headquarters reduction of $7.9 million is a reduction of 511 end strength below FY 1974. Other reductions in headquarters support costs such as travel and increases for pay raises and health benefits result in a net decrease of $6.3 million.

(In thousands)
FY 1975 Estimate - $859,704
FY 1974 Estimate - $906,488
FY 1973 Actual - $781,467

Budget Program A : Air Systems Technical Support

Purpose and Scope of Work

The Air Systems Technical Support Program provides for the centrally managed logistic programs assigned to the Naval Air Systems Command. The largest program is the depot level maintenance, rework, overhaul and repair of Naval aircraft, engines, air-launched weapons and other aviation-related equipment. This work is accomplished largely at Navy-operated, special purpose, industrial facilities. Contracts with private industry are employed for mission support items for which an in-house capability has not been achieved or for which the establishment of such a capability is not practical. The Naval Air Systems Command also administers other aviation logistic support programs such as the maintenance and repair of aircraft carrier catapults and arresting gear, the maintenance of ground support equipment, field operations such as Naval plant representatives at contractors' plants, calibration services for fleet aviation equipment, and various engineering services in direct support of fleet operations.

Justification of Funds

The fiscal year 1975 budget request for Air Systems Technical Support is $859.7 million, a net decrease of $46.8 million below the fiscal year 1974 level. This reduction is primarily the result of the transfer of funding responsibility for second destination transportation to the Naval Supply Systems Command ($37.8 million). The balance of the decrease is the decline in Mid-East Support costs ($19.8 million), a reduction in Headquarters staffing ($2.8 million), and reduced logistic support ($5.3 million), partially offset by the full year costs of engineering services which was transferred from procurement funding in FY 1974 ($13.4 million) and contractor repair of aviation components previously funded in procurement appropriations ($5.7 million).

(1) Aircraft Rework and Maintenance

(In thousands)
FY 1975 Estimate - $583,522
FY 1974 Estimate - $601,285
FY 1973 Actual - $481,786

This budget project provides for the maintenance and repair of fleet aircraft, engines and components and other support provided to fleet aviation forces. In fiscal year 1975, $583.5 million is requested here for aircraft rework and maintenance for active fleet forces. In addition, $21.3 million is budgeted elsewhere for the Research and Development and other customer aircraft rework requirements. Thus the total aircraft rework and maintenance program is $604.8 million, as shown in the following table:

(Dollars in Millions)

	Fiscal Year 1973 Units	Fiscal Year 1973 Costs	Fiscal Year 1974 Units	Fiscal Year 1974 Costs	Fiscal Year 1975 Units	Fiscal Year 1975 Costs
Aircraft	1461	$173.1	1561	$217.7	1560	$213.2
Engines	6871	83.4	5678	81.0	5284	82.4
Components		182.7		213.3		220.9
Supporting Program		66.8		108.4		88.3
TOTAL GROSS PROGRAM		$506.0		$620.4		$604.8
Reimbursement from Research, Development Test & Evaluation, Navy		-17.4		-17.7		-19.9
Reimbursement from Other Sources		- 6.8		- 1.4		- 1.4
TOTAL O&M,N		$481.8		$601.3		$583.5

The fiscal year 1975 estimate provides $213.2 million for 1560 aircraft reworks as compared with $217.7 million and 1561 aircraft reworks in fiscal year 1974. The number of aircraft reworks depends on the average operating aircraft strength and the average maintenance cycle time. Aircraft are scheduled for rework based on the maintenance cycle interval for each particular aircraft model. The length of the maintenance cycle is continually being examined and revised to ensure that the time between reworks is optimum to minimize the number of reworks required. Criteria such as individual model peculiarities and age govern the type and extent of rework required for each aircraft model.

The engine overhaul and repair program is intended to provide sufficient operable engines plus a minimum reserve pool to support fleet operations. The fiscal year 1975 estimate of $82.4 million for engine overhauls and repairs will provide for 5284 engines as compared with $81.0 million for 5678 engines in fiscal year 1974. This program reflects a continuing movement of less costly repairs to intermediate maintenance facilities funded in other areas of this budget.

Engine overhaul requirements are computed by compiling, by type engine, the number of engine operating hours required to support the prescribed flying hour program. The engine operating-hour requirement for each type of engine is then divided by the maximum number of operating hours permissible between overhauls to determine the number of engine overhauls which must be made during the next year. This number is then adjusted after considering the number of ready-for-issue engines in the pool and the quantity of new engines to be received from production. Engine repair estimates provide for the return to service of damaged or prematurely failed engines and are based on historical engine failure rates and repair costs.

The component repair program is related to the aircraft flight operations. To support the fiscal year 1975 flying hour program $220.9 million is requested for overhaul and repair of components. This is $7.6 million above the fiscal year 1974 level of $213.3 million.

Funding of $88.3 million is requested in fiscal year 1975 for aircraft reworks Supporting Programs of which $62.3 million is requested for preservation of aircraft for shipment overseas, emergency aircraft repairs, technical services for fleet activities and the processing of material on a priority basis to relieve critical supply shortages. The balance of $26.0 million is required for installation of modification kits and equipment (commercial/field teams). The reduction in this program in FY 1975 reflects primarily the decrease in Mid-East and Readiness supplemental requested in FY 1974.

(2) Air-Launched Weapons Rework and Maintenance

(In thousands)
FY 1975 Estimate - $20,251
FY 1974 Estimate - $20,177
FY 1973 Actual - $20,354

This budget project provides for the rework and maintenance of air-launched missiles, targets, ordnance and ammunition. A three year comparison of the estimates is provided in the following table:

	(In Thousands)		
	FY 1973	FY 1974	FY 1975
Air-Launched Missiles/Targets	$15,905	$15,889	$15,976
Air-Launched Ordnance/Ammunition	4,449	4,288	4,275
TOTAL	$20,354	$20,177	$20,251

Air-Launched Missiles/Targets. Funds are provided for depot maintenance, fleet support and engineering services for the SIDEWINDER, SPARROW, BULLPUP, BULLDOG, WALLEYE, SHRIKE, STANDARD ARM, PHOENIX and CONDOR missiles. The fiscal year 1975 estimate reflects a slight increase over fiscal year 1974 due to classified pay increase.

Air-Launched Ordnance/Ammunition. Funds are provided for rework, maintenance and modification of ammunition, aircraft armament, air-launched special weapons, and engineering services for both expendable and non-expendable ordnance. The fiscal year 1975 estimate is essentially level with fiscal year 1974.

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(3) Field Operations

(In thousands)
FY 1975 Estimate - $91,278
FY 1974 Estimate - $92,441
FY 1973 Actual - $89,554

This budget project provides general operational and logistic support for 19 Naval Air Systems Command field activities and supports the command and administration functions of the Naval Air Systems Command headquarters. Funds in this program provide for day-to-day operating expenses including personnel costs, supplies and materials, automatic data processing, equipment maintenance, and repair services. A three year comparison of the estimates is provided in the following table:

(In thousands)

	FY 1973	FY 1974	FY 1975
Field Activities	$49,308	$56,052	$57,729
Command and Administration	40,246	36,389	33,549
TOTAL	$89,554	$92,441	$91,278

Field Activities. Funds are required to support inspection and contract administration services performed by nine Navy representatives offices at contractors' plants, technical liaison with the fleet provided by two Naval Air Systems Command Representatives and various maintenance and engineering service offices. The fiscal year 1975 estimate is $1.6 above fiscal year 1974; however, included is $3.7 million decrease related to a travel reduction and reduced logistics and maintenance engineering support to operating forces, which is partially offset by an increase of $2.1 million for the classified pay raise effective October 1973; $.2 million for civilian medical health insurance, $.3 for civilian substitution; $1.7 for property disposal and $1.0 for readiness increase.

Command and Administration. $33.5 million is requested for the salaries and administrative expense of the Naval Air Systems Command Headquarters in fiscal year 1975. The Command is responsible for design, development, procurement, and logistics support of Naval aircraft, air-launched weapons systems and related support equipment. The fiscal year 1975 estimate provides for an end-strength of 1,308 personnel, a reduction of 153 personnel below the fiscal year 1974 employment level. The net decrease of $2.8 million in fiscal year 1975 reflects a reduction of $3.4 million in personnel costs, partially offset by $.6 million for classified pay raise and medical health insurance.

(4) Supporting Programs

(In thousands)
FY 1975 Estimate - $164,653
FY 1974 Estimate - $192,585
FY 1973 Actual - $189,773

Supporting programs provide funding required for the maintenance, repair and overhaul of Catapults and Arresting Gear and operational ground support equipment. They also provide for second destination transportation of aviation material and a number of smaller aviation logistics, maintenance and engineering programs. The fiscal year 1975 estimate for supporting programs is $164.6 million, reflecting a decrease of $27.9 million below fiscal year 1974.

A three year comparison of the estimates is provided in the following table:

	(In thousands)		
	FY 1973	FY 1974	FY 1975
Catapults and Arresting Gear	$26,705	$24,771	$25,141
Second Destination Transportation	62,481	37,760	-
Logistics, Maintenance and Engineering Support	100,587	130,054	139,512
TOTAL	$189,773	$192,585	$164,653

Catapults and Arresting Gear. The objective of this program is to ensure the safe and efficient operation of modern high-performance aircraft from carriers and shore bases. The funds provide for the modification, maintenance and cyclical overhaul of aircraft launching and recovery systems aboard aircraft carriers; repair of airfield lighting and other shore-based landing aids, and the rehabilitation of Short Airfield and Tactical Support (SATS) equipment. The increase of $.4 million in FY 1975 reflects increase for fleet readiness.

Second Destination Transportation. Funds are required for the movement of material, including expendable ordnance, aircraft spares and weapon support equipment between Naval activities. This program also provides for costs of terminal services incurred in the movement of aviation material and equipment. A functional transfer of this program from NAVAIR to NAVSUP is reflected in FY 1975.

Logistics, Maintenance and Engineering Support. Funds are required for a variety of programs which directly and indirectly support fleet operations. These programs include the maintenance and calibration of test equipment and other ground support equipment, contract and in-house engineering services in response to equipment design and maintenance problems in the fleet, and maintaining fleet aviation technical publications. Other examples are maintenance services required for

inactive, stored aircraft and installation and overhaul of meteorological equipment. The net increase of $9.4 million in FY 1975 primarily reflects the first full year costs of the transfer of contract engineering technical services function for in-production aircraft from the procurement appropriation to Operations and Maintenance, Navy appropriations ($13.4 million) partially offset by decreases in sustained engineering for aircraft systems ($1.4 million), airborne mine countermeasures ($.5 million), weapons range support ($.5 million), and a wide variety of logistic and engineering support service programs ($1.6 million).

Budget Program B: Ordnance Systems Technical Support

(In thousands)
FY 1975 Estimate - $293,010
FY 1974 Estimate - $269,913
FY 1973 Actual - $281,024

Purpose and Scope of Work

Funds requested for this budget program are under the management responsibility of the Naval Ordnance Systems Command and are requested for providing technical support functions for: (1) surface launched ordnance; (2) receipt, segregation, storage and issue of ammunition; (3) shipboard weapons systems; i.e., fire control radar, weapons direction equipment and launchers; (4) mines and torpedoes; (5) miscellaneous supporting programs in the field of ordnance support including explosive safety; and (6) special support and training equipment. The objective of the Ordnance Systems Technical Support Program is to provide ordnance and components thereof to the fleet where and at the time required.

Justification of Funds

The funds requested in the fiscal year 1975 budget program total $293.0 million, or an increase of $23.1 million above the fiscal year 1974 funding level. This net increase is reflected in conventional ordnance rework and maintenance ($8.7 million), anti-submarine warfare program ($10.1 million) and the surface missile rework program ($4.8 million) offset by a decrease in field operations ($.5 million). These four major areas are discussed in more detail below.

(1) Ordnance Rework, Maintenance and Support

(In thousands)
FY 1975 Estimate - $136,435
FY 1974 Estimate - $127,762
FY 1973 Actual - $148,540

Ordnance rework, maintenance and support includes the rework and maintenance of both expendable and non-expendable ordnance and various supporting programs including industrial preparedness. This project provides ready-for-issue ordnance and ammunition for the Fleet in adequate quantities and types to meet operations requirements and also general operating expenses, maintenance of equipment, minor construction projects, public works operations and military support costs at activities of the Naval Ordnance Systems Command (except research and development activities). A three year comparison of the estimates is as follows:

	(In thousands) FY 1973	FY 1974	FY 1975
Ordnance Rework and Maintenance	$62,357	$45,667	$54,440
Support Programs	45,901	47,289	48,547
Receipt, Segregation, Storage & Issue of Ammunition (RSS&I)	40,282	34,806	33,448
TOTAL	$148,540	$127,762	$136,435

Ordnance Rework and Maintenance - Included in this program are the rework of ammunition, special weapons, night vision devices, weapons control switchboards, gun fire control systems and launchers, mines and other ordnance material. The increase of $8.7 million above the fiscal year 1974 level is due mainly to (1) the updating of Explosive Ordnance Disposal publications ($1.8 million); (2) the direct budgeting for a portion of the costs of disposal of surplus property ($6.2 million); and (3) increased fuel pricing ($.5 million).

Support Programs - Included in this program are support of quality evaluation and metrology, military functions not related to or in support of production facilities at ordnance stations, industrial readiness and other services, materials and equipment required in support of the Naval Ordnance Systems Command technical effort. The increase of $1.3 million from fiscal year 1974 to fiscal year 1975 is made up of facilities management costs at industrial activities ($.4) and increased technical publications, quality evaluation and other maintenance support, ($2.5) partially offset by a $1.6 million decrease in logistics support primarily related to shore establishment realignment costs in fiscal year 1974.

Receipt, Segregation, Storage and Issue of Ammunition (RSS&I) - This program provides for personnel and material costs associated with ammunition movements such as: on-loading and off-loading of Navy and Coast Guard vessels, movements to and from ammunition depots and stations, and movements within depots and stations for segregation, temporary storage, restorage and relocation. Terminal services funded in FY 1974 and prior years from this account has been transferred to Second Destination Transportation account in the Naval Supply Systems Command in FY 1975 ($1.0 million).

(2) Field Operations

(In thousands)
FY 1975 Estimate - $27,488
FY 1974 Estimate - $27,967
FY 1973 Actual - $25,235

This budget project provides for support costs of the Naval Ordnance Systems Command's non-industrial field establishment and salaries and administrative expenses of the headquarters. A three year comparison of the estimates is as follows:

	(In thousands) FY 1973	FY 1974	FY 1975
Central Procurement Function	$ 4,456	$ 9,772	$ 9,616
Command and Administration	20,779	18,195	17,872
TOTAL	$25,235	$27,967	$27,488

Central Procurement Function

The non-industrial field establishment includes the Naval Plant Representative Offices which provide contract administration services for the Navy, Air Force, Army and other DOD procuring activities. In fiscal years 1974 and 1975 this line item also includes Project Manager Offices budgeted under Command and Administration in fiscal year 1973 at $2.0 million as well as Project Manager Offices for Anti-Submarine Warfare Systems and NATO SEASPARROW which were included under Support Programs at $2.8 million in fiscal year 1973.

Command and Administration

This program provides civilian salaries and related expenses for administering the Naval Ordnance Systems Command Headquarters operations. Civilian staffing has been reduced by .6 million in FY 1975 partially offset by civilian pay raises and health insurance.

(3) Anti-Submarine Warfare Systems Rework and Maintenance

(In thousands)
FY 1975 Estimate - $51,645
FY 1974 Estimate - $41,522
FY 1973 Actual - $37,906

This budget project supports the full range of anti-submarine warfare (ASW) effort. The program objective is to attain and maintain an acceptable level of ASW readiness in the active Fleet through efforts ranging from equipment maintenance/restoration to required effectiveness tests and systems engineering on a wide variety of complex anti-submarine weapons/systems. A comparison of the fiscal year 1975 request with that of prior years is as follows:

	(In thousands)		
	FY 1973	FY 1974	FY 1975
Torpedo Program	$14,087	$18,258	$24,103
Underwater Fire Control Program	3,937	4,454	3,966
ASROC/SUBROC Program	6,880	9,104	8,965
Other ASW Support Programs	4,008	4,013	3,795
ASW Underwater Ordnance Fleet Support	8,994	5,693	10,816
TOTAL	$37,906	$41,522	$51,645

The increase in program funding of $10.1 million reflects additional support for the MK-48 Torpedo intermediate and depot-level repair support and initiation of MK-48 in-service maintenance engineering and inventory control management efforts. Funds are also included for the necessary continuity in the areas of product improvement and enhanced reliability and maintainability to the MK-48 Torpedo program previously funded under RDT&E.

(4) Surface Missile Systems Rework and Maintenance

(In thousands)
FY 1975 Estimate - $77,442
FY 1974 Estimate - $72,662
FY 1973 Actual - $69,343

The surface missile rework and maintenance program provides in-service engineering and material maintenance support to STANDARD, TERRIER, TARTAR and TALOS missiles and related weapons systems. Support is also provided for Point Defense, Anti-Ship Missile Defense systems, AEGIS Technical Fleet Support, Standard Surface-to-Surface Missile Capability (SSSMC), airborne ECM/ECCM and search radars. This program funds the labor and material required for maintenance, overhaul, repair and check-out of guided missiles, launchers, fire control systems, weapons direction equipment, search radars and related test equipment. A comparison of the fiscal year 1975 request with that of prior years is as follows:

	(In thousands) FY 1973	FY 1974	FY 1975
3T Missile Program	$42,956	$42,750	$45,054
Point Defense	4,069	5,500	4,250
Airborne ECM/ECCM	2,322	1,950	1,833
SSSMC	2,500	2,908	3,521
Search Radar	13,877	11,822	15,086
AEGIS Technical Fleet Support	-	1,200	1,274
ASMD Rework and Maintenance	3,619	6,532	6,424
TOTAL	$69,343	$72,662	$77,442

The increase of $4.8 million in FY 1975 is due mainly to increased costs for missile rework and maintenance ($2.3 million) and Search Radar engineering services and other support ($3.3 million), and miscellaneous decreases.

Budget Program C: Ships Systems Technical Support

(In thousands)
FY 1975 Estimate - $345,081
FY 1974 Estimate - $360,029
FY 1973 Actual - $330,328

Purpose and Scope of Work

This budget program provides for ship oriented engineering, technical, maintenance and logistics programs centrally administered by the Naval Ship Systems Command. These efforts include the activation of ships and craft, rehabilitation of nuclear, electronic, electrical and mechanical equipments, maintenance and technical engineering services, ship machinery design services, technical publications and maintenance of inactive ship and craft. This budget program also finances services essential to the ship construction program and planning and technical guidance necessary for the maintenance and operation of Active Fleet Ships. The operation of command headquarters and shore activities under the control of the Naval Ship Systems Command, including the Supervisors of Shipbuilding, Naval Ship Engineering Offices, Inactive Ship Maintenance Facilities and the non-industrial functions at Naval Shipyards complete funding responsibilities for this program.

Justification of Funds

The fiscal year 1975 request for Ships Systems Technical Support is $345.0 million, a net decrease of $14.9 million below fiscal year 1974. This decrease is due primarily to the one time cost in fiscal year 1974 to pay bills for the consumption of nuclear fuel for FY 1972 and prior years based on a new Atomic Energy Commission billing procedure, plus a transfer in function to the Naval Supply Systems Command for the payment of second destination transportation costs. These decreases are offset somewhat by increases in Field Operations and Training and other logistics support.

(1) Field Operations

(In thousands)
FY 1975 Estimate - $80,761
FY 1974 Estimate - $79,744
FY 1973 Actual - $77,058

This budget project funds the general operational and support costs of the Naval Ship Systems Command's field establishment. Included in this project is the funding support of the Naval Ship Systems Command Headquarters, the offices of the Supervisor of Shipbuilding and component organizations of the Naval Ship Engineering Center. The increase in Supervisor of Shipbuilding funding is related to the October 1973 payraise ($1.7 million) and additional personnel required for support of Ship Construction and Conversion workload ($1.3 million). The increase in the Naval Ship Engineering Center in fiscal years 1974 and 1975 and a corresponding decrease in Naval Ship Systems Command Headquarters reflects an adjustment to incorporate the Secretary of Defense guidance to make headquarters operations uniform for the three services. The planned staffing levels for the Naval Ship Systems Command Headquarters reflects a reduction from 997 civilian personnel in fiscal year 1974 to 862 in fiscal year 1975 in line with the overall Navy policy on headquarters activities.

A three year comparison of the estimates is provided in the following table:

	(In thousands) FY 1973	FY 1974	FY 1975
Command and Administration	$32,221	$21,847	$20,430
Naval Ship Engineering Center	1,131	10,089	9,545
Supervisor of Shipbuilding	43,706	47,808	50,786
	$77,058	$79,744	$80,761

(2) Ship Maintenance Programs

(In thousands)
FY 1975 Estimate - $108,897
FY 1974 Estimate - $108,295
FY 1973 Actual - $107,486

This budget project funds maintenance and repair programs and programs providing various maintenance services to the Fleet. Included in this project are maintenance engineering support to Active Fleet Ships, the repair and restoration of major ship equipments and planning support for ship overhauls and ship alterations. The support of the Inactive Ship Maintenance Facilities are also included in this project. Decreased requirements for Ship Inactivations ($1.1 million) and Refit and Restoration ($1.1 million) are offset by increased requirements for Acoustic Trials ($0.6 million), Technical Publication Support to the Fleet ($0.5 million), and by a requirement to cover a portion of property disposal costs with direct vice reimbursable funding ($1.7 million). A three year comparison of the estimates is provided in the following table:

	(In thousands) FY 1973	FY 1974	FY 1975
Inactive Ship Maintenance Programs	$ 8,008	$12,736	$11,630
Fleet Maintenance Services	9,008	9,119	9,276
Fleet Maintenance Technical Support	37,514	36,416	36,604
Planning and Engineering for Repair & Alterations	11,322	11,957	11,697
Refit and Restoration of Shipboard Equipment	34,655	32,327	31,186
Acoustic Trials	1,770	1,795	2,365
Technical Publications	5,209	3,945	4,441
Property Disposal	-	-	1,698
	$107,486	$108,295	$108,897

(3) Ships Technical Support

(In thousands)
FY 1975 Estimate - $155,423
FY 1974 Estimate - $171,990
FY 1973 Actual - $145,784

This project funds several categories of ship related technical, engineering, industrial and logistics support. Included are military support services at shipyards operating under the Navy Industrial Fund as well as utilities and maintenance support of non-industrial portions of Naval shipyards and industrial engineering effort associated with the Shipyard Modernization Program. Nuclear engineering and technical support of the Shipboard Nuclear Propulsion program are also funded under this budget project as is the Naval Ship Systems Command's support of anti-submarine warfare programs and other ship and shipboard equipment technical and engineering effort. Industrial preparedness programs are also a part of the request in this budget project. The fiscal year 1975 decrease of $16.6 million primarily reflects the funding in fiscal year 1974 of prior year costs for the reprocessing of nuclear cores because of a change in the Atomic Energy Commission's billing procedure and the consolidation of second destination transportation in the Naval Supply Systems Command. These decreases are offset somewhat by increased requirements for training and other logistics support. A three year comparison of the estimates is provided in the following table:

	(In thousands) FY 1973	FY 1974	FY 1975
Transportation	$ 9,229	$ 8,436	$ -
Industrial Preparedness	138	150	150
Training and Other Logistics Support	22,307	20,634	26,649
Ship Acquisition Support	8,807	9,272	9,462
Ship Industrial Support	25,969	49,024	49,245
Technical and Engineering Support	65,624	68,269	53,861
Anti-Submarine Warfare Support	13,710	16,205	16,056
	$145,784	$171,990	$155,423

Budget Program D: Electronic Systems Technical Support

(In thousands)
FY 1975 Estimate - $72,698
FY 1974 Estimate - $70,919
FY 1973 Actual - $72,379

Purpose and Scope of Work

This budget program, administered by the Naval Electronic Systems Command, finances the electronic material support to the Navy and Marine Corps, and in some cases, the Coast Guard. The Commands's material support responsibilities in Budget Activity 7 include: engineering design, technical services, acceptance testing, installation, restoration, and overhaul of electronic equipment and systems to insure a reliable communications capability for the Navy.

Justification of Funds

The fiscal year 1975 budget request for Electronic Systems Technical Support is $72.7 million, an increase of $1.8 million above the fiscal year 1974 amount. The increase is required for the installation of electronic equipment in the Combat Systems Maintenance Training and Testing Facility ($1.2 million); the medical insurance, wageboard, and classified payraises ($1.4 million); and $0.9 million for the overhaul of electronic equipment in training centers and Fleet cryptographic and radiac equipment. This increase is offset by a reduction of $0.7 million in field operating costs and $1.0 million in other support costs.

(1) Electronic Engineering and Technical Support

(In thousands)
FY 1975 Estimate - $45,021
FY 1974 Estimate - $42,779
FY 1973 Actual - $44,970

This budget project finances engineering and technical services required in the support of electronic equipment, the maintenance of complex test equipment for the Naval Operating forces, the repair and overhaul of cryptographic devices for the Fleet, the major repair of end and secondary items of equipment including electronic modules, the maintenance of radiac equipments for the Naval establishment, and the installation and maintenance of electronic and communications equipment at training centers. The increase of $2.3 million reflects the net result of a $1.2 million increase for medical insurance and payraises, an increase of $2.1 million for the installation and major repair of electronic equipment, partially offset by a reduction of $1.0 million in other support costs.

(2) Field Operations

(In thousands)
FY 1975 Estimate - $27,677
FY 1974 Estimate - $28,140
FY 1973 Actual - $27,409

This budget project finances the operations of the Naval Electronic Systems Command Headquarters and eight field activities strategically located for the efficient management of global electronic responsibilities. The field activities vary in size, location, and individual responsibilities but have the common objective of providing communications and electronics support to all Navy and Marine Corps installations. Their varied functions include site surveys, preparation of electronic installation engineering plans for new or modified communications facilities, and the maintenance engineering and certification of electronic equipment prior to acceptance by the Operating Forces. Staffing for the headquarters for the Naval Electronics Systems Command has been reduced by $1.0 million partially offset by the medical insurance and classified payraise. The increase in the Electronics Engineering Center is also due to the medical insurance and classified payraise. A three year comparison is provided in the following table:

	(In thousands) FY 1973	FY 1974	FY 1975
Electronic Engineering Centers	$12,677	$13,363	$13,601
Command and Administration	$14,732	$14,777	$14,076
	$27,409	$28,140	$27,677

Budget Program E: Facilities Technical Support

(In thousands)
FY 1975 Estimate - $141,829
FY 1974 Estimate - $120,031
FY 1973 Actual - $119,116

Purpose and Scope of Work

This budget program provides funding for Navy-wide technical engineering support administered by the Naval Facilities Engineering Command and six field divisions; maintenance and operation of three Construction Battalion Centers supporting the Naval Construction Force; centrally managed facilities support such as major repair and minor construction projects; initial outfitting of collateral equipment, including personnel support equipment for certain line items of the Navy Military Construction Program; Pollution Abatement Projects; mission support of nine Public Works Centers providing services to activities within the complex where located and various other technical engineering and supporting services.

Justification of Funds

The funds requested in fiscal year 1975 are $21.8 million more than fiscal year 1974. This is a net result of increases of $20.9 million for Facilities Management and Technical Engineering and $1.6 million for Construction Battalion Centers, and a decrease of $.7 million for Field Engineering Direction and Support.

(1) Facilities Management and Technical Engineering

(In thousands)
FY 1975 Estimate - $65,779
FY 1974 Estimate - $44,838
FY 1973 Actual - $46,458

This budget project supports Navy centrally managed programs related to Facilities Management and Technical Engineering such as Collateral Equipment, Pollution Abatement and NIF Public Works Center support. The increase of $20.9 million in the fiscal year 1975 program above the fiscal year 1974 program is a net increase resulting from:

(a) An increase for Collateral Equipment required for initial outfitting based on construction completion schedules. +$9.7 million

(b) An increase for Major Repair Projects to correct serious facility deficiencies related to safety, habitability and readiness. +$16.6 million

(c) A decrease for Second Destination Transportation consolidated in the Naval Supply Systems Command. - $6.4 million

(d) Miscellaneous small program increases. + $1.0 million

(2) Field Engineering Direction and Support

(In thousands)
FY 1975 Estimate - $40,772
FY 1974 Estimate - $41,479
FY 1973 Actual - $40,546

This budget project supports the Naval Facilities Engineering Command Headquarters, which acts as the Navy technical advisor and coordinator in relation to the Command's assigned mission; six Engineering Field Divisions, which provide technical support to the Navy for facilities planning and management, family housing, real estate and environmental protection; and several smaller activities. The decrease of $.7 million in the fiscal year 1975 program below the fiscal year 1974 program results from decreases of $.3 million for the Engineering Field Divisions reflecting a one-time effort supporting Shore Establishment Realignment not required in 1975, and $.5 million for Command and Administration partially offset by health insurance and pay raise increases. A three year comparison is provided in the following table:

	(In thousands)		
	FY 1973	FY 1974	FY 1975
Command and Administration	$ 9,314	$ 8,916	$ 8,495
Field Activities	31,232	32,563	32,277

(3) Construction Battalion Center Operations

(In thousands)
FY 1975 Estimate - $35,278
FY 1974 Estimate - $33,714
FY 1973 Actual - $32,112

This budget project supports the maintenance and operation of three Construction Battalion Centers which provide logistic support for the Naval Construction Force; stock point operations for Civil Engineering Support Equipment; Advanced Base Functional Component Design and Engineering and a wide variety of military personnel and tenant activity support functions; and for the Defense Standardization Program.

The increase of $1.6 million in the fiscal year 1975 program above the fiscal year 1974 program reflects additional functions assigned to Construction Battalion Centers because of the closure of other activities as a part of the Shore Establishment Realignment.

Budget Program F: Supply Support

(In thousands)
FY 1975 Estimate - $479,158
FY 1974 Estimate - $422,086
FY 1973 Actual - $423,150

Purpose and Scope of Work

Funds requested under this budget program are to support functions under the responsibility of the Naval Supply Systems Command. The Naval Supply Systems Command has responsiblity for the operation of eight stock point activities located in the Continental United States engaged in the receipt, storage, and distribution of military supply items. These activities form the core of the Navy supply and accounting network required to sustain the operating forces and Navy shore establishment.

Naval Supply Systems Command responsiblities also include the operation of Navy Inventory Control Points engaged in the management of supply requirements, utilizing to the maximum extent possible logistics support programs that are designed to improve fleet readiness, support weapon systems, and effect economies in supply operations and inventory investment.

The Naval Supply Systems Command is also responsible for financing the second destination transportation costs of material of all systems commands comprising the Naval Material Command. This includes the worldwide movement of aeronautical and ordnance material, ships support material, construction material, stock material, and the transportation of military mail and navy exchange merchandise to overseas destinations.

Other responsibilities of the Naval Supply Systems Command include financing navy commissary store operations, port terminal services, supply departments of naval shipyards, and other supporting activities and services.

Justification of Funds

Total funds requested by the Naval Supply Systems Command in fiscal year 1975 amount to $479.2 million. This amount reflects an increase of $57.1 million from the level funded in fiscal year 1974. The major portion ($53.6 million) of this increase is related to the assumption of budgetary responsibility for transportation and terminal services which prior to fiscal year 1975 was reflected in the budgets of other Commands of the Naval Material Command. This increase has been offset by like reductions in the budgets of the Commands affected.

(1) Supply Depot Operations

(In thousands)
FY 1975 Estimate - $123,669
FY 1974 Estimate - $120,071
FY 1973 Actual - $122,216

The program objectives of the Navy and the force levels to be supported are utilized in determining workload requirements at stock point activities. These requirements are projected on the basis of a proven historical relationship which exists between selected supply workloads at these supply outlets and the operating forces - ships, aircraft, and men.

The funds requested in fiscal year 1975 are $3.6 million above the fiscal year 1974 level. The additional funds requested reflect increases required for pay raises, maintenance and repair projects, storage aids, and improvements in reparables asset management. These increases are partially offset by reduced funding of supply workload and decreases related to base closures.

(2) Supply Management

(In thousands)
FY 1975 Estimate - $114,642
FY 1974 Estimate - $106,133
FY 1973 Actual - $104,573

The major considerations determining workload and funding requirements at inventory control points are the program objectives of the Navy: the operating forces to be supported and logistics programs that support weapon systems, produce economies in procurement practices, and increase fleet readiness. Funding requirements for Command reflect the minimum staffing necessary for the central control and direction of all functions which are the responsibility of the Naval Supply Systems Command.

Fiscal year 1975 funding requirements reflect an increase of $8.5 million above the fiscal year 1974 level. The major increases in fiscal year 1975 are related to efforts to improve reparables asset management, pay raises, and maintenance and repair projects. These increases are partially offset by decreases primarily related to base closures, functional transfers, and reduced funding of supply workload and command staffing. Command staffing has decreased by $.4 million, partially offset by health insurance and pay raises.

The following table reflects a comparison of funding requirements by major category included under this program:

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	(In thousands) FY 1973	FY 1974	FY 1975
Inventory Control Points	$97,505	$99,384	$108,192
Command & Administration	7,068	6,749	6,450
TOTAL	$104,573	$106,133	$114,642

(3) Other Supply Activities and Support

(In thousands)
FY 1975 Estimate - $240,847
FY 1974 Estimate - $195,882
FY 1973 Actual - $196,361

Funding requirements for transportation, terminal operations, and supply departments of naval shipyards are based on the force levels, tempo of operations, and other known requirements to be supported. Commissary stores funding is related to staffing requirements determined on the basis of projected sales volumes and support of the Navy Resale Systems Office, Brooklyn, New York. Funding of other supporting activities and services is determined on the basis of periodic reviews of each activity or service concerned.

The table below reflects a comparison of funding requirements by major category included under this budget project:

	FY 1973	FY 1974	FY 1975	Change FY 74 to FY 75
Transportation and Terminal Services	$140,543	$130,169	$179,498	$ +49,329
Commissary Stores	30,908	35,146	39,164	+4,018
Supply Departments of Naval Shipyards	6,898	5,688	5,166	-522
Other Supporting Activities & Services	18,012	24,879	17,019	-7,860
	$196,361	$195,882	$240,847	$ +44,965

Transportation and Terminal Services: The major increases in fiscal year 1975 results from (1) the transfer to this program of budgetary responsibility for costs of transportation and terminal services formerly reflected in other programs of the Naval Material Command budget as indicated below, (2) increased rates due to POL price increases and (3) other rate increases. These increases are partially offset by program reductions.

(In thousands)

(1) Transfer of FY 1974 Base Amounts:	
Air Systems Technical Support	$37,760
Facilities Technical Support	6,388
Ships Systems Technical Support	8,436
Ordnance Systems Technical Support	1,000
Total FY 1974 Base Program	$53,584
(2) Rate increases due to POL price increases	6,012
(3) Other rate increases	1,000
Program reductions	-11,267
Fiscal Year 1975 Increase	$+49,329

Commissary Stores: The additional funds required for fiscal year 1975 are related to salary increases; workload increases; standards of service deficiencies; and increased reimbursement to the Navy Resale Systems Office, Brooklyn, N.Y. for support to the Commissary Stores Program.

Supply Departments of Naval Shipyards: The net reduction of $.522 million basically reflects the annualized impact of fiscal year 1974 shipyard closures.

Other Supporting Activities and Services: This category of funds finances other supporting activities such as Navy Regional Procurement Offices and the Navy Material Transportation Office. It also includes funds for support programs administered at the Headquarters level such as contract stevedoring, publications and printing, and Military Sealift Command Mideast readiness charges. The decrease of $7.860 million reflects reduced funding of supporting services, principally Military Sealift Command Mideast readiness charges ($-7.7 million), partially offset by increases related to pay raises and Navy Regional Procurement Offices workload requirements.

Budget Program G: Naval Material Command and Support

(In thousands)
FY 1975 Estimate - $54,911
FY 1974 Estimate - $54,212
FY 1973 Actual - $43,878

Purpose and Scope of Work

This budget program includes the headquarters of the Naval Material Command and Field Support Programs. The Naval Material Command is headed by the Chief of Naval Material who, as principal material executive of the Navy under the Chief of Naval Operations, has the responsibility of planning, directing, supervising and establishing overall policies for the work performed by the six Systems Commands and the Project Management Offices in all phases of material support to the operating forces of the Navy and the Marine Corps. The Naval Material Command also directs a research, development and test program to provide for the introduction of new weapons systems and techniques to the Fleet and to accelerate and improve overall fleet readiness.

Field support effort includes the Naval Material Command Support Activity and Navy-wide Employee Compensation Fund costs. The Naval Material Command Support Activity provides centralized common services functions for the Systems Commands, Project Managers and other offices. These functions consist of consolidated services for civilian personnel, accounting, and automated data processing and systems design. The Employee Compensation Fund provides for a fixed payment to the Department of Labor to cover the Navy's portion of actual expenditures for employee injury and death benefits and medical costs.

Justification of Funds

The fiscal year 1975 budget request for Naval Material Command and Support is $54.9 million. This is an increase of $.7 million over FY 1974 attributable to a $1.1 million increase for the Naval Material Command Support Activity partially offset by reductions of $.3 million for the office of the Chief of Naval Material and $.1 million for the Employee Compensation Fund.

(1) Headquarters

(In thousands)
FY 1975 Estimate - $7,793
FY 1974 Estimate - $8,068
FY 1973 Actual - $8,191

The fiscal year 1975 budget request for headquarters is $7.8 million, a decrease of $.3 million below fiscal year 1974. This estimate provides for 270 civilian personnel in FY 1975, a reduction of 31 below 1974 and 43 below 1973 in line with the policy of reducing Headquarters personnel and costs to minimum levels.

(2) Field Support

(In thousands)
FY 1975 Estimate - $47,118
FY 1974 Estimate - $46,144
FY 1973 Actual - $35,687

The fiscal year 1975 request for Field Support covers two projects: the Naval Material Command Support Activity and reimbursement to the Department of Labor's Employee Compensation Fund. The Naval Material Command Support Activity, providing essential personnel, accounting and other support for weapon system development, acquisition and maintenance, reflects an increase of $1.1 million in fiscal year 1975. This is comprised of $.1 million for the full year costs of the October 1973 classified pay increase and $1.0 million primarily related to implementation of the Naval Material Command's portion of the Navy-wide Integrated Financial Management System to provide comprehensive, accurate and timely data to program and functional area managers. In total, the fiscal year 1975 request of $17.0 million for the Naval Material Command Support Activity provides for 875 civilian personnel as compared with 834 in fiscal year 1974.

The reimbursement to the Department of Labor is for benefits paid to Navy employees and dependents for occupational injuries and deaths. The FY 1975 request of $30 million is required to cover actual expenditures paid by the Department of Labor in 1973. A two-year time lag exists between payments to employees and dependents by the Department of Labor and reimbursement to the agency by the Navy.

A three year comparison of Field Support Projects is as follows:

	FY 1973	FY 1974	FY 1975
Naval Material Command Support Activity	$14,641	$15,865	$16,971
Employees Compensation Fund	21,046	30,279	30,147
	$35,687	$46,144	$47,118

BUDGET ACTIVITY 8: TRAINING, MEDICAL AND OTHER GENERAL PERSONNEL ACTIVITIES
SUMMARY OF OBLIGATIONS

(In Thousands)

	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 compared with 1974
A Training	$177,841	$224,217	$210,737	$-13,480
B Naval Academy	27,177	27,925	29,568	+ 1,643
C Personnel Support	74,784	91,109	87,563	- 3,546
D Base Operations	116,928	127,235	163,397	+36,162
E Medical Support	325,958	362,532	427,404	+64,872
Total direct obligations in budget document	$722,688	$833,018	$918,669	$+85,651

Budget Activity 8: Training, Medical and Other General Personnel Activities

(In Thousands)
FY 1975 Estimate - $918,669
FY 1974 Estimate - 833,018
FY 1973 Actual - 722,688

Introduction

This budget activity finances: (1) training and education for officers and enlisted personnel; (2) the Navy Academy; (3) recruitment of personnel and other personnel oriented programs including personnel management and programs designed to enhance service attractiveness and career motivation; (4) base operations support and operating costs of the Bureau of Naval Personnel; and (5) medical care of active duty personnel and other eligible beneficiaries.

Budget Program A: Training

(In Thousands)
FY 1975 Estimate - $210,737
FY 1974 Estimate - 224,217
FY 1973 Actual - 177,841

Purpose and scope of work

The training and education supported by this program encompasses basic training of new Navy recruits and officers; professional education and technical training for officers and enlisted personnel; aviation training for pilots, other flight officers and air crews; and participation in the Navy Reserve Officer Training Corps Program and the Flight Instruction Program. Also included are the costs of volunteer off-duty education programs which provide opportunties for personnel to pursue their individual educational goals in line with the needs of the Navy; the printing of educational material; procurement and maintenance of various instructional aids; and training programs in Drug and Alcohol abuse control and Human Resources Development.

Justification of funds

(1) Recruit Training

(In Thousands)
FY 1975 Estimate - $4,077
FY 1974 Estimate - 3,004
FY 1973 Actual - 1,968

Recruit training provides general Navy orientation as well as basic technical and military training for personnel entering active duty status. The curriculum supports a transition period from civilian to military life prior to occupation skill training in Navy schools or experience on-the-job in the Fleet. The funds requested provide training for an average of 18,828 recruits in fiscal year 1975 as compared with 17,855 in fiscal year 1974 and 19,886 in fiscal year 1973. The increase of $1.1 million is requested for full year cost of the replacement of military personnel with civilians ($+.1 million), Human Goals training ($+.6 million), uniform alterations ($+.3 million), and supplies ($+.1 million).

(2) Specialized Training

(In Thousands)
FY 1975 Estimate - $47,902
FY 1974 Estimate - 38,285
FY 1973 Actual - 34,783

Training in a variety of specialized technical and operational skills is necessary to provide qualified personnel to meet modern Navy operational requirements. Courses in such areas as electronics warfare, transportation management, POLARIS/POSEIDON missile, damage control, nuclear power, sonar and radar systems, and the various specialized skills required in naval aviation are provided to officer and enlisted personnel at various schools. A net increase of $9.6 million over fiscal year 1974 is requested. This increase reflects full year cost of replacement of military personnel with civilians, the October 1973 graded pay raise and wage board increases, partially offset by civilian personnel reductions ($+3.3 million); increased cost of nuclear power plant operator training for Navy personnel in conjunction with AEC ($+1.5 million); utility cost increases ($+.7 million); transfers due to shore establishment realignment ($+.7 million); improved training techniques ($+1.1 million); other training programs, including Human Goals ($+1.0 million); and cost increases for material, supplies, and service contracts ($+1.7 million). These increases are partially offset by transfer of Medical Specialized Training to Budget Program E in fiscal year 1975 ($-.4 million).

	Average-on-Board			Comparative Costs ($000)		
	1973 Actual	1974 Estimate	1975 Estimate	1973 Actual	1974 Estimate	1975 Estimate
Specialized Training						
General	37,083	40,103	40,648	$34,426	$37,894	$47,902
Medical	2,894	3,454	-	357	391	-
TOTAL	39,977	43,557	40,648	$34,783	$38,285	$47,902

(3) Professional Training

(In Thousands)
FY 1975 Estimate - $19,645
FY 1974 Estimate - 32,854
FY 1973 Actual - 24,171

Professional training and education encompasses preparation of officers for higher command and staff responsibilities; instruction in joint operations for officers of all services; professional education in scientific, engineering and management curricula, and educational opportunities leading to advanced education in special programs for career enlisted personnel. The amount requested reflects a $13.2 million decrease from fiscal year 1974 which is the net effect of phasing out of the BS/BA program at the Naval Postgraduate School ($-1.5 million), reduction in degree seeking programs ($-.5 million), and other minor decreases ($-.1 million), partially offset by full year cost of civilian pay raises ($+.5 million) and Human Goals training programs ($+.2 million). In addition, Medical Professional Training including the Health Professions Scholarship Program is transferred to Budget Program E in the fiscal year 1975 request ($-11.8 million).

(3) Professional Training (Continued)

Professional Training	Average-on-Board 1973 Actual	Average-on-Board 1974 Estimate	Average-on-Board 1975 Estimate	Comparative Costs ($000) 1973 Actual	Comparative Costs ($000) 1974 Estimate	Comparative Costs ($000) 1975 Estimate
General	5,741	6,279	5,899	$17,551	$21,092	$19,645
Medical	1,941	1,934	-	5,535	6,472	-
Health Professions Scholarships	430	1,575	-	1,085	5,290	-
TOTAL	8,112	9,788	5,899	$24,171	$32,854	$19,645

(4) Flight Training

(In Thousands)
FY 1975 Estimate - $73,323
FY 1974 Estimate - 75,825
FY 1973 Actual - 52,357

This program provides for flight training to produce pilots for the Navy and Marine Corps. The funds requested finance the direct cost of operating aircraft including fuel, oil, and consumable supplies in support of pilot training; the operation and maintenance of a training carrier (USS LEXINGTON); and support costs for training squadrons, Naval Air Stations and the Naval Aviation Schools Command. The total estimate includes the following:

	FY 1973	FY 1974	FY 1975
Flight Operations	$30,048	$37,086	$46,957
Flight Support	17,018	18,962	19,648
Training Carrier (USS LEXINGTON)	5,291	16,026	6,643
Ship Alterations (USS LEXINGTON)	(348)	3,751	75
	$52,357	$75,825	$73,323

The fiscal year 1975 request reflects a decrease of $2.5 million from fiscal year 1974. The decrease is the net result of increased fuel costs ($+7.1 million), an increase in flying hours to support additional pilot and flight officer output in fiscal year 1975 ($+2.8 million), increase in the cost of refueling/defueling contracts and materials/supplies ($+.9 million), offset by a decrease in civilian personnel ($-.2 million) and the costs due to overhaul of the USS LEXINGTON in fiscal year 1974 ($-13.1 million).

(4) Flight Training (Continued)

A comparison of pilot output by type follows:

Type Pilot	FY 1973	FY 1974	FY 1975
Jet	656	583	662
Prop	457	423	498
Helo	537	445	494
TOTAL	1,650	1,451	1,654

(5) Overseas Dependents Schools

(In Thousands)
FY 1975 Estimate - -
FY 1974 Estimate - $18,905
FY 1973 Actual - 17,889

This program provides for elementary and secondary education for all eligible minor dependents authorized to accompany military and civilian Department of Defense personnel to overseas duty stations in the Atlantic area and for all eligible minor dependents of Marine Corps personnel stationed at various embassies throughout the world. Funding responsibility for this program is transferred to the office of the Assistant Secretary of Defense (Manpower and Reserve Affairs) beginning in fiscal year 1975.

(6) Naval Reserve Officer Training Corps

(In Thousands)
FY 1975 Estimate - $16,861
FY 1974 Estimate - 16,012
FY 1973 Actual - 13,252

The program supports training in essential naval subjects at civilian educational institutions in order to prepare young men for careers as commissioned officers of the Navy and Marine Corps. In the Junior Program, citizenship and military subjects are offered to high school students. The $.8 million increase is primarily increased costs for tuition/fees and books ($+.5 million); increased unit operating expenses ($+.2 million); and additional students under the Flight Instruction Program ($+.1 million).

(7) Other Training Support

(In Thousands)
FY 1975 Estimate - $48,929
FY 1974 Estimate - 39,332
FY 1973 Actual - 33,421

This program provides training support of a very broad nature, such as (1) the enlisted advancement system, including the development of examinations for advancement and special requirements, (2) the training publications and correspondence course programs, (3) current and long-range studies to support the advancement and training programs, and (4) tuition assistance for those servicemen participating in voluntary off-duty educational programs. Also included is the Navy-wide management of surface and subsurface training devices and simulators; and associated technical support. The net increase of $9.6 million will provide $.6 million for the tuition aid program to accommodate an increased percentage of requests for tuition aid; $1.8 million for implementation of the Navy Training Information System to improve management of education and training programs; $.8 million for full-year funding of the Campus for Achievement Program; $1.2 million for Interservice Education Programs; $2.6 million for full-year costs of new training systems; $1.2 million for full-year funding of the Training Support Center; $.3 million for logistic support of training devices and Navy-wide library support; $.6 million for increased civilian personnel and operating costs of the Naval Training Equipment Center to support existing and expanded inventory of training devices and simulators; $.4 million for Program Afloat College Education (PACE); and $.1 million which is the net result of other program changes.

Budget Program B: Naval Academy

(In Thousands)
FY 1975 Estimate - $29,568
FY 1974 Estimate - 27,925
FY 1973 Actual - 27,177

Purpose and scope of work

The Naval Academy is the basic source of career officers for the Navy and Marine Corps. It provides a four year undergraduate curriculum which is continually subject to revision and expansion to assure that future Navy and Marine Corps Officers will obtain the best possible preparation for professional military careers. Because the Naval Officer must perform with confidence in an environment of advancing technology and changing forces affecting national military strategy, the Academy must graduate officers of the highest caliber. To meet these requirements, the Academy provides the midshipmen with a broad foundation of knowledge and understanding leading to a Commission and a Bachelor of Science Degree.

Justification of funds

The net increase of $1.6 million requested in fiscal year 1975 will provide for full year cost of civilian pay increases ($+.6 million), increased cost of utilities, and other purchased services ($+.7 million), and increased support costs for Rickover Hall of the engineering studies complex ($+.3 million).

Budget Program C: Personnel Support

(In Thousands)
FY 1975 Estimate - $87,563
FY 1974 Estimate - 91,109
FY 1973 Actual - 74,784

Purpose and scope of work

This budget Program provides for: the recruitment of officer and enlisted personnel to meet the Navy's total manpower requirements with special emphasis on requirements for medical personnel, the Nuclear Program, Electronics Program, and minority recruiting; military personnel support functions such as development, implementation, and maintenance of morale, recreation, welfare, and religious programs, and administration of people-oriented programs and activities designed to enhance service attractiveness and career motivation; Drug and Alcohol Rehabilitation Programs and management of Human Goals Programs in such areas as drug and alcohol abuse prevention, race relations, and organizational development and management.

(In Thousands)
FY 1975 Estimate - $58,924
FY 1974 Estimate - 54,866
FY 1973 Actual - 45,889

(1) Recruiting of Military Personnel

The funds included in this program support various functions required to recruit quality personnel for naval service including the operation of recruiting offices, recruiting media, travel, lodging, and subsistence of applicants, and other support requirements.

The net increase of $4.1 million is generally associated with variations in workload, annualization of several programs started in fiscal year 1974, as well as the implementation of several new but overdue programs aimed at improving the recruiting program and the morale of the recruiting staff. Specifically, the net increase of $4.1 million is identified as follows: Increased applicant travel, lodging and subsistence expenses associated with increased workload ($+.2 million); full year costs of the civilianization program and civilian pay raise ($+.8 million); increased contract costs for lease of GSA vehicles ($+.7 million); support costs associated with increased military and civilian manyears ($+.2 million); implementation of a new program to provide leased housing to bachelor recruiters living in areas not proximate to naval installations ($+.4 million); annualization of expanded medical recruiting efforts ($+.3 million); full year costs of the Educator Liaison/Armed Services Vocational Aptitude Battery Program ($+.2 million) and minor increases associated with recruiter out-of-pocket expenses, travel and per diem, recruiting data and recruiting allocation control systems, support of T-34 aircraft used in recruiting aviation officer candidates, NROTC testing and selection, increased vehicle mileage of exhibit vans and recruitmobiles and associated driver per diem, officer and enlisted recruiter orientation, and the Recruiting Assistance Program under which selected enlisted men are returned to their home town for a short period to assist local recruiters ($+.4 million). In addition, $1.8 million is included for recruiting media. Increased workload to meet Navy strength requirements in FY 1975 lends credence to this requirement as well as to the other annualized recruiting programs mentioned above. These increases are partially offset by one time lease costs of office spaces in fiscal year 1974 ($-.3 million); reduced contract costs for market research ($-.1 million); reduced costs associated with the Audio-Visual Rating Classification System ($-.5 million).

(2) Personnel Support Programs

(In Thousands)
FY 1975 Estimate - $28,639
FY 1974 Estimate - 36,243
FY 1973 Actual - 28,895

The requirements included here are varied programs associated with support of military personnel including morale, welfare, and religious programs such as the Navy Music Program, and the Chaplains Program; Officer Retention Programs; Career Counseling; Personnel Administrative Activities such as Personnel Accounting Machine Installations and the Naval Home; per diem costs for personnel who receive less than 20 weeks training between permanent duty stations; Drug and Alcohol Rehabilitation Programs; and management of Human Goals Programs in such areas as drug and alcohol abuse prevention, race relations and organizational development and management.

Decreases in this program result from termination of Project Transition ($-.9 million); disestablishment of the Naval Disciplinary Command, Portsmouth, NH, in connection with Shore Establishment Realignment (SER) ($-.9 million); one-time cost for minor construction, repairs, and alteration projects at Navy Recreation Activities ($-2.0 million) reduction in travel costs ($-.6 million); and the transfer of Human Goals Program functions to other major claimants ($-6.5 million); and reduction in routine operating expenses ($-.2 million).

These decreases are partially offset by support for full year cost of the 1 October 1973 classified civilian pay raise and wage board pay raises ($+.1 million); civilian substitution program ($+.1 million); increased costs for printing ($+.3 million); per diem costs for personnel undergoing taining of less than 20 weeks while enroute from one permanent duty station to another ($+1.4 million); and for consolidation of the Manpower and Personnel Management Information System (MAPMIS) field functions into a Personnel Management Information Center, New Orleans (PERMIC) ($+1.6 million).

Budget Program D: Base Operations

(In Thousands)
FY 1975 Estimate - $163,397
FY 1974 Estimate - 127,235
FY 1973 Actual - 116,928

Purpose and scope of work

This program provides support for training activities under the Chief, Naval Education and Training, the Naval Education and Training Command, field activities under the Chief of Naval Personnel, and the Headquarters, Bureau of Naval Personnel.

Justification of funds

(1) Field Operations

(In Thousands)
FY 1975 Estimate - $141,418
FY 1974 Estimate - 108,293
FY 1973 Actual - 98,889

The funds requested will provide support for field activities and Functional Commanders under the cognizance of the Chief of Naval Education and Training as well as staff functions at the Chief of Naval Education and Training Headquarters, Pensacola, Florida; and the field activities under the command of the Chief of Naval Personnel including the Family Allowance Activity, Cleveland, Ohio and the Naval Personnel Support Activity, Washington, D.C. The increase of $33.1 million in fiscal year 1975 will support a net increase of 327 civilian employees resulting from functional transfers related to Shore Establishment Realignment (SER), other transfers, and increased support requirements ($+4.5 million); full year cost of civilian pay increases ($+1.4 million); replacement of military personnel with civilian employees ($+5.8 million); other SER related costs ($+10.1 million) (station operating costs and costs other than civilian personnel); increased effort to reduce backlog of major repair projects ($+5.3 million); Human Goals training programs ($+1.3 million); a Navy-wide Occupational Systems Program ($+1.0 million) and other increased costs for supplies and services offset by minor decreases ($+3.7 million).

(2) The Bureau of Naval Personnel

	(In Thousands)
FY 1975 Estimate	$21,979
FY 1974 Estimate	18,942
FY 1973 Actual	18,039

The fiscal year 1975 Budget request for the Bureau of Naval Personnel is $22 million and represents an increase of $3.0 million over fiscal year 1974. The increase includes full year costs of the October 1973 classified civilian pay raise and the rise in the government's share of civilian health benefit costs ($+.2 million); funding for the IFMS (Integrated Financial Management System) and JUMPS (Joint Uniform Military Pay System) programs ($+.7 million); increased costs for printing and telephone services ($+.3 million); and funding to continue conversion to a Microform Personnel Record System ($+2.9 million). These increases are partially offset by a reduction in civilian manpower and associated support costs ($-1.0 million) and a reduction in travel costs ($-.1 million).

Budget Program E: Medical Support

	(In Thousands)
FY 1975 Estimate	$427,404
FY 1974 Estimate	362,532
FY 1973 Actual	325,958

Purpose and scope of work

This budget program provides for: operation and maintenance of naval hospitals (34), medical centers (17), regional medical clinics (2), naval dispensaries (2), dental clinics (9), regional dental centers (2), dental center (1), other specialized medical activities (11), and the Bureau of Medicine and Surgery under the command and support of the Surgeon General of the Navy; inpatient and outpatient care of active duty and retired Navy and Marine Corps personnel and their dependents in other than service facilities; and the necessary care of deceased Navy and Marine Corps personnel and other personnel for whom the Navy has responsibility. In addition, the fiscal year 1975 estimate includes the cost of medical training and education programs, which are under Budget Program A in fiscal years 1973 and 1974.

Justification of funds

The funds requested for this program are based primarily on planned Navy and Marine Corps strengths, dependent and retired populations, and experienced workload rates and cost factors.

The budget projects included are:

(1) Hospital Operations

(In Thousands)
FY 1975 Estimate - $207,365
FY 1974 Estimate - 173,379
FY 1973 Actual - 147,060

This budget project provides for operation and maintenance of naval hospitals and medical centers under the command and support of the Surgeon General of the Navy. The requirements are based primarily on planned Navy and Marine Corps strengths, dependent and retired populations, experienced hospitalization rates, outpatient care requirements, and workload experience for other eligible personnel receiving medical care services at naval hospitals. Of the $34.0 million increase reflected, $20.5 million is required to cover full year cost of both replacement of military personnel with civilians and civilian pay increases, the operating costs of medical activities transferred under the program to regionalize medical facilities, and development and implementation of an enrollment system for all beneficiaries. The remaining $13.5 million is required to implement the Occupational Health and Safety Act, expand and cover full year cost of on-going programs to improve medical facilities/services and provide assistance to medical officers, reduce the backlog of major repairs, and cover other cost increases in fiscal year 1975. The following table displays the number of facilities, workload and O&M,N resources:

	1973 Actual	1974 Estimate	1975 Estimate
Facilities:			
Naval Hospitals	38	37	34
Medical Centers	4	17	17
Regional Medical Clinic	0	1	1
Naval Dispensaries	0	2	2
Workload:			
Inpatient, average daily patient load	7,785	7,656	7,694
Outpatients	16,834,655	17,849,918	18,118,103
Outpatient Services	50,179,274	53,493,796	54,297,510

	1973 Actual	1974 Estimate	1975 Estimate
Funds: (In Thousands)			
Operations	$117,692	$134,448	$159,075
Facilities management functions	29,368	34,709	39,694
Military/Civilian Conversion	0	4,222	8,596
TOTAL	$147,060	$173,379	$207,365

(2) Care in Non-Service Facilities

(In Thousands)
FY 1975 Estimate - $185,838
FY 1974 Estimate - 173,487
FY 1973 Actual - 165,130

This budget project provides funds for inpatient and outpatient care of active duty and retired Navy and Marine Corps personnel and their dependents in other than service facilities. The funds requested for this program are based on fiscal year 1973 actual experience applied to the planned Navy and Marine Corps strengths and estimated number of eligible dependents in fiscal year 1975 using prescribed charges for hospitalization and treatment, where applicable. The increase requested in fiscal year 1975 is due mainly to increased population of retired and retired dependents, and an enrollment system for all beneficiaries. Workload and fund requirements for this program are as follows:

	Average Daily Patients			Obligations		
	1973 Actual	1974 Estimate	1975 Estimate	1973 Actual	1974 Estimate	1975 Estimate
Contractual Medical Care (CHAMPUS)				$154,003	$162,447	$170,248
Inpatient Care	3,276	3,417	3,566	116,474	127,650	131,412
Outpatient Care				17,402	19,524	21,521
Retarded and Handicapped				3,467	3,543	3,630
Contractors' Services and Fees, Drugs, Dental, Population Enrollment and Other Costs				16,660	11,730	13,685
Other Non-Service Care				$11,127	$11,040	$15,590
Inpatient Care	336	339	346	8,801	8,734	12,656
Outpatient Care				2,326	2,306	2,934
Total Care in Non-Service Facilities	3,612	3,756	3,912	$165,130	$173,487	$185,838

(3) Other Medical Activities

	(In Thousands)
FY 1975 Estimate	$12,697
FY 1974 Estimate	11,647
FY 1973 Actual	9,657

This budget project provides for operations of Naval Regional Medical Clinic, Pearl Harbor, dental facilities and other specialized medical activities under the command and support of the Surgeon General of the Navy, and the necessary care of deceased Navy and Marine Corps personnel and other personnel for whom the Navy has responsibility. Fund requirements in this budget program are predicted on experienced and planned strengths and populations to be supported, experienced and planned workloads, and experienced and estimated cost factors.

The Regional Medical Clinic provides outpatient medical care for active duty and retired military personnel and their dependents. Naval dental facilities provide dental care for active duty and retired personnel and limited care, such as emergency service, for other eligible persons. Other activities, i.e., the environmental and preventive medicine units, the disease vector ecology control centers, the ophthalmic support and training activity, and the medical data services center, provide their specialized services on a Navy-wide support basis. The $1.0 million increase over fiscal year 1974 is to provide for full year pricing of civilian pay raises, full year cost of replacement of military personnel with civilians, and regionalization of the medical facilities on Oahu, Hawaii into the Regional Medical Clinic.

(4) Medical Training

	(In Thousands)
FY 1975 Estimate	$17,423
FY 1974 Estimate	(12,153)
FY 1973 Actual	(6,977)

The funds requested in this budget project support Specialized Medical Training at the Hospital Corps Schools Great Lakes, Illinois, and San Diego, California; and Professional Medical Training. Professional Medical Training provides funding for graduate, undergraduate, and part-time training of medical personnel including the Armed Forces Health Professions Scholarship Program and Board of Regents and Executive Agent costs of the Uniformed Services University of Health Sciences. In fiscal years 1973 and 1974 this program is included in Budget Program 8A "Training". It has now been determined that the requirement should be included with Medical Support. The amounts for fiscal years 1973 and 1974 are shown here in parentheses for comparison purposes.

The increase of $5.3 million provides for the first year administration of the university staff and support ($+3.6 million), tuition costs of the Armed Forces Health Professions Scholarship Program ($+.5 million), Class "C" school accreditation for enlisted personnel ($+.3 million), increased tuition fees for seminars and short courses ($+.7 million), surgical team training ($+.1 million), and civilian pay increases ($+.1 million). The following table provides student loads and comparative costs:

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	Average on Board			Comparative Costs		
	1973 Actual	1974 Estimate	1975 Estimate	1973 Actual	1974 Estimate	1975 Estimate
Specialized Medical Training	(2,894)	(3,454)	2,514	($357)	($391)	$401
Professional Medical Training	(2,371)	(3,509)	3,428	(6,620)	(11,762)	17,022
Medical	(1,941)	(1,934)	1,853	(5,535)	(6,472)	7,657
Health Professions Scholarships	(430)	(1,575)	1,575	(1,085)	(5,290)	5,790
University of Health Sciences	0	0	0	0	0	3,575
Total Medical Training	(5,265)	(6,963)	5,942	($6,977)	($12,153)	$17,423

(5) Office of the Chief of Medicine and Surgery

(In Thousands)
FY 1975 Estimate - $4,081
FY 1974 Estimate - 4,019
FY 1973 Actual - 4,111

This budget project provides for salaries and benefits of civilian personnel and other related expenses for internal operation of the Bureau of Medicine and Surgery. The program increase results from increases due to pay raise and regionalization, partially offset by a decrease in manyears.

BUDGET ACTIVITY 9: ADMINISTRATION AND ASSOCIATED ACTIVITIES
SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 compared with 1974
A Departmental Administration	$31,197	$32,196	$31,790	$-406
B Field Headquarters and Activities	32,161	31,739	35,073	+3,334
C Service Wide Support	107,990	207,611	118,608	-89,003
D Other Support Activities	6,802	6,590	42,985	+36,395
Total direct obligations in budget document	$178,150	$278,136	$228,456	$-49,680

Budget Activity 9: Administration and Associated Activities

(In Thousands)

FY 1975 Estimate - $228,456
FY 1974 Estimate - 278,136
FY 1973 Actual - 178,150

Introduction

This budget activity finances (1) Departmental Administration costs for the Secretary of the Navy and for the Office of the Chief of Naval Operations; (2) Field Activities of the Office of the Chief of Naval Operations including field headquarters for district commandants; (3) Field Activities of the Secretary of the Navy responsible for service-wide support including those which perform Navy-wide internal auditing, accounting, and disbursing services, and civilian manpower management, and field activities of the Office of the Chief of Naval Operations in the service-wide support area including general support activities and technical activities; (4) Other Support Activities including resources for public affairs, community relations, audio-visual activities, and the Federal Building Fund.

Budget Program A: Departmental Administration

(In Thousands)

FY 1975 Estimate - $31,790
FY 1974 Estimate - 32,196
FY 1973 Actual - 31,197

Purpose and Scope of Work

This program provides funds for the staff support necessary to assist the Secretary of the Navy in the fulfillment of his responsibility for the development and improvement of organization, policy, administration, and operations. The Under Secretary of the Navy, the Assistant Secretaries and the Deputy Under Secretary of the Navy are the principal policy advisors and assistants to the Secretary for the administration of the affairs of the Department of the Navy. Supported by the boards and offices which they supervise, the Civilian Executive Assistants are assigned department-wide responsibility for manpower, material, facilities, research and development, business and military law, financial management, and general departmental administration.

This budget program also provides funds for the administrative support of the Office of the Chief of Naval Operations. The Chief of Naval Operations is the principal naval advisor to the President and the Secretary of the Navy on the conduct of war, and the principal naval executive to the Secretary of the Navy, as well as the Navy member of the Joint Chiefs of Staff and the Armed Forces Policy Council. The Chief of Naval Operations, under the Secretary of the Navy, is responsible for the command of all functions and activities of the Operating Forces of the Navy, and to organize, train, prepare and

maintain the readiness of Navy Forces. He is also responsible to the Secretary of the Navy for the utilization of resources by, and the operating efficiency of, all activities under his command.

There are no funds included in this estimate for the support of executive dining rooms.

Justification of Funds

(In Thousands)

(1) Navy Secretariat

FY 1975 Estimate - $15,742
FY 1974 Estimate - 15,230
FY 1973 Actual - 14,487

The estimate of $16.1 million for fiscal year 1975 provides for 682 civilian personnel and administrative support costs for the Navy Secretariat, a net increase of 16 civilian positions and $.5 million above the fiscal year 1974 level of support. The individual increases and decreases being requested are as follows:

Civilian Graded Pay Increase. An increase of $.2 million is requested for the annualization of the civilian graded pay increase, effective October 1973.

Office of the General Counsel. An increase of $.4 million is required for the establishment of the Contract Appeals Division within the Office of the General Counsel at the direction of the Secretary of the Navy. This action consolidated all civilian attorneys within Navy who work on contract appeals into one division. In fiscal years 1973 and 1974, funding was accomplished through functional transfers from the Operation and Maintenance, Navy, appropriation and reimbursements from the other appropriations. This is not an increase, as such, but represents direct-funding of an on-going operation in fiscal year 1975. This will provide direct-funding of 21 civilian positions.

Additional Staff Requirements. An increase of $.1 million is requested for an additional 4 civilian positions. The augmentation of the staff of the Employee Appeals Review Board by 2 positions is requested to offset the increasing workload. Much of the additional workload was the result of enactment and implementation of the Equal Employment Opportunity Act of 1972 (P.L. 92-261). Complaints of discrimination covered under the Act and submitted to the Board for adjudication have been placed under stringent processing time limitations and are required to be reviewed and adjudicated under newly established criteria. This, coupled with an increase in the number of discrimination complaints, employee grievances, and administrative appeals being submitted has placed additional burdens on the Board. The remaining 2 civilian positions are for the Legal and Legislative Staff of the Office of Civilian Manpower Management (OCMM). The workload in connection with litigation has sharply increased due to: the accelerated time factor contained in the Equal Employment Opportunity Act of 1972 which allows persons who allege discriminatory treatment to bring suit against the employer within 180 days of filing a complaint; Department of Justice regulations which require that attorneys of OCMM carry out litigation functions formerly handled by the Department of Justice, such as taking depositions, representing the Government in hearings on motions, drafting court orders, etc.; and a tri-fold increase in the number of lawsuits filed against Navy officials by present and former civil service employees.

Naval Petroleum Reserves. A decrease of $.2 million reflected in the fiscal year 1975 estimate results from the Office of Naval Petroleum and Oil Shale Reserves being transferred from the Operation and Maintenance, Navy appropriation.

(2) Office of the Chief of Naval Operations

(In Thousands)

FY 1975 Estimate - $16,048
FY 1974 Estimate - 16,966
FY 1973 Actual - 16,710

The estimate of $16.0 million for fiscal year 1975 provides 730 manyears of civilian employment and administrative support for both civilian and military personnel of the Office of the Chief of Naval Operations. The estimate reflects a reduction of 44 manyears associated with an end strength reduction of 88, which completes a 25% personnel reduction begun in fiscal year 1973.

Budget Program B: Field Headquarters and Activities

(In Thousands)

FY 1975 Estimate - $35,073
FY 1974 Estimate - 31,739
FY 1973 Actual - 32,161

Purpose and Scope of Work

This budget program provides for the operation and maintenance of Field Headquarters for district commandants, and other specific activities such as the Naval Air Facility, Andrews AFB and the Naval Safety Center, Norfolk, Va.

Justification of Funds

(1) Office of the Chief of Naval Operations Field Activities

(In Thousands)

FY 1975 Estimate - $35,073
FY 1974 Estimate - 31,739
FY 1973 Actual - 32,161

The estimate of $35.1 million for fiscal year 1975 provides 1,794 manyears of civilian employment and other support for these activities. The estimate reflects increases of 60 MY and $3.3 million support costs. The increases are attributable to: $1.1 million for fuel, flight operations and the Civilian Substitution Program at NAF Washington, and requirements at

COMNAVDISTWASH amounting to $2.7 million mainly for fuel. These increases are offset by a loss of 12 manyears, Shore Establishment Realignment savings of $.3 million at the Naval Bases, and other miscellaneous decreases of $.2 million.

Budget Program C: Service Wide Support

(In Thousands)

FY 1975 Estimate - $118,608
FY 1974 Estimate - 207,611
FY 1973 Actual - 107,990

Purpose and Scope of Work

This budget program finances the field activities of the Department of the Navy Staff Offices which perform Navy-wide internal auditing, accounting, and disbursing services, civilian manpower management functions, medical disability evaluation for military personnel, and legal services. It further provides for long-term civilian training, base communications and for other administrative expenses, the major portion of which is for fixed charges payable to the U. S. Postal Service.

This budget program also provides for the operation and maintenance of: (1) Field Activities having support type missions; (2) activities having a specialized or technical mission; and (3) other activities and programs such as Boards of Inspection and Survey and Manpower Programs Support. It also provides funds to support base communications operations for activities in Budget Activity 9.

Justification of Funds

(1) Navy Secretariat - Servicewide Support

(In Thousands)

FY 1975 Estimate - $110,690
FY 1974 Estimate - 193,309
FY 1973 Actual - 87,289

Funds requested for fiscal year 1975 total $110.7 million, reflecting a net decrease of $82.6 million below fiscal year 1974. Specific increases reflected in the estimate total $4.3 million. These are offset by decreases totaling $86.9 million. In summary the principal changes are outlined below:

1. Civilian Graded Pay Increase. The annualization of the civilian graded pay increase, effective October 1973, will require an increase of $1.0 million.

2. Financial Management. The increases being requested in this area are: (a) $.7 million for the final incremental increase necessary to implement the Joint Uniform Military Pay System; (b) $.8 million to convert reimbursable trainees in the

Financial Management Career Training Program to direct-funded; (c) $.4 million for additional internal audit effort; and (d) other miscellaneous increases totaling $.1 million.

3. Civilian Personnel Management. Increased requirements are $1.2 million for the continuation of the centralized CO-OP project and $.2 million for increases in the Manpower Information System and labor relations training.

4. Naval Petroleum Reserves. A decrease of $82.3 million is reflected in the fiscal year 1975 estimates due to the transfer of the Naval Petroleum and Oil Shale Reserves from Operation and Maintenance Navy to the Naval Petroleum Reserve appropriation. (The fiscal year 1974 column consists of $10.3 million provided by the Defense Appropriation Act of 1974 and $72.0 million provided by the Supplemental Appropriation Act of 1974 (P.L. 93-245).

5. Official Mail. A decrease of $4.6 million is reflected in the Official Mail account.

The following table provides funding data by individual programs:

(In Thousands)

	FY 1973	FY 1974	FY 1975	Program Changes	Annualization of Pay Raise Costs
(a) Navy-Wide Finance Activities	$42,994	$48,679	$51,094	$+1,812	$+603
Includes: Joint Uniform Military Pay System	(7,134)	(11,178)	(12,081)	(+725)	(+178)
(b) Naval Audit Service	9,485	10,514	10,867	+211	+142
(c) Regional Offices of Civilian Manpower Management	3,741	6,356	7,869	+1,321	+192
(d) Long-Term Civilian Training	183	389	394	---	+5
(e) Naval Disability Evaluation	338	536	526	-14	+4
(f) Judge Advocate General - Field	524	1,019	964	-60	+5
(g) Naval Petroleum Reserves - Field	5,306	82,315	---	-82,315	---
(h) Base Communications	817	821	828	+7	---
(i) Other Administrative Expenses	23,901	42,680	38,148	-4,532	---
TOTAL	87,289	193,309	110,690	-83,570	+951

Since the fiscal year 1975 increase of $1.0 million for the annualization of the October 1973 civilian graded pay increase is self-explanatory, the following justification of changes will be addressed to program changes only:

(a) Navy-Wide Finance Activities

This program provides central, regional, and local disbursing, accounting and other financial management services for the Navy. The Navy-Wide Finance Activities pay dealers' bills, government bills of lading, and transportation requests; perform fleet, central, and field accounting; examine and consolidate disbursing and stores returns; examine military records and voucher payments; maintain accounts of and make payments to personnel of the regular Navy, Naval Reserves on active duty, training duty, or drill pay status, and retired and fleet reserve personnel; disburse civilian payrolls; process allotment and closed pay accounts; and perform other miscellaneous financial functions. In addition to day-to-day duties detailed above, this program also provides for developing policies and prescribing principles and procedures to be followed in fiscal, cost, capital, and operating property accounting, disbursing, and working capital and management fund operations throughout the Department of the Navy for both appropriated and non-appropriated funds.

An increase of $1.8 million in fiscal year 1975 is requested for the following:

Joint Uniform Military Pay System (JUMPS): The JUMPS Combined Interim System has been successfully implemented for officer and enlisted personnel Navy-wide. An increase of 73 manyears and $.7 million are required to support the two final JUMPS modules, namely full JUMPS for officers on 1 October 1974 and full JUMPS for enlisted on 1 January 1975. JUMPS staffing requirements are strongly influenced by input document reject rates. Of at least equal significance is the accounts maintenance technicians' production rate, which, in turn, is dependent on time-consuming training and experience. High input document reject rates and lower than anticipated clerical production rates were experienced during implementation of the earlier JUMPS modules (JUMPS Interim Allotment System, Reenlistment Bonus/Variable Reenlistment Bonus Data Bank, Officer Leave Accounting System, Enlisted Leave Accounting System, and the JUMPS Combined Interim System). Moreover, efforts in reducing reject rates and training account technicians have proven to be a gradual, lengthy process. Based on the past experience, it would be unduly optimistic to assume that implementation of the final two modules will not precipitate initial high input document reject rates and low clerical production rates during implementation. Based on documented experience with earlier modules, and assuming the JUMPS system will not be expanded, the JUMPS staffing need is expected to peak in FY 1975. Failure to produce the requested increase will result in inadequate staffing, sharply increase the risk of failure and lead to slippage in presently established JUMPS milestones.

Financial Management Civilian Career Training Program: Eighty three (83) positions and manyears and $.8 million are required to continue a program of training qualified college level personnel to meet the critical needs of the Navy, in the fields of accounting, financial management and budget administration. Action by the first session of the 93rd Congress approved the establishment of the program with funding to come from within Navy. In fiscal year 1974, funding was accomplished by reimbursement from various Navy appropriations. This is not an increase as such, but represents the centralization under a single sponsor of a prior multi-funded program.

Automated Household Goods Entitlement Verification: Four (4) positions and $30,000 are required to improve the household goods entitlement audit function at NRFC Washington. A computerized system for audit, recommended by various inspections and Navy auditors in the past, will enable resolution of the vast majority of cases within months after documentation is complete. At the present time, completion of the audit requires up to 2 years, which creates hardship for the member, frequent lengthy exchanges of correspondence concerning long past events, and considerable Congressional mail. A study to achieve an automated system to improve the audit function through matching of all documentation and checking of distance and weights moved has been completed. However, the system requires a two-year transition to finalize audit cases in process and reduce the backlog of 12,000 unaudited cases presently on hand.

ADP Time-Sharing Services: Funds in the amount of $.1 million are required to sustain the evolutionary growth of various data systems currently utilizing ADP time-sharing services provided by NAVCOMPT's Remote Processing System on the National Institutes of Health computer facilities. Implementation of currently supported time-sharing systems was accomplished during FY 1972 and FY 1973 within the constraints of a level funding situation. Essentially, incremental extensions, refinements and annual revisions are the only planned FY 1974 programming efforts; however, by FY 1975 additional funds will be necessary to cover higher operating costs for computer, time, terminal rentals, data storage rental, etc. This will evolve as a result of annual growth in data bases spanning several years, and greater user reliance on and usage of the automated systems as their utility and reliability continue to be demonstrated in operational use. Representative applications which will require increased funding support during FY 1975 are budget reporting systems, expenditure forecasting systems, data element systems for procurement appropriations and military personnel appropriations and Unit Identification Code System.

Leave and Timekeeping: Fourteen positions and manyears and $.1 million are required to support the Leave and Accounting function, formerly performed by the Naval Material Command Support Activity in budget activity 7. This function was transferred to the Navy Regional Finance Center, Washington, in fiscal year 1974 on a reimbursable basis. This action provides for direct funding in fiscal year 1975.

Civilian Health Insurance: An increase of $26,000 is required for the annualization of the Government's increased contribution to the Federal Employees Health Benefits Program.

(b) Naval Audit Service

The Naval Audit Service performs all internal auditing in the Department of the Navy, and in doing so, carries out the responsibilities assigned by law to the Comptroller of the Navy.

Service is provided in a number of ways. Activity audits evaluate operations at a specific activity. Coordinated audits evaluate a specific, identified problem area at several activities or through several echelons of command. Special audits and consultive services are provided to Naval Managers desiring audit assistance with a particular problem. In addition, the Naval Audit Service provides assistance to the Office of the Assistant Secretary of Defense (Comptroller). The increase in fiscal year 1975 is $.4 million, partially offset by one-time expenses of $.2 million in fiscal year 1974 associated with the closure of the Naval Area Audit Service, Boston. This increase will provide for an additional 34 man-years of audit effort in

fiscal year 1975. This addition represents an increment of the Department of the Navy's long-range plan for strengthening its internal audit capability. The additional resources will provide for expanded efforts in reviewing appropriations and funds and for additional audit review of Management Information and ADP systems and their development.

(c) Regional Offices of Civilian Manpower Management

The Regional Offices of Civilian Manpower Management provide consultation and technical service to Navy field activities on civilian personnel matters. They assist local naval staffs in such personnel management areas as equal employment opportunity, labor relations, training requirements and recruiting. There is a net increase of $1.3 million in this program for the following:

Centralized CO-OP Program: An increase of $1.2 million is requested for the Centralized CO-OP Project of the Minority Relations Program. This is now in the second year of operation to provide an input of college students into Navy's administrative career programs (e.g. Procurement, Financial Management, Civilian Personnel, Data Processing, Supply Management, etc.) of young, motivated people with particular emphasis on achieving affirmative action for the Secretary of the Navy's goal of a fully-integrated work force. The normal program will call for students to enter at the sophomore (2nd year) level and progress over 3 to 4 years of alternating periods of work at Naval activities and pursuing related studies at the participating college. Completion of the co-op program requires the student-trainee to successfully complete college requirements for a Bachelor's degree and progress satisfactorily during on-the-job work periods. The student, college, and Naval activity all sign a "Co-Op Agreement" which sets forth the conditions of employment. Normally, the successfully completed program leads to full-time career employment at GS-5 in the Naval activity. It may, however, lead to employment elsewhere in the Naval establishment. Both the student and the Navy can terminate the arrangement at any time, including after completion. The goal for the project is to provide approximately 25% of the required intake into the Navy-wide career programs for administrative occupations after the third year of operations. It will involve long-term arrangements with colleges throughout the United States with special emphasis on those with large minority student populations. Because of the late passage of the FY 1974 Appropriations Act and restrictions of the Continuing Resolution, the first year of this project will only achieve about 50% of the program objective. An increase of $873,000 is requested to start the new first year group at full strength, and a further increase of $339,000 is requested to partially fund the estimated 280 second year Co-op workers who started the program in FY 1974. The remaining funding requirements for these second year workers (estimated at $750 thousand) will be absorbed by Naval activities where they are working.

Manpower Information Systems: An increase of $.1 million is requested to fund an increase of 7 personnel in this area, with related manyears and other costs. This increase is needed to support efforts to bring Navy ADP systems to consistency with the Civil Service Commission Federal Personnel Management Information Systems and to develop a centrally designed program applicable to all locally automated personnel information systems.

Labor Relations Training: An increase of $.1 million is requested to pay travel and per diem expenses of attendees of the Labor Relations Training Center. Base Commanders and executive level managers will receive this training.

Disestablishment of ROCMM Boston: A decrease of $.1 million reflects the disestablishment of ROCMM Boston with a consequent reduction of six employees and related funding.

(d) Long-Term Civilian Training

This program provides high level training, on a Navy-wide basis, consisting of more than 120 consecutive training days (approximately six calendar months) in either Government or non-Government facilities. Subject matter may cover management or various fields of specialization. The objective is to increase the use of long-term training and education to enable Navy to keep abreast of managerial, technical, and scientific advancements, both within and outside the Federal Government. Employees who attend training in non-Government operated facilities must agree to remain with the Department of Defense for a period of three times the length of the training. Employees who attend training in Government operated facilities must agree to remain with the Department of Defense for a period of three years. Funds requested of $.4 million for fiscal year 1975 will support 36 civilian trainees and include travel, tuition, salaries and related expenses. This program is level with fiscal year 1974.

(e) Naval Disability Evaluation

The activities funded from this program are responsible for making determination in individual cases of the entitlement of Navy and Marine Corps personnel to disability benefits in connection with their retention, retirement or discharge. This includes the holding of formal hearings to evaluate the physical fitness of members to perform their duties. These activities will continue to be performed at the current level of operations.

(f) Judge Advocate General Field Activities

This program provides fund support to four separate activities and also provides for centralized procurement of law books for all Navy libraries. The Navy-Marine Corps Judiciary Activity provides specially selected law officers (presiding judges) on all general courts-martial convened within the Naval Establishment. The Navy Appellate Review Activity processes and reviews courts-martial cases and promulgates the results thereof to the pertinent commands. This activity also provides officers as Appellate Government Counsel and Appellate Defense Counsel. The U. S. Sending State Office for Australia implements the criminal jurisdiction and claims articles of the Australian Status of Forces Agreement, and fulfills all Department of Defense responsibility for claims in Australia. The U. S. Sending State Office for Italy also fulfills all Department of Defense responsibility for claims in Italy under the Status of Forces Agreement. The estimate for fiscal year 1975 reflects a slight decrease in support costs from the current level.

(g) Naval Petroleum Reserves-Field

Funds in this budget program provide for operation of the Naval Petroleum and Oil Shale Reserves in accordance with the Act of June 4, 1920, as amended, 70A Stat. 457, as amended, 76 Stat. 904-906, 10 U.S.C. ss 7421-38 (Supp. V, 1964), which directs the Secretary of the Navy to explore, prospect, conserve, develop, use and operate the Naval Petroleum and Oil

Shale Reserves for the production of petroleum and shale oil when required for national defense. A decrease of $82.3 million, representing the fiscal year 1974 level, is reflected in the fiscal year 1975 Secretariat estimates since the funds for operation of the reserves are being transferred from Operation and Maintenance, Navy to the Naval Petroleum Reserve appropriation starting in fiscal year 1975.

(h) Base Communications

This program represents telephone costs incurred by the Secretariat departmental and field programs in the performance of their official duties.

(i) Other Administrative Expenses

These funds, totaling $38.1 million in fiscal year 1975, provide primarily for payment of fixed charges to the U. S. Postal Service for official mail costs for all programs budgeted under the Operation and Maintenance, Navy, appropriation, accounting for 97%, or $37.1 million, of the total funds requested in this account. The remaining portion provides for the Navy's one-fourth share of funds support to finance the Armed Services Board of Contract Appeals, losses in foreign exchange and disbursing officers' accounts and the financing of common service items related to the field programs contained in this budget program.

(2) Office of the Chief of Naval Operations - Service Wide Support Activities

(In Thousands)

FY 1975 Estimate -	$7,918
FY 1974 Estimate -	14,302
FY 1973 Actual -	20,701

The estimate of $7.9 million for fiscal year 1975 provides 204 manyears of civilian employment and other support for these activities. The estimate reflects a net reduction of 386 manyears, and $7,202 thousand support costs from fiscal year 1974, offset by increases of $.8 million for pay raise, assumption of Ship Manning Document function in MANPOWER PROGRAM from Program 2, provision for phone rate increase in Departmental Telecommunications, and Flight Operations/fuel for HMX-1 Presidential Helicopters.

Budget Program D: Other Support Activities

(In Thousands)

FY 1975 Estimate -	$42,985
FY 1974 Estimate -	6,590
FY 1973 Actual -	6,802

Purpose and Scope of Work

This program provides funds for Navy world-wide public affairs and community relations activities, audio-visual activities, and Congressional Travel and Official Representation. Audio-visual activities represent the funds necessary to provide for the operating support of the Naval Photographic Center, Washington, D. C. This activity serves as the only industrial photographic laboratory for, and provides specialized services to the Department of the Navy and other authorized organizations. Public affairs funds support those personnel and activities which deal with the public and public media to inform the public about the Navy as an instrument of national policy and security, and about the operations of the Navy insofar as such information is compatible with military security. Community relations funds support functions and activities performed for the purpose of contributing to good relations between the Department of the Navy and all segments of the civilian population at home and abroad to help foster mutual acceptance, respect, and cooperation.

Justification of Funds

(1) Public Affairs

The estimate for public affairs for FY 1975 ($1.5 million) will provide the necessary support for the following:

(a) Public information and community relations within headquarters activities: Offices of the Chief of Information, Chief of Naval Operations, Chief of Naval Personnel, Chief of Naval Training, and Chief of Naval Material.

(b) The field activities under the command of the Chief of Information which are the Navy Public Affairs Offices, the Fleet Home Town News Center and the High School News Service, for which the Navy is Executive Agent for the Department of Defense. These activities produce and distribute radio and television news featurettes, new stories, photographs and tape recordings, all of which are an invaluable aid in the recruiting, retention and morale of Navy, Marine Corps and Coast Guard personnel, and provide timely information for the counseling of high school students about service in the Armed Forces.

(c) Other Navy public affairs personnel at various echelons of command world-wide whose primary duties involve the dissemination of information to the public and/or media.

(2) Audio-Visual Activities

The estimate for the Naval Photographic Center for fiscal year 1975 ($5.1 million) represents an increase of $.5 million from the fiscal year 1974 level to provide for increased personnel compensation and cost of materials.

(3) Congressional Travel and Official Representation

The fiscal year 1975 estimate ($.4 million) requests funds to provide for travel by members of Congress and Congressional Committee staffs in connection with the examination of estimates included in appropriation requests and Naval activities in the

field in accordance with the requests of the standing committees concerned. The Official Representation account provides for such expenses of the Navy incurred by its personnel as representatives of the U. S. Government. The fiscal year 1975 request is consistent with previous years' expenditures in these categories.

(4) Federal Building Fund

An increase of $33.6 million is requested to fund GSA building rental charges to Navy under Public Law 92-313, Public Buildings Amendment Act of 1972, which requires a lease payment to GSA for all space occupied. The payment of such costs commences in fiscal year 1975 and cost estimates for both the national capital region and the non-national capital area for the Department of the Navy are aggregated in this budget activity. GSA has submitted lists of space and cost data attributed to Navy use on which this estimate is based.

(5) American Bicentennial Celebration

An increase of $2.5 million is requested to support planning and the initial preparations for Navy participation in the American Bicentennial Celebration.

BUDGET ACTIVITY 10: SUPPORT OF OTHER NATIONS
SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 compared with 1974
A Support of Allies	$42,717	$20,482	$19,160	$-1,322
B International Military Headquarters and Agencies	95	107	99	-8
C MAAG's Missions and Military Assistance Groups	713	1,412	1,401	-11
Total direct obligations in budget document	$43,525	$22,001	$20,660	$-1,341

BUDGET ACTIVITY 10: Support of Other Nations

(In Thousands)

FY 1975 Estimate - $20,660
FY 1974 Estimate - 22,001
FY 1973 Actual - 43,525

Introduction

This budget activity provides funds for the Support of Allies, contributions and support of International Military Headquarters, and support of Military Assistance Advisory Groups, Missions, and Military Assistance Groups.

Budget Program A: Support of Allies

(In Thousands)

FY 1975 Estimate - $19,160
FY 1974 Estimate - 20,482
FY 1973 Actual - 42,717

Purpose and Scope of Work

The support of allies provided by this program encompasses (1) military assistance support costs to the Vietnamese Navy and other Free World Forces including material support and ship overhaul costs; and (2) classified projects.

Justification of Funds

(1) Military Assistance Service Funded Program - Vietnam

(In Thousands)

FY 1975 Estimate - $19,160
FY 1974 Estimate - 19,930
FY 1973 Actual - 25,833

Military Assistance Service Funded Program (MASF) provides for material support, overhaul, and training costs resulting from improvement, modernization, and operation of the Vietnamese Navy (VNN). The fiscal year 1975 estimates provide for continuing technical assistance, overhauls, base maintenance material and equipment, boats/service craft support and training. The following table provides details for fiscal year 1974 and fiscal year 1975 estimates:

MASF Vietnam

(Dollars in Thousands)

Description	FY 1974	FY 1975	FY 1975 Difference from FY 1974
Technical Assistance/Contracts	$1,244	$980	$-264
Local Purchase	240	333	+93
Out of Country Overhauls	1,050	-	-1,050
Ship/Boats/Service Craft Support	5,442	7,859	+2,417
Base Maintenance Material and Equipment	40	40	0
In-Country Overhauls	9,856	9,284	-572
Training Vietnam	800	415	-385
Coastal Raider Programs	1,533	-	-1,533
ACTOV Radar	238	238	0
ACTOV COMM	514	475	-39
VNN Shipyard Support	348	348	0
ACTOV/Card	25	31	+6
Material Support, Korea	-	-	-
Stock Decrease	-1,400	-843	+557
TOTAL	$19,930	$19,160	-770

(2) Classified Projects

(In Thousands)

FY 1975 Estimate - -0-
FY 1974 Estimate - $552
FY 1973 Actual - $16,172

Funds under this program provide resources required in support of certain classified projects. A decrease of $.6 million in fiscal year 1975 is associated with the termination of support for certain classified projects. Additional information can be provided orally, as requested.

(c) Commander, U. S. Naval Forces Vietnam

(In Thousands)

FY 1975 Estimate - -0-
FY 1974 Estimate - -0-
FY 1973 Actual - $712

Commander U. S. Naval Forces Vietnam commanded U. S. Naval Forces and activities in Vietnam and provided U. S. Navy support of advisory efforts.

Budget Program B: International Military Headquarters and Agencies

(In Thousands)

FY 1975 Estimate - $99
FY 1974 Estimate - $107
FY 1973 Actual - $95

Funds in this program are required to support both the International and National costs of SEATO. The International costs consist of United States contributions to the International Military Headquarters, while the national costs provide support for the SEATO Military Planning Office, which is a U. S. Military Element of the SEATO Command. Fiscal Year 1975 requirements reflect a slight decrease from those of fiscal year 1974 due to the United States relinquishing the position of Deputy Chief Military Office in early FY 1975.

Budget Program C: MAAG's, Missions and Military Assistance Groups

(In Thousands)

FY 1975 Estimate - $1,401
FY 1974 Estimate - 1,412
FY 1973 Actual - 713

Funds under this program are for administrative and logistic support of those advisory groups in the Pacific and European areas for which the Department of the Navy is responsible either as Administrative Agent or Service Component. The fiscal year 1975 estimate reflects a slight net decrease due to reduced travel requirements; offset by increases for annualization of the civilian pay raise effective in October 1973, extra work day in FY 1975, and other general operating expenses.

STATEMENT OF REAR ADMIRAL E. W. COOKE

REVOLVING FUNDS

Chairman McClellan. Rear Adm. E. W. Cooke, the Director of Budget and Reports, has a prepared statement on the Navy and Marine Corps Stock and Industrial Funds which will appear in the record at this point.

[The statement follows:]

Mr. Chairman and members of the Committee, it is my pleasure to appear before you to provide information regarding the more significant revolving and management funds which are used to effect improved financial and supply management within the Navy and Marine Corps. These are the Navy Management Fund, Naval Working Fund, Navy and Marine Corps Industrial Funds, and Stock Funds.

Since the purpose and coverage of these funds remain essentially the same from year to year, I will outline them briefly, and indicate in the appropriate segment of my statement any changes which have taken place with respect to our administration of these working capital funds since last year.

NAVY MANAGEMENT FUND

The Navy Management Fund was established in 1950 with a corpus of $1 million. Its purpose is to facilitate the financing of operations, which are supported by two or more appropriations, when it is not practical to make direct distribution of charges at the time the expense is incurred.

The programs financed through this fund are reviewed and justified as part of their respective parent appropriations. Transfers are made from the parent appropriations to the Management Fund, which, in effect acts as a "clearing house" in the settlement of charges.

Our obligational authority plans for FY 1975 are $425 million, all of which is to finance transportation of materials and equipment. These transportation requirements are funded in various appropriations, principally the Operation and Maintenance, Navy and Military Personnel, Navy appropriations.

NAVAL WORKING FUND

The Naval Working Fund was established in 1924 to account for advances received by Navy for the cost of work or services to be furnished to other Government agencies, foreign governments, private parties, and non-appropriated fund activities.

Except for the original corpus of $100,000, the cash in this fund has been attained by deposits from activities requesting work or services. Excesses or deficiencies are adjusted by refunds or billings as necessary.

Beginning 1 July 1974 the use of this fund will be discontinued since laws passed since 1924 and changes in accounting techniques no longer require its retention.

NAVY INDUSTRIAL FUND

On 1 January 1974, the Navy Industrial Fund consisted of 93 industrial-type activities producing a variety of goods and services in support of Department of Defense programs. Over the years, the operation of the fund has, at times, produced relatively small inadvertent variances from the desired financial breakeven. In some years, operating gains have been realized; in other years losses have been sustained. For fiscal year 1973, on revenues of $4.9 billion, there was an operating loss of $58.8 million, a variance of 1.2%. However, even considering the fiscal year 1973 loss, there has been only a minor cumulative impact on the overall fund (a $.2 million deficit in the accumulated operating results).

As in prior years, the majority of the fiscal year 1973 variance relates to sealift operations. This stems from our continuing policy of maintaining stabilized customer tariff rates, insofar as possible, to simplify budgeting for ocean transportation, even though this causes sealift operations to realize gains in some years and losses in other years. As of 30 June 1973, however, cumulative gains and losses for

sealift were at a virtual breakeven. Exhibit I provides the amount of gain or loss during FY 1973 by activity group. Exhibit II contains other pertinent data relating to the various individual industrial fund activities.

Certain of our industrial fund activities are planned for deactivation. These consists of two shipyards, one aircraft maintenance facility, one public works center, one ordnance facility and one strategic system project office facility which are in process of liquidation and are planned for closure by 1 July 1974. These six closures are directly related to the necessity of restructuring shore establishment support to the current fleet size, thereby achieving to a greater degree the desired balance of capacity against workload requirements. In some cases functions of the closed activities will be transferred to other facilities. In consonance with our continuing efforts to improve efficiency through consolidation of functions, a new public works center, serving Government facilities in the San Francisco Bay area, is planned for operation effective 1 July 1974. This new activity will perform public works functions now carried out at numerous relatively small Government installations. Exhibit III provides a summary of the various projected changes scheduled to take place in the Industrial Fund by 30 June 1975.

Marine Corps Industrial Fund

The Marine Corps Industrial Fund consists of two Depot Maintenance Activities located at the Marine Corps Supply Centers, Albany, Georgia and Barstow, California. Total revenues for these two activities amounted to $20.0 million in fiscal year 1973 resulting in a net loss of $.5 million on operations. This was a variation of 2%.

Stock Funds

The Navy and Marine Corps Stock Funds are revolving funds used to finance the purchase of consumable material which is held in inventory until issued for use. Upon issue of material the stock funds are reimbursed by the customer appropriations and these revenues are used to reinvest in inventories for future use. This statement will outline the financial status of these funds through the budget year. Navy and Marine Corps representatives responsible for the program, management and day-to-day operations are available for in-depth discussion, if desired.

Navy Stock Fund

The Navy Stock Fund has existed since the beginning of the century and now procures much of the consumable materials used by the Navy. Item coverage extends to such materials as fuel, clothing, general stores, medical supplies, provisions and repair parts for base equipment, ordnance, electronic, ships, submarine and aviation equipments.

The FY 1975 budget as submitted to Congress is based on the strategic and logistic guidance promulgated by the Secretary of Defense. Basically, the operational plan for the budget year is designed to provide funds to purchase material to meet the needs of the operating forces for stock funded items. Navy's goal is to provide the desired level of support with a minimum inventory investment.

The following table summarizes significant operational aspects of the fund. It also compares the actual FY 1973 operating results with those planned for FY 1974 and FY 1975.

NAVY STOCK FUND

[In millions of dollars]

	Fiscal year—		
	1973 actual	1974 estimate	1975 estimate
Sales	1,798	1,922	2,109
Obligations	1,683	1,931	2,068
Collections	1,792	1,932	2,109
Expenditures	1,719	1,902	2,075
Inventory (on hand end of year)	1,373	1,304	1,268

As depicted by the Table, the Navy Stock Fund operations in FY 1975 have increased somewhat over FY 1974 operations.

The incremental growth in sales is primarily related to sharp increases in fuel prices with moderate increases in the issue of commissary goods. Obligations in FY 1975 follow the sales pattern, with spiralling fuel prices accounting for most of the increase over FY 1974 operations. These increased fuel prices account for a 157% increase in FY 1975 obligations over a 1 July 1973 base of $225 million. Planned expenditures in the current and budget year follow the procurement plan. Inventory levels are expected to decrease somewhat through the budget year. This is caused by disposal of obsolete inventories and efforts to minimize procurement of the items which have low forecasted demands.

The cash position for FY 1974 and FY 1975 reflects an improvement over FY 1973 when $124 million was transferred to the procurement and operating accounts. This transfer drew the cash down to $48 million at the end of the fiscal year. Stock Fund operations will increase cash to $78 million by end FY 1974 and $112 million by end FY 1975, which is about the normal level for the Fund.

Marine Corps Stock Fund

The significant operating and financial status of the fund for FY 1973 and the current and budget years is outlined in the following Table:

MARINE CORPS STOCK FUND

[In millions of dollars]

	Fiscal year—		
	1973 actual	1974 estimate	1975 estimate
Sales	184	205	204
Obligations	180	203	199
Collections	183	205	204
Expenditures	178	211	208
Inventory (end of year)	224	212	252

The Marine Corps Stock Fund operations are expected to change very little during FY 1974 and FY 1975.

Increases in the costs of commissary goods are offset by minor decreases in other commodities. The inventory level increases somewhat during FY 1975 due to a migration of items from the Procurement, Marine Corps appropriation to the Marine Corps Stock Fund.

The Marine Corps Stock Fund cash position is expected to be $41 million at the end of FY 1974 and $37 million at the end of FY 1975. These cash balances reflect the sound condition of the Marine Corps Stock Fund.

This completes my statement, Mr. Chairman, we stand ready to answer any questions you might have on the Department of the Navy Revolving Funds.

EXHIBIT I

NAVY INDUSTRIAL FUND, STATEMENT OF REVENUE AND EXPENSE BY ACTIVITIES—FISCAL YEAR 1973

[in thousands of dollars]

	Revenue	Expense	Gain/loss
Shipyards (10)	1,262,127	1,265,482	(3,355)
Military Sealift Command (1)	729,248	763,988	(34,740)
Aircraft maintenance (7)	593,046	600,518	(7,472)
Ordnance plants (13)	627,772	634,596	(6,824)
Research activities (16)	1,369,273	1,374,677	(5,404)
Base services (8)	216,232	216,202	30
Printing plants (35)	62,859	63,440	(581)
Special Projects Office (3)	27,740	28,180	(440)
Total (93)	4,888,297	4,947,083	(58,786)

EXHIBIT II

NAVY INDUSTRIAL FUND ACTIVITIES AS OF JAN. 1, 1974

[Dollar amounts in thousand]

	NIF implemented	Cash allocation	Estimated sales fiscal year 1975
Shipyards (10): Under NAVSHIPS management		$82,000	$1,239,381
Philadelphia, Pa	April 1952	8,500	
Charleston, S.C	July 1953	5,500	
Norfolk, Va	do	8,000	
Portsmouth, N.H	April 1954	7,600	
Boston, Mass.[1]	do	17,800	
Puget Sound, Wash	July 1954	6,500	
Long Beach, Calif	August 1954	4,600	
Mare Island, Calif	February 1970	10,000	
Hunters Point, Calif.[1]	do	8,000	
Pearl Harbor, Hawaii	December 1954	5,500	
Military Sealift Command (1): Under SecNav management	July 1951	31,000	624,388
Aircraft maintenance (7): under NAVAIR management		40,700	607,506
Quonset Point, R.I.[1]	May 1959	3,300	
Alameda, Calif	March 1962	8,300	
North Island, San Diego, Calif	April 1962	6,900	
Norfolk, Va	July 1962	10,700	
Cherry Point, N.C	August 1962	2,600	
Jacksonville, Fla	October 1962	2,400	
Pensacola, Fla	November 1962	6,500	
Ordnance plants (13): Under NAVORD management		25,050	532,810
Indian Head, Md	October 1953	4,450	
Louisville, Ky	February 1957	2,200	
Yorktown, Va	April 1959	2,850	
Keyport, Wash	January 1960	3,500	
Crane, Ind	July 1967	850	
Earle, N.J	do	900	
Hawthorne, Nev	do	600	
McAlester, Okla	do	2,650	
Oahu, Hawaii[1]	do	750	
Charleston, S.C	do	400	
Concord, Calif	do	2,500	
Seal Beach, Calif	do	1,800	
Port Hueneme, Calif	July 1969	1,600	
Polaris missile facilities (3) (under special projects office management).		2,155	15,586
Atlantic, Charleston, S.C	July 1967	675	
Pacific, Bangor, Wash	do	380	
Navy Strategic Systems Navigation Facility, Brooklyn, N.Y.[1]	July 1970	1,200	
Research activities (16)		43,400	1,630,639
Under SECNAV management: NRL, Washington, D.C	January 1953	6,600	
Under NAVAIR management:			
NAFI, Indianapolis, Ind	July 1955	3,300	
NAPTC, Trenton, N.J	July 1959	1,200	
NATC, Patuxent River, Md	July 1969	1,500	
NAEC, Philadelphia, Pa	do	5,000	
NMC, Point Mugu, Calif	July 1971	4,000	
Under DLP management:			
NWC, China Lake, Calif	January 1969	3,000	
NSRDC, Washington, D.C	July 1957	2,000	
NCSL, Panama City, Fla	July 1968	700	
NURDC, San Diego, Calif	July 1969	1,700	
NELC, San Diego, Calif	do	1,000	
NADC, Warminster, Pa	do	2,900	
NOL, White Oak, Md	do	4,000	
NWL, Dahlgren, Va	do	2,000	
NUWSC, Newport, R.I	July 1971	4,000	
Under NAVFAC management: NCEL, Port Hueneme, Calif	January 1974	500	

See footnotes at end of table.

EXHIBIT II—Continued
NAVY INDUSTRIAL FUND ACTIVITIES AS OF JAN. 1, 1974—Continued
[Dollar amounts in thousands]

	NIF implemented	Cash allocation	Estimated sales fiscal year 1975
Base Services (8): Under NAVFAC management		$14,050	$224,206
PWC, Norfolk, Va	July 1957	2,906	
PWC, Pearl Harbor, Hawaii	November 1958	1,800	
PWC, Newport, R.I.[1]	July 1959	900	
PWC, Guam, M.I.	April 1962	2,000	
PWC, Subic Bay, R.P.	July 1962	2,750	
PWC, San Diego, Calif	July 1963	1,700	
PWC, Great Lakes, Ill	July 1967	1,000	
PWC, Pensacola, Fla	do	1,000	
Printing Plants (35): Under NAVSUP management		1,725	68,404
Navy Publications and Printing Service[2]		1,225	
Philadelphia, Pa. (2)	September 1951		
Norfolk, Va	do		
New Orleans, La	November 1951		
Pensacola, Fla	September 1952		
Charleston, S.C	November 1952		
Brooklyn, N.Y	December 1952		
Washington, D.C	do		
Boston, Mass	January 1953		
Great Lakes, Ill	February 1953		
Bremerton, Wash	March 1953		
San Diego, Calif	April 1953		
Vallejo, Calif	May 1953		
Pearl Harbor, Hawaii	June 1953		
Naples, Italy	September 1953		
Defense Printing Service		500	
Subtotal (93 activities)		240,080	4,942,920
Unallocated cash		98,741	
Losses on closed activities		4,948	
Total		343,769	4,942,920

[1] In process of dissolution.
[2] Includes 19 branch plants not listed.

EXHIBIT III

NAVY INDUSTRIAL FUND SUMMARY OF NIF ACTIVITY CHANGES

Activities planned for deactivation

Name of Activity:	*Projected date of closure*
Boston Naval Shipyard, Boston, Mass	July 1, 1974
Hunters Point Naval Shipyard, San Francisco, Calif	June 28, 1974
Naval Aircraft Repair Facility, Quonset Point, R.I	June 30, 1974
Public Works Center, Newport, R.I	June 30, 1974
Naval Ammunition Depot, Oahu, Hawaii	June 30, 1974
Naval Strategic Systems Navigation Facility Brooklyn, N.Y	June 30, 1974

New activities planned

	Date of activation
Name of Activity: Public Works Center, San Francisco, Calif	July 1, 1974

Reserve Personnel, Navy

Operation and Maintenance, Naval Reserve

Chairman McClellan. The next appropriations to be considered will be those for "Reserve personnel, Navy" and "Operation and maintenance, Naval Reserve."

PROGRAM AND FINANCING

At this point in the record there will appear certain Program and Financing information from the justifications.

[The information follows:]

DEPARTMENT OF DEFENSE - MILITARY

RESERVE PERSONNEL, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 07-05-1405-0-1-051		1973 ACT	1974 EST	1975 EST
	PROGRAM BY ACTIVITIES:			
	DIRECT PROGRAM:			
	1. RESERVE COMPONENT PERSONNEL	216,310	198,423	184,244
	2. RESERVE OFFICER CANDIDATES	15,883	24,877	25,456
	TOTAL DIRECT PROGRAM	232,193	223,300	209,700
	REIMBURSABLE (TOTAL)	215	272	272
10	TOTAL OBLIGATIONS	232,408	223,572	209,972
	FINANCING:			
	RECEIPTS AND REIMBURSEMENTS FROM:			
11	FEDERAL FUNDS	-202	-242	-242
14	NON-FEDERAL SOURCES	-13	-30	-30
25	UNOBLIGATED BALANCE LAPSING	5,128	.....	.....
	BUDGET AUTHORITY	237,322	223,300	209,700
	BUDGET AUTHORITY:			
40	APPROPRIATION	237,322	209,403	209,700
44.30	PROPOSED SUPPLEMENTAL FOR MILITARY PAY RAISES	.....	13,897	.....
	RELATION OF OBLIGATIONS TO OUTLAYS:			
71	OBLIGATIONS INCURRED, NET	232,193	223,300	209,700
72	OBLIGATED BALANCE, START OF YEAR	36,474	43,800	49,100
74	OBLIGATED BALANCE, END OF YEAR	-43,800	-49,100	-47,800
77	ADJUSTMENTS IN EXPIRED ACCOUNTS	-4,593	.....	.....
90	OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL	220,275	205,403	209,700
91.30	OUTLAYS FROM MILITARY PAY RAISE SUPPLEMENTAL	.....	12,597	1,300

DEPARTMENT OF DEFENSE - MILITARY

OPERATION AND MAINTENANCE, NAVY RESERVE

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 97-10-1806-0-1-051	1973 ACT	1974 EST	1975 EST
PROGRAM BY ACTIVITIES:			
DIRECT PROGRAM:			
1. MISSION FORCES	58,277	84,757	138,833
2. DEPOT MAINTENANCE	32,362	39,633	39,091
3. OTHER SUPPORT	46,829	52,860	60,476
TOTAL DIRECT PROGRAM	137,468	177,250	238,400
REIMBURSABLE (TOTAL)	4,781	5,000	5,000
SUBTOTAL	142,249	182,250	243,400
INTRAFUND OBLIGATIONS	-1,321	-1,400	-1,400
10 TOTAL OBLIGATIONS	140,928	180,850	242,000
FINANCING:			
RECEIPTS AND REIMBURSEMENTS FROM:			
11 FEDERAL FUNDS	-3,225	-3,350	-3,350
14 NON-FEDERAL SOURCES	-235	-250	-250
25 UNOBLIGATED BALANCE LAPSING	951	.....	.....
BUDGET AUTHORITY	138,419	177,250	238,400
BUDGET AUTHORITY:			
40 APPROPRIATION	138,419	170,750	238,400
42 TRANSFERRED FROM OTHER ACCOUNTS	.....	3,000	.....
43 APPROPRIATION (ADJUSTED)	138,419	173,750	238,400
44.10 PROPOSED SUPPLEMENTAL FOR WAGE-BOARD PAY RAISES	.....	1,615	.....
44.20 PROPOSED SUPPLEMENTAL FOR CIVILIAN PAY RAISES	.....	1,885	.....
RELATION OF OBLIGATIONS TO OUTLAYS:			
71 OBLIGATIONS INCURRED, NET	137,468	177,250	238,400
72 OBLIGATED BALANCE, START OF YEAR	.....	23,604	49,854
74 OBLIGATED BALANCE, END OF YEAR	-23,604	-49,854	-65,254
90 OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL	113,864	147,552	222,948
91.10 OUTLAYS FROM WAGE-BOARD PAY RAISE SUPPLEMENTAL	.....	1,591	24
91.20 OUTLAYS FROM CIVILIAN PAY RAISE SUPPLEMENTAL	.....	1,857	28

PREPARED STATEMENT

Chairman McCLELLAN. The principal witness for these appropriations will be Vice Adm. D. W. Cooper, Chief of Naval Reserve. You may proceed, Admiral.

Admiral COOPER. I have two programs. One is for Reserve personnel and the other is Reserve operations and maintenance. I have a long statement which I can insert for the record and also a short statement which I will read.

Chairman McCLELLAN. Let the long statement be inserted in the record and we will proceed with your short statement.

[The statement follows:]

BIOGRAPHY OF VICE ADM. DAMON W. COOPER, U.S. NAVY

Damon Warren Cooper was born in Elizabethtown, Kentucky, on April 27, 1919. He attended Western Kentucky State Teachers College at Bowling Green prior to entering the U.S. Naval Academy in 1937. He was commissioned an ensign on February 7, 1941.

Following graduation from the Naval Academy in 1941, he joined the USS WATERS and in February 1943 was detached for flight training at Pensacola, Florida. His first World War II combat duty as a Naval Aviator was performed with Torpedo Squadron TWENTY-FOUR which he commanded from August 1944 until August 1945. For outstanding services while in such command, including sixty combat missions in the Ryukyus area, he was awarded the Distinguished Flying Cross with two Gold Stars and the Air Medal with eight Gold Stars.

In September 1945 he reported as Navigator on board the USS KASAAN BAY and from July 1946 to September 1947 was a student at the Naval Intelligence School, Washington, DC. He next served as Intelligence Officer on the Staff of Commander Air Force, Pacific Fleet and in October 1949 assumed duty as Assistant Training Officer and Officer in Charge of Fighter Squadron ATU-4 at the Naval Auxiliary Air Station, Cabaniss Field, Corpus Christi, Texas.

His first duty in connection with combat operations in the Korean Conflict was performed as Intelligence Officer on board USS PHILIPPINE SEA from August 1950 to January 1951. For meritorious service in that capacity he was awarded the Navy Commendation Medal with Combat "V". After an assignment as Intelligence Officer on the Staff of Commander Carrier Division FIVE, he reported in September 1951 as Commanding Officer of Fighter Squadron EIGHT HUNDRED TWENTY ONE aboard USS ESSEX. For meritorious service as Commanding Officer of this Squadron he was awarded the Bronze Star Medal with Combat "V". He also was awarded Gold Stars to his Air Medal for completing twenty missions during the period of August 1, 1952 to January 2, 1953.

He served in the Office of the Chief of Naval Operations as head of the Aviation Armament Section in the Air Warfare Division from March 1953 to February 1955. He next commanded Air Task Group THREE, on the USS SHANGRI-LA, and in June 1956 reported as Operations Officer on the Staff of Commander Air Force, U.S. Pacific Fleet. He joined the attack carrier USS INDEPENDENCE (CVA-62) as Executive Officer when she was commissioned January 10, 1959 and served aboard until detached, in July 1959, for duty as Commanding Officer of Attack Squadron FORTY-FOUR.

He was a student at the Naval War College, Newport, Rhode Island, from July 1957 to June 1958 and at the National War College, Washington, D.C., from July 1960 to July 1961. Following completion of instruction at the National War College, he served in the Programs Branch, Joint Chiefs of Staff, Washington, D.C. In April 1963, he assumed command of the USS PINE ISLAND (AV-12) and in July 1964 reported as Commanding Officer of USS TICONDEROGA (CVA-14). He was awarded the Gold Star in lieu of the second Navy Commendation Medal for meritorious service in the latter duty.

Detached from the TICONDEROGA, he was ordered to the Bureau of Naval Personnel where he served as Assistant Director for Captain Detail (Aviation) from June 1965 to July 1966, then as Deputy Assistant Chief for Personnel Control. In December 1966 he assumed Command of Patrol Force SEVENTH

Fleet/Taiwan Patrol Force/Fleet Air Wing One. For exceptional service in such assignment he was awarded the Legion of Merit. He was advanced to flag rank as Rear Admiral, to date from July 1, 1967.

In August 1969, Rear Admiral Cooper reported as Assistant Chief of Naval Personnel for Personnel Control. For his exceptional meritorious service during his tenure in that capacity from August 1968 to August 1970, he was awarded a Gold Star in lieu of the second Legion of Merit.

He assumed command of Carrier Division NINE in August 1970 and in March 1971 reported as Commander Attack Carrier Striking Force, SEVENTH Fleet/Commander Carrier Division FIVE. He was advanced to Vice Admiral, to date from August 16, 1972. For this duty he was awarded the Distinguished Service Medal.

On 12 April 1973, Vice Admiral Cooper assumed the duty as Chief of Naval Reserve with headquarters in New Orleans, Louisiana, and additional duty as Director of Naval Reserve on the staff of the Chief of Naval Operations.

His "home town" address is Elizabethtown, Kentucky. He is married to the former Anne Porter Leverick of Olympia, Washington, and they have three daughters, Anne Michele (now Mrs. Davidson), Mary Patricia, Jeanne Fleetwood, and a son John Rockwell Cooper.

Prepared Statement

Mr. Chairman and Members of the Committee, I am Vice Adm. Damon W. Cooper, Director of Naval Reserve. It is a pleasure for me to appear before this Committee in support of the Reserve Personnel, Navy appropriation requesting $209.7 million be appropriated, and in support of the Operation and Maintenance, Naval Reserve appropriation requesting $238.4 million be appropriated. I will briefly give an overview of organizational changes, personnel strength and force changes, and then explain each appropriation in detail.

New Orleans Headquarters

First, I would like to mention that my New Orleans headquarters became fully operational the last of January. This marks the end of the phased transition of functions from the Surface Reserve Headquarters in Omaha, and the Air Reserve Headquarters in Glenview following the establishment on 1 February 1973 of the new Naval Reserve Command.

Manpower Savings From Consolidation

Chairman McClellan. What savings in manpower and operational support will be realized as a result of the consolidation of the surface and air reserve headquarters?

Admiral Cooper. Eighty-nine billets and approximately $1 million per year are savings identified to the consolidation of air and surface reserve headquarters. There are no savings identified in the operational support area.

Chairman McClellan. Proceed.

Admiral Cooper. We believe this change is bringing about improved management in many areas including budget preparation and execution.

Restructuring of Naval Reserve

We are restructuring the Naval Reserve to relate manpower, training and hardware more closely to stated mobilization requirements.

Chairman McClellan. Explain fully how the Naval Reserve is being restructured to relate manpower, training and hardware more closely to stated mobilization requirements. Provide specific details on the number of mission capable Selected Reserve units in FY 1973 through FY 1975 and programmed for the next four years.

Admiral Cooper. The determination of proper active and Reserve Force manpower levels is a very complex and difficult subject. The existing Navy system expresses manpower requirements in the context of full mobilization. If confronted with that situation, Navy would recall the Ready Reserve as well as the Selected Reserve to expand the manpower base to whatever level was necessary and achievable. But in building the new Selected Reserve to provide the initial and primary means of expanding the Navy, development was focused

on those mission-capable, task-performing units that meet our most crucial needs for capabilities to reinforce the active forces in any emergency. The key point here is "unit capabilities" as distinguished from only adding manpower.

It is therefore implicit that these units must contain the requisite mix of skills, proficiency levels, and operational equipment so that they can respond in a matter of hours if necessary, take station and become fully functional in a matter of days. In terms of this new concept therefore, mobilization planning is not merely a matter of a metered input of manpower; rather it is the vastly more complex process of identifying those unit capabilities which are most critically needed and which are also practically attainable.

Sometimes we are mission limited in being able to provide a Reserve capability. In other instances, we are skill limited. That is, the necessary personnel do not exist in sufficient quantity or in the right geographical location or the demand for technical currency is too high or too perishable to make the capability achievable. In other cases, employable/deployable equipment are in short supply.

In brief, all of these feasibility issues must be satisfied or the attainment of the capability within the Reserve is not possible.

There are many areas in which additional capabilities would be desired if they could be provided. With the new Selected Reserve it is evident that we are turning mobilization policy, planning and the statement of requirements away from the gradual and uniform expansion of forces philosophy of the past.

The essential point is that Navy is no longer managing its drill pay program as a manpower pool, but is reshaping its Selected Reserve as a quick reaction response force. Our present design is admittedly short in capabilities, but it is a force that can be successfully created and operated in the immediate future. Out-year reviews will almost certainly bring about refinements in its size and character.

The need of active Naval forces for additional capabilities in an emergency is the paramount consideration. Since the mission of the Navy embraces every warfare discipline, weapons platform and technology known to modern man, its most crucial mobilization needs cannot be expressed solely in terms of manpower. Rather, the Navy needs its men and women in properly tailored packages, joined in a unit capability that is more than just the sum of their individual skills, and outfitted with all of the tools to do the job. It is to this end that the Naval Reserve has been restructured. That is, to provide the most urgently needed reinforcement capabilities for Naval forces in an emergency.

The number of mission capable Selected Reserve units in FY 73 under the old organization was 179 with an allocation of 30,322 drill pay spaces. The new Reserve completed to date and ready for implementation, provides 2,262 mission capable units with a drill pay allocation of 116,393 within the FY 74 funded average strength of 116,857 for the Selected Reserve. The FY 75 budget requests an average strength of 107,526 for the Naval Selected Reserve. Strengths for future years are in the planning stage and have not received final approval within the DOD system.

Chairman McClellan. Proceed.

Admiral Cooper. The new Selected Reserve alignment contains a sharp increase in mission-capable units. A ship or squadron reinforcement unit, for example, will be composed of officers and enlisted men needed to man a specific ship class or aircraft squadron type for wartime operations. They will perform their annual two-weeks training period on a ship of that class or squadron of that type wherever possible. Existing manpower will be utilized to the fullest in order to minimize any turbulence associated with transitioning to the new structure.

Reserve Readiness Commands

Complementing and concurrent with the implementation of the new structure is the establishment of Naval Reserve Readiness Commands throughout the country. Each Readiness Command will encompass several Naval Reserve centers and facilities.

Naval Reserve Readiness Commands

Chairman McClellan. How many Naval Reserve Readiness Commands are being established? Are active duty personnel involved in manning these commands?

Admiral COOPER. There will be a total of 22 Naval Reserve Readiness commands established. Each command will have active duty personnel assigned.

Chairman MCCLELLAN. Proceed.

Admiral COOPER. Included in the overall budget requests are funds to procure needed equipment such as Ship Operational Trainers (SOTs) and Common Skill Shops to provide more effective and meaningful training.

UTILIZATION OF NAVY INSTALLATIONS AND EQUIPMENT

Chairman MCCLELLAN. Are efforts made to assure that active Navy installations and equipment are utilized prior to procurement of equipment for Reserve ship operational trainers and common skill shops?

Admiral COOPER. Wherever possible appropriate active duty Navy installations and equipment will be utilized by Readiness Commands. The procurement of ship operational trainers and common skill shops takes this factor into consideration.

SKILL SHOPS

Chairman MCCLELLAN. What is a common skill shop, and how many people can train in it at the same time?

Admiral COOPER. A common skill shop is a shop containing equipment which can be utilized by personnel, with certain skills in common, to develop, maintain and improve their proficiency; for example, an electronics common skill shop may be utilized by Operations Specialists (OS), Radioman (RM), Electronics Technician (ET), Communications Technician (CT), Electrician's Mate (EM), Sonar Technician (ST), Fire Control Technician (FT), ets. The Metal Common skill shop can effectively train 20 personnel at one time and the Electronics shop can train 15.

Chairman MCCLELLAN. What specialized type of equipment must be obtained for such common skill shops.

Admiral COOPER. The specialized equipment which must be obtained for shops indicated is:

Metal shop

Brake
Forming rolls
Slip rolls
Shear
Metal lathes
Milling machine
Metal hack saw
Arc welders
Oxyacetylene welders
Band saw
Joiner
Table saw
Drill press
Vices
Hand tools

Electronics shop

Parallel ICR equipment
Electromagnetic kit
Phase relationship kit
Transistor circuit kit
Transistor tracer kit
Circuit trainer
Electronic multimeter
Non-electronic multimeter
Oscilloscopes
Radio frequency meter
Signal generator
Tube testers
Transistor test kit
Dummy load kit

Chairman MCCLELLAN. Proceed.

Admiral COOPER. We believe this action will make affiliation with the Naval Reserve more attractive, particularly to those personnel who have most recently completed active duty during which they have performed on modern ship or shore equipment.

RESERVE STRENGTHS

The Fiscal Year 1974 Authorization Act (Public Law 93-155) prescribed an average strength of not less than 119,231 selected reservists in the Navy. The Appropriations Act, however, provided funds for only 116,857. In the Fiscal Year 1975 budget we are requesting an average strength of only 107,526, a reduction of 9,331 from the funded strength and 11,705 from the Fiscal Year 1974 authorized strength.

FORCE MODERNIZATION

Reserve force modernization continues at a modest rate. This year the fourth light attack squadron is ahead of schedule in transitioning from A-4's to the

more modern A–7 aircraft. During recent years, including the current Fiscal Year, five of the land based anti-submarine warfare (ASW) patrol squadrons have transitioned to P–3A, Orion, aircraft. Plans for FY 1975 include transitioning of another fighter squadron into F–4 aircraft, and two more ASW patrol squadrons into P–3 aircraft.

In FY 1974, two Fleet Rehabilitation and Modernization (FRAM) I destroyer (DDs) have been added to the Naval Reserve Force, and 25 other FRAM I DDs have replaced less capable DD sand destroyer escorts (DEs) for a total end FY 1974 destroyer strength of 37 ships. These destroyers are expected to remain in the Naval Reserve during the next few years. These ships were commissioned during 1945 and 1946 and subsequently updated in the early 1960's as part of the Navy's Fleet Rehabilitation and Modernization program. The age and condition of these ships necessitates a faithful overhaul and maintenance program to keep them in a satisfactory state of material readiness.

By the end of Fiscal Year 1975 nearly all of the Navy's Mine Countermeasures Ships will be transferred to the Reserve Forces. These 31 minesweepers will be able to respond to contingency needs as well as full mobilization requirements. Coastal River Squadrons will receive three new sixty-five foot patrol boats in Fiscal Year 1975. Three patrol gunboats being homeported on the Great Lakes are scheduled for entry into the Naval Reserve Force in Fiscal Year 1976.

We had been making steady progress in improving the readiness of Reserve Forces until November 1973 when severe reductions in operations were imposed in order to save fuel. I will go into more detail on this later in my statement.

Now I shall discuss the appropriations in detail, first the Reserve Personnel, Navy appropriations.

Reserve Personnel, Navy

The Reserve Personnel, Navy (RPN) appropriation includes funds for pay and allowances, clothing, subsistence, travel costs and related expenses for personnel of the Naval Reserve on active duty under the authority of section 265, title 10 USC, for personnel on inactive duty undergoing active duty for training or performing inactive duty drills and for members of the Reserve Officer Training Corps, as authorized by law.

The RPN appropriation is divided into two budget activities. Budget Activity One provides for the reserve component personnel while Budget Activity Two is concerned with the Reserve Officer Candidate, Senior and Junior Reserve Officer Training Corps, and the Armed Forces Health Scholarship programs. The total fiscal year 1975 appropriation request is for $209.7 million, which includes $184.2 million for Budget Activity One and $25.5 million for Budget Activity Two. The requested Budget Activity One funding is to support a selected reserve average strength of 107,526 which represents a 9,331 average strength decrease from the fiscal year 1974 funded average strength of 116,857.

Selected Reserve Manpower Reductions

Chairman McClellan. What is the operations and maintenance reduction associated with selected reserve manpoyer strength reductions?

Admiral Cooper. There are no reductions in operations and maintenance specifically related to those manpower strength reductions. Hardware units, supported by O&MNR funds, are not being reduced in strength. Non-hardware units, from which manpower reductions will be taken, drill at fixed sites which need increased support notwithstanding any reduction in Selected Reserve strength.

Chairman McClellan. Continue.

Admiral Cooper. The reduction in the selected reserve average strength for fiscal year 1975 is a result in part of a decision to obtain funds needed for other Naval Reserve programs through a reserve force reduction consisting of one Construction Battalion (24 officers and 738 enlisted personnel), and 3400 surface program enlisted augmentees.

Enlisted Augmentees

Chairman McClellan. How many surface program enlisted augmentees are planned for FY 1974 and FY 1975? Exactly what function does an enlisted augmentee perform in peacetime.

Admiral Cooper. Naval Reserve surface personnel are currently migrating from a largely individual augmentee trainee program to a mission-oriented force program under the restructured Surface Reserve. This migration shall continue un-

til the end of fiscal year 1974 at which time, all surface enlisted (66,707 end strength) will be assigned to recallable units in combat force and combat support related programs. During peacetime, Reservists are engaging in training situations that will provide the necessary skills, both unit and individual, required for the mobilization billets to which assigned.

Charman McClellan. Proceed.

Admiral Cooper. Additionally, Congressional action directing disestablishment of the Wartime Information Security Program by the end of fiscal year 1974 resulted in a 293 average strength reduction for fiscal year 1975. A further average strength reduction of 5,000 was directed by higher authority. As a partial result of these strength reductions the fiscal year 1975 funding request for the Reserve Component Personnel portion of the RPN appropriation represents a net decrease of $14.2 million from the fiscal year 1974 funding level.

Funding is provided to support active duty for training with pay for 2900 pay group D officer and enlisted personnel who perform their regular drills in a non-pay status. Pay group D maintains the same average strength figures as in FY 1974.

Military and Technical Training

In addition to selected reserve personnel costs associated with drill and annual active duty for training performance by pay group A, B, and D personnel, the fiscal year 1975 request includes $11.4 million to provide basic military and technical training for an average strength of 4660 non-prior service enlistees.

Pay Group Definitions

Chairman McClellan. Describe the various Reserve pay groups . . . A, B, C, D . . . and explain the differences.

Admiral Cooper This information can best be presented in table form. Therefore, I will furnish the information for the record.

[The information folows:]

The following table shows differences between each pay group.

Pay group	Comprised of	Minimum number of periods of inactive duty training required annually with pay	Number of days of active duty for training required annually with pay
A	Units of the selected Reserve	48	Not less than 14 exclusive of travel time.
	Individual members of the selected Reserve	48	12 to 14 exclusive of travel time.
B	Units and members of the selected Reserve	24	Do.
C	do	12	Do.
D	Members of ready Reserve	0	Not more than 14 exclusive of travel time.

Chairman McClellan. Proceed.

Admiral Cooper. This projection reflects a $3.4 million increase over the fiscal year 1974 budgeted level. While it is recognized that the Navy probably will not achieve the much lower fiscal year 1974 budgeted accession level, the level reflected for fiscal year 1975 depicts the Navy's projected needs and every effort will be made to achieve the planned level.

Reserve Recruiting

Senator Young. What has been the Navy experience in recruiting for the Reserve? Will objectives or goals be met that will support the strength requested in the budget?

Admiral Cooper. The gains of new recruits have been short of the quotas we have set for personnel without prior service. We have been able to maintain the strength funded for FY 1974 through retention and affiliation of prior service personnel. We anticipate that the Naval Reserve will be able to meet the strength in the Selected Reserve requested in the budget for FY 1975.

Chairman McClellan. Proceed.

Admiral Cooper. Funding in the amount of $7.7 million is requested for school and special active duty for training tours. This amount is consistent with the

fiscal year 1974 requested level with a small increase due to the 1973 calendar year pay increases. This additional training is necessary to enhance the mobilization posture of the Naval Reserve by providing increased proficiency in certain skills which cannot be achieved and maintained solely by regular drills and annual active duty for training periods. In the category of administration and support $6.7 million is requested to provide full year funding for 251 active duty officers located at the seat of government and at selected headquarters as authorized by section 265, title 10, USC. An increase in average strength of 26 such officers in fiscal year 1975 over that for fiscal year 1974 accounts for the $0.8 million funding increase.

Increase of Active Duty Officers

Chairman McClellan. For what purpose is the increase of 26 active duty officers located at the seat of government and selected headquarters?

Admiral Cooper. The increase is to provide reserve officers in major staff offices in Naval Operations including the Director of Naval Reserve to give increased emphasis in the management of the Naval Reserve including the Navy Planning, Programming and Budget process. Reserve officers provide the assistance and advice to insure that Naval Reserve requirements are included in all Navy planning in accordance with the total force policy.

Chairman McClellan. Proceed.

Admiral Cooper. Funds are also included in this category to provide death gratuities, disability and hospitalization benefits allowable in the event of deaths or injuries incurred by inactive duty Naval Reservists while performing inactive duty training or active duty for training.

A major reduction in the fiscal year 1975 funding requirement in Budget Activity One results from the directed transfer of 10,000 personnel from pay group A to pay group B. This action decreased the authorized annual drill performance level from 48 to 24 drills for those personnel involved.

Officer Procurement Programs

In the case of Budget Activity Two, the funding request for the officer procurement programs represents a net increase in fiscal year 1975 of $0.6 million over the fiscal year 1974 level. This increase is due primarily to projected increased Senior Reserve Officer Training Corps and Reserve Officer Candidate enrollments during fiscal year 1975. The average school year enrollment for fiscal year 1975 in the Senior and Scholarship ROTC programs is estimated at 2200 and 5900 respectively for a total enrollment of 8100. Fiscal year 1975 levels for the Junior ROTC program are essentially the same as during fiscal year 1974 with an average enrollment of 31,800.

JROTC Enrollments

Chairman McClellan. What was the average enrollment of Junior ROTC for fiscal years 1972 and 1973? How many schools participate in this program? What is the cost of the Junior ROTC program?

Admiral Cooper. The average NJROTC student enrollment for Fiscal years 1972 and 1973 was 13,000 and 20,400 respectively. In FY 75 there are 223 schools participating in this program and the budgeted cost is $1,473,000.

Chairman McClellan. Continue.

Admiral Cooper. Dollar costs are down by $0.9 million as a result of a higher volume of clothing issues in fiscal year 1974 due to one-time issues for personnel enrolled prior to fiscal year 1974. For fiscal year 1975 the planned input into the Reserve Officer Candidate program (ROC) and the Aviation Reserve Officer Candidate program (AVROC) is 760 with a planned commissioning of 572, which is an increase of 173 over fiscal year 1974.

Selected Reserve Strength Decreases

Chairman McClellan. With the authorized strength of the Selected Reserve decreasing, what is the rationale for the increases of 173 in the Officer Candidate programs?

Admiral Cooper. Enrollments in those Navy Officer Procurement programs supported by Budget Activity Two of the Reserve Personnel, Navy appropriations are based upon the requirements of the regular forces. Therefore, increases

or decreases in the numbers of candidates entering into or being commissioned via the Officer Candidate Program is independent of strength changes in the Selected Reserve. In the case of the Reserve Officer Candidate Program, a FY–73 Aviation Reserve Officer Candidate (AVROC) recruiting shortfall resulted in the less than required number of commissionings for FY–74. The low input situation has been rectified during FY–74 and sufficient numbers of AVROC candidates have been recruited to meet the FY–75 budgetary commissioning projection.

Chairman McCLELLAN. Proceed.

Admiral COOPER. The Armed Forces Health Professions Scholarship Program is projected for a decrease of $0.1 million in fiscal year 1975. The overall fiscal year 1975 Reserve Personnel, Navy appropriation request reflects a net decrease of $13.6 million from the fiscal year 1974 budgeted level.

O&M, NR BUDGET REQUEST

Turning now to the Operation and Maintenance, Navy Reserve request, the FY 1975 Operation and Maintenance, Navy Reserve appropriation is for $238.4 million. The increase over the FY 1974 budget is necessary to support the more complex ships and aircraft previously mentioned.

BUDGET ACTIVITY 1: MISSION FORCES

Budget Activity 1 funds provide for training support and for operation and maintenance of aircraft, ships, and stations which support the Naval Reserve Forces. In fiscal year 1975 we are requesting $138.8 million which is an increase of $24 million over the FY 1974 O&MNR appropriated amount plus the proposed FY 1974 supplemental.

SHIP OVERHAULS

Two additional destroyer overhauls and ten additional minesweeper (MSO and MSC) overhauls are included in the FY 1975 budget request. The increased number and scope of ship overhauls and associated fleet modernization programs are necessitated by the longer time that ships are expected to remain in the Naval Reserve Force as well as the complexity and increased number of ships.

FUEL IMPACT

The fuel situation, as previously mentioned, is severely impacting on the Naval Reserve forces with reductions occurring in both the Naval Reserve Force ship and squadron operating tempos. Although the Naval Air Reserve flight program displayed in the FY 1975 budget reflects an increase of $2 million over FY 1974 for fuel costs, the funds for fuel products are not sufficient to provide the minimum level of operations necessary to maintain satisfactory readiness, and price increases subsequent to the budget submission make it impossible to fully execute even this program in FY 1975.

FLYING HOUR AND SHIP STEAMING HOUR PROGRAM

Chairman McCLELLAN. Provide the flying hour and ship steaming hour program for fiscal years 1973, 1974 and projected for 1975.

Admiral COOPER. I will provide that for the record.

(The information follows:)

[Dollar amounts in thousands]

	Flying		Steaming	
	Hours	Amount	Hours	Amount
1973 actual	264,931	$24,739	51,364	$2,772
1974 [1]	231,544	31,357	52,753	4,889
1975 shown in budget	199,323	33,481	41,204	6,700
1975 projected (attainable with presently requested funds)[2]	157,000	33,481	26,458	6,700

[1] Fiscal year 1974 column (including Readiness Supplemental) of fiscal year 1975 budget.
[2] Due to fuel price increases subsequent to fiscal year 1975 budget submission.

Chairman McCLELLAN. Proceed.

Admiral COOPER. The austerity of the flight hour program will force elimination of flying for more than two-thirds of the Replacement Training Unit (RTU) pilots. These pilots are needed to augment the active fleet in the event of mobilization. The Naval Reserve force ships are also being severely affected by constrained funding and the increased fuel costs. The steaming hours provided by this budget request will not support even minimum readiness requirements.

OPERATIONS REQUIRED FOR RESERVE READINESS

Chairman McCLELLAN. Explain what number of flying and steaming hours would be necessary to maintain satisfactory readiness of the Naval Reserve.

Admiral COOPER. An obsolute minimum of 16 steaming days per ship per quarter is required to maintain satisfactory readiness of the assigned, selected reserve ship crews. A minimum of 259,120 hours is required in the flight program in order to maintain satisfactory readiness. This provides 150 hours per year for carrier pilots and 115 hours per year for fleet augment pilots.

RESERVE READINESS STATUS

Chairman McCLELLAN. Provide the readiness condition of each of the Naval Reserve units.

Admiral COOPER. The readiness status of the Naval Reserve combat and combat support units reflected in the 22 April 1974 FORSTAT report is as follows:

[Deleted.]

Chairman McCLELLAN. Proceed.

Admiral COOPER. Summing up, these fuel problems are impacting significantly on the readiness posture of the Naval Reserve and will continue to degrade readiness until they are rectified.

RESERVE MANPOWER

Chairman McCLELLAN. In view of the austere fuel allocation program and the fact that minimum readiness requirements will not be maintained, what changes will be made in training to provide for effective utilization of Reserve manpower?

Admiral COOPER. Readiness standards cannot and will not be adjusted to accommodate reduced fuel allocations. Every effort will be made to maintain readiness of the maximum numbers of units. The quantity and quality of simulators readily available to the Reserve are not adequate to substitute for "hands on" training. Experience levels in hardware units are such that increased dockside/ground training above present levels will not maintain unit readiness.

Chairman McCLELLAN. Proceed.

Admiral COOPER. The operating funds to support the Naval Reserve Inshore Undersea Warfare Training, Construction Battalion support and fleet support, namely cargo handling battalions and security group units, have been level funded from the fiscal year 1974 base. Completion of the phasein of the coastal/river squadrons and divisions adds $93,000 over the fiscal year 1974 level.

BUDGET ACTIVITY 2: MAINTENANCE AND REPAIR

This budget activity provides for the maintenance and repair of reserve aircraft and engines as well as the repair and overhaul of technical training equipment. There is $0.54 million reduction from fiscal year 1974 as a result of a $1.35 million decrease in the maintenance and repair of Naval Reserve aircraft and engines and a $0.81 million increase in repair and overhaul of technical equipment.

The reduction in the aviation program is attributable to the reduced number of airframes needed to be reworked, from 252 in FY 1974 to 214 in FY 75. In addition, the number of aircraft engines to be repaired or overhauled in FY 1975 is decreased to 783, from 802 in FY 1974. Overall the reductions reflect more maintenance being assumed by intermediate maintenance facilities and a different mix and reduced number of aircraft in the Naval Air Reserve, 634 aircraft in FY 1975 down from 671 aircraft in FY 1974.

The scope of the maintenance program for training equipment has been significantly increased in fiscal year 1975 in an effort to enhance the training effort

and readiness of the Naval Reserve by reducing the backlog of inoperative equipment in reserve centers.

INOPERATIVE TRAINING EQUIPMENT

Chairman MCCLELLAN. What was the dollar value of the inoperative training equipment in Reserve Centers as of end FY 1973 and projected for FY 1974 and FY 1975? What was provided for maintenance of this equipment in the same fiscal years?

Admiral COOPER. The dollar value of inoperative training equipment and funds for maintenance of training are:

	Fiscal year 1977	Fiscal year 1974	Fiscal year 1975
Value of inoperative equipment in Reserve centers	$15,000,000	$15,000,000	$7,500,000
Funds provided for repair of above equipment	984,000	986,000	1,800,000

Chairman MCCLELLAN. Proceed.

BUDGET ACTIVITY 3

Admiral COOPER. This budget activity provides the Naval Reserve with the resources for the management and administration of all Naval Reserve Programs as well as base support costs for the training of reserve personnel. We are requesting $7.6 million more in fiscal year 1975 than in FY 1974 for this budget activity. The increase results from a $0.3 million decrease in the command budget program and a $7.9 million increase in the base operation program.

The $7.9 million in fiscal year 1975 in base operations is a result of:

A transfer of funding from the O&MN appropriation for collateral equipment used to initially outfit facilities/structures under the Military Construction, Naval Reserve program $1.1 million); full year costs of the civilian substitution program ($4.1 million); increasing the scope of the maintenance of real property ($1.5 million), acquisition of small hand tools, ships' modules and common skill shop equipment ($1.0 million); and increase in rent and utility costs ($0.2 million).

CIVILIAN SUBSTITUTION

Chairman MCCLELLAN. How many civilian personnel were substituted for military personnel during FY 74 to require an additional $4.1 million in FY 75?

Admiral COOPER. 662 civilians are scheduled to be hired in FY 74 under the civilian substitution program.

This concludes my statement Mr. Chairman. I shall be pleased to answer any questions or provide further information as desired.

ORAL STATEMENT

Admiral COOPER. Mr. Chairman, it is a pleasure for me to appear before this committee in support of appropriations for "Reserve Personnel, Navy" and "Operation and Maintenance, Navy Reserve."

RESTRUCTURING OF NAVY RESERVE

The Navy Reserve is being restructured under my direction to relate to manpower, training and hardware more closely to stated mobilization requirements. The new selected reserve alinement contains a sharp increase in mission-capable unit. Complementing and concurrent with the implementation of the new structure is the establishment of naval reserve readiness commands throughout the country. Each readiness command will encompass several naval reserve centers and facilities.

RESERVE READINESS COMMANDS

Senator YOUNG. How many naval reserve readiness commands is the Navy establishing? Where will they be located?

Admiral COOPER. The Navy plans a total of 22 such commands. Eight readiness commands are currently in being at Baltimore, Md.; Cleveland, Ohio; Great Lakes, Ill.; Denver, Colo.; San Francisco, Calif.; Seattle, Wash.; Philadelphia, Pa.; and Houston, Tex. The remaining 14 commands are programed to be established as follows:

July 1, 1974—Columbus, Ohio; Los Angeles, Calif.; Boston, Mass.; and Twin Cities, Minn.

July 1, 1975—Charleston, S.C.; Detroit, Mich.; Jacksonville, Fla.; New Orleans, La.; and St. Louis, Mo.

July 1, 1976—New York, N.Y., Dallas, Tex.; Kansas City, Mo.; Syracuse, N.Y.; and San Diego, Calif.

Included in the overall Navy budget are funds to procure needed equipment such as ship operational trainers (SOT's) and common skill shop equipment to provide more effective and meaningful training.

RESERVE PERSONNEL BUDGET REQUEST

The fiscal year 1975 Reserve personnel, Navy budget request is for $209.7 million. This includes $184.2 million for Budget Activity 1, which provides for the Reserve component personnel, and $25.5 million for Budget Activity 2, which supports the Reserve Officer Candidate, Senior and Junior Reserve Officer Training Corps, and the Armed Forces health scholarship program.

RESERVE STRENGTHS

The fiscal year 1974 Authorizations Act prescribed an average strength of not less than 119,231 selected reservists in the Navy. The Appropriations Act, however, provided funds for only 116,857. Fiscal year 1975 funds requested for Reserve component personnel will support an average strength of 107,526 which represents a 9,331 average strength decrease from the fiscal year 1974 funded average strength.

PAY GROUP TRANSFERS

Another major reduction in the fiscal year 1975 funding requirement in this budget activity results from the directed transfer of 10,000 personnel from pay group Alpha to pay group Bravo. This action decreased the authorized annual drill performance level from 48 to 24 for those personnel involved.

I am concerned about this transfer from pay group Alpha to pay group Bravo inasmuch as past experience has shown that a large number of personnel transferred to the lower level of paid training will not continue to participate in training. This adversely affects our ability to maintain adequate strength in the selected Reserve.

RECRUIT SHORTFALLS

Accessions of new recruits into the Naval Reserve have been short of the quotas set for nonprior service personnel although prospects for improvement in the months ahead appear more favorable.

Chairman McCLELLAN. What causes the favorable prospects?

Admiral COOPER. More effort is being devoted by Recruiting Command to procuring personnel. During the first month of the fiscal year, we were able to recruit less than 25 percent of the assigned quotas. More advertising. One of the things that could benefit——

Chairman McCLELLAN. You need increased effort.

Admiral COOPER. Yes, sir. I was going to add that the incentives for the Reserves which are currently before Congress, if acted upon favorably, would help us also.

OFFICER PROCUREMENT

The funding requested for the officer procurement programs represents a net increase in fiscal year 1975 of $0.6 million over the fiscal year 1974 level. This increase is due primarily to projected increased Senior Reserve Officer Training Corps and Reserve officer candidate enrollments during fiscal year 1974. The overall fiscal year 1975 Reserve personnel, Navy (RPN) Appropriation request reflects a net decrease of $13.6 million from the fiscal year 1974 budget level.

RESERVE MODERNIZATION

Reserve force modernization continues at a modest rate. More modern aircraft such as the A–7 Corsair II, F–4 Phantom, and P–3A Orion are being added to the Naval Air Reserve Force.

The Reserve destroyer force consists of a total of 37 ships, all of which have undergone the Navy's fleet rehabilitation and modernization program during the early 1960's. By the end of fiscal year 1975 nearly all of the Navy's mine countermeasures ships will have been transferred to the Reserve forces. The 31 minesweepers will be able to respond to contingency or more extensive mobilization needs.

OPERATIONS AND MAINTENANCE, NAVY RESERVE

The fiscal year 1975 "Operations and Maintenance, Navy Reserve" request is for $238.4 million. The increase over the fiscal year 1974 budget is necessary to support the more modern and complex ships and aircraft in the Naval Reserve inventory. Two additional destroyer overhauls and ten additional mine sweeper (MSO and MSC) overhauls are included in the fiscal year 1975 budget request. The increased number and scope of ship overhauls and associated fleet modernization programs reflects an increased effort to insure that our ships remain in a deployable condition.

FUEL IMPACT

The fuel situation is having a severe impact on the Naval Reserve forces with reductions occurring in both the ship and squadron operating tempo. Because of the fuel price increases, the funds for fuel products are not sufficient to provide the minimum level of operations necessary to maintain satisfactory readiness. Price increases subsequent to the the budget submission make it impossible to execute even the level included in the fiscal year 1975 budget submission.

AIRCRAFT MAINTENANCE

The "Operation and Maintenance, Navy Reserve" appropriation provides for the maintenance and repair of reserve aircraft and engines as well as the repair and overhaul of technical training equipment; 214 airframe reworks and 703 aircraft engine repairs or overhauls are planned for fiscal year 1975.

RESOURCE MANAGEMENT

Finally, the O. & M.N.R. appropriation provides the Naval Reserve with the resources for the management and administration of all Naval Reserve programs as well as base support costs for training of reserve personnel.

We are making improvements in management, organization and structure of the Naval Reserve. Our most significant problem at this time is the fuel related reduction of operating tempo which limits our capability to get our ships to sea and to provide adequate training for our Reserve pilots and crew members.

CONCLUSION

This concludes my statement, Mr. Chairman. I shall be pleased to answer questions or provide additional information as desired.

ENGINE HOURS BETWEEN OVERHAULS

Senator YOUNG. Has the requirement for engine overhaul and the number of hours in between overhauls changed in the last 5 years? Do you run an engine more hours now without overhaul than before?

Admiral COOPER. Basically, no, sir. It varies depending on the type of engine. Some reciprocating engines will have a longer life in between overhauls than will many of our jet engines. On the other hand, within the various types of jet engines this will also vary.

Senator YOUNG. Can't you run a jet engine more hours now without overhaul?

Admiral COOPER. Some of them, yes, sir. The TF–30 engine is not a very good case in point. These are the engines for the A–7's we have. The TF–41 is a much better engine.

Chairman McClellan. Your longer statement will be printed in the record in full.

Admiral Cooper. If I could make a couple of other statements.

Chairman McClellan. You may.

AREAS OF CONCERN

Admiral Cooper. I alluded to the fact I was concerned about two things in the statement. One, the amount of money in personnel, the RPN appropriation and the other is the number of flight hours and the number of steaming hours which the O. & M.N.R. budget as now submitted will actually provide.

I could go to the latter case first, because this is where the readiness of our aircraft squadrons and of our ships is of paramount importance. The fleet commanders have established 16 steaming days as a minimum number of steaming days that the Reserve destroyers should have per quarter.

The budget as submitted provides for only 10 days and with the fuel increases as of April 1, this has now gone down to less than 7 days per quarter.

Going to the flight hour program, the budget as initially submitted by the Navy called for 259,000 flight hours. This included both the Naval and the Marine Reserve aviation units. It subsequently appeared in the budget with reduction from OSD to 199,000. With the additional cuts due to the April 1 fuel price increase, this budget will now support only 157,000 flight hours. If we went to 199,000 as was submitted we would have to ground between the Navy and the Marines 704 pilots, which are 22 percent of all we have, plus we would have to reduce the flight requirements for all the additional pilots that remain in flight status.

Senator Young. How many estimated steaming hours and flight hours will be reduced as a result of the increase in fuel prices?

Admiral Cooper. Due to fuel price increases in February and April, 1974, both subsequent to submission of the fiscal year 1975 budget, steaming will be reduced by 14,746 hours and flying by 42,323 hours.

If I may return to the personnel account. I indicated serious reservations about shifting 10,000 people from pay group Alpha which is 48 drills or more per year to only 24. This year we had to shift 3,000. In the enlisted category and for every two we put into this category one dropped out of training because it economically was not worth it to him.

The 107,526 selected Reserve strength which the budget requests for fiscal year 1975 is about 5,00 less than the Navy requested. Over a period of 2 years, this will represent a drop of about 22,000. We have enough turmoil in Reserves now, and this will create a good deal more.

REDUCTION IN TRAINING HOURS

Senator YOUNG. This reduction in training hours and steaming time, did this originate in the Navy or was that imposed on you by higher-ups?

Admiral COOPER. This was imposed on us. The budget as submitted by the Navy for the flying hours was for 259,000 flight hours. At OSD level this was reduced to 199,000. The steaming days the Navy requested was 13 days per quarter. This was reduced to 10. Since then the Navy is on record as saying to the JCS that 16 is the minimum number of days per quarter that the NRF ships should steam.

Chairman MCCLELLAN. Thank you, sir.

JUSTIFICATION

At this point in the record there will appear certain information from the justifications.

[The justification follows:]

Justification

RESERVE PERSONNEL, NAVY

INTRODUCTORY STATEMENT

The "Reserve Personnel, Navy" appropriation provides financial support for the Naval Reserve. As individually entitled, Reserve personnel and Reserve officer candidates who perform prescribed training receive pay and allowances, uniforms, clothing, subsistence in kind, travel to and from training and miscellaneous benefits authorized by law. This appropriation also provides funds for the pay and allowances and permanent change of station travel of selected Naval Reserve officers on active duty. These officers are assigned to designated headquarters locations for the training and administration of Naval Reservists.

The purpose of the Naval Reserve is to provide trained units and qualified persons available for active duty in the Navy, in time of war or national emergency and at such other times as the National Security requires. The Secretary of Defense has indicated that reserve forces will be the initial and primary source for augmentation of the active forces in any future emergency requiring a rapid and substantial expansion of the active forces.

Reserve personnel are trained by drills and active duty for training. Drills are conducted at specified periods in reserve centers or facilities, at air stations and aboard ships, planes, or stations. Active duty for training of two weeks duration is required of all members in a drill pay status. It is also made available to those members who drill in a non-pay status who have already served on active duty and desire to maintain their skills. Enlisted members being trained in certain programs are provided active duty for training ranging in length from four to ten months. In addition, essential school and special tours of active duty for training are offered to selected personnel who must qualify in certain specialties to meet changing requirements of the Active Force.

Reserve officer candidates are trained to qualify for commissions in the regular Navy and in the Naval Reserve. Their training consists partly of academic courses and partly of active duty during the summer months. The Naval Reserve Officers Training Corps (NROTC) students are enrolled in colleges and universities throughout the United States. During the school year they pursue studies in approved curricula and in naval science. During summer vacation they are given ship or shore based professional naval training of six to eight weeks. The Reserve Officer Candidates (ROC and AVROC) are provided professional naval training of eight and eleven and one-half weeks during each of two summers at the Officer Candidate School, Newport, Rhode Island and the Naval School, Pre-flight, Pensacola. Officer Candidate (Women Program), college junior students are given two periods of training of eight and eleven and one-half weeks at the Officer Candidate School (Women), Newport, Rhode Island. NJROTC students are enrolled in high schools throughout the country and receive training in naval science and orientation. Members of the Armed Forces Health Professions Scholarship Program are commissioned officers in the Naval Reserve while enrolled in colleges and universities throughout the United States. These officers perform forty-five days of active duty for training annually.

SUMMARY OF REQUIREMENTS

(In Thousands of Dollars)

	Actual	Estimate	
	FY 1973	FY 1974	FY 1975
Reserve Component Personnel	$216,525	$198,694	$184,515
Reserve Officer Candidates	15,883	24,878	25,457
TOTAL PROGRAM REQUIREMENTS (Obligations)	232,408	223,572	209,972
Less Actual/Anticipated Reimbursements	215	272	272
Total Direct Obligations/Appropriations	$232,193	$223,300	$209,700

Budget Program 1
Reserve Component Personnel
SUMMARY OF REQUIREMENTS BY BUDGET ACTIVITY

(In Thousands of Dollars)

Budget Activity	Actual FY 1973	Estimate FY 1974	Estimate FY 1975
Direct Program			
Training, Pay Group A	$162,311	$168,499	$133,887
Training, Pay Group B	2,469	5,831	21,929
Training, Pay Group D	2,510	2,637	2,658
Training, Pay Group F	36,754	7,972	11,399
School Training	2,560	2,714	2,735
Special Training	4,302	4,933	4,984
Administration and Support	5,404	5,837	6,652
Total Direct Program	$216,310	$198,423	$184,244
Reimbursable Program			
Training, Pay Group A	$ 215	$ 271	$ 271
Total Reimbursable Program	$ 215	$ 271	$ 271
Total Program			
Training, Pay Group A	$162,526	$168,770	$134,158
Training, Pay Group B	2,469	5,831	21,929
Training, Pay Group D	2,510	2,637	2,658
Training, Pay Group F	36,754	7,972	11,399
School Training	2,560	2,714	2,735
Special Training	4,302	4,933	4,984
Administration and Support	5,404	5,837	6,652
Total Obligations	$216,525	$198,694	$184,515

Navy Reserve Personnel In Paid Status

Pay Groups	Paid Drills	Paid Days Of Active Duty for Training		FY 1973 Begin	FY 1973 Average	FY 1973 End	FY 1974 Average	FY 1974 End	FY 1975 Average	FY 1975 End
A	48	15.6	Off	19,406	17,762	17,116	16,778	17,143	10,039	12,122
			Enl	98,326	101,760	102,498	94,866	94,024	81,830	80,131
B	24	14.6	Off	1,123	1,162	1,198	1,681	1,733	7,484	6,729
			Enl	-	-	-	2,238	2,317	6,435	7,240
F	0	180-300								
			Enl	5,243	7,583	5,387	1,294	1,971	1,738	2,091
Paid Drill Training + Non-Prior Service Sub Total			Off	20,529	18,924	18,314	18,459	18,876	17,523	18,851
			Enl	103,569	109,343	107,885	98,398	98,312	90,003	89,462
			Total	124,098	128,267	126,199	116,857	117,188	107,526	108,313
Paid Active Duty Training Only										
D	0	13.6	Off	2,800	2,800	2,800	2,800	2,800	2,800	2,800
			Enl	496	98	98	100	100	100	100
			Total	3,296	2,898	2,898	2,900	2,900	2,900	2,900
TOTAL PAID STATUS			Off	23,329	21,724	21,114	21,259	21,676	20,323	21,651
			Enl	104,065	109,441	107,983	98,498	98,412	90,103	89,562
			Total	127,394	131,165	129,097	119,757	120,088	110,426	111,213

Averages computed by doubling the end strengths of the months of July through May, adding 30 June strengths of the previous year and the year under consideration, and dividing the total by 24, except for Pay Group D. Pay Group D represents the total number of personnel participating in paid ACDUTRA during the fiscal year, and average and end strengths are identical in any one year.

RESERVE COMPONENT OFFICERS ON STATUTORY TOURS OF ACTIVE DUTY

Navy Reserve officers performing full time active duty under Section 265 of Title 10, United States Code:

	FY 1973 Actual			FY 1974 Estimate		FY 1975 Estimate	
	Begin	Average	End	Average	End	Average	End
0-8 Rear Admiral	1	1	1	1	1	1	1
0-7 Rear Admiral	1	1	1	2	2	2	2
0-6 Captain	31	28	21	31	49	49	49
0-5 Commander	92	103	95	106	115	115	115
0-4 Lieutenant Commander	77	74	70	74	74	74	74
0-3 Lieutenant	23	15	15	10	10	10	10
0-2 Lieutenant (JG)	1	-	-	-	-	-	-
0-1 Ensign	-	-	-	-	-	-	-
Total	226	222	203	224	251	251	251

Section 265: Participation of reserve officers in preparation and administration of Reserve Affairs.

Provides that within such numbers and in such grades and assignments as the Secretary concerned may prescribe, each armed force shall have officers of its reserve components on active duty (other than for training) at the seat of government, and at headquarters responsible for reserve affairs, to participate in preparing and administering the policies and regulations affecting those reserve components. While so serving, such an officer is an additional number of any staff with which he is serving."

Appropriation: Reserve Personnel, Navy
Budget Program 1: Reserve Component Personnel
Budget Activity 1A: Training, Pay Group A

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year	Fiscal Year	Fiscal Year
$162,311	$168,499	$133,887

Part I - Purpose and Scope

This budget activity provides for the total costs of training officers and enlisted personnel of the Naval Reserve in Pay Group A. Members who participate in this program are required to take training duty of two weeks duration and to perform a minimum 48 drills per year. In addition, personnel in the combat component of the surface reserve and in selected aviation groups are authorized to participate in additional drills in order to maintain proficiency. Commanding officers who are required to perform additional and more responsible functions in connection with the administration of their units are entitled to command pay. Included in this subactivity are the costs of basic pay, individual clothing and uniform gratuities of officers and enlisted personnel, subsistence in kind for enlisted personnel, travel to and from active duty for training, basic allowance for quarters, basic allowance for subsistence and the government's contribution to Social Security.

Appropriation: Reserve Personnel, Navy
Budget Program 1: Reserve Component Personnel
Budget Activity 1B: Training, Pay Group B

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$2,469	$5,831	$21,929

Part I - Purpose and Scope

This budget activity provides for the total costs of training officers and enlisted personnel of the Naval Reserve in Pay Group B. Members who participate in this program are required to take training duty of two weeks duration and to perform 24 drills per year. Included in this subactivity are the costs of basic pay, individual clothing and uniform gratuities of officers and enlisted personnel, subsistence in kind for enlisted personnel, travel to and from active duty for training, basic allowance for quarters, basic allowance for subsistence and the government's contribution to social security. The rates of all costs are determined by applicable provisions of law and regulations.

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Appropriation: Reserve Personnel, Navy
Budget Program 1: Reserve Component Personnel
Budget Activity 1C: Training, Pay Group D

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$2,510	$2,637	$2,658

Part I - Purpose and Scope

This budget activity provides for the total costs of training officers and enlisted personnel of the Naval Reserve in Pay Group D. Members who participate in this program take training duty of two weeks duration. Included in this budget activity are the costs of basic pay, individual clothing and uniform gratuities of officers and enlisted personnel, subsistence in kind for enlisted personnel, travel to and from active duty for training, basic allowance for quarters, and basic allowance for subsistence and FICA. The rates of all costs are determined by applicable provisions of law and regulations.

Appropriation: Reserve Personnel, Navy
Budget Program 1: Reserve Component Personnel
Budget Activity 1D: Training, Pay Group F

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$36,754	$7,972	$11,399

Part I - Purpose and Scope

This budget activity provides for the total costs of training enlisted personnel in Pay Group F. Members who participate in the program are required to take training duty for periods of four to ten months. Personnel have had no prior service. They are given intensive training in areas of critical shortages. Included in this activity are the costs of basic pay, FICA, subsistence in kind, individual clothing and uniform gratuities, travel to and from active duty for training, and separation leave pay. The rates of all costs are determined by the applicable provisions of law and regulations.

Appropriation: Reserve Personnel, Navy
Budget Program 1: Reserve Component Personnel
Budget Activity 1E: School Training

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$2,560	$2,714	$2,735

Part I - Purpose and Scope

This budget activity provides for the total costs of training qualified officers and enlisted personnel participating in selected school programs. This training is designed to increase mobilization potential and to provide increased proficiency in high priority skills which cannot be achieved solely by regular drills and active duty for training; for example, Naval War College - Senior Officers' Course, Defense Strategy, Engineering Watch Officer, and ASW Operator. Included in this activity are the costs of basic pay, subsistence in kind for enlisted personnel, travel to and from training, basic allowance for quarters, basic allowance for subsistence, family separation allowance, separation leave pay, incentive pay for hazardous duty, sea pay and the government's contribution to social security. The rates of all costs are determined by applicable provisions of law and regulations.

Appropriation: Reserve Personnel, Navy
Budget Program 1: Reserve Component Personnel
Budget Activity 1F: Special Training

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$4,302	$4,933	$4,984

Part I - Purpose and Scope

This budget activity provides for the total costs of training selected officers and enlisted personnel participating in special programs; for example, War Gaming Seminar, NRF Ship Movement, Fleet Exercise Support, NFO Transitional Training, etc. This training is designed to enable personnel to achieve immediate readiness standards that cannot be met by other means and for support of other requirements. Included in this activity are the costs of basic pay, subsistence in kind for enlisted personnel, travel to and from training, basic allowance for quarters, basic allowance for subsistence, family separation allowances, separation leave pay, and incentive pay for hazardous duty. The rates of all costs are determined by applicable provisions of law and regulations.

Appropriation: Reserve Personnel, Navy
Budget Program 1: Reserve Component Personnel
Budget Activity 1G: Administration and Support

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$5,404	$5,837	$6,652

Part I - Purpose and Scope

The funds requested in this budget activity are to provide for pay and allowances and permanent change of station travel costs of the Naval Reserve officers engaged in the training and administration of reservists at selected headquarters locations as authorized by Section 265, Title 10, U.S.C.

Funds are also requested to provide death gratuity payments to beneficiaries of Naval Reserve personnel who die while participating in or as a result of injury received or disease contracted while participating in active or inactive duty training; for pay and allowances during periods of disability and hospitalization to members of Naval Reserve who suffer injury or contract disease in line of duty while participating in active or inactive duty training; and the Federal Government's portion of the Servicemen's Group Life Insurance associated with Naval Reserve personnel.

Part II - Justification of Funds Requested

The FY 1975 estimates are based on 1,245 officers and 785 enlisted personnel participating in the school program. The following is a comparison by fiscal years of the program data and associated costs included in this estimate:
($ in thousands)

	FY 1973 (Actual)	FY 1974 (Estimate)	FY 1975 (Estimate)
Number of Participants			
Officers	1,354	1,245	1,245
Enlisted	930	785	785
Total Participants	2,284	2,030	2,030
Number of Man-Days			
Officers	36,575	29,782	29,782
Enlisted	29,366	30,736	30,736
Total Man-Days	65,941	60,518	60,518
Active Duty Training Costs			
Officers	$1,342	$1,253	$1,262
Enlisted	495	845	852
Subsistence of Enlisted Personnel	24	33	38
Travel Costs			
Officers	538	447	447
Enlisted	161	136	136
Total Requirement:	$2,560	$2,714	$2,735

Budget Program 2
Reserve Officer Candidates

SUMMARY OF REQUIREMENTS BY BUDGET ACTIVITY

(In Thousands of Dollars)

Budget Activity	Actual FY 73	Estimate FY 74	Estimate FY 75
Direct Program			
Senior ROTC	$1,260	$1,826	$2,716
Scholarship Program	9,053	9,401	9,489
Junior ROTC	1,590	2,232	1,473
Reserve Officer Candidates	1,737	1,605	2,006
Armed Forces Health Professions Scholarship Program	2,243	9,813	9,772
Total Direct Program	$15,883	$24,877	$25,456
Reimbursable Program			
Scholarship Program	-	$ 1	$ 1
Total Reimbursable Program	-	$ 1	$ 1
Total Program			
Senior ROTC	$1,260	$1,826	$2,716
Scholarship Program	9,053	9,402	9,490
Junior ROTC	1,590	2,232	1,473
Reserve Officer Candidates	1,737	1,605	2,006
Armed Forces Health Professions Scholarship Program	2,243	9,813	9,772
Total Obligations	$15,883	$24,878	$25,457

Appropriation: Reserve Personnel, Navy
Budget Program 2: Reserve Officer Candidates
Budget Activity 2A: Senior ROTC

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$1,260	$1,826	$2,716

Part I - Purpose and Scope

The funds requested will provide for military personnel costs for students enrolled in the Senior Naval Reserve Officer's Training Corps (except the Scholarship Program). The estimate includes funds for a subsistence allowance, uniforms, pay and allowances and subsistence while attending summer training and travel to and from training. Funds are also included for the costs of pay, subsistence in kind, and travel of Designated Applicants for the Senior Naval Reserve Officers' Training Corps (except the Scholarship Program). These applicants perform summer training at a Navy installation and receive indoctrination in various Naval Science courses to enable them to enter the NROTC Program in the fall.

FY 74 increases in Program costs over FY 73 are caused by a much higher number of members attending summer training. Also, clothing requirements increased in FY 74 to provide a "one-time" issue of certain clothing items to all members of the Program. FY 75 Program costshave increased over FY 74 due to increased numbers eligible to draw subsistence allowance, a significant increase in uniform requirements generated by a high incoming freshmen class, and an increase in numbers attending summer training.

Summer training costs vary between years due to the length of training and sites at which training is performed. Additionally, there are variations in costs between the Senior Naval Reserve Officers' Training Corps members and Designated Applicants. NROTC members receive one-half the basic pay of an O-1; Designated Applicants receive basic pay of an E-1.

Appropriation: Reserve Personnel, Navy
Budget Program 2: Reserve Officer Candidates
Budget Activity 2B: Scholarship Program

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$9,053	$9,401	$9,489

Part I - Purpose and Scope

The funds requested will provide for military personnel costs for students enrolled in the Naval Reserve Officers' Training Corps Scholarship Program authorized by Public Law 88-647. The estimate includes funds for a subsistence allowance, uniforms, pay at one-half the basic pay of an O-1, and subsistence while attending summer training, travel, and SGLI. The travel authorization covers initial travel to the educational institution in which matriculated, travel to and from summer training, and travel on discharge. During fiscal year 1975, scholarships will be offered to 6,000 selected students as authorized by Public Law 92-166 (10 U.S.C. 2107).

Cost variance of the Program between fiscal years 1973, 1974 and 1975 is not too significant. However, there are off-setting requirements which are applicable. In FY 1974 and FY 1975, a greater number of members are eligible to draw subsistence allowances while at the same time there is a reduction in the number of members attending summer training. Additionally, in FY 1974, funds will provide a "one-time" issue of certain clothing items to all members. These items will become a part of the normal "issue in kind" uniform in the future.

Summer training costs vary between years due to the length of training and sites at which training is performed.

Appropriation: Reserve Personnel, Navy
Budget Program 2: Reserve Officer Candidates
Budget Activity 2C: Junior ROTC

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$1,590	$2,232	$1,473

Part I - Purpose and Scope

The funds requested will provide for issue-in-kind uniforms for students enrolled in the Junior ROTC program at secondary educational institutions.

Requirements for initial uniforms increased due to the establishment of new units with a resultant increase in student enrollment. FY 1974 requirements are higher than FY 1975 because of a much greater initial input of students into the Program. Additionally, FY 1974 requirements include a "one-time" issue of certain clothing items to members enrolled prior to FY 1974.

Appropriation: Reserve Personnel, Navy
Budget Program 2: Reserve Officer Candidates
Budget Activity 2D: Reserve Officer Candidates

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$1,737	$1,605	$2,006

Part I - Purpose and Scope

The funds requested will provide for military personnel costs for students enrolled in the Navy's Reserve Officer Candidate Program (ROC), Aviation Reserve Officer Candidate Program (AVROC) and the Officer Candidate (Women Program), college junior students. These personnel attend two periods of summer training and upon completion of training and graduation from college are commissioned in the Naval Reserve. The estimate includes funds for uniforms, pay and allowances, travel, subsistence, and SGLI while attending summer training. These members receive the pay and allowances of an E-5.

Current projections indicate that the Officer Candidate (women) and NROTC Programs will be able to provide the required number of women officers to meet the needs of the Service. Accordingly, inputs to the Officer Candidate (women) College Junior Program will cease in FY 1975. Students enrolled in the second phase of the two-year OC(W) College Junior Program in FY 1975 will complete their training and upon graduation, the OC(W) College Junior Program will be terminated.

Variations in costs are attributable to strength changes, varying lengths of the training within the program, and sites at which programs are held.

Appropriation: Reserve Personnel, Navy
Budget Program 2: Reserve Officer Candidates
Budget Activity 2E: Armed Forces Health Professions Scholarship Program

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$2,243	$9,813	$9,772

Part I - Purpose and Scope

The funds requested will provide for military personnel costs for Naval Reserve Officers enrolled in the Armed Forces Health Professions Scholarship Program established by 10 U.S.C. 2120-2127. These officers are enrolled in approved colleges and universities throughout the United States. Participants serve on active duty for training in the grade of O-1 for a period of forty-five days annually. The estimate includes funds for a monthly stipend while attending school, uniform gratuities, pay and allowances, travel and the Government's contribution to social security and SGLI while on active duty for training.

Variations in costs are due to a full year implementation of the program in Fiscal Year 1974, and a decrease in uniform requirements in FY 1975.

OPERATION AND MAINTENANCE, NAVAL RESERVE

INTRODUCTORY STATEMENT

The purpose of this appropriation is to train, operate and maintain the Naval Reserve Forces at a state of readiness which will permit rapid employment in the event of full or partial mobilization. These forces, consisting of men, ships and aircraft, constitute a vital part of the Navy's total forces.

Emphasis continues to be placed on making the Naval Reserve a more hardware oriented organization and streamlining the command structure. In order to achieve these goals, additional emphasis is being placed on the Reserve ship overhaul program; eight of the projected 22 Reserve Readiness Commands have been established, and a substantial increase in training equipment has been planned for the one or more demographically determined satellite Reserve Centers in each Readiness Command. Five additional Readiness Commands are scheduled for activation in fiscal year 1975. These Readiness Commands and associated satellite centers will provide greater cost effectiveness of dollars invested in surface reserve training.

The Operations and Maintenance, Navy Reserve appropriation consists of three budget activities: 1 - Mission Forces; 2 - Depot Maintenance; and, 3 - Other Support. Mission Forces consists primarily of operation and maintenance of Reserve ships and operation of Reserve aircraft. Depot Maintenance includes aircraft reworks and training equipment maintenance. Other Support consists of base operations, including Reserve Centers and Facilities, command and administrative activities.

Significant force indicators help to demonstrate the emphasis being applied to upgrade Reserve forces. The planned end fiscal year 1975 Reserve ship inventory will be 68, or an increase of six ships over end fiscal year 1974. The planned end year aircraft supporting the Reserve program in fiscal year 1975 will be 634, a decrease of 33 from end fiscal year 1974; this represents continuing efforts to phase out older aircraft and replace them with newer, higher performance models. As a result of the energy crisis, the fiscal year 1974 flying program was reduced from the planned 266,000 hours to 232,000 hours; the fiscal year 1975 program is currently planned at an even lower level of 200,000 hours.

Provision is made for the overhaul of ten destroyers in fiscal year 1975 as compared with eight in fiscal year 1974. Other ship overhauls increased from seven in fiscal year 1974 to 17 in fiscal year 1975. With respect to aircraft reworks in fiscal year 1975, provision is made for the rework of 214 aircraft as compared to 252 planned for fiscal year 1974.

SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Activity	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 Compared with 1974
1. Mission Forces	$58,277	$114,757	$138,833	$+24,076
2. Depot Maintenance	32,362	39,633	39,091	-542
3. Other Support	46,829	52,860	60,476	+7,616
Total Direct Obligations in Budget Document	$137,468	$207,250	$238,400	$+31,150

BUDGET ACTIVITY 1: MISSION FORCES

SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate	Difference 1975 Compared with 1974
A. Naval Air Reserve Forces	$24,167	$30,323	$32,498	$+2,175
B. Naval Ship Reserve Forces	32,957	83,251	105,152	+21,901
C. Other Surface/Sub-Surface Support	1,153	1,183	1,183	-
Total Direct Obligations in Budget Document	$58,277	$114,757	$138,833	$+24,076

Budget Activity 1: Mission Forces

(In Thousands)
FY 1975 Estimate - $138,833
FY 1974 Estimate - 114,757
FY 1973 Actual - 58,277

Introduction

This budget activity supports the Naval Air Reserve Forces, Naval Ship Forces and Other Surface/Sub-Surface Support, including inshore undersea warfare training, construction battalion support and fleet support forces. Funds provide for training and for operation and maintenance of aircraft, ships and stations that support the Reserve Forces.

Budget Program A: Naval Air Reserve Forces

(In Thousands)
FY 1975 Estimate - $32,498
FY 1974 Estimate - 30,323
FY 1973 Actual - 24,167

Purpose and Scope of Work

This program finances the flight requirements including POL and maintenance for forty-eight Naval Air Reserve Force Squadrons, and the Marine Air Reserve Training Command. Through these organizations the Navy and Marine Corps mobilization requirements for combat-ready, fleet-sized squadrons with fully equipped aircraft are met. These funds also provide training for fleet squadron augmentation pilots and aircrewmen for the Reserve Training Units. The mobilization potential of Naval Air Reserve Forces are 2,462 pilots and 591 aircraft.

Justification of Funds

Flight training is accomplished annually during two week tours of active duty and regular week-end training. The average operating aircraft levels have declined over the last several years reflecting phase out of older aircraft. However, the inventory of modern fleet type aircraft, such as the P3A and F4B's has increased. As a result of the energy crisis and fuel price increases the FY 1975 flying program has decreased 29,000 hours from FY 1974 but will result in an increased cost of $2.2 million. A three-year comparison of flight activity, excluding Base Operations flying follows:

	FY 1973	FY 1974	FY 1975
Flying Hours	247,045	217,421	188,705
Number of Pilots	3,114	3,006	2,462
Hours per Pilot per Year	126	115	125

Budget Program B: Naval Ship Reserve Forces

(In Thousands)
FY 1975 Estimate - $105,152
FY 1974 Estimate - 83,251
FY 1973 Actual - 32,957

Purpose and Scope of Work

This budget program provides for the operation, maintenance and alteration of Naval Reserve Force Ships, administrative costs and Coastal and River Warfare Programs. Included in the support of ships and craft are the fuel, repair parts, and general supplies required for operation and scheduled overhauls and restricted availabilities required to maintain the ships in a state of material readiness to enable them to be employed with active fleet units in peace time fleet commitments and for mobilization.

Justification of Funds

The $105.2 million required in fiscal year 1975 is an increase of $21.9 million over the fiscal year 1974 estimate and is due to a change in the mix and an overall increase in the number of Naval Reserve ships to be overhauled and operated as well as an increase for associated ship alterations. The number of ships and overhauls to be supported are:

	FY 1973	FY 1974	FY 1975
Ships (End Strength)	59	62	68
(Ship Years)	56.5	63.5	65.0
Overhauls	13	15	27
DD	2	8	10
MSO	6	3	12
MSC	5	4	5

(1) Ship Operations

(In Thousands)
FY 1975 Estimate - $15,679
FY 1974 Estimate - 15,903
FY 1973 Actual - 9,740

This program provides the resources required for intermediate shipboard maintenance and day to day operating costs of Naval Reserve Force ships.

The Navy is planning to support an average of 65.0 ship years and 41,204 steaming hours in this program in fiscal year 1975 compared to 63.5 ship years and 52,753 steaming hours in fiscal year 1974. The savings resulting from the decrease in steaming hours is more than offset by conversion to distillate fuel and fuel price increases. The net decrease of $224 thousand is primarily due to the change in mix of ships and a reduction in support for shipboard repair parts, consumables and utilities.

(2) Ship Repairs

	(In Thousands)
FY 1975 Estimate -	$64,049
FY 1974 Estimate -	51,912
FY 1973 Actual -	21,384

Ship Repairs includes regular overhauls and non-scheduled repairs for Reserve ships at Naval and private shipyards. The fiscal year 1975 request includes $50.1 million for 27 scheduled overhauls and $13.9 million for restricted availabilities. The increase of $12.1 million in fiscal year 1975 provides for two additional destroyer overhauls, ten additional minesweeper overhauls partially offset by a decrease in Non-Scheduled Repairs.

	FY 1973	FY 1974	FY 1975
Regular Overhauls	$11,296	$34,144	$50,125
Non-Scheduled Repairs	10,088	17,768	13,924
TOTAL	$21,384	$51,912	$64,049

(3) Fleet Support

	(In Thousands)
FY 1975 Estimate -	$383
FY 1974 Estimate -	651
FY 1973 Actual -	400

This program provides the resources for the support of Commands and Staffs including travel costs. The decrease of $268 thousand is related to a reduction in travel due to energy conservation measures.

(4) Ship Alteration Program

	(In Thousands)
FY 1975 Estimate -	$21,728
FY 1974 Estimate -	11,565
FY 1973 Actual -	(2,244)

Ship Alterations and Improvements are accomplished within the Fleet Modernization Program as approved by the Chief of Naval Operations. The Fleet Modernization Program is executed by the Commander, Naval Ship Systems Command acting as executive agent for the Chief of Naval Material and as directed by the Chief of Naval Operations. The Fleet Modernization Program is an integrated program combining military improvements, technical improvements, nuclear alterations, ordnance alterations and non-hull related funding requirements arranged by individual hulls based on scheduled ship overhauls and for restricted availabilities.

The requested funds provide for alterations and design and planning for ships in the Naval Reserve Force. Specific alterations include pollution abatement, habitability improvement, safety, and those alterations which provide the Reserve Fleet compatability with the active fleet. The increase of $10.2 million relates to the increase in the number of ship overhauls.

(5) Coastal/River Reserve Program

	(In Thousands)
FY 1975 Estimate -	$3,313
FY 1974 Estimate -	3,220
FY 1973 Actual -	1,433

To retain the Navy combat craft capability in the Navy Reserve, the Coastal/River Reserve Program was established in fiscal year 1972 and expanded through fiscal year 1974. The Coastal/River Squadron/Division locations are:

Squadron One, Coronado California
Division Eleven, Mare Island, California
Squadron Two, Little Creek, Virginia
Division Twenty-One, Great Lakes, Illinois
Division Twenty-Two, New Orleans, Louisiana

The increase of $93 thousand reflects the full year costs of the transfer of Coastal River Squadron One from the Active Forces to this program.

Budget Program C: Other Surface/Sub-Surface Support

	(In Thousands)
FY 1975 Estimate -	$1,183
FY 1974 Estimate -	1,183
FY 1973 Actual -	1,153

Purpose and Scope of Work

This program provides operating funds for Naval Reserve inshore undersea warfare training, construction battalion support and fleet support forces, namely cargo handling battalions and security group units.

Justification of Funds

The operating funds requested for this program remain level in fiscal year 1975 with the fiscal year 1974 program.

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BUDGET ACTIVITY 2: DEPOT MAINTENANCE

SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate	Difference 1975 Compared with 1974
A. Aviation	$31,378	$38,642	$37,291	$-1,351
B. Training Equipment	984	991	1,800	+809
Total Direct Obligations in Budget Document	$32,362	$39,633	$39,091	$-542

Budget Activity 2: Depot Maintenance

(In Thousands)
FY 1975 Estimate - $39,091
FY 1974 Estimate - 39,633
FY 1973 Actual - 32,362

Introduction

This budget activity provides for the maintenance and repair of reserve aircraft and engines as well as the repair and overhaul of technical training equipment.

Budget Program A: Aviation

(In Thousands)
FY 1975 Estimate - $37,291
FY 1974 Estimate - 38,642
FY 1973 Actual - 31,378

Purpose and Scope of Work

This project provides for the maintenance and repair of Reserve aircraft and engines.

The FY 1975 budget request for this program reflects a net decrease of $1.4 million from the FY 1974 estimate. The net decrease from FY 1974 equates to reduced active operating aircraft inventory and reduced flying for FY 1975.

The fiscal year 1975 estimate provides $25.8 million for 214 aircraft reworks as compared with $28.0 million and 252 aircraft reworks in fiscal year 1974. The number of aircraft reworks depends on the average operating aircraft strength and the average maintenance cycle time. Aircraft are scheduled for rework based on the maintenance cycle interval for each particular aircraft model. The length of maintenance cycle is continually being examined and revised to ensure that the time between reworks is optimum to minimize the number of reworks required. Criteria such as individual model peculiarities and age govern the type and extent of rework required for each aircraft model.

The engine overhaul and repair program is intended to provide sufficient operable engines plus a minimum reserve pool to support Reserve operations. The fiscal year 1975 estimate of $11.5 million for engine overhauls and repairs will provide for 783 engines as compared with $10.7 million for 802 engines in fiscal year 1974. This program reflects a continuing movement of less costly repairs to intermediate maintenance facilities in other areas of this budget.

Budget Program B: Training Equipment

(In Thousands)

FY 1975 Estimate -	$1,800
FY 1974 Estimate -	991
FY 1973 Actual -	984

Purpose and Scope of Work

This program provides for the repair and overhaul of technical training equipment. The equipment consists of electronics, ships and ordnance technical equipment.

Justification of Funds

The fiscal year 1975 request for this program reflects an increase of $.8 million from the fiscal year 1974 estimate and reflects the increased emphasis on reducing the backlog of inoperable equipment in reserve training centers. This effort will greatly enhance the training effort and readiness of the Reserves.

BUDGET ACTIVITY 3: OTHER SUPPORT

SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate	Difference 1975 Compared with 1974	Justification Page
A. Base Operations	$45,078	$50,221	$58,107	$+7,886	2-21
B. Command	1,751	2,639	2,369	-270	2-21
Total Direct Obligations in Budget Document	$46,829	$52,860	$60,476	$+7,616	

Budget Activity 3: Other Support

(In Thousands)
FY 1975 Estimate - $60,476
FY 1974 Estimate - 52,860
FY 1973 Actual - 46,829

Introduction

This budget activity provides the Naval Reserve with the resources for the management and administration of all Naval Reserve Programs - as well as the base support costs required for the training of reserve personnel.

Budget Program A: Base Operations

(In Thousands)
FY 1975 Estimate - $58,107
FY 1974 Estimate - 50,221
FY 1973 Actual - 45,078

Purpose and Scope of Work

This program provides base operation support for Naval Reserve Training at 6 Naval Air Stations, 9 Naval Air Reserve Training Units, 1 Naval Air Facility, 13 Naval Air Reserve Training Detachments, 14 Marine Air Reserve Detachments and 337 Naval Reserve Training Centers/Facilities. An average paid drill strength of 107,526 Naval Reserve officers and enlisted are supported through organizational Units attached to these activities.

Justification of Funds

The increase of $7.9 million in fiscal year 1975 includes increases of: $1.1 million for a functional transfer from the O&M,N appropriation for collateral equipment used to initially outfit facilities/structures under the Navy's Military Construction, Navy Reserve Program; $4.1 million for the full year cost of the civilian substitution program; $1.5 million for maintenance of real property; $1.0 million for acquisition of small hand tools, ships modules and common skill shop equipment; and $.2 million for utilities and rents.

Budget Program B: Command

(In Thousands)
FY 1975 Estimate - $2,369
FY 1974 Estimate - 2,639
FY 1973 Actual - 1,751

Purpose and Scope of Work

This budget program provides civilian employment and administrative support for both civilian and military personnel involved with Naval Reserve matters in the Office of the Chief of Naval Operations and for the Chief of Naval Reserve located at New Orleans, Louisiana.

Justification of Funds

The fiscal year 1975 net decrease of $.3 million results from one-time consolidation costs incurred in FY 1974 by the Chief of Naval Reserve.

Military Personnel, Marine Corps

Chairman McClellan. The next appropriation to be considered will be that for "Military Personnel, Marine Corps."

PROGRAM AND FINANCING

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

DEPARTMENT OF DEFENSE - MILITARY

MILITARY PERSONNEL, MARINE CORPS

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	IDENTIFICATION CODE 07-05-1105-0-1-051	1973 ACT	1974 EST	1975 EST
	PROGRAM BY ACTIVITIES:			
	DIRECT PROGRAM:			
	2. GENERAL PURPOSE FORCES	$ 914,679	$ 993,563	$ 1,034,998
	3. INTELLIGENCE AND COMMUNICATIONS	14,007	16,926	11,642
	5. GUARD AND RESERVE	41,050	41,260	41,858
	6. RESEARCH AND DEVELOPMENT	508	540	9,272
	7. CENTRAL SUPPLY AND MAINTENANCE	16,985	18,737	18,655
	8. TRAINING, MEDICAL, AND OTHER GENERAL PERSONNEL ACTIVITIES	536,126	540,262	552,891
	9. ADMINISTRATION AND ASSOCIATED ACTIVITIES	52,557	56,762	58,228
	10. SUPPORT OF OTHER NATIONS	1,810	1,150	1,156
	TOTAL DIRECT PROGRAM	$ 1,577,722	$ 1,669,200	$ 1,728,700
	REIMBURSABLE (TOTAL)	9,313	9,787	6,648
10	TOTAL OBLIGATIONS	1,587,035	1,678,987	1,735,348
	FINANCING:			
	RECEIPTS AND REIMBURSEMENTS FROM:			
11	FEDERAL FUNDS	- 8,118	- 7,880	- 4,663
14	NON-FEDERAL SOURCES	- 1,961	- 1,907	- 1,985
21	UNOBLIGATED BALANCE AVAILABLE, START OF YEAR	.....	- 766	.....
22	UNOBLIGATED BALANCE TRANSFERRED FROM OTHER ACCOUNTS	- 6,000	.....	.....
24	UNOBLIGATED BALANCE AVAILABLE, END OF YEAR	766	.....	.....
25	UNOBLIGATED BALANCE LAPSING	5,901	.....	.....
	BUDGET AUTHORITY	$ 1,577,623	$ 1,668,434	$ 1,728,700
	BUDGET AUTHORITY:			
40	APPROPRIATION	$1,576,798	$1,547,000	$1,728,700
41	TRANSFERRED TO OTHER ACCOUNTS	- 375	.....	.....
42	TRANSFERRED FROM OTHER ACCOUNTS	$1,200	.....	.....

DEPARTMENT OF DEFENSE - MILITARY

MILITARY PERSONNEL, MARINE CORPS

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS) CONTINUED:

IDENTIFICATION CODE 07-05-1105-0-1-051		1973 ACT	1974 EST	1975 EST
43	APPROPRIATION (ADJUSTED)	$ 1,577,623	$ 1,547,000	$ 1,728,700
44.30	PROPOSED SUPPLEMENTAL FOR MILITARY PAY RAISES	.....	121,434	.....
	RELATION OF OBLIGATIONS TO OUTLAYS:			
71	OBLIGATIONS INCURRED, NET	$ 1,576,956	$ 1,669,200	$ 1,728,700
72	OBLIGATED BALANCE, START OF YEAR	66,369	82,218	111,118
74	OBLIGATED BALANCE, END OF YEAR	- 82,218	- 111,118	- 115,218
77	ADJUSTMENTS IN EXPIRED ACCOUNTS	- 41,660	.....	.....
90	OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL	$ 1,519,447	$ 1,524,766	$ 1,718,700
91.30	OUTLAYS FROM MILITARY PAY RAISE SUPPLEMENTAL	.....	115,534	5,900

BIOGRAPHICAL SKETCH AND PREPARED STATEMENT

Chairman McClellan. The principal witness for this appropriation will be Lt. Gen. Samuel Jaskilka, Deputy Chief of Staff for Manpower of the Marine Corps. Do you have a prepared statement, General?

General Jaskilka. Yes, and with your permission I would like it submitted for the record.

Chairman McClellan. The biographical sketch and full statement will be submitted for the record. You may highlight it if you wish, General.

[The biographical sketch and statement follows:]

Biographical Sketch of General Jaskilka

Samuel Jaskilka was born Dec. 15, 1919, in Ansonia, Conn. He completed high school there and graduated from the University of Connecticut where he received a B.S. degree in May 1942. While at the university, he was a member of the ROTC unit.

He accepted an appointment as a second lieutenant in the U.S. Marine Corps Reserve on Sept. 26, 1942, and was assigned to active duty. He completed the Reserve Officers' Class, Marine Corps Schools, Quantico, Va. in 1942; Sea School at Portsmouth, Va., in 1943; and accepted an appointment in the regular Marine Corps in March 1943.

During World War II, 2d Lt. Jaskilka served aboard the USS Princeton, and participated in the Tarawa Island raid, the Gilbert Islands operation, the Marshall Islands operation, Palau, Yap, Ulithi, Wolei raids, Marianas operation, Western Caroline Islands operation, and the Leyte operation.

Upon his return to the United States, he was assigned duty as instructor, Headquarters Company, Troop Leaders Battalion, Camp Pendleton, Calif. until August 1945. He was promoted to captain in January 1945. From September 1945 until May 1947, Capt. Jaskilka saw tours of independent duty with District Headquarters Recruiting Station, Manchester, N.H., and at District Headquarters Recruiting Station in Philadelphia, Pa.

After completing the Amphibious Warfare School, Junior Course, at Marine Corps Schools, Quantico, in Jannary 1948, he became Commanding Officer, Marine Detachment, U.S. Naval Air Activities, Port Lyautey, French Morocco. In September 1949, he joined the 1st Marine Division and later embarked with the division for Korea where he served successively as Battalion Executive Officer and Commanding Officer of Company E, 2nd Battalion, Fifth Marines. For heroism in combat in Korea, he received two awards of the Silver Star Medal and a Bronze Star Medal with Combat "V".

Promoted to major in January 1951, he returned to the United States that February and served as Monitor, Detail Branch, Personnel Department, Headquarters Marine Corps. In July 1954, he was transferred to the West Coast for duty as Operations Officer, Marine Corps Test Unit #1, Marine Corps Base, Camp Pendleton, Calif. He was promoted to lieutenant colonel in December 1955.

Upon completion of the Amphibious Warfare School, Senior Course, Marine Corps Schools, Quantico, in June 1957, Lt. Col. Jaskilka saw a 3-year tour of duty as Assistant G–3 Operations and Plans Officer with Fleet Marine Force Pacific. He returned to Quantico as Instructor at the Senior School, serving in this capacity until May 1963.

Reporting to the 3rd Marine Division, Fleet Marine Division, Fleet Marine Force, he was assigned duty as Executive Office, Third Marines and, later, Assistant Chief of Staff, G–3, SEATO Expeditionary Brigarde. Following his return to the United States, he assumed duty as Joint Staff Officer in the Office of the Joint Chiefs of Staff, and earned the Joint Service Commendation Medal He was promoted to colonel in July 1964.

Upon leaving the Joint Staff in August 1966, he returned to Headquarters Marine Corps, where he was to remain for 29 months. He served, consecutively, as Deputy Manpower Coordinator for Research and Information Systems, G–1 Division; Director, Data Systems Division; and as Director, Management Analysis Group. He earned the Legion of Merit for his service during the latter two assignments, and was promoted to brigadier general, October 18, 1968.

Ordered to the Republic of Vietnam in February 1969, Brig. Gen. Jaskilka served as Assistant Division Commander, 1st Marine Division. That August, he was reassigned duty as J–3, Operations, Military Assistance Command, Vietnam (MACV). He was awarded the Distinguished Service Medal for his Vietnam service.

Brig. Gen. Jaskilka returned to the United States in August 1970, and reported to Quantico, where he served as Director, Command and Staff College, then as Deputy for Development/Director, Development Center, Marine Corps Development and Education Command. He was promoted to major general in August 1972. The following month, he became Assistant Chief of Staff, G–1, Headquarters Marine Corps. He served in this capacity until his transfer in July 1973 to Camp Lejeune where he served as Commanding General, 2nd Marine Division. He was promoted to lieutenant general on January 2, 1974 and that same day became Deputy Chief of Staff for Manpower at Headquarters Marine Corps.

He holds the following personal decorations: the Distinguished Service Medal, the Silver Star Medal with one gold star in lieu of a second award, the Legion of Merit, and the Bronze Star Medal with Combat "V".

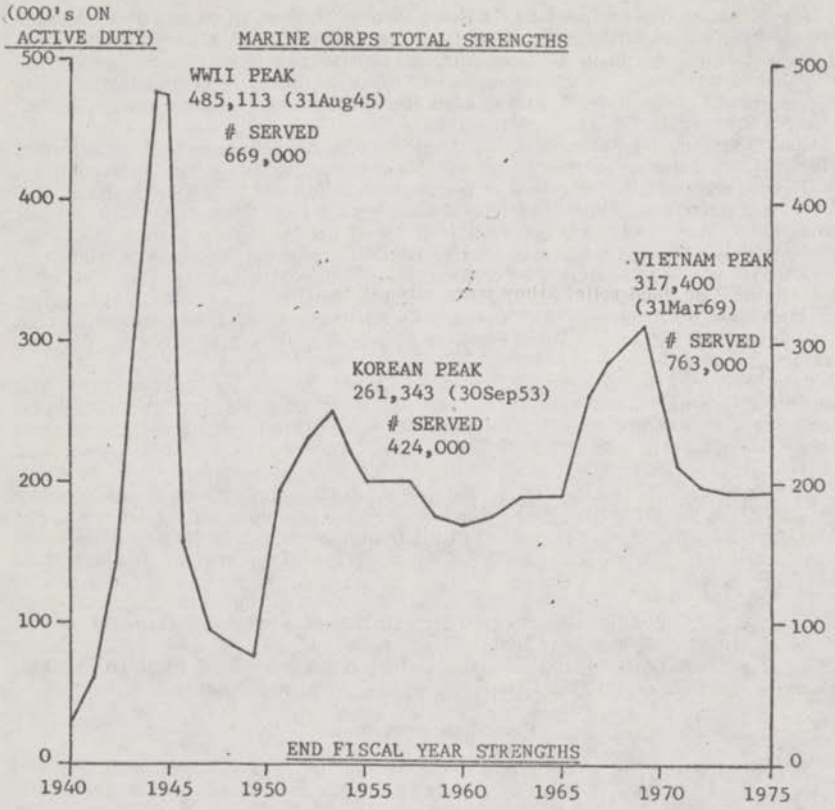
Lt. Gen. Jaskilka and his wife, the former Norma Blick of Stafford Springs, Conn., have four children; Michael C., Diane, Ann, and Samuel M.

Prepared Statement

Mr. Chairman and members of the Committee, I am Lieutenant General Samuel Jaskilka and it is my privilege to appear before this committee again, this time as the Marine Corps' Deputy Chief of Staff for Manpower. I will present the highlights of the Marine Corps military manpower program for fiscal year 1975 and our estimate of the military personnel appropriation which supports it.

Personnel End Strength Summary

Before I discuss current manpower in the Marine Corps, I would like to summarize the yearly end strengths and the numbers that have served as Marine during each war since 1940.



The chart shows that the Marine Corps has undergone some considerable strength changes in the past. The most recent of those being the post-Vietnam phase-down which started in Fiscal Year 1969. Even more dramatic is the number of Americans who served as Marines in our most recent war compared to World War II.

Return to Peacetime Strengths

Our strength has been essentially level for the last two years. Our early return to peacetime strength levels was made possible by planning for the phase-down even before we reached our wartime peak. This strength reduction occurred at the same time we were maintaining forces in Southeast Asia. In fact, it was not until this past September that the last of our aviation combat forces committed there were rotated back to their peaceime stations in Japan.

Task Force DELTA

Chairman McClellan. Where were Marine aviation combat forces through last September, and why were they still there?

General Jaskilka. Mr. Chairman, we had Task Force DELTA, an aviation combat organization, operating out of Nam Phong, Thailand, against targets in Cambodia up until the bombing halt was ordered on 15 August 1973. Task Force DELTA was under the operational control of the Seventh Air Force. After the bombing was stopped, Task Force DELTA moved back to Okinawa and Japan. The last elements moved out of Thailand about the last week in September.

Chairman McClellan. Proceed.

General Jaskilka. The Marine Corps has resumed its normal peacetime mission as a force-in-readiness. In the past year we have been called upon to

demonstrate that readiness. As examples, we responded with an additional Marine Amphibious Unit in the Mediterranean during the recent Mideast War and we performed a flood-relief mission in the Philippines.

Flood Relief Mission

Chairman McClellan. Describe the flood relief mission to the Philippines. How large a force of Marines was sent?

General Jaskilka. Sir, the Marines that assisted were members of the Marine Amphibious Unit that we keep afloat in the Western Pacific. There were about 1,600 Marines in this unit. This particular relief mission consisted of food deliveries by Marine helicopters to remote villages which had been cut off by typhoon floods. In the strictest sense, those Marines were not sent to the Philippines for flood relief; they were already nearby.

Chairman McClellan. Proceed.

General Jaskilka. Although we have returned to peacetime strength levels, I cannot say that wartime-induced turbulence has completely subsided, but we are making progress. We are increasing our average term of enlistment by accepting more four year and fewer two year enlistees. Reenlistment numbers indicate that Marines believe we offer a good career.

Enlistment Options

Chairman McClellan. What are the Marine Corps enlistment and reenlistment options?

General Jaskilka. We have options available in both ground and aviation programs which guarantee entry into those broad fields to the enlistee if he qualifies. We also have the $2500 Combat Arms Enlistment Bonus Program. Our term-of-service options are for two, three, or four years. The term also depends on the particular program a young man or woman qualifies for and desires. The skills needing longer schooling require longer enlistment contracts. We offer numerous reenlistment options to those who are qualified. These options include formal school training, or retraining. A Marine who reenlists can also request a particular duty station or type of duty. We also offer promotion incentives and reenlistment bonuses. The Marine will usually receive two options per reenlistment. Of course, the needs of the Marine Corps dictate what options are offered to each Marine desiring to reenlist.

Chairman McClellan. Proceed.

General Jaskilka. As a result, our career force is growing, which will serve to reduce the number of first-term enlistments required in future years. These and other factors will allow us to reduce our male recruit input to below 50,000 next year for the first time since before the war. This assumes, of course, that our Fiscal Year 1974 recruiting goals are met.

The Marine Corps ended Fiscal Year 1972 with 198,238 Marines, and Fiscal Year 1973 with 196,098. We plan on 196,014 Marines at the end of Fiscal Year 1974 and are requesting 196,398 at end Fiscal Year 1975 to serve in the Nation's primary ready force.

Readiness Now

The Marine Corps remains the most manpower intensive of the services. In Fiscal Year 1975, 78.6% of all of the dollars requested in Marine Corps budgets will be spent on military and civilian manpower. We will be maintaining an essentially level strength, but we will have more Marines in combat forces, which I will discuss later. We concur wholeheartedly with Congress that the mission of the Department of Defense is to maintain strong combat forces; our program for Fiscal Year 1975 will increase the manpower devoted to those forces.

In developing our program, primary consideration was given to the unique nature of the Navy-Marine Team which is the only self-sustaining force in the world with a combined land, air and sea combat capability. The presence of Marine amphibious forces anywhere in the world provides for quick response without automatic commitment of any force and without the requirement for bases or airfields ashore.

The Marine Corps requires about 205,000 men to meet peacetime requirements. Because of strength and dollar constraints, we have found it necessary to cadre selectively certain units.

Cadreing

Chairman McClellan. Describe in detail "cadres" of certain units.

General Jaskilka. Sir, the Marine Corps really requires about 205 thousand men to man fully the peacetime force. Under the fiscal year 1975 budget constraints the Marine Corps has requested authority to fund an end strength of 196,398. In order to maintain rapid response forces at this strength level the Marine Corps selectively reduces the capability of certain units by either manning them at a reduced level or by not manning them at all. This is referred to as "cadreing".

The only units that have been subjected to this action are those such as small infantry elements that can be quickly reconstituted and trained in time of emergency and those units whose specific capability is not required in the active force to meet non-mobilization contingency requirements. Units such as reconnaissance and hospital companies are in this latter category. Some units, such as service support elements, whose full wartime capabilities are not necessary in peacetime are reduced in manpower by five to 10 percent.

Risks Involved in Cadreing

Chairman McClellan. What risks are involved in this concept?

General Jaskilka. Reductions such as those I mentioned have an adverse impact on our capability to deploy rapidly and to engage successfully. The units remaining in the force are smaller and fewer in number, yet these forces are precisely those needed to meet the requirements for rapid-response forces generated by worldwide contingency plans. The principal risk is reduced substantially through the selective cadre process by which units earmarked for certain areas are not affected by cadre actions. These forces are maintained on a fully ready basis.

Reduction of Marine Corps Strength

Chairman McClellan. Why could it not be used to further reduce the Marine Corps strength?

General Jaskilka. I think the answer to that lies in our concept of what constitutes prudent risk. In effect, we have gone about as far as we can along these lines without seriously degrading our ability to support the national security policy. Readiness now is what we consider to be the principal attribute of credible deterrence.

Chairman McClellan. Proceed.

General Jaskilka. That course allows us to retain our expansion capability without significantly degrading the responsiveness of existing forces.

Operating Forces

Our Fiscal Year 1975 program reflects our determination to devote at least 60% of our manpower to the operating forces; that is, the Fleet Marine Forces. the embassy security detachments, our Marine barracks and detachments serving afloat in U.S. Navy vessels. We believe that we have achieved about the optimum balance between operating and supporting forces. A further increase in mission forces, for example, at the expense of base operating support, would be counter-productive. We believe that a substantial portion of manpower required for base support of a Fleet Marine Force unit housed at a base should be furnished by, and deploy with, that Fleet Marine Force unit. Consequently, the only permanent personnel assigned to our own bases are those required for the maintenance of real property, fixed-site services, or for security. There are approximately 9,400 Marines programmed for base operating support duties in Fiscal Year 1975, caring for 15 major Fleet Marine Force home bases in the United States and overseas. In addition, the Marine Corps furnishes approximately 8,300 Marines for the security of 52 major Navy installations throughout the world.

Marines Afloat and Overseas

Chairman McClellan. How many Marines are serving afloat and overseas? Identify numbers, bases and embassies.

General Jaskilka. I can provide that for the record.

[The information follows:]

MARINES ASHORE AND AFLOAT OVERSEAS;
EMBASSIES TO WHICH MARINES ARE ASSIGNED;
MARINE CORPS BASES AND AIR STATIONS OVERSEAS;
AND
MARINE BARRACKS AT OVERSEAS NAVY INSTALLATIONS
AT
END FISCAL YEAR 1975

Region & Country	Number of Marines	Embassy Security	Marine Corps Bases and Air Stations	Marine Barracks
Europe/Related Areas				
Austria	19	Yes		
Belgium	27	Yes		
Cyprus	61	Yes		
Denmark	8	Yes		
Finland	17	Yes		
France	33	Yes		
Germany	83	Yes		
Greece	14	Yes		
Iceland	138	Yes		Keflavik
Ireland	6	Yes		
Italy	167	Yes		Naples
Libya	7	Yes		
Luxembourg	12	Yes		
Malta	6	Yes		
Morocco	200	Yes		Kenitra
Netherlands	9	Yes		
Norway	8	Yes		
Portugal	7	Yes		
Spain	184	Yes		Rota
Sweden	6	Yes		
Switzerland	14	Yes		
Tunisia	10	Yes		
Turkey	27	Yes		
United Kingdom	142	Yes		London
Yugoslavia	7	Yes		
Afloat	1755			
TOTAL	2967			
Western Pacific				
Japan	6156	Yes	Iwakuni	Sasebo Yokosuka
Philippines	637			Subic Bay
Ryukyu Islands	17761		Camp Butler Futema	
South Korea	52	Yes		
Taiwan	12	Yes		
Afloat	2743			
TOTAL	27361			
Near East/South Asia				
Afghanistan	12	Yes		
Algeria	6	Yes		
Bahrain Islands	6	Yes		
Bangladesh	6	Yes		
Botswana	6	Yes		
Burundi	6	Yes		
Cameroon	5	Yes		

Region & Country	Number of Marines	Embassy Security	Marine Corps Bases and Air Stations	Marine Barracks
Central African Rep.	6	Yes		
Ceylon	10	Yes		
Chad	6	Yes		
Congo	6	Yes		
Dahomey	6	Yes		
Egypt	6	Yes		
Ethiopia	10	Yes		
Ghana	9	Yes		
Guinea	6	Yes		
India	36	Yes		
Iran	15	Yes		
Israel	22	Yes		
Ivory Coast	9	Yes		
Jordan	11	Yes		
Kenya	6	Yes		
Kuwait	9	Yes		
Lebanon	20	Yes		
Lesotho	6	Yes		
Liberia	6	Yes		
Malagasy	6	Yes		
Malawi	6	Yes		
Mali	6	Yes		
Nepal	10	Yes		
Niger	6	Yes		
Nigeria	10	Yes		
Pakistan	12	Yes		
Port Louis	6	Yes		
Saudi Arabia	14	Yes		
Senegal	9	Yes		
Sierra Leone	6	Yes		
Somali Republic	9	Yes		
South Africa	7	Yes		
Swaziland	6	Yes		
Sudan	9	Yes		
Tanzania	6	Yes		
Togo	6	Yes		
Tunisia	10	Yes		
Uganda	9	Yes		
Upper Volta	6	Yes		
Zaire	9	Yes		
Zambia	6	Yes		
TOTAL	426			
Other Pacific				
Australia	6	Yes		
Burma	6	Yes		
Hong Kong	12	Yes		
Indonesia	16	Yes		
Malaya, States of	6	Yes		
New Zealand	5	Yes		
Singapore	5	Yes		
TOTAL	56			
Western Hemisphere				
Argentina	13	Yes		
Barbados	6	Yes		
Bermuda	104			Bermuda
Bolivia	10	Yes		
Brazil	28	Yes		
Canada	10	Yes		

Region & Country	Number of Marines	Embassy Security	Marine Corps Bases and Air Stations	Marine Barracks
Chile	9	Yes		
Colombia	14	Yes		
Costa Rica	9	Yes		
Dominican Republic	12	Yes		
Ecuador	10	Yes		
El Salvador	9	Yes		
Guatemala	16	Yes		
Guyana	8	Yes		
Haiti	7	Yes		
Honduras	6	Yes		
Jamaica	7	Yes		
Mexico	14	Yes		
Nicaragua	9	Yes		
Panama	14	Yes		
Paraquay	8	Yes		
Peru	10	Yes		
Trinidad	6	Yes		
Uruguay	10	Yes		
Venezuela	13	Yes		
TOTAL	362			
USSR/East Europe				
Bulgaria	7	Yes		
Czechoslovakia	5	Yes		
Hungary	9	Yes		
Poland	10	Yes		
Romania	5	Yes		
USSR	21	Yes		
TOTAL	57			
Southeast Asia				
Cambodia	13	Yes		
China	6	Yes		
Laos	12	Yes		
South Vietnam	195	Yes		
Thailand	52	Yes		
TOTAL	278			
U. S. & Territories Overseas				
Alaska	85			Adak
Hawaii	10900		Camp Smith	Pearl Harbor
			Kaneohe	Barbers Point
U.S. Naval Base, Cuba	802			Guantanamo
Guam/Marianas Islands	332			Guam
Panama Canal Zone	134			Rodman
Puerto Rico	218			Roosevelt Roads
TOTAL	12471			

Chairman McClellan. Proceed.

General Jaskilka. An additional 1,200 serve in ships detachments aboard U.S. Navy vessels. I do not believe that significant reductions can be made in these areas without modifying our present base structure. Base closures would seriously degrade our expansion and mobilization capability. Should base closures be directed, though, manpower savings would naturally accrue. However, I hasten to add that since all male Marines represent immediately available resources for combat deployment, their loss would mean a permanent decrease in our capability for rapid response.

Allocation of Manpower

The overall allocation of our manpower resources for the period fiscal year 1973 through 1975 is shown below:

FISCAL YEARS 1973–75 MILITARY MANPOWER DISTRIBUTION BY MANPOWER PLANNING CATEGORY

[Marines in thousands]

Category	Fiscal year 1973		Fiscal year 1974		Fiscal year 1975	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
General purpose	104.0	53.0	106.2	54.2	113.4	57.7
Auxiliary	1.6	.8	1.8	.9	1.7	.8
Mission support	28.0	14.3	23.0	11.7	22.6	11.5
Central support	25.7	13.1	24.1	12.3	23.1	11.8
Individuals	36.9	18.8	41.0	20.9	35.7	18.2
Total [1]	196.1	100.0	196.0	100.0	196.4	100.0

[1] May not add because of rounding.

Update of Fiscal 1974

I would like to turn to the Fiscal Year 1974 column of the Fiscal Year 1975 budget and the changes from last year's request. The Authorization Act (Public Law 93–155) allowed the Marine Corps 196,419 Marines at end Fiscal Year 1974, the number we had requested. However, the Secretary of Defense was directed to apportion a 43,000 cut among the Services. Our share of that cut was 405, of which 66 were officers and 339 enlisted. The specific cuts were 234 Career Planners, 52 Enlisted Aides, 48 in Graduate Education and the remaining 71 in various Defense and other Government agencies.

The allocation of manpower for Fiscal Year 1974 is substantially as submitted to the Congress last year. However, because of early fiscal year strength shortfalls, we expect about 2,000 fewer Marines to be in the Land Forces part of General Purpose Forces than we originally planned. A corresponding increase in individual training manpower will result.

Fiscal Year 1975 Request

The Fiscal Year 1975 request for $1.73 billion includes a strength increase of 384 to 196,398. The officer force will be decreased 206 and the enlisted force will be increased 590. The result of the officer to enlisted conversion is that the cost of the officer force will be lower in Fiscal Year 1975 than in 1974. This occurs even though the October 1973 pay raise will be in effect during all of Fiscal Year 1975. The proportion of the Military Personnel, Marine Corps budget for Pay and Allowances, Officers is also being reduced. Indications exist that the trend of rising manpower costs may have leveled, or declined, in the Marine Corps. The manpower share of all the Marine Corps appropriations will be decreased from 80.3% in Fiscal Year 1973 to 78.6% in Fiscal Year 1975. We believe that the steps we have taken to hold down manpower costs result in a more effective force at a lower constant dollar cost.

Effect of Terrorism Overseas

The major manpower change from 1974 to 1975 is brought about by the increasing terrorism directed against our Foreign Service personnel around the world. At the request of the State Department, we have increased our embassy guards 438 to a total of 1,546.

Embassy Guards

Senator Young. Has the increase in embassy guards been because of the requirements for increased security or new embassies or both?

General Jaskilka. The former, sir. Some of the Marine positions represent security detachments at existing embassies which did not previously have such detachments but most represent an increase in manning of existing security detachments. In both cases, though, increased security requirements generate the need for more manpower.

Support of Embassy Guards

Chairman McClellan. Does the State Department provide reimbursement to the Marine Corps for support provided by embassy guards?

General Jaskilka. The State Department reimburses the Marine Corps for enlisted Permanent Change of Station travel and any temporary lodging allowance or civilian clothing required. The State Department provides part of the support directly to Marines assigned to them. This support includes necessary language training plus housing and subsistence for single Marines. The Marine Corps provides the rest of the pay, allowances and expenses incident to duty with the State Department.

Chairman McClellan. Proceed.

General Jaskilka. The embassy guards and associated training line increase is partially offset by a civilian substitution program. This is in keeping with our policy of replacing Marines with civilians where it is cost effective and does not seriously degrade combat readiness.

Civilianization of Military

Chairman McClellan. What is your estimate of the total additional number of military positions that could be civilianized?

General Jaskilka. Sir, the only answer that I can give to that question is that the number is small. As a matter of fact, we are having difficulty findings qualified civilians to fill some of the military billets civilianized.

Chairman McClellan. Proceed.

General Jaskilka. We will convert 194 military billets to civilian and reduce associated military strength by 221.

As our previous strength allocation table illustrates, we are increasing manpower devoted to General Purpose Forces while maintaining an essentially level strength. The program for Fiscal Year 1975 brings us closer to our real peacetime requirement in General Purpose Forces.

We have continued to evaluate likely threats to which we might be required to respond. As a result, units with the Atlantic Fleet have been provided increased manning.

Officers Matters

I would now like to turn to the details of our officer plan for Fiscal Year 1975 and start by discussing grade escalation.

The Marine Corps has been reducing its officer force for the past five years. We have controlled the grade structure during this period by making reductions in the senior as well as junior grades. We believe our efforts respond to the concern expressed by the Congress.

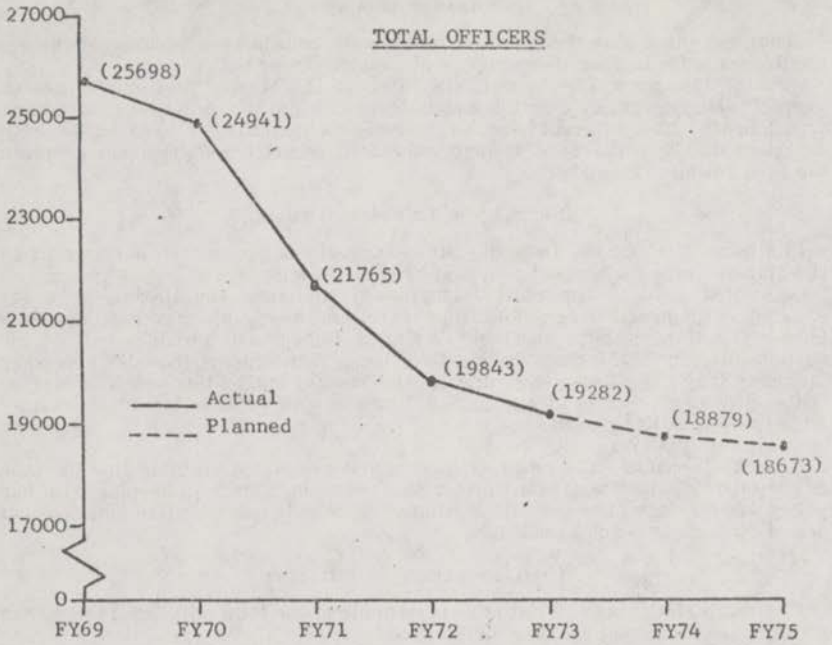
Grade Structure

The following facts about our officer grade structure at end Fiscal Year 1974 and 1975 form the basis for our conviction that we have complied with Congressional direction in this area:

1. We will have fewer colonels at end Fiscal Year 1974 and 1975 than we had at end Fiscal Year 1964.
2. As a percent of the officer force, the grades of colonel and lieutenant colonel are both below the end Fiscal Year 1964 level.
3. Lieutenant colonels have been reduced a greater than proportionate share than has the total officer force since 1969.

It should be noted that numerous members of Congress agreed, during the first session of the 93rd Congress, that the Marine Corps had made significant progress in this area.

The following chart summarizes the overall reductions in our officer force since the end of Fiscal Year 1969:



General JASKILKA. This first chart on officers shows a total officer strength reduction of 7,025 or 27.3% since the end of Fiscal Year 1969.

OFFICER TO ENLSTED RATIO

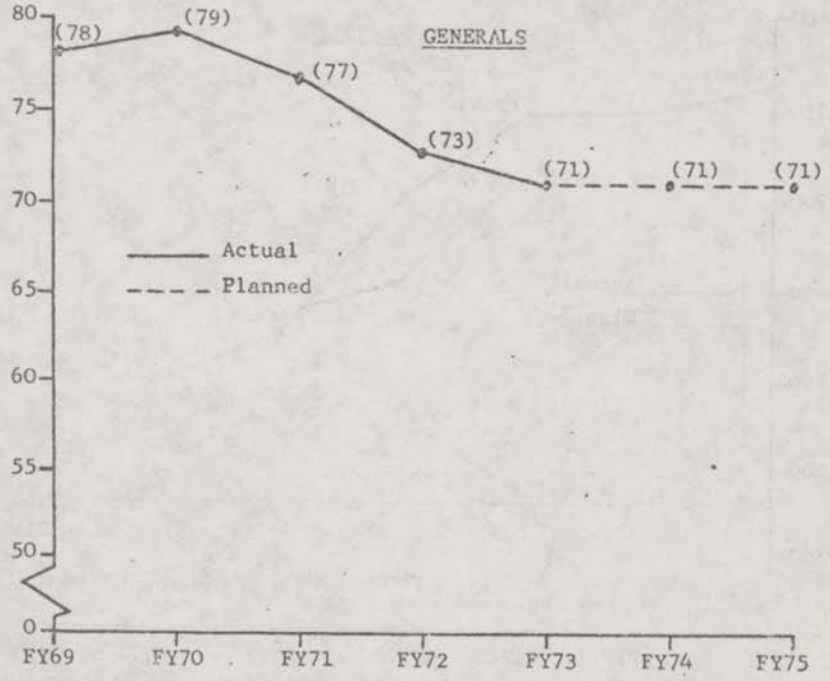
Another measure sometimes used to examine grade escalation is the officer-to-enlisted ratio. Our officer-to-enlisted ration will continue moving in a favorable direction as it has since Fiscal Year 1971. This is illustrated by the below table which uses two of the more common means of expressing the officer-to-enlisted relationship:

OFFICER TO ENLISTED RATIOS

	Officers as percent of total strength	Officer enlisted
Fiscal year:		
1971	10.25	1:8.76
1972	10.01	1:8.99
1973	9.82	1:9.18
1974	9.62	1:9.39
1975	9.50	1:9.53

GENERALS

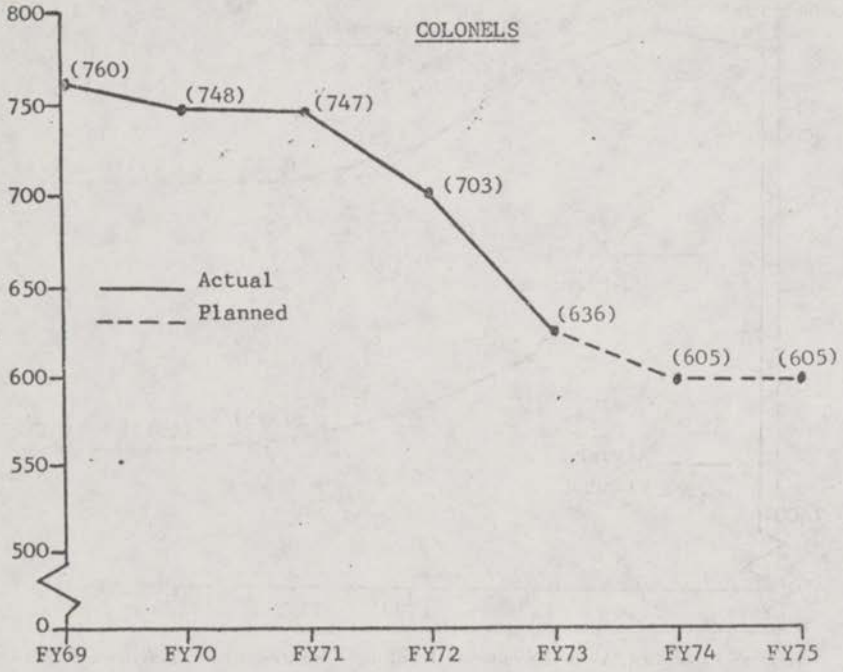
Reductions have been made in the number of general officers as shown by the next chart:



General JASKILKA. The proportion of general officers to total officers has remained relatively constant during the above period. It remains more favorable than the Department of Defense norm in this regard. The general officer to total strength ratio is most favorable in the Department of Defense. The number of Marine Corps general officers was increased in 1966 when Congress enacted Public Law 89-731. This law recognized an increased peacetime requirement for general officers in the Marine Corps. Our requirement remains substantially as presented to the Congress at that time.

COLONELS

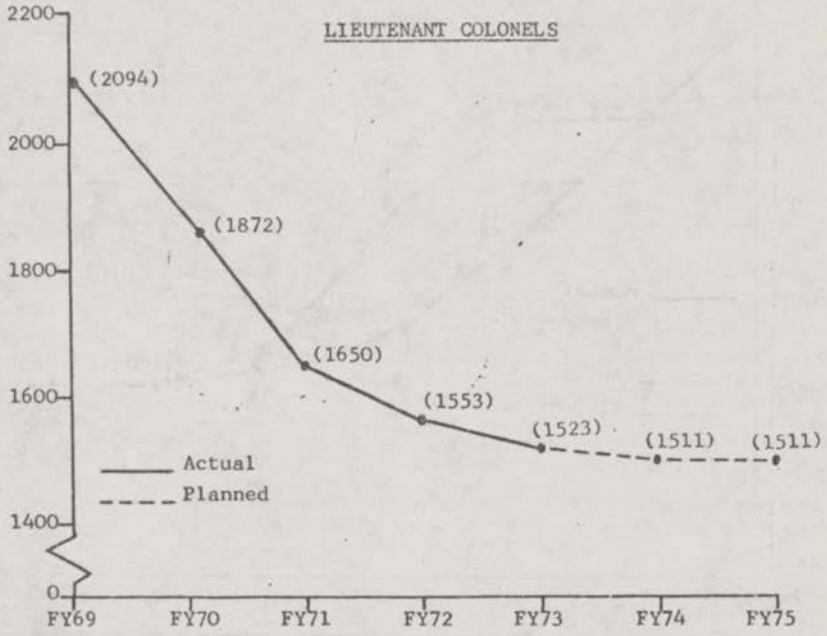
The extensive progress the Marine Corps has made in reducing the number of colonels is shown on the following chart:



General JASKILKA. The 155 reduction in colonels puts us below the number we had at end Fiscal Year 1964. It also means that as a percent of the officer force, the number of colonels will have been reduced to 3.2% compared to 3.6% at the end of Fiscal Year 1964.

LIEUTENANT COLONELS

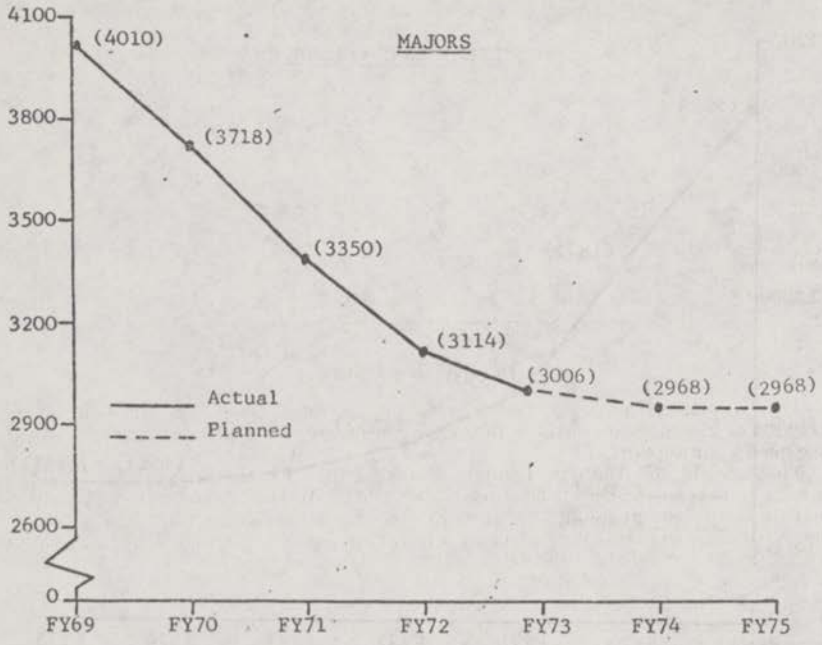
A reduction of 583 lieutenant colonels has been effected since end Fiscal Year 1969 as shown below:



General JASKILKA. As is the case with colonels, lieutenant colonels as a percent of the total officer force will be lower at end Fiscal Year 1974 than at the end of 1964: 8.0% versus 8.3%.

MAJORS

Majors have been reduced 1,042, as the next chart illustrates:



General JASKILKA. While not mentioned in the discussion of each of the preceding charts, the average time-in-grade and time-in-service for promotion to each of the officer grades has been steadily increasing. The charts shown illustrate the extensive progress made to reduce senior officer grades.

PROPOSED GRADE CEILINGS

The previous discussion of our efforts to control grade escalation serves as background for a discussion of the reductions which were directed by the Conference Committee Report on Public Law 93–238, the Department of Defense Appropriation Bill for Fiscal Year 1974.

If the Marine Corps were to implement the full reduction contained in the Committee Report, it would suffer grade decreases disproportionately larger than any of the other services. Such a result appears to be anomalous when it is imposed upon the service which, as members of Congress have stated, has made the most progress in controlling grade escalation. In addition, the full reduction set forth in the Committee Report would increase the disparity which already exists between the Marine Corps and the other services in terms of career opportunity as measured by promotion flow.

As a consequence, and in an effort to abide by the spirit of the Conference Committee, we have effected a reduction of 4 colonels, 10 lieutenant colonels, and 27 majors. This reduction is proportionate to the overall Department of Defense field grade cut levied by the Committee Report. It bears repeating that our continuing efforts to reduce costs in the officer area result in our costs being lower in Fiscal Year 1975 than in Fiscal Year 1974 even though the annual salary of officers has increased.

Officer Grade Structure

The grade structure currently requested. as compared to previous years, is summarized in the below table:

OFFICER END STRENGTHS

Grade	Fiscal year—			
	1969	[1] 1973	[1] 1974	[1] 1975
General	78	71	71	71
Colonel	760	631	600	600
Lieutenant colonel	2,094	1,517	1,505	1,505
Major	4,010	3,002	2,964	2,964
Captain	5,545	5,167	4,994	4,850
1st lieutenant	7,298	4,288	4,267	4,456
2d lieutenant	4,580	3,108	3,283	3,110
Warrant officer	1,333	1,477	1,180	1,102
Total	25,698	19,261	18,864	18,658

[1] Direct program.

Officer Accessions

The Marine Corps is currently meeting its total officer procurement goals. However, in order to continue doing so, there are three problem areas wherein we need your support.

The first is the Platoon Leaders Class (PLC) Financial Assistance Option which is due to expire on 30 June 1976. As the Marine Corps gains experience with recruitment in the All Volunteer environment, the importance of this option becomes more evident. We have found that the absence of draft motivation makes recruitment extremely difficult and that some officer candidates will not accept a commission when tendered.

In 1970, the Marine Corps requested and obtained legislative authority to pay PLC members a monthly allowance of $100.00 during the academic year. The recruitment value of this option is evident from PLC enrollments in Fiscal Years 1972 and 1973, when, against an annual goal of 2,200 candidates, the Marine Corps achieved over 100% enrollments. During these years we paid Financial Assistance to over 1,000 members and expect to provide over 900 payments this year. Since these students must make a firm commitment to serve on active duty, we desire this program to be a principal source of officer accessions in future years. Our procurement plans include this objective.

PLC Financial Assistance Option

The part of the current law which is a matter of concern to the Marine Corps is the 30 June 1976 expiration date for the monthly allowance. We request that the temporary status be removed and that permanent authority be established for the PLC Financial Assistance Option. It would appear that deletion of the wording "Until 30 June 1976" in the present legislation would accomplish this purpose. This would enable the Marine Corps to assure students enrolling this year of their eligibility to receive the payment for the maximum three academic years. Our present recruitment effort loses credibility under circumstances where we cannot guarantee financial assistance beyond 30 June 1976.

Flight Indoctrination Program

Another accession area of concern is our Flight Indoctrination Program or, as termed last year, the Civilian Pilot Training Program. This program, although funded in the Operation and Maintenance, Marine Corps Appropriation, is of vital importance in attaining a sufficient number of Naval Aviators.

Civilian Pilot Training Program

Chairman McClellan. Describe what is done under the Civilian Pilot Training Program.

General Jaskilka. The Civilian Pilot Training Program, or Flight Indoctrination Program as it will be termed in fiscal year 1975, is a voluntary option available to members of the Platoon Leaders Class (Aviation) Program who have completed all required precommissioning training. Flight instruction is conducted by a civilian flight school near the student's college or university and is paid for by the Marine Corps. The program calls for a minimum of 35 hours of flight time plus appropriate ground school classes to qualify for a private pilot's certificate.

Chairman McClellan. Continue.

General Jaskilka. The proposed Flight Indoctrination Program is similar to that offered the Air Force, Army and Navy ROTC members. In order that our aviator recruiting may be on the same basis as the other services, we are requesting that funds for the Flight Indoctrination Program be provided.

Program Enrollment

Chairman McClellan. What is the current number of students enrolled in the flight indoctrination program?

General Jaskilka. 196 PLC members have been approved for participation in the program during fiscal year 1974.

Program Completion Rate

Chairman McClellan. What has been the percentage completion rate for this program?

General Jaskilka. 40 percent of those who began the program in fiscal year 1973 completed it. Many of those who did not complete the program were unable to do so because of time constraints incident to their being seniors in college.

Cost Per Graduate

Chairman McClellan. What is the cost of this program per graduate?

General Jaskilka. The cost of this program per graduate was $1535 in fiscal year 1973. Of course, this figure ascribes the cost of those who failed to those who graduated. Without ascribing attrition costs to graduates, the average cost was $917.

Chairman McClellan. Proceed.

General Jaskilka. The value of the program is twofold; first, like the Financial Assistance option, it commits the recipient to accept a commission if offered; second, it acts as an aviation aptitude screening device. Since our program is in its first year there is no substantiating evidence as to its aviation aptitude screening effectiveness; however, the other services have found that the failure rate in flight school is significantly lower for students who participated in the ROTC Flight Indoctrination Programs than for students who did not participate. In its review of our Fiscal Year 1974 appropriation request, the Congress directed that the Civilian Pilot Training Program be discontinued. We will terminate the program during Fiscal Year 1974; however, we have identified $200,000 in the Fiscal Year 1975 Operation and Maintenance budget to allow for reinstitution of the program and seek specific Congressional authority to do so. Cost estimates for training a Naval Aviator run about $500,000. So, if the screening provided by the program prevents one flight school student from failing halfway through the course, it will have paid for itself in cost avoidance.

Judge Advocates

The last area in the officer personnel field in which we seek your support has to do with the problem of lawyer procurement and retention. The Marine Corps is currently experiencing difficulty in retaining lawyers beyond their initial obligated tour of active duty.

Retention of Lawyer

Chairman McClellan. What is the percent retention of initial tour lawyers in fiscal year 1973 and fiscal year 1974?

General Jaskilka. Sir, we have historically retained about two to four percent of the Judge Advocates obtained through the Platoon Leaders Class (Law) program. From the beginning of fiscal year 1973 to the present we have been experiencing that same rate. Our other lawyer procurement program, the Extended Leave Program (Law), has been in existence too short a time to have had anybody procured under it complete his initial period of obligated service.

Chairman McClellan. Proceed.

General Jaskilka. As a result, to meet Judge Advocate requirements, we must procure more new lawyers each year than are desirable.

Career Lawyers

Chairman McClellan. What percent of the Judge Advocate corps can be considered career personnel?

General Jaskilka. We had 285 Judge Advocates on active duty as of 1 April 1974. We consider 117 of these to be careerists; that is, they were serving beyond their initial tour of obligated service. Thus, 41 percent of our on-board Judge Advocates are careerists but those 117 represent only 60 percent of the careerists we need.

Chairman McClellan. Proceed.

General Jaskilka. In addition, we are not developing the career force of Judge Advocates necessary to meet our requirements.

Judge Advocate Positions in Corps

Chairman McClellan. What is the number of authorized Judge Advocate positions in the Marine Corps?

General Jaskilka. We currently have a requirement for 354 Judge Advocates.

Chairman McClellan. Proceed.

General Jaskilka. For this reason, we support a retention bonus system, such as that proposed in the Uniformed Services Special Pay Act.

Lawyer procurement has run at approximately a 50% success rate for Fiscal Year 1972 and Fiscal Year 1973. Due to this recruiting shortfall and increased requirements, it is necessary to procure 112 new lawyers during Fiscal Year 1974. Our direct commissioning program was to have achieved 60 of this requirement; however, results to date are not encouraging. Therefore, it may be necessary to provide the additional incentive of allowing law school graduates to enter active service at the grade of captain as the Army and Air Force now do.

Law School

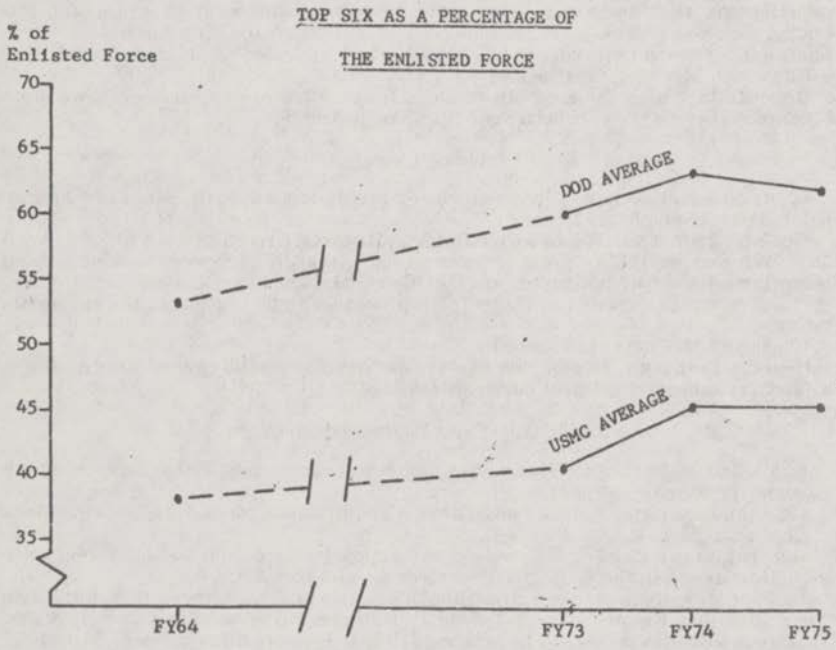
The Marine Corps welcomed the legislation which allowed each military department to send 25 officers annually to law school. It is a step toward solving our Judge Advocate retention problem. However, we advocate that 25 officers per service, as opposed to the 25 we must share with the Navy, be authorized as a more realistic assessment of our needs. We believe that by the time our officers become eligible to participate in this program, and by the time that they have served the requisite pay-back tour, retention of a high percentage of the officers in this program for a full career would be relatively certain. Hence, we would strongly support expansion of this newly adopted legal education program.

Enlisted Matters

I would like to begin the discussion of enlisted matters by pointing out that our enlisted force will increase by 590 to 177,725 from end Fiscal Year 1974 to 1975. Our mission and force structure have changed little so our grade structure remains relatively unchanged. The major change is a reduction of 108 E–9's from end Fiscal Year 1973 to 1975. This 8% reduction in our programmed number allowed us to "buy" a greater number of junior Marines. This, plus our officer to

enlisted conversion, resulted in our being able to increase our total force 448 while maintaining level funding.

The average grade in the Marine Corps remains well below the Department of Defense norm. Our percent in the Top Six pay grades is also well below the Department of Defense norm, as shown by the below chart:



General JASKILKA. The lower average grade and percent in the Top Six naturally lead to a lower average cost per serviceman.

ENLISTED PROCURING OBJECTIVES

Since the submission of the President's Budget last year, we have increased our Fiscal Year 1974 non-prior service male accession objective from 51,800 to 54,800. This 3,000 increase results from a shortfall at end Fiscal Year 1973 and a projected increase of 1,700 non-expiration of active service (EAS) attrition losses over plan. However, we expect to benefit from the higher quality of recruit input which began last April, and, as a result, are forecasting 2,500 fewer non-EAS losses during Fiscal Year 1975.

If we can achieve our Fiscal Year 1974 end strength objectives, our enlisted accessions will be reduced 6,300 in Fiscal Year 1975. Enlisted male accessions are 49,000 in Fiscal Year 1975 and female accessions 1,210. We also plan on 2,500 prior service Marines being enlisted by the recruiting force. We are continuing to increase our average term of enlistment by taking a greater percentage of four-year enlistees and fewer two-year enlistees. Our reduced recruit input in Fiscal Year 1975 is due mainly to the longer average term of enlistment effected in Fiscal Year 1973.

If we do not achieve our Fiscal Year 1974 recruiting objective, an increase in enlisted accessions will be required in Fiscal Year 1975. This will require a change to the training load authorization. Depending on the size of the shortfall, it may also be necessary to reallocate priorities to allow for the increased recruiting required in Fiscal Year 1975.

Recruiting

The Marine Corps has always been concerned about quality standards in recruiting. In April 1973, we set a limit of 10% on the number to be enlisted in Mental Group IV. We established this requirement because we believe Mental Group is a reasonable predictor of trainability. This was a difficult decision because high school graduation is an indicator of "stick-to-itiveness" and that, too, is important. We desired both trainability and "stick-to-itiveness" but the recruiting market forced us to select one.

Marine Corps Criteria for Determining Personnel

Senator Young. What units of measures other than high school graduates and mental groups is the Marine Corps utilizing?

General Jaskilka. Sir, we look at a lot of things besides mental group and education. We check for a police record; we ask the applicant about his employment record and what he has been doing since leaving school. If he left school before he graduated we ask him about his reason for leaving. In effect, we try to use the "whole man" approach when we evaluate a prospective recruit.

Recruit Ability to Satisfactory Service

Senator Young. What has been the Marine Corps experience in measuring a potential recruit's ability to serve satisfactorily?

General Jaskilka. The Marine Corps has found that high school graduation is a fairly reliable indicator of social maturity and stick-to-itiveness. Recruits with high school diplomas are demonstrably less susceptible to disciplinary problems than non-high school graduates of similar mental level.

Mental level, on the other hand, is a relatively reliable predictor of performance in specific skill areas. Our 10 percent limitation on Mental Group IV's is based on the fact our distribution of skills is such that we cannot efficiently employ more than that many. Those of higher mental level are also less susceptible to disciplinary problems among both high school graduates and non-high school graduates.

Chairman McClellan. Proceed.

General Jaskilka. We had 7,000 fewer accessions than desired during the first seven months of the Fiscal Year. This indicates that we were not adequately prepared to recruit in an all volunteer force environment. Also, we had not allocated sufficient recruiting resources to replace the pressure of the draft.

Objective and Strength of Recruiting Force

Chairman McClellan. Provide the objective and actual strength of the recruiting force for the past two years to date.

General Jaskilka. Yes, sir; I will provide that information for the record.

[The information follows:]

MARINE CORPS RECRUITING AND EXAMINING MANPOWER

[End strength in whole numbers]

	Fiscal year 1972		Fiscal year 1973		Fiscal year 1974	
	Program	Actual	Program	Actual	Program [1]	Actual [2]
Officer	260	259	254	312	259	271
Enlisted	2,539	2,539	2,571	2,766	2,650	2,765
Civilian	61	67	108	79	111	104

[1] Does not include a temporary allocation of 31 officers and 81 enlisted Marines.
[2] As of Feb. 28, 1974.

General JASKILKA. I believe that we have now taken the steps which will allow us to recruit a sufficient number of quality men in the absence of a draft. Those steps include:

1. Reorientation of our recruiting schools so that they prepare recruiters to be salesmen.
2. Preparation of a Guidebook for Recruiters so that successful sales techniques are readily available to all.
3. Allocation of additional personnel to the recruiting force on a temporary basis to provide surge recruiting capacity.
4. Dissemination of new recruiting techniques to those trained under the old system.
5. The decision to request general paid print and outdoor advertising.

PAID ADVERTISING

This last measure deserves additional attention. The Marine Corps was the only service which did not plan any general distribution paid print or outdoor advertising in its Fiscal Year 1974 budget. The only paid print advertising we have is in those periodicals that have selected distribution such as SCHOLASTIC. Our recruiting experience to date indicates this may have been a serious omission. Our surveys show that our public service and other advertising is reaching about 25% of the qualified military availables with a frequency of about one-and-a-half to two times a month. This contrasts with the other services which, through paid advertising, are reaching about 90% of the target population with a frequency of nine to ten times a month. With such a relatively low awareness among the quality young men we seek, it is easy to understand why our recruiters have had such a difficult time. They literally have had to create a market awareness by "one-on-one" in order to have the opportunity to discuss the advantages of Marine Corps service.

I believe that most of us recognize intuitively that sales are a function of both advertising and sales-force expertise. We contend that we have improved the expertise of our Recruiting Service; we will continue to improve as we gain experience in a free, competitive market. However, our message is simply not getting across to the target population. Part of this, I am sure, is because of the decrease in Public Service Advertising that has occurred as the other Services mounted more aggressive advertising programs. In effect, we have done everything we can to use the resources currently available in the most efficient way and we are still not enlisting the numbers of high quality young people we need. We cannot improve quality without a commensurate increase in recruiting resources.

I know of your concern with the lack of any hard evidence on the effects of advertising. I wish I had the evidence which would prove conclusively that advertising will solve our problem. Regrettably, that evidence does not exist, but almost all major enterprises in the marketplace conduct vigorous advertising campaigns. Without such a campaign we have failed to achieve our recruiting objectives while other services, with aggressive advertising, have succeeded. The prospect, his handshake and effective media coverage, both news and advertising, are vital parts of any sales campaign; likewise, the recruiter, his personal contacts and an advertising program are vital to successfully recruiting the number of quality young men we seek. With expeditious approval of our reprogramming request, which will provide the funds for entry into a paid advertising program, I believe we can be competitive in recruiting. Moreover, it appears that we will have to devote more resources to recruiting in the future. Our planned average cost per recruit was $731 in Fiscal Year 1974, well below the average in the Department of Defense.

AVERAGE COST PER RECRUIT

Chairman MCCLELLAN. What is the Department of Defense average cost per recruit?

General JASKILKA. I will provide that for the record, sir.

[The information follows:]

The Department of Defense average cost to obtain a recruit is $801 in fiscal year 1974. The fiscal year 1975 average cost is projected to increase to $828 per recruit.

Chairman MCCLELLAN. Continue.

General JASKILKA. While our reprogramming request is within the original measures approved for recruiting, it is doubtful that the Marine Corps can be successful in the future unless resources devoted to recruiting are more in line with the Department of Defense norm. Therefore, we are currently planning to include funds in our Fiscal Year 1976 budget for this purpose. Also, we plan to realign priorities in order to sustain our planned recruitment advertising program in Fiscal Year 1975.

RECRUITING FORECAST

As I indicated earlier, we ended January with about 7,000 fewer Marines than desired. This shortfall was not all in the recruiting area, since we began the year short and have experienced losses over plan. However, there are encouraging signs. We wrote more contracts during January than any month in the last 42, and it was the best January in this regard since 1970. In fact, during the entire third quarter of this fiscal year, we have written more contracts than any corresponding period since 1970. While we did not meet our revised monthly quotas for February and March, which compensate for the early fiscal year shortfalls, we did exceed our original quota for both those months.

RECRUITING PLANS

Chairman MCCLELLAN. Describe your recruiting quotas and production FY 1974 to date.

General JASKILKA. We have had essentially two recruiting plans for fiscal year 1974. The original one was in the budget submitted to you last year. It was used, with some modification, during the first half of this fiscal year. The second plan, contained in this year's budget submit, reflects actuals for the first six months with the last half quotas increased to compensate for the shortfalls in the first half of the year. I will provide a table for the record which compares the two recruiting plans.

[The information follows:]

MARINE CORPS FISCAL YEAR 1974 RECRUITING QUOTAS AND ATTAINMENT THROUGH MARCH 1974 [1]

Month	Fiscal year 1974 President's budget quotas	Attainment	Attainment as percent of quota	Fiscal year 1974 column of fiscal year 1975 President's budget quotas	Attainment	Attainment as percent of quota
July	5,795	5,298	91.4	5,298	(2)	(2)
August	5,775	4,772	82.6	4,772	(2)	(2)
September	5,525	4,382	79.3	4,382	(2)	(2)
October	4,425	3,809	86.1	3,809	(2)	(2)
November	3,900	3,451	88.5	3,451	(2)	(2)
December	3,590	3,320	92.5	3,320	(2)	(2)
January	4,950	4,862	98.2	4,952	4,862	98.2
February	4,450	4,662	104.8	6,062	4,662	76.9
March	4,150	4,497	108.4	5,587	4,497	80.5
April	3,750			4,732		
May	4,150			4,732		
June	5,550			7,913		
Total	56,010			59,010		

[1] Includes nonprior service (male and female) and prior service enlistments.
[2] Not applicable.

General JASKILKA. In fact, measured against our original quota we attained 103.5% of our total recruiting objective for the third quarter of the fiscal year. Our delayed enlistment pool at end March had increased to over 8,900, 5,100 of whom will be shipped during fiscal year 1975. The number now in the pool is the highest since September 1970. The combination of contracts written and pool strength is the best indicator of what we did during a month and how we are going to do in the future. I am encouraged by these signs.

SECTION 718

I am aware of Congressional concern about the quality of manpower in an all volunteer era and assure you that the Marine Corps shares that concern.

We raised both enlistment and reenlistment standards in fiscal year 1973. In April we limited Mental Group IV male non-prior service accessions to not more than ten percent. This has resulted in an increase in the proportion of recruits in Mental Groups I through IIIA—above average mental ability—from 48 percent in fiscal year 1973 to 62 percent so far this year.

EFFECT OF SECTION 718

Senator YOUNG. If Section 718 of fiscal year 1974 appropriation act was repealed, would the Marine Corps be able to recruit sufficient presonnel to attain its end fiscal year 1974 strength?

General JASKILKA. No, sir. However, approval of our reprogramming request which would allow us to begin a general distribution paid print advertising campaign and a waiver of the requirement that 55 percent of our recruits be high school graduates would allow a quick return to programmed manpower levels early in fiscal year 1975.

Chairman MCCLELLAN. Proceed.

General JASKILKA. Our reenlistment standards were increased in June 1973 when our Area Aptitude score requirement was raised from two of 90 or above to three of 100 or above. Even before that, in June of 1972, we tightened reenlistment standards to the extent that second time reenlistees were required to be high school graduates or the equivalent. These and other actions have resulted in the high school graduate proportion of those in the career force—having more than four years of service—increasing from 79 percent in 1969 to the current 87 percent.

I would like to cover briefly several other areas of Congressional concern about quality of manpower in the All Volunteer Era.

First, the belief that more women are being recruited in order that more male non-high school graduates may be enlisted. This is not true. The Marine Corps has had a level annual recruiting objectives for female non-prior service accessions of 1,210 since 1970.

Second, that the number of persons enlisting with General Education Development (GED) certificates has increased substantially. This is not true. Individuals with GED equivalency certificates made up approximately 2 percent of the enlistees in fiscal year 1972 and 1973 and have continued at the same rate through March of this fiscal year.

Third, that a reasonable racial and social/economic balance should be maintained. The Marine Corps' view is that the criteria for enlistment should be a desire to serve one's Country and the ability, as determined by the Service Chief responsible, to do so.

Finally, that the non-high school graduate limitation is well below the requirement of all the services and it should not be lowered simply because of recruiting difficulties. The Marine Corps has never had a requirement for a specific percentage of its enlistees to be high school graduates. High school graduation is an indicator of amenability to discipline, which is desirable, but not necessarily the best indication of whether an individual is trainable, which we consider the overriding consideration. Obtaining 55 percent high school graduates requires us to increase the number of graduates recruited from 27,200 last fiscal year to 30,800 this year. Because of late enactment, it would be necessary to obtain 18,200 of these in the last six months. If the 55 percent restriction is not lowered or removed, there will be 6,000 fewer junior Marines in our "cutting edge," the Fleet Marine Forces, next year. We do not believe that Congress intended that our readiness posture be degraded to this extent.

COSTS OF RECRUITING

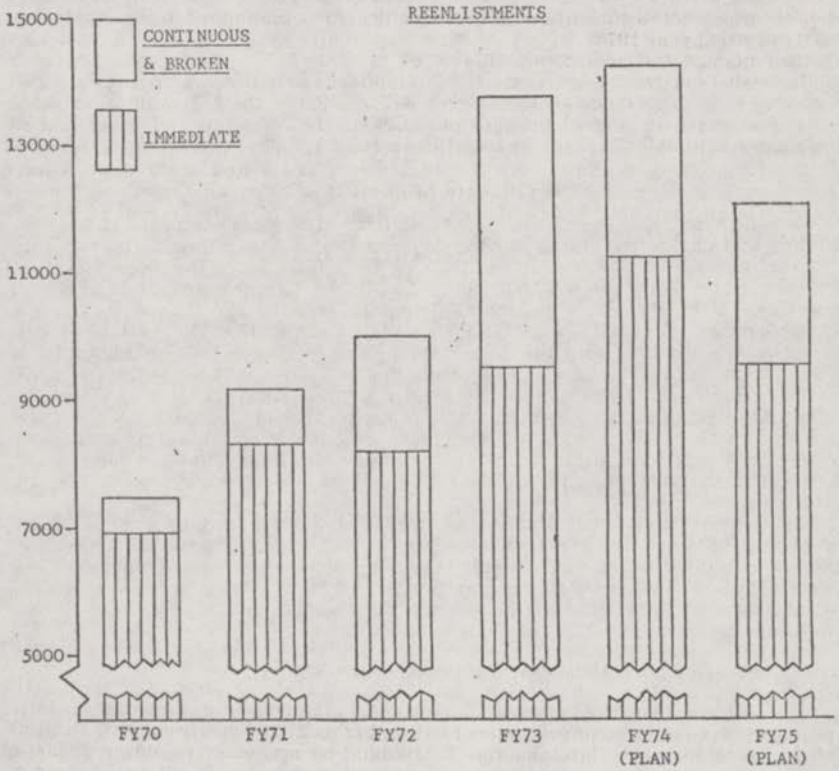
I would also like to comment on the cost of quality and high school graduates.

The Marine Corps' approach to recruiting in an all volunteer era was fiscally conservative. We wished to allocate only just enough resources to recruiting. Hindsight now shows we must allocate more resources to compete in the market-

place for the quality young men all Services and industry are seeking. Quality costs money. It is anomalous to expect to increase quality without providing commensurate increased resources. Now, finally, a word about high school graduates. We have found that many who complete high school are social graduates and do not have the mental capability to be trained in Marine Corps skills. We would prefer to acquire recruits who have both amenability to discipline and the ability to absorb training but, until we have determined and allocated the optimal mix of resources to attain both, we prefer to require that the young men we recruit be trainable.

RETENTION

Enlisted retention continues to hold a position of high priority in the area of manpower management. Our objective is the reenlistment of well-qualified, well-trained, career-motivated Marines in sufficient numbers to meet career force occupational field requirements. The chart below indicates the progress we have made in increasing the number retained each year.



General JASKILKA. The immediate reenlistments shown are those that occur within 24 hours of discharge. The continuous occur between 2 and 90 days and the broken are those which occur beyond 90 days. Our continuous and broken reenlistment success in Fiscal Year 1973 was due to initiation of a vigorous effort by our recruiters to obtain prior service Marines. Since there was a large pool available at the beginning, our success corresponded to the size of the available pool. The lower number anticipated now corresponds to the number available who have recently completed an initial active service tour.

Reduction in Reenlistment NCO's

The number of reenlistments projected for Fiscal Year 1975 decreases because there will be fewer Marines reaching EAS during the year. Again, this is because of the increase in four-year enlistees in Fiscal Year 1973 and the corresponding reduction in two-year contracts. The rate projected for Fiscal Year 1975 is the same as that expected in Fiscal Year 1974. This may be optimistic, since our career planners, or reenlistment NCO's, were reduced from 434 to 200 in the last session of Congress. The directed reduction has been taken, insofar as possible, from among the supervisors and administrators rather than from among those Marines who do the face-to-face reenlistment counseling. The immediate impact of this reduction will be an increased administrative workload on the remaining reenlistment NCO's. It remains to be seen what impact the reduction will have upon the number reenlisting.

Combat Arms Enlistment Bonus

Our recruiters use the Combat Arms Enlistment Bonus as a last resort. It is usually not mentioned by the recruiters unless no other program or option has been effective. Our lack of advertising apparently resulted in an insufficient number of qualified young men, motivated toward the Combat Arms, coming in contact with our recruiters. Thus, the last option, the bonus, was not often given a chance to be effective. As a result, only $4.1 million of the $8.9 million budgeted for the Bonus will be used for that purpose. Of the remaining, $4.6 million has been made available for transfer to paid advertising.

Means to Impose Quality

We believe in using the Combat Arms Enlistment Bonus as a means to improve quality and our recruiters have been directed to use it as a recruiting tool to a greater degree. We are recommending a three-tier bonus to the Department of Defense which calls for a $3,000 bonus to Mental Group I and II high school graduates, a $2,500 bonus to Mental Group IIIA high school graduates and a $2,000 bonus to Mental Group IIIB high school graduates. The variable bonus program is consistent with the desires of the Congress. We believe this proposal would be an improvement over the present bonus system which provides a $2,500 bonus to high school graduates who are in Mental Groups I through IIIA. An advertising program to get high quality applicants into contact with our recruiters and a three-tiered bonus should be an effective combination in helping to meet our accession objective. We believe the $8 million requested for Combat Arms Bonus payments in Fiscal Year 1975 will be one of our most effective recruiting tools.

The Combat Enlistment Bonus has upgraded quality and brought a larger number of Marines into the Combat Arms for longer enlistments. Therefore, we support continuation of such an enlistment incentive as contained in the Armed Forces Enlisted Personnel Bonus Revision Act of 1974. With a broader spectrum of occupational fields that could be paid that bonus, we could put the money where the problem is.

Areas of Congressional Concern

The Congress expressed concern during the past year in several areas which impact on military personnel; among those that I have already mentioned are: Grade Escalation, the Civilian Pilot Training Program, quality of recruit input and recruiting costs. I would like to comment further on some other areas; namely: Headquarters strength, our Human Relations Institute, Military Bands, Counselors and PCS Travel.

Headquarters

In past sessions, Congress expressed its concern about the level of resources devoted to "headquarters" and about the lack of commonality among the services' definitions of what constituted a headquarters. The Marine Corps welcomed efforts to standardize the definition on a Department-wide basis this year. Whichever convention one chooses to use, Marine Corps manpower devoted to headquarters functions continues to decline as it has since 1960. The next table, using the headquarters definition adopted within DOD this year, displays manpower allocated to Marine Corps-managed headquarters:

MANPOWER DEVOTED TO MARINE CORPS-MANAGED HEADQUARTERS

Headquarters	Fiscal year— 1973	1974	1975
Headquarters, Marine Corps	2,605	2,475	2,390
Marines	1,395	1,286	1,240
Navymen	14	16	16
Civilians	1,196	1,173	1,134
Fleet Marine Force, Atlantic	643	618	615
Marines	627	601	598
Navymen	15	16	16
Civilians	1	1	1
Fleet Marine Force, Pacific	833	751	743
Marines	777	696	688
Navymen	34	33	33
Civilians	22	22	22
Total	4,081	3,844	3,748

The data reflect the Secretary of Defense's decision of 2 April 1974 regarding the Marine Corps' share of headquarters reductions to be implemented as a result of the Secretary's Headquarters Reducation Program.

Human Relations Institute

The Marine Corps' Human Relations Institute at San Diego will be disestablished by the end of Fiscal Year 1974, as directed by Congress.

Project Transition

All services carried out in the Marine Corps as a part of Project Transition will be terminated by the end of Fiscal Year 1974, as directed by the Congress.

Military Bands

The House Committee on Appropriations in its report on the Fiscal Year 1974 Department of Defense Appropriations Bill recommended that a review of musical units be undertaken in the Department of Defense. We are participating in that review. We conducted a thorough review of our musical program in 1971, and are currently reevaluating it in view of the new demands arising from the all volunteer force environment. Thus far, we have identified one Drum and Bugle Corps to be deactivated by the end of Fiscal Year 1975.

Cost of Marine Corps Band

Chairman McClellan. What is the estimated cost of military bands in the Marine Corps and the number of military personnel involved in fiscal years 1973 through 1975.

General Jaskilka. I will provide those figures for the record if I may, Mr. Chairman.

[The information follows:]

MARINE CORPS MUSIC PROGRAM MANPOWER AND COSTS

	Marines		Cost (thousands)	
	Officers	Enlisted men	MPMC	O. & M.M.C.
Fiscal year:				
1973 [1]	17	644	$5,392	$185
1974 [2]	17	643	5,762	[3] 212
1975 [2]	17	643	5,763	[3] 212

[1] Actual.
[2] Plan.
[3] Budget request contains $212,000, however, internal management actions taken since the budget submission have resulted in reductions of $14,000 in fiscal year 1974 and $19,000 in fiscal year 1975 for revised figures of $198,000 and $193,000, respectively.

Counselors

General Jaskilka. The Committees on Appropriations also expressed concern last year over the number of counselors in the several services. The next table lists those Marines, Navy chaplains and civilians who perform a counseling function. They are specially trained personnel who provide advice and guidance to other Marines who have problems that impact upon their ability to function properly or need advice on the relative merits of various options open to them. Those whom the Marine Corps does not consider to be counselors, on the lower part of the table, perform a function which can best be described as providing technical and administrative assistance to others in obtaining rights, benefits or entitlements.

COUNSELOR AND TECHNICAL/ADMINISTRATIVE SUPPORT BILLETS IN MARINE CORPS BUDGET REQUESTS [1]

Function area	Fiscal year 1974 budget				Fiscal year 1975 budget		
	Fiscal year 1973	Difference	Fiscal year 1974	Difference	Fiscal year 1974	Difference	Fiscal year 1975
Counselors:							
Career planning	408	26	434	−234	200	.....	200
Chaplains [2]	167	.....	167	.....	167	.....	167
Project transition	27	20	47	−47	0	.....	0
Legal assistance	23	.....	23	.....	23	.....	23
Race relations	0	.....	0	.....	0	.....	0
Intercultural relations	0	.....	0	.....	0	.....	0
Corrections	60	.....	60	.....	60	.....	60
Drug abuse	21	.....	21	.....	21	−3	18
Alcohol abuse	8	4	12	.....	12	.....	12
Total	714	50	764	−281	483	−3	480
Technical/administrative support personnel:							
Education	14	.....	14	.....	14	.....	14
Family Assistance	126	.....	126	−47	79	.....	79
Equal Employ. Oppor	4	.....	4	.....	4	.....	4
Total	144	.....	144	−47	97	.....	97

[1] Total full-time positions, military and civilian.
[2] U.S. Navy officers funded by military personnel, Navy appropriation.

Function of Legal Assistance Counselors

Chairman McClellan. Describe how the legal assistance counselors differ from lawyers of the Judge Advocate corps.

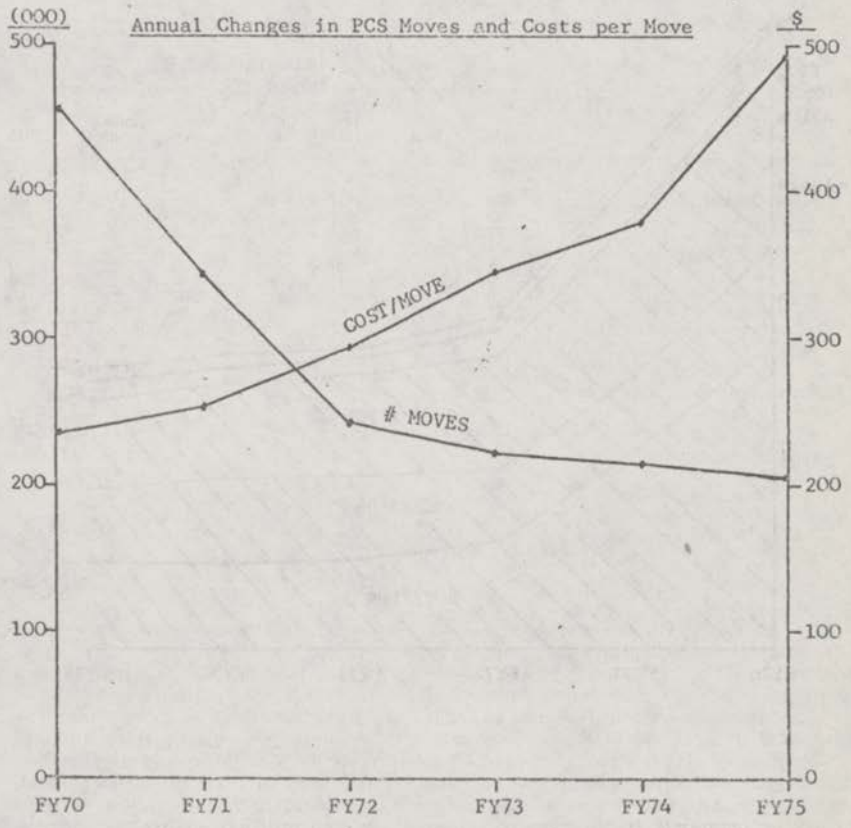
General Jaskilka. All Judge Advocates of the Marine Corps are qualified to serve in Legal Assistance Officer billets; however, only a limited number of Judge Advocates actually serve in legal assistance billets at any one time. The work of a legal assistance officer normally involves providing advice and aid in the many civilian legal problems encountered by Marine and their families. The legal assistance officer concentrates on the area of civil law. In contrast, the Judge Advocate, who is not assigned to a legal assistance billet, will be working primarily in the area of criminal law and military justice, as a prosecutor, defense counse or military judge.

Chairman McClellan. Proceed.

PERMANENT CHANGE OF STATION

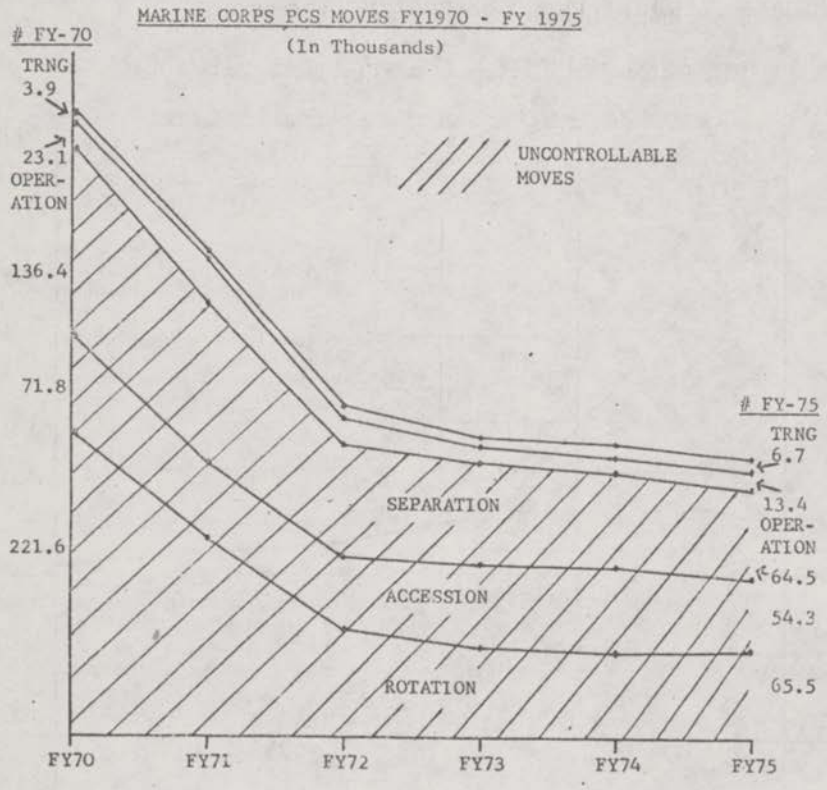
General JASKILKA. Last year the House Committee on Appropriations expressed concern over the cost of PCS travel and the manner in which DOD accounted for moves. A standardized move accounting policy within the Department of Defense was directed for Fiscal Year 1975. This has been done and the number of moves shown in Budget Activity 5 reflects the new standardized Department of Defense format. The next chart uses the new convention to illustrate the number of moves in Fiscal Years 1970 to 1975 by category.

U.S. MARINE CORPS FISCAL YEARS 1970-1975



MOVES DOWN—COSTS UP

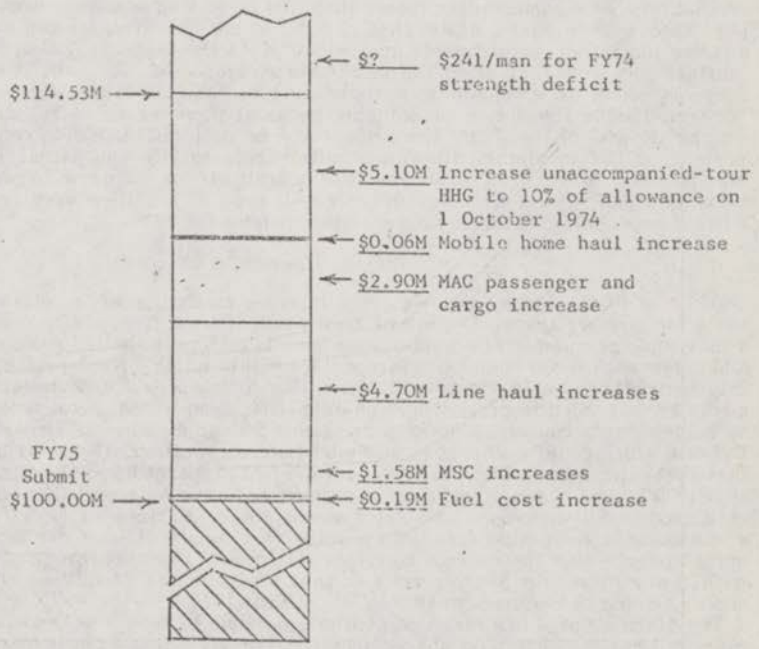
General JASKILKA. The Marine Corps has continuously stressed the stabilization of personnel and the reduction of PCS moves to the lowest possible level commensurate with our mission as a force-in-readiness. The reduction in the number of moves reflected above indicates we continue to make progress in that area. However the next chart indicates how the average cost per move has increased.



EFFECTS OF INSTALLATION ON PCS MOVES

General JASKILKA. Our budget request for PCS for Fiscal Year 1975 is $100 million. Even that level of funding will be inadequate in view of new travel entitlements and inflationary pressure intensified by the fuel crisis. For example, since the budget was prepared in January 1974, there have been several cost increases affecting PCS travel that will require additional funding in Fiscal Year 1975 if we are to execute the number of moves planned. The source of these cost increases and their impact are depicted on the chart below:

Recent Cost Increases Not Included in FY 75 PCS Budget ($ Millions)



General JASKILKA. As the chart illustrates, we have an additional requirement in PCS travel for $14.53 million in Fiscal Year 1975. Also required is $241 for each Marine below our authorized strength level at end Fiscal Year 1974 to provide for the additional accession travel necessary in Fiscal Year 1975. The $5.1 million increase for unaccompanied tour household goods (HHG) is an effort to return partway to the Joint Travel Regulation (JTR) allowance. It authorizes up to 25 percent of the maximum allowable shipment on a PCS move to be shipped to or returned from overseas when on an unaccompanied tour. In order to stay solvent, in February 1973 we imposed a 250 pound baggage restriction on Marines assigned to the Fleet Marine Forces in the Western Pacific. That restriction applies to moves in each direction. Since the other Services did not have to take similar action, our Marines view the restriction as inequitable and discriminatory. Our commanders report that this is causing a serious morale problem. They believe, and I agree, that if relief is not provided, we can expect an adverse impact on reenlistments and retention. In the long run, losses of career Marines may more than offset the short term avoidance in PCS costs. The Marine Corps is not at all amenable to authorizing Fleet Marine Force Marines in the Western Pacific the option of shipping personal property up to the maximum weight allowed in the JTR; the costs would be prohibitive. We do consider 10 percent of the maximum allowance sufficient to satisfy the actual needs of Marines and to head off problems with morale. If we adopt a 10-percent-of-maximum policy on 1 October 1974, we will need $5.1 million over and above what is now contained in our appropriation request for PCS.

TRAVEL COSTS

Included in the budget request is an increase to eight cents a mile from six cents for member travel. Dependent travel is increased from six to seven cents a mile and the number of eligible dependents is no longer limited to three. E–4's and below with fewer than two years service will be eligible for dependent travel, shipment of household goods and dislocation allowances. These latter entitlements are extended in areas where no data exist upon which a cost forecast can be made. A very conservative estimate of cost was applied by the Department of Defense which could well lead to an under-funded condition. Also contributing to that possibility are the marriage factors used in preparation of the Fiscal Year 1975 PCS budget. Current marriage rates were used but we expect that additional entitlements will increase those rates among junior Marines which have shown a consistently increasing trend since 1970. The impact of each one percentage point increase over the current marriage rate among privates through corporals with fewer than four years service is that an estimated $1 million additional funding would be required for PCS in Fiscal Year 1975.

The Marine Corps has taken steps where possible to reduce PCS costs. I have discussed our restriction on unaccompanied baggage, which, even if increased as proposed, will result in significant savings. We continue our efforts to reduce the distance traveled on each move. Despite these efforts, the rate at which costs have been increasing in the transportation field has exceeded the rates in the rest of the economy and caused a disproportionate cost increase in PCS. To illustrate, in Fiscal Year 1972 it cost, on the average, $136 to transport 1,000 pounds of household goods 1,000 miles. In Fiscal Year 1974, it will cost an estimated $181 to move the same goods the same distance—a 33% increase for transportation. By way of comparison, an unmarried corporal's base pay has gone from $349 to $420, a 20% increase in manpower costs. With cost increase differentials of this order, it is readily apparent that the cost of PCS travel has exceeded the rate of inflation of the general economy.

I cannot identify, today, a source of funding within the Military Personnel, Marine Corps appropriation which would permit funding the fact-of-life PCS cost increases or the proposed increase in shipment of household goods. I would propose that this be addressed just before markup of the MPMC appropriation when the end Fiscal Year 1974 strength is known or can be better projected.

SUMMARY

Mr. Chairman, members of the Committee, the Marine Corps is requesting $1.73 billion to fund an end strength of 196,398 Marines and an average strength of 196,134 in Fiscal Year 1975. Our request this year represents, as it has in the past, our judgment of the resources necessary to meet the Marine Corps' commit-

ments at the lowest posible cost while still accepting a prudent level of risk. The Marine Corps contends that in an area of diminished General Purpose Forces, increased reliance will be placed on remaining forces to provide visible, credible deterrence. We subscribe to Washington's view that "To be prepared for war is one of the most effectual means for preserving peace". Readiness *now*—not two months from now—is our view of what constitutes a credible deterrent. The need—even in the face of detente—for a strong force-in-readiness has not diminished. The Marine Corps is such a force. We seek your help and support in maintaining it as such.

I would be pelased to answer any questions you may have.

ORAL STATEMENT: EMBASSY GUARD INCREASES

General JASKILKA. Mr. Chairman, the Marine Corps request for 1975 is essentially the same as the request for fiscal year 1974. The major change is an increase in security guard requirements to protect our embassies throughout the world.

The State Department, because of terrorist attacks in our embassies, asked the Marine Corps for 438 additional security guards and we are providing them. That is the basic change in our budget.

Chairman MCCLELLAN. I don't quite understand that.

General JASKILKA. The difference in our end-strength from 1974 to what we are requesting in 1975, sir.

Chairman MCCLELLAN. Is how much?

General JASKILKA. About 400 marines.

Chairman MCCLELLAN. About 400 more?

General JASKILKA. Yes.

Chairman MCCLELLAN. You requested 400 more end-strength in 1975 than you had in 1974?

General JASKILKA. That is correct. They will be security guards in our embassies making a grand total of 1,546 marines who will be providing security for embassies throughout the world.

Chairman MCCLELLAN. That would be the total after this increase?

General JASKILKA. That is correct, sir.

Chairman MCCLELLAN. So you have about between 1,100 and 1,200 now.

General JASKILKA. That is right, sir.

AREAS OF CONCERN

Mr. Chairman, I would like to talk about two areas of our personnel budget briefly. One is our recruiting problem and the second is permanent change of station costs.

With respect to recruiting, sir, as you probably have heard and read, the Marine Corps experienced recruiting difficulties in the first half of this fiscal year. We ended December, about 7,000 Marines short.

Question: What is the problem with recruiting?

Well, we think that part of it was that we were not fully ready for the AVF environment. Part of it was the fact that we have not been involved in general distribution of paid print advertising. Our sister services have. We have not.

With respect to our internal problems, Mr. Chairman, we took corrective action last fall. We assigned a general officer in charge of recruiting. We have made substantial changes in our internal management procedures. We have upgraded our syllabus for recruiter's school.

We have prepared a recruiter's guide for use throughout the recruiting service, something we had never had before. Also, we have taken several others that are designed to improve our sales techniques, which, in fact, is what recruiting really is.

Beginning in December, we started to see the recruiting shortfalls level off. In the third quarter of this fiscal year we were very encouraged by the fact that we achieved 103.5 percent of our original quota for that period. We have increased our number of poolies, meaning the young men who have enlisted in the Marine Corps but have not yet been shipped. So in the third quarter of this year we had a very encouraging turnaround in our recruiting.

EFFECTS OF SECTION 718

Meanwhile, in January of this year the Congress enacted section 718 which essentially prohibits the Marine Corps or any other service from enlisting more than 45 percent non-high-school graduates or more than 18 percent mental group IV's. This causes the Marine Corps a considerable problem because we have been averaging, in recent years, only about 50 percent high school graduates.

Getting the word in January to shoot for 55 percent high school graduates for the entire fiscal year was a bit late for us to get our recruiting service geared up to accomplish that increased quality objective.

With respect to mental group IV's, we have had no difficulties. The law says no more than 18 percent. We have been hanging in at less than 10 percent for the entire fiscal year.

DESIRE TO REPEAL SECTION 718

So the net result of section 718 with respect to recruiting, Mr. Chairman, is that if it is not repealed real soon, like the end of this week or early next week, we anticipate our total shortfall will be on the order of 12,000 Marines. If section 718 is repealed, we think that we could reduce that shortfall on the order of 6,000.

Chairman McClellan. You think that section should be repealed?

General Jaskilka. Yes, we do, sir.

Chairman McClellan. It handicaps you.

General Jaskilka. Yes, sir, it does, very much.

Chairman McClellan. And you think the quality of the marines will not be greatly diminished by reducing it?

General Jaskilka. We do not, sir.

Chairman McClellan. What should be the limit? The language limits the category to not to exceed 45 percent. What modification would you make if we are going to keep the section?

General Jaskilka. Well, sir, I would say first, before I answer your question directly, the Marine Corps would prefer there be no legislation to establish enlistment standards. Rather, that the service chiefs who are responsible for the performance of their service be allowed to establish standards which, in their good judgment, have served their service over these years.

Chairman McClellan. If we are going to delegate authority to them to establish standards, why can't they submit to us the standards they would establish and let us evaluate them.

General Jaskilka. With respect to the Marine Corps, Mr. Chairman, the standard in effect today is to limit to 10 percent all new accessions in mental group IV and to shoot for as high a quality combination of high school graduates and mental groups I, II, and III as the market will bear. We have been achieving that this year. In fact, in mental groups I through III–A, which corresponds to above average intelligence, we are achieving about 62 percent for this fiscal year. That compares in the past 2 years to about 49 percent. So, we have increased our quality in accordance with the standards established by the Commandant last April.

SUGGESTED CHANGES TO SECTION 718

Now, to go to you specific question, sir. One suggestion with respect to section 718—the only one I would have aside from repealing—would be to change the word "or" to read "and".

Chairman McClellan. Where is that?

General Jaskilka. Change the word "or" to read "and" between "exceed 45 per centum" and "the mental category IV".

Chairman McClellan. "45 per centum and the mental category IV".

General Jaskilka. Yes, sir. Then it would mean to us that in order to violate the law you would have to exceed 18 percent and 45 percent non-high-school graduates. We could live with a provision written in that fashion because, as I indicated, we are achieving less than 10 percent mental group IV today and do not intend to go any higher.

Senator Young. That would be the easiest way out.

Chairman McClellan. Continue.

General Jaskilka. So much for recruiting.

PCS COSTS

The last item I would like to mention is permanent change of station costs. You have heard the Navy witnesses speak of inflationary costs and the like in this area. We have been struggling with permanent change of station costs for the last 2 years. To live within our budget, because of inflation, we have taken drastic action.

Among other things we lengthened tours for our marines. We cut back on their baggage allowance to and from overseas stations as a cost saving measure. But inflation is dramatized by this: in January of this year when we submitted the budget for fiscal year 1975 it showed a figure of $100 million for permanent change of station costs. Since then inflation has crept in and that budget is now understated by at least $14.5 million.

Chairman McClellan. What is that increase involved in the change of station? You have a $14 million increase. What produces that increase?

MAC PASSENGER FARE INCREASE

General JASKILKA. I will be happy to tell you. It involves a 12.5-percent MAC passenger fare increase.

Chairman MCCLELLAN. They travel by airlift?

General JASKILKA. Yes, sir. Military airlift.

Chairman MCCLELLAN. It costs 12 percent more to transport them?

General JASKILKA. That is right, sir. Then there was a 16- to 22-percent rate increase allocated on the 1st of February.

General ROBERTSON. That was the Military Sealift Command rate increase effective on February 1.

General JASKILKA. The 1st of May there are increases along the same line allocated for both outbound and inbound traffic from Hawaii and Japan totaling $1.3 million. Then there was a 6-percent line haul increase on February 9.

Chairman MCCLELLAN. What is involved in that?

General ROBERTSON. That is the in-Conus rate for movement of household effects, primarily.

Chairman MCCLELLAN. Freight rates? Tonnage rates?

General ROBERTSON. Yes, sir.

General JASKILKA. That was February 9. On the 1st of May we had another increase in line haul of $2.9 million. Then, finally, there is a $5 million item we are asking for to give our marines a little more equity with respect to baggage allowances in their movement to and from overseas since we had cut it back drastically last year.

Chairman MCCLELLAN. So you will need $14 million more.

General JASKILKA. Yes, sir.

Chairman MCCLELLAN. Proceed.

General JASKILKA. That ends my comments, Mr. Chairman, and those points I wanted to make, unless you have further questions.

Chairman MCCLELLAN. Thank you, General.

JUSTIFICATION

At this point in the record there will appear certain information from the justifications.

[The information follows:]

Justification

MILITARY PERSONNEL, MARINE CORPS

INTRODUCTORY STATEMENT

This appropriation provides funds for the pay and allowances, subsistence in kind, travel and transportation costs related to permanent change of station, and other personnel costs, as authorized by law and regulations, for Marines on active duty with the regular establishment. The program and financing schedule for this appropriation reflects program activity classifications which are identical to the ten major program classifications used for management purposes throughout the Department of Defense.

The tables immediately following include manyears and end strength, gains and losses by type, increases and decreases, detailed requirements for the military personnel appropriations by budget activities and special analyses.

The final section summarizes the Active Duty Military Personnel Manpower by Program Activity, as in the Five Year Defense Plan, and by Operating Program. Operating Programs are: Operation of the Marine Corps, Operation of Other Defense Agencies, and Research and Development Defense Agencies.

Operation of the Marine Corps includes Marines performing Marine missions as well as Marines assigned in support of the Navy, performing Navy missions. Marines assigned to other defense agencies are shown under Operation of Other Defense Agencies, and Marines performing research and development for other defense agencies are shown under Research and Development Defense Agencies. In addition, a small number of Marine Corps military personnel are assigned to other Government agencies outside the Department of Defense. The costs of these personnel are financed as a part of the reimbursable program for this appropriation, with reimbursements received from the Government agencies to which such personnel are assigned.

Obligations for military personnel are distributed to each of the program activities on the basis of average rates. These rates are derived by averaging total obligations for officers and enlisted personnel. The resulting rates are multiplied by the number of manyears in each activity. Obligations for permanent change of station travel are excluded from these standard rates and entered directly in Program 8. The remainder of the book, except for special analyses, contains material in the same form that has been used for a number of years to present the detailed requirements for the military personnel appropriation by budget activities. The concluding pages have been used for special analyses for those areas in which there has been special interest.

SUMMARY OF MILITARY PERSONNEL STRENGTH

	FY 1973 Actual		FY 1974 Planned		FY 1975 Planned	
	Man-Years	End Strength	Man-Years	End Strength	Man-Years	End Strength
DIRECT PROGRAM						
Officers	19,349	19,261	18,800	18,864	18,630	18,658
Enlisted	178,349	176,814	173,521	177,135	177,489	177,725
Subtotal	197,698	196,075	192,321	195,999	196,119	196,383
REIMBURSABLE PROGRAM 1/						
Officers	21	21	15	15	15	15
Enlisted	2	2	0	0	0	0
Subtotal	23	23	15	15	15	15
TOTAL PROGRAM						
Officers	19,370	19,282	18,815	18,879	18,645	18,673
Enlisted	178,351	176,816	173,521	177,135	177,489	177,725
TOTAL	197,721	196,098	192,336	196,014	196,134	196,398

1/ Military personnel assigned to agencies outside of Department of Defense on a reimbursable basis under the provisions of 10 USC 5416

SUMMARY OF REQUIREMENTS BY BUDGET PROGRAM
(In thousands of Dollars)

Identification Code: 07-05-1105-0-1-051	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Direct Program:			
1. Pay and allowance of officers	$ 316,486	$ 327,336	$ 326,573
2. Pay and allowance of enlisted	1,104,148	1,165,889	1,195,203
4. Subsistence of enlisted personnel	78,336	99,641	103,997
5. Permanent change of station travel	75,222	80,700	100,000
6. Other military personnel costs	3,530	3,734	2,927
	1,577,722	1,677,300	1,728,700
Reimbursable Program:			
1. Pay and allowance of officers	362	353	353
2. Pay and allowance of enlisted	68	445	445
4. Subsistence of enlisted personnel	8,215	8,239	5,000
5. Permanent change of station travel	668	750	850
Total reimbursable program	9,313	9,787	6,648
Total PROGRAM:			
1. Pay and allowances of officers	316,848	327,689	326,926
2. Pay and allowances of enlisted	1,104,216	1,166,334	1,195,648
4. Subsistence of enlisted personnel	86,551	107,880	108,997
5. Permanent change of station travel	75,890	81,450	100,850
6. Other military personnel costs	3,530	3,734	2,927
Total Program	$1,587,035	$1,687,087	$1,735,348

SCHEDULE OF INCREASES AND DECREASES
(Increases or decreases over $200 Thousand)

		AMOUNT ($ Millions)
FY 1974 Direct Program		$1,677.3
INCREASES:		
Basic Pay - 1 October 1973 Pay Raise and Manyears	35.8	
Proficiency Pay - Recruiters and Superior Performance Pay	2.0	
BAQ - Number of Payments	.5	
FICA - Pay Raise, Base change, and Manyears	2.0	
Basic Allowance for Subsistence 1 January 1974 Rate change	6.8	
Line Haul Tariff increase on Household Goods Shipments	.6	
Monetary Allowance in lieu of Transportation	7.0	
Annualization of E-4 over 2 travel benefits	1.3	
Proposed Travel Benefits for E-4 under 2, E-3, E-2 and E-1	10.4	
Subsistence in Kind - Manyears and Rate Change	3.7	
Total Increases		+70.1
DECREASES:		
Incentive Pay - Flying Duty Payments	.4	
Reenlistment Bonus - Number of Payments	2.0	
Combat Arms Enlistment Bonus - Number of Payments	2.6	
Clothing - Issues to Recruits and Navy Corpsmen	1.9	
Family Separation - Number of Payments	.2	
Separation Pay - Number of Payments	4.6	
Subsistence in Kind - Operational Rations to Marine Corps Stock Fund	6.2	
Saving Deposits - Cessation of Program except for MIA's	.2	
SGLI - Rate change	.6	
Total Decreases		-18.7
Total FY 1975 Direct Program		$1,728.7

BUDGET ACTIVITY 1: PAY AND ALLOWANCES OF OFFICERS, SUMMARY BY PROJECTS

(In Thousands of Dollars)

Project	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
A. Basic Pay	$242,831	$254,160	$255,004
B. Incentive Pay	13,221	12,444	12,266
C. Special Pay	339	77	47
D. Basic Allowance for Quarters	27,122	25,750	25,106
E. Basic Allowance for Subsistence	11,117	10,802	10,704
F. Station Allowances, Oversees	1,243	1,462	1,462
G. Uniform Allowances	588	513	525
H. Family Separation Allowance	1,128	954	1,027
I. Separation Payments	8,915	9,110	7,669
J. Federal Insurance Contribution Act (FICA)	9,982	12,064	12,763
K. Reimbursables	362	353	353
Total Obligations	316,848	327,689	326,926
Reimbursable Program	- 362	- 353	- 353
Direct Program	$316,486	$327,336	$326,573

SCHEDULE OF INCREASES AND DECREASES
(Increases or decreases over $200 Thousand)

		AMOUNT ($ Millions)
BUDGET ACTIVITY #1		
FY 1974 Direct Program		$327.3
INCREASES:		
Basic Pay - 1 October 1973 Pay Raise	.8	
FICA - Pay Raise and Base change	.7	
Total Increases		+ 1.5
DECREASES:		
Incentive Pay - Number of Payments	.2	
BAQ - More Government Quarters/Manyears	.6	
Separation Pay - Number and type of Payments	1.4	
Total Decreases		- 2.2
Total FY 1975 Direct Program		$326.6

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(In Thousands of Dollars)

PROJECT: A. Basic Pay

Estimate - FY 1975 - $255,004
Estimate - FY 1974 - $254,160
Actual - FY 1973 - $242,831

PART I - PURPOSE AND SCOPE

The funds requested will provide for basic compensation of officers on active duty including length of service increments, under provision of 37 U.S.C. 201, 203, and 205. Included in the estimates is the basic compensation (including length of service increments) of the Reserve components on active duty for purposes other than training or under the provisions of Sec. 265, Title 10 U.S.C.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1975 program is based on a beginning strength of 18,864 officers, an end strength of 18,658 and 18,630 manyears. Costs are determined on the basis of a grade distribution by longevity for each fiscal year. The average rates utilized are derived from a consideration of the latest longevity adjusted by planned gains and losses for respective years.

PROJECT: B. Incentive Pay for Hazardous Duty

Estimate - FY- 1975 - $12,266
Estimate - FY 1974 - $12,444
Actual - FY 1973 - $13,221

PART I - PURPOSE AND SCOPE

The funds requested will provide for pay to officers under provisions of 37 U.S.C. 301 for these types of duty:

(1) Crew member involving frequent and regular participation in aerial flight;
(2) Non-crew duty involving frequent and regular participation in aerial flights not as a crew member;
(3) Parachute jumping as an essential part of military duty;
(4) Demolition of explosives as a primary duty including training for such duty;
(5) Other hazardous duty required by order and authorized under the provisions of 37 U.S.C. 301.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Hazardous duty pay is computed on the basis of the average number of officers in each pay grade who are eligible for payment. Average pay rates for flying-duty crew members are based on statutory rates to which longevity factors have been applied. All other hazardous duty pay is computed at the statutory rates per manyear.

PROJECT: C. Special Pay

Estimate - FY 1975 - $ 47
Estimate - FY 1974 - $ 77
Actual - FY 1973 - $339

PART I - PURPOSE AND SCOPE

The funds requested will provide for Special Pay

(1) For personal money allowances for certain general officers under provisions of 37 U.S.C. 414(a); and
(2) To officers on active duty performing duties involving SCUBA diving under provision of 37 U.S.C. 304
(3) Officers on duty subject to hostile fire under provisions of 37 U.S.C. 310.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Special pay items are computed by extending the average numbers programmed to be entitled by the statutory rates.

PROJECT: D. Basic Allowance for Quarters

Estimate - FY 1975 - $25,106
Estimate - FY 1974 - $25,750
Actual - FY 1973 - $27,122

PART I - PURPOSE AND SCOPE

The funds required are to provide for payment of basic allowance for quarters authorized under provisions of 37 U.S.C. 403; Sec. 502, P. L. 89-568; and Sec. 506, P. L. 92-545 to officers with or without dependents or occupying inadequate family housing.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Basic allowance for quarters is determined by mulitiplying the number of eligible personnel by the statutory rates to which each grade is entitled.

PROJECT: E. Basic Allowances for Subsistence

Estimate - FY 1975 - $10,764
Estimate - FY 1974 - $10,802
Actual - FY 1973 - $11,117

PART I - PURPOSE AND SCOPE

The funds requested will provide for subsistence allowances on a monthly basis as authorized by 37 U.S.C. 402.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Basic Allowance for Subsistence costs are computed by multiplying the statutory rate of $574.56 by the average number of officers programmed for the year.

PROJECT: F Station Allowances, Overseas

Estimate - FY 1975 - $1,462
Estimate - FY 1974 - $1,462
Actual - FY 1973 - $1,243

PART I - PURPOSE AND SCOPE

The funds requested will provide payments of a per diem allowance to officers and their dependents on duty outside the United States, considering all elements of the cost of living, including quarters, subsistence and other necessary incidental expenses as prescribed by Joint Travel Regulations and authorized under the provisions of 37 U.S.C. 405.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Overseas station allowances are computed using cost factors based on past experience with the average numbers programmed to draw each of the three types of overseas station allowances; Cost of Living, Housing, and Temporary Lodging.

PROJECT: G. Uniform Allowances

Estimate - FY 1975 - $525
Estimate - FY 1974 - $513
Actual - FY 1973 - $588

PART I - PURPOSE AND SCOPE

These funds will provide for the initial payment and supplemental allowances under provisions of 37 U.S.C. 415 - 417 to officers for purchase of required uniforms.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Uniform allowances are determined by applying statutory rates to the number of eligible personnel programmed.

PROJECT: H. Family Separation Allowances

Estimate - FY 1975 - $1,027
Estimate - FY 1974 - $ 954
Actual - FY 1973 - $1,128

PART I - PURPOSE AND SCOPE

The funds requested are to provide for Family Separation Allowance payments to officers with dependents for added separation expenses under 37 USC 427:

(a) When travel of dependents to overseas duty station is not authorized and the member maintains two homes, one in CONUS for his family and one overseas for himself; and/or

(b) When a member with dependents makes a permanent change of station or is on temporary duty travel for thirty days or more either on board ship or overseas and the travel of dependents to his duty station is not authorized and dependents do not reside at or near duty station.

PART II- JUSTIFICATION OF FUNDS REQUESTED

Allowances for family separation payments are determined by multiplying the number of personnel eligible for each type of family separation allowance by the statutory rate applicable.

PROJECT: I. Separation Payments

Estimate - FY 1975 - $7,669
Estimate - FY 1974 - $9,110
Actual - FY 1973 - $8,915

PART I - PURPOSE AND SCOPE

The funds requested will provide:

(1) For lump sum terminal leave payments to officers under provisions of 37 U.S.C. 501.

(2) For severance pay to officers, including elimination severance pay to officers not eligible for retirement, under any provision of law on the date of elimination by promotion list passover, under provisions of 10 U.S.C. 1167, 6382-83, and 8303; elimination severance pay for cause under provisions of 10 U.S.C. 8786; disability severance pay under provisions of 10 U.S.C. 1203, 1206, 1208, 1212-13 and lump sum readjustment payments to Reserve Officers under provisions of 10 U.S.C. 680 and 687 and P.L. 87-509, approved June 28,1962.

PART II-JUSTIFICATION OF FUNDS REQUESTED

Separation payments are arrived at by using cost factors, which are based on past experience, and programmed separations by type and by rank.

PROJECT: J. Social Security Tax-Employer's Contribution

Estimate - FY 1975 - $12,763
Estimate - FY 1974 - $12,064
Actual - FY 1973 - $ 9,982

PART I - PURPOSE AND SCOPE

The funds requested provide for the employer's tax to the Social Security Administration as required by the Federal Insurance Contribution Act (FICA).

PART II - JUSTIFICATION OF FUNDS REQUESTED

Social Security costs are computed by determining the average numbers of personnel paid by grade and longevity pay step, computing the total amount paid in each pay step, and applying the proper FICA rate within the total annual limit on taxable income.

Project: K. Reimbursables

Estimate - FY 1975 $353
Estimate- FY 1974 $353
Actual - FY 1973 $362

PART I - PURPOSE AND SCOPE

This project provides for the resources for which the Marine Corps is reimbursed by other federal activities. The distribution of the manpower by federal agency is shown in PART F of the Special Analyses.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The reimbursable program is computed on the same basis as the pay entitlements for the direct manyears.

BUDGET ACTIVITY 2, PAY AND ALLOWANCES OF ENLISTED PERSONNEL, SUMMARY OF PROJECTS

(In thousands of Dollars)

PROJECT	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
A. Basic Pay	$ 858,322	$ 907,048	$ 942,088
B. Incentive Pay	3,026	2,618	2,400
C. Special Pay	5,719	5,039	4,895
D. Proficiency Pay	10,317	10,052	12,668
E. Reenlistment Bonus	23,560	19,582	17,562
F. Combat Arms Enlistment Bonus	6,479	10,587	7,997
G. Basic Allowances for Quarters	91,039	92,778	93,931
H. Station Allowances, Overseas	4,760	3,596	3,596
I. Clothing Allowances	25,910	32,570	30,674
J. Family Separation Allowance	3,598	3,232	3,022
K. Separation Payments	24,418	25,189	21,983
L. Federal Insurance Contribution Act (FICA)	47,000	53,598	54,387
M. Reimbursables	68	445	445
Total Obligations	1,104,216	1,166,334	1,195,648
Reimbursable Program	-68	-445	-445
Direct Program	$1,104,148	$1,165,889	$1,195,203

SCHEDULE OF INCREASES AND DECREASES
(Increases or decreases over $200 Thousand)

		AMOUNT ($ Millions)
BUDGET ACTIVITY #2		
FY 1974 Direct Program		$1,165.9
INCREASES:		
Basic Pay - 1 October 1973 Pay Raise and Manyears	35.0	
Proficiency Pay - Recruiters and Superior Performance Pay	2.0	
BAQ - Number of Payments	1.1	
FICA - Pay Raise, Base change, and Manyears	1.3	
Total Increases		+ 39.4
DECREASES:		
Incentive Pay - Flying Duty Payments	.2	
Reenlistment Bonus - Number of Payments	2.0	
Combat Arms Enlistment Bonus - Number of Payments	2.6	
Clothing - Issues to Recruits and Navy Corpsmen	1.9	
Family Separation - Number of Payments	.2	
Separation Pay - Number of Payments	3.2	
Total Decreases		- 10.1
Total FY 1975 Direct Program		$1,195.2

(In Thousands of Dollars)

PROJECT: A. Basic Pay

Estimate - FY 1975 - $942,088
Estimate - FY 1974 - $907,048
Actual - FY 1973 - $858,322

PART I - PURPOSE AND SCOPE

The funds requested will provide for basic compensation of enlisted personnel on active duty, including length of service increments, under provision of 37 U.S.C. 201, 203, and 205. Included in the estimates is the basic compensation (including length of service increments) of the Reserve components on active duty for purposes other than training.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1975 program is based on a beginning strength of 177,135 enlisted personnel, an end strength of 177,725 and 177,489 manyears. Costs are determined on the basis of a grade distribution by longevity for each fiscal year. The average rates utilized are derived from a consideration of the latest experienced longevity adjusted by planned gains and losses for respective years.

PROJECT: B. Incentive Pay - Hazardous Duty

Estimate - FY 1975 - $2,400
Estimate - FY 1974 - $2,618
Actual - FY 1973 - $3,026

PART I - PURPOSE AND SCOPE

The funds requested will provide for pay to enlisted personnel under provisions of 37 U.S.C. 301 for these types of duty:

(1) Crew member involving frequent and regular participation in aerial flights;
(2) Non-crew duty involving frequent and regular participation in aerial flights not as a crew member;
(3) Parachute jumping as an essential part of military duty;
(4) Demolition of explosives as a primary duty including training for such duty;
(5) Duty - subject in thermal stress experiments;
(6) Other hazardous duty required by order and authorized under the provisions of 37 U.S.C. 301.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Hazardous duty pay is computed on the basis of the average number of enlisted personnel in each pay grade who are eligible for payment. Average pay rates for flying duty crew members are based on statutory rates to which longevity factors have been applied. All other hazardous duty pay is computed at the statutory rate per manyear. "

PROJECT: C. Special Pay

Estimate - FY 1975 - $4,895
Estimate - FY 1974 - $5,039
Actual - FY 1973 $5,719

PART I - PURPOSE AND SCOPE

The funds requested will provide for the special pay to enlisted personnel while on sea duty or duty outside the contiguous 48 states and the District of Columbia at places designated by the Secretary of Defense under the provisions of 37 U.S.C. 305; for duty subject to hostile fire under the provisions of 37 U.S.C. 310 and for duty involving SCUBA diving under provision of 37 U.S.C. 304. It also includes hostile fire pay under 37 U,S.C. 310.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Duty at certain places is computed by applying statutory rates to the average numbers of personnel programmed to be overseas on permanent assignments. Personnel programmed to be overseas are based on actual inventoried and programmed transfers.

PROJECT: D. Proficiency Pay

Estimate - FY 1975 - $12,668
Estimate - FY 1974 - $10,052
Actual - FY 1973 - $10,317

PART I - PURPOSE AND SCOPE

These funds will provide for proficiency pay under the provisions of 37 U.S.C. 307 for enlisted members in critically undermanned skills, designated special duty assignments and to Marines who are designated superior performers.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The estimate is based on the number of individuals programmed to occupy skills for which proficiency pay is authorized.

PROJECT: E. Reenlistment Bonus

Estimate - FY 1975 - $17,562
Estimate - FY 1974 - $19,582
Actual - FY 1973 - $23,560

PART I - PURPOSE AND SCOPE

The funds requested are to provide:

(a) A bonus to enlisted personnel reenlisting in the regular Marine Corps within three months after the date of discharge or release from compulsory or voluntary active duty (other than for training) or for those personnel extending their enlistments for at least two years. This special pay is in accordance with provisions 37 U.S.C. 308 as amended.

(b) A variable reenlistment bonus authorized under Public Law 89-132, August 21, 1965, to enlisted members designated as having a critical military skill and who is entitled to a bonus upon his first reenlistment. Such member may be paid additional amount of not more than four times the amount of that bonus.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The average numbers programmed to receive reenlistment bonuses are adjusted to remove or reduce those that have received the maximum reenlistment bonus of $2,000.00. The remaining numbers are multiplied by past experience cost factors for each grade to establish the total cost.

Variable reenlistment bonus requirements are based on latest reenlistment experience of those members possessing critical skills. The bonus for each skill is based on the average first reenlistment cost times a multiple of from 1 to 4 depending on the need of the skill.

PROJECT F: Combat Arms Enlistment Bonus

Estimate - FY 1975 - $ 7,997
Estimate - FY 1974 - $10,587
Actual - FY 1973 - $ 6,479

PART I - PURPOSE AND SCOPE

The funds requested are to provide for a bonus, to be prescribed by the Secretary of Defense, but not more than $3,000, to enlisted personnel who enlist in any combat element for a period of at least three years or who extend their initial period of active duty in a combat element to a total of at least three years. This compensation is in accordance with provisions of 37 U.S.C. 308a.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The numbers programmed to enlist and receive the bonus are multiplied by the rate approved by the Secretary of Defense ($2,500) to determine the total cost.

PROJECT G. Basic Allowances for Quarters

Estimate - FY 1975 - $93,931
Estimate - FY 1974 - $92,778
Actual - FY 1973 - $91,039

PART I - PURPOSE AND SCOPE

The funds requested are to provide for payment of basic allowances for quarters authorized under provisions of 37 U.S.C. 403; Sec. 502, PL 89-568, and Sec. 508, PL 92-545 to enlisted personnel with or without dependents or enlisted personnel occupying inadequate family housing.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Basic allowance for quarters is determined by multiplying the number of eligible personnel by the statutory rates to which each grade is entitled.

PROJECT: H. Station Allowances, Overseas

Estimate - FY 1975 - $3,596
Estimate - FY 1974 - $3,596
Actual - FY 1973 - $4,760

PART I - PURPOSE AND SCOPE

The funds requested will provide payments of a per diem allowance to enlisted personnel and their dependents outside the United States, considering all elements of the cost of living, including quarters, subsistence and other necessary incidental expenses as prescribed by Joint Travel Regulations and authorized under the provisions of 37 U.S.C. 405.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Overseas station allowances are computed using cost factors based on past experience with the average numbers programmed to draw each of the three types of overseas station allowance: Cost of Living, Housing, and Temporary Lodging.

PROJECT: I. Clothing Allowances

Estimate - FY 1975 - $30,674
Estimate - FY 1974 - $32,570
Actual - FY 1973 - $25,910

PART I - PURPOSE AND SCOPE

The funds requested will provide for payment to enlisted personnel for prescribed clothing, authorized by the Secretary of Defense under the provisions of 37 U.S.C. 418 including:

(1) Initial clothing allowance including civilian clothing allowance when authorized by competent orders;

(2) For cash payment of the basic maintenance allowance (paid from the sixth month of entrance on duty through the thirty-sixth month) and cash payment of standard maintenance allowance for clothing (commencing with the thirty-seventh month and each month thereafter);

(3) Supplementary clothing allowances for personnel assigned to special organizations or details where the nature of the duties to be performed requires additional items of individual uniform clothing.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Initial clothing allowances are determined by the types of accessions programmed. The clothing maintenance allowance is determined by the average longevity. Supplementary clothing allowance estimates are based on numbers programmed for assignment to special details or organizations.

PROJECT: J. Family Separation Allowance

Estimate - FY 1975 - $3,022
Estimate - FY 1974 - $3,232
Actual - FY 1973 - $3,598

PART I - PURPOSE AND SCOPE

The funds requested are to provide for Family Separation Allowance payments to enlisted personnel with dependents for added separation expenses under 37 U.S.C. 427.

(1) When travel of dependents to overseas duty station is not authorized and the member is required to maintain two homes, one in CONUS for his family and one overseas for himself; and/or

(2) When a member with dependents makes a permanent change of station or is on temporary duty travel for thirty days or more either on board ship or overseas and the travel of dependents to his duty station is not authorized and dependents do not reside at or near duty station.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Allowances for family separation payments are determined by multiplying the number of personnel eligible for each type of family separation allowance by the statutory rate applicable.

PROJECT: K. Separation Payments

Estimate - FY 1975 - $21,983
Estimate - FY 1974 - $25,189
Actual - FY 1973 - $24,418

PART I- PURPOSE AND SCOPE

The funds requested will provide for payment to enlisted personnel for:

(1) Lump sum terminal leave payments authorized under provisions of 37 U.S.C. 501;

(2) Severance pay to enlisted personnel for disability authorized under 10 U. S. C. 1203, 1206, 1208, 1212 and 1213;

(3) Donations (not to exceed $25) to each Marine prisoner upon his release from confinement under court martial sentence involving other than honorable discharge and to each person discharged from the Marine Corps for fraudulent enlistment.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Separation payments are arrived at by using cost factors, which are based on past experience.

PROJECT: L. Social Security Tax (FICA) Employer's Share

Estimate - FY 1975 - $54,387
Estimate - FY 1974 - $53,598
Actual - FY 1973 - $47,000

PART I - PURPOSE AND SCOPE

The funds requested provide for the employer's tax to the Social Security Administration as required by the Federal Insurance Contribution Act.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Social Security costs are computed by determining the average numbers of personnel paid by grade and longevity pay step, computing the total amount paid in each pay step, and applying the proper FICA rate within the total annual limit on taxable income.

BUDGET ACTIVITY 4. SUBSISTENCE OF ENLISTED PERSONNEL, SUMMARY, BY PROJECTS

(In Thousands of Dollars)

Project	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
A. Basic allowance for subsistence.....	$39,030	$ 48,242	$ 55,074
B. Subsistence in kind.....	39,306	51,399	48,923
C. Reimbursables.....	8,215	8,239	5,000
Total Obligations.....	86,551	107,880	108,997
Reimbursable Program.....	- 8,215	- 8,239	- 5,000
Direct Program.....	$78,336	$ 99,641	$103,997

SCHEDULE OF INCREASES AND DECREASES

(Increases or decreases over $200 Thousand)

		AMOUNT ($ Millions)
BUDGET ACTIVITY #4		
FY 1974 Direct Program		$ 99.7
INCREASES:		
Basic Allowance for Subsistence - 1 January 1974 Rate change	6.8	
Subsistence in Kind - Manyears and Rate Change	3.7	
Total Increases		+10.5
DECREASES:		
Subsistence in Kind - Operational Rations to Marine Corps Stock Fund	6.2	
Total Decreases		- 6.2
Total FY 1975 Direct Program		$104.0

PROJECT: A. Basic Allowance for Subsistence

Estimate - FY 1975 - $55,074
Estimate FY 1974 - $48,242
Actual FY 1973 - $39,030

PART I - PURPOSE AND SCOPE

The funds requested are to provide for the payment of subsistence allowancesto active duty enlisted personnel under the provisions of 37 U.S.C. 402. It includes allowances when the individual is authorized to subsist separately, when he is in a leave status and when rations in kind are not available.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The fund requirement is based on the average number of enlisted personnel entitled to receive the several types of allowances.

PROJECT: B. Subsistence in Kind

Estimate - FY 1975 - $48,923
Estimate - FY 1974 - $51,399
Actual - FY 1973 - $39,306

PART I - PURPOSE AND SCOPE

The funds requested are to provide for rations furnished eligible military personnel when they do not receive a cash allowance for subsistence. (10 U.S.C. 6081(a)). It also provides for the new or improved subsistence items being introduced into the military supply system; rotation of operational rations, losses of material due to spoilage, and in-flight meals under 10 U.S.C. 6085.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The fund requirement is based on the number of rations to be furnished military personnel entitled to be subsisted in Marine Corps dining facilities. The ration rates are based on the Daily Basic Food Allowance for the months of September, October and November and the cessation of surplus butter as a free commodity.

BUDGET ACTIVITY 5 - PERMANENT CHANGE OF STATION TRAVEL
SUMMARY OF PROJECT REQUIREMENT MOVES

(In Thousands of Dollars)

Projects	FY 1973 Actual		New Policy	FY 1974 Estimate		FY 1975 Estimate	
	No. Moves 1/	Amount	No. Moves 2/	No. Moves 2/	Amount	No. Moves 2/	Amount
Accession Travel	113,536	$12,352	60,336	60,708	$11,942	54,343	$ 16,333
Training Travel	2,550	2,719	4,446	6,661	2,941	6,661	4,111
Operational Travel Between Duty Stations	13,276	9,820	13,276	10,900	8,726	13,431	9,045
Rotational Travel to and from Overseas	67,601	39,264	67,601	64,214	45,328	65,500	56,229
Separation Travel	64,998	10,892	64,998	61,419	11,676	54,951	14,220
Travel of Organized Units	-	-	-	-	-	-	-
Subtotal	261,961	75,047	210,657	203,902	80,613	194,886	99,938
Reenlistment Travel Payments	9,539	843	9,539	11,200	837	9,500	912
Total Obligations		75,890			81,450		100,850
Less: Reimbursements		668			750		850
Total Direct Program		$75,222			$80,700		$100,000

1/ Moves accounted for prior to 1 January 1974.

2/ Moves accounted for as per DOD Uniform Move Accounting Policy adopted as of 1 July 1974. FY 1973 Number shown for comparison only.

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SCHEDULE OF INCREASES AND DECREASES
(Increases or decreases over $200 Thousand)

		AMOUNT ($ Millions)
BUDGET ACTIVITY #5		
FY 1974 Direct Program		$ 80.7
INCREASES:		
Line Haul Tariff increase on Household Goods Shipments	.6	
Monetary Allowance in lieu of Transportation	7.0	
Annualization of E-4 over 2	1.3	
Proposed travel benefits for E-4 under 2, E-3, E-2 and E-1	10.4	
Total Increases		+19.3
DECREASES:		
None.		
Total FY 1975 Direct Program		$100.0

PERMANENT CHANGE OF STATION TRAVEL
SUMMARY OF REQUIREMENTS BY TYPES OF COSTS
(In Thousands of Dollars)

	FY 1973 Actual		FY 1974 Estimate		FY 1975 Estimate	
	No.	Amount	No.	Amount	No.	Amount
Travel of Military Member	261,961	$ 32,810	203,902	$ 33,601	194,886	$ 37,298
Travel of Dependents	29,146 a/	4,082	70,369 b/	4,261	90,633 b/	6,245
Transportation of Household Goods	-	30,913	-	34,455	-	43,627
m tons - MSC	43,773	(1,452)	57,119	(2,424)	80,530	(3,422)
s tons - MAC	2,656	(2,726)	3,060	(4,406)	3,901	(5,460)
Other Shipments	66,451	(26,735)	60,470	(27,625)	78,887	(34,745)
Dislocation Allowance	23,691	3,319	20,880	3,405	33,798	5,019
Trailer Allowance	820	823	895	942	994	1,054
Transportation of POV's	3,165	747	3,254	901	5,260	1,486
Non Temporary Storage	-	1,099	-	1,012	-	1,064
Port Handling Charges	-	1,254	-	2,036	-	4,145
Subtotal		75,047		80,613		99,938
Reenlistment Travel Payments		843		837		912
Total Obligations		75,890		81,450		100,850
Less: Reimbursements		668		750		850
Total Direct Program		$75,222		$80,700		$100,000

a/ Counted as family units in FY 1973
b/ Counted as total number of dependents in FY 1974 and FY 1975

(In Thousands of Dollars)

PROJECT: A. Accession Travel

Estimate - FY 1975 - $16,333
Estimate - FY 1974 - $11,942
Actual - FY 1973 - $12,352

PART I - PURPOSE AND SCOPE

Funds requested are to provide for PCS Movements of (1) officers appointed to a commissioned grade from civil life, military academies, Reserve, NROTC, and reserve officers called or recalled to extended active duty, from home or point where orders were received to first permanent duty station or training school, of twenty weeks or more duration and (2) officers or warrant officers appointed or recalled from enlisted status from station where they served as enlisted to new permanent duty station or training school of twenty weeks or more duration. (Includes officers appointed from enlisted status upon graduation from OCS, OTS, or basic flying training.) (Officers attending the Marine Corps Basic School will be considered as accession moves.)

Funds requested are to provide for PCS Movements of (1) enlistees, reenlistees, and prior service personnel from recruiting station or place of enlistment to first permanent duty station or training school of twenty weeks or more duration and (2) recalled enlisted reservists from home to first permanent duty station or training school of twenty weeks or more duration.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The estimate for accession travel includes PCS requirement and for planned officers and enlisted gains to meet the Marine Corps strength requirements.

PROJECT: B. Training Travel

Estimate - FY 1975 - $4,111
Estimate - FY 1974 - $2,941
Actual - FY 1973 - $2,719

PART I - PURPOSE AND SCOPE

Funds requested are to provide for Continental United States PCS Movements of (1) officers and warrant officers from previous permanent duty station to formal service or civilian schools, including technical schools, flying training schools, factory training, and other approved courses of instruction, of 20 weeks duration or more; and (2) officer and warrant officer school graduates and eliminees from school to their next permanent Continental United States duty station. (Excludes Academy graduates, Marine Corps TBS graduates, OCS or OTC graduates, flying training graduates, ROTC graduates and others chargeable as Accession Travel.)

Funds requested are to provide for Continental United States PCS Movements of (1) enlisted personnel from previous Continental United States permanent duty station to formal service or civilian schools, including technical schools, flying training schools, factory training, and other approved courses of instruction, of 20 weeks duration or more; (2) enlisted school graduates and eliminees from school to their next continental United States permanent duty station; and (3) enlisted personnel ordered to training leading to a commission if such training period is of 20 weeks duration or more.

PART II - JUSTIFICATION OF FUNDS REQUESTED

This estimate is based on the planned training requirements for officer and enlisted personnel. Training travel for officers is held at the Congressional control of 1,400 moves.

PROJECT: C. Operational Travel Between Duty Stations

Estimate - FY - 1975 - $ 9,045
Estimate - FY - 1974 - $ 8,726
Actual - FY - 1973 - $ 9,820

PART I - PURPOSE AND SCOPE

Funds requested are to provide for PCS Movements within Continental United States and within Overseas of (1) officers, and warrant officers to and from permanent duty stations located within the United States; (2) officers and warrant officers to and from permanent duty stations located within an overseas area when no transoceanic travel is involved; and (3) dependents, household goods, personal effects, trailer allowances and privately owned vehicles of officers and warrant officers who are interned, missing, or captured when no transoceanic travel is involved. Oceanic travel by member from homeport to station is proper.

Funds requested are to provide for PCS Movements within Continental United States and within Overseas of (1) enlisted personnel to and from permanent duty stations located within the United States; (2) enlisted personnel to and from permanent duty stations within an overseas area when no transoceanic travel is involved; and (3) dependents, household goods, personal effects, trailer allowances and privately owned vehicles of enlisted personnel who are interned, missing, or captured when no transoceanic travel is involved. Oceanic travel by member from homeport to station is proper.

PART II - JUSTIFICATION OF FUNDS REQUESTED

This estimate includes PCS requirements for operational reassignment of officers and enlisted personnel between duty stations within Continental United States and within Overseas. The number of reassignment moves cannot be limited to normal rotation since personnel gains and losses, revision to various ship and station allowances, activation or deactivation of units and redistribution of needed skills also influence transfer of personnel.

PROJECT: D. Rotational Travel to and from Overseas

Estimate - FY 1975 - $55,379
Estimate - FY 1974 - $44,578
Actual - FY 1973 - $39,264

PART I - PURPOSE AND SCOPE

Funds requested are to provide for PCS Movements of (1) officers and warrant officers from permanent duty stations in Continental United States to permanent duty stations overseas; (2) officers and warrant officers from permanent duty stations overseas to permanent duty stations in Continental United States; (3) officers and warrant officers from permanent duty stations in one overseas area to permanent duty stations in another overseas area when transoceanic travel is involved; and (4) dependents, household goods, personal effects, trailer allowances and privately owned vehicles of officers and warrant officers who are interned, missing or captured when transoceanic travel is involved.

Funds requested are to provide for PCS Movements of (1) enlisted personnel from permanent duty stations in Continental United States to permanent duty stations overseas; (2) enlisted personnel from permanent duty stations overseas to permanent duty stations in Continental United States; (3) enlisted personnel from permanent duty stations in one overseas area to permanent duty stations in another overseas area when transoceanic travel is involved; and (4) dependents, household goods, personal effects, trailer allowances and privately owned vehicles of enlisted personnel who are interned, missing or captured when transoceanic travel is involved.

PART II - JUSTIFICATION OF FUNDS REQUESTED

This estimate includes PCS requirements for rotation of officers and enlisted personnel to and from overseas duty assignments in accordance with policies approved by the Office of the Secretary of Defense for overseas tours. The Marine Corps program includes consideration of the maximum number of voluntary extensions of overseas tours which are reflected as savings in rotational travel. To maximize the savings in dependents travel every effort is being made to assign an overseas returnee as close as possible to the location of his dependents.

PROJECT: E. Separation Travel

Estimate - FY 1975 - $15,132
Estimate - FY 1974 - $12,513
Actual - FY 1973 - $11,735

PART I - PURPOSE AND SCOPE

Funds requested are to provide for PCS Movements of (1) officer and warrant officers upon release or separation from the service from last permanent duty station to home of record or entry into service or to home of selection when authorized by law; and (2) dependents, household goods, trailer allowances and personal effects of officers and warrant officers who are deceased.

Funds requested are to provide for PCS Movements of (1) enlisted personnel upon release or separation from the service from last permanent duty station to home of record or point of entry into service, or to home of selection when authorized by law; and (2) dependents, household goods, trailer allowances and personal effects of enlisted personnel effects of enlisted personnel who are deceased.

Also includes payments, upon reenlistment with no break in service of mileage to home of record or point of entry into active duty where the member is not required to perform travel and where no entitlement to movement of dependents and household goods accrues. Cost and the number who qualify will be reflected but not number of moves.

PART II - JUSTIFICATION OF FUNDS REQUESTED

This estimate includes separation travel requirements for PCS Travel costs of Officers and Enlisted Personnel to be separated in accordance with the Marine Corps Manpower Program.

BUDGET ACTIVITY 6: OTHER MILITARY PERSONNEL COSTS, SUMMARY BY PROJECTS

(In Thousands of Dollars)

Project	Actual FY 1973	Estimate FY 1974	Estimate FY 1975
A. Apprehension of Military Deserters, Absentees and Escaped Military Prisoners	$1,607	$ 913	$ 900
B. Interest on Uniformed Services Saving Deposits	700	690	500
C. Payment of Death Gratuities	1,223	1,033	1,046
D. Servicemen's Group Life Insurance Program	-	1,098	481
Total Obligations	3,530	3,734	2,927
Reimbursable Program	-	-	-
Direct Program	$3,530	$3,734	$2,927

SCHEDULE OF INCREASES AND DECREASES
(Increases or decreases over $200 Thousand)

		AMOUNT ($ Millions)
BUDGET ACTIVITY #6		
FY 1974 Direct Program		$3.7
INCREASES:		
None.		
DECREASES:		
Saving Deposits - Cessation of Program except for MIA's	.2	
SGLI - Rate change	.6	
Total Decreases		- .8
Total FY 1975 Direct Program		$2.9

(In Thousands of Dollars)

PROJECT: A. Apprehension of Military Deserters
Absentees, and Escaped Military Prisoners

Estimate - FY 1975 - $ 900
Estimate - FY 1974 - $ 913
Actual - FY 1973 - $1,607

PART I - PURPOSE AND SCOPE

The funds requested are to provide for expense in connection with the apprehension of deserters, absentees, and escaped military prisoners and for their delivery to the control of the Department of Defense. Funds requested include cost of subsistence furnished during the period an enlisted member is detained in civil confinement for safekeeping when so requested by military authority, costs of rewards (not to exceed $25.00 in either case), and cost of transportation, lodging and subsistence of a guard sent to return member.

PART II - JUSTIFICATION OF FUNDS REQUESTED

The estimate is based on actual experience which is projected into the current and budget year.

PROJECT: B. Interest on Uniformed Services Savings Deposit Program

Estimate - FY 1975 - $ 500
Estimate - FY 1974 - $ 690
Actual - FY 1973 - $ 700

PART I - PURPOSE AND SCOPE

The funds requested are to provide for payment of interest at the rate of ten percent (10%) per annum on any sum not less than $5.00 which is deposited in a Marines deposit account while overseas as authorized by Public Law 89-538, August 14, 1966.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Marines who participate in the program authorized by Public Law 89-538, withdraw deposits upon return from overseas. Estimates are based on latest actual data.

PROJECT: C. Death Gratuities

Estimate - FY 1975 - $1,046
Estimate - FY 1974 - $1,033
Actual - FY 1973 - $1,223

PART I - PURPOSE AND SCOPE

The funds requested are to provide for the payment of death gratuicies to beneficiaries of deceased military personnel as authorized by law. Death gratuity is composed of basic pay, incentive pay and overseas pay, if applicable.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Fund requirements are based on the most recent mortality rates as applied against the programmed manyears.

PROJECT: D. Servicemen's Group Life Insurance

Estimate - FY 1975 - $ 481
Estimate - FY 1974 - $1,098
Actual - FY 1973 - $ -0-

PART I - PURPOSE AND SCOPE

The funds requested provide for the Marine Corps contribution towards the cost of Servicemen's Group Life Insurance (SGLI) in accordance with P.L. 89-214 dated September 28, 1965 and P.L. 91-291 dated June 25, 1970.

PART II - JUSTIFICATION OF FUNDS REQUESTED

Servicemen's Group Life Insurance costs are based on 100% of the Officer and 100% of the Enlisted manyears times a sliding % of the $2.55 (maximum servicemen's premium) deducted from the servicemen's monthly pay. For FY 1975 the percentage is 8%.

SPECIAL ANALYSES
(Strengths in Whole Numbers)

A. Military Personnel Assigned to Communication Activities

Includes all Marines required for supervision, installation, operations, and maintenance in the following categories:

(1) The Marine Corps Consolidated Telecommunications Program (CTP). This subset includes all Marines in support of base communications and the Joint Tactical Communications Office (Tri-Tac).

(2) Marine Corps support for the Defense Communications Agency (DCA).

(3) Marine Corps support of the Navy CTP and the National Military Command System (NMCS).

(4) Marine Corps support for the intelligence communication program.

	FY 1973			FY 1974			FY 1975		
	Off	Enl	Total	Off	Enl	Total	Off	Enl	Total
Marine Corps CTP	53	695	748	56	724	780	56	724	780
Marine Corps Support for DCA 1/	(20)	(27)	(47)	(20)	(27)	(47)	(20)	(27)	(47)
Marine Corps Support for the Navy CTP and NMCS	11	10	21	17	9	26	17	9	26
Marine Corps Support for the intelligence communication program	1	75	76	1	71	72	1	71	72
TOTALS	65	780	845	74	804	878	74	804	878

1/ Included as Non-add item.

B. Military Personnel Assigned to Automatic Data Processing (ADP) Activities

The Marines reflected in the exhibit includes all military personnel located within Data Processing facilities, regardless of their Military Occupation Skill (MOS), and those Marines outside Data Processing facilities whose primary duty is data processing.

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Officer	221	214	205
Enlisted	1,608	1,559	1,434
Total	1,829	1,773	1,639

C. Military Personnel Assigned to Intelligence Activities

The personnel assigned to Intelligence Activities represent the combination of the Consolidated Cryptologic Program (CCP) and the General Defense Intelligence Program (GDIP) as defined by Chapter 515 of DOD 7110-1-M. These Marines serve in support of Navy missions or are students. Excluded are Marines assigned to DIA and NSA. The decrease in personnel from FY 1974 to FY 1975 is related to the transfer of Fleet Marine Force assets from Program III to Program II to reflect their tactical mission.

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Officers	109	120	52
Enlisted	1,346	1,551	795
Total	1,455	1,671	847 1/

1/ Includes certain Marines included in the Consolidated Telecommunications Program and shown in that Special Analysis on page 3-86.

D. Military Personnel Assigned to Headquarters Activities (Strengths in Whole Numbers)

	FY 1973 Actual					FY 1974 Estimate					FY 1975 Estimate				
	End Strength			Civilian		End Strength			Civilian		End Strength			Civilian	
	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total
Office of the Secretary of Defense	22	8	30			20	6	26			20	6	26		
Joint Chiefs of Staff	50	17	67			52	16	68			53	16	69		
International Military Headquarters															
SEATO	1	-0-	1			1	-0-	1			1	-0-	1		
SAGLANT	2	-0-	2			2	-0-	2			2	-0-	2		
SHAPE (SACEUR)	2	-0-	2			2	-0-	2			2	-0-	2		
Allied Forces-North Europe	2	-0-	2			2	-0-	2			2	-0-	2		
Allied Forces-Southern Europe	6	1	7			6	1	7			6	1	7		
NATO Military Committee	2	-0-	2			2	-0-	2			2	-0-	2		
North American Air Defense	1	1	2			1	1	2			1	1	2		
UN Command (Korea)	7	1	8			7	1	8			7	1	8		
UN Truce Observers, Mid-East	-0-	-0-	-0-			5	-0-	5			5	-0-	5		
Total	23	3	26			28	3	31			28	3	31		
Unified Commands															
Alaskan Command	1	-0-	1			1	-0-	1			1	-0-	1		
Atlantic Command	13	5	18			13	5	18			13	5	18		
Continental Air Defense Command	2	-0-	2			2	-0-	2			2	-0-	2		
U. S. European Command	15	7	22			15	6	21			15	6	21		
Pacific Command	28	18	46			28	15	43			28	15	43		
U. S. Forces Japan	5	2	7			5	2	7			5	2	7		
U. S. Forces Korea	6	1	7			6	1	7			6	1	7		
Taiwan Defense Force	3	2	5			3	2	5			3	2	5		
USMACTHAI	9	3	12			9	3	12			9	3	12		
USSAG/7th AF	3	-0-	3			3	-0-	3			-0-	-0-	-0-		
U. S. Southern Command	5	-0-	5			5	-0-	5			5	-0-	5		

D. Military Personnel Assigned to Headquarters Activities (Strengths in Whole Numbers) (continued)

	FY 1973 Actual					FY 1974 Estimate					FY 1975 Estimate				
	End Strength			Civilian		End Strength			Civilian		End Strength			Civilian	
	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total
U. S. Readiness Command	4	1	5			4	1	5			4	1	5		
Total	108	47	155			108	43	151			105	43	148		
Defense Agencies															
Defense Advanced Research Projects Agency	1	-0-	1			1	-0-	1			1	-0-	1		
Defense Communications Agency	22	27	49			20	22	42			20	27	47		
Defense Intelligence Agency	36	9	45			32	9	41			32	9	41		
Defense Mapping Agency	2	12	14			2	11	13			3	12	15		
Defense Nuclear Agency	4	-0-	4			4	-0-	4			4	-0-	4		
Defense Security Assistance Agency	1	-0-	1			1	-0-	1			1	-0-	1		
Defense Supply Agency	34	4	38			29	4	33			29	4	33		
National Security Agency	30	441	471			28	373	401			28	373	401		
Total	130	493	623			117	419	536			118	425	543		
Secretary of the Navy	25	10	35			25	13	38			25	13	38		
OPNAV	26	3	29			25	3	28			25	3	28		
Headquarters Marine Corps	797	598	1,395	1,199		731	555	1,286	1,171		719	376	1,095	1,132	
Total	848	611	1,459	1,199		781	571	1,352	1,171		769	392	1,161	1,132	
Military Sealift Command	1	-0-	1			1	-0-	1			1	-0-	1		
NAVMAT	4	-0-	4			5	-0-	5			5	-0-	5		
Air Systems Command	27	-0-	27			26	-0-	26			26	-0-	26		
Ship Systems Command	2	2	4			2	2	4			2	2	4		
Electronics Systems Command	7	-0-	7			6	-0-	6			6	-0-	6		
Facililities Engineering Command	1	-0-	1			1	-0-	1			1	-0-	1		
Total	73	39	133			94	35	129			91	35	126		

D. Military Personnel Assigned to Headquarters Activities (Strengths in Whole Numbers) (continued)

	FY 1973 Actual					FY 1974 Estimate					FY 1975 Estimate				
	End Strength			Civilian		End Strength			Civilian		End Strength			Civilian	
	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total
Office of Naval Research	1	-0-	1			1	-0-	1			1	-0-	1		
Commander Naval Training	1	-0-	1			1	-0-	1			1	-0-	1		
Air Training Command	4	-0-	4			5	-0-	5			5	-0-	5		
Training Support Command	1	-0-	1			1	-0-	1			1	-0-	1		
Total	6	-0-	6			7	-0-	7			7	-0-	7		
NAVINTCOM	1	-0-	1			1	-0-	1			1	-0-	1		
NAVSECGRU	9	13	22			9	13	22			9	13	22		
Naval Districts	6	-0-	6			6	-0-	6			6	-0-	6		
NAVTELCOM	2	-0-	2			3	-0-	3			3	-0-	3		
CINCPACFLT	11	10	21			11	10	21			11	10	21		
Third Fleet	1	3	4			1	3	4			1	3	4		
Seventh Fleet	3	4	7			3	4	7			3	4	7		
SUBPAC	-0-	1	1			-0-	-0-	-0-			-0-	-0-	-0-		
SERVPAC	1	-0-	1			1	-0-	1			1	-0-	1		
PHIBPAC	6	2	8			6	2	8			6	2	8		
AIRPAC	6	-0-	6			6	-0-	6			6	-0-	6		
FMFPAC	177	600	777	22		174	522	696	22		173	155	688	22	
Total	205	620	825	22		202	541	743	22		201	534	735	22	
CINCUSNAVEUR	5	5	10			5	5	10			5	5	10		
Sixth Fleet	2	4	6			2	4	6			2	4	6		
Total	7	9	16			7	9	16			7	9	16		

D. Military Personnel Assigned to Headquarters Activities (Strengths in Whole Numbers) (continued)

	FY 1973 Actual					FY 1974 Estimate					FY 1975 Estimate				
	End Strength			Civilian		End Strength			Civilian		End Strength			Civilian	
	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total
CINCLANFLT	7	5	12			7	4	11			7	4	11		
Second Fleet	1	3	4			1	3	4			1	3	4		
MINEWARLANT	-0-	1	1			-0-	-0-	-0-			-0-	-0-	-0-		
SUBLANT	-0-	1	1			-0-	-0-	-0-			-0-	-0-	-0-		
PHIBLANT	7	5	12			7	4	11			7	4	11		
AIRLANT	5	3	8			5	2	7			5	2	7		
CRUDESLANT	-0-	1	1			-0-	-0-	-0-			-0-	-0-	-0-		
FMFLANT	141	486	627	1		142	459	601	1		141	457	598	1	
Total	161	505	666	1		162	472	634	1		161	470	631	1	
Total Headquarters Activities	1,607	2,320	3,927	1,217		1,531	2,087	3,618	1,194		1,516	1,905	3,421	1,155	

NOTE: Numbers contained in this submission may vary from previous submissions because of the change in the definition of headquarters elements. The headquarters definition used in this submission is in accordance with DOD Directive Number 5100.73 dated 8 November 1973. Organizations where no Marines are assigned are not shown.

E. Military Personnel Assigned to Other Defense Agencies

	FY 1973 Actual					FY 1974 Estimate					FY 1975 Estimate				
	End Strength			Civilian		End Strength			Civilian		End Strength			Civilian	
	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total	Off	Enl	Total	ES	Total
Office of the Secretary of Defense	22	8	30			20	6	26			20	6	26		
Joint Chiefs of Staff	50	17	67			52	16	68			53	16	69		
Defense Agencies															
Defense Advanced Research Projects Agency	1	-0-	1			1	-0-	1			1	-0-	1		
Defense Communications Agency	22	27	49			20	22	42			20	27	47		
Defense Intelligence Agency	36	9	45			32	9	41			32	9	41		
Defense Mapping Agency	2	12	14			2	11	13			3	12	15		
Defense Nuclear Agency	4	-0-	4			4	-0-	4			4	-0-	4		
Defense Security Assistance Agency	1	-0-	1			1	-0-	1			1	-0-	1		
Defense Supply Agency	34	4	38			29	4	33			29	4	33		
National Security Agency	30	441	471			28	373	401			28	373	401		
Total Defense Agencies	202	518	720			189	441	630			191	447	638		

F. Military Personnel Assigned to Activities Outside the Military Services

	FY 1973			FY 1974			FY 1975		
	Officer	Enlisted	Total	Officer	Enlisted	Total	Officer	Enlisted	Total
Non-Reimbursable Personnel 1/									
State Department (MSG Bn)	20	1,088	1,108	20	1,198	1,218	25	1,521	1,546
Offices of the President and Vice President of the U.S.A.	2	0	2	2	0	2	2	0	2
Executive Office of the President	1	0	1	1	0	1	1	0	1
Federal Aviation Administration (West and South regions)	2	0	2	2	0	2	2	0	2
United Nations	0	0	0	5	0	5	5	0	5
Total Non-Reimbursable	25	1,088	1,113	30	1,198	1,228	35	1,521	1,556
Reimbursable Personnel									
Federal Aviation Administration	1	0	1	1	0	1	1	0	1
Selective Service System	10	0	10	7	0	7	7	0	7
National Aeronautics and Space Administration	3	0	3	3	0	3	3	0	3
Central Intelligence Agency	7	2	9	4	0	4	4	0	4
Total Reimbursable	21	2	23	15	0	15	15	0	15
Total Reimbursable and Non-Reimbursable	46	1,090	1,136	45	1,198	1,243	50	1,521	1,571

1/ HMX-1 (5 Off 10 Enl) is no longer included. This unit performs a National Command Authority evacuation mission and was previously included through misinterpretation.

(Strengths in Whole Numbers)

G. Schedule of Combat and Non-Combat Forces

	FY 1973		FY 1974		FY 1975	
1. Combat Forces (Strategic & General Purpose)	Officer	Enlisted	Officer	Enlisted	Officer	Enlisted
a. Europe and Related Areas	141	1,880	148	1,957	135	1,620
b. Western Pacific	1,954	19,754	2,052	22,299	1,966	22,352
c. Other Foreign Countries	107	1,565	189	2,875	197	2,749
d. United States, Territories, and SEA	6,225	66,948	5,998	70,557	6,431	77,918
2. Mission Support and Auxiliary Forces						
a. Europe and Related Areas	110	1,124	95	1,011	109	1,103
b. Western Pacific	173	2,932	173	2,900	173	2,870
c. Other Foreign Countries	28	602	34	557	36	865
d. United States, Territories, and SEA	2,937	27,917	2,277	18,936	1,773	18,067
3. Central Support						
a. Europe and Related Areas	0	0	0	0	0	0
b. Western Pacific	0	0	0	0	0	0
c. Other Foreign Countries	0	0	0	0	0	0
d. United States, Territories, and SEA a/	4,344	20,296	4,278	18,707	4,257	18,108
4. Individuals						
a. Europe and Related Areas	0	0	0	0	0	0
b. Western Pacific	0	0	0	0	0	0
c. Other Foreign Countries	0	0	0	0	0	0
d. United States, Territories, and SEA	3,242	33,796	3,620	37,336	3,581	32,073
5. TOTAL	19,261	176,814	18,864	177,135	18,658	177,725

H. Distribution of Military Personnel by Geographical Area

Region and Country	Number of Personnel (end-strength) FY 1973 Actual Officer	Enlisted	Total	FY 1974 Estimate Officer	Enlisted	Total	FY 1975 Estimate Officer	Enlisted	Total
Europe and Related Areas									
Great Britain	25	116	141	20	120	140	19	123	142
Italy	18	168	186	17	107	124	17	150	167
Spain	7	186	193	7	177	184	8	176	184
Turkey	2	21	23	1	19	20	1	26	27
West Germany	30	74	104	23	42	65	35	48	83
Personnel Afloat	141	1,880	2,021	148	1,957	2,105	135	1,620	1,755
Other Europe and Related Areas	28	559	587	27	546	573	29	580	609
Total Europe and Related Areas	251	3,004	3,255	243	2,968	3,211	244	2,723	2,967
Western Pacific									
Japan	536	4,680	5,216	670	5,622	6,292	613	5,543	6,156
South Korea	23	34	57	16	30	46	21	31	52
Philippines	78	1,112	1,190	20	611	631	23	614	637
Ryukyu Islands	1,313	13,756	15,069	1,351	16,339	17,690	1,322	16,439	17,761
Taiwan	11	22	33	11	11	22	3	9	12
Personnel Afloat	166	3,082	3,248	157	2,586	2,743	157	2,586	2,743
Other Western Pacific									
Total Western Pacific	2,127	22,686	24,813	2,225	25,199	27,424	2,139	25,222	27,361
Near East and South Asia	9	186	195	7	179	186	7	419	426
Other Pacific	4	77	81	8	51	59	9	47	56
Western Hemisphere	14	300	314	18	287	305	19	343	362
USSR and East Europe	1	39	40	1	40	41	1	56	57
Other Personnel Afloat	107	1,565	1,672	189	2,875	3,064	197	2,749	2,946
United States, Territories, and SEA	16,748	148,957	165,705	16,173	145,536	161,709	16,042	146,166	162,208
Undistributed	0	0	0	0	0	0	0	0	0
Total	16,883	151,124	168,007	16,396	148,968	165,364	16,275	149,780	166,055
Total Personnel Distribution	19,261	176,814	196,075	18,864	177,135	195,999	18,658	177,725	196,383
Reimbursables	21	2	23	15		15	15		15
Total Personnel by Geographical Area	19,282	176,816	196,098	18,879	177,135	196,014	18,673	177,725	196,398

I. Gains and Losses by Type for Officers	FY 1973	FY 1974	FY 1975
Begin Strength	19,823	19,261	18,864
Gains:			
Service Academies	144	85	145
Naval Reserve Officer Training Corps	140	184	200
Platoon Leaders Class	619	585	685
Officer Candidate Course	848	621	625
Limited Duty Officer	200	97	100
Warrant Officer	143	97	100
Enlisted Commissioning Program	66	53	50
Other	170	178	95
Total	2,330	1,900	2,000
Losses:			
Retirements	712	627	575
Reserves Released From Active Duty	1,603	1,126	1,108
Resignations	374	342	321
Reversions to Enlisted Status	63	60	60
Deaths	45	55	55
Physical Disability	15	25	25
Other Discharges	58	42	42
Other	22	20	20
Total	2,892	2,297	2,206
End Strength	19,261	18,864	18,658

I. Gains and Losses by Type for Enlisted	FY 1973	FY 1974	FY 1975
Begin Strength	178,393	176,814	177,135
Gains:			
Male Enlistments	51,356	54,800	49,000
Female Enlistments	1,088	1,210	1,210
Reenlistments	13,655	13,801	12,000
Officer Candidates	994	990	1,140
Reserves to Extended Active Duty	991	749	400
Reserves to Regular Marine Corps	1,023	200	200
Reversions to Enlisted Status	60	60	60
Others	1,612	--	140
Total	70,779	71,810	64,150
Losses:			
Discharges at Expiration of Enlistment	45,799	49,151	43,763
Retirements (FMCR & 30 Yr.)	2,241	2,363	2,284
Disability Retirements	1,084	840	700
Commissionings	335	677	685
Deaths	378	350	350
*Discharges Prior to Expiration of Enlistment	18,741	16,186	15,278
Desertions (Net)	3,780	1,922	500
Total	72,358	71,489	63,560
End Strength	176,814	177,135	177,725

*Includes: Misconduct; Unfitness; Unsuitability; Good of Service; Convenience of Government; Disability (Other than retirements); Punitive (Result of Courts-Martial); Miscellaneous

ACTIVE DUTY MILITARY PERSONNEL MANPOWER
BY (FYDP) PROGRAM AND BUDGET ACTIVITY
(Dollars in Thousands; End Strengths in Whole Numbers)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Program Activity			
Direct Program			
2. General Purpose Forces			
Operation of the Marine Corps			
Costs	$914,679	$997,853	$1,034,998
End Strengths:			
Officer	10,763	10,213	10,103
Enlisted	115,255	113,607	120,463
Total	126,018	123,820	130,566
Operation of Defense Agencies			
Costs	-0-	-0-	-0-
End Strengths:			
Officer	-0-	-0-	-0-
Enlisted	-0-	-0-	-0-
Total	-0-	-0-	-0-
Total General Purpose Forces			
Costs	$914,679	$997,853	$1,034,998
End Strengths:			
Officer	10,763	10,213	10,103
Enlisted	115,255	113,607	120,463
Total	126,018	123,820	130,566

Program Activity Direct Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
3. Intelligence and Communications			
Operation of the Marine Corps			
Costs	$ 9,451	$ 12,091	$ 6,863
End Strengths:			
Officer	115	126	58
Enlisted	1,172	1,553	797
Total	1,287	1,679	855
Operation of Defense Agencies			
Costs	$ 4,556	$ 4,901	$ 4,779
End Strengths:			
Officer	88	98	97
Enlisted	461	417	413
Total	549	515	510
Total Intelligence and Communications			
Costs	$ 14,007	$ 16,992	$ 11,642
End Strengths:			
Officer	203	224	155
Enlisted	1,633	1,970	1,210
Total	1,836	2,194	1,365

Program Activity Direct Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
5. Guard and Reserve			
Operation of the Marine Corps			
Costs	$41,050	$41,458	$41,858
End Strengths:			
Officer	637	451	479
Enlisted	4,716	4,370	4,337
Total	5,353	4,821	4,816

Program Activity Direct Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
6. Research and Development			
Research and Development, Marine Corps			
Costs	$ 508	$ 540	$9,272
End Strengths:			
Officer	18	18	355
Enlisted	35	31	412
Total	53	49	767
Research and Development, Defense Agencies			
Costs	-0-	-0-	-0-
End Strengths:			
Officer	-0-	-0-	-0-
Enlisted	-0-	-0-	-0-
Total	-0-	-0-	-0-
Total Research and Development			
Costs	$ 508	$ 540	$9,272
End Strengths:			
Officer	18	18	355
Enlisted	35	31	412
Total	53	49	767

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Program Activity			
Direct Program			
7. Central Supply And Maintenance			
Operation of the Marine Corps			
Costs	$16,525	$18,198	$18,089
End Strengths:			
Officer	236	256	253
Enlisted	1,890	1,870	1,842
Total	2,126	2,126	2,095
Operation of Defense Agencies			
Costs	$ 460	$ 605	$ 566
End Strengths:			
Officer	27	31	31
Enlisted	5	3	3
Total	32	34	34
Total Central Supply and Maintenance			
Costs	$16,985	$18,803	$18,655
End Strengths:			
Officer	263	287	284
Enlisted	1,895	1,873	1,845
Total	2,158	2,160	2,129

Program Activity Direct Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
8. Training, Medical and Other General Personnel Activities			
Operation of the Marine Corps			
Costs	$536,007	$543,425	$552,753
End Strengths:			
Officer	5,911	6,166	5,802
Enlisted	48,763	51,029	45,126
Total	54,674	57,195	50,928
Operation of Defense Agencies			
Costs	$ 119	$ 119	$ 138
End Strengths:			
Officer	2	2	2
Enlisted	13	14	14
Total	15	16	16
Total Training, Medical and Other General Personnel Activities			
Costs	$536,126	$543,544	$552,891
End Strengths:			
Officer	5,913	6,168	5,804
Enlisted	48,776	51,043	45,140
Total	54,689	57,211	50,944

Program Activity Direct Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
9. Administration and Associated Activities			
Operation of the Marine Corps			
Costs	$51,331	$55,748	$57,027
End Strengths:			
Officer	1,342	1,379	1,355
Enlisted	4,465	4,203	4,280
Total	5,807	5,582	5,635
Operation of Defense Agencies			
Costs	$ 1,226	$ 1,212	$ 1,201
End Strengths:			
Officer	70	64	63
Enlisted	9	13	13
Total	79	77	76
Total Administration and Associated Activities			
Costs	$52,557	$56,960	$58,228
End Strengths:			
Officer	1,412	1,443	1,418
Enlisted	4,474	4,216	4,293
Total	5,886	5,659	5,711

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Program Activity			
Direct Program			
10. Support of Other Nations			
Operation of the Marine Corps			
Costs	$ 1,810	$ 1,150	$ 1,156
End Strengths:			
Officer	52	60	60
Enlisted	30	25	25
Total	82	85	85

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Program Activity			
Direct Program Summary			
Operation of the Marine Corps			
Costs	$1,570,853	$1,669,923	$1,712,744
End Strengths:			
Officer	19,056	18,652	18,110
Enlisted	176,291	176,657	176,870
Total	195,347	195,309	194,980
Operation of Defense Agencies			
Costs	$ 6,361	$ 6,837	$ 6,684
End Strengths:			
Officer	187	195	193
Enlisted	488	447	443
Total	675	642	636
Research and Development Marine Corps			
Costs	$ 508	$ 540	$ 9,272
End Strengths:			
Officer	18	18	355
Enlisted	35	31	412
Total	53	49	767
Research and Development Defense Agencies			
Costs	-0-	-0-	-0-
End Strengths:			
Officer	-0-	-0-	-0-
Enlisted	-0-	-0-	-0-
Total	-0-	-0-	-0-

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Program Activity			
Total Direct Program			
Costs	$1,577,722	$1,677,300	$1,728,700
End Strengths:			
Officer	19,261	18,864	18,658
Enlisted	176,814	177,135	177,725
Total	196,075	196,999	196,383
Reimbursable Program			
Costs	$ 9,313	$ 9,787	$ 6,648
End Strengths:			
Officer	21	15	15
Enlisted	2	-0-	-0-
Total	23	15	15
Total Marine Corps			
Costs	$1,587,035	$1,687,087	$1,735,348
End Strengths:			
Officer	19,282	18,879	18,673
Enlisted	176,816	177,135	177,725
Total	196,098	196,014	196,398

Operation and Maintenance, Marine Corps

Chairman McClellan. The next appropriation to be considered will be that for "Operation and maintenance, Marine Corps."

PROGRAM AND FINANCING

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

DEPARTMENT OF DEFENSE - MILITARY

OPERATION AND MAINTENANCE, MARINE CORPS

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 07-10-1106-0-1-051	1973 ACT	1974 EST	1975 EST
PROGRAM BY ACTIVITIES:			
DIRECT PROGRAM:			
2. GENERAL PURPOSE FORCES	198,494	220,621	232,564
3. INTELLIGENCE AND COMMUNICATIONS	746	889	.....
7. CENTRAL SUPPLY AND MAINTENANCE	95,554	105,125	107,091
8. TRAINING, MEDICAL, AND OTHER GENERAL PERSONNEL ACTIVITIES	60,141	68,824	68,763
9. ADMINISTRATION AND ASSOCIATED ACTIVITIES	28,028	31,504	37,882
10. SUPPORT OF OTHER NATIONS	176	.....	.....
TOTAL DIRECT PROGRAM	383,139	426,963	446,300
REIMBURSABLE (TOTAL)	64,032	64,757	67,556
SUBTOTAL	447,171	491,720	513,856
INTRAFUND OBLIGATIONS	-9,002	-8,500	-8,500
10 TOTAL OBLIGATIONS	438,169	483,220	505,356
FINANCING:			
RECEIPTS AND REIMBURSEMENTS FROM:			
11 FEDERAL FUNDS	-52,734	-51,957	-54,756
14 NON-FEDERAL SOURCES	-4,296	-4,300	-4,300
21 UNOBLIGATED BALANCE AVAILABLE, START OF YEAR	.....	-2,000	.....
22 UNOBLIGATED BALANCE TRANSFERRED FROM OTHER ACCOUNTS	-5,300	.....	.....
24 UNOBLIGATED BALANCE AVAILABLE, END OF YEAR	2,000	.....	.....
25 UNOBLIGATED BALANCE LAPSING	1,223	.....	.....
BUDGET AUTHORITY	379,061	424,963	446,300
BUDGET AUTHORITY:			
40 APPROPRIATION	378,729	410,645	446,300
41 TRANSFERRED TO OTHER ACCOUNTS	.....	-25	.....
42 TRANSFERRED FROM OTHER ACCOUNTS	332	143	.....
43 APPROPRIATION (ADJUSTED)	379,061	410,763	446,300
44.10 PROPOSED SUPPLEMENTAL FOR WAGE-BOARD PAY RAISES	.....	6,248	.....
44.20 PROPOSED SUPPLEMENTAL FOR CIVILIAN PAY RAISES	.....	7,952	.....
RELATION OF OBLIGATIONS TO OUTLAYS:			
71 OBLIGATIONS INCURRED, NET	381,139	426,963	446,300
72 OBLIGATED BALANCE, START OF YEAR	62,183	68,139	89,002
74 OBLIGATED BALANCE, END OF YEAR	-68,139	-89,002	-100,802
77 ADJUSTMENTS IN EXPIRED ACCOUNTS	-4,034	.....	.....
90 OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL	371,148	393,000	433,400
91.10 OUTLAYS FROM WAGE-BOARD PAY RAISE SUPPLEMENTAL	.....	5,648	600
91.20 OUTLAYS FROM CIVILIAN PAY RAISE SUPPLEMENTAL	.....	7,452	500

BIOGRAPHICAL SKETCH AND PREPARED STATEMENT

Chairman McClellan. The principal witness for this appropriation will be Maj. Gen. H. C. Olson, Deputy Chief of Staff for Installations and Logistics for the Marine Corps.

You have a biographic sketch and a prepared statement that can be placed in the record. You can highlight it.

Biographical Sketch of General Olson

Harry C. Olson was born January 27, 1918, in Des Moines, Iowa. After completing high school there, he earned a BA degree from Drake University, and later received his Masters Degree in Business Administration from George Washington University. While at Drake University, he played three years of varsity football and was captain during his senior year.

A combat veteran of World War II, Korea, and Vietnam, he entered the Marine Corps in May 1941 and was commissioned a Second Lieutenant, November 1, 1941. He completed the Reserve Officers' Class at Quantico, Va., in January 1942.

During World War II, he saw combat with the 2d Marine Division on Saipan and Tinian, Marianas Islands, and in the Assault and Occupation of Okinawa. The Bronze Star Medal with Combat "V" was awarded him for meritorious achievement against the enemy on Saipan and Tinian.

A tour as a recruiting officer near the end of the war was followed by three years as an Associate Professor with the Navy ROTC unit at the University of Southern California.

As a G–4 Staff Officer at Headquarters, Fleet Marine Force, Pacific, (the then) Major Olson was assigned to the 1st Marine Division, and participated in three campaigns in Korea during the Communist China Aggression, the UN Summer-Fall Offensive, and the 2d Korean Winter. He was promoted to Lieutenant Colonel in July 1951.

Following the Korean conflict, he served in motor transport assignments at Camp Lejeune, N.C., and at Marine Corps Headquarters in Washington, D.C. Later, he was Regimental Supply Officer of the 1st Force Service Regiment, and commanded the Base Materiel Battalion at Camp Pendleton, Calif. He also commanded the Supply and Distribution Battalion of the 3d Force Service Regiment.

In 1959, Lt. Col. Olson commanded the Logistic Support Group on Taiwan, then served as Regimental S–3 and Executive Officer of the 3d Force Service Regiment. After being promoted to Colonel in 1961, he became Director of Supply at the Defense Construction Supply Center, Columbus, Ohio, through July 1963.

Upon completion of the Industrial College of the Armed Forces, Washington, D.C., in July 1964, Col. Olson was assigned duty as Force Supply Officer, Fleet Marine Force, Pacific, headquartered in Hawaii, and earned the Legion of Merit.

A Gold Star in lieu of a second Legion of Merit with Combat "V" was awarded him for his service as Commanding General, Force Logistics Command in South Vietnam, from October 1967 to October 1968. He was promoted to Brigadier General, October 1, 1967 prior to becoming CG, Force Logistics Command.

In January 1969, BrigGen. Olson assumed duty as Commanding General, Marine Corps Supply Activity, Philadelphia, Pa., and earned the Navy Commendation Medal for his service there through January 1970. On March 1, 1970, he became Commanding General, Marine Corps Supply Center, Barstow, Calif., and earned a third award of the Legion of Merit. While stationed at Barstow, he was promoted to the present rank on August 12, 1971. During this 30-month period of command, the Marine Corps Supply Center was awarded two Meritorious Unit Commendations for support of FMFPAC forces.

He became the thirty second Quartermaster General of the Marine Corps in October 1972.

On 15 October 1973 he was appointed as the first Deputy Chief of Staff for Installations and Logistics of the Marine Corps.

He has also completed the Navy Comptroller Course, the Army Command Management School, and the Army Quality Control Management for Executive Course.

Maj. Gen. Olson and his wife, the former Bette Jane Graham of Des Moines, have four children: Penny S., Jill A, Jon C. and Graham D. His mother, Mrs. Harry S. Olson, lives in Des Moines.

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PREPARED STATEMENT

Mr. Chairman and Members of the Committee, I am Major General Harry C. Olson, Deputy Chief of Staff for Installations and Logistics, Headquarters, U.S. Marine Corps; Appropriation Sponsor for Operation and Maintenance, Marine Corps. I appreciate this opportunity to appear before the Committee for the first time to present the Marine Corps request for Operation and Maintenance funds for Fiscal Year 1975.

The requested Operation and Maintenance funds will support Fleet Marine Forces of three active divisions, three active aircraft wings, and their normal combat support and combat service support units; the Operation and Maintenance of training bases, the Marine Corps Supply System, Marine detachments and security forces, and administration and associated activities.

PEACE TIME MARINE CORPS

The Marine Corps request provides support for a peace time Marine Corps with a Fiscal Year 1975 end strength of 196,398. These are the minimum funds needed to finance the training that will enable us to maintain the essential combat readiness posture of the Fleet Marine Force.

The Operation and Maintenance budget request for Fiscal Year 1975 totals $446.3 million. This submission represents a net increase of $2.5 million from the revised Fiscal Year 1974 estimate of $443.8 million. I will brief you on the major items contributing to this net increase.

LINCLOE PACK

In order to increase the combat effectiveness of our Marines we are requesting $2.0 million for the initial procurement of the Lincloe Pack. This is a lightweight, nylon combat pack designed to equip the individual Marine with a modern, functional load carrying system to replace our present outdated M1941 pack that has been in service 33 years.

LIGHTWEIGHT PACK PROCUREMENT

Chairman MCCLELLAN. What is the total number of LINCLOE packs to be procured? How many will be procured in FY 1975? What is the unit cost of this pack? When will procurement be completed?

General OLSON. A total of 143,169 packs will be procured commencing with 62,423 during FY 1975. The unit cost is $32.20. Procurement will be completed in FY 1977.

Chairman MCCLELLAN. Proceed.

General OLSON. Another increase related to combat effectiveness is vehicle design contract services, for our LVTP–7 family of vehicles. Previously this item was funded in the Procurement, Marine Corps Appropriation; however since production of these vehicles is completed, future financial support becomes an Operation and Maintenance responsibility.

LVTP–7 DESIGN CONTRACT

Chairman MCCLELLAN. Explain what kind of services are performed under the "vehicle design contract" for the LVTP–7 vehicle family.

General OLSON. Vehicle design contract services are required to extend the useful military life of the LVTP–7 family within the current performance envelope. Services performed include engineering investigation of problems identified in the field, configuration control, technical documentation for provisioning, technical field representation, and publication of Modification and Technical Instructions.

Chairman MCCLELLAN. Continue.

STOCK FUND

General OLSON. The major increase for Fiscal Year 1975, relates to the capitalization of some 4,000 items from the Procurement Appropriation to the Marine Corps Stock Fund. The dollars requested will provide funds to the customer for the purchase of these items from the Stock Fund.

In accordance with P.L. 92-313, the Public Building Amendment of 1972 requires the Marine Corps to reimburse the General Services Administration for all GSA administered space, commencing with Fiscal Year 1975. Accordingly, $3.5 million is requested for this purpose.

Energy Conservation

Our Fiscal Year 1975 budget has been formulated with the energy crisis foremost in our minds. During Fiscal Year 1974 the Marine Corps instituted a vigorous energy conservation program designed to maximize savings while at the same time maintaining the combat readiness of our Forces.

Reductions in Consumption

Chairman McClellan. What percentage reduction in FY 1973 petroleum consumption has been achieved for FY 1974 and FY 1975 as a result of your energy conservation program?

General Olson. For ground equipment fuels we have achieved a reduction of 7 percent during the first half of FY 1974 and the reduction will increase to 15 percent for the remainder of FY 1974 and all of FY 1975. In addition, heating oil consumption will be down 10 percent during FY 1974 due to an unusually mild winter.

Chairman McClellan. Proceed.

General Olson. Although we have reduced our level of consumption, fuel price increases have more than offset dollar savings; thus, we are requesting funds to offset the impact of price increases.

Flight Instruction Training

Before discussing reductions for Fiscal Year 1975 I would like to request Congressional assistance in one area. The Reserve Officers Training Corps (ROTC) Vitalization Act of 1964 incorporates statutory authority for the other services to provide Flight Instruction Training, to prospective Officers. We participate in the Naval ROTC Program; however, the largest source for Officer accessions are the Marine Corps Platoon Leaders Class (PLC) and Officer Candidate Course (OCC) Programs. Consequently, in Fiscal Year 1972 we instituted a similar option, called Civilian Pilot Training, for participants in our PLC (Aviation) Program. The value of that option was twofold; first, it committed the recipient to accept a commission if offered; second, it acted as an aviation aptitude screening device.

Cost of Training

Chairman McClellan. What is the cost of training a student under the Civilian Pilot Training Program to the level where he is obligated to accept a commission? How many students do you propose to train in FY 1975?

General Olson. The cost of training a student under the Civilian Pilot Training Program to the level where he was obligated to accept a commission was approximately $300 during FY 1972 and $312 during FY 1973. It is estimated that 200 students will commence Civilian Pilot Training during FY 1975.

Chairman McClellan. Why must prospective Marine aviators participate in Marine civilian pilot training—wouldn't Navy civilian pilot traning (or its equivalent) be sufficent?

General Jaskilka. Sir, the Navy, Army and Air Force equivalents are only available to ROTC students. Marine PLC members are Class III enlisted reservists and are not eligible to participate in the ROTC programs.

General Olson. I might add that, if the screening provided by the program prevents one Flight School student from failing half way through the course, it will have paid for itself in cost avoidance. While our program is too new to have permitted the collection of any data, the other services have found that the failure rate in Flight School is significantly lower for students who have participated in the ROTC Flight Instruction Programs than for students who had not partiicpated. During the review of our Fiscal Year 1974 Appropriation request, the Congress directed that the Civilian Pilot Training Program be discontinued. We will terminate the program during Fiscal Year 1974; how-

ever, I have identified $.2 million in the Fiscal year 1975 budget to allow reinstitution of the program and seek specific Congressional authority to do so.

SUPPLEMENTAL REQUEST

The major decrease for Fiscal Year 1975 relates to our supplemental readiness request for Fiscal Year 1974. This request represented a one time requirement for monies to bring our Fleet Marine Forces to a high state of material readiness and thus will not be required during Fiscal Year 1975.

CIVILIANIZATION OF MESSMEN

For Fiscal Year 1975 the Marine Corps has terminated its Civilianization of Messmen Program. This action was taken to provide monies for higher priority items in an environment of severely constrained resources.

DEPOT REBUILD PROGRAM

Another reduction is our Depot Rebuild Program, reflecting the completion of the major portion of a rebuild program for five ton trucks.

SUMMARY

The funds requested in this Appropriation are necessary to insure that we are able to recruit and effectively train the Marines required to support our assigned missions. Additionally, the funds will provide for the support of these Marines and the operation and maintenance of their equipment to insure that we continue to have a ready effective force.

This completes my formal statement. I will be glad to answer any questions on this appropriation request.

General OLSON. I have some highlights of my prepared statement.

BUDGET REQUEST

Fiscal year 1975 "Operation and Maintenance" request totals $446.3 million. This is a net increase of $2.5 million over the fiscal year 1974 submission. Briefly, the major items contributing to this increase are as follows:

For procurement of the Lincloe pack, $2 million. This is to replace our M–1941 pack which is 33 years old; $6 million for capitalization of some 4,000 items from procurement appropriation to Marine Corps stock fund. These requested dollars are to provide funds to the customer for purchase of these items from the stock fund.

In accordance with Public Law 92–313 we are requesting $3.5 million to reimburse GSA for space under GSA control that is occupied by the Marine Corps.

Chairman MCCLELLAN. Is that rent?

General OLSON. Yes, sir.

A final increase is $2 million for vehicle design contract service for our LVTP–7 family of vehicles.

Our major reduction these relates to the readiness supplemental for fiscal 1974 which represents a one-time requirement for those moneys during fiscal year 1974.

KP PROGRAM

We also terminated our messmen program in fiscal year 1975 to provide dollars for higher priority items.

Another reduction was our depot maintenance program which reflects completion of a major portion of a rebuild program for our 5-ton trucks.

Chairman McClellan. You were referring to KP's, were you not?

General Olson. Yes, sir.

Chairman McClellan. You have reduced that program?

General Olson. We eliminated the program entirely except for three areas.

Chairman McClellan. You reduced them how?

General Olson. We already had civilian messmen in two of these areas before the general conversion to civilian messmen started. These areas involve 20 contract messmen in Puerto Rico and nine contract messmen at Fleet Marine Force, Pacific headquarters in Hawaii. In Albany, Ga., we are retraining 20 civil service messmen but the rest of the program totaling $5,178,000 has been eliminated. Because of budget constraints we could not afford these other activities.

Chairman McClellan. You effectuated that much saving by eliminating——

General Olson. Yes, sir.

Chairman McClellan. Congratulations. I think the other services can do the same.

CIVILIAN PILOT TRAINING PROGRAM

General Olson. Before closing I would like to request Congress assistance in one area, sir. We need to receive permission to continue our civilian pilot training program in fiscal 1975. Congress directed this program be discontinued at the end of fiscal 1974. We feel this program provides significant benefit to the Marine Corps as an officer recruiting incentive and as an aviation aptitude screening device. We are asking $200,000 to support this program in fiscal year 1975.

Chairman McClellan. $200,000?

General Olson. Yes, sir.

Chairman McClellan. Is that in the budget?

General Olson. Yes, sir.

General Jaskilka. We can handle that. The significant point in our mind about this program is this: All of our sister services have a similar program connected with their ROTC programs and have had since about 1956. For some reason the Marine Corps was cut out. We believe it was because of the title. It was called civilian pilot training program. All our sister services call it flight indoctrination program. So we have changed the name to flight indoctrination program and are asking permission to do the same thing.

Chairman McClellan. Instead of permitting you to change the name and instead of appropriating the money, perhaps we ought to look into their programs. Maybe you called something to our attention.

General Jaskilka. No, sir, I don't think so, Mr. Chairman. Our sister services have found—that young men who take this flight indoctrination program and then go into flight training have attrition rates that are substantially lower than those who have not had the training.

Chairman McClellan. Because they chose that career and initiated the idea themselves.

General Jaskilka. That is right. So, flight training costs about $0.5 million per man, if we could save one man from flunking flight training by investing $200,000, we would have saved a lot of money.

Chairman McClellan. If you can.

COSTS TO TRAIN PILOTS

General OLSON. The average cost to train a pilot is $317,000. For jet training it is $536,000 and for helo-training it is $181,000.

Chairman MCCLELLAN. You mean that is the total cost of training a man to qualify as a pilot?

General OLSON. Yes, sir.

Chairman MCCLELLAN. Does that include his salary?

General JASKILKA. Yes, sir.

Chairman MCCLELLAN. Does that include wear and tear on the plane he trains in?

General JASKILKA. Yes, sir.

Chairman MCCLELLAN. That is the total cost?

General JASKILKA. Yes, sir.

Chairman MCCLELLAN. So you have invested in some instances over $500,000 in a pilot by the time he qualifies.

General JASKILKA. That is right.

Senator YOUNG. Are you asking for that change in the supplemental or in the regular bill?

General JASKILKA. We will manage it—we will change our priorities within the moneys requested and take care of it ourselves provided we get congressional approval to do so.

Chairman MCCLELLAN. In other words, you will do it without more money if we will permit you to do so.

General OLSON. Yes, sir.

Chairman MCCLELLAN. Have you convinced those who originated this inhibition against you?

General JASKILKA. I think so, sir. I appeared before them yesterday and I gave them all the facts I just gave you.

Chairman MCCLELLAN. Perhaps we could tentatively agree that if it is restored, we will not remove it. Is that about the best we can do now, Senator Young?

Senator YOUNG. Unless we initiate something ourselves. It seems to me——

Chairman MCCLELLAN. I think we should try to convince those who initiated the action. The staff reminds me that we allowed the program last year but lost it in conference. So if you can convince the House of your need, apparently you are not going to have much trouble with us.

General JASKILKA. I hope not.

Senator YOUNG. They make an awfully good case.

Chairman MCCLELLAN. Anything further?

BACKLOG OF REAL PROPERTY MAINTENANCE

General OLSON. I have only two other items I would like to mention. One is the backlog of maintenance of real property. From the end of fiscal year 1973 on through to the current budget year we have gone from $44,399,000 backlog of essential maintenance required to $51,875,000 for this particular budget submission. But what is of particular note here is that Engineering News Record, a magazine which gives indices on cost, is forecasting an 8-percent annual increase in labor

and contract costs related to this type of maintenance. The amount we have been able to put on the backlog of real maintenance problem has been so small that just inflationary aspect will preclude us from really getting with this problem and solving it.

FUEL PRICE INCREASE

The other item I would like to mention is fuel price increase. On July 1, 1973, we had a 33-percent increase. On February 1, 1974, we had another 27-percent increase. Bringing the cumulative increase to 69 percent. On April 1, 1974, the cumulative increase moved up again to a total of 125 percent for the period July 1, 1973, to April 1, 1974.

This situation is similar to what Admiral Gaddis described for the Navy. It is going to put us about $4.5 million short in the fiscal year 1975 budget.

I would reiterate and make the same statement Admiral Gaddis did. A supplemental request will be necessary due to the inflationary cost of fuel. That is all I have, sir.

Senator YOUNG. Is there a budget item for that?

General OLSON. We have a fuel price increase item in the budget. But what I am referring to is basis of computation used when the budget was submitted. Since that time the increase in the price of fuel made these figures invalid. We are not allowed to budget for anticipated escalation. We budget for the current cost of items at the time the budget is prepared but prices have gone up significantly since then.

Chairman MCCLELLAN. You think we will have to increase the amount or anticipate a supplemental?

General OLSON. Yes, Mr. Chairman.

Admiral COOKE. The Department of the Navy for the fuel increases affecting our 1975 budget may be up $75 million that one item.

Senator YOUNG. You will have another supplemental for that.

Chairman MCCLELLAN. That is just for the Navy alone.

Admiral COOKE. Yes, sir; and the Department of the Navy and the Marines.

Chairman MCCLELLAN. Thank you for your testimony.

JUSTIFICATION

Chairman MCCLELLAN. At this point in the record there will appear certain information from the justifications.

[The justification follows:]

Justification

OPERATION AND MAINTENANCE, MARINE CORPS

Personnel Summary

	1973 Actual	1974 Estimate	1975 Estimate
Total number of permanent positions	16,242	16,919	17,065
Full-time equivalent of other positions	687	566	547
Average number of all employees	16,032	16,569	17,145
Average GS grade	6.3	6.2	6.2
Average GS salary	$ 9,895	$10,073	$10,073
Average salary of ungraded positions	$ 9,616	$10,277	$10,434

INTRODUCTORY STATEMENT
(In Thousands)

	1973 Actual	1974 Estimate	1975 Estimate
Total direct obligations	$383,139	$443,763	$446,300
Unobligated balance available start of year	-	- 2,000	-
Unobligated balance transferred from other accounts	- 5,300	-	-
Transfer to other accounts	-	+ 25	-
Transfer from other accounts	- 332	- 143	-
Proposed supplemental for wageboard increase	-	- 6,248	-
Proposed civilian pay increase supplemental/amendment	-	- 7,952	-
Proposed program supplemental	-	-16,800	-
Net adjustments	+ 1,223	-	-
Appropriation	$378,729	$410,645	$446,300

This appropriation provides the funds for the costs of all Marine Corps missions, functions, activities and facilities except for those costs related to: Procurement of major items of equipment and ammuniton, military personnel costs of the regular and the reserve establishments, military family housing, operation and maintenance of the Marine Corps Reserve, and those functions supported by Navy sponsored appropriations for aircraft operations and aircraft procurement and support.

The funds contained in this appropriation are intended primarily for the support of the operating forces with particular emphasis on the Fleet Marine Forces. A significant Marine Corps objective is to train and maintain the Fleet Marine Forces at a high level of combat readiness for service with the Fleet, ashore, or for such other duties as the President may direct.

The two Fleet Marine Forces supported by this appropriation are composed of Marine Amphibious Forces (Marine Division/Marine Aircraft Wing Teams) including a combination of combat and service support orgainzations, and a variety of supporting units. Funds are also provided to support two landing force training commands, the Marine detachments afloat, and the security forces to Naval and other government activities ashore.

Shore facilities receiving budget support from this appropriation are: four major unit support bases; two recruit depots; ten air installations; three major supply activities; one Marine Corps Development and Educational Command; one overseas training facility at Vieques, Puerto Rico; two landing force training commands; and numerous Marine Barracks and detachments (partial support of some is provided by Navy appropriations). These facilities are being maintained at standards that will permit effective utilization, avoid major replacement costs, and allow operation and maintenance on an economical and effective basis.

The individual training of enlisted personnel from recruit training to the highest Marine Corps technical training and advanced training at schools of the other services and at civilian institutions as well as individual training of officers from basic to the highest level of training is supported by funds in this appropriation. Such schooling is designed to produce highly trained and disciplined officers and men for duty with the Fleet Marine Force, capable of effective growth as well as effective performance.

This appropriation also supports the Marine Corps supply system. The principal objective of the supply system is to provide the combat forces with the proper materiel and equipment in the quantity, condition, time and place required.

This appropriation also supports other miscellaneous activities such as special training, recreation and welfare services, cataloging, recruiting, equipment overhaul and repair, and miscellaneous individual expenses.

Summary of Civilian Manpower Increases/Decreases
Fiscal Year 1974 to Fiscal Year 1975
(Full Time Permanent Employees)

Operation or Activity	Year End Increases/Decreases
Direct	
Military/Civilian Conversion (FY 1975)	+194
Human Resources Management	+ 52
Management of Energy Resources	+ 14
Support of base operations at Camp Garcia, Vieques, Puerto Rico	+ 23
Automated Data Processing	- 42
Regionalization of Naval Medical Facilities	- 6
Headquarters Reduction	- 89
Net Increase (Direct)	+146
Reimbursable	-0-
Net Increase (Total)	+146

SUMMARY OF OBLIGATIONS
(In thousands)

Budget Act. No.	Budget Activity Title	1973 Actual	1974 Estimate	1975 Estimate	Diff. 1975 Compared with 1974
2	General Purpose Forces.....	$198,494	$236,316	$232,564	$-3,752
3	Intelligence and Communications.....	746	889	-	- 889
7	Central Supply and Maintenance.....	95,554	105,920	107,091	+1,171
8	Training, Medical and Other General Personnel Activities.....	60,141	69,068	68,763	- 305
9	Administration and Associated Activities.....	28,028	31,570	37,882	+6,312
10	Support of Other Nations.....	176	-	-	-
Total direct obligations in budget document		$383,139	$443,763	$446,300	$+2,537

BUDGET ACTIVITY 2: GENERAL PURPOSE FORCES
SUMMARY OF OBLIGATIONS

(In thousands)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
A	Forces	$ 51,496	$ 61,726	$ 55,279
B	Base Operations	144,241	170,993	174,031
C	Command	2,757	3,597	3,254
	Total direct obligations in budget document	$198,494	$236,316	$232,564

Budget Activity 2: General Purpose Forces

(In thousands)
1975 Estimate - $232,564
1974 Estimate - 236,316
1973 Actual - 198,494

Introduction

This budget activity provides for the operation and maintenance costs of the Fleet Marine Forces, supporting facilities, stations and commands which are in direct support of the Fleet, and ships' detachments.

Budget Project A: Forces

(In thousands)
1975 Estimate - $ 55,279
1974 Estimate - 61,726
1973 Actual - 51,496

Purpose and scope of work

This project provides for expenses of unit training and operations of the Fleet Marine Forces and ships' detachments. It also provides for support of Marine Barracks at Navy facilities under the category of General Purpose Forces, e.g., Naval Bases and Naval Air Stations.

The Fiscal Year 1975 estimates reflect funding required to support the necessary training to insure the continued readiness of Marine Corps units. Fleet Marine Force training in Fiscal Year 1975 will be oriented toward refining the unique capability of the Fleet Marine Forces to conduct amphibious operations as part of the Navy-Marine Corps Team. This amphibious orientation is fundamental and continuous, pervading all aspects of training. Training will also be oriented toward air-ground operations in an expeditionary environment which may be conducted as part of the amphibious operation. The basic objective of Fleet Marine Force unit training is to maintain and improve readiness for: (1) rapid, efficient embarkation and deployment to potential areas of combat operations; (2) effective combat operations in all types of climate, weather, and terrain and; (3) effective combat operations involving any combination of weapons.

Justification of funds

The funds requested under this project will provide for the constant state of readiness of the Fleet Marine Forces with the highest priority assigned the areas of training and materiel support. Emphasis is being placed on providing the required direct and backup support to the Fleet Marine Forces.

The funds requested are for: (1) operational expenses incident to operations and training, and for support of Marine Barracks at Naval activities; (2) repair and maintenance of equipment and; (3) the purchase of stock fund materiel to accompany Fleet Marine Force units in mounting out for combat operations. These Fleet Marine Force units include the

Marine Division/Wing Teams, Force Troops and other smaller units. This activity provides all Fleet Marine Force aviation support except flight operations and aviation peculiar maintenance.

Combat units of the Marine Corps must be trained, equipped and maintained in a state of readiness to accomplish assigned missions. Since the Marine Corps' prime responsibility lies in the field of amphibious warfare, much of its training must be devoted to this field. Continued and intensive training is required to ensure that combat units are ready to execute their mission. Unserviceable equipment must be repaired or replaced to ensure that sufficient stocks are on hand for training and to maintain the state of readiness commensurate with the requirements of Marine Corps combat units. To continue the training program, maintain equipment and the required level of mount out stocks, expenses are incurred for such items as:

Replacement of authorized allowances.

Maintenance and repair of equipment used by ground combat units.

Operation and maintenance of aviation ground support equipment (combat vehicles, air traffic control, and Short Airfields for Tactical Support.)

Operational training expenses.

Maintenance of medical and dental mount out blocks.

Other miscellaneous expenses, including recreation and welfare equipment to promote physical health and mental fitness.

Field commanders initially submit estimates for the funds needed to accomplish their missions. These estimates are based on budget guidance furnished annually by the Commandant of the Marine Corps. Before consolidation into the estimate contained herein, review is made based on plans and experience data available. Comparison with other unit costs is made and estimates from the field are modified to include the consideration of latest planning factors, revised budget guidelines, and other data not available to the field commander.

The net decrease is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 graded civilian personnel pay increase ($+3,000), increase in Government contribution for civilian health benefits insurance ($+1,000), and additional civilian workday in FY 1975 ($+2,000)	+	6
2. Increase in FY 1975 compared to FY 1974 for full year funding of ungraded civilian pay increases approved or to be approved during FY 1974	+	1
3. Increase of one civilian manyear and three end strength related to the FY 1975 military/civilian conversion program	+	9

4. Decrease related to termination of the Project Transition Program in FY 1974	- 1
5. Reduction in travel of personnel requirements	- 420
6. Decrease related to maintenance of real property facilities requirements	- 98
7. Increase results from the realignment of funds for support of Marine Radio Battalions, Marine Barracks, Fort Meade, Maryland, and individual equipment for Marines attached to the Naval Security Groups previously funded under Budget Activity 3, Intelligence and Communications	+ 819
8. Increased procurement cost for fuel	+ 530
9. Decrease related to costs associated with the relocation of operating forces from Southeast Asia to their permanent duty stations, and replacement of equipment in FY 1974	- 1,000
10. Decrease related to one-time costs in FY 1974 for purchase of Table of Equipment deficiencies and replacement items	-12,743
11. Increase is required to equip the Fleet Marine Force with the improved frame pack (LINCLOE) which will replace the current M1941 field pack	+ 2,010
12. Increased to support price escalation for supplies and equipment purchased from the Stock Fund	+ 500
13. Increase for capitalization of Procurement, Marine Corps funded items	+4,000
14. Decrease in automatic data processing requirements	- 45
15. Other minor decreases	- 15
Net decrease	-6,447

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Budget Project B: Base Operations

(In Thousands)
1975 Estimate - $174,031
1974 Estimate - 170,993
1973 Actual - 144,241

Purpose and scope of work

The funds requested in this area are for the support of base operations of the Marine Corps Bases at Camp Lejeune, Camp Pendleton, Twentynine Palms, and Camp Butler; and Marine Corps Air Stations, Cherry Point, Beaufort, New River, El Toro, Santa Ana, Yuma, Kaneohe, Iwakuni and Futema.

Fleet Marine Force and supporting units are based at Marine Corps Base, Camp Lejeune, North Carolina, Marine Corps Base, Camp Pendleton, Marine Corps Base, Twentynine Palms and the Marine Corps Base on Okinawa. Marine Corps air stations will provide base support for Marine Aircraft Wings and supporting units.

Justification of funds

Operation and maintenance funding of the supporting installations is generally for costs of a recurring nature. The funds provided a station commander must be managed so that station requirements for operation and maintenance are met in the most economical and effective manner. The station commander is afforded flexibility in administration within materiel allowances, personnel ceilings, and broad policies established by the Commandant.

During the Fiscal Year 1975, all operations are planned to provide only essential facilities required to train and support combat units. Levels of supply are within allowances prescribed by the Commandant.

The following are indicative of the costs included:

Expenses incident to base command/staff services such as training, accounting and disbursing, police and fire protection, supply direction, industrial relations, and office services.

All costs of routine recurring work required to keep items of base owned and operated equipment in working condition.

Costs of providing services such as sanitation; operation of utility systems; utility costs; gasoline and oil for vehicles; maintenance and repair of vehicles; janitorial services; trash and garbage disposal; laundry and dry cleaning services; and inventory and stock control.

Other expenses of facility operation such as cooks' and messmens' clothing, individual field equipment, and replacement of recreation and welfare equipment.

Maintenance required to preserve or restore a facility for effective operation and utilization.

Repair of a facility by overhaul, reprocessing, or replacement of constituent parts or materiels that have deteriorated and which have not been corrected through maintenance.

Alteration required to adjust interior arrangements, on-base location, or other physical characteristics of an existing facility so that it may be more effectively adapted to or utilized for its designated purpose. Additions, expansions, and extensions are not included in alterations.

Construction (as authorized by law under the operation and maintenance appropriation) for the erection, installation, or assembly of a new facility; the relocation of a facility from another installation, collateral equipment installed in and made a part thereof; and related site preparation, escavation, filling and landscaping, or other land improvements.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for the full year funding of the October 1973 graded civilian personnel pay increase ($+446,000), and increase in Government contribution for civilian health benefits insurance ($+54,000)	+ 500
2. Increase in FY 1975 compared to FY 1974 for full year funding of the ungraded civilian personnel pay increase approved or to be approved in FY 1974	+1,333
3. Increase in FY 1975 compared to FY 1974 for full year funding of new civilian personnel hires replacing personnel retired under Public Law 93-39 in FY 1974	+ 476
4. Increase for additional civilian workday in FY 1975	+ 309
5. Decrease related to termination of Project Transition Program in FY 1974	- 164
6. Decrease of 10 civilian manyears and end strength related to automatic data processing	- 125
7. Increase of 5 civilian manyears and 42 end strength for Human Resources and Energy Resources Management Programs	+ 83
8. Increase of 3 civilian manyears and 23 end strength in support of base operations at Camp Garcia, Vieques, Puerto Rico	+ 22

9. Increase in FY 1975 compared to FY 1974 for full year funding of 424 civilian personnel related to the FY 1973/1974 military/civilian conversion program	+1,558
10. Increase for one civilian manyear and two end strength related to the FY 1975 military/civilian conversion program	+ 9
11. Reduction as a result of realignment of medical support costs to Operation and Maintenance, Navy commencing in FY 1975. This realignment also includes six civilian manyears and end strength	-1,591
12. Reduction in travel of personnel requirements	- 108
13. Increase for support of new plant resulting from Military Construction projects completion; utility requirements ($533,000), custodial and trash collection services ($+100,000), and for installation and operation of telephones ($+10,000)	+ 643
14. Increase for collateral equipment requirements for projects in Japan and Okinawa being constructed by the Japanese Government for use of Marines under the Okinawa Reversion Agreement	+ 437
15. Decrease resulting from the elimination of the contract hire of civilian personnel for the mess function civilianization program	-4,250
16. Increase related to maintenance of real property facilities requirements	+1,400
17. Increase to support additional number of intra-station movements of household effects resulting primarily from completion of additional new family housing	+ 153
18. Increase to reimburse the Army and Navy Engineering Inspection Teams performing services related to the Revised Okinawa Reversion Construction Program	+ 69
19. Increase to reimburse the Department of the Army for crime laboratory services	+ 50
20. Increased procurement costs for fuel	+1,037
21. Decrease in automatic data processing requirements	- 378
22. Increase for capitalization of Procurement, Marine Corps funded items	+ 800
23. Increase to support price escalation for supplies and equipment purchased from the Stock Fund	+ 500
24. Increase for furniture and furnishings to improve habitability of bachelor quarters	+ 503

25. Decrease in collateral equipment requirements for Military Construction projects..... - 886

26. Increase is required for modernization of mess and galley support equipment to provide for improved quality and appeal of food services..... + 600

27. Increase for an additional workday related to Japanese Master Labor Contract employees..... + 58

Net Increase..... +3,038

Budget Project C: Command

(In thousands)
1975 Estimate - $3,254
1974 Estimate - 3,597
1973 Actual - 2,757

Purpose and scope of work

The funds requested under this heading are for support of units designated under the budget project "Command". Included are Headquarters activities, Fleet Marine Forces, Atlantic and Pacific.

Justification of funds

The type of costs involved are, in general, as described under Budget Project 2A, "Forces". In addition, costs of Joint Chiefs of Staff exercises are also supported under this project.

The net decrease is due to:

1. Decrease related to one-time costs in FY 1974 for purchase of Table of Equipment deficiencies and replacement items and other authorized allowances ($-610,000), offset by increased procurement costs for fuel ($+9,000)..... -601

2. Increase is required for support of Joint Chief of Staff directed and/or coordinated exercises..... +112

3. Increase in automatic data processing requirements..... +146

4. Increase in travel requirements associated with biennial Fleet Marine Forces inspections..... + 42

5. Reduction in travel of personnel requirements..... - 42

Net decrease..... -343

Budget Activity 3: INTELLIGENCE AND COMMUNICATIONS
SUMMARY OF OBLIGATIONS

(In Thousands)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
A	Cryptologic Activities	$642	$ 731	$ -
B	Other Intelligence Programs	104	158	-
	Total direct obligations in budget document	$746	$ 889	$ -

(In Thousands)

Budget Activity 3: Intelligence and Communications

1975 Estimate - $ -
1974 Estimate - $ 889
1973 Actual - $ 746

Introduction

This budget activity provides for the operational costs of certain Fleet Marine Forces Intelligence systems and other Department of Defense agency support.

(In Thousands)

Budget Project A: Cryptologic Program

1975 Estimate - $ -
1974 Estimate - $ 731
1973 Actual - $ 642

Purpose and scope of work

This project provides operation and maintenance costs identified with two Marine radio battalions, and individual equipment for Marines attached to the Naval Security Groups.

Justification of funds

Funds are required to cover travel costs, maintenance of equipment, and individual equipment support for Marines assigned to cryptologic activities.

Decrease of $731,000 results from the realignment of funds for support of Marine Radio Battalions and individual equipment for Marines attached to the Naval Security Groups previously funded under this budget project. Commencing in FY 1975, funds for support of these activities have been budgeted under Budget Project 2A, Forces - Budget Activity 2, General Purpose Forces.

Budget Project B: Other Intelligence Programs

(In thousands)
1975 Estimate - $ -
1974 Estimate - $ 158
1973 Actual - $ 104

Purpose and scope of work

This project funds support of the Marine Barracks at Fort Meade, Maryland, which provides security to the National Security Agency.

Justification of funds

Funds are required to cover travel costs, maintenance of equipment, and individual equipment support for assigned Marines.

Decrease of $158,000 results from the realignment of funds for support of the Marine Barracks at Fort Meade, Maryland, previously funded under this budget project. Commencing in FY 1975, funds for support of this activity have been budgeted under Budget Project 2A, Forces - Budget Activity 2, General Purpose Forces.

BUDGET ACTIVITY 7: CENTRAL SUPPLY AND MAINTENANCE

SUMMARY OF OBLIGATIONS

(In thousands)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
A	Supply Depot Operations	$17,135	$18,561	$19,637
B	Inventory Control Point	10,578	11,325	11,609
C	Supply Base Operations	25,242	27,017	27,057
D	Other Logistic Support	42,599	49,017	48,788
	Total direct obligations in budget document	$95,554	$105,920	$107,091

Budget Activity 7: Central Supply and Maintenance

(In Thousands)
1975 Estimate - $ 107,091
1974 Estimate - 105,920
1973 Actual - 95,554

Introduction

This budget activity covers central supply and maintenance activities not organic to other budget activities. Field activities include the Marine Corps Supply Centers at Albany, Georgia and Barstow, California and the Marine Corps Supply Activity, Philadelphia, Pennsylvania.

Budget Project A: Supply Depot Operations

(In Thousands)
1975 Estimate - $ 19,637
1974 Estimate - 18,561
1973 Actual - 17,135

Purpose and scope of work

This budget project provides funds for supply mission operations at the Marine Corps Supply Centers, Albany, Georgia and Barstow, California. Mission operations include receipt, storage, issue, packing, preservation, maintenance in storage, and preparation for shipment of equipment, spare parts, materiels and supplies comprising the Marine Corps owned inventories at these major supply installations. In general, supply support of east coast Fleet Marine Forces is provided by the Marine Corps Supply Center, Albany, Georgia. Fleet Marine Forces located on the west coast and in the Pacific receive primary supply support from the Marine Corps Supply Center, Barstow, California.

Justification of funds

Funds requested in this project are required to support the supply mission operations of the two Marine Corps Supply Centers. Costs include pay of civilian personnel as well as supplies and materiels used for receipt, storage, issue, packing, preservation and shipment of materiel and equipment.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 graded civilian personnel pay increase ($+69,000), and increase in Government contribution for civilian health benefits insurance ($+9,000) ..... + 78

2. Increase in FY 1975 compared to FY 1974 for full year funding of the ungraded civilian personnel pay increases approved or to be approved in FY 1974 ..... + 189

3. Increase for additional civilian workday in FY 1975	+ 46
4. Reduction in travel of personnel requirements	- 2
5. Increase supply support costs for care of materiel in store to be performed by the depot maintenance activity located at Marine Corps Supply Center, Barstow, California	+ 665
6. Increase for capitalization of Procurement, Marine Corps funded items	+ 100
Net increase	+1,076

Budget Project B: Inventory Control Point

(In Thousands)

1975	Estimate	-$ 11,609
1974	Estimate	- 11,325
1973	Actual	- 10,578

Purpose and scope of work

This budget project provides funds for supply mission operations at the Marine Corps Supply Activity, Philadelphia, Pennsylvania in support of the Fleet Marine Forces, and other Marine Corps installations. The functions are related to inventory management. They include: procurement operations, contract administration, stock control, technical and cataloging services, provisioning new and modified items of equipment, and commodity management for those items in the Marine Corps Supply System. The Inventory Control Point executes those phases of military logistics which control the input, availability, and demilitarization of materiel, and exercises technical direction over the operation of the Marine Corps supply distribution system. This activity also participates in the Federal Catalog System as directed by Public Law (Title 10, U. S. Code, Chapter 145) and implemented by the Federal Manual for Supply Cataloging, and prepares and prints the Marine Corps Stock Lists and Illustrated Repair Parts Lists for new equipment.

Justification of funds

Funds are required for payment of civilian personnel, communications, printing and reproduction, purchased services, and supplies and materials required to perform the functions assigned to the Inventory Control Point for the Marine Corps.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 graded civilian personnel pay increase ($+130,000), and increase in Government contribution for civilian health benefits insurance ($+6,000)	+136
2. Increase in FY 1975 compared to FY 1974 for full year funding of the ungraded civilian personnel pay increases approved or to be approved in FY 1974	+ 1

3. Increase for additional civilian workday in FY 1975	+ 41
4. Increase in FY 1975 compared to FY 1974 for full year funding of 19 civilian personnel related to the Defense Integrated Data Systems (DIDS)	+143
5. Reduction in travel of personnel requirements	- 20
6. Decrease related to transfer of six civilian manyears and end strength to Defense Supply Agency	- 60
7. Increase to convert certain financial and procurement history files from computer tape to microfilm	+ 70
8. Decrease in printing and reproduction requirements of Marine Corps Stock Lists	- 27
Net increase	+284

Budget Project C: Supply Base Operations

(In Thousands)
1975 Estimate - $27,057
1974 Estimate - 27,017
1973 Actual - 25,242

Purpose and scope of work

This project provides funds for base operation and maintenance of the Marine Corps Supply Centers at Albany, Georgia, and Barstow, California; and the Marine Corps Supply Activity at Philadelphia, Pennsylvania. Supply base operations costs include administrative and staff functions such as office services, motor transport operations, medical and dental operations, schools, training, and support of military personnel. This budget project also provides for maintenance of real property facilities covering:

Maintenance work required to preserve or restore a facility for effective operations and utilization.

Repair of a facility by overhaul, reprocessing, or replacement of constituent parts or materiels that have deteriorated and which have not been corrected through maintenance.

Alterations required to adjust interior arrangements, on-base location, or other physical characteristics of an existing facility so that it may be more effectively adapted to or utilized for its designated purpose. Additions, expansions and extensions are not included in alterations.

Construction (as authorized by law under the operation and maintenance appropriations) for the erection, installation, or assembly of a new facility; the addition, expansion or extension of an existing facility; the conversion or replacement of an existing facility; or the relocation of a facility from another installation; including collateral

equipment installed in and made a part thereof; and related site preparations, excavating, filling and landscaping, or other land improvements.

Justification of funds

Funds are required for operation and maintenance support of supply base operations, pay of civilian personnel, utilities and rents, automatic data processing, equipment and equipment maintenance, and purchase of supplies and materiels peculiar to the needs of supply operations.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 graded civilian personnel pay increase ($+72,000), and increase in Government contribution for civilian health benefits insurance ($+16,000)	+ 88
2. Increase in FY 1975 compared to FY 1974 for full year funding of the ungraded civilian personnel pay increases approved or to be approved in FY 1974	+158
3. Increase for additional civilian workday in FY 1975	+ 85
4. Increase in FY 1975 compared to FY 1974 for full year funding of 154 civilian personnel related to the FY 1973/1974 military/civilian conversion program	+990
5. Decrease of 23 civilian manyears and end strength related to automatic data processing	-292
6. Decrease in civilian manyear requirements related to supply base operations	-631
7. Increase of 1 civilian manyear and 12 end strength for Human Resources and Energy Resources Management Programs	+ 16
8. Decrease related to maintenance of real property facilities requirements	-249
9. Decrease results from the elimination of the contract hire of civilian personnel for mess function civilianization program	-170
10. Decrease in automatic data processing requirements ($-190,000) offset by an increase in communications support costs ($+49,000)	-141
11. Decrease as a result of realignment of medical support costs to Operation and Maintenance, Navy commencing in FY 1975	- 43

12. Increase to support collateral equipment requirements for Military Construction projects..... +231

13. Reduction in travel of personnel requirements ($-18,000), offset by an increase in procurement costs for fuel ($+16,000)..... - 2

Net increase..... + 40

Budget Project D: Other Logistic Support

(In thousands)
1975 Estimate - $48,788
1974 Estimate - 49,017
1973 Actual - 42,599

Purpose and scope of work

This budget project funds three major areas of logistic support: (1) depot level maintenance of Marine Corps equipment; (2) second destination transportation of equipment, spare parts, ammunition, and supplies; and (3) centrally managed programs.

Justification of funds

Funds requested for this project will provide for:

1. Depot level maintenance of equipment:

(In thousands)			
FY 1973	FY 1974	FY 1975	+/-
$17,469	$21,459	$17,531	$-3,928

Funds provide for 5th echelon maintenance of Marine Corps ground equipment (less Marine Corps Reserve equipment funded in Operation and Maintenance, Marine Corps Reserve). Repair/Rebuild is accomplished on a scheduled basis to maintain the materiel readiness of the equipment inventory necessary to support the operational demands of the Fleet Marine Forces. Items programmed for repair are screened to insure that a valid stock requirement exists and that repair or rebuild of the equipment is the most cost effective means of satisfying the requirement. Repair/Rebuild is accomplished by the Depot Maintenance Activities at Marine Corps Supply Center, Albany, Georgia, and Marine Corps Supply Center, Barstow, California, by Depot Maintenance Interservice Support agreements, and by commercial contracts.

The net decrease is due to:

a. Increase FY 1975 compared to FY 1974 for full year funding of the ungraded civilian personnel pay increases approved or to be approved in FY 1974 ($+330,000), and increase in Government contribution for civilian health benefits insurance ($+10,000) and an increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 graded civilian personnel pay increase ($+35,000)..... + 375

b. Decrease in depot level maintenance program relating to fifth echelon maintenance of Marine Corps equipment in support of Fleet Marine Forces..... -4,803

c. Increase for capitalization of Procurement, Marine Corps funded items..... + 400

d. Increase to support price escalation for supplies and equipment purchased from the Stock Fund..... + 100

Net decrease..... -3,928

2. Transportation of Things:

(In thousands)

FY 1973	FY 1974	FY 1975	+/-
$14,894	$17,069	$18,249	$+1,180

Funds provide for all costs related to second destination transportation of cargo to the operating forces overseas and within Continental United States. Categories of Transportation are: (a) Military Sealift Command for sea cargo movement; (b) inland transportation for cargo movement between Continental United States installations and ports; and (c) Military Airlift Command for movement of priority cargo in support of Fleet Marine Forces Units.

The net increase is due to:

a. Decrease in transportation of cargo to operating forces overseas and within the Continental United States..... - 420

b. Increase in transportation rate adjustments..... +1,600

Net increase..... +1,180

3. Centrally managed support:

(In thousands)

FY 1973	FY 1974	FY 1975	+/-
$10,236	$10,489	$13,008	$+2,519

Funds provide support for the Fleet Marine Forces and supporting installations such as: (a) contract technical services; (b) task order type services for product improvement; (c) updating of technical publications; (d) ammunition rework/renovation; (e) printing and publication costs; (f) reimbursement of the employee compensation funds; and (g) official mail costs.

The net increase is due to:

a. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 graded civilian personnel pay increase ($+1,000), and for an additional civilian workday in FY 1975 ($+1,000)..... + 2

b. Decrease results from the discontinuance of technical representatives services at the Communication-Electronics School, Marine Corps Base, Twentynine Palms, California and the use of Civil Service Technical Personnel..... - 385

c. Decrease in calibration support requirements ($-30,000), offset by an increase in procurement cost for paper ($+142,000)..... + 112

d. Increase for vehicle design contractor services costs associated with the LVTP-7 vehicles..... +2,000

e. Increase for serialization of small arms program for improved accountability..... + 100

f. Increase for reimbursement of the Employee Compensation Fund administered by the Department of Labor.. + 45

g. Increase costs of official mail reimbursable to the U.S. Postal Service..... + 645

Net increase..... +2,519

BUDGET ACTIVITY 8: TRAINING, MEDICAL AND OTHER GENERAL PERSONNEL ACTIVITIES
SUMMARY OF OBLIGATIONS

(In Thousands)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
A	Recruit Training	$ 17,452	$ 18,327	$ 17,569
B	Specialized Training	8,700	10,529	10,217
C	Professional Training	17,395	20,425	20,447
D	Flight Training	25	27	27
E	Other Activities	16,569	19,760	20,503
	Total direct obligations in budget document	$ 60,141	$ 69,068	$ 68,763

Budget Activity 8: Training, Medical and Other General Personnel Activities

(In thousands)
1975 Estimate - $68,763
1974 Estimate - 69,068
1973 Actual - 60,141

Introduction

This budget activity finances training of Marines. Also included is the recruiting and examining function for the Marine Corps.

Budget Project A: Recruit Training

(In thousands)
1975 Estimate - $ 17,569
1974 Estimate - 18,327
1973 Actual - 17,452

Purpose and scope of work

This project provides for costs of individual training at the Marine Corps Recruit Depots, Parris Island, South Carolina, and San Diego, California. The recruit training period is 11 weeks and has as its objective to develop within the recruit:

(1) A state of discipline which assures respect for authority and instant, willing, obedience to orders.

(2) Individual proficiency in military skills.

(3) A skill in rifle markmanship.

(4) Physical fitness and endurance.

(5) Self confidence, pride, initiative, aggressiveness, determination, moral integrity, loyalty and a sense of duty and responsibility as well as love of Country and Corps.

Justification of funds

The funds requested in this project provide for operation and maintenance of the necessary facilities and associated costs of recruit training of the Marine Corps Recruit Depots at Parris Island, South Carolina, and San Diego, California.

The funds provided must be managed so that station requirements for operation and maintenance are met in the most economical and effective manner that enables mission accomplishment. The station commander is permitted flexibility in administration within materiel allowances, personnel ceilings, and broad policies established by the Commandant.

During the Fiscal Year 1975 all operations are planned to provide only essential facilities required to support this training. Levels of supply are within allowances prescribed by the Commandant.

The following are indicative of the costs included:

Expenses incident to command/staff services such as training, accounting and disbursing, police and fire protection, supply direction, industrial relations, and office services.

All costs of routine recurring work required to keep items of equipment in operating condition.

Costs of providing services such as sanitation; operation of utility systems; utility costs; gasoline and oil for vehicles; maintenance and repair of vehicles; janitorial services; trash and garbage disposal; laundry and dry cleaning services; and inventory and stock control.

Other expenses of facility operation such as cooks' and messmens' clothing, individual field equipment, and replacement of recreation and welfare equipment.

Maintenance required to preserve or restore a facility for effective operation and utilization.

Repair of a facility by overhaul, reprocessing, or replacement of constituent parts or materiels that have deteriorated and which have not been corrected through maintenance.

Alteration required to adjust interior arrangements, on-base location, or other physical characteristics of an existing facility so that it may be more effectively adapted to or utilized for its designated purpose. Additions, expansions and extensions are not included in alterations.

Construction (as authorized by law under the operation and maintenance appropriation) for the erection, installation, or assembly of a new facility; the relocation of a facility from another installation; collateral equipment installed in and made a part thereof; and related site preparation, excavation, filling and landscaping, or other land improvements.

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The net decrease is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 civilian graded pay increase ($+51,000), and increase in Government contribution for civilian health benefits insurance ($+7,000)...	+ 58
2. Increase in FY 1975 compared to FY 1974 for full year funding of the ungraded civilian personnel pay increases approved or to be approved in FY 1974.....	+105
3. Increase in FY 1975 compared to FY 1974 for the full year funding of 68 civilian personnel related to the FY 1973/1974 military/civilian conversion program.....	+150
4. Increase for additional civilian workday in FY 1975.....	+ 37
5. Increase in FY 1975 compared to FY 1974 for full year funding of new civilian personnel hires replacing personnel retired under Public Law 93-39 in FY 1974,.....	+108
6. Decrease of three civilian manyears and end strength related to automatic data processing.....	- 38
7. Increase of 1 civilian manyear and 5 end strength for Human Resources and Energy Resources Management Program.....	+ 16
8. Decrease related to termination of the Project Transition Program in FY 1974.....	- 64
9. Decrease in travel costs results from consolidation of east coast male recruit training at Marine Corps Recruit Depot, Parris Island, South Carolina ($-325,000), and other reductions in travel of personnel requirements ($-21,000).....	-346
10. Increase related to maintenance of real property facilities requirements.....	+174
11. Increase in automatic data processing requirements.....	+ 10
12. Decrease in support requirements related to a reduction in recruit input, FY 1975 compared to FY 1974..	-412
13. Increase to support collateral equipment requirements for Military Construction projects.....	+ 50

14. Reduction as a result of realignment of medical support costs to Operation and Maintenance, Navy commencing in FY 1975..... -574

15. Increased requirements for utilities in support of new plant resulting from Military Construction project completion..... + 38

16. Decrease in recreation, morale and welfare programs..... - 70

Net decrease..... -758

Budget Project B: Specialized Training

(In Thousands)
1975 Estimate - $10,217
1974 Estimate - 10,529
1973 Actual - 8,700

Purpose and scope of work

This budget project provides for training of the individual Marine after completion of recruit training. The major type of training involved is military occupational speciality training conducted primarily at Marine Corps Bases Camp Pendleton, California, and Camp Lejeune, North Carolina and formal schools training at other Marine Corps activities. In addition, this budget project provides for special expenses (primarily travel and per diem) for personnel attending other service schools and for procurement of training devices. Direct cost of supporting activities and operation of training organizations is also included.

Initial Military Occupational Specialty training consists of four to fifty-two weeks of formal instruction in technical and non-technical skills, depending on skill complexity. Advanced skill training is provided to career Marines at both Marine Corps and other service formal schools.

Justification of funds

This budget project provides for direct costs of operating and supporting the training organizations at Marine Corps activities. The more significant costs are for organizational equipment, individual Marine support (e.g., packs and web equipment), spare parts for ordnance, and travel and per diem for those Marines attending schools away from their permanent station. Also included are training device procurement, and support for Marines attending other service and selected civilian schools.

The net decrease is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 civilian graded pay increase ($+18,000), and increase in Government contribution of civilian health benefits insurance ($+1,000)	+ 19
2. Increase in FY 1975 compared to FY 1974 for full year funding of ungraded civilian personnel pay increases approved or to be approved in FY 1974	+ 1
3. Increase for additional civilian workday in FY 1975	+ 3
4. Increase in FY 1975 compared to FY 1974 for full year funding of 26 civil service technicians who replaced contract field service technicians at Communication - Electronics School, Marine Corps Base, Twentynine Palms, California	+166
5. Increase for capitalization of Procurement, Marine Corps funded items	+700
6. Decrease related to automatic data processing requirements	- 67
7. Decrease in supplies results from the consolidation of east coast male recruit training at Marine Corps Recruit Depot, Parris Island, South Carolina ($-175,000) and decrease in other consumable supplies and material requirements ($-50,000)	-225
8. Reduction in travel of personnel requirements	-941
9. Increase for tuition costs for drug abuse training ($+20,000), offset by reduced requirements for drug abuse training material ($-16,000)	+ 4
10. Decrease relates to one time costs incurred in FY 1974 for equipping of student billeting and lounge/ recreation areas, and office equipment and furniture required for office, conference room, and classroom space	- 72
11. Increase to support price escalation for supplies and equipment purchased from the Stock Fund	+100
Net decrease	-312

Budget Project C: Professional Training

(In thousands)
1975 Estimate - $20,447
1974 Estimate - 20,425
1973 Actual - 17,395

Purpose and scope of work

This project provides for support for professional training and career development of Marine Corps officers and selected enlisted personnel. Marine Corps Development and Educational Command at Quantico, Virginia, represents the primary source of officer training. Also involved is training at upper level schools of other services and selected civilian institutions. The main effort in professional training is command and staff functioning with particular emphasis on amphibious warfare. Professional training encompasses undergraduate and postgraduate education in the technical, scientific, engineering, and managerial field, and support of the Off-Duty Education Program.

Justification of funds

The type of costs involved for the Marine Corps Development and Education Command, Quantico, are in general for facility support as described under Budget Project 8A, "Recruit Training". Also included are tuition and fees for Marine Corps personnel participating in the Special Education Program (SEP), Navy Enlisted Scientific Education Program (NESEP), Marine Corps Enlisted Commissioning Education Program (MECEP), Marine Corps Associate Degree Completion Program, the Staff NCO Degree Program, and tuition assistance for the Off-Duty Education Program.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 graded civilian personnel pay increase ($+68,000), and increase in Government contribution for civilian health benefits insurance ($+8,000)..... + 76

2. Decrease related to termination of Project Transition Program in FY 1974..... - 17

3. Increase in FY 1975 compared to FY 1974 for full year funding of the ungraded civilian personnel pay increases approved or to be approved in FY 1974..... + 154

4. Increase in FY 1975 compared to FY 1974 for full year funding of 85 civilian personnel related to the FY 1973/1974 military/civilian conversion program..... + 237

5. Increase for additional civilian workday in FY 1975	+ 47
6. Increase in FY 1975 compared to FY 1974 for full year funding of new civilian personnel hires replacing personnel retired under Public Law 93-39 in FY 1974	+ 131
7. Increase of 1 civilian manyear and 7 end strength for Human Resources and Energy Resources Management Programs	+ 16
8. Increase related to maintenance of real property facilities requirements	+1,006
9. Decrease resulting from the elimination of the contract hire of civilian personnel for mess function civilianization program	- 758
10. Increase in automatic data processing requirements	+ 11
11. Decrease in collateral equipment requirements for Military Construction projects	- 385
12. Decrease in furniture and furnishings to improve habitability of bachelor quarters	- 375
13. Reduction as a result of realignment of medical support costs to Operation and Maintenance, Navy commencing in FY 1975	- 123
14. Increase for utilities in support of new plant resulting from Military Construction project completion.	+ 57
15. Increase in tuition costs associated with the off-duty education program	+ 5
16. Decrease in requirements for the Navy Enlisted Scientific Education Program ($-19,000), Marine Associate Degree Completion Program ($-13,000), Staff Noncommissioned Officer Degree Completion Program ($-27,000) and Special Education Program ($-22,000)	- 81
17. Increase in Marine Enlisted Commissioning Education Program (MECEP) is required to provide well-qualified Enlisted Marines with a Bachelors Degree and leads to a Commission as a Second Lieutenant in the Marine Corps	+ 19
18. Reduction in travel of personnel requirements ($-16,000), offset by an increase in consumable supplies and materials ($+18,000)	+ 2
Net increase	+ 22

Budget Project D: Flight Training

(In thousands)
1975 Estimate - $27
1974 Estimate - 27
1973 Actual - 25

Purpose and scope of work

This project provides support for Marines involved in Naval aviation training and includes both student officers and the supporting staff personnel.

Justification of funds

The funds requested in this project provide support for Marines involved in aviation training at Marine Aviation Training Support groups located at Pensacola, Florida and Corpus Christi, Texas. It is estimated that the same level of funding will be required as in FY 1974.

Budget Project E: Other Activities

(In Thousands)
1975 Estimate - $20,503
1974 Estimate - 19,760
1973 Actual - 16,569

Purpose and scope of work

This project provides for the support of administration, operation and routine maintenance of officer and enlisted recruiting activities and finances the costs of obtaining applicants. Also included is the support for 52 Marine Corps Junior Reserve Officer Training Corps Units.

Justification of funds

This project provides funds to support recruiting and examination of potential accessions into the Marine Corps. Included are costs for the operation and administration of officer and enlisted procurement activities, i.e., transportation, board and lodging and subsistence of applicants, and other costs involved in the recruitment of Marine applicants. Also provided are funds for travel of personnel, other purchased services, and supplies and equipment to support the Marine Corps Junior Reserve Officer Training Corps program.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 civilian graded pay increase ($+8,000), and increase for additional civilian workday in FY 1975 ($+3,000)..... + 11

2. Increase due to realignment for prisoners' support costs from Operation and Maintenance, Navy commencing in FY 1975. As a result of the Shore Establishment Realignment Program, Marine prisoners will be relocated from the Naval Disciplinary Command, Portsmouth, New Hampshire to the Army Disciplinary Barracks, Fort Leavenworth, Kansas. Under this arrangement the Marine Corps will reimburse the Army for prisoners' support costs previously funded from Operation and Maintenance, Navy	+678
3. Reduction in travel of personnel requirements	- 81
4. Increased cost of official mail reimbursable to the U.S. Postal Service	+ 89
5. Increase is required to reimburse recruiting personnel for out of pocket expenses	+156
6. Decrease in advertising costs in support of the recruiting effort	-297
7. Decrease for one-time costs associated with the activiation of seven new Marine Corps Junior Reserve Officer Training Corps units in FY 1974 ($-56,000), offset by an increase for the activiation of three new units in FY 1975 ($+69,000)	+ 13
8. Increase is required to fund Marine Corps Junior Reserve Officer Training Corps instructor pay increase	+ 48
9. Increased procurement cost for fuel ($+158,000), offset by other minor decreases in recruiting operating costs ($-32,000)	+126
Net increase	+743

BUDGET ACTIVITY 9: ADMINISTRATION AND ASSOCIATED ACTIVITIES
SUMMARY OF OBLIGATIONS

(In Thousands)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
A	Departmental Headquarters	$ 16,886	$ 18,295	$ 18,325
B	Field Activities	9,749	11,641	13,555
C	Other Support Activities	1,393	1,634	6,002
	Total direct obligations in budget document	$ 28,028	$ 31,570	$ 37,882

Budget Activity 9: Administration and Associated Activities

(In Thousands)
1975 Estimate - $37,882
1974 Estimate - 31,570
1973 Actual - 28,028

Introduction

This budget activity provides for departmental headquarters and other administrative support activities. The Washington area includes Headquarters, Marine Corps, and supporting activities at Marine Barracks, 8th and I Streets, S.E. and Headquarters Battalion, Headquarters, Marine Corps. Administrative support of field activities is also provided for the Marine Corps Finance Center and the Automated Service Center, Kansas City, Missouri, and other Department of Defense agencies.

Budget Project A: Departmental Headquarters

(In Thousands)
1975 Estimate - $18,325
1974 Estimate - 18,295
1973 Actual - 16,886

Purpose and scope of work

This budget project provides funds for operation of Headquarters, U. S. Marine Corps for the administration of the missions, functions, and world wide operations of the Marine Corps.

Justification of funds

The cost of operations include civilian personnel salaries, automatic data processing, printing and reproduction, communication services, expense of travel for military and civilian personnel, purchase and maintenance of office equipment and supplies, and official mail.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 civilian graded pay increase ($+187,000), and increase in Government contribution for civilian health benefits insurance ($+8,000)..... +195

2. Increase in FY 1975 compared to FY 1974 for full year funding of ungraded civilian personnel pay increases approved or to be approved in 1974..... + 1

3. Increase of 25 civilian manyears and 50 end strength related to the FY 1975 military/civilian conversion program..... +275

4. Decrease related to termination of Project Transition Program in FY 1974..... - 26

5. Increase in FY 1975 compared to FY 1974 for full year funding of new civilian personnel hires replacing personnel retired under Public Law 93-39 in FY 1974..... +261

6. Increase for additional civilian workday in FY 1975..... + 55

7. Decrease in headquarters staff of 80 civilian personnel..... -137

8. Decrease related to costs in FY 1974 required to implement approved reorganization of the Headquarters, Marine Corps staff for increased management effectiveness through consolidation of functional responsibilities which will interface with those of the Secretary of Defense and the Secretary of the Navy..... -500

9. Decrease related to the modification of building space to house a consolidated computer facility to be accomplished in FY 1974 ($-200,000), offset by an increase in maintenance and service costs in support of automatic data processsing requirements ($+65,000)..... -135

10. Increase costs of official mail reimbursable to the U. S. Postal Service..... + 89

11. Reduction in travel of personnel requirements ($-53,000), offset by an increase in maintenance contract costs of equipment ($+5,000)..... - 48

Net increase..... + 30

Budget Project B: Field Activities

(In Thousands)
1975 Estimate - $13,555
1974 Estimate - 11,641
1973 Actual - 9,749

Purpose and scope of work

This budget project provides support for field administrative activities not covered by other budget projects. The major activities are: Headquarters Battalion, Headquarters, Marine Corps for administrative support for Marine Corps personnel assigned to Headquarters, Marine Corps; the Marine Barracks, 8th and I Streets, Washington, D.C.; and the Marine Corps Finance Center and the Automated Service Center at Kansas City, Missouri.

Justification of funds

The major costs under this budget project are for pay of civilian personnel, automatic data processing, administrative support and maintenance of real property facilities at the Marine Barracks, 8th and I Streets, and Headquarters Battalion, Headquarters, Marine Corps.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 civilian graded pay increase ($+188,000), and increase in Government contribution for civilian health benefits insurance ($+8,000)	+196
2. Increase for 70 civilian manyears and 139 end strength related to the FY 1975 military/civilian conversion program	+651
3. Increase in FY 1975 compared to FY 1974 for full year funding of ungraded civilian personnel pay increases approved or to be approved in FY 1974	+ 11
4. Increase in FY 1975 compared to FY 1974 for full year funding of new civilian personnel hires replacing personnel retired under Public Law 93-39 in FY 1974	+ 18
5. Increase for additional civilian workday in FY 1975	+ 34
6. Increase in FY 1975 compared to FY 1974 for full year funding of 276 civilian personnel related to FY 1973/1974 military/civilian conversion program	+1,060
7. Decrease of six civilian manyears and end strength related to automatic data processing	- 90
8. Decrease in headquarters staff of 9 civilian personnel	- 16
9. Reduction in travel of personnel requirements	- 91
10. Increase related to maintenance of real property facilities requirements	+131
11. Decrease in automatic data processing requirements	- 63
12. Increase for utilities in support of new plant resulting from Military Construction project completion ($+67,000), and an increase to support collateral equipment requirements for Military Construction projects ($+10,000)	+ 77
13. Increased procurement costs for fuel ($+35,000) offset by other minor decreases in operating costs ($-39,000)	- 4
Net increase	+1,914

Budget Project C: Other Support Activities

(In thousands)
1975 Estimate - $6,002
1974 Estimate - 1,634
1973 Actual - 1,393

Purpose and scope of work

This project provides centralized personnel support services on a Marine Corps wide basis, and miscellaneous support not provided elsewhere.

Justification of funds

Funds requested provide for civilian salaries and related costs for Public Affairs Program, medals, ribbons and awards; support of international sports competion; purchase of library books; General Services Administration space rental costs; and Marine Corps' share of the armed forces professional entertainment program and other miscellaneous travel costs.

The net increase is due to:

1. Increase in FY 1975 compared to FY 1974 for full year funding of the October 1973 graded civilian pay increase	+ 3
2. Increase for GSA building rental cost in accordance with Public Law 92-313, Public Building Amendment of 1972	+3,562
3. Increase required for Marine Corps participation in the Bicentennial Observance	+ 470
4. Net decrease in travel costs related to physical examinations for temporary retired personnel, ($-102,000), Olympic type sports competition ($+15,000), Excess Leave Program (LAW) ($+3,000), and other travel of personnel requirements ($-14,000), offset by other minor increases in operating costs ($+28,000)	- 70
5. Increase for overtime services (heat, air conditioning, and physical protection) over and above that included in General Services Administration rates	+ 403
Net increase	+4,368

BUDGET ACTIVITY 10: SUPPORT OF OTHER NATIONS
SUMMARY OF OBLIGATIONS

(In Thousands)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
A	Support of Allies	$ 176	-	-

Introduction

This activity supports Marine contingents of Free World Forces.

Budget Project A: Support of Allies

(In thousands)
1975 Estimate - $ -
1974 Estimate - $ -
1973 Actual - $ 176

Purpose and scope of work

This budget activity aggregates costs under one budget project "Support of Allies".

The concept of the support furnished is in general the same as described under "Forces" in Budget Activity 2, General Purpose Forces.

Justification of funds

Assistance to "Free World Forces" Marines is furnished primarily for Marine expeditionary equipment. Military common item support is provided by the U. S. Army. The support provides primarily consumable supplies and equipment items of an operation and maintenance nature.

The Department of the Army assumed responsibility for the MASF program for the Replublic of Vietnam Marine Corps in FY 1974.

Reserve Personnel, Marine Corps

Operation and Maintenance, Marine Corps Reserve

Chairman McClellan. The next appropriations to be considered will be those for "Reserve Personnel, Marine Corps," and "Operation and Maintenance, Marine Corps Reserve."

PROGRAM AND FINANCING

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

DEPARTMENT OF THE NAVY

RESERVE PERSONNEL, MARINE CORPS
PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	Identification Code: 07-05-1108-0-1-051	1973 Act	1974 Est	1975 Est
	Program by Activities:			
	Direct Program:			
	1. Reserve Component Personnel	64,642	60,656	68,485
	2. Reserve Officer Candidates	3,733	4,344	4,515
	Total Direct Program	68,375	65,000	73,000
	Reimbursable (Total)	250	300	300
10	Total Obligations	68,625	65,300	73,300
	Financing:			
	Receipts and Reimbursements From:			
11	Federal Funds	- 251	- 272	- 272
14	Non-Federal Sources	- 10	- 28	- 28
25	Unobligated Balance Lapsing	8,442	-	-
	Budget Authority	76,806	65,000	73,000
	Budget Authority:			
40	Appropriation	76,806	61,173	73,000
44.30	Proposed Supplemental for Military Pay Raises	-	3,827	-
	Relation of Obligations to Outlays:			
71	Obligations Incurred, Net	68,364	65,000	73,000
72	Obligated Balance, Start of Year	8,496	8,088	10,088
74	Obligated Balance, End of Year	-8,088	-10,088	-11,088
77	Adjustments in Expired Accounts	-4,626	-	-
90	Outlays, Excluding Pay Raise Supplemental	64,146	59,573	71,600
91.30	Outlays from Military Pay Raise Supplemental	-	3,427	400

DEPARTMENT OF DEFENSE - MILITARY

OPERATION AND MAINTENANCE, MARINE CORPS RESERVE

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 07-10-1107-0-1-051	1973 ACT	1974 EST	1975 EST
PROGRAM BY ACTIVITIES:			
DIRECT PROGRAM:			
1. MISSION FORCES	2,925	3,382	3,847
2. DEPOT MAINTENANCE	653	737	737
3. OTHER SUPPORT	4,367	6,931	6,816
TOTAL DIRECT PROGRAM	7,945	11,050	11,400
REIMBURSABLE (TOTAL)	260	259	259
10 TOTAL OBLIGATIONS	8,205	11,309	11,659
FINANCING:			
RECEIPTS AND REIMBURSEMENTS FROM:			
11 FEDERAL FUNDS	-258	-259	-259
14 NON-FEDERAL SOURCES	-2	.....	.....
25 UNOBLIGATED BALANCE LAPSING	149	.....	.....
40 BUDGET AUTHORITY (APPROPRIATION)	8,094	11,050	11,400
BUDGET AUTHORITY:			
40 APPROPRIATION	8,094	11,000	11,400
44.20 PROPOSED SUPPLEMENTAL FOR CIVILIAN PAY RAISES	.....	50	.....
RELATION OF OBLIGATIONS TO OUTLAYS:			
71 OBLIGATIONS INCURRED, NET	7,945	11,050	11,400
72 OBLIGATED BALANCE, START OF YEAR	.....	2,325	3,405
74 OBLIGATED BALANCE, END OF YEAR	-2,325	-3,405	-3,805
90 OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL	5,620	9,923	10,997
91.20 OUTLAYS FROM CIVILIAN PAY RAISE SUPPLEMENTAL	.....	47	3

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BIOGRAPHICAL SKETCH AND PREPARED STATEMENT

Chairman McClellan. The principal witness for these two appropriations, which will be considered together, will be Maj. Gen. Michael P. Ryan, Director of the Marine Corps Reserve. You may proceed, General.

General Ryan. Could I submit my biographical sketch and statement for the record and highlight the difference in the budget between this last year and then touch on three things?

Chairman McClellan. General Ryan's biography and statement will be placed in the record.

You may proceed, General.

[The biographical sketch and statement follows:]

Biographical Sketch of General Ryan

Michael Patrick Ryan, who earned the Navy Cross and the British Distinguished Service Cross at Tarawa, was born in Osage City, Kansas, January 31, 1916, and attended high school in Atchison and Kansas City, Kansas. He attended Rockhurst College in Missouri and, later, George Washington University, majoring in Political Science.

Enlisting in the Marine Corps Reserve in 1933, he was called to extended active duty in November 1940 with the 15th Reserve Battalion of Galveston, Texas, and commissioned a Marine second lieutenant.

As a major during World War II, he served initially with the Sixth Marines in Iceland. Later assigned to the Second Marines, 2d Marine Division, Major Ryan took part in combat on Guadalcanal, Tarawa, Saipan, and Tinian. The Navy Cross was awarded him for heroism in leading his company and two others, which he organized into a composite infantry battalion, in a bitterly fought attack on Betio in the Tarawa campaign. He also received the British Distinguished Service Cross for his actions at Tarawa, Gilbert Islands, on November 20–24, 1943.

Following the war, he served at Marine Corps Schools, Quantico, Virginia, until 1948; at Headquarters Marine Corps until 1951; and with the U.S. Naval Mission in Venezuela from 1951 until 1953. In July 1954, he reported to the 1st Battalion, Seventh Marines in Korea, as a battalion commander. He was promoted to lieutenant colonel in April 1950, and to colonel in August 1958.

During subsequent assignments, he served as a training officer with Fleet Marine Force, Pacific, in Hawaii (1955–57); with the G–1 Division, Headquarters Marine Corps (1957–60); and as Commanding Officer, Recruit Training Regiment, Recruit Depot, Parris Island, South Carolina (1960–63). He was designated Assistant Director, Joint Planning Group, Office of the Deputy Chief of Staff (Plans and Programs), Headquarters Marine Corps, in July 1964.

He completed the Junior Course, Amphibious Warfare School, Quantico (1946); Command and General Staff College, Fort Leavenworth, Kansas (1954); and the National War College, Washington, D.C. (1964).

Prepared Statement

In January 1966, he was promoted to brigadier general and assumed duties as Assistant Chief of Staff, G–2, while serving concurrently with the Joint Planning Group at Headquarters Marine Corps. He received his B.A. degree from George Washington University in 1966.

From April 1966 until December 1966, BGen. Ryan served as Commanding General, 9th Marine Amphibious Brigade/Commanding General, FMF, Seventh Fleet. From January until May 1967, he was Assistant Division Commander, 3d Marine Division, Republic of Vietnam. For his service in the latter capacity, he was awarded the Legion of Merit with Combat "V".

Upon hs return to the United States, Ryan reported to the Marine Corps Base, Quantico, and served for one year as Director, Command and Staff College, and was further assigned in June 1968 as Deputy for Education/Director, Education Center. On Sept. 1, 1968, he was promoted to major general.

After his detachment from Quantico in May 1969, MajGen. Ryan served for two years as Commanding General, 2d Marine Division, FMF, Marine Corps Base, Camp Lejeune, N.C. This was followed by duty as Deputy Commander, FMF, Atlantic, in Norfolk, Virginia, from June 1971 to December 1972. He assumed the assignment as Commanding General, III Marine Amphibious Force in January 1973. In January 1974, he assumed his present assignment.

A complete list of his medals and decorations includes: the Navy Cross; the Legion of Merit with Combat "V"; the Presidential Unit Citation with two bronze stars; the American Defense Service Medal; the European-African-Middle Eastern Campaign Medal; the Asiatic-Pacific Campaign Medal with five engagement stars; the American Campaign Medal; the World War II Victory Medal; the National Defense Service Medal with one bronze star; the Korean Service Medal; the Vietnam Service Medal; the Distinguished Service Cross (British Award); the Vietnamese Cross of Gallantry with Palm; the Vietnamese National Order, 5th Class; the United Nations Service Medal; and the Republic of Vietnam Campaign Medal.

MajGen. Ryan and his wife, the former Marjorie Allen of Galveston, Texas, have three children: Michael Jr., Allen, and Theresa.

Mr. Chairman and members of the committe, I am Major General Michael P. Ryan, Director of Marine Corps Reserve. I appreciate the opportunity to appear before you today to present information relative to the Fiscal Year 1975 budget requests for the Appropriations Reserve Personnel, Marine Corps and Operations and Maintenance, Marine Corps Reserve. I will briefly review our mission, forces, training, manpower and the budget requirements.

Budget Request

The Appropriation Reserve Personnel, Marine Corps provides for pay, allowances, clothing, subsistence, per diem, travel and other related costs for training members of the Marine Corps Reserve and reserve officer candidates. It also provides for assigning reserves to active duty to support the Marine Corps Reserve program as authorized under Section 265 of Title 10, U.S. Code and for clothing for the Marine Corps Junior ROTC program. The Appropriation Operations and Maintenance, Marine Corps Reserve, provides funds for the operating costs of the Selected Reserve not provided for by other appropriations. Activities and functions funded by this appropriation include training operations and exercises; maintenance of equipment used in training; replacement of minor end items of equipment used in training; maintenance and minor repair of reserve training centers; recruiting efforts for the Selected Reserve, and administrative support for the Marine Corps Reserve program.

Mission and Forces

The mission of the Marine Corps Reserve is to act as a deterrent to armed conflict. To accomplish this mission we must maintain a high state of mobilization readiness with the ability to provide combat ready units and qualified individual reserve Marines in time of war or national emergency. Under the Total Force Policy, the Marine Corps Reserve participates with other branches of the military service in a comprehensive and continuous program for the defense of the United States. Accordingly, the Selected Reserve is structured to facilitate accomplishment of this mission. The 4th Marine Division, the 4th Marine Aircraft Wing, Combat Support and Combat Service Support units comprise the Selected Reserve.

Training

Training of the Marine Corps Reserve is accomplished both on a unit and an individual basis. A reservist's initial period of active duty, which on the average, is for a period of about five months, provides him with the basic military training given all active duty Marines. After completion of about 10 weeks of recruit training, the individual is trained in the basic skills of his Military Occupational Speciality. After completion of Initial Active Duty, the reservist returns to his home town reserve unit where he participates in 48 drills annually. Training during drill periods is aimed at increasing the reservist's individual skills. Additionally, unit training exercises are held to enhance mobilization readiness consistent with the mission of the unit.

Selected Reserve Training

During two weeks of Annual Training Duty Selected Reserve units progress over a five year period from individual unit tactics through large scale air/ground exercises with regular and allied units. These large scale training exercises with other forces, which culminate the five year training cycle, greatly improve our mobilization readiness as well as enhance total force posture. Unfortunately large scale training exercises and the comprehensive planning that precedes them, which is invaluable training in itself, must be minimized for Fiscal Year 1975 and the remainder of Fiscal Year 1974 because of increased travel costs and petroleum conservation measures.

Drill Requirements

Chairman McClellan. Are all reservists required to participate in 48 drills annually? Explain what counts as one drill. What happens to a man who fails to attend 48 drills?

General Ryan. All reservists who are members of a selected Reserve unit, pay group A, are required to participate in 48 drills annually. Satisfactory participation in one 4 hour drill period constitutes one drill. If a man fails to attend 48 drills and is a mandatory participant, the Marine becomes vulnerable for either assignment to involuntary active duty for a period of time that when added to active duty served equals a total of 24 months; or, possible discharge action from the Marine Corps. If the individual is a non-mandatory participant and upon the commanding officer's recommendation the individual may be transferred to the Individual Ready Reserve.

Chairman McClellan. Proceed.

General Ryan. In fact, some of our reserve units will have to perform their two weeks annual training duty at home in Fiscal Year 1975. Continuation of this procedure beyond Fiscal Year 1976 could degrade mobilization readiness inasmuch as annual training duty with regular forces provides our most realistic training.

Foreign Training

Another factor which affects training is the exclusion of the Marine Corps Reserve from participation in foreign training exercises. Under the Total Force Concept, reserve units readiness would be greatly enhanced by combined training with regular and allied forces in possible contingency areas. I would like to institute a modest program of participation in joint training exercises overseas, both to demonstrate and exercise our rapid response and reinforcement capabilities and to demonstrate to our allies the reality of the Total Force Concept. Such overseas training would be predicated on participation in regularly scheduled joint or combined exercises, training for specific contingency operations or in areas where environmental conditions cannot be duplicated within the United States.

Reserve Training at Home

Chairman McClellan. How many reserve units performed their two weeks annual training duty at home during fiscal year 1973 and 1974 and are projected to do so during FY 1975? Provide an estimate of the cost for a typical unit to perform the annual training duty at home and compare with the cost of a typical unit performing training with regular forces.

General Ryan. During fiscal year 1973 one ground reserve unit conducted annual training at home, and while there were aviation units trained at their home station, specific data is not available. In fiscal year 1974, nine units conducted this duty at their home training centers. It is projected that during fiscal year 1975, 17 reserve units will conduct annual training duty at home. This marked increase is due to actions taken in December 1973 as a result of the fuel crisis.

The estimated cost to train a typical unit, in this case 150 reservists, to perform annual training duty at home is approximately $45,119.55. In utilizing the average budgeted travel cost figure of $159.52 per reservist, an estimated additional $23,928.00 for cost of transportation for a total of $69,047.55 is necessary for training with the regular forces. The preferred method of performing annual training duty is at a Marine Corps established base. This ensures the availability of suitable facilities and support, provides interrelaton between regular and re-

serve, and over a period of several years permits the reservist to experience various climatic and environmental situations.

Chairman McClellan. Proceed.

General Ryan. Should Congress decide to approve this type of training, we would inagurate a modest program involving about 1,000 Reserves in air and ground units in exercises in the Mediterranean and Caribbean areas.

Cost of Joint Overseas Training

Chairman McClellan. What would be the cost in FY 1975 for a program of joint training overseas for 1,000 reservists? Are our allies receptive to this concept?

General Ryan. An estimated additional $306,000 travel cost would be required to train 1,000 reservists in an overseas area. This program would not be concentrated only on joint training exercises with allied forces. Our desire is to commit 70–75% of these reservists to training sites in Panama, the Caribbean, and Alaska, and the remainder to a joint exercise in the European area. Experiences of three rifle companies deployed in previous joint exercises over a two year period in the NATO area indicate reserve participation to be beneficial to our allies as well as our reservists.

Cost of European Exercise Participation

Chairman McClellan. What would be the cost of the modest program recommended for reserve participation in Mediterranean and Caribbean exercises?

General Ryan. A modest program allowing for reserve participation with three rifle companies (600 reservists) in training exercises in the Mediterranean and Caribbean would require an approximate additional cost of $132,000.

Chairman McClellan. Proceed.

Manpower

General Ryan. Addressing first, the Fiscal Year 1974 column of the Fiscal Year 1975 Reserve Personnel Budget, I wish to inform the committee of the changes from last year's manpower request. The Authorization Act (Public Law 93–155) allowed the Marine Corps Reserve an average strength of 39,735 which equates to an end-strength of 39,488 for Fiscal Year 1974, the number requested. However, manpower shortfalls, due primarily to recruiting and retention difficulties resulted in sufficient funds being appropriated to support an end-strength of only 36,063.

Declining Reserve Strength

The persistently declining strength of the Marine Corps Reserve has forced immediate, and almost total, attention on recruiting and retention. In compliance with congressional wishes, the regular and reserve recruiting efforts of the Marine Corps were consolidated on April 1, 1973. Unfortunately, this coincided closely with the end of the draft, the impact of which has made it difficult to fairly evaluate Consolidated Recruiting. Our original recruiting goal for the period of July-December 1973, was 4,200 personnel. Only 1,527 new accessions were realized. We do not consider this to be indicative of our recruiting capabilities and we are determined to improve our results. Recent steps taken to improve recruiting include:

1. Assignment of a general officer, with much experience in this area, to head Consolidated Recruiting.
2. Assignment of additional personnel to the recruiting force on a temporary basis to provide surge recruiting capability.
3. Nearly doubling the number of full time reserve recruiters as 96 new recruiters approved by this committee in December 1973, complete their training and become productive in April of this year.

Recruiting Force Service

Chairman McClellan. Is service in the consolidated recruiting force voluntary? How are individuals selected for this duty?

General Ryan. Within the consolidated recruiting force there are currently 202 reserve recruiters. For these individuals service is on a voluntary basis.

Applicants are solicited throughout the Marine Corps. Interested persons then submit an administrative action form via his military chain of command to Headquarters Marine Corps. Each applicant is screened to ensure he is qualified and capable of withstanding the demands of recruiting duty. Selection is then made at Headquarters Marine Corps level based on the Marine's record and needs of the recruiting service.

Chairman McCLELLAN. Proceed.

General RYAN. 4. Increased efforts of Consolidated Recruiting on obtaining reserve accessions.

5. Setting aside the on-going projects of Reserve Volunteer Training Units and making recruiting their only assignment, (this incidentally, is cost-free as these individuals serve without pay).

6. Assigning an officer and a staff noncommissioned officer in every one of our reserve units collateral duties of coordinating recruiting efforts in their home town areas with the local recruit station.

7. Enjoining all reservists to participate actively in the Reserve recruiting effort and to lend all possible support to local recruiters.

8. We are in the process of increasing the number of prior service personnel (that is former Marines) from 18 to 25 percent of the Selected Reserve. (This is less costly, inasmuch as they are already trained; also, they have a wealth of experience upon which we can draw).

9. Lastly, I have directed unit commanders to place increased emphasis upon retention.

EDUCATIONAL BENEFITS FOR RESERVISTS

I am glad to be able to report that the above steps have already resulted in a slight upturn in our quota attainment. However, there are two additional steps which would have a very favorable impact but which are only with in the power of Congress to implement. First, some form of education benefit, such as a GI Bill for reservists or a tuition assistance program would greatly enhance our ability to attract and retain adequate numbers of quality personnel.

RESERVISTS TUITION ASSISTANCE PROGRAM

Chairman McCLELLAN. Has specific legislation for a reservist's tuition assistance program been submitted to Congress?

General RYAN. No, sir. The proposal is currently at OSD.

Chairman McCLELLAN. Proceed.

General RYAN. Recent surveys have shown that personnel in the top two mental groups are more interested in educational benefits than increased pay. I would hope therefore that Congress would favorably consider such action in the very near future.

RESERVE PAID ADVERTISING

Second, the Marine Corps Reserve needs to get into paid print and outdoor advertising. Heretofore, the Marine Corps Reserve has relied on public service advertising for entry into printed and electronic advertising media. Outside surveys show that our public service and other advertising is reaching about 15 to 20 percent of the qualified military availables with a frequency of about 1.5 to 2 times a month. This contrasts with the other services which are reaching about 90 percent of the target population with a frequency of 9 to 10 times a month by utilizing paid advertising. With such a relatively low awareness among the quality young men we seek, our recruiters literally have had to create a market awareness by "one-on-one" in order to have the opportunity to discuss the advantages of service in the Marine Corps Reserve.

With the recruiting environment that exists today, the Marine Corps Reserve needs the visibility that paid advertising has given the other services.

MARINE CORPS ADVERTISING BUDGET

Chairman McCLELLAN. What is the Marine Corps advertising budget, paid and other, for FY 1973 through FY 1975?

General RYAN. The Marine Corps Reserve advertising budget, paid and other, for FY 1973 through FY 1975 is as follows:

[In thousands]

	Fiscal year—		
	1973	1974	1975
Paid [1]	0	0	0
Other	$296	$1,300	$1,550
Total	296	1,300	1,550

[1] Paid advertising in the amount of 1,300 is currently pending legislative reprograming action from RPMC to O. & M.M.C.R

Chairman McCLELLAN. Continue.

General RYAN. I therefore request that you consider giving us the opportunity to enter paid advertising as soon as possible.

RECRUITING FORECAST

Although the Marine Corps Reserve is presently meeting only 82 percent of our mobilization requirements vis-a-vis our manpower strength, we have implemented a plan to meet 100 percent of requirements by Fiscal Year 1979. By recruiting 6,640 non-prior service personnel, plus 5,500 former Marines respectively in the out years, we will reach this target. The steps we've taken within the Marine Corps, which I outlined above, plus some assistance from Congress in the areas of education benefits and paid advertising, should enable us to achieve 100 percent of mobilization requirements.

EQUIPMENT

Marine Corps Reserve units are authorized the same equipment allowances as like units in the Regular Establishment. Major items of equipment for ground combat units are usually funded by the Appropriation Procurement, Marine Corps.

The amount of equipment on hand in reserve units is limited to that which can be effectively utilized for training, and which can be properly stored and maintained. At the present time all Organized Marine Corps Reserve units have sufficient equipment on hand to ensure adequate training. Marine Corps policy provides that procurement of major end items for active duty ground forces will normally include a buy for the Marine Corps Reserve.

RESERVE TANK STATUS

Chairman McCLELLAN. Describe the current tank equipage of the Marine Reserves as well as the future plans in this area.

General RYAN. The two Marine Reserve Battalions are currently equipped with the M–48A3 tank as are the three regular tank battalions. Each Reserve tank unit has ample training equipment in its home center for drill requirements with the remaining mobilization equipment held within the prepositioned war reserve at the Marine Corps Supply Centers.

[A deficiency of 77 M–48A3 tanks currently exists in the Marine Corps Reserve due to replacement of the M–103 by the M–48A3. Additional M–48A3 tanks will be received by Reserve units as follows:

Quantity:	
5	3d quarter, 1975
15	4th quarter, 1975
57	1st quarter. 1976

Reserve units will be equipped with the M–60 tank commencing FY–76.]

Chairman McCELLAN. Proceed.

General RYAN. The following modernization program illustrates the current plan:

MODERNIZATION PROGRAM

1. Distribution of the LVT P7, Personnel Amphibious Tractor has been completed and backup stocks are available at supply centers. The command and recovery vehicle, of the LVT P7 family, will be delivered in the 4th quarter of

Fiscal Year 1974. Introduction of the LVT P7 will be complete when the Prepositioned War Reserve stock for ancillary vehicles is attained in the 1st quarter of Fiscal Year 1975.

2. While shortages still exist in the area of Helicopter Expedient Refueling Systems, delivery is planned in Fiscal Year 1975.

3. The M–561 Gama Goat Tactical Truck is 95 percent introduced with the remainder on the way this year.

4. The expedited issue of the AN/PPS–6 Ground Surveillance Radar and Remote Sensing Equipment to South East Asia units had the effect of delaying distribution to the Marine Corps Reserve. This equipment should be available to us in Fiscal Year 1976.

5. The AN/MPQ–10 Counter Mortar Radar is over 20 years old and becoming difficult to support. It is to be replaced by the AN/MPQ–4A beginning in the 4th quarter of Fiscal Year 1974.

6. The M–60 Tank is scheduled for delivery in Fiscal Year 1976.

7. Deficiencies of Navy funded equipment items exist in our Reserve Aircraft Wing Modernization of our fighter aircraft has begun with the phasing in of the F4 which should be completed by the end of Fiscal Year 1976. Introduction of KC–130 aircraft is currently proposed for Fiscal Year 1976 also. Combat capabilities of the wing will continue to be adversely affected because of the lack of photo reconnaissance, electronic warfare, self-contained all weather attack, and aerial refueling aircraft. Additionally, a lack of some aviation ground support equipment and aeronautical spare parts exists. These deficiencies are being discussed with the Navy and additional funding should alleviate the problem. Delivery of some of these items is scheduled for the 3rd quarter of Fiscal Year 1975.

8. Lastly, we have continued to make inroads in reducing secondary item deficiencies in the Prepositioned War Reserve (PWR). Eighty percent of the stock fund account item requirements to initially outfit and provide mount-out for the Selected Reserve have been attained. All unfundeded PWR deficiencies are secondary items—that is, there are no principal end item unfunded PWR deficiencies.

Fuel Conservation

In compliance with congressional wishes and dictates of the energy crisis, the following steps have been taken to reduce fuel consumption by the Marine Corps Reserve:

1. Annual Training Training Duty for many Reserve units were rescheduled to nearer geographical sites for some units and to home training centers for others.

2. All out-of-country Annual Training Duty was rescheduled to within-country sites.

3. Motor marches, that is the use of tactical vehicles to Annual Training Duty sites, have been reduced.

4. Reduction of the Fiscal Year 1974 flying hour program of our Marine Reserve Air Wing by 17.4 percent. The projected Fiscal Year 1975 flight hour program has been reduced 33.2 percent from the initial Fiscal Year 1974 program.

5. Transcontinental travel to Annual Training Duty was minimized.

The impact of the above conservation steps will be a reduction in training. The impact on readiness will fall most acutely on aviation units. Early restoration of an adequate flying hour program is essential to combat readiness.

Decrease in Flying Hour Program

Chairman McClellan. What is the percentage decrease in the FY 1975 flying hour program from the actual FY 1973 program?

General Ryan. There is a 12.7% decrease in the budgeted FY 1975 flying hour program from the actual FY 1973 program. If additional funds are not provided to support fuel price increases experienced subsequent to the budget submission, an additional decrease of 19.5% from the FY 1973 base would be required making a total reduction of 32.2%.

Chairman McClellan. Proceed.

General Ryan. An associated problem, that deeply concerns us is the availability of gasoline in the private sector. A current demographic study shows that 35 percent of our enlisted reservists live over 25 miles from their home town

training center, while 10 percent live beyond 50 miles. Thus far more has not been an appreciable falloff in drill attendance, although we have received several congressional inquiries, originated by reservists with complaints about the availability of fuel. In a sense our people are being penalized for serving their country. Attending drill increases their consumption of gasoline, which is selling at higher and higher prices.

Civilian Contract Training

I would like to report that the Civilian Contract Training Program, first approved by Congress in Fiscal Year 1974, has been very favorably received by our reservists in the field. Under this program, a unit can contract with a local vocational/technical school to conduct special courses which are aimed towards improving the capability of the individual reservist in his Military Occupational Speciality. Courses are presently being conducted in such areas as welding, automotive mechanics, and communications equipment repair, to name a few. The admantages of this program are twofold: one, it acts as an incentive—by making drill-training more interesting through the use of expert civilian professionals as instructors; and two, it increases the technical proficiency of the reservist receiving the training.

Because of the success of this program and the benefit the Marine Corps Reserve is realizing from it, we have asked for a modest expansion of it in this budget request, to the tune of an additional $114,000.

Cost of Civilian Contract Training

Chairman McClellan. What is the total FY 1975 cost for civilian contract training?

General Ryan. The budgeted amount for civilian contract training for FY 1975 is $314,000.00.

Chairman McClellan. Continue.

Budget Requests

General Ryan. The Reserve Personnel, Marine Corps Fiscal Year 1975 budget request is for $73 million and supports an average paid drill strength of 36,703. This plan will support 87 percent of mobilization requirements. What we are requesting is a floor—not a total authorization to include the total requirement. We have been unable to meet our Selected Reserve minimum average strength mandated by the Congress for Fiscal Year 1974. Our request for Fiscal Year 1975 recognizes this fact and the floor we are requesting is considered a base from which we can rebuild our strength—rebuild them to mobilization manning level objectives which are commensurate with effective mobilization and deployment in an emergency. The request also includes funds for 4,204 Reserve Officer Candidate training tours and clothing for an estimated 7,061 Marine Corps Junior ROTC cadets.

The $8 million increase in this request over that approved for 1974 is due to the inclusion of military pay raises, a functional transfer of short tours for reserve training assistants from the personnel appropriation which supports the regular Marine Corps and an increase in average strength of 1,585 personnel.

The Operations and Maintenance, Marine Corps Reserve budget request for Fiscal Year 1975 is $11.4 million. This request is $320,000 greater than the $11,080,000 is requested in the Fiscal Year 1974. The increase is primarily due to increased postal rates, fuel price increases, and a requested increase in the Civilian Contract Training Program.

Summary

In this presentation of the budget requests for the Marine Corps Reserve for Fiscal Year 1975, Appropriation Reserve Personnel, Marine Corps I have touched briefly on those areas which I thought would be of special interest to the committee. The funds requested will enable us to continue to progress towards combat readiness. Additional requirements not included herein are funds for overseas training, paid advertising and educational benefits for reserve personnel.

Mr. Chairman, this concludes my prepared statement. It is my hope that your examination of our recommendations will reveal that we have responded appropriately to your previous counsel and directions. I will be pleased to attempt to answer any questions you may have about this budget request or to provide such additional information that you may require.

BUDGET REQUEST

General RYAN. The Reserve budget is in two parts. First, operation and maintenance, here we are asking for $11.4 million this year. This is an increase of $320,000 based primarily on increased postal costs and increased fuel costs. The major part of the budget is Reserve personnel, Marine Corps. We are asking for $73 million this year, an increase of $8 million. Part of this increase is an administrative transfer of a portion of the budget from military personnel, Marine Corps to Reserve personnel. This consists of the training assistants that are brought on board by the Marine Corps Reserve to assist them in Reserve training.

In past years this was carried in the MPMC budget. It is now included in the RPMC budget. The other portion of the increase of the $8 million reflects an average strength increase of 1,585 marines, and the rest is the October 1, 1973, pay raise.

PERSONNEL PROCUREMENT

With that as a background, I would like to touch on three things. First our personnel procurement, that was discussed by General Jaskilka. Procurement of enlisted personnel is our No. 1 problem. In the first half of this fiscal year we had a target of 4,200 non-prior service accessions. We were able to procure 1,527, about 25 percent of our target rate. We do not believe this to be our capabilities even under conditions that exist today.

As General Jaskilka pointed out, when the draft ended there was an immediate difficulty in both active and Reserve recruiting and over a period of time it is determined that we need increased assets. These assets are being provided to the recruiting service to enable them to cope with this difficulty.

In addition, we have gone out to our Reserve units and directed that they participate actively in the procurement effort. We have asked our Reserve officers to assist in this and have directed all our volunteer training units to stop all other work and get on recruiting.

RECRUITING GOAL INCREASES

I am happy to report that since January our percentage of achievement of our goals has gone up about 10 percent a month. However, it is not anything to brag about yet since we are only getting about 55 percent of our quota of non-prior service accessions, but it is improving.

Chairman MCCLELLAN. You feel encouraged enough to believe that you are going to really lick the problem?

General RYAN. Yes, sir. And I might touch on some of things that have been done in addition to the request for paid advertising. We are now authorized to enlist personnel in high school, put them in

units, pay them, then send them on active duty in the summer months. Administrative things of this nature will help us, too.

EFFORTS TO IMPROVE RETENTION

We are striving to improve our retention, which has been very poor, and we are starting on a program of reenlistments and retention of personnel that we think will bear fruit shortly.

Chairman McCLELLAN. Your experience in that respect has not been satisfactory up to this time?

General RYAN. No, sir, we are at about 3 percent reenlistment of our first termers.

Chairman McCLELLAN. Only about 3 percent?

General RYAN. But those are 6-year men, sir, and many of them are getting up where they have families. I don't think you can expect much more than 20 percent at the outside. We can do better than 3 percent, and I think we will get on that.

Chairman McCLELLAN. There is quite a gap between 3 percent and 20 percent.

General RYAN. Yes, sir.

Chairman McCLELLAN. If 20 percent is the highest retention you can reasonably anticipate, you still have a long way to go.

General RYAN. Yes, sir, and we have to do this.

Chairman McCLELLAN. How did you get in this situation? You were just not prepared?

General RYAN. We were not prepared for it.

Chairman McCLELLAN. For an all-volunteer force?

General RYAN. It is not only that. We were not prepared for the all-volunteer force. I don't think our Reserve units were geared to assist in the recruiting efforts because during the draft they had everybody coming in that they needed and our consolidated recruiting effort did not have the assets that were required to cope simultaneously with shortages, a great shortage in the Reserves, and in the regulars and they spread themselves too thin.

ADVERTISING

Additional assets are being provided through paid advertising. All the other services are presenting their programs to the young men in the United States and we need that same opportunity in the Marine Corps Reserve as they need in the regulars. It would be a consolidated program run by the recruiting service but calling attention and localized where necessary to support Marine Corps Reserve procurement.

NEED FOR RESERVE RECRUITING INCENTIVES

I would like to point out one other thing, Mr. Chairman. I think it is time, and I know that proposals will be coming forward, as were intimated by Admiral Cooper—proposals to assist recruiting into the Reserve forces. There are many incentives for active duty service. There are none for performing in the Marine Corps Reserve. This made sense a couple of years ago because a man was either drafted or went into the Reserves. Now we are asking our Reserve personnel to

be ready to be called and in combat within 60 days and we offer them no incentives for joining.

Now, our young men are patriotic, but they are also governed by an enlighted self-interest and I think what we need to do is to loook at reasonable incentives for a young man to serve in an organized unit. I think the major thing we need is some kind of educational assistance that will enable us to attract the man in high school or the young man in college or junior college. I think this would be one of the major items that would help us overcome our difficulties.

I think we can do better than we are doing, and have done in the past. But I think we will need additional incentives to overcome our shortfall.

FLYING TIME SHORTAGES

I would like to touch on the shortage in flying time that was alluded to by Admiral Cooper because this will have a serious impact on our fourth wing.

Now, the driving factor that allows us to put pilots into the air is the amount of what I will call Zero 1 funds given to our Fourth Reserve Aircraft Wing by the Director of the Naval Air Reserve. These are the moneys that will support maintenance of the aircraft and the gasoline.

Based on what we would want to have in order to keep up a pilot's proficiency in the Marine Corps we assume 140 hours a year for an active duty pilot, and 120 hours a year minimum for a Reserve tactical pilot. One hundred hours a year for Reserve support pilot. That is transport type.

Now, during fiscal year 1973 we had 923 pilots supported by the Fourth Marine Reserve Wing but not all of them were on the wing. Some were regulars on independent duty. Because of our gasoline shortage we reduced that to 778 pilots, which met the requirements for the Reserve wing. But any future cuts in this Zero 1 funding as alluded to by Admiral Cooper and which are anticipated in fiscal 1975 could cut our Fourth Marine Aircraft Wing by 135 pilots because, rather than put a pilot in the air with less than the minimums required to keep his combat efficiency, it would be better to cut the number of pilots and keep everybody up so they are combat ready. So with the anticipation of cuts in Zero 1 funds alluded to by Admiral Cooper, we could lose 135 pilots in the Fourth Marine Aircraft Wing, which would materially reduce our combat readiness.

NEED FOR OVERSEAS TRAINING

One other thing I would like to allude to is not in this budget, Mr. Chairman. Last year the Marine Corps asked for funds to support overseas training. This was taken out of the budget.

Chairman McClellan. This was to support overseas training?

General RYAN. Active duty training. In other words, to send companies to participate in regular exercises or to conduct training in places like the jungle warfare school in Panama. This was taken out by the House Appropriations Committee. It was taken out of the budget. However, the Senate said if the services consider this to be essential they could reprogram.

I mention this now because at times the opinion of Congress is cited to keep out of the budget the funds to support such a program. Last year this program was advanced as an assist to recruiting. Actually it is a program to maintain combat readiness by sending units to areas that we cannot duplicate in the United States for some reason, such as the jungle warfare school in Panama, Arctic operations in other areas. So in the future we would be coming back asking for such training and we would hope that when we do that the Congress will view it sympathetically.

Chairman MCCLELLAN. All right, thank you, General.

General RYAN. Thank you, Mr. Chairman.

JUSTIFICATION

Chairman MCCLELLAN. At this point in the record there will appear certain information from the justification.

[The justification follows:]

Justification

RESERVE PERSONNEL, MARINE CORPS

INTRODUCTORY STATEMENT

The mission of the Marine Corps Reserve is to provide trained units and qualified persons for active duty in the Marine Corps in time of war or national emergency and at such other times as the national security requires. The purpose of the appropriation "Reserve Personnel, Marine Corps" is to maintain an efficient, balanced Marine Corps Reserve component responsive to the initial mobilization requirements of the Marine Corps to expand to a full mobilization force level.

The fiscal year 1974 estimated paid drill end strength is 36,063 and the average paid drill strength is estimated to be 35,118. The FY 1975 budget supports a paid drill end strength of 34,958 and an average strength of 36,703. The FY 1975 end strength includes approximately 2,473 at Initial Active Duty for Training.

This budget provides funds for 4,204 Reserve Officer Candidate training tours and clothing for an estimated 7,061 Marine Corps Junior Reserve Officer Training Corps cadets in FY 1975.

Reserve Personnel, Marine Corps

SUMMARY OF REQUIREMENTS

(In Thousands of Dollars)

	Actual	Estimate	
	FY 1973	FY 1974	FY 1975
Reserve Component Personnel	$64,892	$60,956	$68,785
Reserve Officer Candidates	3,733	4,344	4,515
TOTAL PROGRAM REQUIREMENTS (Obligations)	$68,625	$65,300	$73,300
Less Actual/Anticipated Reimbursements	261	300	300
Less Unobligated balance transferred from other accounts	-0-	-0-	-0-
Unobligated balance lapsing	8,442	-0-	-0-
Total Direct Obligations/Appropriations	$76,806	$65,000	$73,000

Budget Program: 1
Reserve Component Personnel
SUMMARY OF REQUIREMENTS BY BUDGET ACTIVITY

(In Thousands of Dollars)

Budget Activity	Actual FY 1973	Estimate FY 1974	Estimate FY 1975
Direct Program			
Training Pay Group A	$39,083	$41,567	$43,888
Training Pay Group D	689	741	747
Training Pay Group F	21,723	14,089	17,510
School Training	1,158	1,322	1,321
Special Training	870	1,050	3,031
Administration and Support	1,108	1,887	1,988
Total Direct Program	$64,631	$60,656	$68,485
Reimbursable Program			
Training, Pay Group A	$ 20	$ 132	$ 132
Training, Pay Group F	241	168	168
Total Reimbursable Program	$ 261	$ 300	$ 300
Total Program			
Training, Pay Group A	$39,103	$41,699	$44,020
Training, Pay Group D	689	741	747
Training, Pay Group F	21,964	14,257	17,678
School Training	1,158	1,322	1,321
Special Training	870	1,050	3,031
Administration and Support	1,108	1,887	1,988
Total Obligations	$64,892	$60,956	$68,785

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Marine Corps Reserve Personnel In Paid Status

Pay Group	Paid Drills	Paid Days of Active Duty For Training		FY 1973 (Actual Year) Begin	FY 1973 (Actual Year) Average	FY 1973 (Actual Year) End	FY 1974 (Current Year) Average	FY 1974 (Current Year) End	FY 1975 (Budget Year) Average	FY 1975 (Budget Year) End
A	48	14	Off	3,082	2,975	2,937	2,802	2,769	2,750	2,749
A	48	15	Enl	33,463	31,780	31,446	29,881	30,327	30,997	29,736
F	0	150	Enl	4,176	4,321	3,126	2,435	2,967	2,956	2,473
Paid Drill Training										
		Sub Total	Off	3,082	2,975	2,937	2,802	2,769	2,750	2,749
			Enl	37,639	36,101	34,572	32,316	33,294	33,953	32,209
			Total	40,721	39,076	37,509	35,118	36,063	36,703	34,958
Paid Active Duty Training Only										
D	0	13	Off	629	629	629	600	600	600	600
			Enl	58	58	58	100	100	100	100
			Total	687	687	687	700	700	700	700
TOTAL PAID STATUS										
			Off	3,711	3,604	3,566	3,402	3,369	3,350	3,349
			Enl	37,697	36,159	34,630	32,416	33,394	34,053	32,309
			Total	41,408	39,763	38,196	35,818	36,763	37,403	35,658

Averages computed by doubling the end strengths of the months of July through May, adding 30 June strengths of the previous year and the year under consideration, and dividing the total by 24, except for Pay Group D. Pay Group D represents the total number of personnel participating during the fiscal year, and average and end strengths are identical in any one year.

RESERVE COMPONENT OFFICERS ON STATUTORY TOURS OF ACTIVE DUTY

Marine Corps Reserve officers performing full time active duty under Section 265 of Title 10, United States Code:

	FY 1973 (Actual Year)			FY 1974 (Current Year)		FY 1975 (Budget Year)	
	Begin	Average	End	Average	End	Average	End
0-6 Colonel	9	4	8	16	17	17	17
0-5 Lieutenant Colonel	5	10	19	19	20	20	20
0-4 Major	-	8	17	20	21	21	21
0-3 Captain	-	11	22	19	20	20	20
0-2 1st Lieutenant	-	-	-	2	2	2	2
Total	14	33	66	76	80	80	80

Section 265. Policies and regulations; participation of reserve officers in preparation and administration

"Within such numbers and in such grades and assignments as the Secretary concerned may prescribe, each armed force shall have officers of its reserve components on active duty (other than for training) at the seat of government, and at headquarters responsible for reserve affairs, to participate in preparing and administering the policies and regulations affecting those reserve components. While so serving, such an officer is an additional number of any staff with which he is serving."

Appropriation: Reserve Personnel, Marine Corps
Budget Program 1: Reserve Component Personnel
Budget Activity 1A: Training, Pay Group A

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$39,083	$41,567	$43,888

Part I - Purpose and Scope

Pay Group A identifies personnel assigned to Organized Marine Corps Reserve units. Personnel in these units are authorized to attend 48 regularly scheduled drill periods and 14 days Annual Training Duty. Additional paid drills are authorized for selected personnel for improvement of individual skills and to increase unit mobilization readiness.

Scheduled drills provide for classroom training, practical application, and specialist training appropriate to the units. Scheduled drills are conducted as multiple drills of a minimum of eight hours duration (counting as two drills) or a minimum of sixteen hours in one weekend (counting as four drills). Scheduling of multiple drills provides a greater opportunity for field training and special exercises, as well as realistic and more advanced unit and individual training.

Funds requested are based on 98% and 90% attendance at regularly scheduled drills for officers and enlisted personnel, respectively. Personnel in Organized Marine Corps Reserve units are authorized 14 days active duty for training annually, exclusive of travel time. This training is normally accomplished as a unit as part of the Marine Corps Reserve five year cyclic training plan. Funds requested are based on an average tour length of 14 days for 98% of the average officer strength and an average tour length of 15 days for 92% of the average enlisted strength.

Additional paid drills are used for the following purposes:

(1) To maintain technical skills;
(2) Training exercise planning;
(3) Maintenance of equipment; and,
(4) Maintenance of administrative records.

Funds requested for FY 1974 and FY 1975 include 11,600 additional paid drills in each year, for ground personnel to be used for the above listed purposes.

Additional Flying Training Periods (AFTP's) are used by reservists to maintain and improve flight proficiency. A total of 22,800 AFTP's are programmed during FY 1974 and FY 1975 for use by officer and enlisted reservists.

Appropriation: Reserve Personnel, Marine Corps
Budget Program 1: Reserve Component Personnel
Budget Activity 1C: Training, Pay Group D

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$689	$741	$747

Part I - Purpose and Scope

Pay Group "D" annual training conforms to an individual's established "career pattern", and consists of assignments to professional and occupational field training during the span of the individual's reserve service. Professional courses are designed to orient the reservists toward broad military doctrine with emphasis on the modern tasks of sea power and amphibious warfare doctrine through the Amphibious Warfare School, Command and Staff College, Naval War College, Armed Forces Staff College and Landing Force Staff Planning Courses. Occupational field training is accomplished by formal Military Occupational Specialty refresher courses in a particular occupational field, or by on-the-job training in an individual's primary Military Occupational Specialty (MOS). All class III reservists are selected for training only after a full review of each individual's record.

Also included in Pay Group "D" are 60 mandatory participants, who have a Ready Reserve obligation, but are not located within commuting distance of a reserve training center.

Tour lengths average 13 days, which consist of 12 days training, and an average of one day of travel.

Appropriation: Reserve Personnel, Marine Corps
Budget Program 1: Reserve Component Personnel
Budget Activity 1D: Training Pay Group F

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$21,723	$14,089	$17,510

Part I - Purpose and Scope

Title 10, United States Code, Section 511, authorizes a program whereby non-prior service personnel may enlist in the Marine Corps Reserve for a period of six years, of which not less than four months must be spent on initial active duty for training. Funds requested in Pay Group "F" are used for pay and allowances and other personnel costs incurred during this period of initial active duty for training. All trainees are enlisted for a pre-selected Military Occupational Specialty (MOS) and receive recruit training at Marine Corps Recruit Depots, during which time they are integrated with Regular Marine Corps Recruits. Aviation trainees proceed to formal schools conducted by the Marine Corps and other services. Ground trainees proceed to either technical, specialist, or Military Occupational Specialty training. All Marine Corps trainees perform an initial active duty period of not less than 130 days; however, this initial active duty period may be as long as twelve months for certain Military Occupational Specialties.

The budget includes funds to support 5,000 recruits in FY 1974 and 6,640 recruits in FY 1975. This level of recruit input will enable the Marine Corps Reserve to meet 87% of mobilization requirements in FY 1974 and 87% of mobilization requirements in FY 1975.

Appropriation: Reserve Personnel, Marine Corps
Budget Program 1: Reserve Component Personnel
Budget Activity 1E: School Training

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$1,158	$1,322	$1,321

Part I - Purpose and Scope

This program is designed to augment initial active duty training and other previously attained skills by providing additional instruction in a broad range of subjects to Reserve personnel in Organized Marine Corps Reserve units on an individual basis. Career development courses such as Command and Staff, Amphibious Warfare, Staff NCO Academy and Amphibious Planning keep the reservist proficient with new weapons, doctrine, and techniques. Refresher programs bring a reservist up-to-date in his particular Military Occupational Specialty. This program also provides necessary formal training when an individual is assigned a different Military Occupational Specialty (MOS) or when a unit is assigned a new mission. Also, an intensive period of biennial refresher training and training for transition to new Aircraft is provided through this program for aviators in tactical flying units.

Appropriation: Reserve Personnel, Marine Corps
Budget Program 1: Reserve Component Personnel
Budget Activity 1F: Special Training

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$870	$1,050	$3,031

Part I - Purpose and Scope

Special training tours consist of short tours of active duty authorized for a variety of purposes as described below:

Special training tours are authorized for Reserve officers who attend training conferences conducted by District Headquarters, 4th MAW/MARTC and major posts and stations of the Marine Corps, for annual conferences with members of Volunteer Training Units, for maintenance assistance teams to assist in improving combat readiness in Reserve units, and for air support required by the Fourth Marine Amphibious Force.

In addition, 50 two-day tours are planned in FY 1975 for use by General Officers. These tours will be used when a Reserve General Officer is designated by the Commandant to be his representative at official functions, and for inspection tours by the Assistant Wing and Division Commander to subordinate units. These tours are in addition to the annual 13-day active duty tours provided for in Pay Group "D".

Special tours are also used to support the Organized Marine Corps Reserve Marksmanship Program. The objective of this program is to increase marksmanship proficiency and combat readiness by developing a base of Marines with high skills in rifle and/or pistol shooting to serve as competitors on a national level, and act as instructors in their organizations. The program stimulates interest and desire for self-improvement, and competitive excellence on the part of the individual Marines. A total of 700 four day tours are planned for FY 1975. The program will provide for 36 shooting events, plus a two-phase Marine Corps Reserve Championship Match and Marine Corps District Championship Matches.

In FY 1975 this program reflects a functional transfer of special tours previously funded in the Military Personnel, Marine Corps appropriation for Reserves ordered to active duty from 30 to 120 days in connection with organizing, administering; recruiting, instructing, or training the reserve components. As an example, the short tours program will provide instructors to augment the NESEP Program, Officer Procurement matters and Long Range Study Panel, MCDEC Quantico, Marine Corps Reserve Combat Artist Program, and Umpires for Reserve Exercises.

Appropriation: Reserve Personnel, Marine Corps
Budget Program 1: Reserve Component Personnel
Budget Activity 1G: Administration and Support

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$1,108	$1,887	$1,988

Part I - Purpose and Scope

This project provides funds to finance pay and allowances and permanent change of station travel for Reserve Officers assigned to active duty with the Reserve program under provisions of Section 265, Title 10, United States Code. It is estimated that 80 officers will be assigned to duty with the Reserve program by the end of FY 1974. The strength is expected to remain at this level throughout FY 1975. This program provides a representative number of reservists to participate in formulation and administration of policies and regulations which affect the Reserve program.

Also included in this estimate are funds for the payment of death gratuities, disability and hospitalization benefits to all officers and enlisted personnel undergoing paid training duty.

Budget Program 2
Reserve Officer Candidates

SUMMARY OF REQUIREMENTS BY BUDGET ACTIVITY
(In Thousands of Dollars)

Budget Activity	Actual FY 1973	Estimate FY 1974	Estimate FY 1975
Junior ROTC	$ 328	$ 658	$ 384
Reserve Officer Candidates	3,405	3,686	4,131
Total Direct Program/Obligations	$3,733	$4,344	$4,515

MARINE CORPS RESERVE OFFICERS (PLC) PROGRAM a/

	FY 1973			FY 1974			FY 1975		
	Begin	Average	End	Begin	Average	End	Begin	Average	End
Platoon Leaders Class	4,173	3,697	3,222	4,117	3,653	3,190	4,515	4,063	3,612
Women Officer Candidates	191	160	130	162	136	110	170	141	115
Total Reserve Officer Candidates	4,364	3,857	3,352	4,279	3,789	3,300	4,685	4,204	3,727

a/ These personnel are college students who attend Platoon Leaders' Classes, consisting of 45-day summer training in each of two years.

Appropriation: Reserve Personnel, Marine Corps
budget Program 2: Reserve Officer Candidates
Budget Activity 2C: Junior ROTC

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$328	$658	$384

Part I - Purpose and Scope

This program provides for the initial issue of uniforms for 375 male students who will be trained in the units of the Marine Corps Reserve Training Corps, which are to be established in FY 1975; included also is the initial issue of 150 uniforms for the female members in the three new schools.

Replacement issue of clothing for students in the 49 established units thru FY 1974 is also provided.

Appropriation: Reserve Personnel, Marine Corps
Budget Program 2: Reserve Officer Candidates
Budget Activity 2D: Reserve Officer Candidates

(In Thousands of Dollars)

Actual	Estimate	
Fiscal Year 1973	Fiscal Year 1974	Fiscal Year 1975
$3,405	$3,686	$4,131

Part I - Purpose and Scope

Provides for pay, subsistence, travel, and clothing for the Platoon Leaders Class and the Woman Officers Candidates Class. These personnel attend two periods of summer training and upon completion of training and graduation from college are commissioned in the Marine Corps Reserve and assigned to active duty for three years. Pay and subsistence rates are based on the actual number of days trainees are on board during the applicable fiscal year. Travel costs and clothing rates are based on the number of students entering training during the applicable fiscal year. Funds to cover the new PLC subsidy authorized by Public Law 92-172 are included in the amounts of $ 810,000 for FY 1974 , and $ 900,000 for FY 1975.

OPERATION AND MAINTENANCE, MARINE CORPS RESERVE

INTRODUCTORY STATEMENT
(In thousands)

	1973 Actual	1974 Estimate	1975 Estimate
Total direct obligations	$ 7,945	$ 11,080	$ 11,400
Proposed civilian pay increase supplemental/amendment	-	- 50	-
Proposed program supplemental	-	- 30	-
Appropriation	$ 7,945	$ 11,000	$ 11,400

This appropriation provides the funds for the day-to-day costs of operating and maintaining the Marine Corps Reserve forces, functions, activities and facilities except for those costs related to: Procurement of major items of equipment and ammunition, military personnel costs, and those functions supported by Navy sponsored appropriations for aircraft operations and procurement and support of aircraft and associated equipment.

The funds contained in this appropriation are intended for support of Marine Corps Reserve Forces. The Marine Corps Selected Reserve is the Reserve component of the Fleet Marine Force. This Reserve is organized to permit assignment of trained units and qualified personnel to active duty in time of war or national emergency, and at such other times as required for national security.

The Marine Corps Selected Reserve includes 67 aviation units, 29 battalions, 18 separate companies and batteries, 10 staff groups, and 3 selective service units.

This appropriation provides funds for equipment authorized in Marine Corps Tables of Equipment and unit allowances and used in Organized Marine Corps Reserve training as follows: Operation and local maintenance of equipment; depot level maintenance of major end items; and procurement of minor items of equipment.

This appropriation also supports the operation and maintenance of Marine Corps facilities such as training centers for use of Reserve units. It provides resources for maintenance and repair of facilities, minor construction, purchase of utilities and communications, rental of data processing equipment, postal costs, professional literature, recreational supplies, medals, recruiting, hire of passenger motor vehicles, uniform alterations, travel, operation and maintenance of staff vehicles, civilian personnel costs, and procurement of minor items of office and other administrative support.

Direct Hire Civilian Employment
(Dollars in Thousands; Strength in Whole Numbers)

	FY 1973 Actual			FY 1974 Estimate			FY 1975 Estimate		
	Average Strength	E/S 30 Jun 73	Est Oblig	Average Strength	E/S 30 Jun 74	Est Oblig	Average Strength	E/S 30 Jun 75	Est Oblig.
Direct Hire Civilians									
Full time permanent	69	63	$672	73	75	$704	73	75	$710
Other	-	-	-	-	-	-	-	-	-
Total direct hire civilians	69	63	672	73	75	704	73	75	710
Detail By Budget Activity									
Mission Forces	-	-	-	-	-	-	-	-	-
Depot Maintenance	-	-	-	-	-	-	-	-	-
Other Support	69	63	672	73	75	704	73	75	710
Total direct hire civilians	69	63	$672	73	75	$704	73	75	$710

SUMMARY OF OBLIGATIONS

(In thousands)

Budget Activity Number	Budget Activity Title	1973 Actual	1974 Estimate	1975 Estimate
1	Mission Forces.....	$ 2,925	$ 3,382	$ 3,847
2	Depot Maintenance.....	653	737	737
3	Other Support.....	4,367	6,961	6,816
Total direct obligations in budget document		$ 7,945	$ 11,080	$ 11,400

BUDGET ACTIVITY 1: MISSION FORCES

SUMMARY OF OBLIGATIONS

(In thousands)

		1973 Actual	1974 Estimate	1975 Estimate
A	Mission Forces	$ 2,925	$ 3,382	$ 3,847

Introduction

This budget activity supports the Mission Forces. Included are funds for training and materiel essential to the Marine Corps Reserve in the accomplishment of its mission as a Force in Readiness.

(In Thousands)

Budget Project A: Mission Forces

1975 Estimate - $3,847
1974 Estimate - 3,382
1973 Actual - 2,925

Purpose and Scope of work

The Marine Corps Selected Reserve is the Reserve component of the Fleet Marine Force. This Reserve is organized to permit assignment of trained units and qualified personnel to active duty in time of war or national emergency, and at such other times as required for national security.

Justification of Funds

The funds requested for this project are required to permit immediate, and effective utilization of members of the Organized Marine Corps Reserve upon mobilization. During FY 1975 continued emphasis will be placed on the implementation of the 5-year cyclic training program, with evaluation of air/ground/amphibious exercises serving as primary gauges of Organized Marine Corps Unit readiness. Also, company and squadron level tactical and operational readiness tests will be administered to Organized Marine Corps Reserve Units. Funding requirements for the Fiscal Year 1975 are geared to unit training and the procurement and maintenance of training allowances. The Navy is responsible for providing aircraft and associated support equipment and for funding aircraft operation and maintenance. Support provided in this Budget Activity includes the following:

Training

Travel associated with inspections, planning of exercises and annual training duty support, movement of organizational equipment for training, hire of commercial transportation for movement to training exercises, printing of training directives, and training aids and operating cost of equipment used in training.

Materiel Readiness

Replacement of minor items authorized in Tables of Equipment and unit allowances, local repair of equipment, procurement of consumable supplies used in maintenance, and second destination transportation costs for new end items of equipment received by Reserve units.

The increase is due to:

1. Procurement of minor equipment to meet increased field training requirements associated with the Five Year Cyclic Training Plan	+282
2. Increased procurement costs for fuel	+183
Increase	+465

BUDGET ACTIVITY 2: DEPOT MAINTENANCE

SUMMARY OF OBLIGATIONS
(In thousands)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
A	Depot Maintenance	$ 653	$ 737	$ 737

INTRODUCTION

This budget activity supports depot level equipment maintenance requirements of the Marine Corps Reserve.

Budget Project A: Depot Maintenance

Purpose and scope of work

Depot-level rebuild of Marine Corps Reserve equipment which is required for training.

(In thousands)
1975 Estimate - $ 737
1974 Estimate - 737
1973 Actual - 653

Justification of Funds

The funds provide for 5th echelon maintenance of Marine Corps furnished equipment used by the Marine Corps Reserve. Repair and rebuild is accomplished on a scheduled basis by the depot maintenance activities at Marine Corps Supply Center, Albany, Georgia and Marine Corps Supply Center, Barstow, California. Items programmed for repair are screeened to insure that a valid requirement exists and that repair or rebuild is the most cost effective means of satisfying the requirement. It is estimated that the same level of funding will be required as in FY 1974.

BUDGET ACTIVITY 3: OTHER SUPPORT

SUMMARY OF OBLIGATIONS
(In thousands)

	Budget Project Title	1973 Actual	1974 Estimate	1975 Estimate
A	Other Support	$4,367	$6,961	$6,816

INTRODUCTION

This budget activity provides resources for operation and maintenance of Marine Corps Reserve Training facilities and includes various costs associated with administrative support of the Organized Marine Corps Reserve.

Budget Project A: Other Support

Purpose and Scope of work

To maintain and operate Organized Marine Corps Reserve facilities and for administrative costs associated with support of the Marine Corps Reserve.

(In thousands)
1975 Estimate - $6,816
1974 Estimate - 6,961
1973 Actual - 4,367

Justification of funds

The funds requested for this project are required for the day-to-day costs required to maintain and operate the Marine Corps Reserve facilities and provide various types of administrative support. This support includes the following:

Facilities:

Maintenance, minor construction costs for Marine Corps Reserve Training Centers and Marine Corps spaces in jointly used facilities.

Administration:

Office supplies, rental of data processing equipment, postal costs, professional literature, recreational supplies, medals, recruiting, hire of passenger motor vehicles, uniform alterations, travel, operation and maintenance of staff vehicles, civilian personnel costs, procurement of minor items of office and other administrative support.

The net decrease is due to:

1. Increase in FY 1975 compared to FY 1974 for an additional civilian workday in FY 1975 ($+1,000), and full year funding of the October 1973 graded civilian personnel pay increase ($+5,000).....	+ 6
2. Decrease related to one-time costs incurred in FY 1974 for facilities improvements at Marine Corps Reserve Training Centers and Marine Corps portions of Joint Training Centers.....	-540
3. Increase required for contract training support.....	+114
4. Increased requirements in support of the Reserve recruiting effort.....	+314
5. Increase in travel and subsistence costs related to processing of Marine Corps Reserve applicants..	+ 25
6. Increase is required for replacement of administrative support equipment worn out in service.....	+ 36
7. Increased cost of official mail reimbursable to the U. S. Postal Service.....	+ 60
8. Increased procurement costs for fuel.....	+ 40
9. Decrease in travel of personnel requirements.....	-200
Net decrease.....	-145

The following tables are presented as the basis upon which computations are made:

Ground	FY 1973	FY 1974	FY 1975
1. Number of Reserve Units	Average	Average	Average
a. Battalions	30	30	29
b. Companies or Batteries	15	15	18
c. Staff Groups	10	10	10
d. Selective Service Units	3	3	3
2. Training Centers	End Year	End Year	End Year
a. Joint *	114	115	115
b. Federal *	40	37	37
c. Commercially Leased	2	4	4

* Includes Marine Corps owned

Aviation			
1. Reserve Units, End Year	67	62	57
2. Reserve Locations, End Year	29	24	24
3. Staff Groups	10	10	10

Naval Petroleum Reserve

Chairman McClellan. The next appropriation to be considered will be that for the naval petroleum reserve.

PROGRAM AND FINANCING

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

NAVAL PETROLEUM RESERVE

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	1973 actual	1974 estimate	1975 estimate
Program by activities: Exploration and development of petroleum reserve (OBL.)	(5,449)	(82,478)	24,200
Financing: Budget authority	(5,449)	(82,478)	24,200
Relation of obligations to outlays:			
Obligations incurred, net	(5,449)	(82,478)	24,200
Obligated balance, end of year	(2,773)	(32,478)	−6,200
Outlays	(2,676)	(50,000)	18,000
Object classification: Direct obligations: Other services (total)			24,200

REQUESTED APPROPRIATION LANGUAGE

Chairman McClellan. Since this is a new appropriation for fiscal year 1975, I believe it would be advantageous to insert the proposed budget language in the testimony at this time.

[The information follows:]

Naval Petroleum Reserve

For expenses of exploration, prospecting, conservation, development, production, use and operation of the naval petroleum and oil shale reserves as authorized by law, $6,900,000.

Chairman McClellan. The principal witness will be Capt. J. P. Trunz, Jr., the Director of the Naval Petroleum and Oil Shale Reserves. You may proceed, Captain.

Captain Trunz. I would like to read this since it is brief.

Chairman McClellan. All right, Captain, you may proceed to read your statement.

BUDGET REQUEST

Captain Trunz. Mr. Chairman and members of the committee, I appreciate this opportunity to appear before you to discuss the naval petroleum reserves program for fiscal year 1975. This program is being financed by a separate appropriation in 1975, having been included previously in the operation and maintenance-Navy appropriation.

Chairman McClellan. This is the one for which a total of $25 million would be required?

Captain Trunz. Twenty-four plus, yes.

NAVAL OIL RESERVES

There are four naval petroleum and three naval oil shale reserves which were created by Executive order during the period 1912 through 1924. These reserves were confirmed by statute which set forth their fundamental program and purpose. The statute directs the Secretary of the Navy, subject to the approval of the President, to explore and develop the reserves for the production of a supplemental supply of oil when required for national defense.

OIL RESERVE LOCATIONS

Chairman McClellan. What are the locations of the four naval petroleum and three naval oil shale reserves?

Captain Trunz. Naval Petroleum Reserves Nos. 1 and 2 are both located in Kern County, Calif., approximately 25 miles Southwest of Bakersfield, Calif.

Naval Petroleum Reserve No. 3 is located in Natrona County, Wyo. about 40 miles north of Casper, Wyo.

Naval Petroleum Reserve No. 4 is located on the North Slope of Alaska.

Naval Oil Shale Reserves Nos. 1 and 3 are located in Garfield, Colo., about 6 miles west of Rifle, Colo.

Naval Oil Shale Reserve No. 2 is located in Uintah and Carbon Counties, Utah, about 40 miles south of Vernal, Utah.

DEVELOPMENT OF RESERVES 1 & 4

With the oil shortage occurring towards the end of World War II, the Congress called on Navy to explore and develop its two most important reserves, Naval Petroleum Reserve No. 1, Elk Hills, Calif., and Naval Petroleum Reserve No. 4 on the North Slope of Alaska.

Considerable progress was made on both of these programs, but they were prematurely terminated in 1953. Since then, comparatively little exploration and development has been done on the reserves.

CURRENT DEVELOPMENT

Now, facing another national oil shortage, the Congress has again taken action to explore and develop these two reserves. The Supplemental Appropriation Act of 1974 provided $11.5 million for the first year of a 5-year exploration program in NPR No. 1 and a 10-year exploration program in NPR No. 4, and $47.5 million for development of the productive capacity of NPR No. 1. The Supplemental Appropriation Act also provided $13 million for 1 year production operating expenses at NPR No. 1, subject to the passage of a joint resolution by the Congress authorizing increased production from that reserve.

PRODUCTION CAPABILITY

Chairman McClellan. What is the current production capability authorized for reserve No. 1 (Elk Hills, Calif.), and what is being proposed with the funds provided in the fiscal year 1974 Supplemental Appropriations Act?

Captain TRUNZ. The current production authorized at Naval Petroleum Reserve No. 1 is that amount necessary to be produced for testing, maintenance and protection of the reserve, which was about 3,000 barrels per day in calendar year 1973.

The fiscal year 1974 Supplemental Appropriation Act provided $11.5 million for the first year of a 5-year exploration program in naval petroleum reserve No. 1 and the first year of a 10-year exploration program in naval petroleum reserve No. 4, A sum of $4 million was provided for exploration at naval petroleum reserve No. 1 (Elk Hills) and $7.5 million for naval petroleum reserve No. 4. There are 17 exploratory wells proposed for Elk Hills, two of which are drilling and are proving to be of great commercial and geological significance. Geophysical work is currently being conducted on naval petroleum reserve No. 4 in preparation for selection of locations of test wells to be drilled in fiscal year 1975 and subsequently, and materials needed for the next year's drilling have been purchased for shipment on this summer's supply barge to the reserve. The Supplemental Appropriation Act also provided $47.5 million for development of naval petroleum reserve No. 1 productive capacity to achieve a rate of 160,000 barrels per day for one year. The $47.5 million will be used to drill an additional 240 development wells to increase the reserve's production capacity, and to install additional surface facilities to handle the production of 160,000 barrels of oil per day and associated gas production.

An additional $13 million was provided in the 1974 supplemental for 1 year's operating expenses for increased production at NPR No. 1, subject to the authorization of such increased production by a joint resolution of the Congress. This $13 million will be available only in the event that such joint resolution is enacted.

EXPLORATION AND DEVELOPMENT

The exploration and development programs are under way. At NPR No. 1 the first exploratory well has been successful in the discovery of a major new oil accumulation, and several contracts have been let for the construction of surface facilities to enhance the productive capacity of this reserve.

At NPR No. 4, a geophysical exploration survey is now being conducted in preparation for selection of locations for test wells to be drilled in fiscal 1975 and subsequently, and materials needed for the next year's drilling have been purchased for shipment on this summer's annual supply barging to the reserve.

PENDING JOINT RESOLUTION

Continuation of the exploration programs in NPR Nos. 1 and 4 make up the major part of our 1975 budget of $24.2 million. The budget is in two parts; $6.9 million for regular operations, and $17.3 million for exploration. The exploration budget is contingent on passage of a proposed joint resolution which would authorize increased production from NPR No. 1 and the use of the proceeds from the sale or exchange of such production to finance the exploration programs. In the event such a joint resolution is not passed, there will be no funds to further the exploration programs in fiscal 1975.

Inasmuch as the joint resolution as passed by the Senate in the form of Senate Joint Resolution 175 authorizes the financing of only exploration and not development, no funds were included in the 1975 contingent budget for the continuation of the development program on NPR No. 1.

CURRENT PROGRAMS

The regular operations budget provides for following continuing programs. This is the $6.9 million we have broken out.

Maintenance of wells and facilities, limited remedial production, and protective offset production at NPR No. 1 in California.

Administration of oil and gas leases on Navy's lands in NPR No. 2 in California.

Protective offset production on NPR No. 3 in Wyoming.

Environmental cleanup, and the drilling of one development gas well and one exploratory gas well in the Barrow area of NPR No. 4 in Alaska. The purpose of these two gas wells is to assure sufficient current and future gas supplies to meet increasing demands of the Federal installations in the Barrow area and the residents of the city of Barrow.

Management of the naval oil shale reserves located in Colorado and Utah, including management of grazing, timber, wildlife and recreation.

Administration of the reserves and the employment of petroleum and oil shale consultants.

CONCLUSION

That concludes my prepared statement, Mr. Chairman. I shall be pleased to provide any additional information you may desire.

Chairman McClellan. Would the $24 million plus be used for these items listed here?

Captain Trunz. No, sir, the last items listed there are the normal regular maintenance items and testing of wells, et cetera, that we do every year on an annual basis.

BUDGET TOTALS

Chairman McClellan. What is the amount contained in the regular operations budget for continuing petroleum reserves programs? Would it not be desirable to consolidate all activities of this nature under the naval petroleum reserves appropriation?

Captain Trunz. The regular operations budget for fiscal year 1975 is $6.9 million for all the reserves. It would be desirable to have all activities, including the $17.3 million for exploration, under the naval petroleum reserve appropriation but in the current budget the $17.3 million is contingent upon the passage of a joint resolution authorizing increased production from the Elk Hills Reserve and the use of the proceeds of such production to finance the exploration programs.

Now, of that $24.2 million, $6.9 of that is what I have just read. This is our normal budget, what we call our normal, regular budget which was the budget submitted in 1975 but a new twist was added

whereby $17.3 million for our exploration program in NPR No. 4 and our exploration program in NPR No. 1 were included to come up to the $24.2 based on the fact that we would get proceeds from oil production at NPR No. 1 in accordance with the joint resolution if it were passed by Congress. The Senate has passed this. The House has not passed it.

POSSIBLE HALT IN PRODUCTION

What I am saying is if the House does not pass the joint resolution—and I have reason to believe that the House will not pass that joint resolution now—we are again back in the same category we were over the past years of having funds solely for the purpose of what I read on the last page, $6.9 million. We will not have the $17 million. Our programs will come to a halt and the development which we had submitted has been knocked out. That was $58 million, which was knocked out at the OMB level.

This again could not be funded under the joint resolution. Therefore, they did not include it in the budget. Essentially I think—since everybody has a final pitch—I think that one of the things that bothers me greatly is the fact that we will again go into status quo regime and we will be doing nothing on the two most important reserves of our whole reserve system. We will have no money and I do not see any real hope down the end of the lane here, 1980, 1985. Certainly we are subject to being cut off again as we were by the Arab embargo; as you well know, sir, the fuel situation during that period of time was very critical. The military had to go to the Defense Production Act. We had to get allocations out of FEO.

OPERATIONAL READINESS

I feel that the reserves should be in a position for which they were established. That means they should be in an operational readiness position that when Congress and the President say we need this for national defense we should be in a position where we just have to turn it on and we don't need any money, we don't need any development or any further exploration. We should be in a position to support the military and the military establishment, including the economy which does support the military establishment.

Chairman McClellan. And the purpose of this $24 million is to help us secure a state of readiness?

Captain Trunz. It is to proceed along our exploration programs. As I mentioned we are on our initial exploration program.

Chairman McClellan. It is a phase of it.

Captain Trunz. Yes, sir, a phase of it.

Chairman McClellan. Any questions, Senator?

Senator Young. Your problem lies with the House Armed Services Committee in holding up legislation that would permit you to go ahead with exploration?

Captain Trunz. To answer your questions, yes, the joint resolution lies with the House Armed Services Committee. I don't believe we should be opening up for the purpose—the purpose of the joint resolution was not for national defense.

Senator YOUNG. Isn't Elk Hills Naval Reserve checkerboarded with private interests?

Captain TRUNZ. No, sir, you are thinking of Naval Reserve No. 2. That is checkerboarded with six or seven majors and it is leased out. The reserve at Elk Hills is about 46,000 acres mainly owned by Navy, but we have a contract with Standard Oil Co. of California. Of the 46,000, they own about 8,000 acres in the field.

Senator YOUNG. This is a complex problem.

Captain TRUNZ. The complex problem is Elk Hills, yes, sir, because of the unit plan contract and the way we operate with Standard Oil Co. of California. It is a very complex problem, especially when it comes to opening up and the results of opening up and who gets what and where and when.

Chairman MCCLELLAN. Thank you very much.

JUSTIFICATION

Chairman MCCLELLAN. At this point in the record there will appear certain information from the justifications.

[The justification follows:]

Justification

NAVAL PETROLEUM RESERVES

	PET RES. #1	PET RES. #2	PET RES. # 3	PET RES. #4	TOTAL
LOCATION:					
AREA	ELK HILLS	BUENA VISTA HILLS	TEAPOT DOME	ARCTIC SLOPE	
COUNTY	KERN	KERN	NATRONA	---------	
STATE	CALIFORNIA	CALIFORNIA	WYOMING	ALASKA	
ESTABLISHED BY:					
EXECUTIVE ORDER OF	PRESIDENT TAFT	PRESIDENT TAFT	PRESIDENT WILSON	PRESIDENT HARDING	
DATE	2 SEPTEMBER 1912	13 DECEMBER 1912	30 APRIL 1915	27 FEBRUARY 1923	
ACREAGE - TOTAL	46,095	30,181	9,481	23,680,000	23,765,757
GOVERNMENT	37,554	10,446	9,481	23,680,000	23,737,481
PRIVATE	8,541	19,735	---	---------	28,276
ESTIMATED REMAINING RECOVERABLE OIL RESERVES (BARRELS), 1-1-73	TOTAL 1,007,000,000 NAVY 799,000,000	33,255,000 15,600,000	43,000,000 43,000,000	10,000,000,000 10,000,000,000 (NOT PROVEN BY DRILLING BUT CONSIDERED CONSERVATIVE BY MANY AUTHORITIES)	11,083,000,000 10,858,000,000
ESTIMATED NET WORTH (USING A CONSERVATIVE AVERAGE OF $4.50 PER BARREL OF OIL. DOES NOT CONSIDER VALUE OF NATURAL GAS)	TOTAL $4,500,000,000 NAVY 3,600,000,000	$161,600,000 70,200,000	$193,500,000 193,500,000	$45,000,000,000 45,000,000,000	$49,855,000,000 48,864,000,000

NAVAL OIL SHALE RESERVES

	OIL SHALE RES. #1	OIL SHALE RES. #3	OIL SHALE RES. #2	
LOCATION				
COUNTY	GARFIELD	GARFIELD	UINTAH AND CARBON	
STATE	COLORADO	COLORADO	UTAH	
ESTABLISHED BY:				
EXECUTIVE ORDER OF	PRESIDENT WILSON	PRESIDENT COOLIDGE	PRESIDENT WILSON	
DATE	6 DECEMBER 1916	27 SEPTEMBER 1924	6 DECEMBER 1916	
ACREAGE	54,893 (NOSR'S 1 & 3 ARE CONSIDERED JOINTLY)		90,440	145,333
ESTIMATED RECOVERABLE OIL FROM SHALES ASSAYING 15 GAL/TON OR MORE (BARRELS)	12,000,000,000		4,000,000,000	16,000,000,000
ESTIMATED NET WORTH (USING $1.00 PER BARREL OF OIL)	$12,000,000,000		4,000,000,000	16,000,000,000

SUMMARY OF OBLIGATIONS

(In Thousands)

Budget Program	1973 Actual	1974 Estimate	1975 Estimate	Difference 1975 Compared with 1974	Justification Page
A Naval Petroleum Reserve No. 1	($ 3,004)	($ 69,836)[a/]	$ 7,086[b/]	$-62,750	6
B Naval Petroleum Reserve No. 2	(19)	(20)	20	-	12
C Naval Petroleum Reserve No. 3	(267)	(409)	409	-	12
D Naval Petroleum Reserve No. 4	(1,339)	(11,335)	15,812[b/]	+4,477	13
E Naval Oil Shale Reserves	(97)	(100)	100	-	14
F Field Offices	(457)	(463)	469	+6	14
G. Employment of Consultants	(123)	(139)	139	-	14
H Office of Director	(143)	(176)	165	-11	14
Total direct obligations in budget document	(5,449)	(82,478)	24,200	-58,278	

a/ Includes $13,000,000 which is not available until passage by Congress of a proposed Joint Resolution to authorize production of NPR #1 for one year for national defense purposes.

b/ Includes the following amounts to continue exploration programs in 1975. These funds are contingent on passage of the above-mentioned Joint Resolution to authorize the production of NPR #1. Proceeds from the exchange or sale of this production are to be used to finance exploration in both NPR #1 and NPR #4 in 1975 and subsequent years:

(In Thousands)

$ 3,750 exploration, NPR #1
13,550 exploration, NPR #4
17,300 Total

SUBCOMMITTEE RECESS

Chairman McClellan. That will conclude this morning's session and we will recess until 10 o'clock in the morning.

[Whereupon, at 12:35 p.m., Tuesday, April 23, the subcommittee was recessed, to reconvene at 10 a.m. Wednesday, April 24.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1975

WEDNESDAY, APRIL 24, 1974

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:20 a.m. in room 1222, Everett McKinley Dirksen Office Building, Hon. John L. McClellan (chairman) presiding.

Present: Senators McClellan and Young.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

STATEMENTS OF:

VICE ADM. W. D. HOUSER, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (AIR WARFARE)

VICE ADM. R. E. ADAMSON, JR., U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (SURFACE WARFARE)

VICE ADM. F. H. PRICE, JR., U.S. NAVY, DIRECTOR OF SHIP ACQUISITION AND IMPROVEMENT, OFFICE OF THE CHIEF OF NAVAL OPERATIONS

VICE ADM. W. D. GADDIS, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)

MAJ. GEN. H. C. OLSON, U.S. MARINE CORPS, DEPUTY CHIEF OF STAFF FOR INSTALLATIONS AND LOGISTICS

ACCOMPANIED BY:

REAR ADM. J. H. ALVIS, U.S. NAVY, PROJECT MANAGER, F-14/PHOENIX, NAVAL AIR SYSTEMS COMMAND

BRIG. GEN. C. S. ROBERTSON, U.S. MARINE CORPS, FISCAL DIRECTOR, HEADQUARTERS, MARINE CORPS

BRIG. GEN. W. F. SIMLIK, U.S. MARINE CORPS, FISCAL DIRECTOR DESIGNATE, HEADQUARTERS, U.S. MARINE CORPS

CAPT. M. C. COOK, U.S. NAVY, ASSISTANT DIRECTOR OF BUDGET AND REPORTS, OFFICE OF THE NAVY COMPTROLLER

PROGRAM AND BUDGET

Chairman MCCLELLAN. The subcommittee will come to order.

Today the subcommittee will receive testimony in support of Navy procurement budget requests for fiscal year 1975.

The following witnesses are scheduled to appear:

Vice Adm. W. D. Houser, Deputy Chief of Naval Operations for Air Warfare;

Vice Adm. Rogert E. Adamson, Jr., Deputy Chief of Naval Operations for Surface Warfare;

Vice Adm. F. H. Price, Jr., Director of Ship Acquisitions and Improvement, Office of the Chief of Naval Operations;

Vice Adm. Walter D. Gaddis, Deputy Chief of Naval Operations for Logistics; and

Maj. Gen. Harry C. Olson, Deputy Chief of Staff for Installations and Logistics, U.S. Marine Corps.

Aircraft Procurement, Navy

The first appropriation to be considered will be that for Aircraft procurement, Navy.

PROGRAM AND FINANCING

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

DEPARTMENT OF DEFENSE - MILITARY

AIRCRAFT PROCUREMENT, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	IDENTIFICATION CODE 07-15-1506-0-1-051	BUDGET PLAN (AMOUNTS FOR PROCUREMENT ACTIONS PROGRAMED)			OBLIGATIONS		
		1973 ACT	1974 EST	1975 EST	1973 ACT	1974 EST	1975 EST
	PROGRAM BY ACTIVITIES:						
	DIRECT:						
	1. COMBAT AIRCRAFT	.....	1,852,500	1,950,600	.....	1,444,441	1,739,362
	2. AIRLIFT AIRCRAFT	.....	.....	52,100	.....	.....	36,500
	3. TRAINER AIRCRAFT	.....	76,400	.....	.....	63,400	6,400
	4. OTHER AIRCRAFT	.....	56,200	39,100	.....	30,200	34,950
	5. MODIFICATION OF AIRCRAFT	.....	285,800	338,500	.....	234,640	290,595
	6. AIRCRAFT SPARES AND REPAIR PARTS	.....	418,824	374,200	.....	366,524	323,000
	7. AIRCRAFT SUPPORT EQUIPMENT AND FACILITIES	.....	171,917	206,100	.....	140,997	177,472
	TOTAL DIRECT	.....	2,841,641	2,960,600	.....	2,280,202	2,604,279
	REIMBURSABLE (TOTAL)	.....	88,000	82,000	.....	59,798	80,283
10	TOTAL	.....	2,929,641	3,042,600	.....	2,340,000	2,684,562
	FINANCING:						
	RECEIPTS AND REIMBURSEMENTS FROM:						
11	FEDERAL FUNDS	-3,617	-85,950	-74,950	-3,617	-85,950	-74,950
13	TRUST FUNDS	-3,478	-7,000	-7,000	-3,478	-7,000	-7,000
14	NON-FEDERAL SOURCES	-46	-50	-50	-46	-50	-50
21	UNOBLIGATED BALANCE AVAILABLE, START OF YEAR						
	FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	.....	-589,641
	AVAILABLE TO FINANCE NEW BUDGET PLANS	.....	-7,141	.....	.....	-7,141	.....
22	UNOBLIGATED BALANCE TRANSFERRED FROM OTHER ACCOUNTS	.....	-106,800	.....	.....	-106,800	.....
24	UNOBLIGATED BALANCE AVAILABLE, END OF YEAR						
	FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	589,641	947,679
	AVAILABLE TO FINANCE SUBSEQUENT YEAR BUDGET PLANS	7,141	.....	.....	7,141	.....	.....
	BUDGET AUTHORITY	.....	2,722,700	2,960,600	.....	2,722,700	2,960,600
	RELATION OF OBLIGATIONS TO OUTLAYS:						
71	OBLIGATIONS INCURRED, NET				-7,141	2,247,000	2,602,562
72	OBLIGATED BALANCE, START OF YEAR				.....	.....	1,988,859
	RECEIVABLES IN EXCESS OF OBLIGATIONS, START OF YEAR				.....	-7,141	.....
74	RECEIVABLES IN EXCESS OF OBLIGATIONS, END OF YEAR				7,141	.....	.....
	OBLIGATED BALANCE, END OF YEAR				.....	-1,988,859	-2,951,421
90	OUTLAYS				.....	251,000	1,640,000

BUDGET REQUEST

Chairman McCLELLAN. The principal witness for this appropriation will be Vice Adm. W. D. Houser. You may proceed, Admiral.

Admiral HOUSER. Good morning.

I am pleased to return and present the budget request for fiscal year 1975 for Naval Aviation. This budget contains only the aircraft necessary to maintain an effective force.

Chairman McCLELLAN. You have quite a lengthy statement.

Admiral HOUSER. I have a lengthy statement for the record and I have a short statement. I was just going to read the short statement.

BIOGRAPHICAL SKETCH AND PREPARED STATEMENT

Chairman McCLELLAN. Let the lengthy statement be printed in the record in full. Make any remarks you wish and highlight the lengthy statement if you desire.

[The biographical sketch and statement follow:]

BIOGRAPHICAL SKETCH OF VICE ADMIRAL HOUSER

William Douglas Houser was born in Atlanta, Ga., on November 11, 1921. He attended Ponce De Leon High School, Coral Gables, Florida and Marion Military Institute, Marion, Ala., prior to entering the U.S. Naval Academy, Annapolis, Md., in June 1938. Graduated with the Class of 1942 and commissioned Ensign on December 19, 1941, he subsequently advanced in rank, to that of Vice Admiral, to date from August 5, 1972.

After graduation from the Naval Academy, he was assigned to U.S.S. *Nashville* (CL 43) until January 1945 when he commenced flight training. Designated a Naval Aviator on September 1946, he reported the next month as Maintenance Officer of Fighter Squadron ONE–L. He later became Executive Officer of that squadron, and in June 1948 became Deputy Chief of the Air Objectives Branch, Office of the Chief of Naval Operations.

In October 1951, he reported as Executive Officer of Fighter Squadron FORTY FOUR. He assumed command of Fighter Squadron FORTY FOUR in November 1952, and commanded that squadron in action in the Korean area of hostilities.

Detached from fighter Squadron FORTY FOUR in January 1954, he served until February 1956 in the Air Branch, Office of Naval Intelligence, Office of the Chief of Naval Operations. Following temporary training duty, March–May 1956, with Fleet All Weather Training Unit, he joined Air Development Squadron THREE.

He attended the Senior Course at the Naval War College, Newport, Rhode Island, from August 1958 until June 1959, after which he commanded Fighter Squadron ONE HUNDRED TWENTY FOUR. In October 1960, he was assigned to the Atomic Energy and Guided Missile Branch, Joint Chiefs of Staff. He reported in February 1962 as Military Assistant to the Deputy Secretary of Defense, where he remained until September 1963.

He was a student in the Harvard University Graduate School of Business Administration from September until December 1963. In February 1964 he assumed command of the USS MAUNA LOA (AE–8). Assigned duty in January 1965 in the Office of the Secretary of Defense, he remained there until November that year and in January 1966 assumed command of the USS CONSTELLATION (CVA–64). In January 1967 he reported as Chief of the Strategic Plans and Policy Division, J–5, Joint Chiefs of Staff. In November 1968 he became Director of the Aviation Plans and Requirements Division, Office of the Chief of Naval Operations. In July 1970, he assumed command of Carrier Division TWO. Detached in June 1972, he reported in August of that year as Deputy Chief of Naval Operations (Air Warfare).

Vice Admiral Houser has been awarded the Distinguished Service Medal, Legion of Merit with three Gold Stars, Bronze Star Medal with Combat "V", Air Medal with Gold Star, and the Navy Commendation Medal with Gold Star and Combat "V" and the Navy Unit Commendation Ribbon.

He is married to the former Betty Lou Worral of Denver, Colorado and they have three children, Cynthia Louise, Gayle Lynn, and Francie Lund.

STATEMENT OF VICE ADM. W. D. HOUSER

Admiral HOUSER. Mr. Chairman and members of the committee, I welcome the opportunity to present to you the Navy's aircraft procurement request. To assist me are Vice Admiral Lee, commander, Naval Air Systems Command; and Major General Fris, Marine Corps deputy chief of staff for air.

BUDGET REQUEST

The fiscal year 1975 aircraft procurement request contains only those aircraft necessary to endeavor to maintain an effective force.

APN FY 1973-75 CONGRESS

	73	74	74S	75
A-4M		20	24	24F
A-6E	21	13		12
EA-6B	7	6		6
A-7E	48	30		34
AV-8A	30	12		COMPLETE
F-14A	48	50		50
VH-3D	11			
UH-1N	24	24		20
AH-1J	20	15		20
P-3C	12	12	6	12
S-3A	35	45		45
E-2C	8	9		6
C-9B	3			7
CT-39	5			6
T-2C	24	24		COMPLETE
TAV-8A		8		COMPLETE
F-5E			6	0
EC-130	1	1		COMPLETE
KC-130		4	6	6F

REDUCTION OF AIRCRAFT TYPES

All aircraft requested are a continuation of prior year programs. We will complete production of the AV–8A and TAV–8A, T–2C, and EC–130 aircraft with those requested in our fiscal year 1974 budget. Fiscal year 1975 will be the final year for one and possibly two other aircraft types thereby reducing the different types requested by the Navy.

Chairman MCCLELLAN. You refer to fiscal year 1975 being the final year in which funds will be requested for one and possibly two other aircraft types. Please explain your statement in detail.

Admiral HOUSER. This reference was to stopping A–4M production and possibly KC–130 production after fiscal year 1975. This intention is dependent however on approval of the A–4M's and KC–130's requested in the fiscal year 1974 supplemental and the fiscal year 1975 request.

Chairman MCCLELLAN. Proceed.

Admiral HOUSER. Our other aircraft procurements are continuing at minimum rates consistent with constrained funding. In order to fill authorized force levels, it is necessary to continue aircraft in active inventory for extended periods beyond their originally anticipated service life.

NEED FOR MODERNIZATION

Senator YOUNG. Admiral Houser, your statement makes reference to minimum procurement of aircraft and continuing the use of aircraft beyond their anticipated life, If funds were available what changes would you recommend in the budget request for fiscal year 1975?

Admiral HOUSER. Increased rates of aircraft procurement, particularly in the Tacair types F–14, A–6E, A–7E, E–2C and EA–6B. Also, as stated earlier our transport force is in need of modernization. Therefore, increased numbers of C–9 aircraft is highly desirable.

Chairman MCCLELLAN. Proceed.

Admiral HOUSER. Modification programs to safely extend structural service life of aircraft and to modernize their weapons systems for mission effectiveness in current threat environments are increasing in numbers and requirements for funding.

OPERATIONAL READINESS

Chairman MCCLELLAN. There have been comments in the press of late that a very large percentage of Navy and Marine Corps aircraft are not operationally ready because of shortages in spare parts and overdue maintenance. As Deputy Chief of Naval Operations for Air Warfare, do you feel that this situation exists? Do you feel that the fiscal year 1975 budget request contains those funds necessary for spare parts, modifications, maintenance and overhaul to adequately keep the Navy air arm in a responsive rate of operational readiness?

Admiral HOUSER. The derivation of operational readiness statistics and their measurement application needs to be addressed first. Information concerning operational readiness of Naval aircraft is derived from the Navy's Maintenance and Material Management System (3–M). The system is purely a Navy logistics management system used to determine the material condition of aircraft and to manage support assets. It indicates trends in aircraft material condition and enables funds and manpower to be allocated effectively in order to correct deficiencies and maintain aircraft in the highest possible state of material readiness. The 3–M system is not designed to forecast or predict the combat capability of our air weapon systems. There has been a tendency to use 3–M material readiness reports to measure combat readiness of aircraft, rather than the FORSTAT reports.

Under the 3–M system we define an operationally ready (OR) aircraft as one which is safely flyable and can perform at least one of its primary missions. Aircraft which are not OR are either not operationally ready for supply reasons (NORS) or are not operationally ready because of maintenance (NORM). We define a fully mission ready aircraft as having a full systems capability (FSC), that is, it is safely flyable and can perform all designated missions. Aircraft which are not FSC are either not fully equipped (NFE), that is, the systems equipment lacks parts, or are in a reduced material condition because the systems equipment is undergoing maintenance (RMCM).

32-383 O - 74 - 48

Under the Navy program full systems capability (FSC) or operational readiness (OR) is measured against a twenty-four hour day or an average 720 hour month. In peacetime, aircraft are manned, funded and supported to fly only a small percentage of this total time. In wartime, higher rates are flown with personnel and funding augments provided. Rates for several representative aircraft are arrayed below:

	Fiscal year 1973		Fiscal year 1974		Combat rate	
	Hours per month	Peacent	Hours per month	Percent	Hours per month	Percent
Aircraft:						
A–6	[Deleted.]					
A–7						
P–3						
H–3						

Since it cannot be predicted when aircraft will be required during any given period, or when a requirement for a high tempo of operations may occur, the goal for material condition of aircraft is set at the highest feasible level.

A review of the 3–M system data for all aircraft in the inventory reveals that only [deleted] of scheduled mission flights are aborted, prior to launch, for maintenance related causes. After launch only [deleted] of such flights are unable to fulfill assigned missions because of maintenance related causes.

Direct comparisons between Navy and Air Force OR rates cannot be made using existing data because of the different criteria used in determining these rates. For example, in computing NORS status of aircraft, different time and part location criteria are utilized. Each service uses a management system which best meets their particular requirements.

Listed below are data concerning the full systems capability of all Naval aircraft. The trend is not favorable. As reflected the operational readiness rate is declining while the NORS rate is increasing.

NOT OPERATIONALLY READY (OR) AND NOT FULLY MISSION READY (FSC) AIRCRAFT

Category	June 1973	December 1973
Operating aircraft:		
Not OR	[Deleted.]	
NORS		
NORM		
Not FSC		
NFE		
RMCM		

The Navy budget is constrained and controlled as is the budget for the entire Defense Department. The FY–75 budget, in and of itself, will not provide the funds necessary to attain an adequate material readiness rate. The Navy OR goal is 71 percent. The FY–74 supplemental is an integral part of the Navy's program to improve the material readiness posture of its aircraft. Failure to obtain supplemental requirements will result in a further decline in OR from the current [deleted] in early FY–75. The funds programmed for FY–75 will arrest this down trend during the latter half of the fiscal year but only a minimal upturn can be forecasted.

Senator YOUNG. Please provide the committee a listing of the number and type of aircraft to be procured; a similar listing of aircraft to be modified; and a breakdown by major category of aircraft spares and support equipment.

Admiral HOUSER. I will supply the information for the record.

(The information follows:)

FY 1975 Aircraft Procurement

A–4M
A–6E
EA–6B
A–7E
F–14A
UH–1N
AH–1J
P–3C
S–3A
E–2C
C–9B
CT–39
KC–130R

Modifications in Lieu of Procurement

A–6A to E
F–4B to N
A–7B to TA–7C
SH–3G to H
UH–2C to SH–2D
T–34B to C

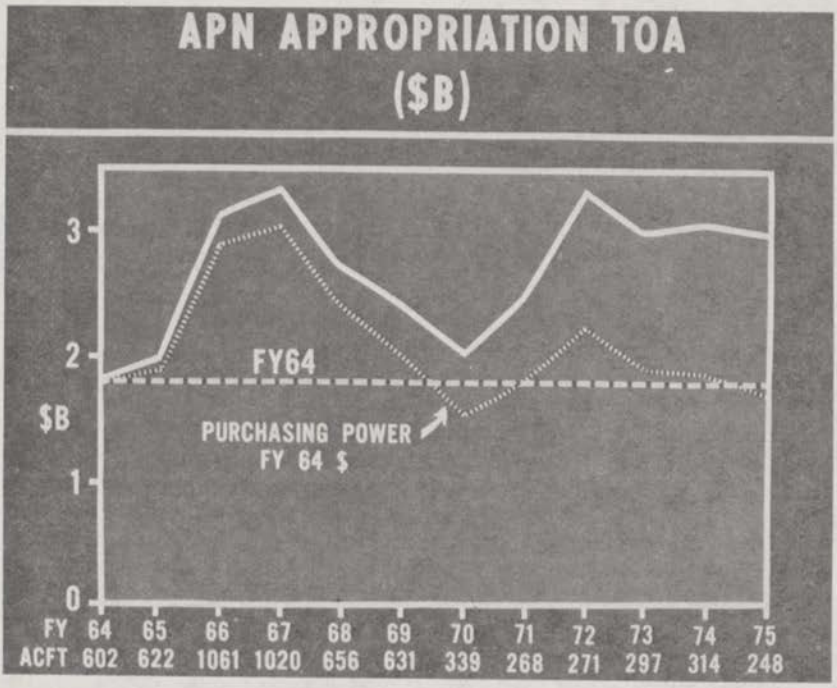
Aircraft Spares and Repair Parts

Initial Spares
Replenishment Spares

Aircraft Support Equipment and Facilities

Common Ground Equipment
Component Equipment
Aircraft Industrial Facilities
War Consumables
Other Production Charges

Chairman MCCLELLAN. Proceed.



Admiral HOUSER. In FY 1975 the limited procurement dollars available have been applied to our most urgent requirements. However the dollars available in 1975 equate to less buying power that we had in 1964 (64—$1,785.2M, 75—$1,725.5M).

CONTINUED PROCUREMENT

ATTACK	A-7E	34
	A-6E	12
ELECTRONIC WARFARE	EA-6B	6
FIGHTERS	F-14A	50
AIRBORNE EARLY WARNING	E-2C	6
PATROL & ANTI SUBMARINE	P-3C	12
	S-3A	45
MARINE ATTACK	A-4M	24
MARINE HELICOPTERS	UH-1N	20
	AH-1J	20
MARINE TANKERS	KC-130R	6
TRANSPORTS	C-9B	7
	CT-39	6

ATTACK AIRCRAFT PROCUREMENT

Admiral HOUSER. Continued procurement is requested of the Navy A–7E and A–6E attack aircraft; the EA–6B Electronic Warfare aircraft; F–14 fighters; E–2C Airborne Early Warning aircraft and P–3C and S–3A Patrol and Anti-Submarine aircraft. To continue modernization of the Marine Corps we request procurement of A–4M light attack aircraft; the UH–1N and AH–1J helicopters and the final increment of KC–130 tankers.

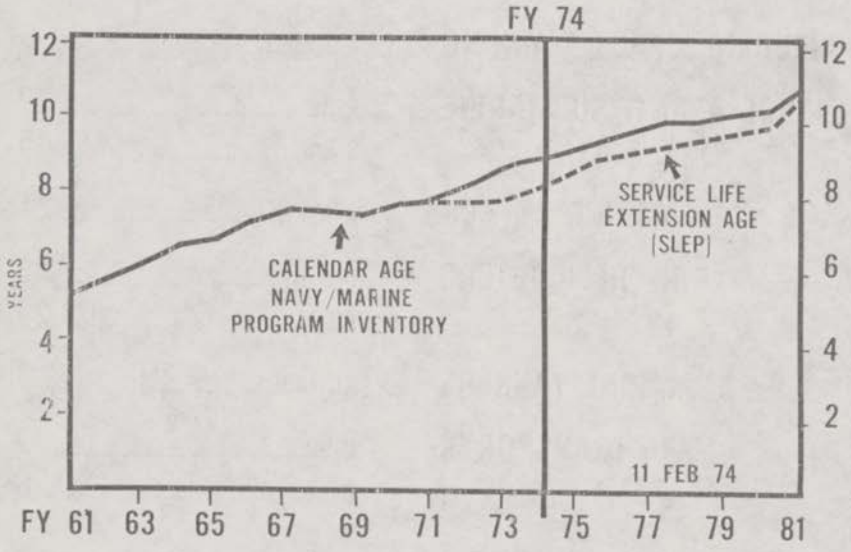
To replace many of our old propeller transports because of their age and inefficiency, our FY 1975 budget contains a request for replacement C–9B and CT–39 transports.

The low procurement numbers in many of our programs has forced retention of many older/obsolete aircraft in each class. The average age of our active aircraft is steadily increasing as the inventory decreases.

INCREASING AGE OF NAVY AIRCRAFT

Chairman MCCLELLAN. Provide a statistical tabulation for the record which shows how the average age of the Navy's aircraft has been steadily increasing as the inventory decreases.

Admiral HOUSER. The requested information is shown by this chart.



Chairman MCCLELLAN. Continue.

ADMIRAL HOUSER. In view of the lmited procurement of new aircraft, it is especially important that we modernize aircraft in our current inventory to meet new requirements and projected threats.

Modifications in Lieu of New Procurement

F–4B to F–4N
A6–A to A–6E
A–6A to KA–6D
SH–3A to SH–3H
CH–46 update
P–3B update
EA–6B update
A–7B to TA–7C
T–34B to T–34C

This years request includes funding for continuation of the service life extension program on our old F–4B fighter upgrading A–6A aircraft to the improved A–6E version; modifying our old SH–3 anti-submarine helicopters to the improved SH–3H; updating Marine CH–46 assault helicopters for greater lift capability and safety; modernizing the avionics in P–3B ASW aircraft and installation of electronic warfare equipment designed to update radar homing and warning and DECM capabilities in combat aircraft.

COUNTERMEASURES CAPABILITIES

Chairman MCCLELLAN. What do you mean by DECM capabilities?

Admiral HOUSER. The term DECM is derived from the words Defensive (or Deceptive) Electronic Countermeasures. These refer to the self protection electronic countermeasures devices used in our tactical aircraft. Their purpose is to warn against and/or defeat enemy electromagnetic devices associated with missile and radar directed threats.

Chairman MCCLELLAN. Proceed.

Admiral HOUSER. Two new modification programs are also requested—the conversion of A–7B and A–7C aircraft to a two place training version of the A–7E and the conversion of T–34 primary trainers to a T–34C turboprop configuration.

Also included in the FY 1975 request are spares and repair parts to support both new aircraft and those currently in inventory and funds for support equipment and industrial facilities.

FY 1975 AIRCRAFT PROCUREMENT PROGRAM

BUDGET ACTIVITIES	TYPE	QUANTITY	COST (IN MILLIONS)
1. COMBAT AIRCRAFT	A-4M SKYHAWK	24	$ 59.5
	A-6E INTRUDER	12	129.3
	EA6B PROWLER	6	122.7
	A-7E CORSAIR II	34	142.0
	F14A TOMCAT	50	709.3
	UH-IN IROQUOIS	20	16.5
	AH-IJ SEA COBRA	20	28.8
	P-3C ORION	12	150.0
	S-3A VIKING	45	485.4
	E-2C HAWKEYE	6	107.1
2. AIRLIFT AIRCRAFT	C-9B SKYTRAIN II	7	41.6
	CT-39 SABRELINER	6	10.5
4. OTHER AIRCRAFT	KC-130 R HERCULES	1	39.1
5. MODIFICATION OF AIRCRAFT			338.5
6. AIRCRAFT SPARES AND REPAIR PARTS			374.2
7. AIRCRAFT SUPPORT EQUIPMENT AND FACILITIES			206.1
(ADVANCED PROCUREMENT FOR FY 1976 PROGRAM)			(151.9)
TOTAL AIRCRAFT PROGRAM		248	$2960.6 M

Admiral HOUSER. In summary the Navy's total aircraft procurement request, including modifications, aircraft spares and support programs is $2 billion $960.6 million dollars.

NEW AIRCRAFT

Chairman MCCLELLAN. How many new aircraft are requested in the fiscal year 1975 budget? How many new aircraft were funded in the FY 1974 appropriation act? How many do you plan to procure in FY 1976?

Admiral HOUSER. There are 248 new aircraft requested in the FY 1975 budget and 273 were funded in the FY 1974 Appropriation Act. The FY 1976 budget is still in the formulation stage, and a number of aircraft is not available. It is hoped that the number of new aircraft to be procured can be increased to begin to overcome recognized shortfalls.

Chairman MCCLELLAN. Proceed.

Program Review

Admiral Houser. Mr. Chairman, with your permission I will review each program requested this year, concentrating on how it fits into our force level requirements. I will discuss where we stand with respect to equipping the force and why these quantities are requested.

Additional Aircraft Carrier

Chairman McClellan. Discuss the effect of the decision to retain an additional active carrier in the aircraft procurement program.

Admiral Houser. No additional aircraft were procured, however, A–4 and F–8 aircraft that were scheduled to drop from active Navy forces were retained for deployment on the carrier. This did require additional aircraft reworks.

Chairman McClellan. Proceed.

Admiral Houser. I will show a picture of the aircraft and corresponding data. The data sheets will be provided the recorder for the record.

A–4M Skyhawk

The A–4M picture is reasonably bright this year. As you will recall, our basic FY 1974 A–4M program was approved for 20 aircraft. Also, I'm sure you're aware that during the Middle East Crisis we transferred 46 A–4E & F aircraft to Israel. These aircraft came from active and reserve Navy and Marine units and from support elements. Naturally these directed sales had some impact on the total A–4 inventory. While the number of combat capable aircraft to equip Navy A–4 Squadrons and Combat Support squadrons was reduced, the main impact was on the Marines. This was primarily a delay in transitioning USMC Reserve light attack squadrons to more modern aircraft. Our decision to retain HANCOCK for the time being contributes to the reserve modernization problem. However, with the funds realized from the FMS sales to Israel we will be able to buy 17 new A–4M's this year.

Foreign Military Sales

Chairman McClellan. Explain how the foreign military sale of A–4 aircraft to Israel will enable the Navy to buy 17 new A–4 aircraft. How many were sold to Israel?

Admiral Houser. Forty-six used A–4E/A–4F aircraft were sold to Israel in October 1973 for $40.7 million. The average sales price of about $900,000 per aircraft is a present value cost based on original cost, improvement cost, and escalation—reduced by the percentage of aircraft life already expended. The $40.7 million is sufficient to purchase 17 new production A–4M aircraft at the present cost of approximately $2.25 million per aircraft plus support costs.

Chairman McClellan. Proceed.

Admiral Houser. To overcome the shortfall which will exist after this, we have requested an additional 24 A–4M's in the FY 1974 Supplemental. If approved this would give us a total of 41 A–4M's—17 from FMS sales and 24 in the FY 1974 supplemental. These 41, with the 24 requested in FY 1975 will meet the Marine Corps short term goal of an all A–4M light attack force and continue the transition of Marine Reserve units to the A–4E/F.

Marine Corps Aircraft

Chairman McClellan. How will the decision to provide F–14 aircraft to the Marine Corps affect the A–4 program?

Admiral Houser. The F–14's going to the Marine Corps are replacements for older F–4 aircraft. They will not affect the A–4 program.

Chairman McClellan. Proceed.

Admiral Houser. Navy light attack squadrons would remain in the A–4E/F until they are no longer required and then these aircraft will also go to the USMC Reserves. To do this we are requesting $59.5 million to procure the 24 A–4M's in FY 1975. $0.8M is required for initial spares.

A–4M Production

Chairman McClellan. What is the minimum economic procurement of A–4M aircraft in FY 1975 to maintain a warm production line?

Admiral HOUSER. A warm production line can be maintained even with no procurement of FY–75 A–4Ms, if the FY–74 Supplemental request for 24 A–4Ms is approved and the procurement executed, since these Supplemental aircraft could simply replace the originally planned FY–75 24 A–4M procurement in the Douglas Aircraft Company production schedules. This would defer the FY–75 procurement until FY–76. However, compared to the economical procurement presently planned—producing all 24 FY–74 Supplemental A–4Ms and all 24 FY–75 A–4Ms as a 48 aircraft purchase, with all aircraft delivered by December 1976—the extended approach would raise program costs in excess of $7M, plus escalation costs.

Chairman MCCLELLAN. Proceed.

DATA SLIDE

Admiral HOUSER. I invite your attention to the data slide. The format coincides with the Congressional Data Sheets provided to you by the Secretary of Defense. Total APN dollars include the Weapons System Cost and Initial Spares.

WEAPONS SYSTEM COST

"Weapons System Cost" is the actual amount we are requesting under the line item and is derived from flyaway cost, support requirements and advance procurement. I would like to emphasize that only the flyaway and price year advance procurement are directly related to this year's requested quantity. "Advance Procurement Current Year" provides long-lead funding for next year's planned request.

INITIAL SPARES

Total "Initial Spares" requirements are contained in the request for "Aircraft Spares and Repair Parts" but have been included here to provide you with the dollar amounts associated with each weapon system. A portion of support equipment and initial spares will outfit support ships and air stations, independent of the quantity of aircraft in this year's buy. I point this out to show you that even if zero quantity of any given aircraft is procured this year, a portion of initial spares and support equipment for that aircraft would still be required.

FLYAWAY UNIT COST

The "Flyaway Unit Cost" is the cost of one completely equipped aircraft at the head of the runway ready for take-off. This should be differentiated from total program unit cost which is the cost of single aircraft after prorating the cost of RDT&E, support and initial spares throughout the total program.

DEFINITIONS OF COST

Chairman MCCLELLAN. What is the difference between "flyaway unit cost" and "procurement unit cost?"

Admiral HOUSER. "Flyaway Unit Cost", as defined above, is the cost of the airframe, engines, avionics and armament. "Procurement Unit Cost" includes Flyaway cost, support requirements, advance procurement and initial spares, all prorated for one aircraft.

Chairman MCCLELLAN. Continue.

PROGRAM STATUS

Admiral HOUSER. Under "Program Status" the total actual inventory for this aircraft series as of 1 January 1974 is shown. The total "Funded and Undelivered" pertains to the aircraft in this series approved by the Congress for procurement but not delivered to the Navy as of 1 January 1974. "Costs Through Budget Year" indicates total accumulated APN costs for the program through this year's request.

A break down of "Total Program", including:

Details on procurement quantities programmed for the future,

Inventory objectives,

APN, RDT&E and MILCON costs,

And total program costs, is available for each item on a second data slide, if you desire to see them.

A-6E INTRUDER GRUMMAN

MISSION

DESTRUCTION OF ENEMY SEA AND LAND TARGETS WITH CONVENTIONAL OR NUCLEAR WEAPONS UNDER DAY AND NIGHT ALL-WEATHER CONDITIONS WITHOUT VISUAL REFERENCE TO THE TARGET



A-6E INTRUDER

MANUFACTURERS

AIRFRAME
GRUMMAN
BETHPAGE, L.I., N.Y.

ENGINE
UNITED AIRCRAFT CORP.
PRATT & WHITNEY DIV.
E. HARTFORD, CONN.

FY-75 REQUEST

QUANTITY			UNIT COST
12	WEAPONS SYSTEM COST	$ 129.3 M	
	FLYAWAY 79.7		$ 6.6 M FLYAWAY
	SUPPORT 49.7		
	ADV PROC (PRIOR YR) −1.9		
	ADV PROC (CUR YR) 1.8		
	INITIAL SPARES	$ 2.4 M	
	TOTAL PROCUREMENT COST	$ 131.7 M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	PROCUREMENT COST THRU BUDGET YR
36	34	$752.1M

A–6E Intruder

Admiral Houser. The A–6 is the only true all-weather attack aircraft in the Navy and Marine Corps. The A–6E is an improved version of the combat-proven A–6A which has demonstrated its capabilities under the most demanding combat conditions.

A–6E Improvements

Chairman McClellan. What are the principle improvements of the A–6E aircraft over the A–6A?

Admiral Houser. The principle improvement in the A–6E is increased reliability and maintainability over the A–6A avionics, achieved by a new micro-miniaturized computer, a solid state weapon release system and a single integrated track and search radar.

Chairman McClellan. Continue.

Admiral Houser. This long-range, versatile, twin-jet aircraft is equipped for very accurate navigation and weapons delivery, and specialized electronics equipment installed permits accurate attack on targets day or night under all-weather conditions. The test program for the A–6E avionics system has been very successful. This system includes a new micro-miniaturized computer, a solid state weapon release system and a single integrated track and search radar. Navy Preliminary Evaluation (NPE) is complete and the Board of Inspection and Survey (BIS) trials are complete. The Operational Evaluation (OPEVAL) was completed during June 1973. All data from these tests indicate a significant improvement in reliability and maintainability over our A–6A avionics. Weapons delivery accuracies are better than the A–6A system. The real key to the A–6E program is that the Full System Capability availability is nearly four times greater than the A–6A and this directly relates to the maintenance effort required.

Weapon System Capability

Chairman McClellan. Explain your statement that "full system capability is nearly four times greater than the A–6A".

Admiral Houser. It means that A–6E aircrews have a full operable weapons system for the entire mission profile, i.e. take off, enroute to the target, return and upon landing on the parent carrier the full weapons system is still operable and ready for a subsequent launch, a much higher percentage of the time, than the A–6A upon return from a similar mission.

Chairman McClellan. Proceed.

Admiral Houser. The A–6E takes roughly one-third to one-half less direct maintenance man-hours per flight hour than the A–6A and the avionics systems require less than three hours per flight hour.

Fleet Squadrons

There are currently five fleet squadrons equipped with A–6E aircraft with excellent performance reported to date.

A–6E-Equipped Fleet Squadrons

Chairman McClellan. How many fleet squadrons do you plan to equip with A–6E aircraft?

Admiral Houser. The plan is to equip twelve (12) Navy and five (5) Marine squadrons.

Chairman McClellan. Proceed.

Admiral Houser. The A–6E has completed 2 deployments, the 3rd deployment occurred in Jan 74 in AMERICA. The 4th will be FORRESTAL on 11 Mar 74. During the ORI portion of FORRESTAL's predeployment workup, VA–85's A–6E's scored 16 DIRECT HITS and multiple near misses out of the first 30 bombs delivered on a target hull sinking the target, an ex-destroyer.

Readiness Inspection

Chairman McClellan. What do you mean by the ORI portion of the Forrestal's predeployment workup?

Admiral Houser. ORI is the Operational Readiness Inspection which is the final inspection that verifies that an operating squadron is ready for combat operations and overseas deployment.

Chairman McClellan. Continue.

TRAM

Admiral Houser. The fiscal year 1975 configuration includes provisions for the Target Recognition and Attack Multisensor (TRAM) system. TRAM is an lectro-optical sensor package with a Forward Looking Infrared (FLIR) sensor and laser designator that will allow high resolution viewing of the target and provides the capability to execute self contained delivery of laser guided weapons.

TRAM Laser

Chairman McClellan. Explain how the laser designator works in the TRAM system.

Admiral Houser. The laser designator in the TRAM system is mounted on the inner gimbal assembly of the turret along with the infra-red receiver. The laser beam is boresighted with the infra-red sensor so that the operator can direct laser energy onto a target which he is tracking with the infra-red system. The laser designator contains a ranging capability for providing precise range information to the aircraft computer and weapon release system. The full lower hemisphere coverage of the TRAM turret allows the aircraft to maneuver away from the target and still keep the laser on the target until weapon impact. With the A–6E TRAM installation the laser can be used for laser guided weapons carried by the TRAM aircraft itself or as a designator for other non-laser equipped aircraft.

Chairman McClellan. Proceed.

Admiral Houser. TRAM equipments are to be installed in the last four fiscal year 1975 aircraft. Contractor/Navy flight test of TRAM commences late March, 1974 utilizing a prototype TRAM system. The FY 1975 program also includes two A–6E Weapons System Trainers (WST). A total procurement program of 189 A–6E's is planned, with 70 funded in FY 1974 and prior, 12 requested in FY 1975, and 107 planned for future years. Additionally, we will retrofit 192 A–6A's to the "E" version in our modification program.

A–6A Retrofit

Chairman McClellan. What is the cost to retrofit a single A–6A aircraft to the A–6E version?

Admiral Houser. The average unit cost for the retrofit program is $1.6M including both the APN and O&MN appropriations.

Chairman McClellan. Do you plan to retrofit the entire inventory of A–6A aircraft to the A–6E configuration?

Admiral Houser. Yes, it is now planned to retrofit most of the A–6 inventory.

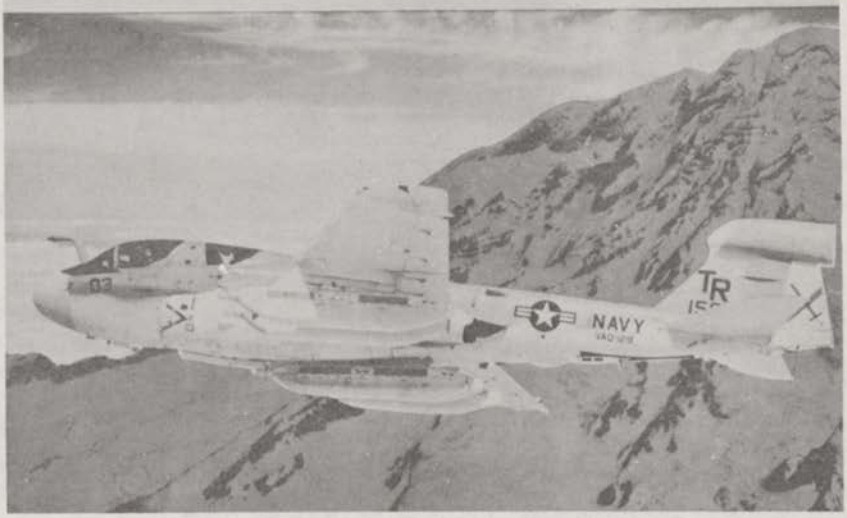
Chairman McClellan. Proceed.

Admiral Houser. Overall budget constraints and other aviation priorities will permit us to request only 12 A–6E's this year. This request, for 12 aircraft and $129.3 million, continues a modest inventory modernization, and provides for a minimum production capability. Required funds for initial spares associated with these aircraft are an additional $2.4 million.

PROWLER EA-6B GRUMMAN

MISSION

ALL WEATHER TACTICAL JAMMING SYSTEM



EA-6B PROWLER

MANUFACTURERS

AIRFRAME
GRUMMAN
BETHPAGE, L.I., N.Y.

ENGINE
UNITED AIRCRAFT CORP.
PRATT & WHITNEY DIV.
E. HARTFORD, CONN.

QUANTITY	FY-75 REQUEST		UNIT COST
6	WEAPONS SYSTEM COST	$ 122.7 M	
	FLYAWAY	85.5	$ 14.3 M FLYAWAY
	SUPPORT	36.2	
	ADV PROC (PRIOR YR)	– –	
	ADV PROC (CUR YR)	1.0	
	INITIAL SPARES	$ .4 M	
	TOTAL PROCUREMENT COST	$123.1 M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	PROCUREMENT COST THRU BUDGET YR
40	13	$1127.8M

EA–6B Prowler

Admiral Houser. The EA–6B is the first naval tactical jammer system designed and built specifically for tactical electronic warfare with integrated high-powered electronic jammers and modern state-of-the-art receivers under computer direction.

Crew Functions

Chairman McClellan. What jobs do the four crew members of the EA–6B perform?

Admiral Houser. The four crew members of the EA–6B perform the jobs listed below:

a. Left front seat—pilot.
b. Right front seat—command electronic countermeasure operator.
c. Left rear seat—communications jammer operator.
d. Right rear seat—#2 electronic countermeasures operator.

Chairman McClellan. Proceed.

Admiral Houser. A derivative of the A–6A, the EA–6B is a four place, carrier based aircraft capable of radiating electromagnetic energy to degrade enemy radar and communications nets in support of our strike or reconnaissance missions. By depriving the enemy of information vital to the effective functioning of his offensive and defensive systems, we enhance the mission success and survivability of our strike forces.

Sea Operations

Chairman McClellan. Was the EA–6B used in Southeast Asia combat operations? If so, discuss its effectiveness. Is it capable of overcoming the [deleted].

EA–6B Effectiveness

Admiral Houser. The EA–6B has met program schedule and technical milestones and four squadrons have completed deployments to SEASIA. The EA–6B has proven to be extremely effective in countering enemy defense systems.

The expanded capability (EXCAP) version of the EA–6B is operational and presently deployed aboard USS *America* with Sixth Fleet. This version has considerably improved capabilities. During a recent Fleet exercise, we had the opportunity to exercise these aircraft for the first time in the ASMD role.

Anti-Ship Missile Defense

Chairman McClellan. What do you mean by the ASMD role?

Admiral Houser. ASMD stands for Anti-ship Missile Defense. Fleet defense is a new role for the EA–6B. Its effectiveness was first tested in a major SECOND Fleet exercise in the fall of 1973. Results of the test indicate that the EA–6B can play a significant role in protecting the Fleet from Anti-ship capable missiles that fall within its frequency coverage.

Chairman McClellan. Proceed.

Admiral Houser. Results were quite gratifying and proved the EA–6B to be complementary to the ships' DECM equipment in combating the missile threat. It further showed the ability of the EA–6B and other task force assets to work in an integrated EW environment.

A total program of 77 EA–6B's (four pre-production and one R&D A/C) is currently planned. This program is sufficient to provide EA–6B squadrons for 12 CVA's.

We are requesting $122.7 million for procurement of 6 EA–6B's. Initial spares required an additional $0.4 million.

A-7E CORSAIR II LING-TEMCO-VOUGHT

MISSION

GENERAL PURPOSE LIGHT ATTACK. OPTIMIZED FOR VISUAL ATTACK IN STRIKE AND INTERDICTION MISSIONS



A-7E CORSAIR II

MANUFACTURERS

AIRFRAME
LING TEMCO VOUGHT,
DALLAS, TEXAS

ENGINE
G.M. (ALLISON DIV.)
INDIANAPOLIS, IND.

FY-75 REQUEST

QUANTITY			UNIT COST
34	WEAPONS SYSTEM COST	$ 142.0 M	
	FLYAWAY 118.1		$ 3.5 M FLYAWAY
	SUPPORT 20.9		
	ADV PROC (PRIOR YR) – .8		
	ADV PROC (CUR YR) 3.8		
	INITIAL SPARES	$ 8.6 M	
	TOTAL PROCUREMENT COST	$ 150.6 M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	PROCUREMENT COST THRU BUDGET YR
311	78	$1819.3M

A–7E Corsair II

Admiral Houser. The A–7E is a single-place, attack aircraft which is the mainstay of the Navy's carrier based attack force. Its performance in combat in Southeast Asia was outstanding. It provides a substantial increase in bombing accuracy, combat radius and load carrying capability over previous light attack aircraft. The navigation/weapons delivery system enables aviators with comparatively little combat experience to achieve combat bombing accuracy far better than results achieved with previous visual attack systems.

A–7 Configurations

Chairman McClellan. How does the A–7E differ from the configurations used by the Air Force?

Admiral Houser. The major configuration differences between the Air Force A–7D and the Navy A–7E are:

	A–7D	A–7E
Engine TF-41	A–1	A–2 (+500 lb. thrust).
Fuel heater for JP–5	No (normally uses JP–4)	Yes.
Carrier provisions:		
Wheels	No	Yes.
Brakes	No (but higher energy)	Yes.
Nose gear strength	No	Yes.
Launch bar	No	Yes.
Pressurized wing	No	Yes.
Nuclear capability	No	Yes.
Battery	Yes	No.
Internal starter	Yes	No.
Air refueling provisions	Boom	Probe.
Bomb racks		
Electric fuzing	No	Yes.
Cockpit arrangement		

The percentage of commonality between the Air Force A–7D and the Navy A–7E is:

	Percent
Engine	95
Major Avionics components	90
Other Avionics components	50
Airframe	90
Sheet metal parts	60
Wiring harness	05
Major subsystems (hydraulics, landing gear, fuel system, flight controls)	20

Chairman McClellan. Proceed.

Admiral Houser. The A–7E has proved to be both reliable and easily maintainable, not only during operational testing but in deployments to the Mediterranean and Southeast Asia.

The United States participation as a guest in the "1973 Airsouth Tactical Weapons Meet" held at Istrana, Italy 16–28 July 1973 clearly demonstrated the A–7E's superior accuracy and light attack capability. With Turkey, Italy, Greece and the USAF participating, the Navy A–7E team was the winner by a large margin over the other teams/aircraft models.

A–7E in Foreign Competition

Chairman McClellan. What were the other teams and aircraft models with whom the U.S. Navy competed at Istrana, Italy, in 1973?

Admiral Houser. The USN flying A–7E aircraft and USAF flying F–4E aircraft comprised the United States team which competed against Italy flying the G–91Y, and Turkey and Greece flying the F–5A.

Chairman McClellan. Proceed.

Admiral Houser. In FY 1975, eighteen squadrons will be equipped with the A–7E. Our objective is an all A–7E regular light attack force. At this time, a total procurement program of 646 A–7E's is planned—and 476 have been approved for procurement through the FY 1974 budget. A continuation of this procurement rate will not achieve the desired all A–7E active force level until FY 1981.

$142.0 million is requested in the FY 1975 budget for the procurement of 34 A–7E aircraft to sustain A–7 force levels. A modest modernization of the light attack force will result simply from replacing attrited A–7A/B aircraft with new production A–7E's. Initial spares require an additional $8.6 million.

F-14A TOMCAT GRUMMAN

MISSION

AIR SUPERIORITY FIGHTER
FLEET AIR INTERCEPT
AIR-TO-GROUND ATTACK



F-14A TOMCAT

MANUFACTURERS

AIRFRAME
GRUMMAN
BETHPAGE, L.I., N.Y.

ENGINE
UNITED AIRCRAFT CORP.,
PRATT & WHITNEY DIV.
E. HARTFORD, CONN.

QUANTITY	FY-75 REQUEST		UNIT COST
50	WEAPONS SYSTEM COST	$ 709.3 M	
	FLYAWAY 563.5		$ 11.3 M FLYAWAY
	SUPPORT 130.8		
	ADV PROC (PRIOR YR) — 55.0		
	ADV PROC (CUR YR) 70.0		
	INITIAL SPARES	$ 35.2 M	
	TOTAL PROCUREMENT COST	$ 744.5 M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	PROCUREMENT COST THRU BUDGET YR
49	132	$3500.9M

F–14A Tomcat

Admiral Houser. Air supremacy requires an acceptable level of effectiveness in all tactical fighter roles—escort, air superiority and fleet air defense. Because a carrier deck cannot accommodate several types of fighter aircraft each dedicated to a peculiar mission, a Navy fighter must be a total system providing the most capable and effective vehicle to accomplish all fighter missions. The F–14 design was optimized to this end, and the demonstrated performance of the total weapon system is meeting Navy requirements.

F–14 Sorties and Flying Hours

F–14 development, test and evaluation has progressed very successfully and at a rapid rate. F–14 aircraft have flown 4523 sorties and 7610 flight hours through December 1973. Of this total, 2660 sorties and 4426 flight hours have been flown by Navy crews in test and evaluation efforts as well as training and operations. This flight program provides us with a broad insight into the total F–14 performance and mission capability, far more than any previous fighter initiative. Test and evaluation has not, of course, been trouble free and there are areas in which our test efforts continue. However, and most significant, these areas do not affect safety of flight nor will they impair ultimate F–14 performance.

F–14B Engine Development

Chairman McClellan. The F–401–PW–100 engine was initially selected for use in the F–14B aircraft. What funds were expended for the development of this engine in years prior to FY–1974? What will be the expenditures in FY–74 and FY–75, and for what will the funds be used? What is the Navy's plan for production of the F–401 engine and its use with the F–14B aircraft?

Admiral Houser. The Navy has been allocated $353.3 million in FY–73 and prior years for development of the F401–PW–400 engine and associated flight tests. The $16.0 million FY–74 budget and the $27.5 million FY–75 budget will be used primarily to fund contractor effort already expended under the Limit of Government Obligation (LOGO) clause of the Engine Development contract as well as further development effort.

When the F–14B program was initiated, it was planned that the F401 engine would be incorporated in the F–14 procurement program. However, as a result of F401 engine failures during the official substantiation tests in September and November of 1973, other technical problems and associated schedule slippages and cost increases of the Joint engine development program, the Navy is redefining the F401 program to complete the development of the F401 engine. No production is planned at this time; however, the F401 engine has emerged as a very promising candidate to fulfill the propulsion requirements of the VFAX and V/STOL aircraft, as well as other applications in the 1980's.

Chairman McClellan. Proceed.

BIS Trials

Admiral Houser. The final trials phase of the weapon system Board of Inspection and Survey (BIS) commenced on schedule in February 1973 and was completed in October 1973. Operational Evaluation (OPEVAL) commenced in August 1973. The first carrier suitability BIS trials were successfully conducted aboard the USS Forrestal in December 1973. The AIM–54A Phoenix missile was evaluated for the first time in the carrier environment and results indicate that it is compatible with carrier operations.

Phoenix Missile Launchings

Another significant F–14A/Phoenix milestone was achieved in November 1973 when an F–14 launched six Phoenix missiles in less than 40 seconds at six targets in two raid fronts. Four of the missiles made direct hits, one missile failed and one missile's target discontinued presentation of realistic-size simulation during missile flight resulting in a "no test". You will recall last year I reported to you that in December 1972 a single F–14 simultaneously engaged four of five separate target drones with four Phoenix missiles resulting in four kills. Both

of these firings are unprecented and add a new dimension to air-to-air combat. An impressive 90% of our 33 valid Phoenix firings from the F–14 have been successful.

PHOENIX TESTING

Chairman MCCLELLAN. Has the Phoenix missile system been tested under all weather conditions and required altitudes? Discuss these types of tests.

Admiral HOUSER. The Phoenix missile system has been tested under a wide variety of test conditions—altitudes and target conditions. A summary listing of all firings is depicted in Exhibit (A). Testing has been restricted to certain weather minimums, primarily for Test Range considerations. Range clearance for safety, weather minimums for target take-off and recovery and radar tracking telemetry reception are all factors in determining test weather criteria.

There is no reason to suspect that weather would affect Phoenix capability or performance, [deleted].

Chairman MCCLELLAN. Proceed.

LOT V PROCUREMENT

Admiral HOUSER. Discussions between the Navy and Grumman to resolve the F–4 airframe contractual difficulty were successfully concluded in March 1973. Grumman has agreed to produce the 48 aircraft in FY 1973 (Lot V) in accordance with the terms of the original contract and congressional direction imposed on the FY 1973 authorization and appropriation.

PROGRAM UNIT COST THROUGH LOT V

Chairman MCCLELLAN. What was the program unit cost of each aircraft through Lot V? What is the program unit cost for the 50 aircraft requested for the FY–1975 buy?

Admiral HOUSER. Program unit cost for 134 aircraft through Lot V comes to $24.1 Million. As you know, this includes flyaway, support, spares, R&D and MILCON Costs. Program unit cost for FY–75 is $15.1 million.

Chairman MCCLELLAN. Continue.

Admiral HOUSER. It was the Navy's decision to not exercise contract options beyond Lot V. FY 1974 and subsequent F–14 procurements to fulfill Navy requirements have been and will continue to be negotiated annually on an individual contract basis. The FY 1975 F–14–APN request is based on this form of contractual arrangement.

CONTRACTOR ECONOMIC PRODUCTION RATE

Chairman MCCLELLAN. What is the minimum economic procurement of F–14A aircraft in FY–1975?

Admiral HOUSER. Grumman will be producing the F–14 on a 6 aircraft per month production rate at the start of the FY–75 procurement. Accordingly, based on their production capacity at that time, the minimum economic production of F–14 aircraft in FY–75 is six aircraft per month. Between the U.S. Navy FY–75 procurement and the Iranian buy, Grumman will essentially maintain a 6 aircraft per month production rate during the FY–75 procurement period.

Chairman MCCLELLAN. Proceed.

Admiral HOUSER. Twelve research and development and 172 production aircraft for a total of 184 F–14's have been funded to date. In FY 1975 we are requesting $709.3 million for 50 additional aircraft. $35.2 million is required for initial spares.

F–14A CAPABILITIES

The F–14A is continuing to prove itself as a superior weapon system. The Navy requires the quantum jump forward in fleet air defense and dog fight capability which the F–14A provides.

DOGFIGHT CAPABILITY OF F–14

Chairman MCCLELLAN. More and more emphasis is being given to the dog fight capability of the F–14. Is this consistent with the concept of a stand-off missile system such as the Phoenix? Discuss this.

Admiral HOUSER. Yes, the F–14/Phoenix weapon system is inherently capable of both missions at no derrogation to either, principally because of the automatically programmed wing which provides superior turning performance and the proven capabilities of the AWG–9 system in the close-in dog fight—i.e., visual rapid radar acquisition systems and "heads up" display indicating where and when to fire weapons. From an operational and training standpoint, as shown in previous limited wars, fighter aircrews must be capable of both missions. Further dog fight training and attendant capabilities establish an aggressive confident professionalism in Navy aircrews that pervades other flight phases, enhancing overall combat readiness.

Chairman MCCLELLAN. Continue.

Admiral HOUSER. We are confident of the F–14's continued success as it approaches initial career deployment this fall.

F–14's for Marine Corps

As you will recall, the Marine Corps joined the Navy in the F–14 program last summer and will receive their first eighteen aircraft from FY 1974 procurement. A Marine Corps cadre of instructor personnel is presently being formed at Naval Air Station Miramar, California.

Marine Corps Requirement for F–14

Chairman MCCLELLAN. What is the Marine Corps requirement for a costly aircraft like the F–14? How many aircraft are programmed for the Marine Corps and what aircraft will they replace?

Admiral HOUSER. As outlined by Admiral Zumwalt on 13 April 1973 before the Senate Armed Services Committee, some of the high threat scenarios may require pull back of carrier based fighter cover necessitating Marine Corps fighter aircraft to provide seaward sector cover as well as inland. In such cases, the Marine Corps aircraft must have equivalent capability to Navy fighter stand off systems. The Marine Corps is programmed for four F–14 12-plane tactical squadrons and the attendant pipeline and training aircraft. The Marine Corps F–14s will replace F–4s.

Chairman MCCLELLAN. Proceed.

Iranian Purchases

Admiral HOUSER. The Imperial Iranian Air Force is purchasing 30 F–14's along with support and spares to modernize their fighter force. This procurement has been initiated and deliveries will commence in January 1976 at the rate of two aircraft per month. These deliveries will be made concurrently with those planned in the FY 1975 procurement request for 50 U.S. Navy F–14 aircraft and extend into FY 1977.

Iranian Buy

Chairman MCCLELLAN. How much will the Iranian buy reduce the cost of the Navy's F–14 program? Is the Iranian government paying a portion of the R&D cost of the F–14 program?

Admiral HOUSER. Cost savings to the U.S. Government in FY 75 because of the Iranian procurement are estimated between $15–22 million. Navy negotiations with Grumman are expected to be concluded in July 1974 with a fixed price type contract reflecting realistic savings. We cannot predict the outcome of the upcoming negotiation but do recommend a FY–75 F–14 budget reduction of $15 million pending completion of negotiations.

The Iranian Government is paying a pro-rata share of F–14 non-recurring R&D costs amounting to $67 million. This amount was arrived at by dividing the total F–14 R&D costs by the sum of the current approved U.S. program and anticipated foreign military sales cases to arrive at a unit cost. As collections are received from the Government of Iran, they will be applied to the appropriate appropriation accounts in accordance with prescribed OSD policy.

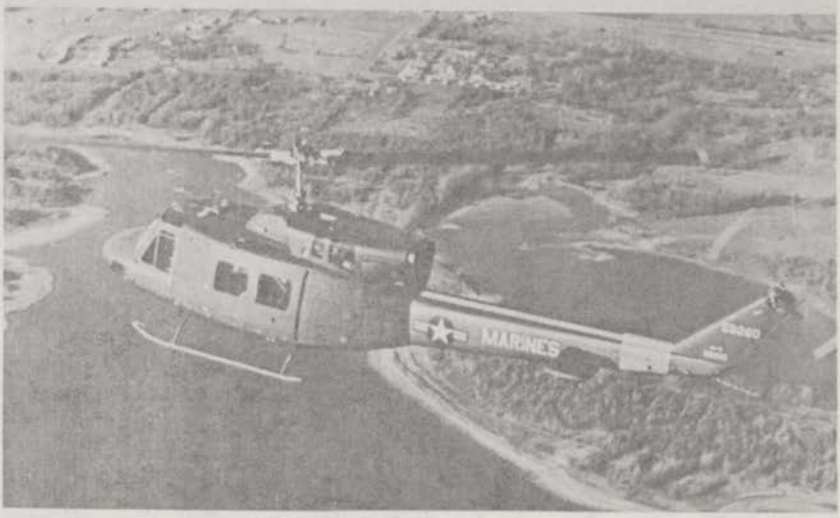
It must be recognized that entitlements to collections from foreign customers do not become due nor are they collected at the time a sales agreement is consummated. Rather, these collections are earned and received as production progresses and items are delivered. On major items such as the F–14 this process will not be completed until FY–1977.

Chairman MCCLELLAN. Proceed.

UH-IN IROQUOIS BELL

MISSION

LIGHT TRANSPORT



UH-IN IROQUOIS

MANUFACTURERS

AIRFRAME
BELL
FORT WORTH, TEXAS

ENGINE
UNITED AIRCRAFT OF W.VA.
BRIDGEPORT, WEST VIRGINIA

QUANTITY	FY-75 REQUEST		UNIT COST
20	WEAPONS SYSTEM COST	$ 16.5 M	
	FLYAWAY 14.8		$ .739 M FLYAWAY
	SUPPORT 1.2		
	ADV PROC (PRIOR YR) – 1.1		
	ADV PROC (CUR YR) 1.6		
	INITIAL SPARES	$ .1 M	
	TOTAL PROCUREMENT COST	$ 16.6 M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	PROCUREMENT COST THRU BUDGET YR
101	48	$137.5M

UH–IN Iroquois

Admiral Houser. The UH–IN is the latest model of the "HUEY" helicopter, incorporating design and equipment improvements (including a twin-engine power package) that markedly improve safety, reliability and maintainability. The Navy, Marines—and the Air Force—all use this helicopter for a variety of missions.

UH–IN Missions

The Navy uses the UH–IN primarily for local base rescue at naval air stations and for support of Antarctic Operation DEEPFREEZE. Marine Corps use includes command and control mobility for troop commanders, and movement of troops, equipment and cargo in amphibious assault and shore-based operations. Other missions include medical exacuation, combat reconnaissance support and various light utility missions.

Marine Corps Requirements

The Marine Corps force requirement is six squadrons of 21 operating aircraft each. The Navy force level requirement is 28 operating aircraft.

CURRENT AND PROGRAM INVENTORY OF ROTARY WING AIRCRAFT FOR THE NAVY AND MARINE CORPS

Type	Fiscal year—									
	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
AH–1G	26	26								
AH–1J	48	66								
HH–3A	11	11								
UH/HH–2	33	4								
SH–3D	60	58								
SH–3H	20	33								
SH–3A	66	52								
SH–3G	76	75								
UH–3A	7	7								
HSX(L)	0	0								
SH–2D/F	64	85								
CH–53A	101	99								
CH–53D	110	107								
CH–53E	0	0								
RH–53D	30	29								
HH–46A	36	60	[Deleted.]							
UH/CH–46A	40	15								
UH/CH–46D	176	169								
CH–46F	168	164								
CH–46E	2	2								
HH–1K	21	20								
TH–1L	42	41								
UH–1N	97	117								
UH–1D/H	25	24								
UH–1E	82	78								
UH–1L	5	5								
TH–57A	37	36								
VH–3A	9	9								
VH–3D	0	1								
Total	1,392	1,393								

Chairman McClellan. Proceed.

Admiral Houser. A total procurement program of 293 UH–1N's is planned at this time; 149 previously authorized, 20 requested this year and 124 planned for future years.

UH–1N Procurement Program

Chairman McClellan. You indicate a requirement for 154 operational UH–1N helicopters and a total procurement program of 293. What will the additional helicopters be used for?

Admiral Houser. Continued procurement of UH–1N helicopters is required to (1) complete the Navy/MC "HUEY" modernization program, replacing single-engine UH–1Es with the twin-engine UH–1N in the Active Forces; and (2) to provide for attrition and advance attrition during forecast utilization.

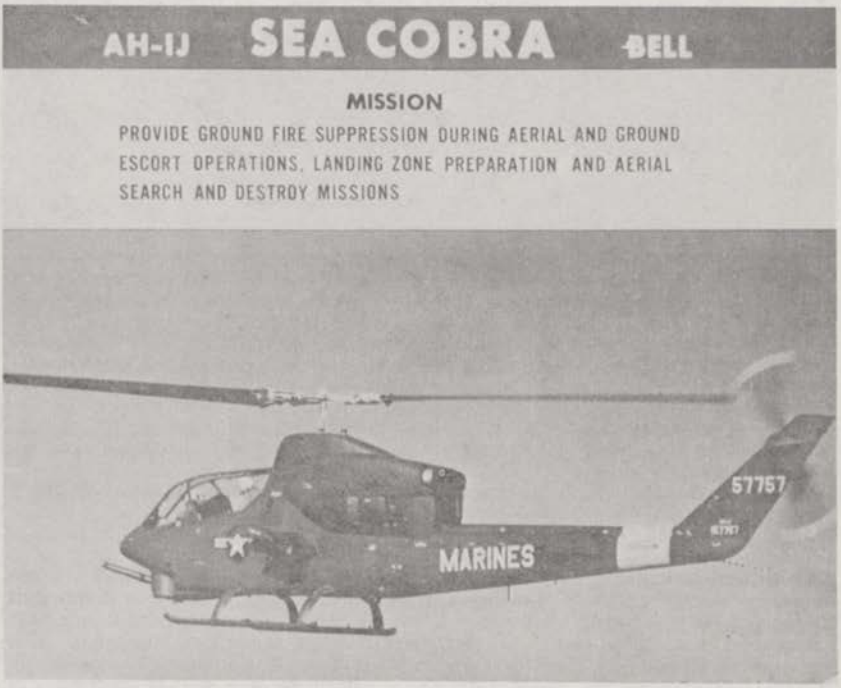
The total procurement of 293 UH–1Ns will sustain the operational requirement of 156 for the Marine Corps and 28 for the Navy (a total of 184), plus a pipeline requirement averaging 23, for a total of 207.

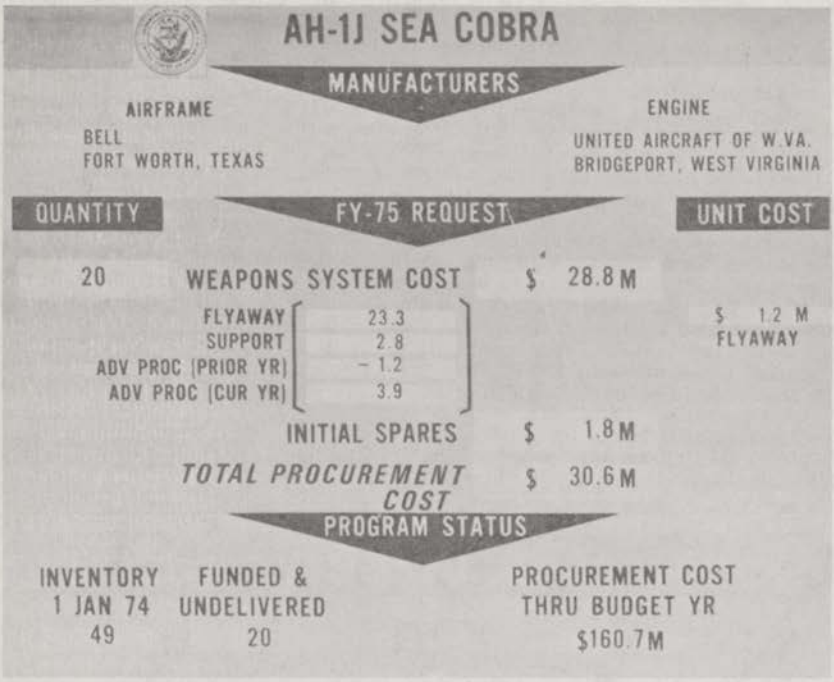
Marine Corps utilization includes six light helicopter squadrons of 21 UH–1Ns each, plus 12 for training, 12 in Reserve units, and 6 for other equipment. Navy's use includes shore-based Search and Rescue employment at various Naval Air Stations plus support of Operation "DEEPFREEZE" in the Antarctic.

Initial procurement commenced with a buy of 62 aircraft for both Navy and Marine Corps needs in FY 70; therefore, original aircraft reach Service Life termination in early 80s; replacement aircraft would be of service through the 1990 timeframe.

Chairman McClellan. Continue.

Admiral Houser. We are requesting $16.5 million to procure the 20 UH–1N's. $0.1 million is required for initial spares.





AH–1J (Improved) Sea Cobra

Admiral Houser. The AH–1J, an assault helicopter gunship, is used by the Marine Corps to provide close-in ground fire-suppression during escort operations of troop/cargo-carrying helos or ground forces and helo landing zone preparation. The improved version of the AH–1J, like its predecessors, the single-engined AH–1G and the standard AH–1J is designed specifically for the armed helo combat role. The primary differences between the standard and improved versions of the AH–1J are the incorporation of a highly efficient rotor dynamics system, coupled to an uprated version of the "twin-pac" engine, which allows a 40% increase in maximum gross weight.

Cost and Comparison of Cobra and AH–1J Helicopter Gunships

Chairman McClellan. Compare the AH–1J helicopter gunships with the Cobra gunship which is used by the Army, including the cost of each.

Admiral Houser. The Army AH–1G differs from the Marine AH–1J in number of engine and horsepower rating, gear box ratings, armament and fire control systems, and other equipment as listed in Table I, below. Alternate ordnance payload capabilities under varying ambient (altitude/temperature) conditions are portrayed in Table II. A total of 1133 AH–1Gs were delivered through 1973 whereas only 49 AH–1Js were delivered to date. A theoretical buy of 55 each (procurement unit cost expressed in FY–74 dollars) would incur a cost of approximately $687,000 for the AH–1G and $990,000 for the AH–1J.

TABLE I.—CONFIGURATION COMPARISON

Model	Maximum gross weight (pounds)	Engine	Rotor Dia/Chord	Main Xmsn[1] (shp)	Armament	Sight	Other equipment		Rotor brake	Crashworthy fuel cells
							SLAE[2] radios	Electrical		
AH-1G	9,500	T-53-L-13B (single) 1,400 shp	44 ft/27 in	1,134	M-28	M-28 pantograph and direct vision 1 to 1.	Yes	Alternating current	No	Yes.
AH-1J	10,000	T400-CP-400 (twin) 1,800 shp	do	1,292	XM-197	do	No	Direct current	Yes	No.

[1] Maximum SHP (5 minute limitation).

[2] Standard lightweight avionics equipment.

TABLE II.—PERFORMANCE COMPARISONS

Model	Weight empty	Nondisposable useful load	Max ordnance load	Max gross weight
AH–1G	5,809	[1] 2,417	1,274	9,500
AH–1J	6,591	[2] 2,429	980	10,000

[1] Includes crew 1,716-lb fuel, trapped fluids, ammo boxes, store pylons.
[2] Includes crew 1,827-lb fuel, trapped fluids, ammo box, KY 28, 1 KIT-9A.

	Alternate ordnance loads (lbs)				
	Sea level standard day	Sea Level 95 F	2000 ft 70°F (NATO standard)	3,000 ft, 91.5°F (MC hot day)	4,000 ft, 95°F (Army hot day)
HIGE[1]	1,274	———	———	1,124	494
HOGE	1,164	544	974	———	———
HIGE	980	———	———	———	———
HOGE	980	———	———	580	80

[1] HIGE—Hover in ground effect; HOGE—Hover out of ground effect.

Chairman McCLELLAN. Proceed.

UPRATED ENGINE DEVELOPMENT

Admiral HOUSER. The increased weight capability equates to an ordnance/fuel payload growth factor of two to three times, dependent on altitude and temperature. Significant economies will be realized by using the new rotor dynamics system and uprated engine developed for the government of Iran for use in their Huey's and AH–1J's which are in concurrent production with our improved AH–1J. A total procurement of 124 AH–1J's is planned with final procurement in 1976. $28.8M is requested to procure the 20 AH–1J (Improved) helicopters with an additional $1.8 required for initial spares.

HELICOPTER DELIVERY SCHEDULE

Chairman McCLELLAN. How many of the AH–1G and standard AH–1J helicopters have been delivered? What will these assets be used for upon delivery of the improved AH–1J?

Admiral HOUSER. A total of 38 AH–1Gs were delivered in FY–69 and deliveries of 49 AH–1Js were completed in January 1971. Due to normal attrition, plus combat losses, the current AH–1G inventory is 27.

AH–1G/J COBRA GUNSHIP DELIVERIES TO DATE

[Programed deliveries in parentheses]

Fiscal year	1968	1969	1970	1971	1972	1973	1974	1975	1976	Total
AH–1G	38	———	———	———	———	———	———	———	———	38
AH–1J (standard)	———	49	———	———	———	(18)	———	———	———	67
AH–1J (improved)	———	———	———	———	———	(2)	(15)	(20)	(20)	57

Marine Corps AH–1J requirements include:

3 squadrons (at 24 each)	72
2 training elements (at 6 each)	12
R.D.T. & E	2
Pipeline	10
Attrition	28
Total	124

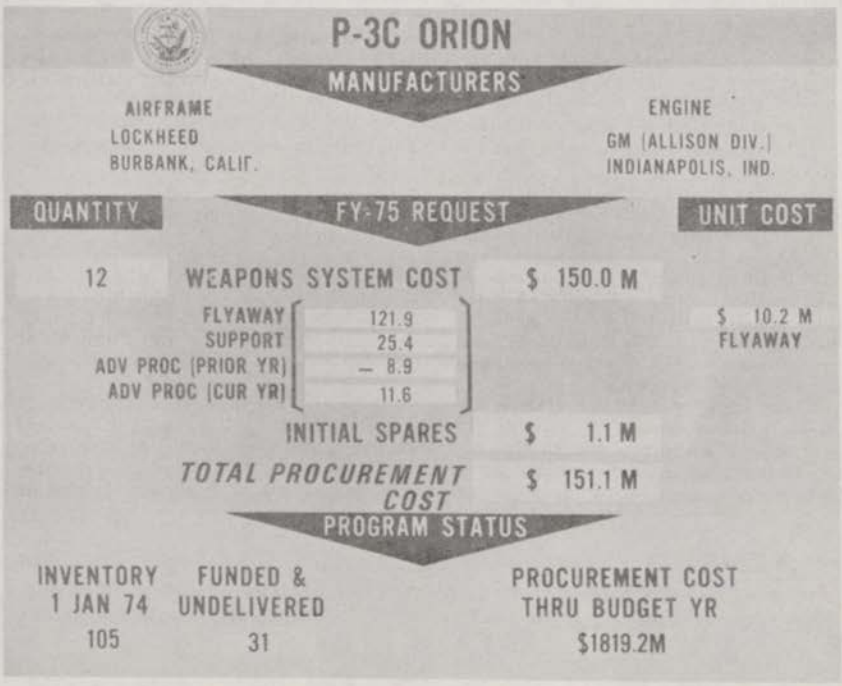
Standard AH–1J's being procured in FY–73 will continue to replace the aging, single-engine AH–1Gs in the Active Forces while the G's will be utilized to build up the Reserve inventory.

Eventual deliveries of the improved AH–1J will provide for two attack helicopter squadrons equipped with that configuration while the third active attack squadron employs the standard AH–1J.

Chairman McCLELLAN. Proceed.

P–3C ORION





Admiral HOUSER. The P–3C, latest version of the P–3 ORION family of land-based anti-submarine warfare (ASW) aircraft continues to demonstrate significantly improved capability over the earlier P3A/B models and other land-based ASW aircraft. With nine squadrons now employing the P–3C, the value of the A–NEW concept of computer integrated avionics is proving itself as the number one ASW weapon system of the free world.

P–3C OPERATIONAL READINESS

The Operational Readiness of the P–3C has been of concern to all of us. As I reported last year, an aggressive Operational Readiness Improvement Program to increase the readiness of the P–3C, was implemented by the Navy. One facet of this program involved a major improvement to the high frequency communications system. This modification has more than doubled the reliability of the HF communication system. The Navy has implemented two aggressive asset management programs, CLAMP and MAVERICK, to more efficiently provide expeditious spare support to the fleet. Realization of the benefits of these programs occurred in November 1973 when our operational P–3C squadrons achieved the CNO goal of 71% Operational Readiness.

MANAGEMENT PROGRAMS

Chairman MCCLELLAN. Discuss two management programs which helped the P–3C squadrons achieve an operational readiness goal of 71% last November. Just what does this readiness status mean? What is the operational readiness status of these squadrons today?

Admiral HOUSER. The two management programs which helped the P–3C squadrons achieve an operational readiness goal of 71% last November are the Closed Loop Aeronautical Management Program (Clamp) and Maverick.

Clamp.—As Navy aircraft and equipments have become more complex, the interdependence between the installed systems and repairable subcomponents has become critical. Costs for these complex systems have risen sharply in an environmental declining resources. As a result, the investment which can be made for repairable components is constrained and only limited numbers may be procured. To ensure the availability of repairables required to sustain established levels of full systems capability with minimal assets, it has become necessary to develop and test new dedicated management techniques. The Closed Loop Aeronautical Management Program (Clamp) is such a technique.

The objectives of Clamp include world-wide knowledge or visibility of selected repairable assemblies, serial number control of pipeline and repair cycle requirements, and one-for-one replenishment when an item is beyond the local maintenance capability. To acomplish these objectives, the following management techniques apply to items selected for Clamp.

a. Negotiated allowances between ASO and the type commanders for each operating site.

b. Serial number control of items.

c. Segregated storage.

d. Shipments via controlled transportation.

e. Dedicated ASO field representatives.

f. Failure analysis to determine problems and recommend corrective actions.

Maverick.—Supply support of the P–C3 relies heavily on the automated inventory system operated by the Aviation Supply Office (ASO) but special management attention is required when unavailability of parts/equipment affect Operational Readiness. Maverick accomplishes this by use of TWX messages and conference telephone calls.

Early each week, each participating P–3 Base identifies approximately 30 NORS/critical supply requisition items and transmits a list via TWX to the program coordinators and to the support activities. Cited items are researched to the greatest extent possible by receiving agencies. A mid-week, conference calls are initiated by the coordinators to include each base individually and all

support activities. During this call, each supply requisition item is discussed among the participants and updated status is provided by whoever has the most current information. Usually, ASO has the latest status and is able to advise those concerned of actions being taken by ASO commodity managers to fill the requisitions such as, referral to a base that has the item, expediting an item through commercial overhaul, etc. Other features of Maverick include, use of rapid transportation methods, such as AIR FREIGHT, and dedicated tracking of all items up to receipt by the requiring base. On Friday, a second conference call is conducted with each base to close out items left uncompleted during the earlier calls.

Aircraft operationally ready is a safely flyable aircraft that has on-board and operable the mission essential sub-systems necessary for the performance of one or more of the primary missions of the unit to which assigned.

The P–3C operational readiness goal of 71% which was achieved in November 1973 has been maintained within 10% of that goal since then. Operational readiness for March was 62% for the operational patrol squadron in the Atlantic and Pacific Fleet.

Chairman McCLELLAN. Proceed.

P–3C UPDATE PROGRAM

Admiral HOUSER. The P–3C update program will be introduced to the fleet in early CY75. This program permits significant growth of the on-board computer memory, installs the new fully-automatic OMEGA Navigation System, and replaces the two currently-installed magnetic tape transports with one highly reliable unit. The net result of this program allows the more efficient application of the CP–901 computer to the resolution of the ASW problem and adds a new dimension to the P–3C's submarine detecting capability.

Major modifications to the DIFAR system are scheduled for incorporation in September 1975. This modification will significantly improve the sensitivity of the system while, at the same time, increasing reliability and improving maintainability.

P–3C COMPARED TO EARLIER MODELS

Chairman McCLELLAN. Provide a comparison of the P–3C anti-submarine warfare aircraft with the earlier P–3A/B models. How will these older aircraft be used?

Admiral HOUSER. Although the P–3C generally shares the same basic exterior appearance as its predecessors, internally a complete modernization has taken place to take advantage of the application of a digital computer to the integration of improved avionics, including navigational, sensor and armament systems. This data processing system is the distinguishing feature of the P–3C. In addition to the increased capability provided by these changes, improvements have been introduced in the areas of human engineering, reliability and maintainability. The end result is a significant improvement in the effectiveness of the P–3C as compared to the P–3A/B aircraft. Recent experience has demonstrated a tactical effectiveness of two to three times that of the older P–3A/B. As the P–3C progressively replaces the older models in the actve force, the P–3A/B aircraft will be utilized to modernize the reserves and retire the aging SP–2H aircraft.

Chairman McCLELLAN. Proceed.

IMPROVED MAINTENANCE PROGRAM

Admiral HOUSER. Currently under implementation is the P–3 Improved Maintenance Program which has as its objectives minimizing scheduled maintenance requirements, reducing maintenance down time, improving the effectiveness of scheduled maintenance and reducing the maintenance manpower requirements to accomplish these tasks.

P–3 Improved Maintenance Program

Chairman McClellan. Describe the P–3 Improved Maintenance Program. Can this be used with other aircraft systems?

Admiral Houser. The P–3 Improved Maintenance Program is a squadron and depot level program to apply the latest commercial airline maintenance analytical techniques and develop a schedule maintenance program that will optimize maintenance costs and increase aircraft availability. This program resulted from a proposal by the Aerospace Industries Association (AIA) Product Support Committee to devise methods for improving the support of military aircraft. The AIA proposal recognized that applying commercial maintenance concepts developed for the wide-bodied jets would reduce maintenance costs and improve aircraft availability. The maintenance programs for the wide-bodied jets are developed from two basic concepts:

(1) Perform only those tasks that are necessary to retain the inherent levels of safety and reliability.

(2) Accomplish these tasks in timely and efficient groups.

To develop a maintenance program that satisfies these concepts requires a detailed analysis of the aircraft. A new analytical technique employing decision-making logic trees was pioneered by the airline operation and defined in the Air Transport Association Maintenance Program Planning Document, MSG–2. This technique has been applied to the P–3 aircraft to develop the essential maintenance tasks. These tasks for the squadron level have been structured into a continuous or phased maintenance program that consists of small work packages, each capable of being accomplished in a few hours. The analysis for the depot level tasks will be completed during May 1974.

A trial of the IMP was conducted on a typical operational squadron of P–3 aircraft for a period of six months and from the comparison of the data on manhours and downtime, there is little doubt the program is a success. Projecting the results of the trial phase to an annual basis results in a projected reduction of 7120 maintenance man-hours, in increased aircraft availability of 182 aircraft days (estimated to be 3–5% improvement in Operational Readiness). A portion of the improvement is due to the application of the MSG–2 analysis and a portion to the phased packaging of the maintenance tasks. Based on the results of the trial phase an dthe recommendations of the trial squadrons Fleet Commander, the Naval Air Systems Command intends to bring all P–3 Fleet Squadrons under the IMP in FY–75.

The S–3 aircraft is being introduced into the operating forces with the maintenance requirements based upon MSG–2. Actions are being taken to start the MSG–2 analysis on F–4 aircraft by 1 July 1974. This will result in the P–3, S–3 and F–4 being on the MSG–2 program by the end of FY–75.

Chairman McClellan. Continue.

Admiral Houser. During a six month trial of this program, savings of 66% in aircraft down time and 32–40% maintenance man hours were achieved.

Force Procurement

Procurement through FY–1979 provides a total of 220 aircraft which will equip 17 P–3C squadrons. While this program provides a mix of P–3B an P–3C squadrons, the Navy goal remains an all P–3C active force.

Chairman McClellan. How many aircraft will be required to have an all P–3C active force?

Admiral Houser. In order to achieve an all P–3C active force, 276 aircraft are required. However, this figure does not include attrition aircraft necessary to maintain the desired force level.

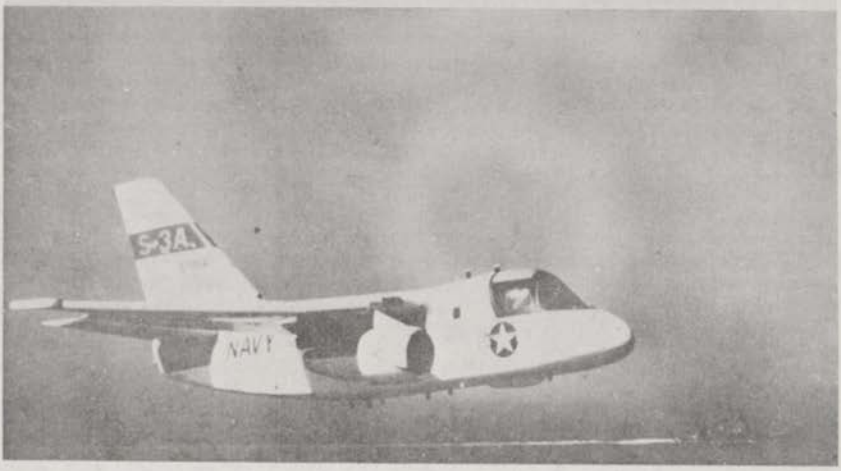
Chairman McClellan. Continue.

Admiral Houser. Our FY 1975 request for $150.0 million will procure 12 P–3C's and allow the twelfth squadron to transition to P–3C's. Initial spares require an additional $1.1 million.

S-3A VIKING LOCKHEED

MISSION

CARRIER BASED ANTI SUBMARINE AIRCRAFT DESIGNED TO COUNTER THE QUIET NUCLEAR SUBMARINE DURING THE FY-75 85 TIME PERIOD



S-3A VIKING

MANUFACTURERS

AIRFRAME
LOCKHEED
BURBANK, CALIF.

ENGINE
GENERAL ELECTRIC
WEST LYNN, MASS.

FY-75 REQUEST

QUANTITY			UNIT COST
45	WEAPONS SYSTEM COST	$ 485.4 M	
	FLYAWAY	396.7	$ 8.8 M FLYAWAY
	SUPPORT	86.7	
	ADV PROC (PRIOR YR)	– 54.0	
	ADV PROC (CUR YR)	56.0	
	INITIAL SPARES	$ 74.2 M	
	TOTAL PROCUREMENT COST	$ 559.6 M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	PROCUREMENT COST THRU BUDGET YR
6	87	$2075.2M

S–3A

Admiral HOUSER. The S–3A is a carrier based anti-submarine search and attack aircraft containing the latest ASW sensors, integrated with a general purpose digital computer. Over seven years of effort have been expended in designing the S–3A to counter the capabilities of Soviet nuclear submarines. The S–3A is designed to employ air-to-surface missiles, homing torpedoes and mines as well as conventional and nuclear depth charges. It replaces the S–2 Aircraft and will introduce a carrier based capability for searching large ocean areas and will provide anti-submarine protection for naval forces and other units independent of land bases.

S–3A CAPABILITIES

During the initial operational tests and evaluation the S3A with digital acoustic processing and fully integrated sensor/navigation avionics demonstrated greatly increased detection and localization capability over the S2. In addition, with its increased speed and altitude, greater weapon load, and greater endurance at mission range, the S3 provides the CV with an ASW screening capability which is an order of magnitude better than the S2.

The BIS started on 1 October 1973 as planned with the weapons system portion scheduled for completion 31 March 1974. The OPEVAL commenced in February 1974 to complete near the end of this year. The S–3A was officially introduced into the fleet 20 February at North Island, California.

The S–3A program is on or ahead of schedule in all areas. All project milestones have been met or exceeded, and the FY 1975 Lot Option exercise date is 1 October 1974. The 45 aircraft requested in FY 1975 represents a continuation of the production rate of four aircraft per month.

S–3A PRODUCTION RATES

Chairman MCCLELLAN. What is the minimum economic production rate for S–3A aircraft in FY 1975?

Admiral HOUSER. Under the terms of the contract that the Government has with Lockheed-California Company the minimum production rate for 1975 shall not drop below two and five tenths (2.5) aircraft per month. If production is lowered below this rate, all cost protection that the contract affords to the Government will be lost. The present option for FY 1975 calls for a production rate of four aircraft per month. If this rate is reduced to the contract minimum, the unit price of each aircraft will increase significantly. A production rate of four per month, or one per week, is considered the most efficient and economical production rate.

Chairman MCCLELLAN. Continue.

Admiral HOUSER. This lot of 45 aircraft will bring the production total to 138. A total program of 187 aircraft is planned with an operating force of 12 squadrons.

CARRIER OBJECTIVES

Chairman MCCLELLAN. The recommended procurement vice inventory objective for the S–3A program is 187 aircraft. How many active carriers is this based on? Describe how the objective is arrived at.

Admiral HOUSER. I will furnish the information for the record.

[The information follows:]

12 CV's at [deleted]	[Deleted]	Squadron UE.
Training squadron		
Fleet support/facilities		
Pipeline (14.6)		
Advance attrition		(Fiscal year 1974–81.)
Total	187	

Chairman MCCLELLAN. Proceed.

Admiral HOUSER. We are requesting $485.4 million to procure these 45 aircraft. Initial spares will require an additional $74.2 million.

E-2C HAWKEYE GRUMMAN

MISSION

AIRBORNE EARLY WARNING; COMMAND AND CONTROL



E-2C HAWKEYE

MANUFACTURERS

AIRFRAME	ENGINE
GRUMMAN BETHPAGE, L.I., N.Y.	GM (ALLISON DIV.) INDIANAPOLIS, IND.

FY-75 REQUEST

QUANTITY			UNIT COST
6	WEAPONS SYSTEM COST	$ 107.1 M	
	FLYAWAY	100.3	$ 16.7 M FLYAWAY
	SUPPORT	8.7	
	ADV PROC (PRIOR YR)	– 1.9	
	ADV PROC (CUR YR)	–	
	INITIAL SPARES	$ 11.6 M	
	TOTAL PROCUREMENT COST	$ 118.7 M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	PROCUREMENT COST THRU BUDGET YR
11	19	$761.6M

32-383 O - 74 - 50

E–2C Hawkeye

Admiral Houser. The E–2C Airborne Early Warning aircraft which is now in fleet service, provides threat early warning, intercept control and other command and control services to fleet units. It has similar outward appearance to the older E–2B but included many airframe refinements, uprated engines and an entirely new avionics suit. This new sysfem provides vastly improved detection capability, including the ability to detect and track airborne targets overland. Design features to enhance reliability and maintainability are also included.

The aircraft successfully completed Board of Inspection and Survey (BIS) trials in November 1973. Initial deployment is scheduled for mid 1974.

Replacements for Aging Aircraft

The requested procurement of 6 aircraft in FY–75 is another step toward replacement of the aging and obsolescent E–2B aircraft with an all E–2C force.

All E–2C Force Requirements

Chairman McClellan. How many aircraft will be required to provide the Navy with an all E-2C force? When do you plan to reach this goal?

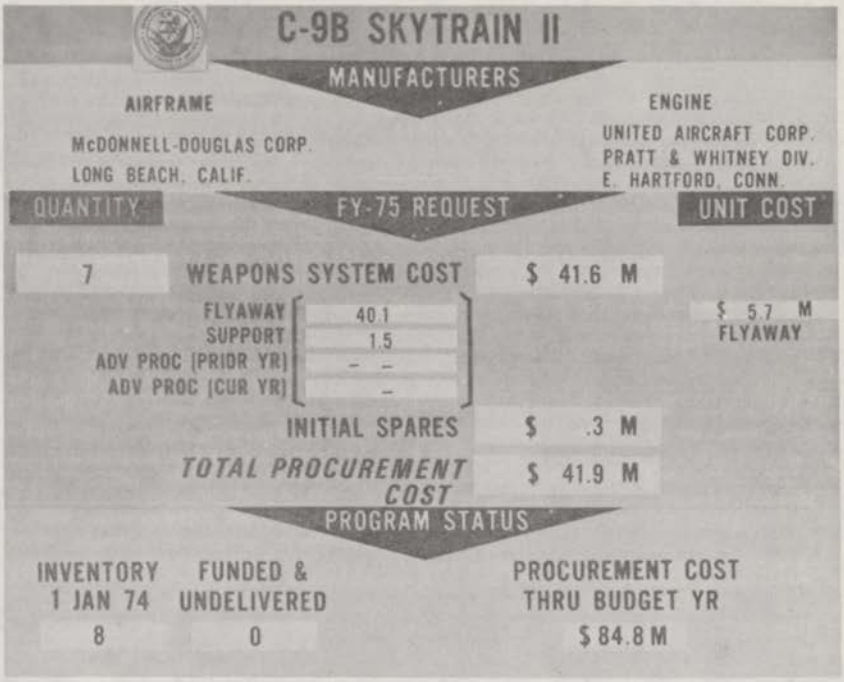
Admiral Houser. The requested procurement of 6 E–2C's in FY–75 results in total procurement of 34 aircraft. Thirty-six additional aircraft, procured at the rate of 6 per year would provide an all E-2C force in FY–83.

Chairman McClellan. Proceed.

Admiral Houser. The additional aircraft will permit transition of a sixth squadron to the E–2C, giving increased capability in both Sixth and Seventh Fleets. In addition, the buy will also preserve the option to procure additional aircraft in FY–76 and subsequent, without costly line start-up charges.

$107.1 million is requested to procure 6 E–2C aircraft with an additional $11.6 million for initial spares.





C–9B Skytrain II

Admiral Houser. The C–9B aircraft that we are requesting in FY 1975 will be a follow-on buy of the same model authorized in the FY 1972 and FY 1973 budgets. The C–9B is an off-the-shelf, twin fan-jet commercial aircraft capable of carrying 90 passengers, cargo, or a combination thereof.

Commercial Production

Chairman McClellan. Which manufacturers produce commercial aircraft of the C–9B configuration? What were the FY 1972 and FY 1973 buys and prices?

Admiral Houser. Only McDonnell Douglas, Long Beach CA., produces a commercial aircraft of the C–9B configuration. Boeing Co., Seattle, Washington, produces an aircraft, model 737–20, that is similar in mission capability. Five aircraft were procured in FY 1972 at $4,704,000 per aircraft. Three aircraft were procured in FY 1973 at $4,904,000 flyaway unit cost.

Chairman McClellan. Proceed.

Reliability and Dependability

Admiral Houser. Since its introduction in May 1973, the C–9B has achieved unprecedented dependability. Its reliability and operational readiness records have been the highest of any aircraft in the Navy inventory (92.5%), and its maintenance requirements have been consistently lower than original estimates (7.7 MMH/FH).

C–9B Aircraft

Chairman McClellan. You mention the dependability and maintenance records of the C–9B aircraft. Is not this aircraft contractually maintained? What is the annual contractual cost of maintaining this aircraft? What would be the estimated Navy cost to maintain the aircraft organically? What other aircraft are maintained by contract?

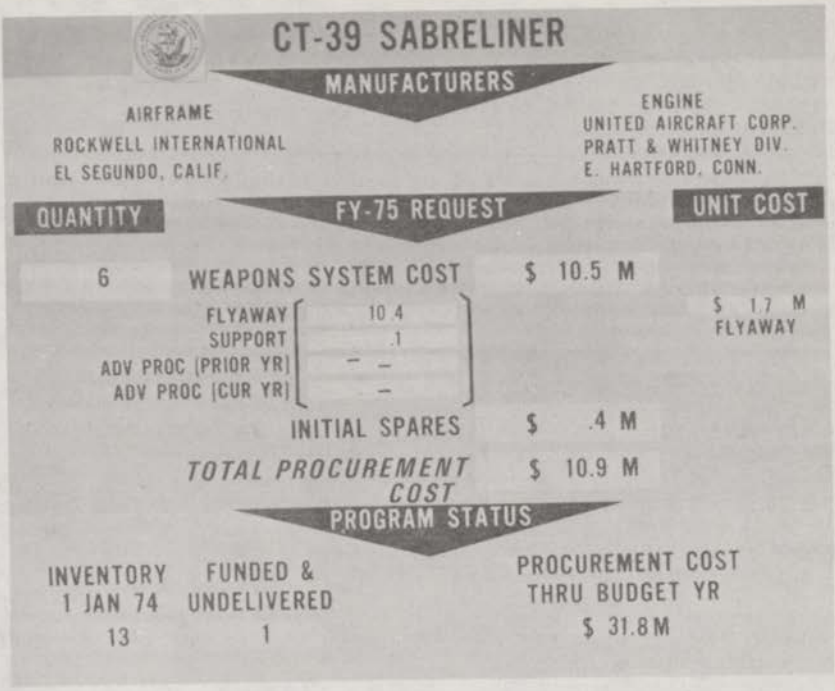
Admiral HOUSER. Organizational level maintenance is done by the Navy. Intermediate and depot level maintenance are done by the Contractor. On 8 May 1974, the C–9B will complete the first operational year in the Fleet. The contractual cost to maintain a total of 8 C–9B aircraft at two sites for this year is $3,045,192. The cost to perform this first year maintenancce organically is estimated at $8,335,484 including $4.7 million in spares and repair parts. CT–39, TC–4C, TH–57, and U–11 aircraft are also maintained by commercial contracts.

Chairman MCCLELLAN. Proceed.

Admiral HOUSER. The 7 aircraft requested in FY 1975 constitute the third increment in a program designed to satisfy Navy/Marine medium jet transport requirements. Thirty-four C–9B's are required and 31 are funded through the FYDP years. They will replace 20+ year old C–18's, C–121's and C–131's. Significant operating savings will result from replacement of these old propeller aircraft which are increasingly more costly to fly and maintain.

We are requesting $41.6 million for seven aircraft. An additional $0.3 million is requested for initial spares.





CT–39 SABRELINER

Admiral HOUSER. The CT–39 is a commercial twin-jet aircraft produced by North American Rockwell. The civilian designation of this aircraft is SABRELINER Series 60. It carries eight to ten passengers or equivalent weight in cargo, and is operated by a crew of two.

RAPID RESPONSE AIRLIFT

The CT–39 will be used for the purpose of providing rapid response airlift for high priority, time critical cargo and personnel. The aircraft will be assigned to Navy and Marine tactical support squadrons in support of fleet and Marine Corps operations.

REDUCED OPERATING COSTS

Nine CT–39's were purchased prior to FY 1972. The last aircraft of the five authorized in FY 1973 will be delivered in February 1974. The CT–39 has been proven to be economical to operate and highly reliable resulting in substantial reduction of aircraft operating costs compared to the older propeller aircraft which they replaced. Additional procurement of CT–39's is required in future years to permit replacement of these older aircraft in goth the Navy and Marine Corps inventories.

Chairman MCCLELLAN. You now have fourteen CT–39 aircraft. To what units are they assigned, and where are they located? Where and for what purpose will the six aircraft which you request for FY 1975 be used?

Admiral HOUSER. The fourteen aircraft presently in the Navy inventory are assigned as follows:

Squadron and location	*Number of A/C*
VR–1, Norfolk, Va.	4
VR–30, Alameda, Calif.	2
VRC–50, Cubi Point, Philippine Islands	3
VR–24, Naples, Italy	3
SOE, Cherry Point, N.C.	2

The six aircraft requested in FY–75 will be assigned as follows:

Squadron and location	*Number of A/C*
VR–30, Alameda, Calif	3
VRC–50, Cubi Point, Philippine Islands	1
H. & H. S., El Toro, Calif	1
H. & H. S., Iwakuni, Japan	1

The six aircraft requested in FY–75 are required to continue our modernization plan for Fleet Tactical/Fleet Marine Support squadrons. All CT–39 aircraft are used in conjunction with the C–9B to provide rapid response to support fleet commander high priority personnel and cargo aircraft demands.

Chairman McClellan. Proceed.

Admiral Houser. The requested $10.5 million is for procurement of 6 CT–39 aircraft. An additional $0.4 million is requested for initial spares.

Navy Budget Request

Senator Young. How many C–9 and CT–39 aircraft will the Navy procure assuming the budget request for these aircraft is approved?

Admiral Houser. The Navy is requesting 7 C–9B and 6 CT–39E aircraft in the FY–75 Budget.

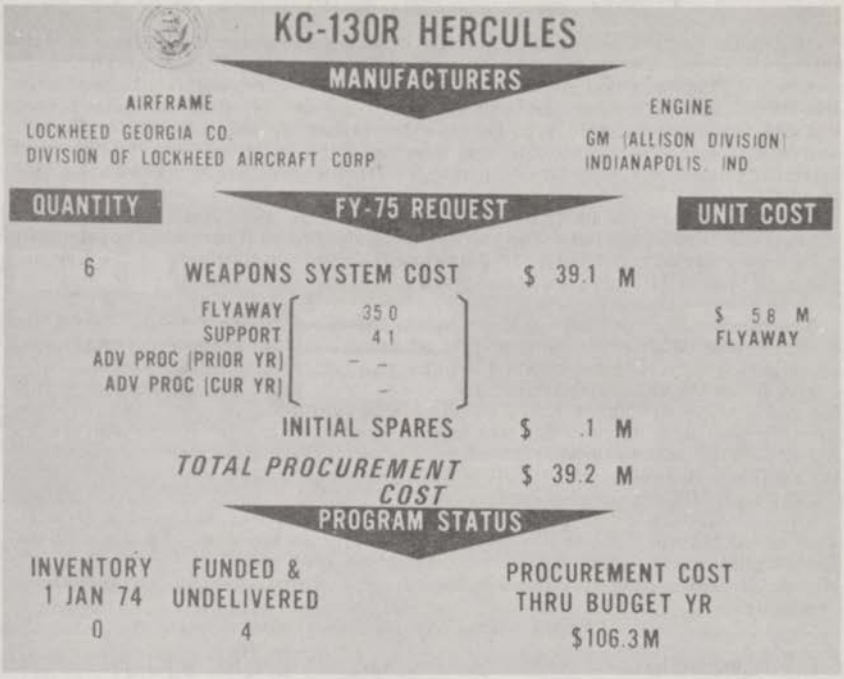
Aircraft Utilization

Senator Young. How will the C–9 and CT–39 aircraft be utilized? Will any of the aircraft be VIP configured and assigned to specific commands? If so, please provide the Committee with a list of such assignments.

Admiral Houser. The C–9B and CT–39E aircraft will be used in the Fleet Tactical/Fleet Marine Support Mission area. They will not be VIP configured nor will they be assigned as Command Aircraft. These aircraft provide the rapid response necessary to support Fleet Commander high priority personnel and cargo airlift demands.

Chairman McClellan. Proceed.





KC–130R Hercules

Admiral Houser. The KC–130R is the current production C–130 aircraft with in-flight refueling capability added. These aircraft provide aerial refueling for Marine Corps fighter and attack aircraft during tactical operations and for both Navy and Marine Corps aircraft transiting the Atlantic and Pacific.

Range and Capacity

Chairman McClellan. What is the range and capacity of the KC–130R tanker?

Admiral Houser. Used in a typical refueling mission at the design weight limit of 155,000 pounds, the KC–130R can cruise outbound 1000 nautical miles, loiter one hour, offload 38,300 pounds of fuel and return to the departure base. On a refueling mission planned to utilize the overload capability of the aircraft, the KC–130R can cruise outbound 1000 nautical miles, loiter two hours, offload 44,400 pounds of fuel and return to the departure base.

Fully fueled and used as a cargo aircraft, the KC–130R has a maximum range of 4130 nautical miles with a cargo load of 13,274 pounds. Should lesser range and a larger cargo load be required, 28,186 pounds can be transported 2840 nautical miles.

Chairman McClellan. Proceed.

Admiral Houser. The six aircraft requested in FY 1975 are required to provide pipeline and advanced attrition aircraft in order to maintain the regular force aerial refueler capability until the procurement of a follow-on tanker aircraft in the early/mid 1980's.

NEED FOR SEPARATE MARINE CAPABILITY

Chairman MCCLELLAN. As the Marine Reserves are generally collocated with active air units, why is a separate aerial refueling capability required?

Admiral HOUSER. Upon mobilization, the Marine Reserves will be utilized as the 4th Marine Aircraft Wing. As such, the Reserve Force requires an aerial refueling and transport capability to function in combat. In preparation for this requirement, and also to provide the Reserve Force with a realistic transport capability, it is necessary to equip the 4th Marine Aircraft Wing with KC–130 aircraft.

While some Reserve units are collocated at a base with active Marine units, the majority are located at other bases. Due to funding and personnel constraints, little excess aerial refueling or transport capability is available from the Regular Force to support these units. Thus, even at the shared location, additional support is necessary.

Additionally, as the Reserve Force aerial refueling capability is developed, the Reserves will be able to supplement the Regular Force in aerial refueling during short periods of crisis requirements similar to the recent Mid-East crisis.

The Reserves, then, require the KC–130 to provide a balanced wing structure for combat operations, to train aircrews and maintenance personnel in peacetime, to provide a modest, but realistic transport capability to the 4th Marine Aircraft Wing and to provide a source of short term augmentation of the Regular Force's aerial refueling capability during crisis periods.

Chairman MCCLELLAN. Proceed.

Admiral HOUSER. Upon delivery of previous procurement, transfer of six KC–130F aircraft from the Regular Force to the Reserves is planned by the Marines. This transfer will allow retirement of the 20 year old C–119 aircraft in the Marine Reserves and will provide the Reserve Force with an aerial refueler capability.

PROVISION FOR ATTRITION AIRCRAFT

Chairman MCCLELLAN. As the KC–130R aircraft requested in FY 1975 are for pipeline and advanced attrition, why cannot these aircraft be deferred to a later year?

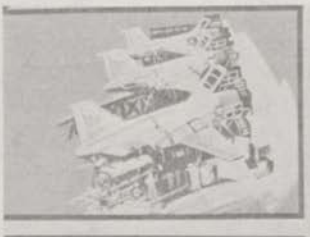
Admiral HOUSER. No provisions for attrition aircraft have been included in the previous requests. Projected loss rates indicate, that prior to the completion of delivery of the FY–74 procurement, including the FY–74 supplemental aircraft, the total inventory will be less than necessary to support the authorized UE. Additionally, should the aircraft be procured later, there are some nonrecurring costs involved in commencing the production of those items peculiar to the aerial refueling modification. Thus a delay in the procurement would result in an inadequate inventory of aircraft to support the UE, and would cause some added costs for the total KC–130R procurement. In the event the KC–130R's included in the FY 1974 Supplemental are not approved, the aircraft in the FY 1975 budget will be required not as pipeline or attrition, but to go directly into active force squadrons, permitting the programmed transfer of six KC–130H's from the active forces into the Reserves.

Chairman MCCLELLAN. Continue.

Admiral HOUSER. $39.1 million is requested to procure the six KC–130R aircraft. Initial spares will require an additional $0.1 million.

FY-75 AIRCRAFT MODIFICATION

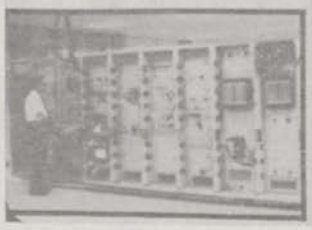
● ELECTRONIC WARFARE	$ 44.5M
● TACTICAL AIRCRAFT MODIFICATIONS	$218.5M
● ANTI-SUBMARINE WARFARE	$ 45.1M
● OTHER AIRCRAFT MODIFICATIONS	$ 24.4M
● POWER PLANT CHANGES	$ 5.0M
● FLIGHT SAFETY	$ 1.0M
TOTAL	$338.5M



$338.5 M AIRCRAFT MODIFICATION



$374.2 M AIRCRAFT SPARES AND REPAIR PARTS



$206.1 M AIRCRAFT SUPPORT EQUIPMENT AND FACILITIES

Aircraft Modification

Admiral Houser. The Aircraft Modification Program funds incorporation of technical improvements which substantially modernize operational capabilities, improve maintenance reliability or safety and extend service life of aircraft. Our request for this program is for $338.5 million dollars. The more significant items in the modification program include:

Continued installation of electronic warfare equipment designed to update radar homing and warning and DECM capability in combat aircraft to provide survivability against the more advance Soviet surface-to-air and air-to-air missiles.

Retrofit of the less capable A–6A aircraft with the A–6E avionics and weapons release system for improved combat capability, reliability and maintainability. A total of 192 A–6A-to-E modifications is planned through 1977. This in conjunction with planned new procurement, will replace the A–6A in active inventory and provide the Navy and Marine Corps with a modernized all-weather attack capability.

SLEP Program

Continuation of the Service Life Extension Program (SLEP) for F–4B aircraft in order to meet active and reserve fighter force levels.

F–4B Service Life Extension Program

Chairman McClellan. Describe the Service Life Extension Program for the F–4B aircraft.

Admiral Houser. The F–4B to F–4N program commenced January 1971. The first flight of the prototype aircraft occurred in June 1972. Since July 1972, 102 of the 197 aircraft program have been inducted and 70 aircraft produced. The time in process is approximately 6 months and the last completion is currently scheduled for December 1975.

Three types of work are involved:

(1) *Configuration Update.*—All aircraft receive all non-incorporated changes that have been approved for retrofit plus a few changes that enhance the operational capability of the aircraft (i.e., 30 KVA generators, the visual target acquisition system and an ECM update).

(2) *Fatigue Life.*—The 6-year extension of ten F–4B aircraft requires a rather extensive structural "beef-up" of the basic airframe.

(3) *Rewire.*—All aircraft are totally rewired because of general deteriorations of the F–4B wire bundles, and the cumulative effect of numerous service changes. New environmental connectors and color coded wires are used.

Chairman McClellan. Proceed.

Admiral Houser. This program will provide an additional 72 months of service per aircraft. A total of 199 aircraft will have been programmed for SLEP through FY 1975 at a rate of 5 per month to meet near term inventory requirements for fighters.

Multisensor configuration for ASW helicopters for improved capability against high speed, nuclear powered submarines. This program adds radar, sonobuoys, magnetic anomaly detection and anti-ship missile defense equipment to the SH–3 helicopter for more flexible operations against modern submarines.

Conversion of A–7B and A–7C aircraft to a two place training version of the A–7E. This program is planned to replace single place A–7E aircraft in Carrier Replacement Air Wings for more efficient aircraft transition and weapon delivery training. The employment of a two place trainer for both student and instructor in lieu of a second single piloted aircraft used as a chase plane will result in a reduction in training flight hours, aircraft inventory requirements and fuel usage.

Continuation of the CH–46 update program to provide a modernized medium assault helicopter for the U.S. Marine Corps. This program provides greater lift capability and improves safety and survivability in a combat environment.

A modernization program for P–3B ASW aircraft to improve tactical navigation accuracy and acoustical sensor sensitivity for increased mission effectiveness against maneuverable, high speed modern submarines. The P–3B will be in active inventory as a first line ASW platform for the foreseeable future.

Conversion of T-34B primary trainer aircraft to the turboprop T-34C. This program is planned to replace older T-34 and T-28 training aircraft which have reached the end of their structural service life. Significant savings will accrue by attriting students earlier in a cheaper aircraft and avoiding the required SLEP of T-28 aircraft.

FY-75 AIRCRAFT SPARES

● INITIAL SPARES	$177.0M
● *SUPPORT OF NEW AIRCRAFT* *$145.1M*	
● *SUPPORT OF AIRCRAFT MODIFICATION* *$ 31.9M*	
● REPLENISHMENT SPARES	$197.2M
TOTAL	$374.2M

AIRCRAFT SPARES

Admiral HOUSER. The funds requested in this budget activity are required to provide spare repairable assemblies and components in support of Navy and Marine Corps aircraft. The funds requested are segregated into two distinct elements, initial spares and replenishment spares.

Initial spares provide the basic outfitting and pipeline quantities of repairable assemblies and components in support of new weapon systems entering the operating inventory.

Replenishment spares provide follow-on outfitting quantities of repairable assemblies and components in support of additional increments of new weapon systems. Replenishment funding also provides for replacement procurement of initial spares that wear out or become beyond economical repair.

In prior years all outfitting requirements were included in the initial segment of the spares funding line. Commencing in FY-75 the follow-on outfitting portion of initial spares shifted to the replenishment account.

INITIAL SPARES AND REPAIR PARTS

Chairman MCCLELLAN. Line 611 of the P-1 exhibit shows $177 million for initial spares and repair parts and $197.2 million for replenishment spares and repair parts. Provide a tabulation for the record which breaks the amounts down as to the type of aircraft for which they are required.

Admiral HOUSER. The tabulation requested is arrayed as follows:

[In millions of dollars]

A/C type	Initial spares	Replenish spares
A-4M	$0.8	$3.3
A-6E	2.4	9.8
EA-6B	.4	36.3
A-7E	8.6	9.2
F-14A	35.2	43.9
UH-1N	.1	1.9
AH-1J	1.0	1.4
P-3C	1.1	4.9
S-3A	74.2	2.5
E-2C	11.6	.6
C-9B	.3	
CT-39	.4	
T-2C	.1	.1
EC-130Q	.1	.2
KC-130H	.1	1.3
VAST	1.6	4.3
ESO/SPCC	3.8	.4
C GSE	1.7	
T/D spares	.8	
Mod spares	31.9	21.8
General replenishment		55.3
Total	177.0	197.2

Chairman McClellan. Continue.

Admiral Houser. This change in structure of the spares budget was predicated on implementation of revised OSD guidance which directed that an item would no longer be procured through the initial spares channel once the demand development period had been completed. This change in procedure accounts for the reduction in initial spares and the concomitant increase in replenishment requirements.

Impact on Fleet Readiness

As reflected in the definitions, initial spares are an investment in material support of new weapon systems. The level of support is directly related to the number and types of new aircraft entering the fleet and the flight hour program specified. Replenishment spares funding provides a like function as initial with respect to follow-on increments of new weapon systems. However, as indicated, this funding also provides the means of replacing attrition repairables. Thus, only the pure replacement portion of replenishment funding has a real impact on sustaining or improving fleet readiness because the outfitting portion of the spares budget is designed to support modernization additives/changes to the force level.

Recognizing these factors it is apparent that spares funding will not substantially improve aircraft readiness in, and of, itself. Procurement funding is currently set at a level which should result in a supply effectiveness (demand against system availability) of between 70–75% overall for aviation material (10% below the Navy goal of 85%). It must be recognized that this 70–75% effectiveness *presupposes* that the component repair program will be fully funded. This funding level is critical to the aircraft support program since repairable procurement formulas assume that all component repair funds are available and automatically discount buy requirements accordingly. Thus, failure to provide a funded rework program will rapidly degrade readiness and limit the effectiveness of replacement spares procurement to the extent that repairable carcasses are actually reworked subsequent to initial in-service failure.

The best estimate that can be forecast for improving aircraft readiness, which is a basic Navy objective, is that if both the procurement and repair budgets for FY–75 and the comparable FY–74 supplemental requirements are approved, as submitted, NORS incidence should reduce by approximately 4% with a corresponding increase in overall aircraft readiness.

NORS

Chairman McClellan. What do you mean by "NORS"?

Admiral Houser. The acronym NORS translates literally as Not Operationally Ready—Supply. It relates to that period of calendar time that an aircraft is not operationally ready due to non-availability or replacement spares or repair parts.

Current NORS Rate

Chairman McClellan. What is the current Not Operationally Ready-Supply (NORS) rate for Navy aircraft, and what do you consider a manageable rate?

Admiral Houser. Currently, the NORS rate is running slightly above [deleted] and climbing. A 10% NORS rate is the maximum acceptable to permit attainment of aircraft material readiness goals.

Chairman McClellan. Proceed.

Admiral Houser. In summary, we are requesting $177.0 million for initial spares and $197.2 million for replenishment spares.

FY-75 AIRCRAFT SUPPORT EQUIPMENT AND FACILITIES

● COMMON GROUND EQUIPMENT	$ 126.0M
● COMPONENT IMPROVEMENT	$ 36.4M
● AIRCRAFT INDUSTRIAL FACILITIES	$ 23.2M
● WAR CONSUMABLES	$ 1.0M
● OTHER PRODUCTION CHARGES	$ 19.5M
TOTAL	*$206.1M*

Aircraft Support Equipment and Facilities

Admiral Houser. The FY 1975 Budget request of $206.1 million provides continuing effort in five categories that support our aircraft procurement programs. These support programs are:

1. *Common Ground Equipment* ($126.0 million) which funds the Versatile Avionics Shop Test (VAST) System.

VAST System

Chairman McClellan. Which Navy aircraft programs include the VAST system?

Admiral Houser. The VAST system is included in the F–14A, E–2C and S–3A Navy aircraft programs.

Chairman McClellan. Proceed.

Admiral HOUSER. Other programs funded by Common Ground Equipment are Aircraft System Trainers and Training Aids, the Maintenance Information Automated Retrieval System (MIARS) and other aircraft ground support equipment including mobile maintenance facilities for Marine Expeditionary Forces.

2. *Component Improvement* ($36.4 million) which funds the engineering effort to improve reliability and maintainability of aircraft engines and associated systems, as well as to correct unforeseen deficiencies that are revealed during fleet operations.

3. *Aircraft Industrial Facilities* ($23.2 million) which finances modernization and maintenance of government owned production and rework facilities necessary for the efficient production and maintenance of aircraft and for pollution abatement programs.

NAVY AIRCRAFT INDUSTRIAL FACILITIES

Chairman MCCLELLAN. Where are the Navy Aircraft Industrial Facilities located? Is each Navy owned and operated?

Admiral HOUSER. The Navy Aircraft facilities are Navy-owned but are contractor-operated. These facilities and their operators are as follows:

Bethpage, New York	Grumman Aerospace
Bloomington, Conn.	Kaman Aircraft
Calverton, New York	Grumman Aerospace
Columbus, Ohio	Rockwell International, Inc.
Dallas, Texas	LTV, Inc.

Chairman MCCLELLAN. Continue.

Admiral HOUSER. 4. *War Consumables* ($1.0 million) provides funds for auxilliary fuel tanks, pylons and ejector racks. These items are of a consumable nature related primarily to the number of sorties flown by combat or training aircraft.

WAR CONSUMABLES ACCOUNT

Chairman MCCLELLAN. You indicate that items in the War Consumables account relate primarily to the number of sorties flown by combat or training aircraft. Are auxiliary fuel tanks, pylons and ejector racks expended in training flights?

Admiral HOUSER. Auxiliary fuel tanks, pylons and ejector racks are not normally expended during training flights. However, fuel tanks and ejector racks are jettisonned if an emergency situation develops during a training flight.

Chairman MCCLELLAN. Proceed.

Admiral HOUSER. 5. *Other Production Charges* ($19.5 million) which provides funds for certain production support and testing services, aircraft cameras, various equipment for Coast Guard aircraft and ground support equipment for aircraft not in production, such as reserve site outfittings.

COAST GUARD AIRCRAFT

Chairman MCCLELLAN. Under "Other Production Charges" you cite various equipment for Coast Guard aircraft. Are these costs reimbursed by the Coast Guard?

Admiral HOUSER. No. The equipment installed in Coast Guard aircraft is considered as Navy-owned and is provided without reimbursement in accordance with an agreement between the Navy and Coast Guard so that Coast Guard aircraft may readily amalgamate with the Navy task force in the event of war or other emergency.

Chairman MCCLELLAN. Proceed.

APN SUMMARY

Admiral HOUSER. Our total aircraft procurement request is for 248 aircraft and $2 billion 960.6 million.

Chairman MCCLELLAN. Please proceed to highlight your statement.

FEWER TYPES OF AIRCRAFT

Admiral HOUSER. There are no new aircraft starts, all are continuations of prior years. In the past we have been asked to reduce the number of types of aircraft that we are buying, and I am pleased to report this year's budget contains fewer types than formerly.

We will complete procurement of the AV–8A and TAV–8A, T–2C and a special mission EC–130 with those requested in our fiscal year 1974 budget.

There are possibly two others that will terminate this year but in response to the specific request of this committee last year, we are reducing the number of types.

We are continuing to procure our attack and fighter aircraft, patrol airplanes, antisubmarine airplanes and helicopters. They are listed in the longer statement but I can discuss them if you would like.

Chairman MCCLELLAN. Admiral, how many different types of planes do we have in the Navy today?

Admiral HOUSER. I will estimate about 20.

Chairman MCCLELLAN. Twenty different types of planes. Can you be exact? Can you get those figures for the record?

AIRCRAFT MISSIONS

Admiral HOUSER. I can get them exact for the record.

Chairman MCCLELLAN. Does each of these different types of planes have a separate and different mission from the others?

Admiral HOUSER. Yes, sir, except where one is replacing another. For example, in the case of the A–7, it is replacing the A–4 in the Navy.

Chairman MCCLELLAN. The A–4 will go out?

Admiral HOUSER. The A–4 will go out of the Navy inventory and the A–7 will be operated as the only attack airplane in the Navy.

Chairman MCCLELLAN. In giving us the number of different types of planes you have, also indicate which of those planes are now going to be phased out and what planes are replacing them.

Admiral HOUSER. Yes, sir, we will do.

[The information follows:]

The following tabulation gives various aircraft types in the Navy/Marine inventory.

CLASS	TYPE	USED BY (N) NAVY (MC) MARINE	BEING REPLACED BY
		FIXED WING	
FIGHTER	F-8	N, MC	F-14
	F-4	N, MC	F-14
	F-14	N, MC	--
ATTACK	A-4E/F	N, MC	A-7E (N), A-4M (MC)
	A-6A	N, MC	A-6E
	A-7	N	A-7A by E
ANTI-SUBMARINE	S-2	N	S-3A
	S-3	N	--
ECCM	EKA-3B	N	EA-6B
	EA-6	N, MC	--
RECCE	RA-5C	N	--
	RF-4B	MC	--
PATROL	P-3	N	P-3A by C
EARLY WARNING	E-1B	N	E-2C
	E-2C	N	--
TRANSPORTS	C-117	N, MC	CT-39, C-9
	C-118	N, MC	CT-39, C-9
	C-119	MC	KC-130
	C-131	N, MC	CT-39, C-9
	C-130	N	--
	CT-39	N, MC	--
	C-9	N, MC	--
COD	C-1	N	VCX
	C-2	N	VCX
TANKERS	KA-6D	N	--
	KC-130	MC	--
TACAMO	EC-130	N	--
OBSERVATION	OV-10	MC	--
TRAINING	T-38	N	F-5E
	T-2	N	--
	TA-4	N	--
	TF-9	N	TA-4
	T-28	N	T-34C
	T-34B	N	T-34C
		HELICOPTERS	
ATTACK HELOS	AH-1	MC	AH-1E by J
UTILITY HELOS	UH-1	N, MC	UH-1E by H
SAR/ANTI SUB HELOS	H-2	N	--
	H-3	N	--
ASSAULT HELOS	H-46	MC	--
	H-53	MC	--
TRAINING	TH-1	N	--
	TH-57	N	--

Chairman McCLELLAN. You may proceed.

AIRCRAFT MODIFICATIONS

Admiral HOUSER. One of the other characteristics of this year's request is the fact we are modifying many of the older planes to give them increased capabilities instead of buying new airplanes. We have some 100 of these in the budget.

As an example, we are taking the older models of the F–4 airplane, doing very extensive modification on them and returning them to operational service with about one-half of the new service life of an airplane.

Chairman McCLELLAN. In other words, when you say you are taking the oldest models of the F–4, you mean by that the first you got into the inventory?

Admiral HOUSER. The F–4B, that is correct, sir.

Chairman McCLELLAN. You are remodeling those. Is that what you are doing?

Admiral HOUSER. Really what we are doing is putting in new wire bundles, new hydraulic lines, strengthening those parts that may have shown evidence of fatigue or failed, and sending them back out not for 18 months as normally done for interim repair, but for a new tour of about 6 to 8 years.

Chairman McCLELLAN. By this expenditure you are increasing the life and usefulness of them 50 percent more than normal? Is that about what it amounts to? Instead of a 10-year plane, you will have 15 years service out of it, by way of illustration. Is that correct?

Admiral HOUSER. That is correct, sir.

RESULTANT ECONOMIES

Chairman McCLELLAN. Is it quite economical to do that? Is it the practical thing to do?

Admiral HOUSER. We believe it is, Mr. Chairman. It is much cheaper than buying a new airplane, and the service life in the airplane has been used up. We have found, by putting a much smaller amount of money, rather than buy a new plane, we will get this airplane with about half its original service life remaining.

Chairman McCLELLAN. What will that plane's capacity be as compared to a new one?

Admiral HOUSER. In the case of some it will be almost equal. In the case of others it won't be. We are taking older models of the A–6A and making them into the A–6E. Their capabilities will be essentially the same as a new A–6E.

In the case of the F–4B, the capability won't be the same as the F–14 or even the F–4J, but they are substantially improved over the earlier models.

Chairman McCLELLAN. They are still needed?

Admiral HOUSER. Yes, they are needed for our force levels.

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AIRCRAFT OBSOLESCENCE

Senator YOUNG. How old are they?

Admiral HOUSER. We operated the first F–4B's about 1961, Senator Young.

Senator YOUNG. A plane gets as obsolete in 20 years as an automobile. I know you can improve them, but will these planes, after spending all the money on them, be capable of fighting the new Russian Foxbat or MIG–25? I think there was a news story in Syria where there was a MIG–25 in action.

Admiral HOUSER. That is correct.

COUNTERING FOXBAT

Senator YOUNG. I think the only thing you have that has the same capability as a MIG–25 is the F–14. Is that right?

Admiral HOUSER. That is correct, sir. There are a number of areas we operate where we would not necessarily look at the Foxbat at that time. The fact of the matter is the older air force we are making into a new air force will handle themselves very well against many of the threats in other parts of the world. When we get to the place we expect to see Foxbat, you will need the F–14 to counter it.

We are putting a relatively small amount of money into these airplanes, but we are providing them with the capability to live longer and we do think they will be effective in many areas of the world.

Senator YOUNG. I don't mean to be critical. I think you are doing the best you can with the amount of money Congress gives you. Unless Congress is willing to provide enough funds, this is the next best thing you can do. I think the country should know, though, even after you spend the money in the plane it is not nearly as good a plane, or equal, to the MIG–25.

Admiral HOUSER. That is exactly right, sir. In the case of the A–6, the difference is not so great. As I say, we have taken the airframe of the older airplane and put in the new avionics. The thing we are getting out of this principally is the reliability. It takes from one-third to one-half less man-hours to operate and maintain this airplane as it did with the older model.

This is a way that we are trying to hold down expenses by making our avionics systems in the airplanes more reliable.

Senator YOUNG. I think the country should know, the public should know after you get the plane it is not as good as the best source now.

Admiral HOUSER. That is correct, sir.

Senator YOUNG. That seems to me an erroneous opinion that many people have, even many Members of Congress.

F-14 PROCUREMENT

What kind of contract do you have with Grumman on the F–14? I thought your old contract had run out with the pass-by. Did you negotiate a different price?

Admiral HOUSER. Yes, Senator, in March of 1973 an agreement was reached between Grumman and the Navy to terminate the existing

contract. Grumman accepted the fiscal year 1973 buy at the contract price which they formerly said they would not do, and the Navy agreed not to hold them to any further buys under this single package procurement.

Subsequently the fiscal year 1974 contract was negotiated on fixed price incentive. This is the same type negotiation undertaken on all other airplanes the Navy buys.

In the case of the fiscal year 1975 budget request, this will be negotiated by the Naval Air Systems Command and the contractor.

Senator YOUNG. You think you will be able to work out a contract?

F–14 DEPLOYMENT

Admiral HOUSER. I am confident we will. Really, Senator, I will say this program is back on track. The contractual difficulties have been solved. The airplanes have been delivered to the fleet, they are operating in the fleet. The first deployment of the F–14 is scheduled [deleted] aboard the U.S.S. *Enterprise.*

F–14 ENGINE

Senator YOUNG. I am glad to hear that. When will you get into the bigger engine, the more powerful engine?

Admiral HOUSER. The more powerful engine is another subject. We are in discussions and negotiations with the contractor right now for future developments of the F–401 engine. The engine they were supposed to give us did not work out. It failed. It failed, I might add, at the severe high end of the test spectrum but this is the reason for having the test.

The contractor has had to go back to find out why it failed to make recommendations to the Naval Air Systems Command on what remedial steps should be taken. That has been done and we are laying out a development program to correct these deficiencies and then proceed to prove the engine through the series of tests that we have.

Senator YOUNG. About how many years do you think it will be before you get into production of the bigger engine?

Admiral HOUSER. We hope the tests will be completed in about 18 months. I would say in about 3 years we could be in production.

Senator YOUNG. Thank you, Mr. Chairman.

Chairman MCCLELLAN. You may proceed.

MISSILE FIRINGS

Admiral HOUSER. The F–14 has had a number of highlights this last year. We have fired six missiles from it at one time against six targets. Three of the targets were subsonic and three were supersonic. Four missiles hit the target. One missile failed, and one target failed in the sense that it turned away, thus not presenting an appropriate size target. But this is the first time in air warfare that we have been able to fire against six targets at the same time.

Chairman MCCLELLAN. Simulaneously?

Admiral HOUSER. Almost simultaneously. They were fired in about 6 seconds.

Chairman McClellan. Firing at six separate targets in six separate firings?

Admiral Houser. Yes.

Chairman McClellan. And you hit four of them?

Admiral Houser. Yes, sir.

Chairman McClellan. Those were air targets?

Admiral Houser. These were air targets, three subsonic and three supersonic. They were crossing; it was not just clay pigeons.

Chairman McClellan. Which ones did you miss?

Admiral Houser. We missed one of the subsonic and one of the supersonic. One of the supersonics turned away.

Chairman McClellan. You hit two out of three on each?

Admiral Houser. Yes, sir.

Chairman McClellan. That is pretty good.

Admiral Houser. That is very good. I think we discussed similar tests last year. We had a test last year with four separate targets, and all of those were hits.

TEST CRITERIA

Chairman McClellan. Were the tests made under simulated war conditions?

Admiral Houser. To the extent we can. They are out over the Pacific Ocean off the coast of California. We try to get as much data as we can from each shot. They have to be in the same area. We have a lot of equipment to find out how the targets are performing and how the missiles are performing. To the degree we can, we try to simulate combat conditions.

Chairman McClellan. I don't suppose it would make much difference. You would encounter about the same situation anywhere in the atmosphere, wouldn't you?

Admiral Houser. Yes, sir, but it is a difficult task to get one of these set up to have six targets operating properly at the same time under control and get the firing airplane in this area.

Chairman McClellan. I understand the reason you missed one is that the target didn't function properly.

Admiral Houser. That is right. The target didn't function properly. There was a reflector in the target, and the controller made it turn away and it made it appear to the radar that was not the proper target. But we have had four missiles fired at four separate targets, and they were all successful.

F–14 BIS TESTS

My purpose for bringing this up was it was one of the highlights last year. Another highlight was the completion of Board of Inspection and Survey (BIS) tests in October 1973. The airplane comes aboard ship and takes off very well; the pilots are extremely enthusiastic about it.

Chairman McClellan. What ship is that?

Admiral Houser. First it operated on the *Forrestal* and then went out aboard the *Enterprise.*

Chairman McClellan. That is which plane?

Admiral Houser. The F–14.

Chairman McClellan. You are well satisfied with the progress of that plane?

Admiral Houser. Yes, sir. We are not completely finished testing the plane. We will be working with the plane, but two squadrons will be deployed aboard the U.S.S. *Enterprise* [deleted] and it should be a success.

Chairman McClellan. In hitting four targets, did you do that from one plane?

Admiral Houser. That is one airplane and one crew, and the crew was a Navy crew, not a contractor crew.

Chairman McClellan. That means they could shoot at six different enemy planes at one time if they were in combat.

Admiral Houser. That is right. We have a short movie which we didn't bring, but if you are interested we could bring it.

Chairman McClellan. I am afraid we don't have as much time these days as we would like to devote to such matters.

Admiral Houser. Yes, sir; I know.

RANGE OF PHOENIX MISSILES

Senator Young. What is the range of the missiles fired from the fleet?

Admiral Houser. We have had a shot over 100 miles. The range normally would be from 30 to 75 miles.

Chairman McClellan. A hundred miles. Can you see a plane that far away with any kind of instruments?

Admiral Houser. Through our radar we can see the plane.

Senator Young. What missile?

Admiral Houser. The Phoenix missile.

Senator Young. That is the big thing, one of the big things in the F–14?

Admiral Houser. It is one of the big advantages but not the only one. It also has a number of other outstanding characteristics. It is quite an exceptional dogfighter. It is large but because it has a maneuvering wing, a wing that moves back and forth, it has been able to defeat in simulated combat the best airplanes we have in the fighter role. We have flown against a lot of airplanes and have not found anything this would not defeat.

Chairman McClellan. What is the prime mission of this plane?

PRIMARY MISSION OF F–14

Admiral Houser. The prime mission is to be a fighter. It is a fleet air defense fighter in the sense it carries these long-range missiles. It can more than handle itself in air-to-air combat. It has the amount of fuel to give it the range that we need to escort the long-range attack airplanes. It escorts the bombers, what we call the attack airplanes, into the target. It carries a lot of fuel and has a very fine radar for search and detection. It has many times the volume of other radars in search, so it is a multipurpose airplane, and Phoenix firing is only one of its missions.

Chairman McClellan. Is this the plane that you developed to take the place of the F–111B?

Admiral Houser. It is, sir. I know you are familiar with that history.

Chairman McClellan. I am familiar with the fact that it was, I think, impractical from the beginning, because of the ground rules under which it was to be developed. I know it couldn't be done. I in no way opposed the Navy's objective in developing a plane to perform its mission. That was not the opposition to it. I just didn't think you could build two different aircraft out of the same parts.

But you are now getting a weapon commensurate with your hopes and expectations, are you?

Admiral Houser. Indeed we are, sir.

Chairman McClellan. You are now getting the weapon you wanted to get in the F–111B.

Admiral Houser. Actually our sights are somewhat larger than that and we are getting a better plane even if the F–111B had worked out the way we had talked about.

Chairman McClellan. Advancing technology contributes to that over a period of time. In a 10 or 12 year period of time that would naturally occur.

Proceed.

S–3A PROCUREMENT

Admiral Houser. We have had our other new airplane, the S–3A come into fleet service this year. This is the twin engine antisubmarine aircraft. It is in the training stages with the fleet in California. It will replace the S–2, the twin engine propeller driven plane which has been around for over 15 years, I guess more like 20. The S–3 will be the carrier based antisubmarine airplane. It has completed carrier trials and is now in fleet service with the training squadron. It is not as far along as the F–14 but is doing very well.

Chairman McClellan. When will you be able to start placing the F–14 in the inventory?

Admiral Houser. We have two squadrons operational now, Mr. Chairman.

Chairman McClellan. In respect to the antisubmarine plane, when do you expect to get it in the inventory?

Admiral Houser. The first squadron was commissioned in March and the first deployment will be [deleted].

Chairman McClellan. Deployment will be [deleted].

Admiral Houser. Yes, sir.

S–3A TESTING

Chairman McClellan. Let me ask you, has that antisubmarine plane proven satisfactory?

Admiral Houser. We have done a great deal of testing on it and it has proven very satisfactory. We have quite thorough inspections on our program by the Office of the Secretary of Defense in his process known as the Defense Systems Acquisition Review Council and we go

before this group, known as the DSARC, periodically. The S–3 has passed all tests set for it. The operators as well as the technicians have tested it and we have done a lot of work with submarines.

Chairman McClellan. You are now ready for procurement?

Admiral Houser. Yes, sir.

Senator Young. How much cost will there be?

Admiral Houser. Flyaway unit cost is $8.8 million and I think procurement unit cost is about $12.4, sir.

These are highlights on the new airplanes. The other airplanes we are requesting are continuations of others. I can go down each if you would like but they are in my long statement.

Chairman McClellan. They are already in inventory, you are just purchasing more of them?

Admiral Houser. Yes, sir; for modernization and some for attrition.

Chairman McClellan. Proceed.

OTHER BUDGET REQUESTS

Admiral Houser. The other parts of the budget request is for modernization, facilities and equipment so we really have in the basic budget the new airplanes, the continuation of the older ones, the spares and support and the modernization programs I talked about of making the older planes into newer ones.

That completes my informal statement unless you have other questions.

Chairman McClellan. Thank you very much, Admiral.

JUSTIFICATION

At this point in the record there will appear certain information from the justifications.

[The justification follows:]

Justification

AIRCRAFT PROCUREMENT, NAVY

INTRODUCTORY STATEMENT

(In Thousands)

	1974 Estimate	1975 Estimate
Appropriation (Adjusted)	$3,060,841	$2,960,600
Total Direct Obligations	2,403,602	2,698,281
Total Direct Budget Plan	3,060,841	2,960,600

The "Aircraft Procurement, Navy" (APN) appropriation appeared for the first time in fiscal year 1974. It is the successor to Budget Activities 1 through 7 of the "Procurement of Aircraft and Missiles, Navy" appropriation which was divided into two new appropriations, "Aircraft Procurement, Navy" and "Weapons Procurement, Navy", effective with FY 1974. The Aircraft Procurement, Navy appropriation finances the procurement of aircraft and supporting equipment for Navy and Marine aviation forces. This supporting equipment includes; equipment for modification of in-service aircraft, aircraft spare parts, ground support and training equipment, and industrial facilities and tools. In addition, material and effort required for the planned FY 1976 program, which, due to leadtime considerations, must be procured in FY 1975, are financed under this appropriation.

FISCAL YEAR 1975 HIGHLIGHTS

The FY 1975 budget program for the Aircraft Procurement, Navy appropriation totals $3.0 billion. Significant features of the FY 1975 request are:

(a) A procurement program of 248 aircraft at a cost of $1.890 billion. Procurement of sophisticated, high performance A-6E, EA-6B, F-14A, P-3C, S-3A, and E-2C aircraft continues in FY 1975. Requests for the Marines include continued procurement of the A-4M and an improved version of the AH-1J helicopter.

(b) An advance procurement program of $151.9 million to finance long leadtime procurement of prime contractor and government furnished equipment, material and effort required to insure timely delivery of aircraft planned for procurement in FY 1976.

(c) An aircraft modification program of $338.5 million to improve the safety-of-flight, operational characteristics, maintainability, and reliability of aircraft currently in inventory.

(d) $374.2 million for the procurement of reparable aircraft spares and repair parts to provide initial outfitting and replenishment support for operational Navy and Marine aircraft and related aircraft support equipment. Commencing in FY 1975, aircraft spares and repair parts requirements are computed following the new guidance provided by Department of Defense Directive 4140.40. Implementation of this directive results in the shifting of a relatively large number of requirements previously categorized as initial spares into the replenishment spares portion of the program.

(e) Other supporting programs of $206.1 million including aircraft industrial facilities, engine component improvement, common ground equipment, and other production charges.

(f) Increased aircraft simulator procurement is requested in FY 1975. This will not only provide for increased readiness because of better trained pilots and crew but will also result in operating cost savings after the simulators are in place and operational.

PROGRAM SUMMARY

Of the 248 aircraft included in the FY 1974 program, 229 are combat aircraft. This combat aircraft program continues procurement of three attack weapons systems, the A-4M Skyhawk, the A-6E INTRUDER, and the A-7E CORSAIR II. Fighter aircraft procurement consists exclusively of the high performance, air superiority F-14A TOMCAT for both the Navy and Marine Corps. Procurement of the improved AH-1J SEA COBRA armed gunship for the Marine Air Groups and the light transport utility version of the IROQUOIS helicopter (UH-1N) is continued in FY 1975. Support of the Navy's anti-submarine warfare mission is provided by continued procurement of the S-3A VIKING and the P-3C ORION aircraft. Also funds are programmed for the EA-6B PROWLER for electronic warfare and the E-2C HAWKEYE for airborne warning. Advance procurement funds related to the planned FY 1976 program are included for nine combat models.

Airlift aircraft requirements include funds for the resumption of C-9B SKYTRAIN II and CT-39 SABRELINER procurements.

In FY 1975, procurement in the other aircraft activity is limited to the KC-130R (Tanker) HERCULES for Marine in-flight refueling purposes.

Support programs which contribute significantly to the Navy's and the Marine's combat capability include: modifications required to improve the capabilities of aircraft previously delivered to the Fleet; spares and repair parts to support new aircraft entering the Fleet as well as those already in the operating program; industrial facilities to support the production and maintenance of fleet aircraft; ground handling, training, test and production support equipment required to support aircraft procurement and operations.

FINANCING

The FY 1975 budget plan of $2,960,600,000 for this appropriation is to be financed by new obligational authority.

COMPARABILITY INFORMATION

In order to facilitate review of the Aircraft Procurement, Navy request, comparable funding for FY 1973 under the superseded Procurement of Aircraft and Missiles, Navy appropriation is included in the funding table at the beginning of each budget activity's justification. Comparability information for FY 1974 includes both appropriated FY 1974 APN programs and funding proposed in the FY 1974 Readiness Supplemental Request.

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	1974 Estimate	1975 Estimate
Combat aircraft	$1,955,400	$1,950,600
Airlift aircraft	-	52,100
Trainer aircraft	86,700	-
Other aircraft	75,200	39,100
Modification of aircraft	319,100	338,500
Aircraft spares and repair parts	434,524	374,200
Aircraft support equipment and facilities	189,917	206,100
TOTAL DIRECT PROGRAM	3,060,841	2,960,600
Reimbursable program	88,000	82,000
TOTAL PROGRAM REQUIREMENTS	3,148,841	3,042,600
Less: Portion of program to be obligated in subsequent fiscal years	-685,441	-786,293
Plus: Obligations incurred against prior year program funds	-	522,257
TOTAL OBLIGATIONS	2,463.400	2,778,564

FY 1973-75 Aircraft Procurement Program
($ in Millions)

	TOTAL PROGRAM					
	FY 1973		FY 1974		FY 1975	
NAVY AND MARINE CORPS	Qty	Amt	Qty	Amt	Qty	Amt
A-4M (Attack) SKYHAWK	-	-	44	(108.9)	24	(59.5)
Less: Advance Procurement in Prior Year	-	-	-	(-2.0)	-	(-2.2)
Net		-	-	106.9	-	57.3
A-4M Advance Procurement, Current Year	-	2.0	-	2.2	-	2.2
A-6E (Attack) INTRUDER	21	(151.2)	13	(117.9)	12	(129.4)
Less: Advance Procurement in Prior Year	-	(-3.6)	-	(-1.7)	-	(-1.9)
Net		147.6		116.2		127.5
A-6E Advance Procurement, Current Year	-	1.7	-	1.9	-	1.8
EA-6B (Electronic Warfare) PROWLER	7	(129.3)	6	(103.0)	6	121.7
Less: Advance Procurement in Prior Year	-	(-28.5)	-	(-1.4)	-	
Net		100.8		101.6		
EA-6B Advance Procurement, Current Year	-	1.4	-		-	1.0
A-7E (Attack) CORSAIR II	48	(160.7)	30	(135.1)	34	(139.0)
Less: Advance Procurement in Prior Year	-	(-5.0)	-	(-8.7)	-	(-.8)
Net		155.7		126.4		138.2
A-7E Advance Procurement, Current Year	-	8.7	-	.8	-	3.8
AV-8A (V/STOL) HARRIER	30	(111.6)	12	(47.9)	-	-
Less: Advance Procurement in Prior Year	-	(-12.0)	-	(-8.1)	-	-
Net		99.6		39.8		
AV-8A Advance Procurement, Current Year	-	8.1	-	-	-	-
F-14A (Fighter) TOMCAT	48	(492.6)	50	(660.6)	50	(694.3)
Less: Advance Procurement in Prior Year	-	(-84.8)	-	(-75.7)	-	(-55.0)
Net		407.8		584.9		639.3
F-14A Advance Procurement, Current Year	-	75.7	-	55.0	-	70.0
VH-3D	11	(35.9)	-	-	-	-
Less: Advance Procurement in Prior Year	-	(-1.9)	-	-	-	-
Net		34.0				
UH-1N (Helicopter) IROQUOIS	24	(20.0)	24	(20.4)	20	(16.0)
Less: Advance Procurement in Prior Year	-	(-2.7)	-	(-1.4)	-	(-1.1)
Net		17.3		19.0		14.9
UH-1N Advance Procurement, Current Year	-	1.4	-	1.1	-	1.6
AH-1J (Helicopter) SEACOBRA	20	(32.4)	15	(21.8)	20	(26.1)
Less: Advance Procurement in Prior Year	-	(-1.6)	-	(-1.0)	-	(-1.2)
Net		30.8		20.8		24.9
AH-1J Advance Procurement, Current Year	-	1.0	-	1.2	-	3.9
P-3C (Patrol) ORION	12	(140.0)	18	(188.5)	12	(147.3)
Less: Advance Procurement in Prior Year	-	(-33.5)	-	(-12.7)	-	(-8.9)
Net		106.5		175.8		138.4

FY 1973-75 Aircraft Procurement Program
($ in Millions)

Navy and Marine Corps (Continued)	TOTAL PROGRAM FY 1973 Qty	FY 1973 Amt	FY 1974 Qty	FY 1974 Amt	FY 1975 Qty	FY 1975 Amt
P-3C Advance Procurement, Current Year	-	12.7	-	8.9	-	11.6
S-3A (Anti-Submarine) VIKING	35	(496.9)	45	(463.8)	45	(483.4)
Less: Advance Procurement in Prior Year	-	(-24.6)	-	(-61.2)	-	(-54.0)
Net		472.3		402.6		429.4
S-3A Advance Procurement, Current Year	-	61.2	-	54.0	-	56.0
E-2C (Early Warning) HAWKEYE	8	(137.0)	9	(152.6)	6	(109.0)
Less: Advance Procurement in Prior Year	-	(-16.6)	-	(-18.2)	-	(-1.9)
Net		120.4		134.4		107.1
E-2C Advance Procurement, Current Year	-	18.2	-	1.9	-	-
C-9B SKYTRAIN II	3	16.9	-	-	7	41.6
CT-39 SABRELINER	5	8.5	-	-	6	10.5
T-2C (Trainer) BUCKEYE	24	(31.9)	24	32.1	-	-
Less: Advance Procurement in Prior Year	-	(-.6)	-	-	-	-
Net		31.3				
F-5E (Trainer) FREEDOM FIGHTER	-	-	5	10.3	-	-
TAV-8A (V/STOL TRAINER) HARRIER	-	-	8	(46.2)	-	-
Less: Advance Procurement in Prior Year	-	-	-	(-1.9)	-	-
Net				44.3		
TAV-8A Advance Procurement, Current Year	-	1.9	-	-	-	-
EC-130 ( ) (Special Mission) TACAMO IV	1	12.1	1	(11.4)	-	-
Less: Advance Procurement in Prior Year	-	-	-	(-1.2)	-	-
Net				10.2		
EC-130 ( ) Advance Procurement, Current Year	-	1.3	-	-	-	-
KC-130R (Tanker) HERCULES	-	-	10	65.0	6	39.1
Modification of Aircraft	-	314.4	-	319.1	-	338.5
Aircraft Spares and Repair Parts	-	468.4	-	434.5	-	374.2
Aircraft Support Equipment & Facilities	-	234.4	-	189.9	-	206.1
TOTAL NAVY/MARINE CORPS AIRCRAFT Program		2974.1		3060.8		2960.6

STATEMENT OF VICE ADM. R. E. ADAMSON, JR., U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (SURFACE WARFARE)

PROGRAM AND FINANCING

Chairman MCCLELLAN. The next appropriation to be considered will be that for "Weapons procurement, Navy."

At this point in the record, there will appear certain program and financing information from the justifications.

[The information follows:]

DEPARTMENT OF DEFENSE—MILITARY WEAPONS PROCUREMENT, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	Budget plan (amounts for			Obligations		
	1973 actual	1974 estimate	1975 estimate	1973 actual	1974 estimate	1975 estimate
Program by activities:						
Direct:						
1. Ballistic missiles		253,400	84,700		214,900	107,352
2. Other missiles		326,300	535,900		260,230	482,154
3. Torpedoes and related equipment		200,768	187,700		162,500	182,900
4. Other weapons		28,751	25,600		23,500	25,200
Total direct		809,219	833,900		661,130	797,606
Reimbursable (total)		35,000	43,000		32,800	41,300
Total		844,219	876,900		693,930	838,906
Financing:						
Recipts and reimbursements from:						
Federal funds		−34,950	−37,410		−34,950	−37,410
Trust funds	−3,519	−5,000	−5,540	−3,519	−5,000	−5,540
Non-Federal sources		−50	−50		−50	−50
Unobligated balance available, start of year:						
For completion of prior-year budget plans						−150,289
Available to finance new budget plans		−3,519			−3,519	
Unobligated balance available, end of year:						
For completion of prior-year budget plans					150,289	188,283
Available to finance subsequent year budget plans	3,519			3,519		
Budget authority		800,700	833,900		800,700	833,900
Relation of obligations to outlays:						
Obligations incurred, net				−3,519	653,930	795,906
Obligated balance, start of year						507,411
Receivables in excess of obligations, start of year					−3,519	
Receivables in excess of obligations, end of year				3,519		
Obligated balance, end of year					−507,411	−768,317
Outlays					143,000	535,000

PREPARED STATEMENT

Chairman McCLELLAN. The principal witness will be Vice Adm. R. E. Adamson, Jr., Deputy Chief of Naval Operations for Surface Warfare.

Admiral, do you have a lengthy statement?

Admiral ADAMSON. I have a lengthy statement.

Chairman McCLELLAN. Let it be inserted in the record. Proceed with your brief statement.

Admiral ADAMSON. Yes, sir.

[The biography and statement follow:]

BIOGRAPHICAL SKETCH OF ADMIRAL ADAMSON

Vice Admiral Robert Edward Adamson, Jr., United States Navy is assigned as Deputy Chief of Naval Operations (Surface Warfare).

Vice Admiral Adamson is a native of Chicago, Illinois. He graduated with distinction from the U.S. Naval Academy having completed an accelerated course of instruction with the Class of 1944 (graduating in June 1943). He studied at the Naval Post Graduate School in the Ordnance Engineering (Special Physics) curriculum, and continued postgraduate study at Massachusetts Institute of Technology from which he received the degree of Master of Science in Physics in June 1950. He is also a graduate of the Army Command and General Staff College at Fort Leavenworth, Kansas.

As a junior officer in World War II, Vice Admiral Adamson served in the Gunnery Department in the cruiser USS SAN DIEGO (CLAA–43), participating in numerous Pacific Fleet combat operations. During the Korean War, he served as Operations and Executive Officer in USS BROWN (DD–546).

He has commanded USS NAIFEH (DE–332), Reserve Escort Squadron TWELVE, USS WILTSIE (DD–716), USS MULLANY (DD–528), Destroyer Division ONE FIFTY-TWO, USS GALVESTON (CLG–3), U.S. Naval Support Activities Danang and Saigon in Vietnam, and the U.S. South Atlantic Force. Vice Admiral Adamson wears numerous decorations, including the Distinguished Service Medal for service in Vietnam, the Legion of Merit for his service as Deputy Commander for Maintenance and Logistic Support, Naval Ship Systems Command, and a second Legion of Merit for his service as Commander, U.S. South Atlantic Force.

In other assignments, Vice Admiral Adamson has served as a physicist with Joint Task Force THREE at Los Alamos, New Mexico, and with the Los Alamos Scientific Laboratory. He was subsequently assigned to the Military Liaison Committee to the Atomic Energy Commission. He has also served on the staffs of the Commander, Battleship-Cruiser Force, Atlantic, and the Cruiser-Destroyer Force, Pacific; and in the Strategic Plans Division of the Office of the Chief of Naval Operations.

He is married to the former Carolyn Axberg of Bayside, New York. Vice Admiral and Mrs. Adamson have a son and two daughters.

PREPARED STATEMENT OF ADM. R. E. ADAMSON, JR.

Mr. Chairman and members of the committee, it is my pleasure to appear before you today to present the Navy's fiscal year 1975 request for the Weapons Procurement, Navy Appropriation. Here to assist me today are representatives of the Naval Material Command.

FY 1975 WEAPONS PROCUREMENT, NAVY

BUDGET ACTIVITIES	QUANTITY	COST (IN MILLIONS)
1. BALLISTIC MISSILES		$ 84.7
2. OTHER MISSILES	2861	535.9
3. TORPEDOES & RELATED EQUIPT.	953	187.7
4. OTHER WEAPONS	12	25.6
TOTAL WPN NEW OBLIGATIONAL AUTHORITY REQUESTED		$833.9

Admiral ADAMSON. The Weapons Procurement, Navy Appropriation was first established in FY 1974. The first two budget activities are missile related and were previously included in the Procurement of Aircraft and Missiles, Navy Appropriation. The final two budget activities, three and four, encompass torpedoes, weapons, and other programs formerly funded under the Other Procurement, Navy Appropriation.

APPROPRIATIONS MANAGEMENT

Senator YOUNG. Has the new budget activity Weapons Procurement, Navy created an additional staff to manage the weapons program included?

Admiral ADAMSON. No. However, as a separate appropriation entity it requires separate allocation, fiduciary management, and accounting. Thus at some organizational levels there are one or more staff members whose function is entirely within this appropriation. Some of these personnel are performing identical functions, but in the new appropriation; while others whose function must now encompass additional areas or who must address the whole appropriation have new responsibilities. In the overall Navy numerical sense, there has been no increase in staffing. No headquarters organizational entity (NAVCOMPT, CNO, CNM, SYSCOMS, etc.) has requested or been granted an increase in authorized strength because of this new appropriation. On the contrary, during the past few years, the time frame of the genesis and establishment of the Weapons Procurement Navy appropriation, each of the organizational examples cited have been reduced in overall staffing authorized.

Chairman MCCLELLAN. Proceed.

Appropriation Composition

Admiral Adamson. I would now like to briefly describe the composition of the Weapons Procurement, Navy Appropriation. Budget Activity One contains the strategic missile programs as they relate to the weapon itself. The major program in terms of cost included in this category is the Poseidon support. The major program in terms of future strategic capability is the TRIDENT. Continued support of the POLARIS missile program is also included.

Budget Activity Two includes other Navy guided missile programs such as the Sparrow, Sidewinder, Phoenix, Shrike, Harpoon, Condor, Standard missiles and aerial targets. This Budget Activity also contains the funding required for procurement of missile modification kits, fleet satellite communications, and related support programs.

Budget Activity Three contains funds for torpedo and mine programs that were formerly included in the Other Procurement, Navy Appropriation. The major program in this Budget Activity is the MK 48 Torpedo, but funds are also required for mobile targets, the CAPTOR advance procurement, torpedo modifications, and related support.

Budget Activity Four titled "Other Weapons" includes the gun and gun mount programs requiring authorization by Congress. The 5''/54 Gun Mount Modification Program is the principal program in this activity.

In FY 1975, the budget request includes $84.7 million for Ballistic Missiles, $535.9 million for Other Missiles, $187.7 million for Torpedoes, and $25.6 million for other weapons. The total FY 1975 request for the appropriation is $833.9 million.

Mr. Chairman, with your permission, I will review each major program for which funds are requested for FY 1975. I will project two viewgraphs for each major weapon: one showing a picture of the item; the second, showing pertinent information primarily contained in the Congressional Data Sheets.

Ballistic Missiles

The FY 1975 request for Ballistic Missiles continues the procurement of fleet ballistic missile components and support, ancillary test and checkout equipment, missile modifications, support equipment and engineering services for missile facilities required to outfit and support the submarines assigned to the sea-based strategic deterrent forces.

Of the $84.7 million requested in FY 1975, $61.6 million is for procurement of components and engineering services for ballistic missiles, $15.5 million for missile modification, and $7.6 million is for support equipment and missile facilities. The ballistic missile request of $61.6 million provides $48.0 million for Poseidon, $1.0 million for Polaris, and $12.6 million for Trident.

POSEIDON (UGM-73A)

MANUFACTURERS

MISSILE SYSTEM
LOCKHEED, SUNNYVALE, CALIF.

GUIDANCE
HUGHES, RAYTHEON, HONEYWELL, BENDIX CORP.

QUANTITY	FY-75 REQUEST	UNIT COST
—		
	WEAPONS SYSTEM COST $48.0M	
	INITIAL SPARES	
	TOTAL WPN $48.0M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
[deleted]	[deleted]	619	$3,358.7M	$5.42M

WPN/PAMN COST THRU BUDGET YR
$2,266.4M

THRU FY
79

POSEIDON

Admiral ADAMSON. The Poseidon request for $48.0 million provides $22.9 million for procurement of DOD reentry body components; $12.7 million for procurement of other components to support the total inventory and $12.4 million for procurement support.

The FY 1974 procurement of 72 Poseidon missiles represented the last planned procurement of complete missiles to achieve an inventory objective predicated upon an approved Trident I backfit program commencing in FY 1979.

MISSILE INVENTORY OBJECTIVES

Chairman MCCLELLAN. Discuss the inventory objective for Poseidon missiles predicated upon an approved Trident I backfit program, including how many Trident I missiles are planned to be backfitted.

Admiral ADAMSON. In FY 72 the Poseidon Missile procurement program, as approved was 639 missiles, with a final buy of 92 missiles in FY 74. The 639 missile objective was based on [deleted] missiles for [deleted] shipfills, 5 missiles for Quality Assurance, 50 missiles for Operational Support, 52 missiles for Demonstration and Shakedown Operations (DASO), 40 missiles for Operational Tests (OT), and 60 missiles for follow-on Operational Tests (FOT). The DEPSECDEF in September 1972 deferred Trident I Missile retrofit into Poseidon SSBNs to FY 82, and directed 41 additional missiles be requested in FY 75 for 3 years (FY 79–81) of DASOs and FOTs.

Planned retrofit of Trident I Missiles into 10 Poseidon SSBNs will displace 160 Poseidon Missiles. These displaced Poseidon Missiles then will become available for use as test missiles in the outyears.

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In September 1973, the Secretary of Defense directed that the planned retrofit of Trident I missiles into 10 Poseidon SSBNs be advanced to commence in 1978. Accordingly the Navy has programmed a reduction in the Poesidon C–3 Missile inventory objective from 680 missiles to 619. FY 75 WPN funding reflects this, decreasing from $95.5M to $48.0M.

Under the current Poseidon SSBN deployment schedule a maximum of [deleted] Poseidon Submarines will be deployed at any given time. This would require[deleted] Poseidon Missiles to outfit the deployed submarines. In addition to the required shipfills, test flights of the Poseidon Missile occur annually for DASOs, OPs, and FOTs. Table 1 summarizes the current program.

TABLE 1.—CURRENT TEST MISSILE PROGRAM

	DASO	OT	FOT
Fiscal year—			
1974			
1975			
1976			
1977			
1978	[Deleted]		
1979			
1980			
1981			
1982			

The DASO test program provides the assurance that after spending many months in a shipyard the SSBN's Strategic Weapon System is fully ready to go on patrol. The number of DASO missiles required per year is thus dependent upon the overhaul schedule, but in general is 3 to 6.

The OT and FOT tests are similar in that they provide for a continuing evaluation of the weapon system. The actual number of such test firings is not an absolute quantity, however, in that they are not tied to the number of submarines or overhaul schedules. Instead, after a given number of OT firings to initially evaluate the weapon system capabilities, the FOT program serves primarily to monitor the weapon system performance in order to detect degradation.

The requirements above total 642 missiles. However, in recognition of those missiles which will become available as a result of the earlier backfit of the Trident I Missile, the revised inventory objective of 619 Poseidon Missiles provides only those missiles funded in FY 74 and prior years. All 61 missiles previously planned for FY 75 procurement have been deleted.

Chairman McClellan. Proceed.

Admiral Adamson. Procurement has been programmed to sustain deliveries and support commensurate with submarine deployment schedules.

Trident Backfit

Chairman McClellan. What magnitude of modification will be required to backfit the TRIDENT I into the POSEIDON submarine?

Admiral Adamson. Of the ten POSEIDON (C–3) ships currently planned for backfit to TRIDENT (C–4), four are to be equipped with C–4 equipment during a regularly scheduled overhaul which will be of no greater length than if the ships remained configured for C–3. Six SSBNs are to be backfitted to C–4 alongside the tender.

The actual time alongside a tender required to backfit the submarine-installed weapon systems equipment to C–4 capability is estimated to be [deleted]. An additional [deleted] will be required to demonstrate and certify the readiness of the ship and crew to operate the equipment on tactical patrol. [Deleted] are required to load the submarine with C–4 missiles, for a total interpatrol period of [deleted]. This compares with a normal refit period of [deleted] which is currently spent alongside the tender between operational patrols.

One of the ships is scheduled to conduct a C–4 missile firing after backfit. For this ship an additional [deleted] are required alongside the tender to install special test instrumentation for a total of [deleted]. The Demonstration and Shakedown Operation is planned to take [deleted] are required for transit from Cape Canaveral to Charleston, and [deleted] for tactical C–4 missile loadout. The total interpatrol period of this case will be [deleted].

Chairman McClellan. Proceed.

POLARIS

Admiral ADAMSON. The FY 1975 budget provides $1.0 million for recurring Polaris missile costs. These costs include flight instrumentation components for tests, replacement of FBM-peculiar special purpose tooling and test equipment to support Polaris operations at the Polaris Missile Facilities (POMFLANT and POMFPAC), and special purpose hardware.

TRIDENT UGM-93A

MANUFACTURERS

MISSILE SYSTEM
LOCKHEED, SUNNYVALE, CALIF.

QUANTITY	FY-75 REQUEST	UNIT COST
WEAPONS SYSTEM COST	$12.6M	
TARGETS		
SUPPORT		
INITIAL SPARES		
TOTAL WPN	$12.6M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
[deleted]	[deleted]	579*	$7034.1M	$12.1M

WPN/PAMN COST THRU BUDGET YR: $17.6M

THRU FY: 81

*EXCLUDES 29 RDT&E MISSILES

TRIDENT

Admiral ADAMSON. The Trident Program goal is to provide an undersea missile system in order to ensure that the United States continues to maintain a credible deterrent which will not be neutralized by foreseeable technological countermeasures. The Trident System is comprised of CONUS-based nuclear-powered submarines equipped with long-range strategic missiles. In addition it is planned to backfit Trident I missiles into Poseidon submarines.

The FY 1975 funding request of $12.6 million provides $11.0 million to continue the engineering services begun in FY 1974 preparatory to readying the Trident support site in Bangor, Washington for operation.

TRIDENT SUPPORT SITE

Chairman MCCLELLAN. You request $11 million to continue engineering services in Bangor, Washington. Describe the services.

Admiral ADAMSON. The $11 million requested for the Trident Program will provide for: Preparation of preliminary and final architectural and engineering design criteria for Trident support site missile assembly production plant (Strategic Weapons Facility, Pacific—SWFPAC); Preparation of equipment installation design; Preparation of SWFPAC Master Equipment List, and Procurement of missile assembly control building/assembly building co-axial cables.

Chairman MCCLELLAN. Continue.

Admiral ADAMSON. The remaining $1.6 million is required for initial funding of the same type of effort in support of the backfit program at the Ballistic Missile Facility at Charleston.

Modification of Missiles

The modification of missiles request of $15.5 million provides for the FY 1975 procurement of both Polaris and Poseidon missile alteration kits.

Missile Reliability Effort

Chairman McClellan. You request $15.2 million to continue the Poseidon modification program. Can any of these funds be identified with the current efforts to upgrade the reliability of the C–3 missile?

Admiral Adamson. The entire $15.2 million requested for the Poseidon modification program in FY 75 will be applied to the reliability improvement effort. The requested funding provides for the on-going effort in three specific areas. First, $9.8M provides for increased testing which includes incorporation of additional tests of both missile components and also test hardware. Second, $4.8M provides for the replacement of inertial gyros in the guidance assembly with modified gyros. Lastly $0.6M is provided for installing a new internal connector in the missile guidance computer.

Chairman McClellan. Proceed.

Admiral Adamson. The majority of these funds, $15.2 million, are required to continue the Poseidon modification program which provides for increased component testing and modifications to the non-tactical destruct system, and to the Electronic and Gimbal assemblies of the guidance system.

Support Equipment and Facilities

The support equipment and facilities request of $7.6 million provides for the procurement of POLARIS and POSEIDON replenishment spares and repair parts, first destination transportation, support of missile industrial facilities, and launch and satellite support necessary to maintain the Navy Navigation Satellite System.

Other Missiles

Funds budgeted under this activity finance the procurement of other guided missile, aerial target, modifications to missile, fleet satellite communications and space systems and related support programs.

SPARROW (AIM-7E/F)

MANUFACTURERS

GUIDANCE & CONTROL
RAYTHEON, LOWELL, MASS.
GENERAL DYNAMICS, POMONA, CALIF.

ROCKET MOTOR
HERCULES, CUMBERLAND, MD.

QUANTITY	FY-75 REQUEST		UNIT COST
300	WEAPONS SYSTEM COST	$54.9M	$.134M
	FLYAWAY	(40.3M)	
	SUPPORT	(14.6M)	
	INITIAL SPARES	1.1M	
	TOTAL WPN	$56.0M	$.187M

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
(deleted)	(deleted)	16,266*	$1,159.0	$ .071M

WPN/PAMN COST THRU BUDGET YR: $443.3

THRU FY: 84

*INCLUDES 128 RD&E MISSILES

SPARROW III (AIM–7F)

Admiral ADAMSON. The SPARROW is an all weather, all aspect, semi-active radar guided, air-to-air missile employed by the Navy and the Air Force on the F–4, F–14, and F–15 aircraft and as a surface-to-air point defense missile on surface ships in the Basic Point Defense and NATO SEASPARROW surface missile systems. It is also used by several NATO and allied countries.

The AIM–7F version has demonstrated significant improvements over the AIM–7E and AIM–7E2 versions in reliability, increased range, improved maneuverability, a larger warhead, and compatibility with the pulse doppler radars and higher carriage and launch speeds of the F–14 and F–15 aircraft.

Phase one of the Operational Evaluation (OPEVAL) was successfully completed in December 1972. Results included [deleted]. Phase II of the OPEVAL which exercises the extremities of the missiles planned capabilities, is scheduled to complete this spring. The initial operational capability is planned for [deleted].

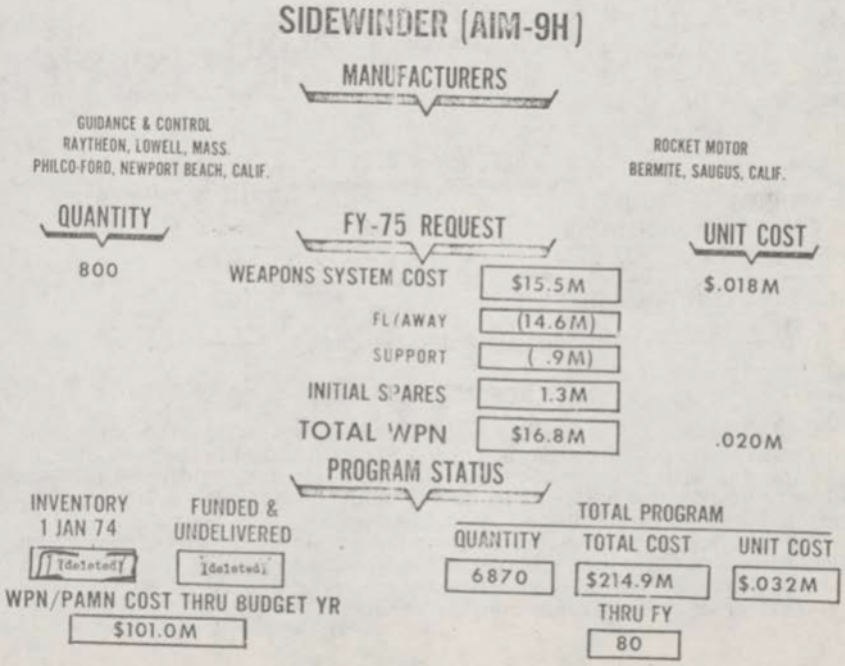
The $54.9 million requested will procure 300 AIM–7F missiles with an additional $1.1 million required for initial spares included in a separate line item. This quantity will partially offset expenditures and reduce the drawdown on the overall SPARROW inventory.

AIM–7F PROCUREMENT

Chairman MCCLELLAN. Explain how the procurement of 300 AIM–7F missiles will partially offset expenditures and reduce the drawdown on the overall SPARROW inventory?

Admiral ADAMSON. The inventory objective at the end of the FY 1975 delivery period is [deleted] missiles. Projected assets at that time, considering minimum expenditures and including the FY 75 request of 300 missile procurement, would be [deleted] missiles, or a deficiency of 439 missiles below the objective. Subsequent year buys of 700 missiles per year are planned to reverse this trend and bring assets up to the inventory objective. The 300 missiles requested in FY 75 for Navy, combined with 300 for the Air Force represents an orderly transition from the limited production of missiles procured in FY 1974. A decrease in the FY 75 request would further aggrevate the inventory shortfall and cause further increase in the unit cost of the missile for the Navy and Air Force.

Chairman MCCLELLAN. Proceed.



SIDEWINDER (AIM–9H)

Admiral ADAMSON. The SIDEWINDER is a heat-seeking missile used by fighter and attack aircraft of the Navy, Marine Corps, and Air Force. Developed in 1955 and improved over the subsequent years, it has been our most effective close-in, air-to-air missile.

The AIM–9H version, first procured in FY 1970, is a solid-state SIDEWINDER with improved performance, reliability, and maintainability over earlier models. It offers a significant improvement in close-in tracking of a maneuvering target.

We are requesting $15.5 million for procurement of 800 AIM–9H missiles to provide an increment toward meeting the inventory objective.

AIM–9H INVENTORY

Chairman MCCLELLAN. What is the current inventory of the AIM–9H sidewinder missile and the inventory objective?

Admiral ADAMSON. There is no separate inventory objective for the AIM–9H. The inventory objective for the AIM–9 Sidewinder missile is [deleted] this objective consists of the AIM–9D/G/H/L without specific breakout by series. As of 31 March 1974 the total Sidewinder inventory was [deleted] of this total [deleted] were "H" models.

Chairman MCCLELLAN. Proceed.

Admiral ADAMSON. Initial spares associated with the AIM–9H procurement require $1.3 million.

PHOENIX (AIM-54A)

MANUFACTURERS

MISSILE SYSTEM
HUGHES, CULVER CITY, CALIF.

ROCKET MOTOR
NO. AMERICAN ROCKWELL, McGREGOR, TEXAS
AEROJET GENERAL CORP., SACRAMENTO, CALIF.

QUANTITY	FY-75 REQUEST		UNIT COST
340	WEAPONS SYSTEM COST	$94.7M	$ 241M
	TARGETS	(82.1M)	
	SUPPORT	(12.6M)	
	INITIAL SPARES	4.8M	
	TOTAL WPN	$99.5M	.29 M

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
[deleted]	[deleted]	2532*	$1119.1M	$.442M

WPN/PAMN COST THRU BUDGET YR: $571.3

THRU FY: 79

*INCLUDES 37 RDT&E MISSILES

PHOENIX (AIM–54A)

Admiral ADAMSON The Phoenix is a long-range, all weather, air-to-air missile controlled by the AWG–9 Airborne Control System installed in the F–14 aircraft.

Employing semi-active, mid-course, and active terminal guidance, up to six Phoenix missiles can be fired and simultaneously guided against multiple, aircraft or missile target in a dense EMC environment.

The Test and Evaluation Program continues to progress extremely well. An 80% success rate has been achieved in the 70 valid test firings from all launch aircraft to date. A 90% success ratio has been realized in the 30 valid Phoenix firings from the F–14, including multiple launches.

The air-to-air portion of the Board of Inspection and Survey (BIS) Trials was completed 1 October 1973. The operational evaluation is scheduled to complete in December 1974. The Phoenix was introduced to the fleet concurrently with the F–14 in December 1973.

The $94.7 million requested in FY 1975 to procure 340 Phoenix missiles will sustain an orderly buildup of fleet inventory missiles to support F–14 deployments. An additional $4.8 million is requested for initial spares.

Program Unit Cost of PHOENIX Missile

Chairman McClellan. What is the program unit cost of the Phoenix missile and the procurement unit cost?

Admiral Adamson. The Phoenix program unit cost is $442,000 and the procurement unit cost is $382,000.

Chairman McClellan. Proceed.

SHRIKE (AGM–45)

Admiral Adamson. The Shrike is an anti-radiation missile employed by the Navy, Marine Corps, and Air Force to destroy or suppress enemy radars. It was used in Southeast Asia commencing in 1965 with over 5,000 missiles fired in combat. Although developed as an air-to-surface weapon, Shrike also has been employed in a surface-to-surface role on destroyers in Southeast Asia to suppress radar-directed coastal defense sites. It is deployed on all attack carriers and can be fired from Navy A–4, A–6, A–7 aircraft. The FY 1975 request is $25.4 million for 900 Shrike missiles. $.5 million is also requested for initial spares.

Effectiveness of SHRIKE in Israeli War

Chairman McClellan. Did the Israeli forces employ the Shrike missile in the October 1973 war? If so, what was its effectiveness?

Admiral Adamson. Yes sir, the Israelies imployed the Shrike missile as well as unguided CBU weapons, rockets, and general purpose bombs against the Arab SAM air defenses. Their effectiveness was similar to our own experience in Southeast Asia.

SHRIKE (AGM 45A)

MANUFACTURERS

WARHEAD
GUIDANCE & CONTROL
COMPETITIVE

ROCKET MOTOR
AEROJET GENERAL
SACRAMENTO, CALIFORNIA

QUANTITY	FY-75 REQUEST		UNIT COST
900	WEAPONS SYSTEM COST	$25.4M	$.027
	F.YAWAY	(24.7M)	
	SUPPORT	(.7M)	
	INITIAL SPARES	.5M	
	TOTAL WPN	$25.9M	.027

PROGRAM STATUS

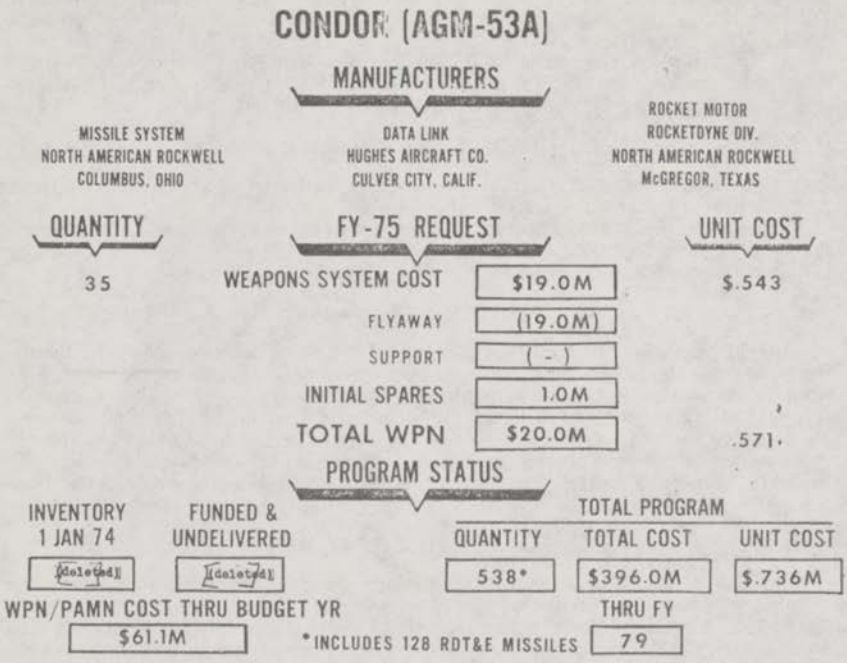
INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
[deleted]	[deleted]	12,623*	$322.5M	$.026M

WPN/PAMN COST THRU BUDGET YR: $233.9

THRU FY: 79

* INCLUDES 156 RDT&E MISSILES

Chairman McCLELLAN. Proceed.



CONDOR (AGM–53A)

Admiral ADAMSON. The TV-guided CONDOR air-to-surface missile is a medium-range, rocket-powered, air-launched cruise missile that provides a stand-off capability of [deleted] nautical miles against selected high priority land and sea targets in heavily defended areas.

The Condor missile System has a very secure data link, and automatic mid-course guidance system which provides the capability to navigate the missile to the target area, a command guidance system and an aim-point selection feature with relock and close-in update capabilities which provide exceptional accuracy and high target kill probability. These elements of the Condor System permit the launching aircraft's crew to select the best avenues of approach for penetration to and escape from the firing point. The combination of weapon stand-off distance, flexibility in selecting the launching aircraft's approach to and escape from a firing point, and the ability to guide and redirect the missile in the terminal flight phase provides a significant advance in the tactical use of air-launched missiles against heavily defended targets.

Upon completion of eight successful R&D firings, Navy technical and preliminary operational testing completed in July 1973 with 7 successes [deleted]. The Operational Evaluation is scheduled to take place between [deleted].

The $19.0 million in our FY 1975 request provides for the first 35 Condor missiles for limited fleet introduction. An additional $1.0 million will provide for initial spares.

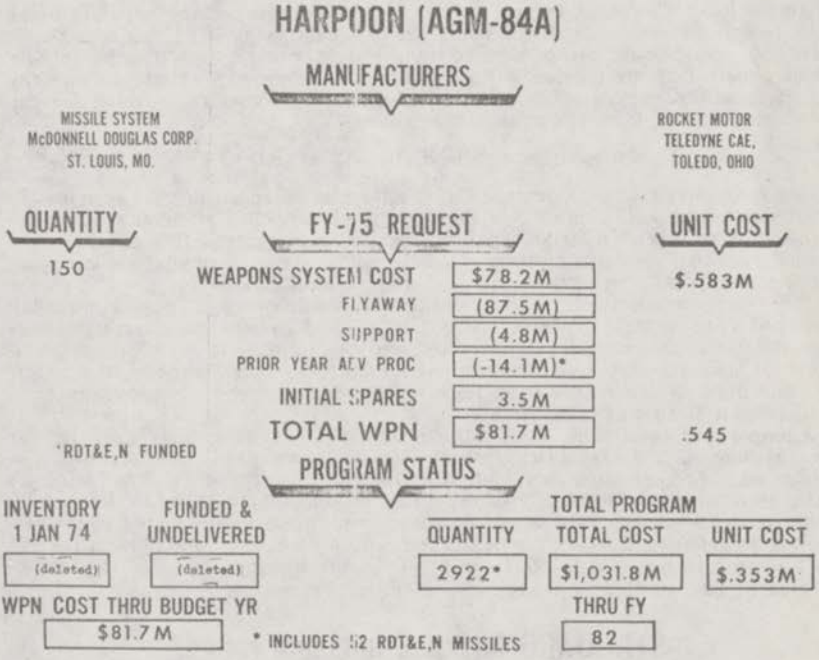
PRODUCTION RATE CONDOR

Chairman McCLELLAN. You plan to procure 35 Condor missiles in FY 1975. Is this an economical production rate? How much was the Navy's request to DoD for Condor Procurement in FY 1975? What is the inventory objective for the Condor missile?

Admiral ADAMSON. The 35 missiles in FY 1975 cannot be produced economically. A larger procurement would avoid a seven month production gap between FY 1975 and FY 1976, allow more missiles for fleet introduction and provide a warm

production base in FY 1977 for procurement of dual mode and other improved versions. At present, the Navy is studying alternatives that would preclude a production gap. The Navy's request to DoD for FY 1975 Condor procurements was for $35 million to buy 90 missiles. The Condor inventory objective is currently [deleted] missiles. This objective is currently being reviewed and indications are that it may be increased.

Chairman McClellan. Proceed.



HARPOON (AGM–84A AND RGM–84A–1)

Admiral Adamson. The radar-guided HARPOON missile (air-to-surface, surface-to-surface, and subsurface-to-surface) is an extended range, turbo-jet powered, anti-ship cruise missile.

Foreign Sales of CONDOR and HARPOON

Chairman McClellan. Are foreign sales of Condor and Harpoon anticipated? Discuss.

Admiral Adamson. Foreign sales of Harpoon are anticipated. In 1972 the Chief of Naval Operations approved a plan to sell the Harpoon Weapon System to Allies. During the fall of that same year the first of several briefings to friendly foreign governments was completed. Subsequent briefings were conducted in 1973 and early this year. Interest is high in several countries and Letters of Request for the Harpoon System have been received .Under the authority of the U.S. Navy, the Harpoon prime contractor, (McDonnell Douglas Astronautics Company) has a contract with the Turkish Government to provide shipboard Harpoon equipment for four Fast Patrol Boats. The British Government has a submarine-launched Encapsulated Harpoon study contract with McDonnell Douglas. Letters of Request from the Netherlands and Denmark have been received by the U.S. Government. All missile sales will be under the Foreign Military Sales Program.

Disclosure for Condor to foreign governments has been authorized. Navy personnel have visited Iran to discuss Condor applications. A briefing for NATO and selected Allies will be held on 15 May 1974 to forward technical information. No

letters of offer on Condor will be accepted until Condor has achieved service approval by the Navy.

Chairman McClellan. Proceed.

Admiral Adamson. The HARPOON missile designed has evolved from many engineering studies and critical subsystem hardware tests conducted during the validation phase. The seeker is an active radar type selected because of its ability to pick out the target, and remain locked on that target under all weather conditions, sea state, electronic countermeasures, and target evasive maneuvers or formations. The flight control section provides the necessary accurate flight path to bring the missile to the point where seeker acquisition can take place. The 500 pound warhead is a maximum weight consistent with the missile sizing constraints. Propulsion is provided by a turbine engine that provides the thrust to attain ranges up to 60 nautical miles. A booster is provided for the ship- or submarine-launched mode.

Comparison of CONDOR and HARPOON

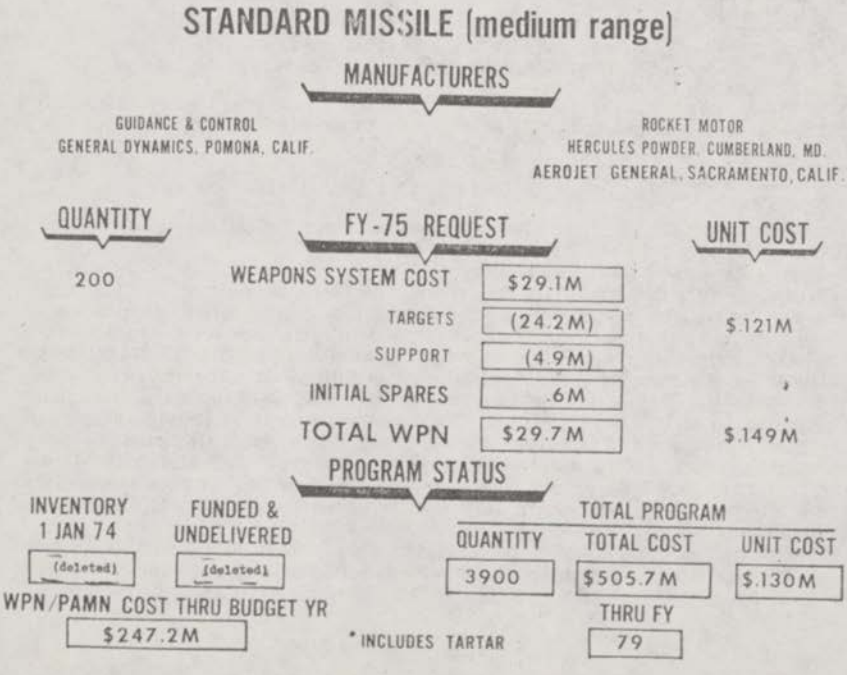
Chairman McClellan. Compare the Condor and Harpoon missile systems.

Admiral Adamson. Condor is a long range, air-launched standoff weapon designed to give precision strike capability against land targets. It uses an electro-optical terminal guidance system which directs its use to daylight visual conditions. Aim point control is available through a data link.

The Harpoon missile is a long standoff anti-ship weapon capable of being launched from several types of aircraft, ships and submarines. Harpoon is designed for the ship attack mission only, and can be used in all weather conditions. It uses an active radar terminal guidance system. Harpoon flies a low altitude flight which makes it extremely difficult to detect by enemy radars.

Chairman McClellan. Proceed.

Admiral Adamson. The $78.2 million in our FY 1975 request provides for procurement of 150 HARPOON missiles for Operational Evaluation, which is scheduled to be completed by [deleted] and initial fleet introduction in [deleted.] Long lead time engineering, tooling, and components for this buy have been procured with the FY 1974 advance procurement funds appropriated in the Research, Development, Test and Evaluation, Navy. Contractual action on the FY 1975 request is required by 28 July 1974 to maintain production continuity. Additionally, $3.5 million is requested for Initial Spares.



STANDARD MISSILE—Medium Range (RIM–66B)

Admiral ADAMSON. The medium range version of the STANDARD missile is a supersonic missile which provides all weather, anti-aircraft, and surface-to-surface armament for destroyers and incorporates advanced solid-state electronic and engineering concepts. It has a maximum range of [deleted] nautical miles. It is the replacement for TARTAR on our smaller combatants and is employed as the secondary missile battery in three of our TALLOS cruisers.

REPLACEMENT OF TARTAR

Chairman MCCLELLAN. When will the Tartar missiles be completely replaced by the Standard RIM–66B missile?

Admiral ADAMSON. The Tartar missiles will be completely replaced by Standard (MR) missiles by the end [deleted]

Chairman MCCLELLAN. Proceed.

Admiral ADAMSON. The RIM–66B was first procured in FY 1966. We are requesting $29.1 million for 200 medium-range missiles to reach the desired inventory objective and $.6 million for associated initial spares and repair parts.

STANDARD MISSILE (extended range)

MANUFACTURERS

MISSILE SYSTEM	SUSTAINER	BOOSTER
GENERAL DYNAMICS POMONA, CALIF.	ATLANTIC RESEARCH. ALEX. VA.	NAVAL ORD. STATION INDIAN HEAD, MD.

QUANTITY	FY-75 REQUEST		UNIT COST
-	WEAPONS SYSTEM COST	$3.2M	
	FLYAWAY		
	SUPPORT	(3.2M)	
	INITIAL SPARES	.6M	
	TOTAL WPN	$3.8M	

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
[deleted]	[deleted]	4428	$595.3M	$.134M

WPN/PAMN COST THRU BUDGET YR	THRU FY
$264.7	79

STANDARD MISSILE—EXTENDED RANGE (RIM–67A)

Admiral ADAMSON. The extended range version of the STANDARD missile, with a maximum range of [deleted] miles, is a follow-on weapon for TERRIER configured guided missile frigates, cruisers, and aircraft carriers. It differs from the STANDARD MR mainly in the addition of a booster to the propulsion system.

Chairman MCCLELLAN. Are the Standard medium range and extended range missiles modular in that certain components interchangeable?

Admiral ADAMSON. Yes. The Guidance and the Ordnance sections including the warhead and fuze are directly interchangeable between STANDARD Medium Range and STANDARD Extended Range. The autopilot and steering control electronics are interchangeable but the airframe structures enclosing the autopilot and steering controls are unique for adaptability to different propulsion

systems. The STANDARD Medium Range utilizes the Dual Thrust Rockets Motor MK 56. The STANDARD Extended Range utilizes the MK 30 Sustainer with the MK 12 Booster.

Chairman McClellan. Proceed.

Admiral Adamson. The ER and the MR versions of the Standard missile provide for improved overall performance, reliability, multiple target discrimination, and for effective operation against sophisticated electron countermeasures.

We are requesting $3.2 million to provide fleet support for the ER missiles in inventory and $.6 million for associated initial spares and repair parts.

SSM STANDARD (ARM) RGM-66D

MANUFACTURERS

GUIDANCE & CONTROL
GENERAL DYNAMICS
POMONA, CALIFORNIA

ROCKET MOTOR
HERCULES POWDER CO. (ABL)
OR
AEROJET GENERAL CORP.

QUANTITY	FY-75 REQUEST		UNIT COST
62	WEAPONS SYSTEM COST	$8.1M	$.124M
	FLYAWAY	(7.7M)	
	SUPPORT	(.4M)	
	INITIAL SPARES	.2M	
	TOTAL WPN	$8.3M	.134M

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
[deleted]	[deleted]	88	$22.4	$.255M

WPN COST THRU BUDGET YR: $4.9M

THRU FY: 76

STANDARD SSM (ARM) RGM-66D

Admiral Adamson. The Surface-to-Surface ARM version of the Standard missile provides selected escorts with an over-the-horizon, surface-to-surface antiradiation, capability required to combat radiating enemy missile launching platforms, shipping, and shore-based installations from ranges of [deleted].

The SSM ARM is a surface-launched solid propellant missile that homes on the RF energy emitted by enemy targets, thus obviating the need for shipboard or missile radar illumination of the target. The SSM ARM provides a capability to defend task forces against surprise attack by trailing enemy ships and also provides deployed forces a credible capability to counter equivalent enemy surface forces in the absence of carrier aircraft.

The SSM ARM was developed by incorporating the seeker, guidance, and warhead sections of the air-launched STANDARD ARM missile (AGM-78D) into the surface-to-air MR version of the Standard missile (RIM-66B). The missile can be fired from PG class ships using "box" launchers and from modified TARTAR launch platforms.

Chairman McClellan. How many ships of what types do you plan to equip with the Standard SSM ARM missile?

Admiral ADAMSON. Present plans include only 16 ships (6 Guided Missile Destroyers (DDG's), 6 Guided Missile (DEG's) and 4 Patrol Gunboats (PG's)) in the Standard ARM program.

Chairman MCCLELLAN. Proceed.

Admiral ADAMSON. Shipboard modifications to permit firing Standard SSM ARM have been completed in two Tacoma class PGs and will be completed in 12 DDG/DEG by end FY 1975.

We are requesting $8.1 million to procure 62 Standard SSM ARM missiles in FY 1975 and $.2 million for associated initial spares and repair parts.

STANDARD ACTIVE SSM RGM-66F

MANUFACTURERS

GUIDANCE & CONTROL
GENERAL DYNAMICS, POMONA, CALIF.

ROCKET MOTOR
HERCULES POWDER CO. (ABL)
CUMBERLAND, MD.
AEROJET GENERAL, SACRAMENTO, CALIF.

QUANTITY	FY-75 REQUEST		UNIT COST
74	WEAPONS SYSTEM COST	$32.1M	$.418
		(30.9M)	
		(1.2M)	
	INITIAL SPARES	1.5M	
	TOTAL WPN	$33.6M	.454M

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
(deleted)	(deleted)	74	$75.9M	$1.026M

WPN COST THRU BUDGET YR: $33.6M

THRU FY: 76

STANDARD ACTIVE SSM—RGM-66F

Admiral ADAMSON. The surface-to-surface active version of the Standard missile is derived by adding active guidance to the basic Standard missile, providing an over-the-horizon surface-to-surface active missile capability to the fleet. The missile acquires and homes on the target, thus eliminating the need for continuous radar illumination of the target by the firing ship. The effective range of the missile is from [deleted] mm.

The test program on the Standard Active has been very successful. All three active test round firings have resulted in direct hits at ranges up to [deleted] nautical miles. Eight more development test and evaluation firings are planned during July–December 1974. The operational Evaluation is scheduled to complete by [deleted].

The $32.1 million requested in FY 1975 will procure 74 Active SSM missiles for deployment on 12 DEG/DDG ships. Initial spares associated with Active production require $1.5 million.

Chairman MCCLELLAN. Are these the first procurement funds requested for production models of the Standard Active SSM Missiles?

Admiral ADAMSON. Yes, sir. They are.

Chairman MCCLELLAN. Proceed.

AERIAL TARGETS

MODEL	CHARACTERISTICS		QUANTITY	UNIT COST	REQUEST ($M)
BQM-34A	MACH .95	RECOVERABLE	84	$173,810	14.6
BQM-34E	MACH 1.5	RECOVERABLE	24	383,33	9.2
MQM-74A/C	200-400 KTS.	RECOVERABLE	230	63,478	14.6
OTHER TARGETS					3.9
(TOTAL TARGETS)					(41.3)
INITIAL SPARES					2.8
FY 1975 COST					$44.1

MFGS
- BQM-34A/E — TELEDYNE/RYAN AERONAUTICAL
- MQM-74A/C — NORTHROP CORPORATION, VENTURA DIV., NEWBURY PARK, CALIFORNIA

Aerial Targets

Admiral Adamson. The FY 1975 budget requests $41.3 million for the continued procurement of aerial targets required for the simulation of potential enemy targets.

The majority of the FY 1975 request, $38.4 million, is for the procurement of three target types. The recoverable BQM–34S simulates subsonic aircraft, and the recoverable BQM–34T simulates high performance supersonic aircraft, and the recoverable MQM–74C is a subsonic target required for fleet anti-aircraft gunnery exercises. Additionally, $2.9 million is requested for a variety of other targets for fleet gunnery and air-to-air missile training. Funds to convert obsolete aircraft to drones for weapons systems development and test programs are now budgeted in the RDT&E,N appropriation. Additionally $2.8 million is requested for initial spares.

Fleet Satellite Communications

The Fleet Satellite Communications (FLTSATCOM) System will provide substantial improvement to long-range communications with and among the Fleet. The first satellite will be launched [deleted]. Subsequent launches will be at [deleted] intervals. Four satellites in orbit at equatorial geosynchronous positions will provide worldwide coverage.

Orbiting Satellites at Equatorial Geosynchronous Positions

Chairman McClellan. Describe what you mean by four satellites in orbit at equatorial geosynchronous positions?

Admiral Adamson. Each of four spacecraft will be launched separately and injected into a circular earth orbit at an altitude of approximately 19,300 nautical miles. Each orbit will lie approximately in the earth's equatorial plane (±3 degrees). Under these conditions each satellite will move around the center of the earth once every 24 hours, the same as the earth's period of rotation. Thus,

the satellite will appear to an observer on earth to stay in a fixed position above the equator. Such a satellite is said to be in an equatorial geosynchronous orbit. A satellite positioned in such an orbit with its antenna pointing toward the center of the earth always illuminates the same area on earth until it is repointed or repositioned.

Our four satellites will be spaced around the earth so as to provide complete continuous antenna coverage around the earth, with some overlap between adjacent satellites, for all latitudes up to the polar regions. Each of our satellites can be repositioned to a new longitude if operational considerations should dictate a change in coverage.

Chairman McCLELLAN. Proceed.

Admiral ADAMSON. Each will provide one anti-jam fleet broadcast channel and nine radio relay channels for ships, aircraft and shore stations operating within the eight thousand mile diameter circle on earth as viewed from each satellite. Procurement includes one ground-spare satellite and launch vehicle to insure that four operational satellites are achieved in the initial system. FLTSATCOM will service almost all of the Navy's surface and submarine fleet as well as selected ASW aircraft, and link them with shore stations. In addition, certain high priority Air Force requirements, including Presidential communications and essential communications of the airborne command posts, the Strategic Air Command and emergency mission support will be served.

FLEET SATELITE COMMUNICATIONS

Chairman McCLELLAN. Is the Air Force providing any funds for the Fleet Satellite Communications item?

Admiral ADAMSON. No, sir. The Navy is funding the complete spacecraft and their associated launch vehicles.

Chairman McCLELLAN. Proceed.

Admiral ADAMSON. Prior year funds provided funding for five launch vehicles plus critical long-lead material for three satelites. The FY–1975 request of $68.0 million completes procurement of the three satellites, and funds procurement of long-lead parts for the fourth and fifth, as well as certain ancillary equipment and services.

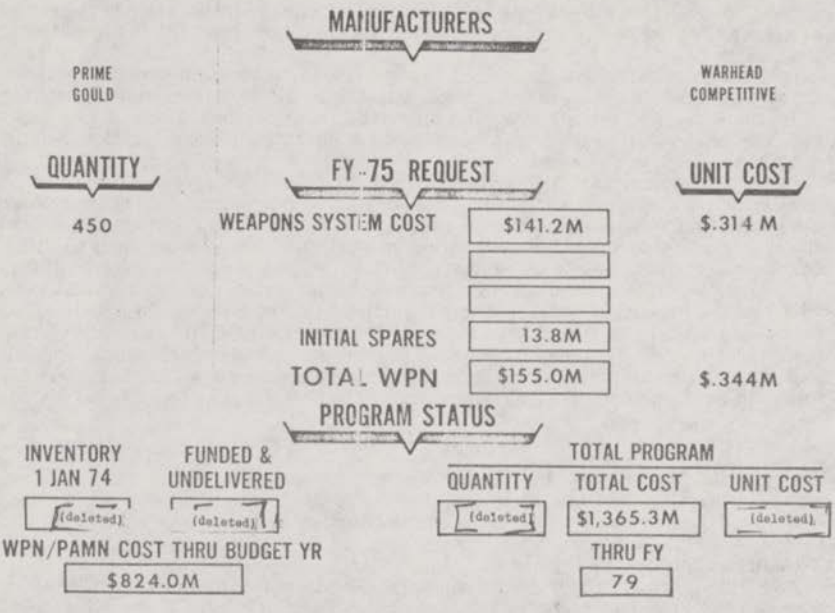
MISSILE SUPPORT

The balance of our request for other missile funds includes $11.2 million for support of out-of-production missiles: $17.8 million for modification of missiles, $3.3 million for other Initial Spares and replenishment spares and repair parts, $1.0 million for first destination transportation, $12.3 million for missile industrial facilities and $2.9 million for a classified project.

TORPEDOES AND RELATED EQUIPMENTS

Budget Activity Three funds the procurement of torpedoes, mines, mobile targets and related weapons and the acquisition of necessary support relating to their production.

TORPEDO MK 48



MK 48 TORPEDO

Admiral ADAMSON. The $142.2 million requested for FY 1975 provides for the continued production of the submarine-launched torpedo MK 48-1. The MK 48 has been approved for service use, is in full production, and is encountering no significant technical problems. The in-water reliability of the torpedo during the operational evaluation and in subsequent submarine certification firings is over [deleted]. The FY 1975 budget requests funds for an additional 450 units to continue the upgrading of our submarine force's weapon capability. $13.8 million is requested for initial spares to support this procurement.

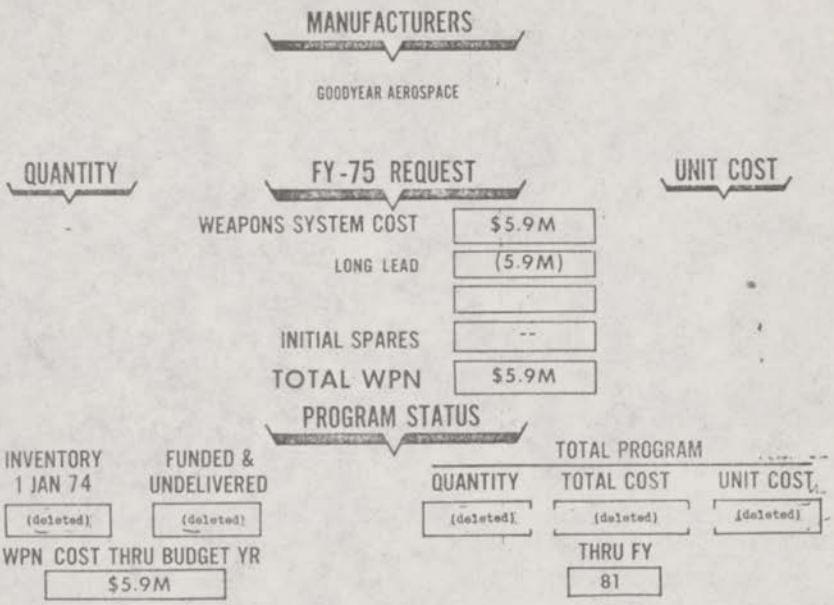
REPLACEMENT OF MK-46 INVENTORY

Senator MCCLELLAN. Will the MK-48 Torpedo eventually replace the MK-46 inventory?

Admiral ADAMSON. No. The Torpedo MK-48 is a submarine weapon and will replace the MK-14, MK-16, and MK-37 torpedoes. It is not intended to replace the Torpedo MK-46 since the MK-46 is a lightweight torpedo carried by surface ships and aircraft. The fiscal year 1975 RDT&E,N Congressional Budget requests funds for the Advanced Lightweight Torpedo which will eventually replace the Torpedo MK-46.

Chairman MCCLELLAN. Continue.

CAPTOR (enCAPsulated TORpedo)



CAPTOR

Admiral ADAMSON. In FY 1975 the Navy is requesting advance procurement funding of $5.9 million for the procurement of long lead time test equipment, non-service mines and proofing range preparation which is required prior to entering into initial production in [deleted].

The CAPTOR mine concept and its related technology have been explored by the Navy over a period of more than 10 years. This new Weapon System encapsulates and releases a MK 46 homing torpedo when the CAPTOR's special sensing device detects a target. The CAPTOR development has continued satisfactorily in development and the Navy will be able to proceed on schedule. The Navy technical evaluation started in February 1974; the Operational Evaluation is scheduled to start in July 1974 and will complete by December 1974.

MOBILE TARGET MK-30

MANUFACTURERS

NORTHROP - VENTURA

QUANTITY	FY-75 REQUEST		UNIT COST
3	WEAPONS SYSTEM COST	$9.8M	$1.00M
	TARGETS	(3.0M)	
	SUPPORT	(6.8M)	
	INITIAL SPARES	.5	
	TOTAL WPN	$10.3M	$3.43M

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
8	21	260	$249.2M	$.958M

WPN/PAMN COST THRU BUDGET YR: $55.2M

THRU FY: 84

MOBILE TARGET MK 30

Admiral ADAMSON. The third major item in Budget Activity Three request is the Mobile Target MK 30. Three targets and related items are requested for $9.8 million. The goal of this program is the production of a self-propelled, target capable of simulating a submarine target for the principal ASW sensors and weapons. Although there is no substitute for an actual submarine in some forms of test and training, a mobile target can definitely carry a large part of the test and training load. Indeed, in some situations dangerous to the submarine, use of the mobile target is mandatory.

MOBILE TARGET

Chairman MCCLELLAN. Describe a situation in which use of the Mobile Target is mandatory in lieu of an actual submarine.

Admiral ADAMSON. The primary consideration for using the Mobile Target is that it is compatible with all sonars, all weapons systems and MAD. This is used to attain and maintain proficiency by training ASW forces whenever a submarine is not available. There are some situations, however, where it is considered mandatory to use the Mobile Target in lieu of an actual submarine. These are:

a. For the evaluation of and training the fleet to use high performance ASW torpedoes and variable depth sonars where the safety of the submarine is considered in jeopardy.

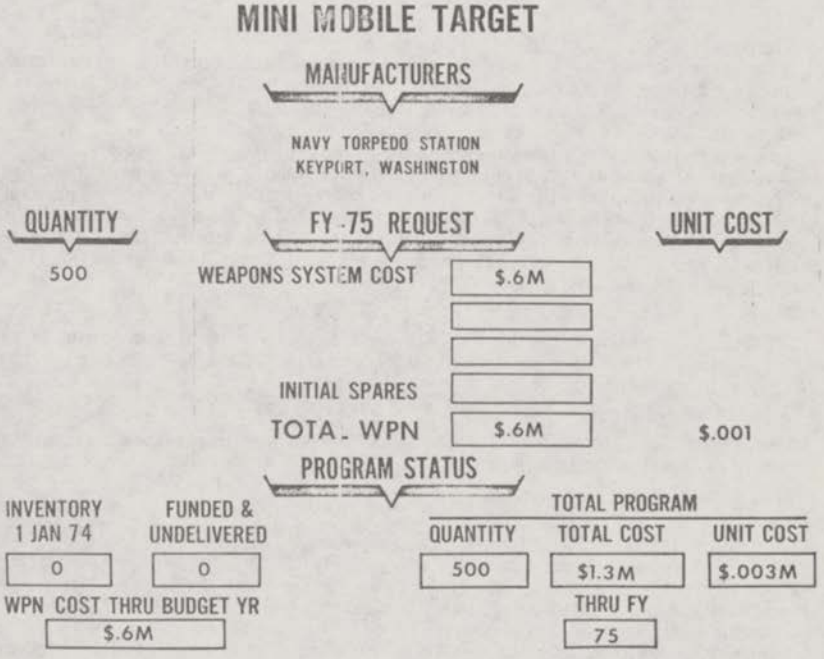
b. For the evaluation of and training the fleet to use ASW sensors and weapons systems which have depth capabilities greater than current submarines.

c. For training the fleet to operate against a sound source which appears like a Soviet submarine instead of a U.S. submarine.

Chairman McCLELLAN. Proceed.

Admiral ADAMSON. The projected attrition rate of the MK–30 is estimated to be .5%, and, due to its reusable nature, it is estimated that the average target will achieve 200 runs prior to loss or failure. The amortized hardware cost will be approximately 20% of the cost of comparable submarine services, if such services were available.

FY 1975 is planned to be the last year of sole source procurement for the MK–30. Included in the FY 1974 program is $1.5 million to procure a data package suitable for competition. The FY 1975 request includes $3.0 million for target procurement, and $6.8 million for support including $2.6 million for replacement of components expended during target usage. An additional $.5 million is requested for initial spares.



MINIATURE MOBILE TARGET

Admiral ADAMSON. The $6.8 million requested for FY 1975 provides for procurement of 500 miniature mobile targets. This target is a small, non-sophisticated expendable, hand launched acoustic device developed as an open ocean training device for sonar teams. It provides basic training only and is a complement to the MK–30 target.

Modification of Torpedoes and Related Equipment

The modification of Torpedoes and Related Equipment request of $6.9 million supports modifications and alterations of our inservice ASW weapons required to enhance the performance or extend the useful service life of this material.

The prime claimant for over half of the FY 1975 request is the MK 46 Torpedo which is being updated with improved countermeasures to increase its effectiveness against the Soviet submarines. A large portion of the remainder is to modify inservice MK–48 Torpedos.

Support Equipment

The request of $7.0 million for Torpedo Support Equipment will provide for procurement of expendable equipment consumed in exercise firings including such items as batteries, cables, otto fuel and wire coils.

Otto Fuel

Chairman McClellan. What is Otto Fuel?

Admiral Adamson. Otto fuel is a liquid monopropellant, which by definition, contains both fuel and oxidizer in the same chemical compound. This is the fuel used to power both the Torpedo MK–48 and MK–46.

Chairman McClellan. Proceed.

Admiral Adamson. Reusable equipment such as silver for batteries, exercise heads, special tools and test equipment and containers are also procured. Tnis procurement program will support over 2,700 torpedo firings, and a gross torpedo population of nearly 20,000 inservice out-of-production torpedoes.

Finally, $2.0 million is included for initial outfittings other than the above programs and replenishment of spares and repair parts to support the ASW weapon population.

Other Weapons

In Budget Activity Four the 5''/54 Gun Mount Modification Program is the principal line item being procured and accounts for $16.1 million of the total of $25.6 million requested.

5''/54 Gun Mount

The 5''/54 Gun Mount MK 42 Mod 10 Conversion Program is an upgrading program of the Mod 7 gun mount.

5 Inch Gun -Use

Chairman McClellan. Which Ships employ the 5'' Gun?

Admiral Adamson. Fifty six ships will employ the 5''/54 Caliber Gun Mount MK 42 Mod 10. The number and types of ships are eight destroyers, one escort ship, twenty-seven guided missile destroyers and twenty missile frigates.

Chairman McClellan. Proceed.

Admiral Adamson. Many of the advanced features of the 5''/54 MK 42 Mod 9 and MK 45 gun mounts and MK 26 missile launcher have been incorporated, particularly in the areas of reliability and maintainability. The major components improved are fuze setters, train power drive, power panel, control panel, and elevation power drive.

The Naval Ordnance Station, Louisville converts the Mod 7 gun mount to Mod 10. Through FY 1974, a total of 39 mounts will have been converted.

The $16.1 million requested will provide for the conversion of 19 mounts in FY 1975 using kits which were procured in prior years. It will also provide for the procurement of 7 conversion kits which will be used for conversion of mounts commencing in FY 1976.

MACHINE GUN MK-29

MANUFACTURERS

GUN SYSTEM
GENERAL ELECTRIC COMPANY
BURLINGTON, VERMONT

QUANTITY	FY-75 REQUEST		UNIT COST
10	WEAPONS SYSTEM COST	$1.7M	
	INITIAL SPARES		
	TOTAL WPN	$1.7M	$.170M

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
0	0	779	$17.7M	$.023M

WPN COST THRU BUDGET YR	THRU FY
$1.7M	79

MK-75 76MM GUN MOUNT

MANUFACTURERS

UNKNOWN

QUANTITY	FY-75 REQUEST		UNIT COST
2	WEAPONS SYSTEM COST	$1.5M	
	INITIAL SPARES		
	TOTAL WPN	$1.5M	$.750M

PROGRAM STATUS

INVENTORY 1 JAN 74	FUNDED & UNDELIVERED	TOTAL PROGRAM QUANTITY	TOTAL COST	UNIT COST
0	0	4	$3.4M	$.850M

WPN COST THRU BUDGET YR	THRU FY
$1.5	81

Admiral ADAMSON. Additionally, we have budgeted for the following other weapons in Budget Activity Four: 10 MK 29 machine guns for $1.7 million; $1.5 million for 2 MK–75 76 mm gun mounts for use at Navy training schools; $.3 million for weapons under $500K; $1.4 million for modifications under $500,000; $2.0 million for gun support equipment, and $2.6 million for initial and replenishment spares and repair parts.

APPROPRIATION SUMMARY

In summary we are requesting $84.7 million for Ballistic Missiles (Budget Activity One), $535.9 million for Other Missiles (Budget Activity Two), $187.7 million for Torpedoes and Related Equipment (Budget Activity Three), and $25.6 million for Other Weapons (Budget Activity Four). Total New Obligational Authority (NOA) requested for the Weapons Procurement, Navy Appropriation for FY 1975 is $833.9 million.

Chairman MCCLELLAN. Please proceed to highlight your statement.

BUDGET REQUEST

Admiral ADAMSON. Our budget submission for the next fiscal year under the "Weapons Procurement, Navy" fiscal year 1975 includes $84.7 million for "Ballistic missiles," $535.9 million for "Other missiles," $187.7 million for "Torpedoes," and $25.6 million for "Other weapons." The total fiscal year 1975 request for the appropriation is $833.9 million.

MISSILES

The fiscal year 1975 ballistic missiles request for $84.7 million includes $72.1 million to support the previously procured inventory of Polaris and Poseidon missiles including required modifications and spare parts. The remaining $12.6 million is required for engineering services in support of the Trident program. These services will be performed at both the Trident missile facility at Bangor, Wash., and at the ballistic missile facility at Charleston, S.C.

TRAINING MISSILES

Senator YOUNG. Does the ballistic missile request contain training missiles or the replacement of missiles direct in training? If so, how many are included in the request?

Admiral ADAMSON. The fiscal year 1975 ballistic missile request does not include either training missiles nor missiles for replacement of Poseidon missiles fired in training. However, the request does include funding for the continued procurement of special purpose test instrumentation which includes test reentry vehicles used in both the DASO and operational test programs.

Budget activity two includes $535.9 million for other Navy guided missile programs. Of this total $420.6 million is required to continue production of programs started in prior years. Included in this category is the Sparrow, Sidewinder, Phoenix, Shrike, and Condor missiles; Aerial Target, three versions of the Standard missile, Fleet Satellite Communications Satellites, and associated modifications and spare parts. The new programs requested in fiscal year 1975 include the Harpoon and Standard active missiles.

CLASSIFICATION OF MISSILES

Chairman McClellan. How many different kinds of missiles do we have in the Navy.

AIR-TO-AIR MISSILES

Admiral Adamson. In the air-launched side we essentially have five missiles included in this year's budget request. You have three versions of the air-to-air missile, the medium range Sparrow, the shorter range Sidewinder, and the long-range Phoenix, which Admiral Houser just mentioned.

Chairman McClellan. Are those all different types of missiles?

Admiral Adamson. Yes, sir. The Sidewinder (AIM–9), for example, is a small infrared guided missile.

Chairman McClellan. You have mentioned three different types.

Admiral Adamson. They vary by range and by requirements, how to use them. They are loaded in accordance with the mission of the aircraft prior to takeoff.

AIR-TO-GROUND MISSILES

Chairman McClellan. Are these air-to-air missiles?

Admiral Adamson. Yes, sir. The air-to-ground missiles, the Condor and Harpoon. The Condor, as you know, uses data link and transmits a picture back to the pilot, and to the aircrew. It has, if you will, the precision of a surgical instrument in that it does not require the aircraft to proceed to the immediate vicinity of the target. The pilot can stand off and not be subjected to anti-aircraft fire, and so forth.

Senator Young. Has that been a reliable missile?

Admiral Adamson. It is very reliable during the test program. I realize I am speaking in part for Admiral Houser, my air warfare friend on my left, but when the time came to look at what we would do if we had to undertake certain missions, the first questions that we were asked was, "How many experimental Condors do you have in inventory?"

HARPOON VERSATILITY

Harpoon is a new missile. It is a missile with a range of about [deleted] nautical miles and it is all-weather. Condor is not all weather. Harpoon is really air-to-surface over the sea. It wont' do the job at the present time overland. Harpoon is also capable of being launched surface-to-surface and subsurface-to-surface. The Harpoon is a general missile that all three warfare diciplines, if you will, of the Navy can use.

Chairman McClellan. All three branches?

Admiral Adamson Submarine, surface, and aviation. It is launched from a submarine in a canister. It is configured so it can be launched from existing missile launchers in surface ships or we can put it in a box launcher similar to shipping box containers which we install on small ships. In this mode it is launched as a surface-to-surface missile.

It has the capability of being launched and will be launched from the air. Initial use will be on the P–3C aircraft.

That will then give them a surface strike capability, and with the range of the P–3, gives us an air-to-surface missile capability over most of the sea expanses of the globe.

SHRIKE MISSILE

Chairman McClellan. Describe the Shrike.

Admiral Adamson. The Shrike is a missile that is used against radars. We used this extensively in Southeast Asia with considerable success, as indicated by the fact that in fact it did destroy active radar sites of the North Vietnamese. In addition it also achieved success in that when it was launched and if it was detected, the only recourse that the other fellow had was to turn off his radars, which meant they could no longer do the job those radars were supposed to do.

SHRIKE is a proven missile, one which has been used extensively. There are various models depending upon the radars which we want to use them against.

In the surface-to-air category we are requesting funds for the medium range version of the Standard missile. This is a proven missile which has been in the fleet many years.

In the surface-to-surface category, in addition to the Harpoon which I mentioned earlier, we are requesting funds for the SSM ARM and Active versions of the Standard missile. Both of these missiles are required to counter the surface threat and augment the Harpoon in the fleet.

That completes the types of missiles included in this budget request.

Chairman McClellan. Continue with your statement.

HARPOON FUNDING

Admiral Adamson. The new programs requested in fiscal 1975 include $81.7 million for 150 Harpoon missiles and their associated spare parts. These missiles will be used for operational testing and initial fleet introduction. It should be noted that the long lead time engineering, tooling, and components for this buy have been procured with the fiscal year 1970 advance procurement funds appropriated in the R.D.T. & E., appropriation and that follow-on contractual action committing $36 million of the fiscal year 1975 request is required by July 28, 1974, in order to maintain the production continuity started with the fiscal year 1974 funding.

STANDARD ACTIVE FUNDING

The surface-to-surface Active version of the Standard missile is derived by adding an active guidance to the basic Standard missile. The fiscal year 1975 request includes $33.6 million including initial spares to procure 74 of these missiles for deployment on 12 DEG/DDG ships. The operational evaluation testing of this missile is scheduled to complete this spring.

TORPEDO AND TARGET FUNDING

The budget activity three request of $187.7 million includes $181.2 million to continue production of the MK–48 torpedo, the MK–30 target, and various programs to support our inventory of out-of-production torpedoes and other ASW weapons. The remaining $6.5 million is required for two new programs; CAPTOR and minimobile target.

CAPTOR REQUEST

The fiscal year 1975 request for CAPTOR advance procurement is $5.9 million. These funds are required to procure long lead items needed for proofing range preparation, procurement of nonservice mines, and test equipment. The operational testing of the CAPTOR mine is scheduled to complete [deleted].

MINIMOBILE TARGET PROGRAM

Another new program in the fiscal year 1975 budget request is $0.6 million to procure 500 mini-mobile targets. This target is a small, hand-launched acoustic device designed to provide basic open ocean training for surface ship sonar teams.

OTHER WEAPONS

Of the $25.6 million requested for "Other weapons," budget activity 4, all but $3.2 million is required to continue programs started in prior years. The two new programs are the procurement of the two MK–75 76-mm gun mounts for training sites for the PF and PHM crews and 10 MK–29 machineguns for operational evaluation. These will replace the 20-mm machine guns in use since World War II.

What has happened with the 20-mm machine guns is that the old ammunition is unstable. What is left is unsafe. This gun takes advantage of the state of the art to give us 20-mm machine guns for service craft, and it is compatible with the marines and their vehicles.

That completes my brief statement.

Chairman McClellan. Any questions, Senator?

Senator Young. Is the Navy required to procure guided missiles as a part of the Middle East payback?

Admiral Adamson. The Navy is not required to procure those missiles. However, when the sale of a missile from inventory results in the Navy's inventory being drawn below the authorized inventory objective, reprocurement of the missiles sold usually occurs.

JUSTIFICATION

Chairman McClellan. At this point in the record, there will appear certain information from the justifications.

[The justification follows:]

Justification

WEAPONS PROCUREMENT, NAVY

APPROPRIATION INTRODUCTION
(In Thousand Dollars)

	FY 1975 Estimate
Appropriation	$ 833,900
Total Direct Obligations	797,606
Total Direct Budget Plan	833,900

The Weapons Procurement, Navy appropriation finances the procurement of missiles, torpedoes, guns and support equipment for Naval forces and Marine forces. Support equipment includes: equipment for modification of in-service missiles, torpedoes, guns and gun mounts; aerial targets used in training exercises and evaluation; hardware for Navy navigation and communications satellite programs; spare parts; ground support and training equipment; and industrial facilities and tools required for the production and maintenance of missiles. Contractor Engineering Services which were budgeted in activities 8 and 9 and installation costs incident to missile modifications under the Procurement of Aircraft and Missiles, Navy appropriation in FY 1973 and prior years are budgeted in the Operations and Maintenance, Navy appropriation in FY 1974 and subsequent years.

FISCAL YEAR 1975 HIGHLIGHTS

The FY 1975 budget program for the Weapons Procurement, Navy appropriation totals $833.9 million. Significant features of the FY 1975 request are:

(a) A Ballistic Missile Program, including POSEIDON spare and repair parts, facilities requirements and support programs, launch and satellite support necessary to maintain the Navy Navigation Satellite System totaling $72.1 million.

(b) $12.6 million for the proposed TRIDENT refit facility complex and associated special tools and test equipment.

(c) A missile and aerial target program of $465.0 million, including $402.0 million for air launched and ship launched missiles and targets, $17.8 million for missile modifications and $45.2 million for repair parts and support programs.

(d) $70.9 million for the Fleet Satellite Communications program and Classified Projects.

(e) A program of $187.7 million for the procurement of torpedoes and related equipment and support.

(f) A program of $25.6 million for guns, gun mounts and related support equipment.

PROGRAM SUMMARY

The FY 1975 Ballistic Missile Procurement program reflects procurement of POSEIDON support, missile modifications, spare parts and facilities support, continued support of the POLARIS missile and the navigation satellite program, as well as the start-up of the TRIDENT program.

Tactical missile procurement in FY 1975 provides for continued procurement of the surface-to-surface STANDARD SSM missile. In addition, continued production of SPARROW III, SIDEWINDER and PHOENIX air-to-air missiles and SHRIKE and CONDOR air-to-surface missiles is provided. In the surface-to-air category, production of the medium range configuration of the ship-launched STANDARD Missile is maintained. Initial procurement of the HARPOON and STANDARD ACTIVE SSM is also provided for. The FY 1975 procurement program also includes a variety of aerial targets to meet training requirements as well as fleet support requirements for missiles out-of-production in FY 1975.

Support programs which contribute significantly to the Navy's combat capability are also included in the FY 1975 request. Among these are: modifications required to improve the capabilities of missiles previously delivered to the Fleet; spares and repair parts to support new missiles entering the Fleet as well as those already in the operating program; industrial facilities to support the production and maintenance of weapon systems procured under this appropriation; ground handling, training, test and production support equipment required to support procurement and operations; and procurement of hardware for a Fleet Satellite Communications program which will provide protected tactical communications to all Navy ships and selected aircraft.

Torpedoes and related equipment programs will provide for the procurement of the TORPEDO MK 48, the MOBILE TARGET MK 30, and the MINI MOBILE TARGET. In addition the anti-submarine program provides advance procurement for the CAPTOR weapon system. Modification and support of existing in-service anti-submarine weapon systems is also provided.

Other weapons procurement includes the MK 29 Machine Gun and the MK 75 76MM Gun Mount procurement. The FY 1975 program will also provide for modification of the 5"/54 Gun Mount and other support equipment, including spares and repair parts.

FINANCING

The FY 1975 plan of $833,900,000 for this appropriation is to be financed by new obligational authority.

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	FY 1974 Estimate	FY 1975 Estimate
Ballistic Missiles	$253,400	$ 84,700
Other Missiles	354,900	535,900
Torpedoes and Related Support	200,768	187,700
Other Weapons	28,751	25,600
TOTAL DIRECT PROGRAM	837,819	833,900
Reimbursable Program	35,000	43,000
TOTAL PROGRAM REQUIREMENTS	872,819	876,900
Less: Portion of program to be obligated in subsequent fiscal years	157,989	159,348
Plus: Obligations incurred against prior year program funds	-	129,054
TOTAL OBLIGATIONS	$714,830	$846,606

FY 1973-75 Navy Missile Procurement Program
($ in Millions)

NAVY	FY 1973 Qty	FY 1973 Amt	TOTAL PROGRAM FY 1974 Qty	TOTAL PROGRAM FY 1974 Amt	FY 1975 Qty	FY 1975 Amt
UGM-27C (A-3) POLARIS	-	10.9	-	2.1	-	1.0
UGM-73A (C-3) POSEIDON	95	268.8	72	185.5	-	48.0
UGM-73A Advance Procurement Current Year	-	18.4	-	-		-
TRIDENT	-	-	-	5.0	-	12.6
Modification of Ballistic Missiles	-	12.0	-	52.4	-	15.5
Spares and Repair Parts	-	3.8	-	2.0	-	1.0
First Destination Transportation	-	2.5	-	2.1	-	1.8
Missile Industrial Facilities	-	.6	-	.7	-	.8
Astronautics	-	2.8	-	3.6	-	4.0
AIM-7 E/F (SPARROW III)	100	28.3	100	25.8	300	54.9
AIM-9 H (SIDEWINDER IC IR)	470	11.7	850	14.6	800	15.5
AIM-54A (PHOENIX)	180	89.3	240	92.5	340	94.7
AGM-45A (SHRIKE)	1672	26.8	1160	22.6	900	25.4
AGM-53A (CONDOR)	20	17.9	30	22.7	35	19.0
AGM-78D (STANDARD ARM)	316	39.6	-	.8	-	.5
AGM-84A (HARPOON)	-	-	-	-	150	78.2
RIM-66A (STANDARD MR)	340	33.8	444	47.3	200	29.1
RIM-67A (STANDARD ER)	100	12.7	68	9.5	-	3.2
RGM-66D (STANDARD SSM)	-	-	26	4.3	62	8.1
RGM-66F (STANDARD ACTIVE SSM)	-	-	-	-	74	32.1
Other Missile Support	-	16.2	-	12.5	-	10.7
Aerial Targets	-	36.5	-	33.8	-	41.3
Modification of Missiles	-	13.8	-	6.8	-	17.8
Spares and Repair Parts	-	10.4	-	15.2	-	21.2
First Destination Transportation	-	.7	-	.6	-	1.0
Missile Industrial Facilities	-	9.9	-	9.3	-	12.3
Fleet Satellite Communications	-	31.1	-	36.6	-	68.0
Classified Projects	-	-	-	-	-	2.9
TOTAL NAVY Program		698.5		608.3		620.6

Other Procurement, Navy

STATEMENT OF VICE ADM. W. D. GADDIS, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)

PROGRAM AND FINANCING

Chairman McClellan. The next appropriation to be considered will be that for "Other procurement, Navy."

At this point in the record, there will appear certain program and financing information from the justifications.

[The information follows:]

DEPARTMENT OF DEFENSE, MILITARY

OTHER PROCUREMENT, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	Budget plan (amounts for procurement actions programed)			Obligations		
	1973 actual	1974 estimate	1975 estimate	1973 actual	1974 estimate	1975 estimate
Program by activities:						
Direct:						
1. Ships support equipment	567,663	313,434	340,000	552,529	299,750	337,000
2. Communications and electronics equipment	438,065	388,900	517,900	389,687	417,563	512,000
3. Aviation support equipment	581,845	223,700	337,700	440,708	326,036	342,200
4. Ordnance support equipment	600,169	237,500	304,600	546,035	300,463	307,100
5. Civil engineering support equipment	54,678	53,400	78,600	63,005	49,553	76,100
6. Supply support equipment	9,203	12,200	13,800	7,000	14,167	13,900
7. Personnel and command support equipment	50,547	52,300	91,900	44,865	55,271	89,000
Total direct	2,302,170	1,281,434	1,684,500	2,043,829	1,462,803	1,677,300
Reimbursable (total)	298,175	176,000	110,000	299,632	197,197	117,700
Total	2,600,345	1,457,434	1,794,500	2,343,461	1,660,000	1,795,000
Financing:						
Receipts and reimbursements from:						
Federal funds	−319,919	−164,687	−102,100	−285,396	−164,687	−102,100
Trust funds	−22,866	−7,100	−7,100	−8,333	−7,100	−7,100
Non-Federal sources	−1,037	−800	−800	−1,016	−800	−800
Unobligated balance available, start of year:						
For completion of prior year budget plans				−375,577	−443,570	−196,004
Available to finance new budget plans		−58,847			−58,847	
Reprograming from (−) or to prior year budget plans	−139,814	−45,000				
Unobligated balance transferred from other accounts	−90,000	−45,000		−90,000	−45,000	
Unobligated balance transferred to other accounts	90,000	68,200		90,000	68,200	

DEPARTMENT OF DEFENSE, MILITARY—Continued

OTHER PROCUREMENT, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	Budget plan (amounts for procurement actions programed)			Obligations		
	1973 actual	1974 estimate	1975 estimate	1973 actual	1974 estimate	1975 estimate
Financing—Continued						
Unobligated balance available, end of year:						
For completion of prior year budget plans				443,570	196,004	195,504
Available to finance subsequent year budget plans	58,847			58,847		
Unobligated balance lapsing: Unobligated balance lapsing, budget plan	49,814			49,814		
Budget authority	2,225,370	1,204,200	1,684,500	2,225,370	1,204,200	1,684,500
Budget authority:						
Appropriation	2,310,900	1,204,200	1,684,500	2,310,900	1,204,200	1,684,500
Transferred to other accounts	−85,530			−85,530		
Appropriation (adjusted)	2,225,370	1,204,200	1,684,500	2,225,370	1,204,200	1,684,500
Relation of obligations to outlays:						
Obligations incurred, net				2,048,716	1,487,413	1,685,000
Obligated balance, start of year				1,639,262	2,023,137	1,903,550
Obligated balance, end of year				−2,023,137	−1,903,550	−2,194,550
Outlays				1,664,840	1,607,000	1,394,000

PREPARED STATEMENT

Chairman McClellan. The principal witness will be Vice Adm. W. D. Gaddis, Deputy Chief of Naval Operations (Logistics).

Admiral, your longer statement will be placed in the record at this point, and you may proceed to highlight it.

[The statement follows:]

Mr. Chairman and members of the Committee, I am Vice Admiral Walter D. Gaddis, Deputy Chief of Naval Operations for Logistics. It is a pleasure to appear before you to present the fiscal year 1975 budget request for the Other Procurement, Navy Appropriation. I will make the only formal statement on the overall appropriation.

BUDGET REQUEST

The Other Procurement, Navy Appropriation is essentially the same in program content and structure as presented last year. There are no major new programs requested in the FY 1975 budget request of 1 billion 684 million 500 thousand dollars. Approximately half of the $178.9 million increase over FY 1974 program of 1 billion 505 million 600 thousand is related to increased training and support equipment for the TRIDENT program. A combined total of $118.7M is requested to procure training and other support equipment for the Trident System. This compares with $26.4 million appropriated in FY 1974. The lead ship, for which funds were provided in the FY 1974 SCN Appropriation, is scheduled for delivery in FY 1978. MILCON and WPN funds, also appropriated in FY 1974, allow the start of construction at the Trident Support Site at Bangor, Wash., and provide start-up costs for the Strategic Weapons Facility, Pacific which will be located at the Site. $110.5 million of the FY 1975 request for OPN funds is for the procurement of shipboard equipments peculiar to the operation of the Trident submarine and Procurement of Weapon System equipment for the Trident missile. This equipment will be used for training at the Trident Training Facility,

located at the Trident Support Site. The training facility is scheduled to receive its first class in January 1977.

Shore support to the Trident System with special industrial materials handling equipments for the Strategic Weapons Facility, and inertial instruments needed to provide back-up support for strategic weapons system navigation equipments represent $6.0 million of the request. The remaining $2.2 million is for a computer which is required to aid in logistics support.

Other Major Programs

Other major programs in the fiscal year 1975 budget include $250 million for munitions, $167 million for ship reactor plant equipment including cores, $84 million for spares and repair parts, $78 million for the undersea surveillance program, $74 million for continuation of the backfit of the AN/BQQ-5 sonar and all digital attack center on nuclear submarines, $25 million for a major upgrade of Naval Tactical Data Systems, $46 million for ship and shore satellite communications equipment, $65 million for sonobuoys, $32 million for surface missile systems fire control and launcher alterations, $20 million for pollution control items, $47 million for vehicular equipment including trucks, trailers, earth moving equipment and $47 million for training equipment including simulators.

The munitions program is a continuation of the accelerating initiative in the FY 1974 supplemental aimed at achievement of minimum war reserve inventories to improve readiness and provide assets for training consumption. War reserves, depleted during the SEASIA conflict, have only been partially reconstituted; principal shortages exist in the new "smart" weapons.

Depletion of War Reserves

Chairman McClellan. When you say that war reserves depleted during the Southeast Asia conflict have only been partially reconstituted, does this include those items which are in the FY 1974 supplemental request which is now being considered?

Admiral Gaddis. The Southeast Asia conflict depleted our War Reserve in air strike munitions by approximately [deleted]. The majority of this depletion was in the Atlantic Fleet War Reserve Stockpile. Since the cessation of hostilities in February 1973 we have reconstituted the Atlantic Fleet Stockpile to the pre-Southeast Asia surge level. At this time we have reconstituted our War Reserve Aggregate tonnage requirement to provide as a minimum the munitions required [deleted]. Principal shortages do, however, exist in our sophisticated weaponry such as Walleye Extended Range (ER) with Data Link (DL), Laser Guided Bombs (LGB), Anti-Personnel-Anti-Material Cluster Bomb (APAM) and Rockeye Cluster Bomb. The FY 1974 supplemental includes requests for Walleye ER/DL and Rockeye. Since the LGB and APAM are only in initial production phase requests for these weapons are not included in the FY 1974 Supplemental.

Chairman McClellan. Proceed.

Funding of Spare Parts

Admiral Gaddis. Spares funding has been austere for a number of years; the FY-75 budget continues that practice. Rising prices have diminished the buying power of each dollar but management action is being taken to help offset this loss. Management programs have been instituted to decrease the time repairables are in the pipeline and undergoing repair in order to reduce inventory investment. The depth of spares initially procured for inventory have been reduced and shipboard allowances cut back by relying on premium transportation to get parts to the fleet. This has helped to hold down costs. I am concerned at the possible impact which the fuel situation may have on the availability of premium transportation to support this program, and the degree to which we can intensify management as a tradeoff to inventory in the face of pressure to cut back on the people who perform this intensive management.

The total spares budget from FY-74 to FY-75 reflects an overall reduction. I cannot predict that this trend will continue in FY-76 and beyond. For one thing, our current levels of supply availability—the number of requisitions we can fill from stock on hand—are virtualy all below our 85% goal, and are all declining.

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Supply System Performance Goal

Chairman McClellan. Discuss the 85% goal for supply availability.

Admiral Gaddis. The Navy has a supply system performance goal of filling 85% of the requisitions received from stock on hand within the system. This percentage of supply availability is calculated based on the inventory manager's visibility of material located at the various stock points. It has been found that, as a general rule, 85% availability is the approximate point on a curve of availability versus costs at which cost begins to increase inordinately for each additional percentage point gain in supply availability. Therefore, the 85% availability goal represents a practical and reasonable compromise between the customer's desires for higher availability and the requirement for application of investments with prudent risks. This goal has been accepted for many years within the Department of Defense, by the Office of Management and Budget and by the Congress.

Navy guidance has for several years required that spares requirements computations be based upon the 85% objective. Based upon detailed analysis of the requirements and in consideration of current budget constraints the various commodity areas will be allocated funds which will not support an 85% availability goal. Further, increases in production lead times and prices will impact on the Inventory Managers ability to meet these goals. The decline experienced in FY74 reflects increased lead times, prices and funding deficiencies. We are hoepful that the declining trends can be reversed in FY75.

Chairman McClellan. Proceed.

I would like now to present individually the budget request for each of the seven activities and will address the balance of the major programs in the context of the budget activity in which they appear.

Budget Activity 1—Ships Support Equipment

This activity finances the procurement of major shipboard components such as hull, mechanical and electrical equipment, replacement cores and components; deep submergence equipment; small boats; industrial production equipment for the Naval Shipyards; and spares and repair parts.

The Fiscl Year 1975 request for this activity is $340M, a $5M increase over the FY 1974 level.

Shipboard Components

Funding of $92.1M is requested for Shipboard components, a decrease of $20.2M from that requested last year. A portion of this decrease is attributable to the reduction in funds for the Pollution Control Program.

Reduction of Pollution Control Funds

Chairman McClellan. Why is there a reduction in funds for the Pollution Control Program—aren't we just getting the program started?

Admiral Gaddis. The reduction of funds (OPN BA1) under the Pollution Control Program results merely from an orderly extension of the shipboard sewage control phases of the program. This rearrangement was made possible by the 2 to 3 year delay in Coast Guard's promulgation regulations to meet EPA standards. Accordingly, the Navy now has until FY '80 to comply with shipboard sewage regulations vice the originally planned FY '77. The benefits of these rearrangements are less annual impacts on the shipyard workload and critical trades situations, a more manageable and uniform overall fleet modernization program, and a leveling of annual funding for pollution abatement.

Chairman McClellan. Continue.

Admiral Gaddis. The remaining decrease is associated with the reactor training equipment necessary for TRIDENT. The reactor training installation at Milton, New York was completely funded in FY 1973 and FY 1974. The FY 1975 equipment will support the Ship System training facility requirements at Bangor. Washington.

LM–2500 Engine Spares

For FY 1975 we are requesting funds for the procurement of necessary LM–2500 engine spares to support the ships under construction such as the SPRAUNCE Class Destroyer. This program will provide a pool of major engine-subassemblies—gas generators and power turbines for all LM–2500 equipped ships.

Use of LM-2500 Engine

Chairman McClellan. How often must a LM-2500 engine be replaced? On which ships are these engines used and planned to be used?

Admiral Gaddis. The LM-2500 engine breaks down into two major subassemblies, a Gas Generator and a Power Turbine, either of which can be replaced independently of the other. The initial times between required repairs for the gas generator and power turbine are based upon empirical data for at-sea operating experience in the GTS ADMIRAL CALLAGHAN; which are that both the gas generator and the power turbine will be able to be operated for 4000 hours before these machines will have to be replaced by reworked units. Further, it is estimated that if certain engineering programs are funded and thus able to be prosecuted, the reliability of these major subassemblies will have increased by the end of this decade such that they will be able to be operated for more than double the initial 4000 hours before replacement is required.

The LM-2500 engine is not presently installed in any ship of the U.S. Navy. Two of these engines are, however, installed and operating in the merchant ship GTS Admiral William M. Callaghan, which is operated under charter to the Military Sealift Command. The engine will be introduced in the Navy when the first of the SPRUANCE class destroyers is delivered. Each of these twinscrew ships will have four LM-2500 engines installed for main propulsion, two on each shaft. The engine will be used for foilborne propulsion in the Nato hydrofoil (PHM) class, each of which will be equipped with one LM-2500. In addition, the LM-2500 will provide main propulsion in the PF-109 and SCS classes of ships, each of which will have two engines on a single shaft.

Chairman McClellan. Proceed.

Admiral Gaddis. The ship is designed to permit engine replacement in port, by ship's force, provided crane service and replacement subassemblies are available. Major engine maintenance will then be conducted ashore, based on the condition of the engine subassemblies as indicated by monitoring equipment associated with each engine. When information from monitoring equipment indicates the necessity, the gas generator or power turbine will be replaced and the unit requiring repair sent to a designated central shore repair facility. This requires that a number of Gas Generators and Power Turbines—each of which requires two year's procurement lead time—be available when needed as replacements to minimize loss of ship availability. In addition, the budget request includes funds to procure the special tools and repair parts required to repair failed Gas Generators and Power Turbines at the designated Central Shore Repair Facility. This will provide an organic Navy repair capability, which is to be operational after an initial two year period of repair support by the engine manufacturer, in order to ensure the availability of the mission essential main engines.

Submarine Periscope

We are requesting $7.9 million for the procurement of the new type 18 periscope for submarines. While this periscope was originally based on the type 15, it does contain completely redesigned electronic warfare support measures and optical sub-systems.

Replacement of Type 15 Periscope

Chairman McClellan. Does the replacement of the Type 15 periscope by the Type 18 require any modification to the submarine?

Admiral Gaddis. No external modifications are required. The only internal modifications associated with the replacement of the Type 15 by the Type 18 periscope are in the mounting of ancillary interconnnection boxes and TV monitors. In addition, interconnecting cabling for the Type 18 is connectorized whereas the Type 15 cabling utilizes terminal board connections.

Chairman McClellan. Continue.

Admiral Gaddis. Some of the other features in this new periscope are higher power and resolution, television and photographic capabilities, and a vastly improved image stabilization and special electronics equipment for low light level viewing. The type 18 periscope will replace the type 15 periscope on most nuclear attack submarines and is included as original equipment on new construction SSNs.

Pollution Control

The request for pollution control equipment is down to $8.0 million this fiscal year. This is $14.7M less than last year. The larger amount required in FY 1974 was due to the emphasis on procuring the necessary hardware for the shipboard collection, holding, and transfer systems for disposing of sewage, either to a barge or a municipal sewage system. The funds requested in FY 1975 will be used primarily for the procurement of hardware intended to dispose of oily waste and oil spillages both on board ships and ashore.

Reactor Plant Components

The budget request includes $44.3M for spare and replacement reactor plant components and equipment required for the continued safe operation of the basic heat transfer cycle of naval reactor plants. Also included is $122.6M for the procurement of reactor cores and associated structural and reactivity control elements required for the periodic refueling of nuclear powered ships.

Reactor Core Components

Chairman McClellan. Are the nuclear components of the reactor cores included within the funds requested?

Admiral Gaddis. The $122.6M requested is for the fabrication of the reactor cores and associated structural and reactivity control elements. The AEC provides the enriched uranium to the reactor core manufacturer. The Navy pays the AEC directly for the cost of the enriched uranium as it is consumed in the use of the reactor core. The funds for the core are consumption budgeted by the Navy as an operating expense in the Operations and Maintenance appropriation.

Chairman McClellan. Proceed.

Admiral Gaddis. Funds for SSN/SSBN long life reactor cores; the final cores of a 5 year procurement of CVAN-65 and CGN-9 reactor cores; alloy type SSN reactor cores for submarines where long life cores are not suitable; and reactor fuel to support NIMITZ class aircraft carriers are included. Timing for the procurement of the replacement reactor cores is based on the refueling requirements of the Navy and on the need to maintain continuity of the unique and highly specialized core production lines.

Patrol Craft

The Navy request for $4.6M in FY 1975 will procure Patrol Boats for the active Fleet and the Naval Reserve. All procurements will be small business set-aside, competitively awarded, advertised fixed price contracts with delivery filling fleet allowance to provide a Naval Inshore Warfare capability.

$3.3M is being requested for the procurement of new 25-man life rafts and modification kits to up-grade the 15-man life rafts currently installed on active fleet ships. This program is intended to correct existing deficiencies, such as deterioration and inflation problems at temperatures below 32 degrees.

Life Raft Deterioration

Chairman McClellan. Do the current life rafts deteriorate when they are stored below 32° or is this after they are inflated and in the water?

Admiral Gaddis. The existing lifeboats will not inflate when subjected to temperatures of 32° or below for any significant period of time. These are currently stored aboard ships in soft rubber containers which allow the components to deteriorate.

The new MK 6 twenty-five man life boat and the modified MK 5 boat will utilize an air inflation system vice the traditional CO2 system. The air system

will operate in outside air temperatures as low as 10°F. Additionally, both new MK 6 and modified MK 5 boats will be sealed in fiberglass reinforced plastic containers which will prevent deterioration of the components.

Chairman McClellan. Proceed.

Budget Activity 2

Communications and Electronic Equipment

Admiral Gaddis. This activity finances the procurement of all shipboard and shore communications and electronics equipment for the active fleet and shore activities. Included are shipboard radars, anti-submarine warfare electronics equipment ranging from ship sonars to underwater surveillance systems, and equipment in support of electronic warfare, reconnaissance, surveillance, and command and control systems. In addition, all communications and navigation equipment supporting air stations, ships, and shore facilities as well as cryptographic and cryptologic equipments are funded in this budget activity.

The total request of $517.9 million represents one hundred million increase over the FY 1974 program of $417.5 million.

Shipboard Radars

$23.1 million is requested for shipboard radars. The increasing threat and recent advances in technology make it both necessary and possible to provide Navy radars which can more fully support modern combat systems. These capabilities are being furnished to some of our higher value ships.

Definition of High Value Ship

Chairman McClellan. What do you classify as higher value ships? Will the Sea Control Ship be a high value ship?

Admiral Gaddis. In the context usually employed, the following classes of ships are generally considered to be in the "high value" category: CV, CVA, LCC, LHA and LPH. In a broader context, all of the "high mix" ships of the High Low balanced force mix and some of the low mix ships are "higher value ships because of their military value. These include the SCS, DLG, DLGN, DDG, etc. The FY 75 radar improvement program includes funding for the procurement of SPS–48 radars for CVA class ships with major modifications incorporated for enhanced detection in sea, land and weather clutter; the incorporation of surface search radar modifications to enhance detection of targets in extended clutter environments; the procurement of SPS–40 radars for DDGs, LPDs, LPAs and LCCs; and the procurement of SPS–58 radars for a range of ships to enhance detection of high speed low altitude cruise missile threats. The Sea Control Ship (SCS) is not classified as a "high value" ship in the narrow context of the term. In the broader sense of the term, it is a "higher value" ship.

Chairman McClellan. Proceed.

Admiral Gaddis. Navy radars are, for the most part, approaching the end of service life because of age and problems inherent in the technology when they were built. These old radars are affected by weather, land clutter, interference and jamming. They do not detect low-flying threats well and are not suitable for automatic detection and tracking. The current radar program upgrades existing radars or provides new radars for more capability in the expected threat environment with emphasis on impoved reliability, better performance in jamming and clutter, and detection of anti-ship missiles. Included in the fiscal year 1975 request is $3.5 million for the continuation of the AN/SPS–40 Corrective Action Program, $10.5 million for provision of a Moving Target Indication (MTI) capability for the AN/SPS–48 radar, and $5.6 million for procurement of fifteen AN/SPS–58 radars to be installed in ships equipped with the Basic Point Defense missile system.

Basic Point Defense Missile System Installations

Chairman McClellan. Which ships are equipped with the Basic Point Defense Missile System?

Admiral Gaddis. Sir, I will have to provide that for the record.

(The information follows:)

Systems are installed and operational in the following ships:

Ships	*Number of units*	*Ships*	*Number of units*
John F. Kennedy (CVA–67)	3	*Shields* (DE–1066)	1
Enterprise (CVAN–65)	2	*Bowen* (DE–1079)	1
Forrestal (CVA–59)	2	*Paul* (DE–1080)	1
Okinawa (LPH–3)	2	*Alywin* (DE–1081)	1
Sims (DE–1059)	1	*Fanning* (DE–1076)	1
Iwo Jima (LPH–2)	2	*Reasoner* (DE–1063)	1
Oulette (DE–1077)	1	*Montgomery* (DE–1082)	1
Whipple (DE–1062)	1	*Knox* (DE–1052)	1
Trippe (DE–1075)	1	*Stein* (DE–1065)	1
Lockee (DE–1064)	1	*Cook* (DE–1083)	1
Badger (DE–1071)	1	*Trioli* (LPH–10)	2
Hammond (DE–1067)	1	*Inchon* (LPH–12)	2
Blakely (DE–1072)	1	*Independence* (CV–62)	2
Holt (DE–1074)	1	*Hepburn* (DE–1055)	1
Hewes (DE–1078)	1		

Installation of units are planned for the following ships:

Fiscal year 1974	Fiscal year 1975	Fiscal year 1976	Fiscal year 1977
CVA–60 (2 units)	LHA–1 (2 units)	[Deleted.]	[Deleted.]
CVAN–68 (3 units)	LHA–2 (2 units)		
DE–1053 (1 unit)	CVAN–69 (3 units)		
DE–1054 (1 unit)	LPH–9 (2 units)		
DE–1057 (1 unit)			
DE–1058 (1 unit)			
DE–1060 (1 unit)			
DE–1069 (1 unit)			
DE–1073 (1 unit)			
DE–1056 (1 unit)			
LPH–11 (2 units)			
LCC–19 (2 units)			
LCC–20 (2 units)			
LPH–7 (2 units)			

Chairman McClellan. Continue.

Admiral Gaddis. These installations along with modifications to other search radars will provide some of the detection and reaction time improvements required to enhance the Fleet's area and point defense capabilities.

Ship Sonars

A total of $115.1 million is being requested for the procurement of ship sonars. $27.0 million of this amount is for sonars designed specifically for the Fleet Ballistic Missile Submarines. These funds include $12.5 million to continue procurement of the 31 AN/BQR–15 sonars required for FBM submarines which cannot, due to schedule considerations, be outfitted with this sonar during their conversion period and refresher training facilities. AN/BQR–15 equipment for 21 submarines and all training facilities will be provided with planned OPN procurement through FY 1975. Another $13.8 million of this funding request is to be used for initial procurement of AN/BQR–21 sonars. This sonar is scheduled for service approval in May 1974, upon completion of operational evaluation. A total of 60 AN/BQR–21 sonars are planned to be procured over a three-year period for installation on the Fleet Ballistic Missile submarines and on 12 attack submarines.

$55.8 million is requested for procurement of 9 AN/BQQ–5 sonar systems.

AN/BQQ–5 Sonar System

Chairman McClellan. Does the Los Angeles have the AN/BQQ–5 sonar system?

Admiral Gaddis. Yes. The AN/BQQ–5 sonar system will be installed in the U.S.S. Los Angeles (SSN–688) during the July–October 1974 time frame which is in accordance with the equipment installation schedule at the builders' shipyard.

Chairman McClellan. Continue.

Admiral Gaddis. The AN/BQQ–5 is a sophisticated digital submarine sonar system to be installed in all SSN 688 Class submarines during construction and backfitted into ships of the 594/637 Classes. Due to the complexity of the installation, the backfits must be made during a regular overhaul. Procurements in both the shipbuilding program and this Appropriation are keyed to the shipbuilding/overhaul schedules.

AN/BQQ–5 Sonar Backfit

Due to the length of time between SSN overhauls, it will be nearly 10 years before we can complete the AN/BQQ–5 backfit program. In order to provide interim capability, some sonar improvements previously developed and tested on a piecemeal basis have been packaged into a single modification entitled AN/BQS–13 MPS (Multi-Purpose Subsystem). Because the capabilities of the MPS are urgently needed today and can be installed by forces afloat, all procurements are scheduled to be made in a two year period. 14 units at $13.5 million are requested in FY 1975. In order to obtain adequate return on the investment, MPS will be installed only on those submarines which will have a use period of at least 3 years prior to the installation of an AN/BQQ–5.

The fiscal year 1975 request of $116.1 million for ASW electronics consists principally of $78.3 million for the CAESAR program.

CAESAR Program

Chairman McClellan. Explain the CAESAR program.

Admiral Gaddis. CAESAR is the unclassified code name for the Sound Surveillance System or SOSUS; [deleted].

The CAESAR program was initiated in 1950 to provide a continuous monitor of enemy submarine activity in areas of strategic and tactical interest. The first CAESAR installation became operational in 1954 [deleted].

The FY 1975 CAESAR budget request involves a significantly diverse range of procurements. [Deleted.]

Chairman McClellan. Continue.

Admiral Gaddis. The CAESAR Backfit program will provide system improvements in the following three project areas:

First, the installation of a number of developed, proven, low cost equipments designed to improve system capability and reduce manual operation.

Secondly, communications improvements and other classified improvement capabilities will be provided in both oceans using existing equipments and technologies.

Third, the regeneration and/or elimination of selected existing facilities are anticipated as the result of an extensive system integration study and engineering development program.

ASW Command and Control Centers

$5.8 million is for the continued procurement of ASW Centers Command and Control System (ASWCCCS) equipment.

Program Costs

Chairman McClellan. What will be the total program cost of the ASW Centers Command and Control System?

Admiral Gaddis. The cost of the R&D program will be approximately $19.1M and will conclude with the FY 1978 funding. This RDT&E effort has provided for

the development of the hardware now under procurement and continues for the purpose of developing the software (computer) routines on the installed hardware to ensure interface compatibility with ASWCCCS and other interconnecting systems. The procurement portion will be approximately $13.6M, including $1.4M for initial spares. The total estimated cost of this program will be $32.7M.

Chairman McClellan. Proceed.

Admiral Gaddis. The size and complexity of the Soviet submarine threat in a deployed situation make it imperative for the Navy to employ up-to-date computer technology in support of the command and control function. The operational requirement is for a display augmented, on-line, computer-aided system with integrated secure voice and data link communications. This will enable shore-based commands, in near-real time, to assess the submarine threat continuously and accurately; deploy appropriate ASW forces; exercise command and control of those forces; and perform the important function of control and protection of shipping. Significantly, a large payoff is being realized in this system with relatively small expenditure due to its careful integration into the World Wide Military Command and Control System (WWMCCS), whose equipment it shares. The above position is substantiated by a previous Congressional staff committee report on this program.

Trident Electronics

Also included in ASW electronics is $12.4 million for TRIDENT electronic equipment. TRIDENT submarine electronic training equipments will be procured in FY 1975 for the TRIDENT Training Facility (TRITRAFAC) in Bangor, Washington. The items to be procured in FY 1975 Support Ship Communication, Navigation and Sonar Systems.

Other Programs

Three programs, DIAMOND, AN/BRD–7, and the Tuba Phase I account for the bulk of the $39.0 million requested for Reconnaissance, Surveillance, and Electronic Warfare equipments. The DIAMOND program request of $9.4 million will provide for continued procurement of shipboard direction finding systems.

Diamond Program

Chairman McClellan. Discuss the DIAMOND program.

Admiral Gaddis. The DIAMOND program request for $9.4M will provide for continued procurement of tactical shipboard HF/VHF direction finding systems. These systems, of which 24 currently are programmed, are designed to provide to operational commanders over-the-horizon locating information on potentially hostile platforms. These systems also will provide an improved surface ship signals exploitation capability.

Chairman McClellan. Proceed.

Admiral Gaddis. The request of $11.6 million for the AN/BRD–7 program will continue phased procurement of equipment to rapidly intercept and determine the direction of communications signals. FY–73 and prior OPN funding procured twenty-eight systems. The $11.6M being requested in FY–75 will procure an additional twenty-one systems which are programmed to be installed in SSNs in accordance with the ship overhaul schedule. The requested procurement will provide for all but 14 of a total of 63 systems programmed. The TUBA Phase I program provides submarines with the ability to collect acoustic intelligence in support of Navy's ASW effort.

TUBA Program

Chairman McClellan. Explain the TUBA Phase I program.

Admiral Gaddis. TUBA Phase I is a program structured to provide the equipment and support necessary for submarines to successfully carry out a variety of acoustic missions. The program also provides for direct Fleet support in data reduction and "Quicklook" data promulgation facilities. In procurement, equipments provided and supported by this program include the currently operational but obsolescent AN/BQH–5(V) 1 and 2 systems, the AN/BQH 4 system, and the newly developed AN/BQH–6 system. The AN/BQH–6, while a stand alone system

that can interface with any currently installed SSN sonar suite, is being designed to interface with the AN/BQQ–5 for optimum results. It should be noted that the TUBA program is an ongoing effort and is expected to continue to be reflected in OPN requirements for a number of years. The level of funding required is expected to drop considerably when the AN/BQH–6 procurement is completed. The Navy currently does not plan to implement subsequent "Phases" to the TUBA program.

Chairman McClellan. Proceed.

Admiral Gaddis. The FY–75 procurement includes the initial buy of the AN/BQH–6 Acoustic Intelligence Gathering Device, a replacement system for the currently installed and inadequate BQH–5 system. At present there are three preproduction BQH–6 systems undergoing testing. Test data will be available to support a production decision prior to August 1974. The $5.6M requested in FY–75 will procure eight (8) BQH–6 systems and will also fund non-recurring initial production costs. These systems are programmed for installation in 594/637 Class submarines in accordance with the ship overhaul schedule.

Electronics Equipment

Of the request of $32.0 million for Other Ship Electronics Equipment, $25.4 million is for the Naval Tactical Data Systems (NTDS) program; $17.1 million of this amount is for hardware required to implement the Model IV Operational Computer Program, and $8.3 million is for active fleet and shore support of 52 NTDS System. The Model IV Program implementation, associated with the Tactical Air Control Systems/Tactical Air Defense Systems (TACS/TADS) program, provides the active fleet with greatly improved NTDS capability and permits complete interoperability with Air Force, Army and Marine Corps Tactical Data Systems as well as the 19 NATO ships equipped with NTDS.

NATO Forces Equipped With NTDS

Chairman McClellan. Which 19 NATO ships are equipped with the Naval Tactical Data System?

Admiral Gaddis. Sir, I will have to provide that for the record.

(The information follows:)

Canada:
DDH H.M.C.S. *Iroquois*
DDH H.M.C.S. *Athabaskan*

Germany:
DDG *Lutjens*
DDG *Molders*
DDG *Rommel*

France:
AAW/ASW Frigates:
Suffren
Duquesne

Tanker DDs:
Du Petit Thouars
Bouvet
Ker Saint
Du Chayla

ASW DD *Duperre*
ASW Corvette *Aconit*
CLG *Colbert*

Radar Picket DDs:
Tartu
Jaureguiberry
La Bourdonnais

Italy: CLG *Vittorio Veneto*

United Kingdom: DLG *Bristol*

Chairman McClellan. Continue.

Admiral Gaddis. Target completion date for Model IV is 1 July 1976. Model IV program implementation must be accomplished in as short a time as possible since ships with the new program cannot operate with ships with the older (Model III) program.

Aircraft Support Electronics

The request of $21.9 million for Aircraft Support Communications and Electronics Equipment includes funds for Navy and Marine Corps air traffic control and flight safety improvements, air traffic control radar beacon systems, MK XII AIMS (Identification Friend or Foe) equipment, landing systems and control tower improvement.

Items for Improved Air Safety

Chairman McClellan. Are any of the items requested to improve air safety procured jointly with the Air Force and Army in order to lower costs?

Admiral Gaddis. There are several items requested to improve air safety which are procured jointly with the Air Force and Army in order to lower costs. Examples of FY 1975 planned equipment procurements are the AN/PRC–77 radio which is procured by the Army for joint Army and Navy use and the AN/GRC–171 UHF Transceiver and AN/GRC–175 VHF Transceiver which are procured by the Air Force for joint Air Force and Navy use.

Chairman McClellan. Proceed.

Admiral Gaddis. This equipment is required for a continuing effort to place our aircraft under positive control and to minimize the hazards of possible mid-air collisions and generally improve flight safety. These efforts are consistent with the national program to improve air safety sponsored by the Department of Transportation.

$23.3 million for Other Shore Electronics Communication and Electronics Equipment will provide for continuation of various programs such as: RADIAC, Naval Reserve Equipment, Remote sensors and General Purpose Test Equipment. Also included are funds for an Integrated Combat Systems Test Site.

Shore Testing Facilities

Chairman McClellan. Discuss the Integrated Combat Systems Test Site Program.

Admiral Gaddis. The increasing complexity of evolving Navy shipboard combat systems, together with several past experiences, has vividly demonstrated the requirement for live testing ashore of new combat systems, prior to installation aboard ship. The Navy has no permanent test site to fulfill this testing requirement for third generation (AN/UYK–7) combat systems. In view of this, Acquisition Managers have been forced to establish their own dedicated sites. These dedicated sites are normally disestablished during the ship acquisition phase and the test site equipment is removed and installed aboard one of the later hulls of the class. This procedure leaves the Navy with a critical gap in the engineering support required to solve future problems and to test new concepts for these complex combat systems. A permanent test site capability will be crucial by the late 1970's/1980's when the Navy's count of ships having digital combat systems will be increasing from 47 to more than 250. Required continuation engineering support for second generation combat systems has been provided in the past by the existing Mare Island Test Site utilizing site-owned equipment .

It is noted that the Justification Book submitted to Congress incorrectly states that the ICSTS will be located at San Diego. It is the Navy's intention to expand the Mare Island Test Site capability to serve as the Integrated Combat System Test Site (ICSTS) providing support for third generation, as well as second generation, combat systems. Funds requested in FY 1975 will permit retention of the DLGN 38 class combat system equipment now temporarily installed at the Mare Island Test Site. This will preclude scheduled termination of support for this class of ships which would be an unacceptable risk. The DLGN 38 class has the most complex combat system now being built. With the Navy's efforts to standardize combat system processors and equipment, and by the use of appropriate switching, other developing combat systems could be supported at the ICSTS in the future

by procuring only that additional equipment which is unique to the new combat system. In the immediate outyears, equipment will be installed for the DD–963 and the LHA classes prior to the loss of their dedicated test sites. Subsequently, it is planned to increase the ICSTS capability to support the PF and PHM classes, as well as new development combat systems and major modernizations of existing ones.

Chairman McClellan. Proceed.

Admiral Gaddis. This is a new program, which will provide a permanent test facility with the equipment and resident expertise for certification of integrated combat systems prior to shipboard installation and for conducting continuation engineering of combat systems after introduction to the Fleet. A second item with initial procurement funding in FY 1975 is the Ocean Surveillance Information System (OSIS) program. This program is designed to develop in an evolutionary manner. It will culminate in a world-wide all source, on-line, automated system to receive, process, and disseminate intelligence information on all targets of interest. This will meet a recognized operational requirement of Fleet Commanders-in-Chief to integrate enemy intelligence and own force operational information within a theater of operation. On hand equipment, augmented by components in this procurement line, plus enhanced communications and data processing capability otherwise provided, represent the sources of the various equipment assets for the program.

Shipboard Communications

The Shipboard Communications program request of $8.9 million will allow for the modernization of fleet communications. Specifically, the General Address Reading Device (GARD) program provides for automated screening of the multi-channel fleet broadcast and will reduce the communications workload, HF sounders will contribute to an increased reliability via the HF medium, and the Shipboard Items less than 500K provide for the procurement of various equipments to achieve a balanced communications capability and the procurement of UHF radios.

General Address Reading Device

Chairman McClellan. What improvements will the General Address Reading Device provide?

Admiral Gaddis. The General Address Reading Device, or GARD, will provide automatic control of all incoming messages on the multi-channel fleet broadcast so that only messages of interest to the ship will be printed for distribution. This will eliminate the current requirement of all ships printing all messages on the multi-channel fleet broadcast, whether or not of interest to the individual ships.

It should be highlighted that the GARD, with associated peripheral equipment, is the basic element of an afloat communications automation program of modular design tailored to individual ship needs depending on size and mission. This program, to be implemented next year, will, in conjunction with the FLTSATCOM and shore communication automation programs, significantly enhance our ability to effectively exercise command and control of our Naval Forces. The increased reliability of the FLTSATCOM media coupled with reductions in message handling times ashore and afloat through automation will provide this increased effectiveness.

Chairman McClellan. Continue.

VERDIN

The VERDIN (VLF/LF) communications system budgeted at $7.7 million represents the major portion of the $8.1 million requested to support the procurement of essential command and control communications equipment for the Fleet Ballistic Missile Submarine Forces.

Comparison of VERDIN and SANGUINE

Chairman McClellan. Is the VERDIN communication system related to the proposed SANGUINE system? Would the SANGUINE system replace the VERDIN system?

Admiral GADDIS. VERDIN is Very Low Frequency (VLF)/Low Frequency (LF) modulation and processing equipment which upgrades the VLF/LF single channel submarine broadcast to a multi-channel broadcast with [deleted] increased coverage. SANGUINE is an Extremely Low Frequency (ELF) system and accordingly, is limited to low data rates. The SANGUINE system will not replace the VLF/LF submarine broadcast because the SANGUINE system operates at low information rates and is unsuitable as the only means of submarine command and control. SANGUINE is necessary to free the submarines from the operating constraints imposed to receive by all other means. The SANGUINE data rate is adequate to send urgent or emergency messages and provide a survivable means during nuclear attack condition and thereafter. The VLF/LF and SANGUINE systems provide command and control communications to U.S. strategic nuclear forces for different circumstances.

Chairman MCCLELLAN. Continue.

Admiral GADDIS. This $8.1 million approximates the fiscal year 74 funding level of $8.0 million and provides for procurement of fifty VERDIN receiver terminals and five transmitters which will meet the requirements for all Polaris/Poseidon Submarines and FBM Tenders.

SATELLITE COMMUNICATIONS

The Satellite Communications program request of $46 million is $18 million above the fiscal year 1974 funding level. It represents a peak in the acquisition of terminals to coincide with the projected availability of satellites. The 1975 program includes $16.9 million to provide the Fleet Satellite Communications System terminals and associated equipment necessary to meet scheduled installation opportunities for selected surface ships and submarines at shipyards during a 12 month period. It also provides $16.6 million worth of Fleet Satellite Communications System shore terminal equipment needed to operate the links with ships, aircraft, and Marine Landing Forces of the Fleet.

FLEET SATELLITE COMMUNICATIONS SYSTEM

Chairman MCCLELLAN. What is the total program cost of the Fleet Satellite Communications System?

Admiral GADDIS. The projected cost-to-completion, FY 1972–FY 1980, is 822 million dollars.

Chairman MCCLELLAN. Continue.

Admiral GADDIS. The remaining $12.5 million is for earth terminals to operate in the Defense Satellite Communications System, primarily on critical links in the World-Wide Military Command Control System.

Of the $7.5 million requested for shore communications equipment, $1.2 million is for communications hardware support of the ASW Center Command Control System (ASWCCS) to connect ASW Force and Sector headquarters via communications links to the Fleet CINC's World-Wide Military Command and Control System (WWMCCS). The Electrical Power Program request of $1.5 million will provide both mobile diesel electric generators for emergency power and uninterruptable power systems at selected Naval Communications Stations. Funds amounting to $3.9 million are required to improve the capability, reliability and performance of Navy operated elements of the Defense Communications System.

CRYPTOGRAPHIC EQUIPMENT

The Cryptographic Equipment program of $23.6 million will provide equipment for cryptographic coverage of the Navy, Marine Corps and Coast Guard communications systems. The requirements for one new cryptographic equipment series, the KY–65/75 for secure voice, and increased requirements for KG–30 series equipment to support VERDIN and Satellite Communications account for the increase over FY 1974.

The Cryptologic Equipment program of $15.9 million is an increase of $5.8 million over fiscal year 1974 and will provide for the acquisition of cryptologic systems in support of National Intelligence Requirements included in the General Defense Intelligence program as well as Navy Tactical Warning Requirements. Three high priority requirements are funded in the increased program. First is the modernization of equipment employed in direct support of operational commanders; $3.8 million requested for AN/WLR–6 "E-To-N", AN/BRD–7 kits and

Signal Exploitation Spaces (SES) modernization supports this objective. $3.7 million requested for modifications to Automated Acquisition Systems (AN/FLR–15) and parameter encoders support the second objective which is to enhance the effectiveness and expand the coverage of the World-Wide Bullseye direction finding system. The Marshland and Streamliner programs requested at $4.8 million represent the third requirement which is the on-going program to modernize existing equipment in an effort to reduce manpower requirements.

Manpower Savings Through Automation

Chairman McClellan. Discuss how and in what numbers manpower will be replaced by modern communications equipment.

Admiral Gaddis. Project Marshland, requiring $2.9M for procurement in FY 75, will provide for an upgrade of radioprinter collection systems and automate the existing acquisition, collection, processing and reporting of HF radioprinter signals. Manpower savings of 216 billets will be realized in FY77—FY79 through a combination of automation and reduced maintenance requirements.

Project Streamliner, requiring $1.9M for procurement in FY 75, is a multi-phased/multi-year project designed to modernize cryptologic communications. The initial phase addresses the elimination of manual message handling and related message processing functions. Subsequent phases will interface mission operations with communications and provide computer-to-computer acknowledgments for data transmission. Programmed billet reductions for FY76–78 amount to 103 billets.

Chairman McClellan. Proceed.

Admiral Gaddis. Funds for Other Support Equipment amount to $29.6 million for fiscal year 1975. These provide for first destination transportation and for Spares and Repair Parts.

Budget Activity 3—Aviation Support Equipment

This activity funds the procurement of all air-delivered weapons, except guided missiles, required for naval forces and Marine Air Wings. It also includes air-launched anti-submarine warfare expendables such as sonobuoys, as well as general support equipment not directly associated with aircraft and missile systems.

The funds requested in fiscal year 1975 for Aviation Support Equipment total $337.7 million, $1 million below the fiscal year 1974 funding level.

Funds in the amount of $65.0 million are requested for procurement of sonobuoys. The fiscal year 1975 program continues procurement of all sonobuoy types included in the fiscal year 1974 program. Significant amounts include $24.0 million for 185 thousand passive omni-directional SSQ–41's, $24.1 million for 45 thousand 500 hundred directional passive SSQ–53's (DIFAR), $6.3 million for 3 thousand command-active SSQ–50's, (CASS) and $5.2 million for 15 thousand echo-ranging active SSQ–47's. All of these sonobuoys, except the SSQ–50, have better than 90% reliability in the Fleet. The SSQ–50 has an improved capability to localize targets. Reliability during the recent operational evaluation has been better than 80%. The initial production buy is planned in late FY 1974 with a follow-on buy in fiscal year 1975. The proposed fiscal year 1975 procurement of all buoys is well within the delivery capabilities of the producers involved, and will give us a slight improvement toward achieving our inventory objective of these important ASW sensors.

Achievement of Inventory Objectives

Chairman McClellan. What do you mean by "a slight improvement toward achieving our inventory objectives" of these important ASW Sensors?

Admiral Gaddis. The inventory objective for sonobuoys is predicated on a [deleted] day combat allowance plus an additional [deleted] day allowance for a [deleted.] While the ultimate goal is to remain as close to inventory objective as possible, this is seldom achieved due to economic as well as production constraints. With respect to the total population of all sonobuoys, delivery of the FY 1974 budgeted production will provide an overall readiness of about [deleted] while the completion of FY 1975 budgeted deliveries will cause our inventory level to grow to about [deleted.]

Chairman McClellan. Proceed.

Sonobuoys

Admiral Gaddis. Our FY–75 plans include the procurement of "deep" omnidirectional and "deep" DIFAR sonobuoys. These sonobuoys are derivatives of the basic SSQ–41 and SSQ–53. Additional cable is added to the sonobuoy to provide a much greater hydrophone depth setting. The additional depth is needed to provide increased detection capability in ocean areas where environmental conditions—thermal layers at medium depths—restrict the effectiveness of the normal, shallow depth hydrophones. The Navy has explored solutions to this problem extensively in R&D, and will be ready in fiscal year 1975 to proceed to procurement of production-size lots in order to certify the operational suitability of buoys fabricated under production line conditions.

Funding for sonobuoy support is excluded since this effort was determined by Congressional action in fiscal year 1974 to be more properly funded in the O&MN appropriation.

Air Munitions

For the fiscal year 1975 air munitions program, the Navy is requesting $197.1 million. $118.9 million, or 60% of this request, is for the procurement of three cluster bombs, ROCKEYE, APAM and special purpose FAE.

Rockeye, APAM, FAE Cluster Bombs

Chairman McClellan. Discuss the Rockeye, APAM and FAE cluster bombs.

Admiral Gaddis. The Rockeye weapon, Cluster Bomb MK 20, is an air-delivered free fall unguided weapon utilizing a "clam shell" dispenser MK 7 which opens in mid-flight dispensing 247 M118 Anti Tank/Anti Personnel Bombs. The MK 339 Mechanical Time Fuze opens the MK 7 dispenser at a selected time to deliver the M118 Bombs over a wide area. The planned procurement of this weapon in FY 1975 (16,800 units for $44.4M) will provide [deleted] of the end FY 1975 Inventory Objective for this weapon.

The APAM weapon, Anti Personnel-Anti Material CBU–59/B is a Cluster Bomb air delivered free fall unguided weapon also utilizing the MK 7 dispenser and MK 339 dispenser fuze. This weapon contains 717 target discriminating bomblets. Each bomblet discriminates between soft (Earth, Sand, etc.) and hard (Trucks, Tanks, etc.) targets. Upon impacting a soft target the bomblet pops up 3 to 10 feet and air bursts, thereby maximizing anti-personnel lethality. Upon impacting a hard target, instantaneous shaped charge detonation occurs maximizing hard target lethality. The planned procurement of this weapon (11,300 units for $68.3M) will provide [deleted] of the end FY 1975 Inventory Objective for this weapon.

The FAE, Fuel Air Explosive CBU 72/B is a Cluster Bomb air delivered free fall unguided weapon. This weapon is designed to be an effective blast weapon against protected or concealed troops, land mines, booby traps and light material targets. It is composed of a SUU 49B Dispenser containing 3 BLU 73/B bombs. The FMU 95/B Mechanical Time Fuze opens the dispenser at a selected time dispensing the BLU 73/B bombs in a pre-set stick deployment. The FMU 74/B contact fuze initiates the BLU 73/B bombs on contact dispensing an ethylene oxide cloud. A cloud detonator then initiates the ethylene oxide cloud for blast effect. This weapon is designed for carriage on fixed wing jet aircraft up to 450 knots. An earlier version provided carriage on helicopter and slow fixed wing reciprocating engine aircraft. The planned procurement of this weapon in FY 1975 (3500 units for $6.2M) will provide [deleted] of the end FY 1975 Inventory Objective.

Admiral Gaddis. These weapons are more effective, as well as more sophisticated, than the Southeast Asia mainstay, the 500 pound MK 82, and the Navy plans to upgrade its inventories with more of these newer, and now service approved, weapons.

Other bomb procurements include $800 thousand for Laser Guided Bomb (LGB) kits and $6.7 million for extended range WALLEYE weapons. The fiscal year 1975 LGB program will procure Air Force improved MK 82/84 LGB kits for operational tests of production units. The fiscal year 1975 WALLEYE program is for the cost of modifying 170 WALLEYE II bombs with extended range data link hardware.

In addition to the bomb procurements, $13.1 million is requested for ZUNI and 2.75 inch rockets and $13.1 million for procurement of machine gun ammunition for aircraft.

Ammunition Plants

Chairman McClellan. Are Navy bombs and rockets produced in Navy owned and operated plants or otherwise? Please discuss.

Admiral Gaddis. Navy bombs and rockets including MK 80 series bomb family (MK 81, 82, 83, 84), Rockeye, APAM, Fuel Air Explosive, 2.75" Rockets, and Zuni Rockets are explosively loaded and assembled from previously procured hardware/parts in Navy owned and Navy Operated (GOGO) Loading and Assembly Plant (LAP) facilities. The hardware/parts used in these operations are commercially procured from private industry.

Chairman McClellan. Proceed.

Admiral Gaddis. Other air launched ordnance items requested in FY 1975 are the practice bombs at $5.9 million, and cartridges and rocket activated devices at $16.6 million. $5.0 million is being requested for procurement of the Air Force developed LUU-2/B paraflare. This paraflare has been selected for tri-service used by the Department of Defense. Also, $12.9 million is included for airborne expendable countermeasures which are used to defend aircraft from enemy missiles.

Tactical Support Systems

The request for Other Support Equipment is $75.6 million. $17.2 milion is for the procurement of ASW tactical support equipment for advanced processing and integration of ASW sensor data in support of deployed ASW aircraft. Three shipboard tactical support systems are included for support of carrier based S-3A aircraft. Five sets of interface equipment are also included for integration of the S-3A data into shore based tactical support centers.

range support equipment

The Weapons Range Support Equipment request of $3.8 million is for additional threat platform simulators, scoring receivers, and communication/data equipment for the outer range of the Atlantic Fleet Weapons Range.

Threat Platform Simulators

Chairman McClellan. What are Threat Platform Simulators?

Admiral Gaddis. Threat Platform Simulators consist of four independently controllable transmitters capable of simulating electronic emissions from threat weapon systems such as land based, surface ship and airbone missile platforms attacking U.S. Navy units. The transmitters are interfaced with scoring receivers and data control equipment to provide an immediate evaluaion of the readiness and proficiency of the Navy Electronic Warfare operators while conducting training exercises at the Atlantic Fleet Weapons Range, Roosevelt Roads, Puerto Rico. The transmitters and other electronic equipment are installed in transportable vans which can operate at land sites and on surface vessels.

Chairman McClellan. Proceed.

Admiral Gaddis. $15.6 million is requested for aircraft launching and retrieving equipment, including $3.5 million for Marine Corps Short Airfield Tactical Support (SATS) equipment, $11.1 million for shipboard catapult, arresting gear, and visual landing aid equipment and $1.0 million for arresting gear at Naval Air Stations. The remaining funds requested for other support equipment provide for the procurement of numerous items including drone control, meteorological, photographic, survival equipment, and first destination transportation and spare parts support for all items in this budget activity.

Budget Activity 4—Ordnance Support Equipment

Procurement of all expendable ordnance used by Naval forces except for torpedoes, guided missiles, and air-launched munitions are budgeted in this activity. Included among these expendable ordnance items are ship gun ammunition and mines. This activity also provides support equipment for Surface Missile Systems, Fleet Ballistic Missile Submarines and Anti-Submarine Warfare programs. Also included in this activity are funds for production and logistic support materials such as manufacturing facilities, production equipment, training aids, and associated spares and repair parts .The fiscal year 1975 budget request of $304.6 million, represents an increase of $29.9 million over the fiscal year 1974

program. These increases are primarily in the Anti-Submarine Warfare Support Equipment and Fleet Ballistic Missile Submarines programs.

The budget request of $53.4 million for Ship Gun Ammunition in FY–75 represents a reduction of $11.8 million. Of the funds requested, $9.3 million is for three-inch ammunition, for small ships or close air defense. $41.9 million is for five-inch ammunition which provides the primary shore bombardment capability. $2.2 million is for 76MM ammunition, for use primarily against air targets.

Ammunition Manufacturers

Chairman McClellan. What type of facilities manufacture the Navy ship gun ammunition?

Admiral Gaddis. Metal parts for ship gun ammunition are produced in contractor owned and operated facilities such as Eastman Kodak, Lansdowne Steel, Norris Industries and American Manufacturing Company. Explosives are primarily procured from Army with small quantities of specialized types being produced in-house Navy. Explosive loading and assembly for ship gun ammunition is done in government owned and operated plants with the primary facilities being at NAD Crane, Indiana and NAD Hawthorne, Nevada.

Chairman McClellan. Continue.

Admiral Gaddis. Ship Gun Systems Equipment is requested at $3.4 million, which is for support of improvements to surface gun system fire control equipment. For example, funds are requested to improve the SPG–53 radar signal processing equipment on three destroyers.

Surface Missile Systems

The FY 1975 request of $45.6 million for Surface Missile Systems is comprised primarily of two programs, Surface Missile Systems Ordnance Alterations, $31.7 million and the initial procurement of 12 HARPOON Launching Systems for $6.2 million. This is in sharp contrast to the $99.3M approved in FY–74 for Surface Missile System equipment due to the completion of funding for the procurement of Improved Point Defense Missile Systems. The ordnance alterations funding in the FY–75 program completes the digital fire control improvements to our DDG ships and continues the Anti-Ship Missile Defense (ASMD) oriented update systems modernization for TERRIER Missile Frigates and TARTAR destroyers. Included in this program are various alterations to improve system reaction time in a cluttered as well as clear environment, to reduce vulnerability to electronic countermeasures, and to improve reliability, maintainability and availability. The $6.2 million for HARPOON will procure 11 Ship Command and Launch Systems for the DE–1052 Class ship and one Command and Launch System for maintenance training. The Ship Command and Launch System procurement includes the HARPOON Weapons Control Console and the Associated Weapons Control Indicator Panel. It also includes the procurement of the HARPOON Data Processor, a simple Casualty Panel, switchboard and ASROC Launcher modifications, Peculiar Support Equipment and Ordnance Publications.

Casualty Panel

Chairman McClellan. What is a simple Casualty Panel?

Admiral Gaddis. The Harpoon Casualty Panel is a small panel which is used to fire the Harpoon missile should the CIC/Weapon Control area be damaged from enemy action or if the Harpoon Data Processor is inoperative. The panel consists of a timer, a firing key, and interlock logic which allows the operator to make use of the self leveling feature of the Harpoon missile. The Casualty Panel will be located in the vicinity of the launcher and provides an emergency firing capability for the Harpoon weapons system.

Chairman McClellan. Continue.

Admiral Gaddis. This is the first year buy of a planned four year program to provide the Harpoon capability to the fleet. The Harpoon missile is currently on schedule for both development and funding with the first production buy of 150 missiles in the FY 1975 WPN budget request.

Other than $18.2 million included for Polaris/Poseidon support, most of the $107.4 million requested in FBM equipment is for the TRIDENT training program which was addressed in detail earlier.

All Digital Attack Center

Funding in the amount of $27.9 million is requested for ASW Support Equipment. This represents an increase of $11.8 million over fiscal year 1974 which is primarily associated with the All Digital Attack Center (ADAC), also designated FCS MK 117. ADAC will be installed on all 594/637 and 688 Class SSN's having an AN/BQQ–5 sonar system. Since a regular overhaul is required for its installation, the procurement phasing is similar to that of the AN/BQQ–5.

It is intended that all 594/637/688 Class submarines will ultimately be configured with the FCS MK 117 (ADAC) and the AN/BQQ–5 sonar system. Differences in procurement numbers and scheduling between the AN/BQQ–5 and ADAC result from starting development at different times and different production lead times. There has been some slippage in the ADAC development program. This slippage was reflected in the $11.6 million Congressional reduction applied to the FY 1974 budget request.

Other Ordnance Funding

Other Ordnance Support funding is requested at $66.9 million, a slight decrease from the current fiscal year funding level. The major elements of this request are Fleet Mine Support at $5.3 million for the procurement of material and services for the assembly of mines in stockpile.

Mine Assembly Procedures

Chairman McClellan. Explain why the mines in stockpile must be assembled at this time.

Admiral Gaddis. There is an acute shortage of mines to fulfill fleet requirements documented in prepared mining plans. As mine components become available from rework, mines are assembled and shipped to overseas sites as soon as possible. Any delay in this assembly denies the fleet a much needed mining capability.

Chairman McClellan. Proceed.

Admiral Gaddis. These materials and services include explosive and inert loading, operational testing and the procurement of mine components. $6.6 million is budgeted for Production Facilities and Equipment.

Spares and Repair Parts

Spares and Repair Parts are budgeted at $38.5 million of which $14.8 million is for initial spare parts to support new end items and $23.7 million for Replenishment Spares for the replacement of spares consumed by the Fleet.

Budget Activity 5

Civil Engineering Support Equipment

This activity funds the procurement of trucks, passenger carrying vehicles, general and special purpose automotive equipment, construction and weight handling equipment and other specialized types of equipment for the Navy general purpose forces. The other specialized equipment includes amphibious vehicles, combat construction support equipment, fleet moorings and mobile utility support equipment.

Purchase of Vehicles From Commercial Stocks

Chairman McClellan. How much of the request for equipment and vehicles can be purchased from commercial stocks, and how much must be designed and manufactured to specific military requirements? Can most of the items be procured through competitive bidding?

Admiral Gaddis. All of the equipment and vehicles can be purchased from commercial stocks, only 5% of the equipment must be designed to military specifications. All of the required items will be obtained through competitive bidding.

Chairman McClellan. Proceed.

Admiral Gaddis. The fiscal year 1975 request of $78.6 million for Civil Engineering Support Equipment is $18.0 million more than fiscal year 1974 due primarily to an increased responsibility for pollution control equipment. A change

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in organizational responsibility for pollution control equipment resulting in a transfer of funding requirements from Budget Activity 6, Supply Support Equipment, to this Budget Activity accounts for $5.7 million of the increase.

Vehicle Improvement

Included in the fiscal year 1975 funding request is $49.8 million to finance the first year of an extended program directed at improving the overall material condition of the total Navy vehicle and specialized equipment inventory. This represents the first 10 items in the P-1 shopping list budget exhibit. The program is comprised of three interdependent components: First, an average 10% reduction in the inventory in use by the shore establishment which will be completed by 30 June 1974; second, the discount of the existing life expectancy tables for the equipments involved by 15%; and third, a funding program for procurement of replacement vehicles which when coupled with the above will result in a reduction in the amount of vehicles retained in inventory in an overage status. The 30 June 1973 total inventory for these items approximates 74,000 units with a dollar value of approximately $713 million; the inventory level at the end of the Fiscal Year 1975 funding delivery period is projected at 68,000 with an estimated dollar value of $649 million. For this same time frame, the number of items of equipment retained in an overage status is estimated to decline from approximately 30,000 to 27,000 units. It is planned that increased funding over prior year levels will result in the attainment of an optimum vehicle posture by FY 1981. This phased approach will insure that block obsolescense does not become a problem in future year replacement programs.

Pollution Control Equipment

The request for pollution control equipment under this budget activity totals $7.5 million and is a continuation of the FY 1974 program funded under Budget Activity 6, Supply Support Equipment. The Program consists primarily of oil spill cleanup equipment.

Oil Containment Equipment

Chairman McClellan. Describe some of the oil spill cleanup equipment.

Admiral Gaddis. The oil spill cleanup equipment includes utility boats for fast deployment of oil containment "booms", floating skimmers to remove the contained oil and equipment for cleaning booms after usage.

The booms are floating fences, generally made of plastic or neoprene, used to contain oil spills. The skimmers are small craft equipped to remove oil from the surface of the water, with as little entrained water as possible. The boom cleaners are devices to clean oil, and debris, from booms before storage.

Chairman McClellan. Proceed.

Admiral Gaddis. There are also some one time expenditures for equipment to correct urgent air and water pollution problems caused by heating and power plants as well as solid waste collection and disposal systems. This is the third year of a time phased effort to initially outfit Navy ports with oil spill clean up equipment. Funding through FY 1975 will provide 30% of the total requirement, to be located primarily at Continental U.S. fleet impact and environmentally sensitive areas.

MUSE Program

The MUSE Program has grown from its inception as a pool of mobile power units providing emergency support into a $63M inventory of equipment directly serving Cold Iron and Forward Deployment projects.

Chairman McClellan. What do you mean by MUSE? Describe the program.

Admiral Gaddis. MUSE is the acronym for Mobile Utilities Support Equipment, a Navy program established to provide specialized mobile/easily transportable utility modules for interim support of Navy utility systems whenever there are equipment failures, catastrophies, or plant maintenance/overhauls; test of Ships Systems before sea trials; expeditionary Military Operations; and unforeseen requirements resulting from emergencies/changes in strategic deployment. Mobile Equipment used in this program consists of electric power plants, steam boilers, electric substations/transformers, water distillation plants, air compressors, and industrial type air conditioners. MUSE is now being used in a

significant amount as an interim measure to provide Cold Iron Support for ships berthed at piers which are not equipped with permanent utility facilities. In this application, MUSE permits ships to shut down or reduce in port operations affording improved conditions and time for plant maintenance and improved liberty for engineering ratings. While not as economical as conventional shore power, MUSE is normally more economical than shipboard operations.

Chairman McClellan. Continue.

Admiral Gaddis. The majority of our requirements in the past have been for break-downs, contingencies, peak-sharing, etc. at above activities. However, in recent years the greater priority on Cold Iron (the employment of generators, transformers, and boilers located in direct support to ships) has increased requirements damatically. With reduced steaming hours due to the energy shortage, greater demands are placed upon the MUSE Program.

Fleet Steaming Hours

Chairman McClellan. With respect to reduced steaming hours, provide statistical data which shows the estimated total steaming hours at the time of the FY 1974 budget submission, the latest FY 1974 figures, and the FY 1975 estimate.

Admiral Gaddis. Yes, sir, I'll be happy to provide that information.

[The information follows:]

Steaming hours—Active Fleet

Fiscal year 1973: Actual	1,542,338
Fiscal year 1974:	
Congressional	1,444,354
Actual to date	1,196,736
Fiscal year 1975: Congressional	1,216,181

Chairman McClellan. Proceed.

Admiral Gaddis. Fully loaded MUSE plants provide greater energy and manpower efficiency than partially loaded shipboard plants. At the same time ships readiness is improved by reducing the frequency of on-board plant overhauls and improve liberty for ship personnel in the engineering ratings. The request of $3.7 million will provide five 750 KW and two 2000 KW Diesel Generators, nineteen 2500 KVA substations and eight 20,000 lb/hr Steam Plants for replacement of overage and worn out units.

Budget Activity 6—Supply Support Equipment

This budget activity finances the procurement of forklift trucks and other materials handling equipment used at Navy installations and aboard ships, automated materials handling systems, investment type support equipment, a shipboard microfilm system, and automatic alarms and controls to provide protection against polluting oil spills at shoreside transfer and storage facilities.

The funds requested for fiscal year 1975 total $13.8 million, an increase of $1.2 million over the fiscal year 1974 funding level. The 1975 funding level reflects increases of $4.4 million for materials handling equipment, $1.2 for a microfilm system, and $.4 million for the Military Assistance Service Funded program. These increases are partially offset by a transfer of certain pollution control equipment to Budget Activity 5, Civil Engineering Support Equipment.

Material Handling Equipment

The FY 1975 funding request of $9.2 million for the materials handling program, included in the first two items of the budget activity, represents the first increment of a phased plan to replace excessive numbers of overage forklift and other materials handling vehicles. Replacement of these vehicles will facilitate a reduction in total inventory as newer and more efficient replacement equipment is introduced into the inventory. Due to our inability to replace aging equipment on a phased basis, consistent with it's economic life, inventory has had to be maintained at the current excessive levels to insure that an adequate number of operable vehicles are available to perform required workload. Under the new phased plan initiated in this budget, it is estimated that four new vehicles will replace five overage vehicles currently carried in inventory. Procurement of new equipment under this plan will thus result in reductions of exces-

sive overage equipment, reduce downtime, provide cost avoidances in annual repair and maintenance expenses, and increase efficiency of materials handling operations. Achievement of this objective in other than a phased program would produce block obsolescence as well as a prohibitively large one year investment.

Microfilm System

Also included in this budget activity is $1.2 million to finance a microfilm system which will provide viewers and viewers/printers for use aboard ships to produce technical data and manuals from a 4x6 inch microfiche (film). The estimated total cost of this system is $3.9 million.

Microfilm Installations

Chairman McClellan. You say the total cost of the microfilm system will be $3.9 million. How many ships and shore installations will this accommodate?

Admiral Gaddis. The microfiche readers and reader/printers being budgeted for here will equip 615 ships (of which 558 are active Navy Regular and Reserve, and 57 are operated by the Military Sealift Command), 268 operating forces commands afloat (commanders of squadrons, divisions, and groups), and 656 operating commands ashore, for a total of 1,539 operating forces commands. In addition, they will equip 1,025 support-type activities of the shore establishment in connection with communications, tactical (COMTAC), and intelligence publications. The system will serve, also, a number of support-type activities of the shore establishment in connection with technical publications of three systems commands. These activities, however, will procure their own equipment from funds normally provided to them.

Chairman McClellan. Proceed.

Admiral Gaddis. The system will replace distribution of material in hard copy format, eliminate printed page change effort by end user, and reduce production/mailing costs and shipboard storage space requirements. Eventual savings to the Navy over the cost of current operations are projected at 45% of production cost, 50% of mailing cost, and 90% of storage space.

Budget Activity 7

Personal and Command Support Equipment

This activity finances the procurement of training aids and devices, scientific and technical equipment, industrial shop equipment, data processing equipment and other general support equipment for headquarters operations and cognizant field activities not otherwise provided for within the appropriation structure. The operating forces and shore activities of fleet commands are included.

A total of $91.9 million is requested in fiscal year 1975. This is an increase of $26.1 million over the fiscal year 1974 program.

Increase Over Fiscal Year 1974 Request

Chairman McClellan. You show a 40% increase over FY 1974 for personnel and command support equipment. What is the reason for the large increase? Can any of the increase be attributed to the All-Volunteer Force?

Admiral Gaddis. None of the $26.1 million increase in Personnel and Command Support Equipment is associated with the All-Volunteer Force Mister Chairman. Rather, it relates primarily to increased requirements for shorebased, simulated training devices and training support ($+19.3M). Approximately 43% of this increase is in support of surface ship warfare training while the remaining 57% is in support of subsurface warfare training. In general, training devices provide operator and/or team training capabilities for specific functions on the ship. Improved fleet readiness and crew proficiency can be achieved through simulator usage. The continuing decline in the availability of operational units to provide necessary support services for at sea training operations makes greater utilization of shorebased simulators essential. The Computer Acquisition Program reflects a $5.5 million increase. Generally, the fiscal 1975 program is a continuation of the programs commenced in fiscal 1974. The exceptions are a computer system to assist in logistics support management for the Trident submarine during its life cycle, and a computer for the newly consolidated Joint

Inteligence Center in Hawaii. The Commander in Chief, Pacific, has consolidated unified and service intelligence components on the island of Oahu, to eliminate overlapping functions. This jointly-manned facility will produce better intelligence with fewer people. Finally, there is an increase of $2.2 million for procurement of equipment in support of Naval Intelligence, most of which is associated with Project Prairie Schooner.

Chairman McCLELLAN. Proceed.

TRAINING DEVICES

Admiral GADDIS. $33.8 million is requested for procurement of training devices and general purpose support equipment to provide shorebased individual and/or team training vital to maintenance of active fleet readiness. The application of computer technology utilizing techniques that place the trainees in an apparent at sea operational environment, without danger to equipment or personnel, is the preferred method of training, and additionally saves fuel. Unforeseen operational difficulties can be programmed into the courses so trainees can learn through trial and error and be experienced in different emergency situations before actually going to sea. $29.8 million of the funds requested in fiscal 1975 will provide this type training for surface ship ASW operations, submarine operation control under stress and casualty conditions, submarine ASW technological improvements incorporated into the new development SSN 688 Class submarine (MK–48 Torpedo, MK–113–10 Fire Control System, and BQQ–5 Sonar) require an extensive update of this device. The funds included in this budget will: (1) replace the centralized computer complex and imput-output system to permit expanded simulation capability which will present realistic problems to be solved in employing the MK–48 torpedo weapon system; (2) integrate the procedural trainer (MK–113–10 UFCS); (3) integrate the BQS–13 (MPS) sonar and provide interface for the BQQ–5 sonar trainer; and (4) revise the ocean model to reflect latest available sound propagation characteristics including own ship and target parameters.

SUBMARINE COMBAT SYSTEM TRAINER

$5.9 million is included for a new submarine combat system trainer to be located at Norfolk, Va. This device is comparable to one attack center of the Device located at New London.

TRAINER INSTALLATIONS

Chairman McCLELLAN. Is there a comparable submarine combat systems trainer on the West Coast?

Admiral GADDIS. The Device 21A40, being procured with fiscal year 1973 funds ($5.0M), will provide a similar trainer for the Naval Submarine Training Center Pacific Detachment in San Diego, California and will support the training requirements for an average of 15 submarine crews homeported there. The Naval Submarine Training Center Pacific, Pearl Harbor, has a Device 21A38 Submarine Attack Center which provides training similar to the Device 21A41 being requested for submarine training in Norfolk in 1975.

Chairman McCLELLAN. Proceed.

Admiral GADDIS. $1.2 million is included for a Mine Warfare Trainer Device that will provide training in minefield planning and counter-measures including doctrine, procedures and tactics. This device will enhance instruction in the effects of the environment on mine warfare and will take into account tides, currents, depth, temperatures, and wave/swell data as well as ship's magnetic, acoustic and pressure signatures at various speeds. It will be located at Charlestown, South Carolina.

$6.4 million is included for a 1200 PSI Propulsion Control Trainer for the Naval Destroyer School, Newport, R.I. This will be a full scale operational mockup of equipment in the engine, fire, auxiliary, and electrical control rooms of a 1200 PSI ship. This simulator will provide effective training in the 1200 PSI boiler start operation at any stage; will operate slower, and faster than real time, will freeze and restart operation at any point; and will allow introduction of malfunctions with complete safety procedures. It promises to provide training without impacting on the environment or the energy shortage.

Ship Simulation Complexes for Reserves

The budget request includes $1.5 million to finance the second increment of a program to improve readiness training for our Naval Surface Reserve. Of the $1.5 million requested in fiscal year 1975, $1.3 million is to provide five integrated ship simulation complexes, termed Ship Operational Trainers, for team training in bridge, CIC, damage control, engineering and communications skills. The purpose of this new training concept is to provide fully trained teams for augmentation of less sophisticated ship types in any national emergency.

Intelligence Support Equipment

$14.1 million is requested for Intelligence support equipment as compared to $11.9 million provided in fiscal 1974. The greatest portion of these funds, $10.9 million, is for equipment utilized in the undersea warfare collection effort. Information is collected by operational commanders using a wide variety of complex acoustic, electronic, and optical sensors procured with these funds. The remainder of $3.2 million is primarily for laboratory equipment utilized in processing and analyzing collected data. Counterintelligence and criminal investigative support equipment is also included.

Medical Equipment

$9.2 million is for the acquisition of medical equipment by the Bureau of Medicine and Surgery to support the 38 Naval hospitals and medical centers which act as the nucleus for complete support of more than 120 Naval dispensaries and medical clinics. In addition, 24 other activities such as dental clinics, environmental preventive medicine units, disease vector control units, and field offices are supported by this budget in the continued effort to modernize naval medicine.

Oceanographic Support

$4.4 million is requested for Oceanographic Support equipment. These funds will provide for procurement of scientific, technical, and related undersea survey equipment used in the collection, processing, analysis, and publication of acoustical, geophysical, bathymetric, and navigational data through coastal and deep ocean surveys. These surveys provide the data with which our undersea craft can precisely navigate, and collect operationally valuable data.

Computer Acquisition

$18.3 million is requested for the Computer Acquisition program as compared to $12.8 million provided in fiscal 1974. Significant procurements planned in this budget include $2.8 million for procurement of computers to support the standard shipyard management information system. It is estimated that the procurement will result in a savings of $6 million in lease costs over the life of the system. This procurement added to those funded in fiscal 1974 completes the requirement for the eight shipyards.

Computer Hardware

$2.2 million of computer hardware is included to assist in logistic support management for the TRIDENT submarine during its life cycle. $2.8 million is included for a new computer for the consolidated Joint Intelligence Center in Hawaii.

Joint Intelligence Center Funding

Chairman McClellan. Do you know how much the other Services are requesting for computers in the consolidated joint intelligence center in Hawaii?

Admiral Gaddis. None. Navy is the executive agent in the Pacific and, as such, has the funding responsibility for all CINCPAC (Commander in Chief, Pacific) operations.

Chairman McClellan. Proceed.

Admiral Gaddis. The Commander in Chief, Pacific, is consolidating unified and service intelligence components on the island of Oahu to eliminate overlapping functions, $3.5 million is included for the Fleet Numerical Weather Central, Monterey, Calif., in support of the Satellite Data Processing Center.

WORLD WIDE MILITARY COMMAND AND CONTROL SYSTEM

The most significant portion of this years budget request for computer acquisition is $6.2 million included for the phased optimization of the Worldwide Military Command and Control System (WWMCCS). These funds in addition to the funds requested in previous years will complete the initial implementation of the Navy's portion, which is eight out of a total of thirty-five computer systems worldwide. These funds will ensure adequate capacity not only for the JCS standard software programs such as the Joint Operation Planning System (JOPS) and Force Status Information System (FORSTAT), but also for Navy standard software currently being developed under the Navy WWMCCS software standardization plan for all Navy WWMCCS users. By definition, the primary function of the WWMCCS is to support the National Command Authority (NCA). The secondary function is to support the command and control system and WWMCCS related mission of the respective commanders. In addition to supporting NCA information requirements, the Navy WWMCCS computers will also support unique Navy Command Control functions such as:

1. Navy Status of Forces.
    a. Movement Reporting.
    b. Casualty Reporting.
    c. Employment Schedules.
2. Ocean Surveillance.
3. ASW Centers Command Control System.
4. Unit Identification Application.

The remaining $10.6 million provides for procurement of technical and general support equipment not otherwise provided for within the appropriation structure for such activities as the Bureau of Naval Personnel, the Naval Observatory, the Naval Security Group, the Naval Telecommunications Command, and the Operating Forces under specified Fleet commands.

Mr. Chairman, that completes my prepared statement. I am ready to respond to any question you, or members of the Committee may have.

TRIDENT PROGRAM SUPPORT

Chairman MCCLELLAN. Now, Admiral Gaddis, you may proceed to highlight your statement.

Admiral GADDIS. The "Other Procurement, Navy" appropriation is essentially the same in program content and structure as presented last year. There are no major new programs requested in the fiscal year 1975 budget request of $1,685,500,000. Approximately half of the $178.9 million increase over fiscal year 1974 program of $1,505,600,000 is related to increased training and support equipment for the Trident program. A combined total of $118.7 million is requested to procure training and other support equipment for the Trident system. This compares with $28 million appropriated in fiscal year 1974. The lead ship, for which funds were provided in the fiscal year 1974 SCN appropriation, is scheduled for delivery in fiscal year 1978. Milcon and WPN funds, also appropriated in fiscal year 1974, allow the start of construction at the Trident support site at Bangor, Wash. and provides start-up costs for the strategic weapons facility, Pacific, which will be located at the site. $110.5 million of the fiscal year 1975 request for OPN funds is for the procurement of shipboard equipments peculiar to the operation of the Trident submarine and procurement of weapon system equipment for the Trident missile. This equipment will be used for training at the Trident training facility, located at the Trident support site. The training facility is scheduled to receive its first class in January 1977, so there is an intense amount of work necessary to prepare this training facility.

Shore support to the Trident system with special industrial materials handling equipments for the strategic weapons facility, and inertial instruments needed to provide back-up support for strategic weapons system navigation equipments represent $6.0 million of the request. The remaining $2.2 million is for a computer which is required to aid in logistics support.

COSTS OF MAJOR PROGRAMS

Other major programs in the fiscal year 1975 budget include $250 million for munitions, $167 million for shop reactor plant equipment including nuclear cores for submarines, surface ships and carriers, $84 million for spares and repair parts, $78 million for the undersea surveillance program. This is the CAESAR program which maintains our surveillance throughout the oceans of the world. $74 million for continuation of the backfit of the AN/BQQ–5 sonar and all digital attack center on nuclear submarines. This is a significant development in the all-purpose sonar for nuclear submarines. It is an expansion of the sonars that we have proven out in the past few years and will, in order of magnitude, increase their ability to defeat the Russian submarines, to track, to maintain contact with and to outmaneuver them.

TACTICAL DATA SYSTEM

$25 million is for a major upgrade of the Naval tactical data systems. As we have reported in the past, we were planning the development of what we call phase 4 of the Navy tactical data system. We are completely tested out on this system now and it has been approved for service use. The phase 4 increases the capability of this system by an order of magnitude to handle data, it makes this system completely compatible with the marine tactical data system, the air tactical data system and with tactical data systems installed in all NATO navies, in ships of the same degree of sophistication.

SATELLITE COMMUNICATIONS

$46 million is for ship and shore satellite communications. This breaks down into two very important segments. Associated is the need to lease a gap filler satellite in O. & M.N. to maintain satellite communications to our command ships throughout the world during the period from the demise of our prior satellites which were more or less R. & D. test satellites until we have in orbit a full four satellite system for support of satellite communications worldwide for all Navy ships and commands.

In this appropriation, then, are the shore terminals which control secure communications through these satellites, be it such places as Washington, Honolulu, Naples, and so forth.

SANGUINE SYSTEM

Senator YOUNG. May I ask a question at that point. How will the Sanguine program fit into this?

Admiral GADDIS. Sanguine is a completely different program, Senator Young, it provides extremely low frequency, secure communications for strategic purposes. This is the object, strategic command control. The satellite system is ship to ship, ship to shore and to aircraft worldwide. It can be used by submarines that have an antenna that breaks the surface. Satellite communications can not be used submerged at this stage of development.

Senator YOUNG. To some extent they both serve the same purpose, don't they?

Admiral GADDIS. Essentially a command communication purpose, yes. But the essential purpose of Sanguine is control of strategic submarines worldwide and reliable communication while submerged.

Senator YOUNG. Do we have a Sanguine appropriation in the Navy?

Admiral GADDIS. No, that is handled in the research and development appropriation and Mr. Potter will be up separately to discuss that program.

Senator YOUNG. There is some trouble with that, I guess.

Admiral GADDIS. The only trouble is of understanding. Obviously it has its temporary environmental effects during construction. I think you will find when you talk to Mr. Potter that the program includes environmental research which will insure Sanguine is compatible and more acceptable politically.

Senator YOUNG. Thank you, Mr. Chairman.

Admiral GADDIS. The second element of the satellite communications is the provision of a now tested and approved satellite terminal for all major warships. These programs must be phased apace so that we have the capability to communicate when our new satellites are actually placed in stationary orbit about the mid-1977 time frame.

COSTS OF OTHER MAJOR PROGRAMS

$65 million is for continuation of our sonobuoys program for both training and for an inventory objective for war use. All of our operational sonobuoys are now completely tested and approved for service use. We are low on our inventory objective and we need to get on with this program. This is a slight increase over last year.

$32 million is for surface missiles systems fire control and launcher alterations. This is to improve their compatibility and feasibility of operation with the new missiles that are being developed.

$47 million is for vehicular equipment, including trucks, earthmoving equipment and so forth. I would request your assistance with this program. For many years we have been living off what we procured basically for use in Vietnam. Our vehicular fleet is getting old; it is getting extremely expensive to operate.

Chairman MCCLELLAN. Is this primarily for trucks?

Admiral GADDIS. Trucks and particularly construction equipment, earthmoving equipment, heavy duty equipment, rough terrain forklifts, these sorts of working vehicles. We need to replenish our fleet to make it effective.

SIMULATORS

Chairman MCCLELLAN. You want another $47 million for training equipment. What is that?

Admiral GADDIS. The $47 million for training equipment, you will note the words "including simulators." This is to improve our capability to do effective training without the expense of flying and steaming wherever possible.

In other words, this will provide sonar trainers. It will provide training in the maintenance of a 1,200 pound steam plant to be installed at Newport. There are trainers for air intercept work so that all of the basic training can be done on a trainer and we save fuel by not having to operate the aircraft and the ship for the preliminary phases of training. It is a very cost-conscious approach and we are going heavily into this area to try to reduce our dependence on fuel and of course this is a part of the major fuel conservation program.

I would only have a couple more points to add. We have a very important program in that we are starting this year the development of a backup replacement gas turbine program. All of the new ships coming in, the DD–963, the patrol frigate and PHM, which you will hear about in the shipbuilding appropriation, use gas turbines. These are similar to aircraft turbine engines and in fact will be maintained at the naval air rework facilities. They are the kind of engines that must be overhauled ashore. Therefore, we need a stock of replacement turbines to keep ships operational. We replace the turbine, we send it to the naval air rework facility, either at Alameda or North Island for overhaul and then replace it back in the ship. The first increment of the replacement turbine engines are in the funding request this year and will continue to be bought for the next 2 or 3 years to support gas turbines for the newer ships coming into our inventory.

That completes my statement.

Chairman MCCLELLAN. Senator Young?

Senator YOUNG. Thank you, Mr. Chairman, no questions.

Chairman MCCLELLAN. The fact that we are not asking very many questions does not indicate that we will not have questions. We are presented with this and it will take some staff study and conferences for us to develop the questions that we may need to have answered.

Admiral GADDIS. We will try to be timely and responsive in providing the answers.

JUSTIFICATION

Chairman MCCLELLAN. At this point in the record there will appear certain information from the justifications.

[The justification follows:]

Justification

DEPARTMENT OF DEFENSE - MILITARY

OTHER PROCUREMENT, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS) — 1975 FISCAL YEAR PROGRAM

IDENTIFICATION CODE 07-15-1810-0-1-051	BUDGET PLAN (AMOUNTS FOR PROCUREMENT ACTIONS PROGRAMED)			OBLIGATIONS		
	1973 ACT	1974 EST	1975 EST	1973 ACT	1974 EST	1975 EST
PROGRAM BY ACTIVITIES:						
DIRECT:						
1. SHIPS SUPPORT EQUIPMENT	.....	.....	340,000	.....	.....	310,400
2. COMMUNICATIONS AND ELECTRONICS EQUIPMENT	.....	.....	517,900	.....	.....	472,800
3. AVIATION SUPPORT EQUIPMENT	.....	.....	337,700	.....	.....	308,300
4. ORDNANCE SUPPORT EQUIPMENT	.....	.....	304,600	.....	.....	278,100
5. CIVIL ENGINEERING SUPPORT EQUIPMENT	.....	.....	78,600	.....	.....	71,800
6. SUPPLY SUPPORT EQUIPMENT	.....	.....	13,800	.....	.....	12,600
7. PERSONNEL AND COMMAND SUPPORT EQUIPMENT	.....	.....	91,900	.....	.....	83,900
TOTAL DIRECT	.....	.....	1,684,500	.....	.....	1,537,900
REIMBURSABLE (TOTAL)	.....	.....	110,000	.....	.....	98,637
10 TOTAL	.....	.....	1,794,500	.....	.....	1,636,537
FINANCING:						
RECEIPTS AND REIMBURSEMENTS FROM:						
11 FEDERAL FUNDS	.....	.....	-102,100	.....	.....	-102,100
13 TRUST FUNDS	.....	.....	-7,100	.....	.....	-7,100
14 NON-FEDERAL SOURCES	.....	.....	-800	.....	.....	-800
24 UNOBLIGATED BALANCE AVAILABLE, END OF YEAR						
FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	.....	157,963
BUDGET AUTHORITY	.....	.....	1,684,500	.....	.....	1,684,500

INTRODUCTORY STATEMENT
(In Thousands of Dollars)

	1973 Actual	1974 Estimate	1975 Estimate
Appropriation (Adjusted)	2,225,370	1,428,400	1,684,500
Total Direct Obligation	2,043,829	1,664,203	1,677,300
Total Direct Budget Plan	2,302,170	1,505,634	1,684,500

The Other Procurement, Navy (OPN) appropriation provides for the procurement of all major equipment except ships, aircraft, missiles, torpedoes, and other weapons. Large portions of the programs continue to be devoted to the procurement of shipboard equipment to maintain and provide modern weaponry to Fleet units. Also included is the procurement of all air and ship launched ammunition, the procurement of nuclear cores and components for refueling nuclear powered surface ships and submarines, and the procurement of vehicular and weapons handling equipment to support forces ashore and afloat.

The total direct budget plan for FY 1975 is $1,684,500 thousand, an increase of $178,866 thousand over the FY 1974 revised plan, which includes a supplemental request of $224,200 thousand. New obligational authority of $1,684,500 thousand is required to finance the planned FY 1975 program.

Significant features of the FY 1975 budget request are:

1. A procurement program of $166.9 million for reactor fuel and replacement components for nuclear submarines and surface ships.

2. A procurement program of $173.1 million for shipboard components, shipyard modernization and other equipment.

3. A communication and electronic equipment program of $517.9 million. This program includes $115.1 million for ship sonars, $116.1 million for other ASW electronic equipment, $70.5 million for communications equipment and $23.1 million for ship radar equipment. The remaining funds are required for aircraft, ship, shore and specialized electronics support equipment.

4. A procurement program of $337.7 million for aviation support equipment. This includes $65 million for sonobuoys, $197.1 million for bombs, rockets and other air launched ordnance, and $17.2 million for ASW Tactical Support Systems. In addition, $58.4 million is budgeted for a variety of supporting programs such as aircraft launching and retrieving equipment, weapons range equipment, photographic equipment, meteorological equipment and survival equipment.

5. A procurement program of $304.6 million for ship ordnance and supporting programs. Included is $84.9 million for TRIDENT Training Equipment plus $22.5 million for other FBM Support Equipment, $53.4 million for Ship Gun Ammunition, $45.6 million for surface missile systems ordnance alterations and equipment, and $27.9 million for ASW Support Equipment. The remaining funds ($70.3 million) are required for such programs as improvements to fire control systems, miscellaneous expendable material, production equipment and spare parts.

6. Procurement programs of $78.6 million for vehicular and construction equipment, $13.8 million for materials handling equipment and $91.9 million for Personnel and Command Support Equipment.

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	1973 Actual	1974 Estimate	1975 Estimate
Ships support equipment	567,663	335,734	340,000
Communications and electronics equipment	438,065	417,500	517,900
Aviation support equipment	581,845	338,700	337,700
Ordnance support equipment	600,169	274,700	304,600
Civil engineering support equipment	54,678	60,600	78,600
Supply support equipment	9,203	12,600	13,800
Personnel and command support equipment	50,547	65,800	91,900
TOTAL DIRECT PROGRAM	2,302,170	1,505,634	1,684,500
Reimbursable program	298,175	176,000	110,000
TOTAL PROGRAM REQUIREMENTS (Current)	2,600,345	1,681,634	1,794,500
Less: Portion of program to be obligated in subsequent fiscal years	406,580	171,941	157,963
Plus: Obligations incurred against prior year program funds	149,696	351,707	181,263
TOTAL OBLIGATIONS	2,343,461	1,861,400	1,817,800

BUDGET ACTIVITY 1: SHIPS SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN

(In Thousands)

	Budget Plan (Amounts for Procurement Actions Programmed)		
	1973 Actual	1974 Estimate	1975 Estimate
Shipboard Components	80,740	112,300	92,100
Reactor Plant Equipment	127,900	154,100	166,900
Other Support Equipment	359,023	69,334	81,000
TOTAL BUDGET PLAN	567,663	335,734	340,000

BUDGET ACTIVITY 2: COMMUNICATIONS AND ELECTRONIC EQUIPMENT
SUMMARY OF BUDGET PLAN

(In Thousands)

	Budget Plan (Amounts for Procurement Actions Programmed)		
	1973 Actual	1974 Estimate	1975 Estimate
Ship Radars	$35,269	$19,300	$23,100
Ship Sonars	58,400	79,800	115,100
ASW Electronics	98,700	92,100	116,100
Electronic Warfare Equipment	7,600	8,700	4,800
Reconnaissance Equipment	3,600	9,400	9,400
Submarine Surveillance Equipment	27,300	10,000	24,800
Other Ship Electronic Equipment	24,800	21,000	32,000
Training Equipment	17,500	9,400	7,800
Aircraft Support C&E Equipment	23,900	22,200	21,900
Other Shore Electronic Equipment	29,300	21,200	23,300
Shipboard Communications	5,100	9,000	8,900
Special Communications	7,900	8,000	8,100
Satellite Communications Equipment	23,500	27,900	46,000
Shore Communications Equipment	7,500	9,300	7,500
Cryptographic Equipment	10,700	20,700	23,600
Cryptologic Equipment	5,400	10,100	15,900
Other Support Equipment	51,600	39,400	29,600
TOTAL BUDGET PLAN	$438,065	$417,500	$517,900

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Budget Activity 3: Aviation Support Equipment

SUMMARY OF BUDGET PLAN

(In Thousands

	Budget Plan (Amounts for Procurement Actions Programmed)		
	1973 Actual	1974 Estimate	1975 Estimate
Sonobuoys	$55,398	$60,100	$65,000
Air Launched Ordnance and Support Equipment	417,390	179,000	197,100
Other Support Equipment	109,057	99,600	75,600
Total Budget Plan	$581,845	$338,700	$337,700

BUDGET ACTIVITY 4: ORDNANCE SUPPORT EQUIPMENT

SUMMARY OF BUDGET PLAN

(In Thousands)

	Budget Plan (Amount for procurement actions programmed)		
	1973 Actual	1974 Estimate	1975 Estimate
Ship Gun Ammunition	144,700	65,200	53,400
Ship Gun Systems Equipment	13,569	4,700	3,400
Surface Missile Systems Equipment	76,250	99,300	45,600
FBM Support Equipment	39,500	17,600	107,400
ASW Support Equipment	10,839	16,100	27,900
Other Ordnance Support	80,911	71,800	66,900
Total Budget Plan	365,769	274,700	304,600

BUDGET ACTIVITY 5: CIVIL ENGINEERING SUPPORT EQUIPMENT

SUMMARY OF BUDGET PLAN

(In Thousands)

	Budget Plan (Amount for procurement actions programmed)		
	1973 Actual	1974 Estimate	1975 Estimate
Civil Engineering Support Equipment	$54,678	$60,600	$78,600
Total Budget Plan	$54,678	$60,600	$78,600

BUDGET ACTIVITY 6: SUPPLY SUPPORT EQUIPMENT
SUMMARY OF BUDGET PLAN

(In Thousands)

	Budget Plan (Amounts for procurement actions programmed)		
	1973 Actual	1974 Estimate	1975 Estimate
Supply Support Equipment	$ 9,203	$ 12,600	$ 13,800
Total Budget Plan	$ 9,203	$ 12,600	$ 13,800

BUDGET ACTIVITY 7: PERSONNEL AND COMMAND SUPPORT EQUIPMENT

SUMMARY OF BUDGET PLAN

(In Thousands)

	(Amounts for procurement actions programmed)		
	1973 Actual	1974 Estimate	1975 Estimate
Personnel and Command Support Equip.	$50,547	$65,800	$91,900
Total Budget Plan	$50,547	$65,800	$91,900

STATEMENT OF VICE ADM. F. H. PRICE, JR., U.S. NAVY, DIRECTOR OF SHIP ACQUISITION AND IMPROVEMENT, OFFICE OF THE CHIEF OF NAVAL OPERATIONS

PROGRAM AND FINANCING

Chairman MCCLELLAN. The next appropriation to be considered will be that for "Shipbuilding and Conversion, Navy."

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

DEPARTMENT OF DEFENSE—MILITARY SHIPBUILDING AND CONVERSION, NAVY—PROGRAM AND FINANCING

[In thousands of dollars]

	Budget plan (amounts for procurement actions programed)			Obligations		
	1973 actual	1974 estimate	1975 estimate	1973 actual	1974 estimate	1975 estimate
Program by activities:						
Direct:						
1. Fleet ballistic missile ships	718,700	754,700	1,296,100	642,941	463,600	1,078,000
2. Other warships	1,678,400	2,402,400	1,346,800	1,222,560	2,561,100	1,920,800
3. Amphibious ships				134,326	80,100	6,400
4. Mine warfare and patrol ships	202,200	3,900	543,100	80,022	135,700	371,400
5. Auxiliaries and craft	363,100	307,100	376,600	211,464	764,000	443,200
Total direct	2,962,400	3,468,100	3,562,600	2,291,313	4,004,500	3,819,800
Reimbursable (total)	31,103	70,000	55,000	90,742	212,800	58,900
Total	2,993,503	3,538,100	3,617,600	2,382,055	4,217,300	3,878,700
Financing:						
Receipts and reimbursements from:						
Federal funds	−13,989	−20,000	−15,000	16,857	−20,000	−15,000
Trust funds	−22,714	−50,000	−40,000	−61,006	−50,000	−40,000
Nonfederal sources				2		
Unobligated balance available, start of year for completion of prior year budget plans				−2,556,792	−3,175,683	−2,496,483
Unobligated balance abailable, end of year for completion of prior year budget plans				3,175,683	2,496,483	2,235,383
Budget authority	2,956,800	3,468,100	3,562,600	2,956,800	3,468,100	3,562,600
Budget authority:						
Appropriation	2,970,600	3,468,100	3,562,600	2,970,600	3,468,100	3,562,600
Transferred to other accounts	−13,800			−13,800		
Appropriation (adjusted)	2,956,800	3,468,100	3,562,600	2,956,800	3,468,100	3,562,600
Relation of obligations to outlays:						
Obligations incurred, net				2,337,908	4,147,300	3,823,700
Obligated balance, start of year				4,008,741	4,365,002	6,493,302
Obligated balance, end of year				−4,365,002	−6,493,302	−7,872,002
Outlays				1,981,647	2,039,000	2,445,000

BIOGRAPHICAL SKETCH AND PREPARED STATEMENT

Chairman McCLELLAN. The principal witness for this appropriation will be Vice Adm. F. H. Price, Jr., Director of Ship Acquisition and Improvement. You may proceed, Admiral.

Admiral PRICE. I have a summary statement. My full statement was submitted earlier for the record and addresses in detail each of the fiscal year 1975 shipbuilding and conversion budget requests.

Chairman McCLELLAN. It will be placed in the record.

[The biographical sketch and statement follows:]

BIOGRAPHICAL SKETCH OF ADMIRAL PRICE

Frank Hoblitzell Price, Jr., was born in Van Lear, Kentucky on June 11, 1919. He attended the U.S. Naval Academy, Annapolis, Maryland, and was graduated and commissioned Ensign on February 7, 1941. He was appointed to the grade of Vice Admiral effective November 1, 1972.

Following graduation from the Naval Academy in 1941, he served in USS WALKE (DD 416) and USS O'BRIEN (DD 415). After instruction at the Naval Gun Factory, Washington, D.C., he served in USS SHUBRICK (DD 639), attended the Naval Postgraduate Ordinance Engineering Course, and in March 1946, joined the USS MISSOURI (BB 63).

He then served successive tours in the Bureau of Ordnance; as Commanding Officer, USS BEALE (DD 471); at the Naval Gun Factory, Washington; and under instruction at the National War College. After a two-year tour with the Military Assistance and Advisory Group, Spain, he served one year each as Commander Destroyer Division 362 and as Chief of Staff, Carrier Division 18. He served with the Operational Test and Evaluation Force, underwent instruction at the AEC's Division of Reactor Development and in September 1963 assumed command of USS LONG BEACH, the Navy's first nuclear-powered surface ship. From USS LONG BEACH he went to the Naval Material Command as Deputy Director, Surface Missile Systems; to command of Cruiser Destroyer Flotilla EIGHT and, in September 1969, became Deputy Commander, Naval Ordinance Systems Command. In April 1970 he assumed a position as head of the Ship Acquisitor and Improvement Division in the Office of the Chief of Naval Operations and on 1 May 1973 was designated Director, Ship Acquisition and Improvement.

Vice Admiral Price has been awarded the following medals and decorations: Legion of Merit; Commendation Medal (Air Force); American Service with Bronze "A" American Campaign; European-African-Middle Eastern Campaign, Asiatic-Pacific Campaign; World War II Victory; Navy Occupation Service, Europe Clasp; and National Defense Service with bronze star.

His official home address is Sarasota, Florida. Admiral Price is married to the former Jane Vaughan of Jenkins, Kentucky, and they have two children, Frank E. and Mary V. Price.

PREPARED STATEMENT

Admiral PRICE. Mr. Chairman and members of committee, I am Vice Admiral Frank H. Price, director of ship acquisition and improvement in the Office of the Chief of Naval Operations. I am appearing before this committee in support of the fiscal year 1975 budget request for the shipbuilding and conversion, Navy (SCN) approriation.

Secretary Warner and Admiral Zumwalt have already discussed with you the Navy's current posture relative to our most significant adversary, the Soviet Navy. The Chief of Naval Operations has also presented a net assessment of the two navies postulated future capabilities. He has demonstrated, clearly, that if our current programs are authorized, funded and executed in a timely manner, our position vis-a-vis the Soviet Navy will gradually improve over the next few years.

Today, I would like to present a brief overview of the Navy's fiscal year 1975 budget request and the thinking underlying our ship procurement programs. I will also touch upon some of the problems we are experiencing, and will continue to experience, in our contacts with the shipbuilding community.

BUDGET REQUEST

In the fiscal year 1975 SCN budget request, we are asking for authorization and funding for 30 new construction ships and four conversions, at an estimated cost of three billion, five hundred sixty-two point six million dollars in total obligational authority.

NEW CONSTRUCTION

Chairman MCCLELLAN. Provide for the record the number of new construction ships which were funded each fiscal year from 1964 through 1974.

Admiral PRICE. The information is contained in the following table:

Fiscal year:	*Number of ships funded* [1]	*Fiscal year:*	*Number of ships funded* [1]
1964	31	1970	14
1965	49	1971	15
1966	61	1972	16
1967	46	1973	10
1968	27	1974	14
1969	8		

[1] New construction only; conversions not included.

Chairman MCCLELLAN. Proceed.

Admiral PRICE. This breaks down to 36% for ship construction and conversion in the strategic area; 53% for new construction for sea control; and 6% for support ships. The remaining 5% falls into the "miscellaneous" category, for craft, pollution abatement, outfitting and post delivery, escalation on prior year programs, and military assistance programs funded in the SCN appropriation.

STRATEGIC PROGRAMS

Our strategic programs must, of necessity, consider the various alternatives that might result from the SAL II discussions, the actions of the Soviets and the inevitable aging of our current SSBN force. Trident is an extremely capable ship which provides a high degree of survivability with the growth potential for a number of weapons options. Fleet introduction in 1978 is timely from both the standpoint of providing SAL II options and the growing age of our present ships. Our oldest SSBN's, the George Washington and Ethan Allen classes, will begin reaching 20 years of age in 1980 and we must plan now for their orderly replacement. The remaining 31 ships will have been modernized for Poseidon and will be able, with minimum effort, to be fitted with the Trident I missile. However, these ships will begin reaching retirement age in the mid 1980's and a steady replacement program must be planned and executed.

TRIDENT

While one option would be to consider Trident as the replacement for the present SSBN force, its extensive capability may not be mandatory for the entire future SSBN fleet. Therefore, cost considerations make it prudent to provide a less capable and less expensive alternative if the result of SAL II and Soviet initiatives permit us this option. The definition of the optimum mix for the SSBN force cannot be made until these initiatives become better known. In the interim, we must begin now the design of viable options, such as the smaller, conceptual "SSBN–X" currently under way.

SSBN–X

Chairman MCCLELLAN. Is the SSBN–X similar to the NARWHAL to which the Secretary of Defense has referred?

Admiral PRICE. The NARWHAL to which the Secretary of Defense referred *is* the SSBN–X. Early references to the SSBN–X used the term "NARWHAL", since the nuclear propulsion plant already at sea in the attack submarine USS NARWHAL (SSN 671) is the type currently planned for the SSBN–X.

Chairman MCCLELLAN. Continue.

Admiral PRICE. In FY 1975, the strategic program includes two new construction Trident fleet ballistic missile submarines. The lead ship was funded in fiscal year 1974, and advance procurement money was provided for the first follow

ships. This year's request provides full funding for these first two follow ships plus additional advance procurement for the FY 1976 and 77 programs.

Trident Cost Comparisons

Chairman McClellan. What is the FY 1975 budget funding and delivery schedule for the ten Trident submarines? How does this differ from the FY 1974 schedule? If the current FY 1974 supplemental request of $24.8 million is not provided, how will this affect the FY 1975 program?

Admiral Price. A comparison of the FY 1974 and FY 1975 acquisition costs for the ten Trident submarines, as shown in the Trident submarine Congressional Data Sheets, are shown in Table 1 ($M).

Trident submarine delivery dates set forth in FY 1974 and revised for the FY 1975 program are as follows:

Submarine	Fiscal year 1974	Fiscal year 1975
1	12/77	12/77
2	12/78	12/78
3	4/79	6/79
4	8/79	12/79
5	12/79	6/80
6	4/80	12/80
7	8/80	6/81
8	12/80	12/81
9	4/81	6/82
10	8/81	12/82

The $24.8 million on Trident funds contained in the FY 1974 supplemental is required for advance procurement of long leadtime components necessary to permit timely procurement of the two submarines in the FY 1975 program. Should these funded be deferred to the FY 1975 budget, construction sequencing changes would have to be made to accommodate a less-than-optimum delivery of components, resulting in a probable delay in the planned delivery of these ships. If these funds were deferred to FY 76 or beyond, the two ships requested in FY 75 would be underfunded. This could jeopardize the ability of the Navy to award the secon of the two ships requested in the FY 75 program in that congressional policy requires full funding of the total estimated cost of ships to be available prior to contracting.

TABLE 1

	Fiscal year—							
	1973 and prior	1974	1975	1976	1977	1978	To complete	Total
SCN:								
1974	311.0	867.8	1,520.0	1,249.0	1,235.0	14.3	117.5	5,314.6
1975	311.0	652.6	1,166.8	1,059.3	1,003.0	987.3	584.3	5,764.3
R.D.T. & E., N.:								
1974	204.4	125.6	106.9	79.1	40.8	19.5	17.7	594.0
1975	204.4	126.3	107.2	79.3	41.0	19.6	17.4	595.2
Milcon:								
1974	13.0	129.1	151.7	152.6	84.4	10.0	2.5	543.3
1975	13.0	123.1	107.3	197.0	84.4	10.0	8.5	543.3
Total:								
1974	528.4	1,122.5	1,778.6	1,480.7	1,360.2	43.8	137.7	6,451.9
1975	528.4	902.0	1,381.3	1,335.6	1,128.4	1,016.9	610.2	6,902.8

Chairman McClellan. Proceed.

Admiral Price. At the request of the Navy, three Polaris-to-Poseidon SSBN conversions were deferred from fiscal year 1974 to the 1975 program. We are requesting the funding of these last three conversions in the current submission. Also included are funds for conversion of the last submarine tender to a Poseidon submarine support capability. With the possible exception of future Trident missile backfit into existing FBN submarines, these are the final conversions planned as SCN programs.

Polaris to Poseidon Conversions

Chairman McClellan. Am I correct that the FY 1975 request provides funds for the conversion of the final three of a total of 31 Polaris-to-Poseidon conversions?

Admiral Price. Yes, sir. The FY 1975 request provides funds for the last three SSBN POSEIDON conversions and for the conversion of the fourth submarine tender, USS HOLLAND (AS–32).

Submarine Tender

Chairman McClellan. How many submarine tenders are scheduled for conversion to a Poseidon support capability?

Admiral Price. A total of four submarine tenders are scheduled for conversion. Three have been authorized and funded in prior years, and the last tender to be converted is the USS HOLLAND (AS–32), which is budgeted for funding in FY 1975.

Chairman McClellan. Proceed.

Sea Control

Admiral Price. Our most critical ship replacement problem lies in our sea control forces. Over the past five years, we have reduced our carrier force levels from 23 to 15 ships, and this number will go lower.

Carrier Levels

Chairman McClellan. Did you not originally plan to reduce the carrier force in FY 1975 to 14 ships? If so, what caused the change in plan? What are future year plans as to the number of active carriers?

Admiral Price. Two years ago, in the face of increasing fiscal and manpower pressures, it was decided that the attack carrier force would have to be reduced. In order to support the five carrier forward deployment with fewer total carriers, it was also decided to homeport two carriers overseas—one at Yokosuka, Japan and one at Athens, Greece. With two ships homeported overseas, the five carrier forward deployment would be adequately supported on a continuous basis with a total of 12 carriers. For contingency operations of relatively short duration, the 12 carrier force could support more than five forward ships; and in wartime, of course, all available ships would be deployed. Accordingly, it was planned last year to reduce the carrier force from 15 at the end of fiscal year 1974, to 13 at the end of fiscal year 1975, and to 12 at the end of fiscal year 1976.

Now, however, in view of the difficulties encountered in completing the home port arrangements for a carrier in Greece and the need to retain the capability to deploy a carrier periodically in the Indian Ocean, we have decided to hold the carrier force level at 15 through fiscal year 1975, and then reducing to 13 in 1976, leveling out at 12 at the end of 1977.

Chairman McClellan. Continue.

Admiral Price. Again, it was necessary to retire our older, obsolescent ships to provide the necessary funds for force modernization. In a similar manner, we have reduced our surface combatant force from 265 to 160. Thus, we have a significant deficiency in both our sea based air support and surface escort capability.

High-Low Mix Concept

We have formulated a well structured program to rebuild our capability in these areas with adequate numbers of modern and effective ships through the high-low mix concept.

High or Low Mix

Chairman McClellan. What determines the category as to whether a ship is a high or low mix?

Admiral Price. In order to carry out its missions, the Navy must have sufficient numbers of ships. This requires, due to fiscal and other pressures, a balanced force with each ship designed to perform a particular task in the face of a particular level of threat. In high threat areas, such as the coastal areas of a hostile country, we must have ships of the very highest capabilities to operate and survive against maximum air, surface and subsurface forces. These are the so-called "high mix ships"—and their category is determined by their cost,

capability and the threat against which they must operate. Ships in this category include our large carriers and frigates, both conventionally and nuclear powered, the conventionally powered SPRUANCE, or DD 963, class destroyers; and the nuclear-powered LOS ANGELES class fast attack submarines.

In the remainder of the world's ocean areas where we have important missions, our primary task is keeping open the sea lines of communication to permit the unobstructed flow of vital materials and transit of forces to and from our allies or for unilateral U.S. action. In these areas we are generally confronted with a lesser degree of threat, but because of their worldwide scope, the Navy's requirement is for numbers of ships, to provide protection and coverage in quantity. We can use smaller and less complex, but still effective, ships for the open ocean sea control mission. They are also less expensive to build and comprise what we consider the "low" side of our balanced force mix.

Each ship of the force, whether high or low mix, contributes to this balance and allows the Navy to carry out its many missions in the most effective and economical manner in terms of acquisition costs, operating costs and manpower.

Chairman McCLELLAN. Continue.

Admiral PRICE. We are continuing to build high-mix ships in sufficient quantity to maintain the effectiveness of this segment of our fleet; however, our greatest numerical deficiency lies in the low-mix area where we must replace our open ocean escort forces to insure our ability to protect our sea lines of communication. We must, of necessity, give priority to this mission category while planning future programs which will provide for replacement of those of our large carriers and carrier-capable AAW surface combatants that will be reaching retirement age in the 1980's.

These programs encompass the future DG, DGN and CVX ships which will begin funding in the late 1970's—after we have met our low mix goals. Such orderly and planned shipbuilding programs are vital if we are to maintain a modern and balanced fleet capable of carrying out our world wide missions in all levels of threat.

Thus, in the sea control mission area, we are requesting new construction authorization of 11 high and 12 low-mix ships. On the high side, our request is for three additional fast attack submarines of the *Los Angeles*, or SSN–688 class; one nuclear powered frigate of the DLGN 38 class; and the final increment of seven "SPRUANCE" class destroyers. Also included is long lead funding for an additional nuclear frigate to be full-funded in FY 1976.

SSN 688 Class Submarines

Chairman McCLELLAN. If the request for three additional SSN 688 Class submarines is approved, what will the total number funded be, and how many are planned for future years?

Admiral PRICE. Approval of the FY 75 budget request for three SSN 688 Class submarines will bring the total number funded to 26. The current approved Five Year Defense Plan contains ten additional SSN 688 Class submarines in FY 76–79, plus long lead time funds in FY 79 for two submarines in FY 80.

Chairman McCLELLAN. Proceed.

Admiral PRICE. On the low cost cost side of the spectrum, our request is for authorization of the lead sea control ship, seven patrol frigates and four missile-equipped partrol hydrofoils. Although the requested funding for these ships amounts to only 19% of the total SCN budget this year, it represents the start of our effort to build the vitally needed numbers of ships to replace the world war II escorts which have been retired. The percentage of funds devoted to the low mix will increase over the next few budget years.

Sea Control Ship

Chairman McCLELLAN. Has the original design concept of the Sea Control Ship as to size and speed changed? If so, why, and what costs are involved?

Admiral PRICE. The SCS design concept has not changed, however the size has been increased (displacement and length). The speed has not changed. The lengthening of the ship design, and the concomitant increase in displacement, did increase costs and this increase is reflected in the cost estimates submitted to Conrgess. However, the current cost is still within the established design-to-cost goal of under $100 million per follow ship in FY 1973 dollars. Operational testing aboard USS GUAM, and on-going future aircraft studies, have led the Navy

to conclude that it is an effective tradeoff to lengthen the ship design to provide a growth margin to accommodate possible future aircraft at minimum expense within the cost goal.

Sea Control Ship Funding

Chairman McClellan. What funds have been appropriated and expended to date for the Sea Control Ship program?

Admiral Price. Thus far, the Sea Control Ship program has utilized RDT&E funds only. $17.5 million in R. & D. funds have been appropriated and of this amount $15.8 million have been expended as of 31 March 1974. As you known, the first SCN funding for the lead Sea Control Ship for advance procurement and detail design, $29.3 million, is contained in the fiscal year 1974 budget. However, these funds have been deferred pending completion of a study of the Sea Control Ship program by the House Appropriations Committee Surveys and Investigations Staff, which is scheduled for completion by 15 May 1974.

Chairman McClellan. Proceed.

Support Ships

Admiral Price. In the support ship category, we are requesting resumption of procurement of urgently required replacement destroyer tenders and have included one of these ships in this year's budget. We also request authorization for the first of two new classes of support ships, a fleet oiler and fleet tug. The tug is an adaptation of a successful commercial design, built at a relatively low cost compared to a ship designed to full navy standards. The first ATF's will be built for manning by MSC personnel.

Fleet Tugs

Chairman McClellan. What is an ATF? You say the first will be built for manning by MSC personnel. What do you mean by this, and how does this change the construction of the ship?

Admiral Price. An ATF is a Fleet Tug, designed to operate as a unit of the Navy's Mobile Logistic Support Force, with the primary mission of taking in tow ships of the fleet which are battle damaged or non-operational and to provide other fleet towing services. The FY 1975 ATF will also have a limited salvage capability, which includes the ability to support a transient salvage and diving detachment and its portable equipment. The first ships will be manned by Military Sealift Command civil service mariners in peacetime, but will be designed for conversion to military manning in time of war. The ships construction will be based upon existing commercially designed craft which are commonly used to tow and support offshore oil drilling platforms.

The ATF's will be built to commercial standards, and will be inspected and certified by commercial regulatory bodies. They will employ commercial hardware with modifications and additions where necessary to suit Fleet Tug service. The decision to man these ships with MSC crews alters the number and type of initially installed accommodations and changes the type of logistic support provided; however, since the ship is intended for military manning in time of war, there is little impact of the initial manning decision on the design of the hull, the machinery, and other mission essential equipments .

Chairman McClellan. Proceed.

Miscellaneous

Admiral Price. In the "miscellaneous" category, we have included the following items:

For service craft: 4 yard oil barges, one medium floating drydock and several landing craft for the south Vietnamese navy.

For pollution abatement craft: 26 additional waste offloading barges.

For military assistance ships: Two diesel-powered patrol gunboats, programmed to replace aging patrol craft of the south Vietnamese navy.

Chairman McClellan. Will the two diesel-powered patrol gunboats be Military Assistance Service funded?

Admiral Price. Yes, sir, they will.

Chairman McClellan. Proceed.

Admiral PRICE. Outfitting and post delivery funds are requested to provide for the initial outfitting of ships delivering during the fiscal year and for correction of post-trial deficiencies.

OUTFITTING AND POST DELIVERY FUNDING

Chairman MCCLELLAN. The P–1 exhibit does not break the Outfitting and Post Delivery funds down to specific ships. Will you provide such a breakdown for the record?

Admiral PRICE. The requested information is provided in the following table:

FISCAL YEAR 1975 BUDGET REQUEST

[Dollars in thousands]

Ship	Amount	Ship	Amount	Ship	Amount
Outfitting:					
CVAN 68	$300	SSN 683	$20	DD 965	$100
CVAN 69	2,400	SSN 685	120	DD 966	280
LHA 1	200	SSN 686	20	DD 967	280
LHA 2	850	SSN 687	380	DD 968	280
LHA 3	1,200	SSN 688	400	DD 969	280
LHA 4	900	SSN 689	400	DD 970	280
LHA 5	700	SSN 690	400	DD 972	620
DLG 13	100	SSN 691	900	DD 973	620
DLG 8	100	SSN 692	900	DD 974	620
DLG 11	600	SSN 693	900	DD 975	620
DLG 10	1,000	SSN 694	900	F–PG 1	700
DLGN 25	800	SSN 695	200	F–PG 2	700
DLGN 37	400	SSN 696	900	SSBN 616	227
DLGN 38	800	SSN 697	200	SSBN 617	227
DLGN 39	400	SSN 698	200	SSBN 619	227
DLGN 40	800	SSN 699	200	SSBN 623	433
DE 1092	20	AD 40	100	SSBN 620	558
DE 1093	50	AOR 7	550	SSBN 622	197
DE 1094	80	AS 39	370	SSBN 624	702
DE 1095	100	AS 40	100	SSBN 625	54
DE 1096	150	Craft	300	SSBN 626	266
DE 1097	200	DD 963	100	AS 32	109
SSN 682	10	DD 964	100	Transportation	1,000
Total					30,200
Post delivery:					
CVAN 68	6,000	DD 965	550	SSBN 619	793
DLG 10	2,900	DD 966	550	SSBN 620	793
DLG 11	2,700	SSN 683	1,100	SSBN 623	1,021
DLGN 37	7,000	SSN 685	1,200	SSBN 624	793
DD 963	550	SSN 686	1,100	Craft	300
DD 964	550	SSN 688	2,500		
Total					30,400

Chairman MCCLELLAN. Proceed.

Admiral PRICE. The request for funding of escalation on prior year programs is to restore to the budget funds deferred last year as "not required for obligation in fiscal year 1974." These contract escalation funds are required for obligation in FY 1975.

FUNDING FOR ESCALATION

Chairman MCCLELLAN. How much do you request for funding of escalation on prior year programs? Explain the request fully and state whether the escalation is due to inflation, design changes or other causes.

Admiral PRICE. We have requested $71.9 million to fund escalation on prior year programs. This amount was previously deleted from the FY 1974 budget request by the Congress as "not required for obligation in FY 1974." The entire amount is required for obligation in FY 1975 to pay for differences between predicted inflationary rates in shipbuilding labor and material costs, and those actually experienced over the fiscal year. These differences are solely inflationary and are not due to changes or other causes.

Chairman MCCLELLAN. Continue.

Fleet Modernization

Admiral Price. As I stated at the outset, our total request for fiscal year 1975 is for $3,562.6 million. This funding represents 12.3% of the Navy total request and continues to emphasize the importance we are placing on modernizing our fleet. We hope that with your assistance we will be able to continue this effort and rebuild a viable and effective naval force. With these programs we will improve our capabilities vis a vis the Soviets and fill the gaps created by retirement of the older ships in the same mission categories.

The strategic program will ensure the continued effectiveness and survivability of a credible, sea-based deterrent or second strike force. It also provides alternatives depending on the outcome of the SALT talks.

The Sea Control Program will provide mission-capable forces which can compete at all levels of threat, wherever required, and to insure our continued free use of the sea lines of communication.

The support ship program will provide a continued capability for our naval forces to operate for prolonged periods in all ocean areas, and to establish a mobile support base nucleus where required.

Management Tools

As management tools to achieve the level of naval ship construction we think can be maintained throughout the next few years, we have adopted concepts, now fully implemented, to control costs in SCN programs. The "high-low mix" prevents "goldplating" and ensures that we buy only the capabilities we need in each platform to provide a balanced force to carry out our required missions.

Goldplating

Chairman McClellan. What does the term "goldplating" mean to you?

Admiral Price. I interpret the term to mean that we have built more into a ship than is required by its Navy mission. If we built every aircraft carrier, for example, like CVN 70 which must operate in the highest of threat environments, that would be goldplating. We can get by with much smaller air capable ships in the middle and southern oceans, where the threat is less severe. This is the principle behind the Sea Control Ship program.

The same is true of the nuclear powered frigates and the SPRUANCE-class destroyers that will escort the carriers in the high threat areas—for their missions, they are not goldplated. If we tried to build all of our surface combatants like these ships, they would certainly be goldplated. This is one of the reasons we have developed the Parol Frigate as a low unit cost, but fully effective, ocean escort that we can afford in sufficient numbers for the demands of its lesser-threat mission.

Chairman McClellan. Proceed.

Design to Cost

Admiral Price. "Design-to-cost" establishes a unit cost goal based on the mission parameters of the particular ship, the numbers of ships needed, the total amount of money available to acquire them, and an effective baseline design. This sets a realistic control on each type of ship to ensure that program costs remain in bounds.

New Incentive Ships

Chairman McClellan. What ships have been "designed to cost?"

Admiral Price. Our three "new incentive" ships, the Sea Control Ship, the Patrol Frigate and the Patrol Hydrofoil are the Navy's current design-to-cost shipbuilding programs. In addition, all future ships now under development will have a "design-to-cost goal" established during the developmental process.

The design-to-cost concept requires that this initial cost goal be carefully set, based on thorough analysis and evaluation of the ship's intended mission, tasks and affordability. This goal provides a visible discipline during the design phase of the program to personnel involved in determining and evaluating operational requirements, and to others performing technical design functions. The framework of the design-to-cost process permits monitoring individual cost elements of

the design, with particular attention to high cost elements, and forces trade-offs in capabilities against costs when required.

Chairman McClellan. Proceed.

Admiral Price. I would like to state, at this point, that our new design-to-cost initiative in shipbuilding programs is working well. As an example, the first such program, the Patrol Frigate, is well under our stated cost goal of $50 million in FY 1973 dollars after over three years of formulation and design effort and having let the contract for the first, or lead, ship.

Patrol Frigate Program

We have had an increase in the PF program cost; however, the major portion was the result of changes in marketplace conditions (increased production lead times for equipment, lower shipyard productivity and increased economic inflation factors) which were encountered when we let the lead ship contract. Thus, out of the $238 million increase which we show this year in the total 49 ship follow-on program, only $19.6 million resulted from changes over which the Navy had control. The remainder results from fact of life economic conditions which we are now facing.

Efforts to Control Costs

One of the keys to the control of cost during an extended ship construction period is reduction of the number of engineering changes, either contractor or government initiated. If we can thoroughly define a ship and then hold to the initial design as firmly as possible, we can eliminate or at least minimize changes, and we will have taken a significant step toward eliminating or minimizing controllable cost growth during the conduct of a long-term shipbuilding program. Obviously, over a three to seven-year construction contract, changes will occur. However, if a ship is well-conceived and we rigidly control changes we will reduce controllable cost growth.

Engineering Change Orders

Chairman McClellan. For each major ship procured during the past four fiscal years, indicate how many engineering change orders occurred each year and who initiated the change. What specific action is the Navy taking, or has it taken, to reduce such change orders?

Admiral Price. The first part of the question requires a significant record search (which is in progress), and the requested data will be provided as soon as this can be accomplished.

The Navy is taking several actions to reduce contract modifications. There are two basic types of contract modification instruments available—unilateral and bilateral—and several sub types. Only the unilateral type is a change order. Bilateral types, which include unpriced supplemental agreements, maximum/minimum priced supplemental agreements and fully priced supplemental agreements are contract modifications. Contract modifications can be further classified as priced and unpriced. Change orders and unpriced supplemental agreements are issued unpriced while maximum/minimum, and fully priced, supplemental agreements are issued with a price. All of these can be collectively referred to as contract modifications but not necessarily as change orders.

One of the more persistent problems of contract modification control is the initial adequacy of ship specifications used in our construction contracts. Any significant omission or inconsistency, or an honest misinterpretation of a specification, can lead to a contract modification. We have initiated a Specification Improvement Program which includes formal training programs in specification writing, use of computers and a stepped up effort to revise outmoded specifications. We have also formed a Specification Review Board to approve all new and revised specifications, which supplements a formal review of ship specifications by the project manager and his participating managers prior to the award of a ship contract. All of these efforts are designed to head off the problems we might possibly find with ship specifications during the actual building of a ship.

However, our new procurement policy in some shipbuilding programs—where we are well into detail design and construction of a lead ship before going into full followship production—will do as much to eliminate ship specification cost problems as anything else we are doing in this field. By getting at least a year of actual building experience with the lead ship we should be able to eliminate most of the specification problems before they have any significant cost impact on the remainder of the program.

We have improved the policies and procedures to control changes. We now have a Configuration Management Program to retain tight control of the configuration of a ship from the moment the budget estimate is submitted. We identify this point as the "ship cost baseline," which means that we have described a ship that we believe we can build with the appropriation we have requested. From that point on, the detail design of the ship must remain within that ship cost baseline. Since some change reserves are included in our budget estimates, we have developed change control procedures to keep changes we do authorize within the cost envelope of the ship. Each project manager is chairman of his own Change Control Board. This board reviews carefully the necessity and cost effectiveness of any proposed change and tries to negotiate a firm price on those which we want to make. Engineering change proposals are required on each such change; these are contractor prepared documents which provide the technical information needed for our evaluation and the contractor's proposed price for the change.

Chairman McCLELLAN. Proceed.

Admiral PRICE. The factors I have just covered we consider as "controllable," and we do control them as closely as possible. More significant, however, are the program impacts over which the Navy has little or no control. One, of course, is economic inflation.

SHIPBUILDING PROBLEM AREAS

Another results from the increasing work load in our shipyards. The declining dollar values in world trade have made U.S. shipbuilders more competitive with those of the rest of the world, and U.S. shippers, and even some foreign companies, are now building in american yards rather than overseas. In addition, the considerable U.S. "maritime expansion program" has also impacted on the available ship construction capability. The Navy is thus put into competition for the available consruction capability, although we insure that our programs are feasible of accomplishment, the competition of commercial work has a real impact on overall costs.

U.S. SHIPYARD WORKLOADS

Chairman McCLELLAN. Will you discuss the current workload of the U.S. shipyards and the impact on the shipbuilding programs?

Admiral PRICE. The workload in U.S. shipyards is relatively heavy at the present time, and this situation should result in a healthier industry in general, since it should provide a broader industrial base upon which the Navy may plan to attain its shipbuilding goals. As a result of the greatly increased commercial and Maritime Administration shipbuilding programs, many shipyards are improving and/or enlarging their facilities and expanding their work forces. However, our shipbuilding programs have been impacted by the demand upon suppliers of components and material to the industry, who have developed a rather selective attitude. In short, it has become a "seller's market." Proper planning, taking cognizance of this material situation and reflecting longer intervals between award and delivery of the ships, should greatly alleviate this situation, although it obviously will take longer to obtain our ships.

Considering the facilities and manpower presently available, plus planned improvements and build-up, together with the above noted material situation, there are enough shipyards with adequate facilities available to construct/convert all Navy ships in the FY 1975 and later programs.

Finally, it must be noted that detailed and coordinated ship acquisition planning is a dynamic and continuous process that reacts to the demand rather than to the current and projected availability of resources. The shipbuilding industry is elastic; it can, and does, change to reflect the demands placed upon it, requiring that planning also be adjusted to meet changing conditions. This has occurred during the Korean Conflict build-up, the minimal annual programs that followed, the subsequent reacceleration, and on up to the currently increasing demands upon the industry. The Navy is confident that current and out-year programs are industrially feasible.

Chairman McCLELLAN. Proceed.

NUCLEAR CAPABLE YARDS

Admiral PRICE. An example of our current shipyard problems in this area is the situation existing in our nuclear powered ship construction programs. Only three commercial shipyards are qualified to construct nuclear powered ships—Newport News Shipbuilding and Drydock Company, Electric Boat Division of

General Dynamics and Litton's Shipbuilding Division in Pascagoula, Mississippi. The two primary yards, Newport News and Electric Boat, have recently expanded their workload significantly, with the greatest impact being at Newport News. As a result, Newport News, which is heavily committed to Navy work, has had to enlarge its work force leading to decreased productivity and slipped ship deliveries with attendant increases in costs. Newport News has recently received contracts for commercial liquified natural gas ships and is looking to expand its commercial work further. Newport News is also unable to hire additional people. Yet, Newport News' Navy workload alone resulted in the award of the last increment of SSN 688 class submarines to Electric Boat with a required two-year delivery extension. Litton, heavily committed to the DD 963 and LHA programs, is facing a similar workload situation.

Thus, our nuclear powered programs have to be formulated with consideration for the capacity in these yards. There are, however, other shipyards which can readily build conventionally powered ships, although a number of them are also becoming involved with commercial work. It is essential, therefore, that our current SCN programs be executed in a prompt, timely manner, without delays, in order that we can compete economically in the current shipbuilding environment.

Materials

Another major factor which leads to increased costs and to delays in shipbuilding deliveries is the increased demand on suppliers of material to the industry—we have seen a radical shift from a buyers' to a sellers' market in the past one-and-a-half to two years. In shipbuilding as well as other programs, the procurement function has been deprived of its purchasing power; the raw material and component manufacturers have become selective in their attitudes—with the result that prices and delivery times have gone up and more increases are expected. These are marketplace factors, separate from the normal economic inflation factors, that are difficult to predict when our budgets are formulated. They also lead to increased costs.

Shipbuilding Inflation Index

Chairman McClellan. Compare the inflation index for shipbuilding with other construction areas.

Admiral Price. The attached table compares the three separate inflationary indexes used for shipbuilding with five other discreet indexes. It should be noted that the "Ship Selling Price" index is used for inflating ship costs other than "Contract Escalation;" it is a gross indicator of the total price change. Contract Escalation is determined using Bureau of Labor Statistics (BLS) shipbuilding labor and material indexes. BLS index growth rate has been 7% in the last three months, representing an annual rate of change of plus 13% for the past year.

Chairman McClellan. Proceed.

TABLE I.—YEARLY PERCENT INCREASE, DECEMBER TO DECEMBER

	Shipbuilding indexes			Construction cost ENR [1]	Building cost ENR [1]	All commodities WPI [2]	Industrial commodities WPI [2]	GNP implicit deflator
	BLS material	BLS labor	Ship selling price					
Year:								
1966	3.50	4.62	3.45	4.65	3.31	1.73	2.16	2.71
1967	1.88	3.09	4.56	6.19	4.89	1.00	1.92	3.25
1968	1.94	5.99	8.72	9.38	9.90	2.78	2.67	4.00
1969	5.88	5.25	8.02	8.66	6.23	4.83	3.85	4.82
1970	5.89	4.30	8.00	10.73	7.98	2.21	3.62	5.46
1971	4.68	4.64	7.94	15.72	16.05	3.96	3.22	4.73
1972	2.70	7.03	7.97	8.61	8.46	6.50	3.56	3.18
1973	7.43	[3] 8.10	8.06	6.92	6.42	18.23	14.82	5.34

[1] ENR—Engineering News Record.
[2] WPI—Wholesale price index.
[3] Estimated based on November 1973 value.

Note: The GNP implicit deflator and ship selling price index are both based on yearly averages, all others are December to December values.

Shortages of Material

Admiral Price. We are experiencing shortages of on-hand material stocks, which become serious when ship delivery schedules are predicated on material flow times which may no longer be valid. Material shortages and delays contribute to a disruption of orderly-sequenced operations, increased expediting effort and premium time—all of which increase costs and lead to ship delivery delays.

When factors such as these are combined with the energy crisis, ecological restrictions, and legislative considerations such as the Occupational Health and safety act and increased social security contributions, it seems amazing that ship costs and delays are not greater than they have been. As I said, these factors are largely uncontrollable but, if we are to have the ships we need to perform our missions, they must be paid for.

Other Problems

The Navy supports, completely, the approach that increased emphasis on fly-before-buy, avoidance of concurrency and increased operational test and evaluation implies. When these factors were first emphasized, the Navy was, in fact, the only service that had an independent T&E organization in existence, and it had been functioning as such for many years. In addition, each ship, as an entity, goes through an exhaustive series of rigorous and structured tests and inspections prior to entering the fleet as an operational unit—builder's trials, board of inspection and survey trials, shakedown training, final acceptance trials and post-shakedown correction of deficiencies are examples.

Testing and Evaluation

Chairman McClellan. Take a specific class of ship and describe the test and evaluation procedures it undergoes.

Admiral Price. The Patrol Frigate (PF) program is an excellent illustrative example of the extensive test and evaluation procedures applied to new construction ships.

For the PF, Operational Test and Evaluation (OT&E) will be conducted in two phases during the acquisition process:

a. In the initial phase (IOT&E) an evaluation of the ship's operational effectiveness and suitability will be made through the assessment of results obtained from:

(1) Individual equipment IOT&E, and

(2) Integration of equipments at land based test sites.

b. The follow-on phase (FOT&E) will be continued as necessary during and after the production period to refine the evaluations resulting from IOT&E, to evaluate equipment improvements, and to re-evaluate systems to ensure that the PF continues to meet operational needs.

With regard to installed equipments and subsystems, the following items are scheduled for individual IOT&E, including at sea testing, other than at land based test sites:

a. MK 92 Fire Control system.
b. MK 75 76 mm gun.
c. AN/SPS–49 radar.
d. AN/SQS–56 sonar.
e. Harpoon Fire Control System.
f. Controllable Pitch Propeller.
g. LM2500 Gas Turbine.

Additionally, PF equipments will be integrated at two land based test sites (LBTS):

a. The Combat System LBTS will contain an installation duplicating shipboard installations and arrangements of all sensors, computing equipment, weapons and related subsystems. System integration and computer programming will be accomplished and demonstrated at the Combat System LBTS.

b. The Propulsion System LBTS will contain engines, clutches, gearing, shafting, and controllable pitch propeller hub together with necessary control systems, in direct functional duplication of the shipboard main propulsion system. The Propulsion System LBTS will enable the demonstration of the proper integration of the propulsion and propulsion control equipment. In addition, it will pro-

vide 3000 hours of "whole plant" operating experience prior to the delivery of the lead ship.

The operational test prorgam is structured to ensure that adequate test and evaluation (including IOT&E individually on subsystems and collectively at the Land Based Test Sites) is accomplished with satisfactory results prior to approval for follow ship production.

Further, each PF built will be required to undergo Production Acceptance Test and Evaluation (PAT&E) aimed at demonstrating that each ship fulfills the requirements of the ship contract and specifications. Additionally, for the lead ship, PAT&E is aimed toward supplying follow-ship shipbuilders with standardized equipment test procedures. The procedures will be prepared for and validated by the lead ship acceptance testing.

The Navy's independent test and evaluation organization, Commander Operational Test and Evaluation Force, will closely monitor and actively participiate in both IOT&E and lead ship FOT&E. Additionally, the Navy's Board of Inspection and Survey will conduct an Acceptance Inspection and test of the lead and all follow ships.

Chairman McClellan. Proceed.

Admiral Price. However, the relation of ships to the concept of test and evaluation is very complex. In general, a ship is a platform which supports many subsystems and equipments and which has many mission patterns. A minor defect in any one area for a ship which has a service life of 25 years or more is not as critical as it would be in a weapons system with a comparatively short service life. Were we to take a completely purist approach to the subject of test and evaluation of ships as entities, carried to the extreme, we would never build ships in quantity. Therefore, we must have conducted sufficient testing to be able to make a reasoned judgment that the system performance is adequate and that any known problems are reasonably correctable. The judgment must, by nature, be subjective as well as technical—and it must be made in time and at a point which will let us get on with a program at an acceptable level of risk.

SUMMARY

In summary, I have covered many points that have to do with our fiscal year 1975 and future ship-building programs. While I have laid before you what may seem to be an ambitious program in the face of the many difficulties, I wish to assure you that the Navy *will be able* to construct the ships called for in our SCN program. With timely authorization, funding and execution, we will be able to provide the Navy with the requisite new ships—ships which will make up the Navy of the 1980's and beyond—in an orderly and cost effective manner.

BUDGET OVERVIEW

Chairman McClellan. You may now proceed to highlight your statement, Admiral Price.

Admiral Price. My full statement has also described at some length some of the problems we are encountering within the American shipbuilding community and what we are attempting to do to counter these problems and to hold costs down to the best of our ability.

You have asked for a brief overview of the SCN budget request and a statement of requirement for each class of ship we have included. With your permission, I would like to have my formal statement stand for the record, and spend the next 10 minutes or so to cover the fiscal year 1975 SCN programs in the form you have requested.

Our budget submission for the next fiscal year includes authorization funding of the 30 new construction ships and 4 conversions. As Secretary Warner has testified, the fiscal year 1975 SCN budget, for the first time in years, provides for the acquisition of more new ships than the number that are scheduled to be retired during the same period. The

total estimated amount required is $3,562,600,000 in the following categories:

	Millions
New Construction (30 ships)	$2,933.8
Conversion (4 ships)	122.9
Advance procurement for ships for fiscal 1976	331.8
Escalation on prior year programs	71.9
All other	102.2

HIGH VALUE SHIPS

Thirteen of our new construction ships are highly complex warships. We need these ships to be able to carry out our strategic missions and to operate in those areas where the enemy can concentrate his forces to oppose our fleet.

Chairman McClellan. Describe those 13 ships.

Admiral Price. Included in there is the second and third Trident fleet ballistic missile submarines.

Chairman McClellan. Two submarines?

Admiral Price. Two Trident submarines, No. 2 and 3. The first was funded last year, if you remember, sir. These ships of course, will increase our strategic deterrence and will be available——

Chairman McClellan. We lack authorization on those ships don't we?

Admiral Price. The authorization bill has not yet been passed, sir.

We also have a total obligational authority of $927 million for these submarines.

These nuclear-powered ships will enhance the effectiveness and credibility of our sea-based strategic deterrent by operating in a larger ocean area, carrying longer range missiles than do our current stategic submarines. The Trident is considerably more quiet in operation than the Polaris/Poseidon subs and they have a higher degree of survivability and protection against detection by hostile ASW forces.

The fiscal year 1975 budget requests a total obligational authority of $927 million for two Trident submarines.

TRIDENT COST COMPARISONS

Senator Young. Has the Navy conducted a cost comparison study of funding two Trident submarines per fiscal year versus a program of one per year? If so, please briefly discuss the highlights and savings if any of such a program.

Admiral Price. A study of various alternative Trident programs was conducted during 1973 including procurement rates of one per year and two per year. Although the costs derived for these programs were not of budget quality, they were useful for parametric comparisons. The study showed an increased total program cost of about $512 million for a procurement rate of one Trident submarine per year when compared to a rate of two per year. This increase reflected the escalation associated with the stretchout of the program, based upon OSD rate indices in effect at that time. It has become evident that these increased costs are understated due to the significantly increased rate of

escalation we have observed during the past 6 months. It should also be noted that additional costs could be associated with a one per year procurement rate due to breaks in component production lines, shipbuilder delay and disruption, and decreased procurement quantities of equipments that are inherent in such a program stretchout.

Cost increases associated with a one per year production rate are significant, but they are only a portion of the total impact of such a program. We are faced with an aging Polaris/Poseidon force that will require orderly replacement in the 1980's. A procurement rate of one Trident per year does not permit orderly replacement, espcially when we are confronted with the block obsolescense of our current SSBN forces that will occur in the early 1980's. This is readily apparent when we consider that all 41 of these SSBN's were commissioned in a 7 year period, with 13 commissioned in a single year, 1964. Since they were built to specifications which assumed a 20 year life, a slowed Trident procurement would fail to meet the aging problem anticipated in the 1980's. Additionally, at one submarine per year, we would not have a viable Trident force for many years; and we would be severely constrained in force operational and targeting flexibility. The operation of a force of only one or two submarines is far from effective from the viewpoint of both cost and flexibility, and it does not provide a credible, survivable sea-based deterrent.

The Los Angeles class nuclear powered fast attack submarines are a key element of our sea control forces. Continued acquisition of these ships is required, at a rate of about five every 2 years, to meet and maintain the force levels established for the attack submarine force. The SSN 688 class is being built to operate against enemy submarines and surface shipping for protracted periods at high speed. Like the Trident, this ship incorporates increased quieting, an improved sensor system and a central computer system to integrate navigation, torpedo fire control and command display systems.

The fiscal year 1975 total obligational authority requested for three of these submarines is $502.5 million.

Chairman McClellan. How many of those are requested?

Admiral Price. This year we have three for a total obligational authority of $502.5 million.

We also have the funding of DLGN or nuclear frigates, DLGN–41 and 42 for which Congress provided long-lead funds last year. These are needed to go with the nuclear task forces and they are the most advanced antiaircraft defense platforms that we have.

We are requesting $152.3 million for the full funding of DLGN–41.

The seven Spruance class destroyers, the only high value conventionally powered ships in this year's budget request, are the last to be funded in this thirty-ship program. The DD–963, as it is also known, is required to provide anti-submarine warfare protection, in company with the nuclear and conventionally powered frigates to high value carrier task forces. Technology and age have made our older destroyers obsolete in this field, and the DD–963 is designed for this mission with emphasis on seakeeping ability, quiet operation, efficient integration of weapon systems, reduced manning and ease of maintenance.

Our fiscal year 1975 request is for a total obligational authority of $457.1 million to fully fund the last seven Spruance class destroyers.

DD–963 DELIVERY SCHEDULE

Senator YOUNG. When will the first DD–963 destroyer be delivered? What is the schedule for delivery for the remainder of these ships?

Admiral PRICE. U.S.S. *Spruance* (DD–963) is scheduled for delivery on October 30, 1974. The contractor has, recently, formally confirmed this delivery date, as well as the delivery date for DD–964.

The contractural delivery schedules for the total program is as follows:

DD–963—[1] October 1974
DD–964—[1] April 1975
DD–965—June 1975
DD–966—July 1975
DD–967—October 1975
DD–968—February 1976
DD–969—April 1976
DD–970—June 1976
DD–971—July 1976
DD–972—September 1976
DD–973—October 1976
DD–974—November 1976
DD–975—December 1976
DD–976—January 1977
DD–977—February 1977
DD–978—March 1977
DD–979—April 1977
DD–980—May 1977
DD–981—July 1977
DD–982—August 1977
DD–983—September 1977
DD–984—October 1977
DD–985—November 1977
DD–986—December 1977
DD–987—January 1978
DD–988—February 1978
DD–989—March 1978
DD–990—April 1978
DD–991—May 1978
DD–992—June 1978

[1] Confirmed by contractor.

LOW-COST PROGRAMS

While these high-value programs have essentially reached fruition and are well established as Navy funding priorities, fiscal year 1975 marks the commencement of three important lower-cost shipbuilding programs which are vitally needed if we are to maintain a balanced and effective fleet. As you know, we have recently retired many World War II vintage surface combatants, and have programmed the dollars which would have been spent on their costly operation and maintenance to the acquisition of replacement of ships. This is the only way, in the current fiscal climate, that we can hope to build and maintain a balanced and viable Navy, in sufficient numbers to perform our missions on the world's oceans against the growing Soviet threat.

SEA CONTROL SHIP

The first of these is the sea control ship (SCS), designed as an austere air-capable platform with an air group composed of helicopters and vertical and short takeoff and landing aircraft—VSTOL's. The SCS will provide protection for military and merchant shipping in open ocean areas where the presence of an aircraft carrier is neither feasible nor practical. The sea control ship is required to provide the needed sea-based air support formerly afforded by the now-retired antisubmarine aircraft carriers.

The fiscal year 1975 request is for $142.9 million which, in combination with the $29.3 million provided as advance funding in fiscal year 1974, will fully fund the lead sea control ship.

PATROL FRIGATE

The patrol frigate is also an urgently required fleet asset. For 7 years—since the fiscal year 1967 budget, when we funded the last of the DE–1062 class destroyer escorts—we have funded only one surface combatant tailored for the protection of our open ocean sea lanes, the lead ship of the patrol frigate class. Navy witnesses have testified to the Congress repeatedly that we must begin now to acquire, in adequate numbers, replacements for the many World War II destroyers and destroyer escorts we have retired. This is the function of the patrol frigate program, and the fiscal year 1975 request is for a total obligational authority of $436.5 million to fund the first seven follow ships in the program.

Senator YOUNG. How many patrol frigates does the Navy intend to procure? Where will they be built?

Admiral PRICE. The Navy's patrol frigate program objective is the procurement of 50 ships of the class.

The lead ship is being built by Bath Iron Works.

The Navy envisions the production of the 49 follow ships in three shipyards to be selected on a competitive bid.

Taking into account existing shipyard facilities and past experience, the following is a partial listing of commercial shipyards that may be expected to bid on a portion of the program:

Avondale Shipyards, Inc.
Bethlehem Steel Corp. (Shipbuilding Division).
Ingalls Shipbuilding Division of Litton Industries, Inc.
National Steel and Shipbuilding Co.
Todd Shipyards Corp.
Bath Iron Works Corp.
Lockheed Shipbuilding and Construction.
Newport News Shipbuilding and Drydock Co.

PATROL HYDROFOILS

The third program in this category is the missile-equipped patrol hydrofoil, or PHM. This ship is designed to operate against hostile surface ships many times its size in coastal, narrow sea, or island areas. For this mission, the ship is heavily armed with eight Harpoon antiship missiles, and it can free the larger destroyer escorts and patrol frigates for their open ocean duties.

Senator YOUNG. How much money do you have in there?

Admiral PRICE. $92.3 million for the first four follow ships. The first two lead ships were built under the R. & D. appropriation, and they will be launched this fall and undergo tests. The FY 1975 request is for the first four follow ships, and we have $92.3 million in this year's budget.

Senator YOUNG. How much will they cost each?

Admiral PRICE. Our cost will average for the 30-ship program which we foresee the follow ships will average about $18.5 million in fiscal year 1973 dollars, the year the base estimate was established.

Senator YOUNG. What will the first cost?

Admiral PRICE. The first two were an R. & D. and they will run approximately $30 million each because of all the R. & D. costs involved.

Senator YOUNG. Are they authorized?

Admiral PRICE. The two that are being built now, sir were authorized and funded under the Navy fiscal year 1973 R. & D. appropriation. They will be launched in the fall.

Senator YOUNG. You lack authorization for any more, though?

Admiral PRICE. The four that I am talking about are in this year's authorization bill but those bills have not been acted on.

Senator YOUNG. As I recall, this is a rather controversial subject how far we go and how fast.

Admiral PRICE. We need 30 of them. For example, in the Mediterranean in the recent confrontation we had, these ships would have been very, very valuable, making high speeds to trail the Soviet ships. With eight antishipping missiles, as an example, they would be a very potent platform for use over there.

I think you might have had a feeling about going too fast in the surface effect ship, rather than the patrol hydrofoil. That program is in R. & D. also and is many years downstream. That was really in the early stages of development last year; and this year there have been statements that we were moving too fast in that program, but I don't believe it is the hydrofoil program you had reference to.

NATO INTERESTS

Senator YOUNG. Are the Germans and Italians working with us?

Admiral PRICE. Yes, sir, it is a joint NATO program. The Germans and Italians are sharing the design cost of this ship with us. They will also share a certain portion of the nonrecurring startup costs.

Senator YOUNG. Will they be buying any themselves?

Admiral PRICE. Yes, they will, sir. These plans are always subject to change, but the Germans intend to buy 10 in this country and the Italians will either build them here or in Italy, sir.

Chairman MCCLELLAN. Proceed.

SUPPORT SHIPS

Admiral PRICE. For several years now, our support and auxiliary ship programs have been funded on a rather hit-or-miss basis because of the urgent requirement to apply limited funds to the procurement of combatant ships. As in the current surface combatant programs, fiscal year 1975 is the year in which we hope to restart a logically phased replacement of our aging service force assets. All of these new support ships in the fiscal year 1975 and subsequent programs are intended to replace ships from 28 to 31 years of age that are fast approaching the end of their useful service lives.

The destroyer tender in this year's request is inteneded to continue the replacement program. These newer ships must be able to support the destroyers of the future, with their gas turbine powerplants and more complex weapon systems. We have requested $116.7 million to fund this ship. The new classes of support ships are also included in

this budget, a lead fleet oiler and a new fleet oceangoing tug. We are asking for $81.4 million for the first oiler and $10.8 million for the tug.

CONVERSIONS

1975 also marks, for the foreseeable future, the completion of SCN-funded major conversion programs. Three Polaris to Poseidon fleet realistic missile submarine conversions at $104.6 million and one submarine tender Poseidon submarine support conversion at $18.3 million are included in this year's request.

Senator YOUNG. Will the fiscal year 1975 program complete the Polaris-to-Poseidon conversion?

Admiral PRICE. The fiscal year 1975 request completes the funding of the basic Polaris-to-Poseidon conversion program, except for outfitting and post delivery costs.

ADVANCE PROCUREMENT

As I mentioned earlier, advance procurement funding for fiscal year 1976 and subsequent programs is also contained in this year's budget request. We are asking for $239.8 million to continue the Trident program and an additional $92 million for the fifth nuclear powered guided-missile frigate of the California class, DLGN–42, to be full funded in year 1976.

MISCELLANEOUS FUNDING

The remainder of the SCN budget request is for:

Escalation on prior year programs: $71.9 million requested in fiscal year 1974 but deferred without prejudice as not required for obligation in that year.

Service craft: $31.2 million for four fuel oil barges, a medium floating drydock, and several replacement landing craft for the South Vietnamese Navy.

Ships waste offloading barges: $10.4 million to procure 26 additional pollution control and abatement craft.

Outfitting material: $27.2 million for the initial fitting out of ships delivering during the fiscal year.

Post delivery: $27 million for correction of post trail deficiencies during post shakedown available scheduled during the fiscal year.

SUMMARY

As I have stated, Mr. Chairman, our budget request totals $3,562.6 million for fiscal year 1975. The 30 new ships, four conversions and miscellaneous funding requirements are all essential to our program of building and maintaining a viable, balanced force. If the Navy is permitted to proceed as we have planned, we can accomplish our goal of returning to a position where we can successfully maintain our sea lanes and insure our free use of the seas.

Mr. Chairman, this has been a very brief discussion of a large, costly and varied program. I am sure that you have many questions regarding each program, and I am prepared to answer them at this time.

Senator YOUNG. I have some questions that you can answer for the record.

QUESTIONS SUBMITTED BY SENATOR THURMOND

Chairman McClellan. The following questions will be placed in the record at this point pursuant to the request of Senator Thurmond.

Admiral Price. I understand, sir.

[The questions and answers follow:]

SHIP FUNDING

Senator Thurmond. Admiral Price, on what basis do you favor approval of funds by Congress for ships on which construction could not be started during the fiscal year for which the funds are requested?

Admiral Price. First, Senator, I hope the term "start of construction" does not become a limiting factor for the funding of naval ships. There are many procurement and design functions which must be funded and acomplished before the actual, physical construction of the ship commences, and it is on this basis that we annually request funds for ships. The contractor cannot even begin to order construction materials and equipment until budgeted funds are in hand. (For example, the lead Patrol Frigate was funded in the fiscal year 1973 budget; actual construction of the ship will commence in October or November of this year.) For this reason, the basis for our request for funding is the date the contract will be let, rather than the actual construction start date. The current situation to which I have referred concerning component and material delivery lead times, makes it essential that we negotiate contracts as soon as possible after funding to assure an orderly and economical flow of material orders and deliveries.

CURRENT BUDGET REQUESTS

Senator Thurmond. Are there any requests in the current budget which could conceivably fall into this category?

Admiral Price. There are no ships, with the possible exception of the two patrol gunboats for the South Vietnamese Navy, that cannot conceivably be *contracted for* this coming fiscal year. Very few of them, however, will actually start construction during FY 1975. Scheduled contract award and tentative fabrication start dates for the 30 new construction ships are as follows:

Ship	Contract award date	Construction start date
Trident No. 2	December 1974	May 1975.
Trident No. 3	do	November 1975.
SSN-711	3d quarter, fiscal year 1975	January 1976.
SSN-712	do	July 1976.
SSN-713	do	January 1976.
DD-986	January 1975	February 1976.
DD-987	do	March 1976.
DD-988	do	April 1976.
DD-989	do	May 1976.
DD-990	do	June 1976.
DD-991	do	July 1976.
DD-992	do	August 1976.
DLGN-41	February 1975	June 1975.
SCS-1	January 1975	July 1975.
PHM-3	April 1975	October 1975.
PHM-4	do	November 1975.
PHM-5	do	December 1975.
PHM-6	do	February 1976.
PF-110	June 1975	October 1976.
PF-111	do	November 1976.
PF-112	do	December 1976.
PF-113	do	March 1977.
PF-114	do	April 1977.
PF-115	do	May 1977.
PF-116	do	July 1977.
F-PG No. 1	Indefinite	Indefinite.
F-PG No. 2	do	Do.
AD-41	March 1975	January 197..
AO-144	April 1975	May 1976.
ATF-163	February 1975	October 1975.

Post Budget Requests

Senator Thurmond. Have any requests in past budgets fallen into this category? If so, list them.

Admiral Price. As I have stated, Senator, we do not budget for ships based on the "start of construction" dates. In every shipbuilding and conversion budget we have ever submitted, we have planned to let contracts for each ship in that budget during the fiscal year in which funding is requested. Construction start dates are based on factors such as receipt of material, for example, which cannot be ordered by the contractor until the actual contract is negotiated and signed.

Occassionally, for various reasons, we are not able to contract for a particular ship or ships in the fiscal year in which they are funded. An illustrative example of this is the Submarine and Destroyer Tender programs funded in FY 1972 and 1973. Industry trends over the past few years have limited our access to the builders of ships of this class, which are essentially commercial types adapted to Navy service and standards. As a result we have arrived at a sole source situation for the two Submarine Tenders (as a package) and are still negotiating with the contractor for an acceptable price.

We intend to readvertise the Destroyer Tender as a "package" with the FY 1975 tender, if it is authorized and funded, with options for one or more follow ships which are now contained in outyear Navy programs.

Mark–92 Fire Control System

Senator Thurmond. What confidence does the Navy have that the Mark–92 fire control system development program will not delay the Patrol Frigate program?

Admiral Price. The Mark–92 system is not really developmental, Senator. It is an adaptation of a proven system manufactured in Holland and in use in many of the world's navies. The Mark–92 system for the lead Patrol Frigate has been built and is undergoing factory acceptance tests at this time. Two of the nine cabinets are two to three weeks late at this time; however, for a program of this magnitude this is not an unusual situation. We have every confidence that the system will be completed and tested, successfully, in time to meet Patrol Frigate program requirements.

I would like to point out that any impact is not on the delivery of Mark–92 systems to the lead or follow ships, but rather on the delivery of a test unit to complete a comprehensive and extensive series of tests. These tests must show that the contractor can turn out an operable, effective system before we proceed to contract for systems to be installed in the follow ships of the program.

FY 1975 Construction of Patrol Frigates

Senator Thurmond. Are you confident that all 7 Patrol Frigates requested in the FY 1975 budget can go into construction in FY 1975?

Admiral Price. As I stated previously, Senator, we do not budget for ships based on "start of construction". We are confident that we can contract for construction of the seven ships in late FY 1975; the ships will start construction during FY 1977. Design, planning and material actions must take place before construction, to any degree, can be started.

Nuclear Submarine Starts

Senator Thurmond. Can the nuclear submarines requested be started in FY 1975?

Admiral Price. The three nuclear submarines requested in the FY 1975 budget will be contracted for in the third quarter of FY 1975, hopefully in January 1975. Start of fabrication on the three ships, after order and receipt of steel, components and subsystems will not occur until about 12 months after letting the shipbuilding contract.

Nuclear Frigate Program

Senator Thurmond. Admiral Price, as you know, I am a strong advocate of the nuclear frigate program. However, there is a continued opinion in the Congress that these ships should not be approved. Would you comment on the position taken by these critics?

Admiral PRICE. Senator Thurmond, I am not really in a position to hypothesize the basis for opposition to these ships. True, they are expensive, when compared to less complex ships, but it must be remembered that these are the most capable surface combatants we have in the fleet today. Their weapons systems and sensors are able to accommodate a very high level of anti-air, anti-surface, anti-submarine and anti-missile activity, and they are invaluable in their primary role of escorting and protecting high-value underway units such as aircraft carrier task units.

We have often expressed our need to procure and provide a balanced naval force, with each ship tailored to meet the level of threat it will most probably encounter. The nuclear powered frigate, with its highly capable weapons systems and the ability to operate over long distances at sustained high speeds, virtually independent of logistic support, is designed to operate in the highest of the high-threat areas.

JUSTIFICATION

Chairman MCCLELLAN. At this point in the record there will appear certain information from the justifications.

[The justification follows:]

Justification

DEPARTMENT OF DEFENSE - MILITARY

SHIPBUILDING AND CONVERSION, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 07-15-1611-0-1-051	BUDGET PLAN (AMOUNTS FOR PROCUREMENT ACTIONS PROGRAMED)			1975 FISCAL YEAR PROGRAM OBLIGATIONS		
	1973 ACT	1974 EST	1975 EST	1973 ACT	1974 EST	1975 EST
PROGRAM BY ACTIVITIES:						
DIRECT:						
1. FLEET BALLISTIC MISSILE SHIPS	.....	.....	1,296,100	.....	.....	839,200
2. OTHER WARSHIPS	.....	.....	1,345,800	.....	.....	765,400
4. MINE WARFARE AND PATROL SHIPS	.....	.....	543,100	.....	.....	331,700
5. AUXILIARIES AND CRAFT	.....	.....	376,600	.....	.....	233,100
TOTAL DIRECT	.....	.....	3,562,600	.....	.....	2,169,400
REIMBURSABLE (TOTAL)	.....	.....	55,000	.....	.....	33,000
10 TOTAL	.....	.....	3,617,600	.....	.....	2,202,400
FINANCING:						
RECEIPTS AND REIMBURSEMENTS FROM:						
11 FEDERAL FUNDS	.....	.....	-15,000	.....	.....	-15,000
13 TRUST FUNDS	.....	.....	-40,000	.....	.....	-40,000
24 UNOBLIGATED BALANCE AVAILABLE, END OF YEAR FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	.....	1,415,200
BUDGET AUTHORITY	.....	.....	3,562,600	.....	.....	3,562,600

Introductory Statement
(In Thousands of Dollars)

	1973 Actual	1974 Estimate	1975 Estimate
Appropriation	$2,956,800	$3,492,900	$3,562,600
Total Direct Obligations	2,291,313	4,029,300	3,819,800
Total Direct Budget Plan;	2,962,400	3,492,900	3,562,600

The FY 1975 budget request is the fifth appropriation requested under the title "Shipbuilding and Conversion, Navy". The Shipbuilding and Conversion appropriation for FY 1971 and prior years will be available for obligation through 30 June 1975. The FY 1972 appropriation is available for obligation through June 30, 1976. The FY 1973 appropriation is available for obligation through June 30, 1977, the FY 1974 appropriation is available for obligation until June 30, 1978, and the FY 1975 appropriation is requested to remain available for obligation until June 30, 1979. The objective of these appropriations is to finance the building of a versatile fleet, equipped with technologically advanced hull designs, propulsion, armament and electronics and capable of performing the Navy's assigned missions.

To keep abreast of price changes the Navy periodically reviews ship cost estimates in detail. In addition to estimates for basic construction of the ship, government furnished electronic, non-electronic and weapons equipment, provision is made in the initial estimates for projected labor and material cost increases and design improvements and technological advances which occur while the ship is being built. Outfitting and Post Delivery requirements are also reviewed in detail.

Introductory Statement
(Continued)

	Uncompleted Thru 31 Dec 1973	To be Completed by 30 June 1974	To be Completed in FY 1975	To be completed in FY 1976 & Subsequent Years
FY 1971 and Prior Years				
Ships	41	7	15	19
New Construction	41	7	15	19
Conversion				
FY 1972				
Ships	15		1	14
New Construction	15		1	14
Conversion				
FY 1973				
Ships	16	3	4	9
New Construction	9			9
Conversion	7	3	4	
FY 1974				
Ships	19		2	17
New Construction	14			14
Conversion	5		2	3

The request for Fiscal 1975 is $3,562.6 million, an increase of $69.7 million above the Fiscal 1974 appropriation. The request provides for 30 new construction ships and 4 conversions, an increase of 16 new construction ships above Fiscal 1974.

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Of the 30 new construction ships requested in FY 1975, 21 represent the continuation of programs that were funded in FY 1974 and prior. They include two ballistic missile-firing submarines of the SSBN 711 Class, three high speed nuclear attack submarines (SSN-688 Class), seven anti-submarine warfare destroyers (DD-963 Class), one nuclear powered guided missile frigate (DLGN-38 Class), seven patrol frigates and one destroyer tender (AD-40 Class). The nine new ships include the first Sea Control Ship, four Patrol Hydrofoil Missile ships, two patrol gunboats, one fleet oiler and one fleet tug. The funding request for these 30 new ships is $2,933.8 million.

The four conversions in the FY 1975 budget include three ballistic missile firing submarines to be converted from POLARIS to POSEIDON missile capability and one fleet ballistic missile submarine tender. The proposed budget includes $122.9 million for these conversions.

All of the $331.8 million requested for advance procurement in FY 1975 is associated with continuing programs. $239.8 million is for additional ballistic missile firing submarines of the TRIDENT Class and $92 million is for one nuclear-powered guided missile frigate (DLGN-38 Class).

The remaining $174.1 million in the FY 1975 request is for outfitting material and post delivery work, escalation related to completion of prior year programs and for procurement of service and pollution abatement craft.

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	1973 Actual	1974 Estimate	1975 Estimate
Fleet Ballistic Missile Ships	$ 718,700	$ 779,500	$1,296,100
Other Warships	1,678,400	2,402,400	1,346,800
Amphibious Ships	-0-	-0-	-0-
Mine Warfare and Patrol Ships	202,200	3,900	543,100
Auxiliaries and Craft	363,100	307,100	376,600
TOTAL DIRECT PROGRAM	2,962,400	3,492,900	3,562,600
Reimbursable Program	31,103	70,000	55,000
TOTAL PROGRAM REQUIREMENTS (Current)	2,993,503	3,562,900	3,617,600
Less: Portion of Program to be obligated in subsequent fiscal years	1,399,618	1,426,300	1,415,200
Plus: Obligations incurred against prior year program funds	788,170	2,105,500	1,676,300
TOTAL OBLIGATIONS	$2,382,055	$4,242,100	$3,878,700

FY 1973-75 Navy Shipbuilding and Conversion Program
($ in Millions)

New Construction	FY 1973 Qty	FY 1973 Amt	TOTAL PROGRAM FY 1974 Qty	TOTAL PROGRAM FY 1974 Amt	FY 1975 Qty	FY 1975 Amt
TRIDENT (Nuclear)	-	-	1	780.8	2	1065.0
Less: Advance Procurement	-	-	-	194.0	-	138.0
Net	-	-	1	586.8	2	927.0
TRIDENT Advance Procurement	-	311.0	-	65.8	-	239.8
CVN Aircraft Carrier (Nuclear)	-	-	1	956.0	-	-
Less: Advance Procurement	-	-	-	299.0	-	-
Net	-	-	1	657.0	-	-
CVAN Attack Aircraft Carrier (Nuclear) Advance Procurement	-	299.0	-	-	-	-
SSN Submarine (Nuclear)	6	1050.0	5	908.2	3	580.5
Less: Advance Procurement	-	136.0	-	125.0	-	78.0
Net	6	914.0	5	783.2	3	502.5
SSN Advance Procurement	-	125.0	-	130.0	-	-
DLGN Guided Missile Frigate (Nuclear)	-	-	-	-	1	268.0
Less: Advance Procurement	-	-	-	-	-	115.7
Net	-	-	-	-	1	152.3
DLGN Advance Procurement	-	-	-	79.0	-	92.0
DD 963 Class Destroyer	-	-	7	634.5	7	655.4
Less: Advance Procurement	-	-	-	247.0	-	198.3
Net			7	387.5	7	457.1
DD 963 Advance Procurement	-	247.0	-	198.3	-	-
SCS Sea Control Ship	-	-	-	-	1	172.2
Less: Advance Procurement	-	-	-	-	-	29.3
Net	-	-	-	-	1	142.9
SCS Advance Procurement	-	-	-	29.3	-	-
PHM Patrol Hydrofoil Missile	-	-	-	-	4	96.2
Less: Advance Procurement	-	-	-	-	-	3.9
Net	-	-	-	-	4	92.3
PHM Advance Procurement	-	-	-	3.9	-	-
PF Patrol Escort	1	202.2	-	-	7	436.5
PG Patrol Gunboat	-	-	-	-	2	14.3
AD Destroyer Tender	1	103.6	-	-	1	116.7
AS Submarine Tender	1	100.3	-	-	-	-
Less: Advance Procurement	-	15.0	-	-	-	-
Net	1	85.3	-	-	-	-
AO Fleet Oiler	-	-	-	-	1	81.4
T-ATP Fleet Ocean Tug	-	-	-	-	1	10.8

TOTAL PROGRAM

New Construction (Continued)	FY 1973 Qty	FY 1973 Amt	FY 1974 Qty	FY 1974 Amt	FY 1975 Qty	FY 1975 Amt
Craft	-	2.0	-	-	-	31.2
Pollution Abatement Craft	-	-	-	10.4	-	10.4
SUBTOTAL NEW CONSTRUCTION	9	2289.1	14	2931.2	30	3307.2
Conversion						
SSBN Fleet Ballistic Missile Submarine (Nuclear)	6	432.6	2	150.0	3	187.5
Less: Advance Procurement	-	163.7	-	52.6	-	82.9
Net	6	268.9	2	97.4	3	104.6
SSBN Advance Procurement	-	108.2	-	13.8	-	-
AS Submarine Tender	1	26.1	-	-	1	29.2
Less: Advance Procurement	-	8.9	-	-	-	10.9
Net	1	17.2	-	-	1	18.3
AS Advance Procurement	-	2.1	-	8.8	-	-
DLGN Guided Missile Frigate (Nuclear)	-	-	1	113.0	-	-
Less: Advance Procurement	-	-	-	30.0	-	-
Net	-	-	1	83.0	-	-
DLGN Guided Missile Frigate (Nuclear) Advance Procurement	-	30.0	-	-	-	-
DLG (AAW) Guided Missile Frigate	1	61.2	2	88.9	-	-
Less: Advance Procurement	-	16.9	-	33.8	-	-
Net	1	44.3	2	55.1	-	-
DLG (AAW) Advance Procurement	-	19.1	-	-	-	-
SUBTOTAL CONVERSION	8	489.8	5	258.1	4	122.9
Other						
Outfitting Material						
FBM Ships	-	5.5	-	3.7	-	3.0
All Other	-	24.4	-	30.4	-	27.2
Post Delivery						
FBM Ships	-	5.8	-	3.2	-	3.4
All Other	-	35.2	-	16.4	-	27.0
Cost Growth	-	72.0	-	143.3	-	-
Escalation on Prior Year Programs	-	-	-	106.6	-	71.9
Funds Required for Completion of Prior Year Programs	-	40.6	-	-	-	-
SUBTOTAL OTHER	-	183.5	-	303.6	-	132.5
TOTAL PROGRAM		2962.4		3492.9		3562.6

STATEMENT OF MAJ. GEN. H. C. OLSON, U.S. MARINE CORPS, DEPUTY CHIEF OF STAFF FOR INSTALLATIONS AND LOGISTICS

PROGRAM AND FINANCING

Chairman MCCLELLAN. The next appropriation to be considered will be that for "Procurement, Marine Corps."

At this point in the record there will appear certain program and financing information from the justifications.

[The information follows:]

DEPARTMENT OF DEFENSE—MILITARY PROCUREMENT, MARINE CORPS—PROGRAM AND FINANCING

[In thousands of dollars]

	Budget plan (amounts for procurement actions programed)			Obligations		
	1973 actual	1974 estimate	1975 estimate	1973 actual	1974 estimate	1975 estimate
Program by activities:						
Direct:						
1. Ammunition	15,976	23,600	26,800	15,456	23,012	26,480
2. Weapons and combat vehicles	50,981	47,600	80,600	45,321	57,040	70,052
3. Guided missiles and equipment	22,024	32,600	76,000	24,461	29,309	65,595
4. Communications and electronics equipment	61,591	33,600	13,500	55,024	75,704	20,164
5. Support vehicles	10,492	13,232	8,100	3,200	17,337	7,730
6. Engineer and other equipment	21,136	28,300	23,800	33,340	37,893	24,046
Total direct	182,200	178,932	228,800	182,802	240,295	214,067
Reimbursable (total)	7,906	40		5,503	10,457	
Total	190,106	178,972	228,800	188,305	250,752	214,067
Financing:						
Recipts and reimbursements from:						
Federal funds	−7,943			−8,614		
Nonfederal sources	−3			−27		
Unobligated balance available, start of year:						
For completion of prior year budget plans				−195,641	−121,877	−45,097
Available to finance new budget plans		−40			−40	
Reprograming from (−) or to prior year budget plans	−76,260	−5,000				
Unobligated balance transferred from other accounts	−21,000	−5,000		−21,000	−5,000	
Unobligated balance transferred to other accounts	61,742	5,000		61,742	5,000	
Unobligated balance available, end of year:						
For completion of prior year budget plans				121,877	45,097	59,830
Available to finance subsequent year budget plans	40			40		
Unobligated balance lapsing: Unobligated balance lapsing, budget plan	14,518			14,518		
Budget authority	161,200	173,932	228,800	161,200	173,932	228,800
Budget authority:						
Appropriation	162,400	173,932	228,800	162,400	173,932	228,800
Transferred to other accounts	−1,200			−1,200		
Appropriation (adjusted)	161,200	173,932	228,800	161,200	173,932	228,800
Relation of obligations to outlays:						
Obligations, incurred, net				179,664	250,752	214,067
Obligated balance, start of year				281,923	260,915	348,967
Obligated balance, end of year				−260,915	−348,967	−369,134
Outlays				200,672	162,700	193,900

BIOGRAPHICAL SKETCH AND PREPARED STATEMENT

Chairman McCLELLAN. The principal witness will be Maj. Gen. Harry C. Olson, Deputy Chief of Staff for Installations and Logistics.

You may proceed, General.

General OLSON. Mr. Chairman, you have my formal statement that I have submitted to you.

I have some highlights on the formal statement we submitted for the record.

Chairman McCLELLAN. Let this statement today be printed in the record.

[The biographical sketch and statement follows:]

BIOGRAPHICAL SKETCH OF GENERAL OLSON
DEPUTY CHIEF OF STAFF FOR INSTALLATION AND LOGISTICS, HQMC

Harry C. Olson was born Jan. 27, 1918, in Des Moines, Iowa. After completing high school there, he earned a B.A. degree from Drake University, and later received his Masters degree in Business Administration from George Washington University. While at Drake University, he played three years of varsity football and was captain during his senior year.

A combat veteran of World War II, Korea and Vietnam, he entered the Marine Corps in May, 1941, and was commissioned a second lieutenant, Nov. 1, 1941. He completed the Reserve Officers' Class at Quantico, Va. in January 1942.

During World War II, he saw combat with the 2d Marine Division on Saipan and Tinian, Marianas Islands, and in the Assault and Occupation of Okinawa. The Bronze Star Medal with Combat "V" was awarded him for meritorious achievement against the enemy on Saipan and Tinian.

A tour as a recruiting officer near the end of the war was followed by three years as an Associate Professor with the Navy ROTC unit at the University of Southern California.

As a G–4 Staff Officer at Headquarters, FMF, Pacific, Major Olson was assigned to the 1st Marine Division, and participated in three campaigns in Korea during the Communist China Aggression, the UN Summer-Fall Offensive, and the 2d Korean Winter. He was promoted to lieutenant colonel in July 1951.

Following the Korean conflict, he served in motor transport assignments at Camp Lejeune, N.C., and at Marine Corps Headquarters in Washington, D.C. Later, he was Regimental Supply Officer of the 1st Force Service Regiment, and commanded the Base Materiel Battalion at Camp Pendleton, Calif. He also commanded the Supply and Distribution Battalion of the 3d Force Service Regiment.

In 1959, Olson commanded the Logistics Support Group on Taiwan, then served as Regimental S–3 and Executive Officer of the 3d Force Service Regiment. After being promoted to colonel in 1961, he became Director of Supply at the Defense Construction Supply Center, Columbus, Ohio, through July 1963.

Upon completion of the Industrial College of the Armed Forces, Washington, D.C., in July 1964, Col. Olson was assigned duty as Force Supply Officer, Fleet Marine Force, Pacific, headquarters in Hawaii, and earned the Legion of Merit.

A Gold Star in lieu of a second Legion of Merit with Combat "V" was awarded him for his service as Commanding General, Force Logistic Command in South Vietnam, from October, 1967, to October, 1968. He was promoted to brigadier general, Oct. 1, 1967, prior to becoming CG, Force Logistic Command.

In January 1969, BrigGen. Olson assumed duty as Commanding General, Marine Corps Supply Activity, Philadelphia, Pa., and earned the Navy Commendation Medal for his service there through January 1970. On March 1, 1970, he became Commanding General, Marine Corps Supply Center, Barstow, Calif., and earned a third award of the Legion of Merit. While stationed at Barstow, he was promoted to his present rank on Aug. 12, 1971. During this 30-month period of command, the Marine Corps Supply Center was awarded two Meritorious Unit Commendations for support of FMFPAC forces.

He became the thirty-second Quartermaster General of the Marine Corps in October, 1972. Due to the reorganization of Headquarters in October, 1973, the General assumed his current assignment.

He has also completed the Navy Comptroller Courses, the Army Command Management School, and the Army Quality Control Management for Executives Course.

MajGen. Olson and his wife, the former Bette Jane Graham of Des Moines, Iowa, have four children: Penny S., Jill A., Jon C. and Graham D.

Prepared Statement

General Olson. Mr. Chairman and Members of the Committee, I am Major General Harry C. Olson, Deputy Chief of Staff for Installations and Logistics, Headquarters, Marine Corps.

It is a pleasure for me to appear before you to present the Procurement, Marine Corps Budget for Fiscal Year 1975.

The budget which I am presenting to you today will fund for items which are programmed for use by both our active and reserve operating forces. These items are included in six budget activities: Budget Activity 1 covers only ammunition; Budget Activity 2 includes tracked combat vehicles and weapons; Budget Activity 3 address guided missiles and ground support equipment; Budget Activity 4 contains communications and electronics equipments; support vehicles comprise Budget Activity 5; and Budget Activity 6 pertains to engineer equipment and other equipment.

Supplemental Request

Chairman McClellan. What is your total FY 1975 request, your FY 1974 appropriation and FY 1974 supplemental request?

General Olson. Sir, we have requested $228.8 million in FY 1975 and $178.9 million in FY 1974. Additionally, we have asked for $40.7 million in the FY 1974 Supplemental Request.

Chairman McClellan. Proceed.

MASF Funding

Chairman McClellan. How much of the request is for South Vietnam under MASF? If any, please identify the amounts and what they are for.

General Olson. We have no procurement funds allocated for South Vietnam MASF in the FY 1975 request.

Chairman McClellan. Proceed.

General Olson. In addition to providing funds to support our ground troops, this budget will finance ground communications and electronics equipments operated by our Fleet Marine Force aviation units, and base support equipment, commercial vehicles and materiel handling equipment required by our bases and air stations.

Budget Highlights

The Fiscal Year 1975 Procurement, Marine Corps budget, with the exception of those items in phased procurement, will enable us to attain our materiel objectives.

Significant highlights of this budget request, by Budget Activity, are as follows:

Budget Activity 1—Ammunition

In Budget Activity 1, Ammunition, our request totals $26.8 million. A major portion of our ammunition funds, $16.7 million, will be devoted to tank ammunition for the M60A1 tank. $6.0 million is for other types of ammunition. The balance of funds requested for this Budget Activity, $4.1 million, will provide for ammunition modernization and first destination transportation charges. The funds being requested for ammunition will provide for training comsumption and allow us to attain approved levels of mobilization reserve stocks.

War Reserves

Chairman McClellan. Will the FY 1974 request for ammunition enable the Marine Corps to fully attain prescribed reserve stocks, including war reserves?

General Olson. The FY 1975 Presidential Budget request for ammunition will allow the Marine Corps to attain its inventory objectives which include reserve

stocks and war reserve requirements in all areas except 105mm Tank ammunition. This family of rounds is being phased procured over the introduction period of the M60A1 Tank.

Chairman McCLELLAN. Proceed.

BUDGET ACTIVITY 2—TRACKED VEHICLES

General OLSON. For Budget Activity 2, Tracked Combat Vehicles and Weapons, we are requesting $80.6 million of which $57.9 million is being allocated for the second year buy of M60A1 tanks.

M60A1 TANK

Chairman McCLELLAN. How many M60A1 tanks were funded in FY 1974, and what was the procurement unit cost? What is the FY 1975 procurement unit cost? What will be the total buy for the M60A1 program, and when will it be completed?

General OLSON. In FY 1974, 120 M60A1 Tanks were funded at a procurement unit cost of $349,000. We will procure 154 M60A1 Tanks in FY 1975 if this budget request is approved. The unit cost will be $341,558. This price is based on the recent decision by the US Army to delete the requirement for $5.9 million in long lead funds. We will buy a total of 428 M60A1 Tanks; 120 in FY 1974, 154 in FY 1975 and 154 in FY 1976 when the program will be completed.

Chairman McCLELLAN. Proceed.

General OLSON. $16.4 million is for the M88 Tank Recovery vehicle. The M88 will replace the M51 Tank Recovery vehicle which has been in our inventory since 1955. This will be a two year phase procurement to be completed in FY 1976. We are requesting $1.0 million for the procurement of modification kits to update the 8 inch self-propelled howitzer.

The remaining $5.3 million in Budget Activity 2 is being requested for special training devices, spares and repair parts and other support for our tracked combat vehicles and weapons.

BUDGET ACTIVITY 3—GUIDED MISSILES

In Budget Activity 3, Guided Missiles and Equipment we are requesting $76.0 million.

Three principal weapons systems, one of which is new to the Marine Corps, are included in this request.

The Improved HAWK program for FY 1975 totals $20.6 million. This request represents the third increment of a planned four year program to update our Surface-to-Air Missile (SAM) capability.

HAWK MISSILE UNIT PRICE

Chairman McCLELLAN. Does the Marine Corps pay the same price per unit for Improved HAWK as the Army?

General OLSON. Yes. Both the Marine Corps and Army pay the same Material Cost for Improved HAWK. It should be noted, however, that any per unit cost difference between Marine Corps and Army budget submission is accounted for in recurring and non-recurring overhead cost, a portion of which is not charged to the Marine Corps.

HAWK

Senator YOUNG. Is the Marine Corps satisfied that Improved HAWK will satisfy their surface-to-air missile requirement in the late 70's and early 80's?

General OLSON. The Improved HAWK system represents the application of available state-of-the-art technology to the Basic HAWK system which has been in operation since 1960. As an interim surface-to-air defense system, Improved HAWK will ensure for the Marine Corps continued capability to cope with the advancing air threat of the late 70's and early 80's.

SAM-D

Senator YOUNG. Is the Marine Corps considering the SAM-D as a replacement for the HAWK?

General OLSON. The Marine Corps has in the past, and will continue in the future to monitor the Army's SAM-D program. However, because the Marine Corps continues to rely on Marine fighter aircraft as its long range, high altitude AA

weapon, the decision not to buy SAM-D as a folow-on to the Improved HAWK has been made and is valid.

Chairman McClellan. Proceed.

Effect of Mid-East War

General Olson. The recent mid-east war, and its strong emphasis on tank warfare, reinforced the Marine Corps requirement to modernize its anti-tank capability. Accordingly, we are requesting $19.8 milion for the DRAGON and $30.8 million for the TOW missile systems. These modern, highly effective anti-tank weapons will replace the obsolescent 3.5'' rockets and 106 mm. recoilless rifles now in our inventory.

DRAGON

The DRAGON, which is a lightweight, man-portable weapon to be employed at the infantry battalion level, is being procured by the Marine Corps for the first time in FY 1975. It is part of a projected four (4) year plan to equip our operating forces with this highly effective weapon.

DRAGON Inventory

Chairman McClellan. What is your inventory objective for the DRAGON missile?

General Olson. The Inventory Objective is [deleted] missiles. The total acquisition objective, which includes training, tactical and quality assurance missiles is [deleted].

Chairman McClellan. Proceed.

TOW MISSILE SYSTEM

General Olson. The TOW missile system is a heavier anti-tank/assault weapon which is employed on a tripod or is mounted on various vehicles. FY 1975 will be the second year of a programmed three year buy to equip the Corps with this modern weapon.

TOW Missile

Chairman McClellan. Will you employ the TOW missile on an aerial platform?

General Olson. A favorable procurement decision from OSD, presently under review, will provide the Marine Corps with 57 AH–1J (Improved) attack helicopters. The Marine Corps has determined that the most cost effective mix should result in twenty-four AH–1J (Improved) attack helicopters configured with the provisions to carry the TOW missile.

Chairman McClellan. Proceed.

Other Procurement

General Olson. The balance of $4.8 million in Budget Activity 3 is requested for spares and repair parts, first destination transportation, and other support for our missile systems.

Budget Activity 4—Communications and Electronics

Our request for funding in Budget Activity 4, Communications and Electronics Equipment, totals $13.5 million. This total is divided into two major subactivities: $7.2 million for telecommunications, and $6.3 million for non-telecommunications items.

Telecommunications

Under telecommunications, we are requesting $3.2 million for the Teletype Set AN/UGC–75. This is a new equipment for the Marine Corps which will replace aging tape units now in use. We require $1.6 million for test and repair equipment; and $2.4 million for spares and repair parts, other support, and various minor non-delineated telecommunications items.

Chairman McClellan. Will the UN–UBC–75 teletype set also use tape?

General Olson. Yes, sir.

Chairman McClellan. Proceed.

General Olson. The sub-activity of non-telecommunications contains $600 thousand for contractor support for the Marine Air Ground Intelligence System. We have also requested $1.3 million for unattended ground sensors and $1.8 million for the Tactical Warfare Analysis Evaluation System. This latter item is a computer-assisted war-gaming system which will provide our Fleet Marine Forces, Atlantic with a control and evaluation tool to be employed in a field exercise environment.

Ground Sensors

Chairman McClellan. What are unattended ground sensors?

General Olson. Unattended ground sensors are a family of surveillance devices which provide electronic surveillance of remote areas. The sensors may be either ground emplaced or delivered by air.

Chairman McClellan. Proceed.

General Olson. We are requesting $2.5 million for special training devices, spares and repair parts, interim support equipment, modification kits for equipment currently in our inventory, and $0.1 million for various minor items of non-telecommunications equipment.

Budget Activity 5—Support Vehicles

In Budget Activity 5, Support Vehicles, we are requesting $8.1 million. $3.0 million of this total will be for commercial passenger and cargo vehicles utilized at our bases and air stations and by our Fleet Marine Forces while they are in a garrison environment. $2.8 million is programmed for the first year buy of a new 1¼ ton cargo truck which is basically a militarized-version of a standard commercial vehicle. We are planning a three year phased procurement of these vehicles which will replace our obsolescent M715's and M37's. The M37 trucks are of a 20 year vintage.

Passenger and Cargo Vehicles

Chairman McClellan. How many commercial passenger and cargo vehicles will you purchase in FY 1975? Has the POL shortage led to a change in specifications for some of the commercial vehicles which you will procure?

General Olson. The Marine Corps is purchasing a total of 59 commercial passenger and 558 commercial cargo vehicles in FY 1975. Yes, the POL shortage has led to changes in the vehicles the Marine Corps will procure. In accordance with Federal Management Circular 74–1, of 21 January 1974, future procurements of sedans and station wagons will be limited to vehicle types known as "compacts" and "subcompacts". In the event larger sedans are required, the requirement will be certified to be essential to mission accomplishment to the Administrator of General Services. Additionally, Headquarters, Marine Corps, has directed all major Marine Corps activities to evaluate their vehicle requirements. As a result, certain activities are replacing vehicles with motor scooters.

Chairman McClellan. Proceed.

General Olson. We are requesting $0.9 million for aircraft refueler/defueler trucks; and $1.4 million for spares and repair parts, first destination transportation charges and a small number of non-delineated minor items.

For Budget Activity 6, Engineer, Medical, ADP, and other general supply Equipment, we have programmed $23.8 million. Our second increment of the 25 ton crane buy at a cost of $4.8 million will enable us to achieve our inventory objective for this versatile new equipment.

25 Ton Crane

Chairman McClellan. In what type of operations is the 25 ton crane used?

General Olson. This four-wheel drive, hydraulic crane is used for general material handling during the over-the-beach phase of amphibious operations, and for construction tasks such as erecting buildings and bridges. The crane is capable of operating over rough terrain and can be converted to clamshell and piledriving operations.

Chairman McClellan. Proceed.

General Olson. We are requesting $1.3 million for environmental control equipment and assorted power equipment. $2.7 million has been planned for base support equipment at our major installations. $0.7 million is requested for automated

material handling equipment as part of our warehousing modernization program and $0.1 million will be used for material handling equipment, primarily forklifts.

$6.6 million is requested for the third increment of our five year program to buy transportable field medical support facilities.

FIELD MEDICAL SUPPORT FACILITIES

Chairman MCCLELLAN. What types of transportable field medical support facilities are you requesting funds for?

General OLSON. The requested funds will be utilized to procure additional components of the Medical Unit Self-Contained Transportable (MUST). The MUST is a modular designed, expandable, and self-contained field hospital system with a controlled environment. The system was developed by the Army. The Marine Corps is procuring all components through that Service. The FY 1975 procurement will complete the MUST equippage of east coast Marine units and initiate the outfitting of the Pacific force.

Chairman MCCLELLAN. Please proceed to highlight your statement, General Olson.

BUDGET REQUEST

General OLSON. Basically this fiscal year's submission is an increase over our fiscal year 1974 basic budget submission in which we requested $178.9 million against the $228.8 million for this year's procurement budget. It represents a $49.9 million increase over fiscal year 1974.

However, if you take into account that we have also requested a fiscal year 1974 supplemental of $40.7 million the fiscal year 1974 adds up to $219.6 million. This total versus our fiscal year 1975 request of $228.8 million, represents only a $9.2 million increase.

I would like to point out that the increase can be mostly attributed to a strong emphasis on the modernization of our tank and antitank capabilities. Within this budget we are requesting funds to buy our first increments of the Dragon antitank weapon and the M–88 recovery vehicle. We are also requesting funds for the second increment of the Tow antitank weapon and the M–60A1 tank.

When you put these programs together with our tank ammunition request, the total represents 63 percent of our overall fiscal year 1975 procurement, Marine Corps budget request.

M–60 TANKS

Senator YOUNG. Do you have all M–60's now or do you have older ones?

General OLSON. We have M–48A3 tanks at the present time.

Senator YOUNG. How many of the older ones?

General OLSON. Sir, our present tank inventory consists of 425 M–48A3 tanks.

Senator YOUNG. The M–48 is getting pretty old, is it not?

General OLSON. That is the reason for the procurement of the M–60's. We are procuring a total of 428 M–60A1 tanks to meet our tank modernization requirements.

M–60A1 TANKS

Senator YOUNG. How many M–60A1 tanks will the Marine Corps procure assuming this budget request is approved? Are any of these for Middle East payback?

General Olson. 154. None of these tanks are payback from the Middle East war.

Senator Young. When will that new tank we are working on be available?

General Olson. This is an Army project but as far as we are concerned in the Marine Corps, this particular tank, the M–60A1 meets our requirements through the 1980 time frame at the present time.

The first M–60A1's are scheduled to be delivered to the Marine Corps during July 1974. We plan to activate our first M–60A1 tank battalion in the first quarter of fiscal 1975. Another significant weapons system we are including in this budget request is our third year buy of the improved Hawk missile. This program will be to update our surface-to-air capability. We will complete this program in fiscal year 1976.

COMMUNICATION ELECTRONICS

In the area of communication electronics equipment we are budgeting for a new teletype set to replace aging units now in service.

Chairman McClellan. Proceed.

COMMERCIAL VEHICLES

General Olson. In regard to the support vehicles, we are requesting funds for commercial cargo vehicles and passenger vehicles. Also included is a new vehicle, the 1¼-ton cargo truck. This latter vehicle will replace the 20-year old veteran in our inventory, the M–37's.

Last, in highlighting my prepared statement, under the category of the engineering and general supply items, we programed for a second increment of a new 25-ton crane. This replaces 20-year-old cranes which we currently have in our inventory. Also funding for environmental control equipment and assorted power equipment is requested.

MEDICAL SUPPORT EQUIPMENT

We have a third year buy of a 5-year program to procure the transportable field medical support facilities and third generation computer for our force information system.

Those are the highlights of my prepared statement. I will be glad to amplify any of those areas.

Chairman McClellan. I will go over your statement and submit some questions to you.

Senator Young, any further questions?

Senator Young. No, Mr. Chairman.

Chairman McClellan. All right, gentlemen, thank you. We will have questions prepared and submit them to you for clarification of some of this material you have submitted today.

JUSTIFICATION

At this point in the record there will appear certain information from the justifications.

[The justification follows:]

Justification

DEPARTMENT OF DEFENSE - MILITARY

PROCUREMENT, MARINE CORPS

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS) — 1975 FISCAL YEAR PROGRAM

IDENTIFICATION CODE 07-15-1109-0-1-051	BUDGET PLAN (AMOUNTS FOR PROCUREMENT ACTIONS PROGRAMED)			OBLIGATIONS		
	1973 ACT	1974 EST	1975 EST	1973 ACT	1974 EST	1975 EST
PROGRAM BY ACTIVITIES:						
DIRECT:						
1. AMMUNITION	.....	.....	26,800	.....	.....	24,120
2. WEAPONS AND COMBAT VEHICLES	.....	.....	80,600	.....	.....	64,550
3. GUIDED MISSILES AND EQUIPMENT	.....	.....	76,000	.....	.....	62,800
4. COMMUNICATIONS AND ELECTRONICS EQUIPMENT	.....	.....	13,500	.....	.....	6,306
5. SUPPORT VEHICLES	.....	.....	8,100	.....	.....	6,100
6. ENGINEER AND OTHER EQUIPMENT	.....	.....	23,800	.....	.....	17,900
10 TOTAL	.....	.....	228,800	.....	.....	181,776
FINANCING:						
24 UNOBLIGATED BALANCE AVAILABLE, END OF YEAR FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	.....	47,024
BUDGET AUTHORITY	.....	.....	228,800	.....	.....	228,800

INTRODUCTORY STATEMENT

(In Thousands of Dollars)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Direct Obligations	182,802	271,695	214,067
Direct Obligations against prior year programs	93,987	99,375	32,291
Obligations against current year programs	88,815	172,320	181,776
Add unboligated current year program	93,385	47,312	47,024
Direct Program (TOA)	182,200	219,632	228,800

The appropriation "Procurement, Marine Corps" provides for procurement and delivery of all major items of combat, tactical equipment, and munitions, as well as plant equipment with $1,000 unit cost or greater and initial outfitting requirements.

The Marine Corps has the responsibility of equipping, training, and maintaining a body of the most modern fighting units, ready to deploy on a moment's notice to any part of the world, prepared to fight either a limited or a general war. These three factors - readiness, mobility, and modernity - form the basis upon which the Marine Corps materiel program is constructed.

SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Ammunition	15,976	35,100	26,800
Weapons and Combat Vehicles	50,981	47,600	80,600
Guided Missiles and Equipment	22,024	54,900	76,000
Communications and Electronics Equipment	61,591	35,200	13,500
Support Vehicles	10,492	15,232	8,100
Engineer and Other Equipment	21,136	31,600	23,800
TOTAL DIRECT PROGRAM	182,200	219,632	228,800
Reimbursable program	7,906	40	-
TOTAL PROGRAM REQUIREMENTS (Current)	190,106	219,672	228,800
Less: Portion of program to be obligated in subsequent fiscal years	100,525	47,312	47,024
Plus: Obligations incurred against prior year program funds	98,724	109,792	32,291
TOTAL OBLIGATIONS	188,305	282,152	214,067

FY 1973-74 Missile Procurement Programs
($ in Millions)

MARINE CORPS	FY 1973 Qty	FY 1973 Amt	TOTAL PROGRAM FY 1974 Qty	TOTAL PROGRAM FY 1974 Amt	FY 1975 Qty	FY 1975 Amt
Improved HAWK System	215	21.0	230	30.1	230	20.6
DRAGON	-	-	-	-	1378	19.8
TOW Missile	-	-	5425	22.3	6319	30.8
Modification Kits	-	.1	-	.1	-	2.4
Interim Support Equipment	-	-	-	1.5	-	.6
1st Destination Transportation	-	.5	-	-	-	.1
Spares and Repair Parts	-	.2	-	.7	-	1.6
Items Less Than $500,000	-	.2	-	.2	-	.1
TOTAL MARINE CORPS Program		22.0		54.9		76.0

SUBCOMMITTEE RECESS

Chairman MCCLELLAN. The subcommittee will recess until Tuesday, April 30, at 10 a.m., when we will hear the Research, Development, Test and Evaluation testimony of the Navy.

[Whereupon, at 11:25 a.m., Wednesday, April 24, the subcommittee was recessed, to reconvene at 10 a.m., Friday, May 3.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1975

FRIDAY, MAY 3, 1974

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room 1223, Everett McKinley Dirksen Office Building, Hon. John L. McClellan (chairman) presiding.

Present: Senator McClellan.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

STATEMENT OF DR. D. S. POTTER, ASSISTANT SECRETARY OF THE NAVY (RESEARCH & DEVELOPMENT)

ACCOMPANIED BY:
VICE ADM. W. J. MORAN, U.S. NAVY, DIRECTOR, RESEARCH, DEVELOPMENT, TEST AND EVALUATION, OFFICE OF THE CHIEF OF NAVAL OPERATIONS
REAR ADM. E. W. COOKE, U.S. NAVY, DIRECTOR OF BUDGET AND REPORTS, OFFICE OF THE NAVY COMPTROLLER
BRIG. GEN. H. L. WILKERSON, U.S. MARINE CORPS, DEPUTY CHIEF OF STAFF (RESEARCH, DEVELOPMENT AND STUDIES), HEADQUARTERS, MARINE CORPS

PROGRAM AND FINANCING

Chairman MCCLELLAN. This morning the subcommittee will hear testimony on the fiscal year 1975 Navy research, development, test and evaluation requests.

At this point in the record there will appear program and financing information from the justifications.

[The information follows:]

32-383 O - 74 - 59

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, NA

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS

IDENTIFICATION CODE 97-20-1319-0-1-051	BUDGET PLAN (AMOUNTS FOR RDT&E ACTIONS PROGRAMED)			OBLIGATIONS		
	1973 ACT	1974 EST	1975 EST	1973 ACT	1974 EST	1975 EST
PROGRAM BY ACTIVITIES:						
DIRECT:						
1. MILITARY SCIENCES	128,173	134,365	138,262	129,866	134,139	138,162
2. AIRCRAFT AND RELATED EQUIPMENT	374,155	262,543	349,322	397,307	268,349	347,322
3. MISSILES AND RELATED EQUIPMENT	807,245	986,222	1,192,575	799,890	980,689	1,151,542
4. MILITARY ASTRONAUTICS AND RELATED EQUIPMENT	58,269	52,925	38,716	58,540	52,779	38,816
5. SHIPS, SMALL CRAFT, AND RELATED EQUIPMENT	620,288	629,669	727,505	633,598	627,767	725,505
6. ORDNANCE, COMBAT VEHICLES, AND RELATED EQUIPMENT	66,303	84,986	92,335	76,652	82,384	91,335
7. OTHER EQUIPMENT	341,181	408,614	479,292	349,320	406,372	476,292
8. PROGRAMWIDE MANAGEMENT AND SUPPORT	153,990	154,872	283,926	153,698	155,421	280,926
TOTAL DIRECT	2,541,604	2,714,116	3,261,933	2,598,871	2,707,900	3,249,900
REIMBURSABLE (TOTAL)	48,451	50,000	50,000	57,837	52,100	50,100
SUBTOTAL	2,590,055	2,764,116	3,311,933	2,647,908	2,760,000	3,300,000
INTRAFUND OBLIGATIONS	-3,276	-3,300	-3,300	-3,643	-3,300	-3,300
10 TOTAL	2,586,779	2,760,816	3,308,633	2,644,265	2,756,700	3,296,700
FINANCING:						
RECEIPTS AND REIMBURSEMENTS FROM:						
11 FEDERAL FUNDS	-44,964	-46,500	-46,500	-43,800	-46,500	-46,500
13 TRUST FUNDS	.....	.....	.....	-47	.....	.....
14 NON-FEDERAL SOURCES	-211	-200	-200	-212	-200	-200
21 UNOBLIGATED BALANCE AVAILABLE, START OF YEAR FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	-144,091	-82,835	-86,951
REPROGRAMING FROM (-) OR TO PRIOR YEAR BUDGET PLANS	-2,653	.....	.....	.....	.....	.....
22 UNOBLIGATED BALANCE TRANSFERRED FROM OTHER ACCOUNTS	.....	-23,200	.....	.....	-23,200	.....
24 UNOBLIGATED BALANCE AVAILABLE, END OF YEAR FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	82,835	86,951	90,884
25 UNOBLIGATED BALANCE LAPSING						
UNOBLIGATED BALANCE LAPSING, BUD PLAN	2,653	.....	.....	2,653	.....	.....
BUDGET AUTHORITY	2,541,604	2,690,916	3,261,933	2,541,604	2,690,916	3,261,933
BUDGET AUTHORITY:						
40 APPROPRIATION	2,545,213	2,691,805	3,261,933	2,545,213	2,691,805	3,261,933
41 TRANSFERRED TO OTHER ACCOUNTS	-3,609	.....	.....	-3,609	.....	.....
42 TRANSFERRED FROM OTHER ACCOUNTS	.....	583	.....	.....	583	.....
43 APPROPRIATION (ADJUSTED)	2,541,604	2,692,388	3,261,933	2,541,604	2,692,388	3,261,933
44.20 PROPOSED SUPPLEMENTAL FOR CIVILIAN PAY RAISES	.....	38,528	.....	.....	38,528	.....
RELATION OF OBLIGATIONS TO OUTLAYS:						
71 OBLIGATIONS INCURRED, NET				2,600,206	2,718,000	3,250,000
72 OBLIGATED BALANCE, START OF YEAR				1,044,747	1,239,938	1,394,938
74 OBLIGATED BALANCE, END OF YEAR				-1,239,938	-1,394,938	-1,641,938
77 ADJUSTMENTS IN EXPIRED ACCOUNTS				-817	.....	.....
90 OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL				2,404,199	2,531,272	2,988,200
91.20 OUTLAYS FROM CIVILIAN PAY RAISE SUPPLEMENTAL				.....	23,728	14,800

INTRODUCTION OF WITNESSES AND ASSOCIATES

The principal witness will be Dr. David S. Potter, Assistant Secretary of the Navy for Research and Development.

Dr. Potter, you may proceed.

Dr. POTTER. Thank you, Mr. Chairman.

I have submitted formal statements for the record, a long statement, and then a shorter one of which I would like to give you just a few highlights rather than reading.

Chairman MCCLELLAN. Your formal prepared statement will be placed in the record in full. You may highlight it if you wish.

Dr. POTTER. First let me say I have with me Admiral Moran and General Wilkerson, and we really do form a team from the Navy. We feel that it is necessary to have both elements of the Department of the Navy represented, Marines and our Navy.

Chairman MCCLELLAN. Very well, proceed.

Dr. POTTER. The few points I would like to highlight have to do with some of my findings on the way in which the Navy does its research and development rather than the specific programs. However, there are two specific programs that I will talk about. First, of the things that have impressed me after 6 months.

Chairman MCCLELLAN. Do I need to follow this statement?

Dr. POTTER. Not at all, sir. I will not be reading from it.

PROGRAM MANAGEMENT

For a long time the services have been accused of exercising less than good program management. I find that the Navy always in its Polaris program has had very fine program management. They have understood how to manage large technical programs and have done an excellent job and were leaders in the field back 10 or 15 years ago.

Some of that has been perpetuated in the Navy and we are now making a real effort to find officers who are qualified to manage some of the middle-range technical programs. We have commitments that they shall be left in these program management positions for longer periods of time so they can see the programs through.

Chairman MCCLELLAN. Does the Navy have trouble finding competent people for these important management positions?

Dr. POTTER. Yes, we do, Mr. Chairman.

Chairman MCCLELLAN. Can you now find them among current officers?

Dr. POTTER. We have been able to find some very good ones.

Chairman MCCLELLAN. I am referring to the commissioned officers presently in the Navy.

NEED FOR TECHNICALLY TRAINED OFFICERS

Dr. POTTER. I would like to see a larger number of technically trained officers, particularly with master's level training in engineering and technical curricula level, and in electrical or mechanical engineering.

Chairman MCCLELLAN. Do you have higher education programs in the Navy?

Dr. POTTER. We have about 400 or 500 graduates annually who receive master's degrees in engineering technical areas. The number may be a little larger, but there are not enough for our procurement activities in my opinion. I would like to see more.

NAVAL ACADEMY

Chairman MCCLELLAN. You have the Academy, of course. Would it be wise to increase the size of the Academy, or set up a special school of engineering management to educate cadets in the kind of management you need in future years?

POST GRADUATE TRAINING

Dr. POTTER. I am not talking about the bachelor's level. What I would like to see is a greater use of our Navy Postgraduate School at Monterey. That is where we have master's level technical curricula oriented toward Navy requirements.

Chairman MCCLELLAN. Off the record.

[Discussion off the record.]

Chairman MCCLELLAN. How do you acquire technically oriented officers?

Dr. POTTER. I believe one answer is to increase the number of officers given a graduate education, particularly to increase the number the postgraduate school. That is one way.

Chairman MCCLELLAN. That is to increase the number of students at Monterey?

Dr. POTTER. Increase the number and in particular increase the number in the technical and engineering curricula, not just in the business administration area.

Chairman MCCLELLAN. Does Monterey offer only business administration education?

Dr. POTTER. No, sir, they have both kinds, but I would like to see more emphasis on the technical curricula.

Chairman MCCLELLAN. Does it require a statute to control enrollment in different schools?

Dr. POTTER. No, sir. At this point I believe it takes a greater allowance of money to put the officers at Monterey to up the technical output.

Chairman MCCLELLAN. Is there no solution except by increasing the amount of money spent?

Dr. POTTER. I know of no alternative for educating these officers, because during the period that they are at the school they aren't performing line services.

Chairman MCCLELLAN. I understand, but you have a thousand presently enrolled. What are they specializing in? Is it a postgraduate course from the Naval Academy?

Dr. POTTER. Not exclusively from the Naval Academy. It provides training for officers with bachelor's degrees commissioned from other programs as well.

Chairman McCLELLAN. It involves a postgraduate course from those sources?

Dr. POTTER. It is a postgraduate education for officers who have been educated in other colleges as well, a portion of the time used to be spent in preparing them for graduate work because of their time away from undergraduate study.

Chairman McCLELLAN. Where are the officers assigned when they are up to the standard?

Dr. POTTER. Many of them go back to the fleet. They are better technically trained than they were before. I am talking about those with master's degrees that I would like to see in the program management end of the business.

Chairman McCLELLAN. How many officers are in school now?

Dr. POTTER. The output at present is about 400.

FUTURE REQUIREMENTS

Chairman McCLELLAN. How many would be required to meet the requirements of the Navy?

Dr. POTTER. I estimate that it would take about 150 more. I would like to see that number coming through, because we can do this.

Chairman McCLELLAN. Each year?

Dr. POTTER. Yes.

Chairman McCLELLAN. Do you have more than one term of school a year?

Dr. POTTER. It takes about a year and half to get clear through to a master's degree, depending on the curriculum. The classes themselves are arranged so that they occur, my recollection is about every quarter.

Chairman McCLELLAN. You have graduation periods every quarter, is that correct?

Dr. POTTER. Yes; more or less.

Chairman McCLELLAN. Approximately one-fourth of the enrolled students would be graduating each quarter.

Dr. POTTER. Yes.

Chairman McCLELLAN. You are producing now from 100 to 200 a year.

Dr. POTTER. About 400 a year.

Chairman McCLELLAN. You need twice the existing number of students?

Dr. POTTER. About 150 more.

May I make sure and check that, because I would like to come back to you with the numbers.

[The information follows:]

ENGINEERING CURRICULUM OUTPUTS

The numbers of Naval officers earning masters' degrees in engineering and technical disciplines by curriculum at the Postgraduate School are shown in the table following.

	Fiscal year—	
	1973	1974
Aeronautical engineering	70	73
Electrical engineering	98	85
Mechanical engineering	37	22
Engineering acoustics	5	5
Chemistry	8	
Computer science	30	27
Mathematics	8	2
Oceanography	36	15
Meteorology	33	22
Physics	25	25
Operations research	127	123
Subtotal	477	399
From civilian institutions	40	41
Total	517	440

TRAINING COSTS

Chairman McCLELLAN. How much is the extra cost for the graduate educations?

Dr. POTTER. The facilities are there. The cost is for faculty and there is a cost of the student's salary during his time there.

Chairman McCLELLAN. He is a commissioned officer, isn't he, when he attends the school?

Dr. POTTER. Yes.

Chairman McCLELLAN. That is an expense already incurred whether he is in school or somewhere else, isn't it?

Dr. POTTER. Yes; it is an expense occurring already.

Chairman McCLELLAN. I am referring to the actual cost to the Government to expand the school enabling it to produce technically trained officers.

Dr. POTTER. If I can separate out the cost of salaries.

Chairman McCLELLAN. Subtract the salaries.

Dr. POTTER. It is only a nominal amount for the faculty and the other expendables.

Chairman McCLELLAN. Mr. Secretary, I would like to know how critical the shortage of particular skills is, and additionally, the number of required personnel to eliminate this shortage if it exists as you indicate it does.

Dr. POTTER. May I supply those numbers, please?

Chairman McCLELLAN. Of course. If it takes a special school to train them, it looks like it may be the prudent thing for us to do. Give us some suggestions and recommendations. If a shortage of trained and competent personnel exists, it should be brought to our attention.

[The information follows:]

To increase the engineering and technical curricula by 150 students in FY 1975 require approximately $300,000 in all appropriations, exclusive of student pay and allowances. Equally important, such a change would require an increase to the student load authorization request now before the Congress and would necessitate a complete review of the graduate training reductions imposed by the Congress in FY 1974 which are now being implemented.

CONGRESSIONAL CUT IN GRADUATE TRAINING

Admiral COOKE. I don't have the exact figures, but in fiscal year 1974 our graduate training was cut about 20 percent. We had about $19 million total in the operation and maintenance budget for graduate training and this included both the postgraduate school at Monterey plus the civilian schools, the tuition we pay, and that sort of thing. That was cut 20 percent and then the total number of people enrolled was cut 20 percent. We started out on the basis of 1,500 average student load and we reduced by nearly 20 percent. Those are not exact figures but it is the order of magnitude of the graduate training program, and how much we were reduced, so we have a specific problem there. We did cut back in compliance with that.

Chairman MCCLELLAN. You cut back and maybe this action was not warranted. I don't know. But if this is really needed now, and if we are attracting from civilian sources qualified personnel to supply management requirements, then I know of no other way to acquire such personnel except to train them ourselves. Maybe there is another way but I am not aware of it. Are you?

Dr. POTTER. I believe, Mr. Chairman, you are exactly right. We must train them ourselves and rather than cut it. It is my belief we should increase the number.

QUALIFICATIONS OF POSTGRADUATE SCHOOL

Chairman MCCLELLAN. Are you presently equipped at Monterey to give naval officers this high degree of training?

Dr. POTTER. Yes. The school has been upgraded and it is now an accredited engineering graduate school.

Chairman MCCLELLAN. Is this training equivalent to private institutions?

Dr. POTTER. Yes.

Mr. Chairman, in my view they are even more competent. The engineering education is as good as they can get in almost any of the private schools, and it has particular emphasis on the peculiar needs of the Navy.

Chairman MCCLELLAN. Does this training just apply to the Navy only? Wouldn't it accommodate the Army and Air Force?

Dr. POTTER. There are some Army and Air Force officers there who are taking selected topics with the Navy, but primarily it is a Navy school. The great bulk is Navy.

Chairman MCCLELLAN. Then it is primarily just to train the management personnel for the Navy?

Dr. POTTER. Yes, Mr. Chairman.

Chairman MCCLELLAN. You may proceed; Dr. Potter.

ADVANCE PLANNING IN THE NAVY

Dr. POTTER. One other thing I wanted to comment on is the advance planning that the Navy is doing. I was quite impressed coming in from industry with the thoroughness of the exercise going through

this year. They have been in the process for 3 or 4 years now of trying to get a good 5-year plan that all hung together, so that if you did the research work, in there would be enough money in later years to do the buying, and so on.

I can report to you, Mr. Chairman, that I am quite pleased to see how far the Navy has come with it. It means that my job is very much easier knowing that we are at least pretty far down the line in a good planning process. It is not to say that it is finished. It will have to be changed and modified as experience shows. But I am very pleased they have come as far as they have.

"FLY-BEFORE-BUY" CONCEPT

There are two other aspects of the way we do our research and development business that give me a little concern, however. One of them has to do with the statements about concurrency or nonconcurrency in programs, the "fly before buy" concept. And here my worry is the following—that for a long time it was quite true, I believe that the services established introduction dates that were pretty optimistic, one which and oftentimes couldn't be met. The "fly before buy" concept which Secretary Packard introduced, was a necessary discipline. I believe I understand what he had in mind. I also sense that just about now we have come to the place where we are about to overshoot and go too far. That is just as bad as not being careful enough in getting there. It is possible to stretch the program out beyond any reasonable length. When you stretch them too far they do cost more and you wind up with a development which, instead of being say 5 years, is 7 years, and a little bit more out of date than it should be. It has not happened to us very often, but I notice in the programs that we are just beginning to start that the date of introduction has been moved out perhaps 1 year more, or 2 years more than might be reasonable.

Chairman McCLELLAN. What do you mean by introduction? Do you mean the beginning of procurement?

Dr. POTTER. Yes, or introduction into the fleet. That would be, say, 6 years instead of the 5 in which you really should be able to do it. I only pass this on as a concern. We are addressing it in the Navy on the particular programs that it applies to, but you may hear more about it as time goes on.

Chairman McCLELLAN. I subscribe to the "fly before you buy" philosophy. I have seen instances in the past where very unsatisfactory results occurred by starting procurement before the weapon was developed. I concede, however, that the requirements ought not to be too rigid. There may be occasions when there should be some exception. That is, the prospect is so reassuring that you feel like harm would come from a delay rather than from any risk involved in starting procurement. But I don't want us to revert back to the old policy of just going out and ordering on paper before we know what we are buying. I don't want any more of that.

Dr. POTTER. Mr. Chairman, I agree with that. I think 5 years ago I would have been very worried that we were moving too fast. Today I think we have about come to the right place and it is just when you get that much momentum you are inclined sometimes to overdo it.

Chairman McClellan. I can understand if you are convinced the basic technology is sound and development is only a matter of refinements, however some judgment has to be exercised and some discretion should be allowed. But basically the burden would be on those individuals who want to procure the weapon to establish its credibility before the decision is made to procure.

Dr. Potter. I had the opportunity of talking to Secretary Packard about 6 weeks or so ago on this point, and he had done an investigation—but had examined a few of our programs. He expressed this same concern that I am expressing to you, that there was a little tendency to overdo what he had said. He has a few thoughts, I think, about a clarifying sentence or two in the instructions which would put it just about back to the position you had stated, that is, be darn sure before you go ahead but let's not have undue delay.

Chairman McClellan. Once you are certain of the weapon that you are developing with only minor refinements I think you might go ahead with procurement.

All right, proceed.

NAVY LABORATORIES

Dr. Potter. There was one other point I had given in my written testimony that would be worth just a few moments, and that has to do with a relook at Navy laboratories. This is something that is always on everybody's mind. Dr. Frosch had it as one of his duties when he first came into the position. That was some years ago and it is just now time for a relook. We are trying to reorder the missions, or at least examine the missions. We are right in the middle of an inquiry which won't be finished for another several months.

I would like to make sure that the laboratory process is as good as we can get it.

There are two programs I would like to bring to your attention primarily because of some upgrading in the data that is in my own testimony of a month or so ago. I would like to verbally tell you some of the figures.

PROJECT SANGUINE

In the Sanguine program, as you undoubtedly are very aware, we had come to the state where we had potentially obligated more money than was allowed to us in 1974. We were not sure and requested some clarification on the extent of intent of Congress.

We have, because of the funding problems in this fiscal year, had to stop the program. That does not mean we would like to stop it, but we want it to stay with the clear intent of Congress and once clarified we did stop it, but it is our intention to recommence on July 1, on a much reduced program to do the following things.

PROPOSED SITES

Let me now backtrack. The States that have been thought to be good sites, such as Wisconsin, Texas, and Michigan, have all decided that, or at least the populace has decided that the amount of land required for this was really quite large and was unacceptably large. It is my belief that if we operate the present western Wisconsin test site for

some period of time just as a test, without changing its geography, or without expanding it, or in any way changing it, that we will get some very firm data on just how much land is required.

The engineering studies done in the past have been quite thorough, but the real issue about how big the antenna has to be or how many miles long, and it is many, many miles long, finally was settled by what is the electrical noise level out in the Indian Ocean or in the North Atlantic, and these are questions that have not been answered as thoroughly as one would like to get down to the last decimal point. By that I mean we have extensive measurements in one location for several years and we have a number of geographic locations but not throughout an entire year.

What I would propose to do then in 1975 would be to simply operate the existing transmitter in Wisconsin without regard to site to put receivers on 15 to 20 of our patroling submarines and go through a year in their operating areas and find out the reliability of transmission. Do we need 95 percent? Is 85 percent adequate? That kind of least number, that is, before we settle down on the question of how big a site is needed and whether and where it has to be, the very optimum.

Geographically, the reason for the choice of Wisconsin is that the underlying rock structure, the very deep underlying rock structure of 5,000 feet down and 10,000 feet down has a low electrical conductivity, that is, it really does not conduct very much, hence there are not too many losses.

Wisconsin happens to be ideal. Just across the State line in Michigan the same kind of thing applies, and to somewhat lesser degree in Texas this applies. But there are other sites which almost fill the bill, and they are distributed in the Southwest, even on present Government property at China Lake, our Naval Test Station at China Lake.

CHINA LAKE TEST STATION SITE

Chairman McClellan. Where is China Lake?

Dr. Potter. It is just up in the hills back of the coast of California and it is about 50 miles back, centered at Inyokern. Admiral Moran was the commanding officer and I am sure he can give you latitude and longitude.

Chairman McClellan. The Government owns how many acres?

Dr. Potter. A million acres.

Chairman McClellan. There would be no problem with the civilian population with regard to political opposition. Now, do you think that site is good?

Dr. Potter. It is a possible site. Without these tests I would not want to select it, but if we can operate for a year then we will have data that says it is either possible or it is not.

COST OF OPERATIONS

Chairman McClellan. What do you have in mind when you say operate for a year? What do you anticipate the cost of that to be now?

Dr. Potter. We have asked for about $13 million for next year for that operation and for buying the receivers that have to go in the ships.

There is a small radio receiver and a decoder that has to be put aboard.

Chairman McClellan. How does this operate? What is the value of it to the United States?

Dr. Potter. The value is twofold. First and primarily, or first priority for us is for the fleet ballistic missile submarines, that this becomes the method of communicating with them in the time of emergency.

VALUE OF SANGUINE

The value in Sanguine is the following: It is an extremely low frequency radio transmission but the frequency is lower than anyone ever used, about like the house current here, about like these lights. It has the property that it penetrates sea water to a considerable depth and the big gain we get in using this is to free the submarine so that we can talk to it even though it is deep. Right now the submarine has to come up. It does not break the surface but it is nearer the surface than we would like to see it.

By the time the Sanguine system can be employed in the 1980 period, we feel that the Russian efforts will have forced us to put those submarines deeper. With Sanguine we can still talk to them.

ATTACK SUBMARINE REQUIREMENTS

There is a big fallout, even though I have given first priority to the fleet, to the ballistic missile submarines, there is a big fallout to just attack submarines. These, too, can receive communication when they are deep and that means in many of their missions where they must remain quiet and stay submerged for weeks on end, they can still receive information from home. They can not talk back but can receive information from home even though they are deep and on some mission that requires that they stay deep.

So the safety of the ballistic missile fleet is one and the freedom of action for the attack submarines is another.

Technically we know of no other way of permitting those vessels to be deep and still talk to them. This turns out to be almost a sole technology for that. So we are very, very anxious that we ultimately have such a system and the object now is to continue our test program to see if we can have some freedom in site selection and get it to an area that is either totally Government-owned or small enough so that the people want it.

LONG-RANGE COST OF SYSTEM

Chairman McClellan. What is the long-range cost of such a system, assuming it is fully funded?

Dr. Potter. My recollection is about $200 million total for a semi-hardened system, for one that will stand some amount of damage from bombs. Let me see if the number is right.

Chairman McClellan. The program unit cost is $313 million?

Dr. Potter. Well, I am giving you two numbers. We have the military construction cost and also an R.D.T. & E. and at that point, yes, it is about $300 million with both of them.

Chairman McClellan. How would you know whether the submarine is getting your message? If you say they can receive it but they can't reply, what signal indicates to you they are receiving it?

Dr. Potter. In this situation with these kinds of signals they are recorded and they must pick them up. There is actually a broadcast schedule that the submarines know about.

Chairman McClellan. Yes, but there may be some malfunction and how would you know there was a malfunction if they can not reply?

Dr. Potter. Back on the beach, on the shore, you do not know. The instance of a malfunction is not known by the people on shore.

Chairman McClellan. Is this the only communications system you have in mind now for the Navy for this purpose?

Dr. Potter. No, sir. There are several other parallel systems which can be used in an extreme emergency for this purpose. They are generally used for other purposes.

SUBMARINE PROCEDURES

Admiral Cooke. Mr. Chairman, I might answer on the submarines there is a requirement for the submarines to have a signal coming in all of the time and if he does not have it, he knows there is something wrong and then it is his responsibility to make the problem known.

Chairman McClellan. How can you be assured the submarine is receiving the information you send it?

Admiral Cooke. The submarine has a signal coming in all the time. If he does not have that signal coming in, then he knows there is something wrong and he has to do something about it. He does not acknowledge each signal.

Chairman McClellan. It does have some way of communicating, doesn't it?

Admiral Cooke. Yes, sir, several different ways are required.

Chairman McClellan. In other words, unless a submarine indicates it is not receiving the constant signal, you can assume it has received the message?

Admiral Cooke. That is correct.

NEED FOR DIFFERENT SYSTEMS

Chairman McClellan. Why do we have to have so many different systems? If one works and works well, why the other?

Admiral Moran. I think the very important point is in the question you asked there, is more than one system anticipated, and this is the system that is going to control our submarines strategic weapon capability. We just have to have more than one system for that and it is anticipated the Sanguine system will be one that is constructed in a manner that is resistant to the first strike damage and if hit with a first strike nuclear weapon, we will still be able to get a message out to that deep submarine to tell him what to do with the fleet ballistic missile system. Your question about the continued communications is related to this, because if he loses the signal on this and knows that he is not receiving, he then will come up with the surface and put up the antenna on his backup system, and this is why you need a second one, to

communicate back and find out what is happening and why did he not receive the continuous signal that he received on the Sanguine system.

Chairman McCLELLAN. That would indicate to you there is some malfunction.

Admiral MORAN. If it is just malfunctioning, we will go out to him on the secondary system and tell him it is malfunctioning. If it is because a war is started he will get that message.

Chairman McCLELLAN. Would he receive that message?

Admiral MORAN. Our hope is that all of the submarines operating in deep water would get the message by the Sanguine system and that is why we wish to have it. But we do need an alternative, you are quite correct, if for some reason he does not get his regularly scheduled message and he will be listening to it all the time.

ADEQUACY OF PRESENT SYSTEMS

Chairman McCLELLAN. Do you think our communication with deep water submarines is inadequate under the present systems we have?

Admiral MORAN. The systems we have now have some measure of vulnerability to being attacked by first strike and being knocked out of communication. Survivability is the big item about the Sanguine system and the reason we are so very interested in it.

SYSTEM PRIORITIES

Chairman McCLELLAN. We all would like to have a perfect and invulnerable defense, however, priorities do have to be made.

Are there other things the Navy needs more than it needs this at comparable cost?

PRIORITY OF SANGUINE PROJECT

Admiral MORAN. Mr. Chairman, I would put the priority on this as very high in Navy's requirement. It would be in the top 20 percent of the new things we wish to acquire in support of strategic capability.

Chairman McCLELLAN. What would you give up to get it, of comparable cost?

Admiral MORAN. Well, sir, I hesitate to answer that question off the top of my head but I would like to answer that for the record.

Chairman McCLELLAN. I think you should. I am not arguing against it.

Admiral MORAN. Certainly.

[The information follows:]

Sanguine is our highest priority strategic communication R. & D. program to meet requirements for continuous communication to a submarine at [deleted]. This will remove the potential vulnerability of surface and near-surface antennas and permit the use of the designed submarine capability in speed and depth to avoid detection and attack. However, no other system exists or is under development which can provide this capability. Our investigations have clearly demonstrated that the ELF (extremely low frequency) band (below 100 Hz) offers a promising and practical means of meeting our requirements. To achieve the necessary command and control communication survivability, the Navy has investigated numerous concepts and schemes covering the entire radio frequency spectrum from ELF thru SHF and higher. We have also looked for solutions in

acoustic systems. Calculations based on actual measurements have confirmed that ELF system performance can satisfy the command and control requirement for submarine survivability.

Today we have two principal systems, for providing communications to our strategic submarines—fixed VLF, LF, and HF transmitted stations; and the Tacamo airborne VLF system. We are developing quality improvements to the Tacamo airborne VLF relay system to provide an interium survivable link for relay of emergency action messages to the SSBN's today, and will continue to do so until Sanguine becomes available in the late 1970's. Our worldwide network of fixed VLF/LF/HF stations provide near perfect reliability in the peacetime, [deleted] environment. By 1976, installation of new modulation equipment called Verdin will provide significant [deleted] improvement to the VLF/LF component of this network. However, attenuation of radio waves in seawater is an inherent limitation of VLF/LF/HF which requires the submarines to expose an antenna at or near the surface in order to receive transmissions. In addition, these systems have significant limitations in the trans- and post-attack environments in that they are easily attacked and destroyed and degraded by jamming and nuclear effects. While Tacamo airborne VLF is less vulnerable to attack and performs somewhat better in a [deleted] environment than fixed VLF stations, it imposes the same constraints on SSBN operational flexibility by requiring near-surface antenna. Improvements to these existing communications systems are included in our development program, and are vital to maintain and upgrade our existing communications systems.

The TACAMO system has been operational since 1970 at reduced force levels. We have an eleven aircraft inventory at the present time with two additional aircraft approved and under contract. Various survivability studies have indicated a force level of [deleted] aircraft is required to support the Minimum Essential Communications Network (NEECN) requirements in the late '70's or early 1980's. In order to achieve the significant improvement that we would get from the SANGUINE system, the Navy has already given up plans to increase the quantity of TACAMO aircraft to meet the above requirement, and programmed the necessary funds to develop SANGUINE. If the SANGUINE system does not come into service, we would have to increase the number of TACAMO aircraft. However, only SANGUINE can provide the capability to achieve the requirements for strategic communications which are necessary for the future. Therefore, the Navy is concentrating its effort on the SANGUINE program because of the inherent advantages of an ELF communication system and has placed the necessary resources into the budget cycle which will permit the completion of the SANGUINE RDT&E and lead to production of an operational system by 1980.

ADJUSTMENT OF PRIORITIES

Chairman McCLELLAN. But we do have to adjust priorities from time to time and we have to take it into account. There is a limit. I have suggested that maybe we could try to reduce this budget this year.

Off the record.

[Discussion off the record.]

Chairman McCLELLAN. Back on the record.

Dr. POTTER. Mr. Chairman, that really completes the topics that I wanted to bring up specially.

[Dr. Potter's statement follows:]

Dr. POTTER. I invite any questions you may have, sir.

Chairman McCLELLAN. Well, I have been off the record for a few minutes in discussions with you and I think you gathered from what I had said my personal concern about our military posture and how we must maintain sufficient strength to provide a deterrent to those who might have aggressive designs. However, at the same time I also expressed my concern to you that we must be prudent and we must be diligent and aggressive in trying to eliminate waste and extravagance in the military. We must try to be wise in the selection and determina-

tion of priorities, and I think it is encumbent upon the military, the Defense Department, and the Congress to try to cooperate and work together in finding the correct answers to our problems.

PREPARED STATEMENT

Dr. Potter's statement, along with additional questions to be answered, will be placed in the record at this point.

[The statement and questions follow:]

BIOGRAPHICAL SKETCH OF DR. DAVID S. POTTER

Dr. Potter was born January 16, 1925, in Seattle, Washington, and served as an officer in the U.S. Navy from 1943 to 1946. He received a B.S. degree in physics from Yale University in 1945 while participating in the Navy Group Training Program, and was awarded the PhD degree in physics by the University of Washington in 1951. He was an Atomic Energy Commission Fellow at the University of Washington, 1949–50.

Following his release from the Navy in 1946, Dr. Potter joined the staff of the Applied Physics Laboratory of the University of Washington, and in 1955 became the Assistant Director of the Laboratory. He held this position until joining the General Motors Corporation in 1960. Dr. Potter has held senior research, development, and engineering positions in three major areas of interest with GMC; ocean sciences, electronics, and gas turbine engines. His GMC positions included: Head of the GM Defense Research Laboratories, Santa Barbara, California; Chief Engineer of the Milwaukee operations of Delco Electronics; and Director of Research of Detroit Diesel Allison Division, Indianapolis.

Dr. Potter is a member of the Advisory Committee for Planning of the National Science Foundation; member of the Board of Advisors of the Naval Postgraduate School, and member of the Advisory Panel of the National Sea Grant Program. He has published more than thirty professional papers, and is a member of several professional societies; The Marine Technology Society, the American Physical Society, the American Institute of Aeronautics and Astronautics, and the American Acoustical Society. He has served as a member and Chairman of the Board of Directors of the University of California Santa Barbara Affiliates and as a member of the Board of Directors of the National Oceanography Association. In California Dr. Potter served under Governor Brown as a member of the Governor's Advisory Commission on Ocean Resources, and he was Chairman of this same group under Governor Reagan when the name was changed to the California Advisory Commission on Marine and Coastal Resources. Dr. Potter is a member of the National Academy of Engineering.

Also active in civic affairs, Dr. Potter has been a Director of the American Red Cross and member of the Chamber of Commerce at Santa Barbara, California. Additionally, he was a Director of the Goleta Valley, California, Chamber of Commerce from 1960–1965.

Dr. Potter currently resides in McLean, Virginia, with his wife, the former Juanita Mae Beck of Seattle, Washington, and their son William. The other Potter children are Diana, who is married and lives in Wisconsin; Janice, who attends Law School at the University of California in Berkeley; and Thomas, a student at Yale University.

Dr. Potter was sworn in as the Assistant Secretary of the Navy for Research and Development by the Secretary of the Navy on September 14, 1973.

PREPARED STATEMENT

Dr. POTTER. Mr. Chairman, Members of the Committee, it is a pleasure to appear before this Committee for the first time as the Assistant Secretary of the Navy for Research and Development. My purpose today is to present to you the FY 1975 program and budget for RDT&E, Navy and to tell you something of what we have done and what we propose to do in the future.

With me are my principal assistants including Vice Admiral W. J. Moran, the Director of Research, Development, Test and Evaluation in the Office of the Chief of Naval Operations; and Rear Admiral M. D. Van Orden, Chief of Naval

Research. Appearing for the first time are Brigadier General H. L. Wilkerson who last fall relieved BGEN Donald Brooks as Deputy Chief of Staff (Research, Development and Studies), Headquarters, U.S. Marine Corps; and Rear Admiral F. C. Jones who relieved RADM Davies in December as Chief of Naval Development.

With the assistance of these gentlemen and other members of my party, I hope that I will be able to respond to the majority of your questions. In consonance with your request, I will make a short statement in order to allow maximum time for discussion. You will understand that in such a brief statement, much of the detail on individual programs must be omitted. Such detail will be found in the statement I have submitted for the record and in the Supporting Data Books provided separately.

With your permission, Mr. Chairman, I will now proceed with my statement.

FY 74/75 RDT&E, N Fiscal Summary

The FY 1975 request for New Obligational Authority of $3,264.5 million includes $2.6 million for research undertakings funded by the Special Foreign Currency Program. Shown below is the RDT&E, N program for FY 1974 and 1975 divided among the eight budget activities which are the basic subdivisions of the President's Budget.

R.D.T. & E., N PROGRAM BY BUDGET ACTIVITY

[Dollars in millions]

	Fiscal year 1974	Fiscal year 1975	Increase	Percent
1. Military sciences	$134.4	$138.3	+$3.9	+$2.9
2. Aircraft and related equipment	269.5	349.3	+79.8	+29.6
3. Missiles and related equipment	992.2	1,152.6	+160.4	+16.2
4. Military astronautics	52.9	38.7	−14.2	−26.8
5. Ships, small craft, and related equipment	635.2	727.5	+92.3	+14.5
6. Ordnance, combat vehicles, and related equipment	84.9	92.3	+7.4	+8.7
7. Other equipment	417.6	479.3	+61.7	+14.8
8. Programwide management and support	156.7	283.9	+127.2	+81.2
Total	2,743.4	3,261.9	+518.5	+18.9

R. & D. Funding

Chairman McClellan. Compare the amount of funds spent for Navy R&D for the last 10 years and what percentage it represented of the total Navy and DoD budget.

Dr. Potter. The following is a table reflecting the amount of funds spent for Navy RDT&E for the last ten years and the percentage it represented of the total Navy and DoD budget:

EXPENDED FOR NAVY R.D.T. & E. DURING YEAR SHOWN

Fiscal year	Thousands	Percent of total Navy budget	Percent of total DOD budget
1964	$1,577,846	10.6	3.2
1965	1,293,639	8.8	2.6
1966	1,406,832	7.8	2.3
1967	1,791,101	8.7	2.5
1968	2,002,627	9.8	2.6
1969	2,045,479	9.7	2.7
1970	2,084,248	9.5	2.8
1971	2,404,606	11.3	3.4
1972	2,426,632	10.3	3.2
1973	2,404,199	9.5	3.1
In addition, as comparison of the fiscal year 1974 and 1975 new obligational authority is as follows:			
1974 approved (excludes supplemental request)	2,675,588	10.6	3.5
1975	3,261,933	11.3	3.6

Chairman McClellan. Proceed.

Dr. POTTER. You will note that there is an increase of $518.5 million between 1974 and 1975. This increase is brought about primarily in four accounts.

MANAGEMENT AND SUPPORT

The largest percentage change that is 81.2 percent, occurs in Item 8, "Programwide Management and Support." This change of $127 million is largely due to the new program element for Test and Evaluation Support (P.E. 65864N). In FY 1974, this T&E Support was funded in other budget activities and in other appropriations, and as such, is not an increase in the usual sense.

P.E. 65864N PROGRAMWIDE MANAGEMENT AND SUPPORT

Chairman MCCLELLAN. Explain in greater detail "P.E. 65864N Programwide Management and Support".

Dr. POTTER. In fiscal year 1975, Program Element 65864N provides for the institutional, or indirect, costs of test and evaluation (T&E) support for the major Navy T&E activities, with a total estimate of $135.7 million. The composition of the element in fiscal year 1975 is the result of a new funding policy directed by the Secretary of Defense.

I would like to give a little of the background of that policy. A DOD Study Group was established at the direction of Secretary Packard in 1971, following intense interest on the part of the Congress in how the Services were conducting test and evaluation of their weapons systems. The Secretary of Defense was particularly interested in what resources were available for T&E in the Department of Defense and whether all project managers had an equal opportunity to use the best facilities available for T&E of their particular weapons systems.

The Study Group looked at nearly 100 activities that conduct T&E for the military services, but narrowed down to 26 major activities for designation as the T&E Facilities Base. The Study Group report, which was published in May 1972, recommended that direct cost (and direct cost only) be charged to the users at the major T&E activities.

Deputy Secretary of Defense Memo of 19 January 1973 directed the military services to implement the uniform funding policy in FY 1975 at 19 of the major T&E activities with direct costs only be charged to the users, and the indirect costs to be borne by the management appropriation on an institutional basis. The 26 major T&E activities designated by the Study Group included eight Navy activities, and the new uniform funding policy was directed for application in FY 1975 at five of them, as follows:

Navy Air Test Center (NATC) Patuxent River, Maryland
Naval Air Propulsion Test Center (NAPTC), Trenton, New Jersey
Pacific Missile Range (PMR), Pt. Magu, California
Naval Weapons Center (NWC), China Lake, California (ranges only)
National Parachute Test Range (NPTR), El Centro, California (formerly the Naval Aerospace Recovery Facility)

Navy, for the past several years, has been proceeding with DoD policy which required that full costs of all service programs, including T&E costs, be identified to the benefiitting weapons system project to the maximum extent possible. Therefore, Navy has had all its major RDT&E activities (with the exception of the Pacific Missile Range) operating under Industrial Fund or RMS (Resources Management System) financial systems which pass on indirect (overhead) costs, as well as direct costs, to all customers. In light of this, the new OSD uniform funding policy required a substantial realignment of funds, both within Navy and between Navy and the Army and Air Force. For example, at the four major Navy T&E activities where full costs have previously been charged to the users, the indirect costs in FY 1975 will be funded in the T&E support element rather than in the users accounts (running the full range of many Navy RDT&E program elements, Navy procurement accounts, and Army and Air Force accounts). Therefore, the user accounts had to be adjusted so that only funding for direct costs will remain with the users for use in paying their T&E bills in FY 1975. Conversely, The Pacific Missile Range has been a designated National Range and, therefore, customers were previously provided normal T&E services without charge. All costs of range operations and instrumentation improvements have been borne by the PMR program element (PE 65351N) in Navy's RDT&EN budget, except for the Barking Sands Underwater

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Range in Hawaii, which has been funded by Operation and Maintenance, Navy, for operations costs and Other Procurement, Navy, for equipment costs. Under the new uniform funding policy, the indirect (overhead) portion of the operations costs and all of the instrumentation (equipment) costs will be funded in Program Element 65864N, Test and Evaluation Support, while the direct costs will be paid by the users, who are funded in many program elements of the Army, Navy, and Air Force RDT&E budgets as well as in procurement appropriations. So, here again, a realignment of funds was necessary to provide the required direct cost funding to the users of PMR.

In summary, Budget Activity 8, Programwide Management and Support, reflects a sizable increase which has resulted from the new T&E funding policy. We are naturally concerned about this, since this is an area that is sometimes looked upon as "overhead" that doesn't contribute anything tangible to our R&D effort. However, in order to implement the new uniform funding policy, it is necessary to accept this increase in this budget activity of RDT&EN, knowing that it provides essential support to test and evaluation of weapons systems and that other accounts have been reduced accordingly.

The following table shows the effects of the new uniform funding policy at the five major Navy T&E activities within the RDT&EN appropriation for FY 1975. Program Element 65864N, T&E Support, which has all the indirect costs for the five major T&E activities, as well as the instrumentation equipment costs for the Naval Air Test Facility (Ship Installations), Lakehurst, N.J., totals $135.7 million for FY 1975.

The table also shows the funding realignments from other appropriations, which were included in the $23.4 million increase to RDT&EN. In addition to the adjustments from other Navy appropriations (Aircraft Procurement, $9.8 million; Operation and Maintenance, $6.9 million; and Other Procurement, $3.9 million), net adjustments of $1.7 million from the Air Force and $1.2 million from the Army were made, as shown.

UNIFORM T. & E. FUNDING POLICY—SUMMARY OF FISCAL YEAR 1975 FUNDING REALINEMENTS

[In thousands of dollars]

	Indirect costs		Direct costs		
	Navy activities	Army and Air Force activities	Transferred to R.D.T. & E., Navy direct programs	Transferred to non-R.D.T. & E., Navy direct programs	Total
Adjustments—Appropriations other than R.D.T. & E., Navy:					
Aircraft procurement, Navy	−11,235			+1,430	−9,805
Operations and maintenance, Navy	−7,870			+1,010	−6,860
Other procurement, Navy	−3,892			+21	−3,871
Army appropriations	−201	+440	−1,505	+66	−1,200
Air Force appropriations	−1,648	+204	−1,080	+812	−1,712
Total, other appropriations	−24,846	+644	−2,585	+3,339	−23,448
Adjustments—R.D.T. & E., Navy:					
65351N—PMR	−65,000		−2,849	−2,119	−69,968
65851N—Laboratory and facilities support	−15,268		+10		−15,258
65862N—Instrumentation and equipment	−10,460				−10,460
65863N—Aircraft flight-hours	−2,946		−2,266	−1,220	−6,432
Other R.D.T. & E., Navy elements	−17,131	−644	+7,690		−10,085
65864N—T. & E. support	+135,651				+135,651
Total, R.D.T. & E., Navy	+24,846	−644	+2,585	−3,339	+23,448

Chairman McCLELLAN. Proceed.

MISSILES AND RELATED EQUIPMENT

Dr. POTTER. The largest dollar increase, that is $160 million, is in the category of "Missiles and Related Equipment" and is due almost entirely to the strategic programs of TRIDENT and the Submarine Launched Cruise Missile.

Other Categories

The increase in "Aircraft and Related Equipment" and also in "Ships and Small Craft" are important increases in order to provide better platforms for future naval weapons systems.

Better Platforms for Future Naval Weapons Systems

Chairman McClellan. What do you mean by "better platforms for future naval weapons systems"?

Dr. Potter. By better platforms I mean advanced ships such as the Surface Effect Ship and the Hydrofoil and improved aircraft such as the V/STOL and VFX. These modern vehicles or platforms are necessary to replace those currently in the inventory if the Navy is to continue to fulfill its mission.

Chairman McClellan. Proceed.

Dr. Potter. The large decrease in "Military Astronautics" is due primarily to a reduction in the R&D portion of the Satellite Communications program, which will go into production in FY 1975.

Cost of Satellite Communications

Chairman McClellan. How much to date has been spent on the Satellite Communications program?

Dr. Potter. As of July 1, 1974, $203.88 million of Navy funds will be obligated for the FLTSATCOM program. This represents funds authorized for three fiscal years, beginning with FY 1972 when the program was approved through FY 1974 We have also been active in joint, multi-service satellite projects such as TACSATCOM and the Defense Satellite Communications System. Some of these go back as far as FY 1964. The aggregate of funds expended for these projects from FY 1964 through FY 1974 is $104.60 million.

Chairman McClellan. Proceed.

More Modern Platforms

Dr. Potter. As you can see, we are accenting the development of ships and aircraft in order to provide modern platforms for the Navy of the Eighties. In the long term, it is not wise to allow Research and Exploratory Development to languish, but we believe that it is essential for us to accent other portions of our programs at this time.

Allocations by Budget Categories

A second way of looking at this budget is to examine the allocation by the budget categories used by the Department of Defense. These categories show the emphasis by the stage of development rather than by weapon or mission categories.

R.D.T. & E., N. BY PROGRAM CATEGORY

[Dollar amounts in millions]

	Fiscal year—			
	1974	1975	Increase	Percent
1. Research	$115.9	$118.2	+$2.3	+2.0
2. Exploratory development	292.4	293.9	+1.5	+.5
3. Advanced development	558.7	781.6	+222.9	+39.9
4. Engineering development	1,038.8	1,282.2	+243.4	+23.4
5. Management and support	244.7	304.0	+59.3	+24.3
6. Operational development	492.9	482.0	−10.9	−2.2
Total	2,743.4	3,261.9	+518.5	+18.9

Categories Defined

Chairman McClellan. Provide a definition for each of your program categories.

Dr. Potter. The six categories used in the Department of Defense are:

1. *Research*—Includes scientific study and experimentation directed toward increasing knowledge and understanding in those fields of the physical, engineering, environmental, biological-medical, and behaviorial-social sciences related to long-term national security needs. It provides fundamental knowledge for the solution of identified military problems. It also provides part of the base for subsequent exploratory and advanced developments in Defense-related technologies and of new or improved military functional capabilities in areas such as communications, detection, tracking, surveillance, propulsion, mobility, guidance and control, navigation, energy conversion, materials and structures, and personnel support.

2. *Exploratory Development*—Includes all effort directed toward the solution of specific military problems, short of major development projects. This type of effort may vary from fairly fundamental applied research to quite sophisticated breadboard hardware, study, programming and planning efforts. It would thus include studies, investigations and minor development effort. The dominant characteristic of this category of effort is that it be pointed toward specific military problem areas with a view toward developing and evaluating the feasibility and practicability of proposed solutions and determining their parameters. Program control of the Exploratory Development element will normally be exercised by general level of effort.

3. *Advanced Development*—Include all projects which have moved into the development of hardware for experimental or operational test. It is characterized by line item projects and program control is exercised on a project basis. A further descriptive characteristic lies in the design of such items being directed toward hardware for test or experimentation as opposed to items designed and engineered for eventual Service use.

4. *Engineering Development*—Include those development programs being engineered for Service use but which have not been approved for procurement or operation. This area is characterized by major line item projects and program control will be exercised by review of individual projects.

5. *Management and Support*—Includes research and development effort directed toward support of installations or operations required for general research and development use. Included would be test ranges, military construction, maintenance support of laboratories, operations and maintenance of test aircraft and ships and studies and analyses in support of the R&D program. Costs of laboratory personnel, either in-house or contract-operated, would be assigned to appropriate projects or as a line item in the Research, Exploratory Development, or Advanced Development Programs areas, as appropriate. Military Construction costs directly related to a major development program will be included in the appropriate element.

6. *Operational System Development*—Include research and development effort directed toward development, engineering and test of systems, support programs, vehicles and weapons that have been approved for production and Service employment. This area is included for convenience in considering all RDT&E projects. All items in this area are major line item projects which appear as RDT&E Costs of Weapons Systems Elements in other Programs. Program Control will thus be exercised by review of the individual research and development effort in each Weapon System Element.

New Navy Programs

Chairman McClellan. List for us all the new Navy programs for FY 1975, including their element numbers.

Dr. Potter. The following is a list of new starts for FY 1975.

(The information follows:)

NEW STARTS FISCAL YEAR 1975

Title	PE	PROJ
Adv A/C elect. system	63202N	W45X1
Lift plus lift-cruise proto	63258N	W11W1
RECCE POD	63261N	W36X8
VP ASTACS update	64219N	W21X9
HSX	64262N	W21X7
Fighter prototype	64263N	W1633
Extended range project	63301N	U1427
SEW	63353N	W11A1
Surface missile guidance	63366N	U1771
Standard missile warhead	64365N	U1752
Classic saltbush	31011N	X3687
Advanced lightweight torpedo	63553N	U2247
Sub. atmosphere cont. system	63561N	S4642
Tactical combat system development	63582N	S46X4
Imp. SSBN	63588N	S4667
Concol. tele system	64510N	X32B2
Escort C² system	64518N	S31X5
RECO	63601N	U2520
Mob. SAM system	63606M	C1703
Advanced gun weapon system ammo	63609N	U12X7
LWICG ammo	63609N	U12X8
LWMODGFCS	63652N	U12X4
Advanced weapons FCC	63652N	U12X5
Advanced gun weapon system	63653N	U12X9
Integrated small craft weapon system	63653N	U1413
Quality control and monitor system	28010N	X32W6
Navy access switch	28010N	X32W8
Fuel cell power system	63702N	S4603
Pontoon causeway	63705N	Y41X5
Containership offload	63705N	Y41X6
NUC surv NAV COMM	63714N	X48X1
Radio IsoTherm generator	63724N	Y41W1
Lt refined liquid fuel for ship/AC	63724N	S41X9
IR search and track	63797N	X33X6
Ship energy conserv	64710N	S41W2
Mine and booby trap C/M	64765M	C4110
Medium suction pump	64771N	M4322
For weapon evaluation	64793N	U47X2

Comparison of U.S.-Soviet R&D

Chairman McClellan. How do we compare with the Soviets in their Navy R&D program?

Dr. Potter. A comparison of Soviet and U.S. RDT&E necessarily depends on Soviet observables, i.e. input to the process in funds, manpower and other resources, size of facilities, and new systems entering the Soviet fleet. The following examples are indicative of the R&D required. (Force levels are not considered.)

The R&D budgets of both the U.S. and the USSR increased markedly from about 1950 to 1965. During this period the U.S. budget exceeded the USSR budget both in the amount of RDT&E funds and in the observable results of such expenditures as the number of new military weapons systems and components. The U.S. budget began to level off in 1965 while the USSR budget continued to increase, markedly so after 1967. With adjustments for the effect of inflation, it appears that the Soviet R&D budget began to surpass that of the U.S. in about 1968 and still does so.

The USSR had more scientists and engineers than did the U.S. by the late 1960's. Parity was achieved by the Soviets in 1966 in number of engineering and science Ph.Ds produced. Numerical superiority of Soviet manpower is in engineering rather than the sciences. With the priority and resources commitment to the military, a proportionally larger number of engineers and sciences are committed to Soviet military R&D.

Comparison of many new U.S. and Soviet materials suggests that the U.S. leads in most major fields. The Soviets excel in some areas such as [deleted] and [deleted]. Soviet capability is improving rapidly and will soon achieve comparability with that of the U.S.

The Soviets deploy [deleted] weapons at about the same time as the U.S.

The Soviets are continuing to develop anti-shipping missiles. It is believed that requirement for attack capability against carriers caused the initiation of this program, but these missiles now give the Soviet Navy the ability to challenge all U.S. surface warships. The U.S. is now developing an anti-shipping missile in response to the growing Soviet navy force levels.

Review of research facilities indicates that each expanded rapidly during the late 1950's and early 1960's, with the expansion rate diminishing in the late 1960's. At the present time, with minor exceptions, little expansion is noted. It is believed that this indicates the level of Soviet naval R&D.

R&D Personnel Manning

Chairman McClellan. How many civilians and military personnel work directly or indirectly on Navy R&D programs?

Dr. Potter. The estimated numbers of personnel to be employed at RDT&E, N activities in the FY 1975 budget are as follows:

Type of personnel	Estimated total fiscal year 1975 man-years	Man-years in support of R.D.T. & E.N. work	Man-years in support of other work
Civilian	40,292	26,931	13,361
Military	6,651	6,392	259

Chairman McClellan. Proceed.

Trends in R&D

Dr. Potter. These figures illustrate a trend in RDT&E which over the last decade shows an increasing emphasis on Advanced and Engineering Development. For example, in 1965, about 33 percent of the RDT&E,N program was devoted to Research and Exploratory Development and 20 percent to Engineering and Advanced Development. Ten years later, in 1975, approximately 13 percent is programmed for Research and Exploratory Development and 63 percent for Engineering and Advanced Development.

In the FY 1974/75 time period, Category 3, Advanced Development, reflects an increase of $222.9 million (about 40 percent); and Category 4, Engineering Development, an increase of $243.4 million (about 25 percent).

The increase in Advanced and Engineering Development is primarily the result of several programs attaining their status in the dynamic development process. Examples of these are: the Submarine Launched Cruise Missile; TRIDENT; Ship Contract Design; AEGIS; ASW Surveillance; and commencement of programs for the VFX and HSX advanced aircraft and an Improved SSBN.

It is important to note that Category 1, Research, remains essentially level funded with an increase of $2.3 million (two percent); and, similarly, category 2, Exploratory Development, remained essentially constant with an increase of $1.5 million (one-half percent).

The increase of $59.3 million (about 25 percent) in Category 5, Management and Support, is due to the realignment of T&E Support within the RDT&E,N appropriation and the transfer of T&E costs from other appropriations.

III. MANAGEMENT OF R&D PROGRAMS

The Navy/Marine Corps research and development efforts are designed to give us essential options for the future. The nature of the process is such that we must view the productivity from several vantage points, for example:

The Advanced Development and later full-scale Engineering Development phases are where we take the new principles and combine them in a systematic way to produce a total weapon system. This phase often takes five to eight years.

The Research and Exploratory phase, where we devise these new principles and convert them into Engineering terms, adds approximately five years for a total of about 13 years from an idea to operational utility.

System Development Cycle

Chairman McClellan. Explain for us the development cycle of a system and when it moves from one category to another.

Dr. Potter. The development cycle of a system is divided into five phases the first three of which are roughly equivalent to the 6.2, 6.3 and 6.4 programs.

a. *Conceptual phase.*—This first phase in the system development cycle is conducted at the discretion of the Department of the Navy without specific approval by OSD. During this phase, the technical, military and economic bases for an acquisition program are established through comprehensive systems studies and experimental hardware development and evaluation. The conceptual phase is highly iterative. Its stages overlap rather than occurring sequentially; however, flowing from interacting inputs of operational needs and technology, generally the following stages occur:

Identification and definition of conceptual systems Analysis (threat, mission, feasibility, risk, cost, tradeoff, etc.)

Experimentation and test (of operational requirements, key components, critical subsystems and marginal technology).

The outputs of the Conceptual Phase are alternative systems (including a preferred system) and their associated program characteristics (cost, schedules, and operational parameters) based on a combination of analyses, experiments and test results.

Formal conceptual phase activity generally terminates with proposal of a "system option".

In practical application then, the Conceptual Phase includes the early conception of new systems (which help provide focus for Exploratory Development planning) and the program execution required to provide the technology necessary to make the concept technically feasible.

b. *Validation phase.*—This is the phase in which the major program characteristics (technical, cost and schedule), through extensive analysis and hardware development, are validated and if often identified with Advanced Development. It is preferred to rely on hardware development and evaluation rather than paper studies, since this provides a better definition of program characteristics, high confidence that risks have been resolved or minimized and greater confidence in the ultimate outcome. In an idealized case, this phase ends when a "brass board" model has been demonstrated successfully.

c. *Full-scale development phase.*—During this phase, the weapon system including all of the items necessary for its support (training equipment, maintenance equipment, handbooks for operation and maintenance, etc.) is designed, fabricated and tested. The intended output is a "hardware model" whose performance and reliability has been proven experimentally and the documentation needed to produce for inventory use. An essential activity of the development phase is test and evaluation, both that conducted by contractors and that conducted by the Service. This phase is equivalent to Engineering Development.

d. *Production phase.*—During this phase the weapon system, including training equipment, spares, etc., is produced for operational use.

e. *Deployment phase.*—During this phase, the weapon system is provided to and used by operational units.

Chairman McClellan. Proceed.

Dr. Potter. Accomplishment of these tasks depends, to a first approximation, upon the Nation's technological capability, a capability which is found in the universities, industry, and in Government and independent laboratories. The Navy's RDT&E efforts are, and must be, comprehensive since we must deal with land, sea, air and undersea problems to contribute to the desired national capability.

Efforts to Improve Quality

In consonance with our objective to improve the overall yield of our RDT&E efforts, we have taken several steps during the past year which I believe are significant. These efforts, taken together, are designed to improve the technical quality and end use utility of our fielded equipments in the near term while providing, through an intensive Research and Exploratory effort, the longer term improvements that are required.

Research Advisory Group

Specifically, in the Research area (that is the 6.1 area), the Chief of Naval Research has established an Advisory Group on Research made up of scientists drawn from the systems commands, the Bureau of Medicine and Surgery, the Office of Naval Research and the Naval Research Laboratory, which is the largest research performer among the Navy laboratories. The Group is now applying their collective experience in the process of insuring the quality of our longer term Research efforts. Their reviews of ongoing and planned efforts are resulting in improved direction of our research efforts to better satisfy the long term requirements of the Navy.

Advisory Group Membership

Chairman McClellan. Provide a list of the membership of this Avisory Group and where they are employed.

Dr. Potter. Membership of the Research Advisory Group is comprised of senior R&D managers from specific organizational units of naval activities as follows:

Office of Naval Research

Marine Corps—Deputy Chief of Staff, Research, Development and Studies

Naval Air Systems Command—Assistant Commander for Research and Technology

Naval Electronics Systems Command—Research and Technology Directorate

Naval Facilities Engineering Command—Research and Development Directorate

Naval Ordnance Systems Command—Research and Technology Directorate

Naval Ships Systems Command—Research Directorate

Bureau of Medicine and Surgery—Assistant Chief for Research and Military Medical Specialties

Naval Research Laboratory

Chairman McClellan. Proceed.

Industrial Independent R&D

Dr. Potter. In the important area of Industrial Independent Research and Development programs, our participation has been expanded and intensified by involving more scientists and engineers from each of our laboratories. These practitioners thus can ensure a more cogent review as well as provide an essential link with defense industry efforts.

Industrial Independent Research

Chairman McClellan. Explain "industrial independent research." What funds are we spending for these programs?

Dr. Potter. Industrial independent research and development (IR&D) is that technical effort by a DoD contractor which is not sponsored by, or required in performance of, a contract or grant and which consists of projects falling within the following three areas: (1) basic and applied research, (2) development, and (3) systems and other concept formulation studies. IR&D effort shall not include technical effort expended in the development and preparation of technical data specifically to support the submission of a bid or proposal.

The cost of IR&D effort is charged as an item of overhead expense to all existing DoD contracts.

Chairman McClellan. Proceed.

Effectiveness of Weapons Systems

Dr. Potter. The effectiveness of the Navy/Marine Corp weapons and systems is largely dependent upon the capabilities of our officers and enlisted personnel. The advances in technology and the requirement to operate naval systems all over the world make it necessary that we vitalize our personnel research efforts. The first steps have now been taken. We have formed a new Navy-wide research center in San Diego, California, called the Navy Personnel Research and Development Center. To accomplish this, we disestablished two personnel research laboratories and transferred selected personnel to the new center.

In the area of incremental funding, we have reviewed our major programs in RDT&E to determine the amount of funds for which costs would not be incurred by the end of the fiscal year in which they are to be appropriated. In consonance with our mutual desire, this budget request does not include funds planned to be incurred after the end of the fiscal year except in a few instances.

Control of Costs

The effort to gain control over our development and eventual procurement costs has progressed well during the past year. This includes attention to high-value currently deployed systems such as the *F–4J*; systems now in Engineering Development including the *Vulcan/Phalanx Close-In Weapon System;* and systems for the future such as the *Thrust Augmented Wing*, which is the advanced development prototype VSTOL aircraft. Here the efforts are guided by thresholds in minimum performance and fully installed and operating unit cost ceilings. The project manager thus is able to make needed tradeoffs to control both cost and performance.

IV. REVIEW OF NAVY RDT&E PROGRAMS

In the remainder of my statement, I plan to provide an overview of our ongoing as well as planned programs. To accomplish this, I have selected programs from the several warfare areas which best illustrate the principal thrust of our effort. The details on all the programs will be provided through discussion and in the supporting material submitted for the record.

Summary

A number of our programs have made significant progress during the past year and provide the basis for the continuing efforts to be funded by this and later year requests. The following are highlights from some of our major programs.

HARPOON

The *HARPOON* is a 60nm anti-ship weapon capable of launch from air, surface and subsurface platforms. A launch test vehicle has recently been successfully fired from a box launcher aboard the hydrofoil HIGHPOINT (that is the PCH–1). The ship was foilborne at over 40 knots at the time. During FY 1975, our development test program will be intensified.

Active Standard Missile

The *Active STANDARD*, a member of the modular STANDARD missile family, completed its validation phase with three successful shots against ship targets. This [deleted] range active radar missile is now progressing into the first phase of Engineering Development and we expect in FY 1975 to proof-test some 18 additional rounds against representative ship targets from fleet combatants.

AEGIS

The *Aegis* surface warfare system has completed its land-based testing which demonstrated all aspects of the basic system exclusive of missile firing. In October, the SPY–1 radar at the land-based test site in Morrestown, N.J., tracked an air target near the USS FARRAGUT (DLG–6) and designated accurate target information to the missile tracking radars on the guided missile ship at sea some miles away. These tests, conducted off the Delaware Capes, demonstrated the flexibility and versatility of the system. The AEGIS has since been installed on the USS NORTON SOUND and will be operating in an ocean environment this spring and will continue such operation during FY 1975. The DG ship design, the planned AEGIS platform, is progressing and funds are requested in FY 1975 to intensify this effort.

Close-In Weapons Systems

The *Vulcan/Phalanx Close-In Weapon System* (CIWS) Engineering Development Model has been installed and under test for some time on the USS KING

(DDG–3). The tests aboard KING of this closed loop system have resulted in 15 successful engagements out of 16 target presentations. Increasingly more difficult tests using live targets against a system installed on an unmanned remotely controlled barge are planned for FY 1975. The Engineering Development of the shipboard design is progressing with attention to reliability and maintainability questions. Acquisition of the Operational Suitability Models will be intensified with the Congressionally directed reprogramming of FY 1974 funds from procurement to the RDT&E account.

S–3A

The *S–3A* airborne anti-submarine warfare system has now been introduced into the fleet. The RDT&E plans for FY 1975 cover efforts to ensure the smooth transition of this capability into fleet operations.

F–14A

The *F–14A* airborne weapon system has now entered into the first phase of naval operations. The tests this past year included what we believe is a real "first"—we simultaneously fired six PHOENIX missiles against a raid of six remotely controlled targets. There were four direct hits, one near miss and one no test. This spring, we will continue tests in the operation and maintenance area using naval support personnel. In FY 1975 we expect to continue fleet introduction and development validation.

CAPTOR

The *Captor* remote unattended anti-submarine warfare system, which uses the MK–46 torpedo as its weapon, has progressed from the Engineering Development phase into the proof-of-design test phase. The FY 1975 request will provide the units essential for this type of operational test and will lead to the follow-on production efforts.

SANGUINE

The *SANGUINE* ELF program has been reoriented in response to Congressional concern that its potential operational capability and its effect on the environment have not yet been adequately tested. The start of Full Scale Engineering Development has been deferred until such time as adequate design validation of the SANGUINE concept has been accomplished by tests of prototype hardware components which comprise the potential operational system; additional tests have been conducted with a representative number of SSBNs and attack submarines; and an accelerated R&D program on biological and ecological effects has been accomplished. The Wisconsin Test Site will be used to perform these tests on a 24 hour per day basis. We propose to begin this more intensive R&D effort in FY 1975 with the system design validation to be completed by the end of FY 1977 using the Wisconsin Test Facility as a testbed and placing R&D receivers in some submarines for propagation tests. In addition, we will continue to evaluate the more promising potential operational sites to provide the widest range of site options, and continue the biological and ecological program to firmly establish the likely impact on the environment prior to the request for system approval.

Strategic Cruise Missile

The *Strategic Cruise Missile* system has been under investigation with studies of airframe, propulsion, guidance and control. During FY 1974 we conducted manned flight tests of a terrain profiling matching system installed in an A–7 aircraft. Currently, initial design studies of airframe and associated systems are being conducted by two weapon system contractors. In FY 1975, we plan to initiate full scale Engineering development.

LAMPS MK III

The *LAMPS MK III* shipboard helicopter ASW system has demonstrated its potential capability during special tests accomplished in the P–3 testbed system. The testbed system was configured to represent the essential technical characteristics of the LAMPS MK III and operated under test conditions at sea against representative targets. We expect to select the weapon system prime contractor this spring. The FY 1975 effort includes Engineering Design, test of system elements in a helicopter and cost-performance tradeoff studies.

Thrust Augmented Wing

The *Thrust Augmented Wing* (TAW) advanced development prototype effort continues to show great promise for the future. In FY 1974 this VSTOL program demonstrated the essential thrust augmentation principles on non-flight-weight hardware. Tests this spring are expected to confirm the theory on a flight-weight wing in a captive test fixture. The FY 1975 effort will continue the construction of the two validation phase aircraft which will provide the basis for a military look at this flexible system capable of both strike and anti-air operations at speeds up to Mach Two. Engineering Development will start at a later time.

These highlighted efforts in conjunction with our overall program are designed to provide the Navy and the Marine Corps with the broad spectrum of capabilities and options essential to the attainment of our assigned tasks into the future. Pervasive throughout our developments is the requirement to provide equipments and systems which have increased field reliability, demand fewer special skills for operations and maintenance, are produced and procured at affordable prices, and place less of a demand upon our fiscal and manpower resources.

I will now address several of our research and development warfare areas with emphasis upon their major objectives and efforts.

Research and Exploratory Development

The Navy's Research programs (6.1) have a central and fundamental place in the total RDT&E scheme. Although relatively inexpensive, their value and leverage far exceed their modest cost. These programs make a major contribution to our technology base and provide unique insurance for future technological superiority. The request for FY 1975 remains at substantially the same dollar level as FY 1974.

Attaining and maintaining technological superiority ultimately depends upon the Nation's total scientific and technical posture. This includes all university research, industrial research and development, and the work done in Government and independent laboratories. But while the general health of the Nation's technology is a necessary condition for front-running defense technology, it alone is not sufficient. Defense needs are unique to the point that the Nation could seemingly be making a heavy overall investment in research and technology and at the same time have defense technology falling behind. Research essential to naval needs should not be left to chance under the assumption that a broad spectrum of national investment will automatically suffice.

Programs With Increased Emphasis

I shall now describe a few Research programs which are receiving increased emphasis. In the oceanographic area, the Navy's ocean acoustics research program is being expanded. Ocean acoustics refers to the influence of the ocean environment on underwater sound. The Exploratory Development effort in ocean acoustics is critically dependent on the basic Research programs in physical oceanography, marine geophysics and oceanic biology. With the aid of advanced development, the ocean acoustics R&D is the essential foundation on which rests underwater communications, passive and active sonar, and strategic undersea surveillance. Such effects as water motions, waves, weather, commercial shipping, underwater topography and underwater organisms on the noise and propagation of sound in the sea are investigated in respect to naval weapon system applications. Much of the research in ocean acoustics goes toward producing improved sonar performance prediction models. These models are essential for quickly and accurately converting our oceanographic knowledge into improved performance estimates for current and future sonar systems.

Mid-Ocean Dynamics Experiment

The Mid-Ocean Dynamics Experiment (MODE I), jointly supported by the Office of Naval Research and the National Science Foundation, has been the most complex, large scale, coordinated oceanographic basic Research project to date. It was the first large scale ocean basic research experiment which integrated modern computer and communications systems into its operation. Preliminary results have shown the existence of large slowly rotating pools in the upper

layers of the ocean that may dominate the way in which the ocean changes in response to large scale weather patterns. Experiments have demonstrated that water temperatures at the sea surface and at greater depth, as much as 800 meters, can be closely related. If this situation can be shown to be fairly common, then the importance of remote sensors in satellites and aircraft will increase dramatically for future Navy applications as well as oceanographic research.

New Batteries

In the energy area, I would like to mention an accomplishment which is particularly significant for Navy/Marine Corps applications. New, lightweight, high power, reliable batteries have been developed. The energy density is about five times that of zinc-air batteries. They have a very long shelf life and can operate over a wide temperature range and produce a relatively high voltage which remains constant throughout the cell's lifetime. The new cells are expected to find ready military applications in communications, submarines, mines and missiles. In addition, they will be of great value for use in portable radios, hearing aids, wrist watches and other civilian applications.

Exploratory Development Program

The Navy's Exploratory Development Program (6.2) consists of a number of comparatively small individual efforts. The Exploratory Development efforts can be subdivided into two phases—the near term where we test the feasibility of technical notions proposed for eventual operational use, and the long term where new concepts and theories are conceived and translated into engineering practice from the research findings.

Submarine Silencing

The wide range of technical warfare areas addressed include acoustic and magnetic silencing of our submarines, the improved handling of containers through the surf and over the beach, and the development of techniques to detect underwater swimmers, studies and experiments of training approaches to improve training efficiency as well as the test of concepts for weapon guidance sensors.

The past efforts have produced a number of important advances. For example, in the field of acoustical silencing of our ships and submarines, we have developed [deleted]. In the propulsion and machinery area, we have found ways of [deleted]. In the field of advanced aerodynamics, the *Controlled Circulation Rotor* program has progressed to the point of full scale design. This concept controls the effective lift of a helicopter rotor through use of coanda slots along the edges of the blade. The resultant "jet flap" provides significant improvements in lift over current blade designs and offers the additional potential of improved maintainability due to more simple hub arrangements.

Air Warfare

The major emphasis found in the Air Warfare RDT&E progress is in the area of sea control. The R&D goals are twofold—one is to answer the future requirements for specific weapons and systems; the other is to maintain a viable technology base upon which future weapons and systems developments can depend.

High Priority Programs

This shift in emphasis and the maturing of projects accounts for increases of nearly $100 million in this area over the last year. The high priority programs which will be supported include the *F–401 Engine* development and proof-test for use on future VSTOL aircraft; airborne electronic warfare systems; *LAMPS MK III;* the versatile *Thrust Augmented Wing (TAW)* advanced development prototype VSTOL; the *HARM* programmable anti-radiation missile; the *VCX* Carrier On-Board Delivery Aircraft; the *HSX* anti-submarine warfare system; and the *VFX* future fighter program.

Sea Control Mission

Naval aviation capabilities have been predominantly aircraft-carrier oriented in their contribution to control of the seas.

P3C

Chairman McClellan. What effectiveness has the P3C demonstrated in detecting and localizing submerged Soviet nuclear submarines?

Dr. Potter. Our P3 aircraft conduct several different types of operations against submarines and operate in many different parts of the world. The type and orea of operations and the type of target will all have an effect on the demonstrated performance. The most definitive data currently on hand is from 1972 Pacific P3C operations against YANKEE class ballistic missile submarines. In those operations the P3C demonstrated a capability of [deleted] percent probability of detection per search sortie. For localization capability during the same operations, the system demonstrated a capability of achieving a localization on [deleted] percent of the attempts, once a detection had been made.

Chairman McClellan. Is the Navy spending more on production of P3C aircraft than it is on improving airborne subsurface sensor systems?

Dr. Potter. Yes, and I think this would be the case for all major systems in procurement. In FY 1975, the Navy's budget request includes $151 million for P3C aircraft procurement while we are requesting $31.8 million (21%) for development of improved airborne subsurface sensors. Over the FY 1975 through 1979 period, the Navy's plans call for an average expenditure of $207 million per year on P3C procurement while the subsurface sensor development effort will average $31 million, or 14 percent.

Chairman McClellan. Proceed.

Dr. Potter. Within that general sea control mission, we are experiencing a shift in emphasis from power projection ashore to deep water sea control with the addition of ASW assets to the carrier air wing. In addition, and more profound in its implications, is the spread of naval air to more and more ships of our Navy including the Sea Control Ship and smaller combatants. In order to provide viable aircraft weapons such as HSX, VSTOL and LAMPS III to these ships, increased funding is required.

Other Programs

We also have other important programs in this FY 1975 request which will directly increase our combat capability. Among these efforts are found *TASES*, *CH–53E*, and the *Reconnaissance Pod*, to name but a few. I will discuss some of these in detail later in my statement.

Surface Warfare

Turning to Surface Warfare, there is an increase over FY 1974 of nearly $80 million. As now planned, this is the peak year with the Surface area declining gradually in the outyears. Heavy investment in this year reflects efforts in *HARPOON*, *CAPTOR*, Gunnery programs, Electro-Optics, *AEGIS*, *SES*, *CIWS*, *SM–2*, and Surface Electronic Warfare, including the *"Design-to-Price" EW Suite.*

Cost Effectiveness

The Surface Warfare RDT&E, N goals must be balanced against the relative cost effectiveness of modernization of existing platforms versus procurement of new platforms. Over the near term, our objective is to modernize the existing guided missile ships to cope with the threat and operational environment of the 1980s. We expect the Anti-Air Warfare, Surface/Undersea Warfare and Anti-Ship Missile Defense capability of existing platforms (e.g., DLG/DDGS plus DD–963, PF and PHMs) to be substantially improved through increased weapon range, significant reduction in reaction time, enhancement of command and control and force fire power coordination, improved ECM/ESM capability and an order of magnitude increases in both unit and force fire power. The keys to success in this effort are SM–2, "DTP" EW, HARPOON and *Active STANDARD*, *SPS–53/48 radar* developments, *MK–46 Torpedo* improvements and CIWS.

Long Term Objectives

Longer term objectives are to implement new ship construction programs such as the DG and DG(N) with AEGIS and complete the development of requisite options for later ship developments.

AEGIS Weapon System

Chairman McClellan. In view of the delay in deploying the AEGIS system, has the Navy made any interim decisions as to what total ship/systems package will be?

Dr. Potter. The Naval Ordnance Systems Command and the Naval Ship Systems Command are jointly developing the design of a total ship systems package, including the AEGIS Weapon System, for the new DG class ship. Concept design for this ship is complete with preliminary design scheduled to complete in October, 1974. DOD Instruction 5000.3 states . . . "When combat system complexity warrants, there will be constructed a combat system test installation wherein the weapons, sensor and information processing subsystems are integrated through their interfaces in the manner expected in the ship class . . .".

The AEGIS/DG program contains a land based facility referred to as the "Combat System Engineering Development Site" (CSEDS) to fulfill the requirements of the DOD Instruction. In this manner, the total combat system built around the AEGIS can be designed, engineered, integrated and tested. The critical path in transitioning from AEGIS development through initial ship operational capability is the development of tactical computer programs. The CSEDS provides the necessary facilities and equipment to meet this schedule pacing requirement. The CSEDS will also accommodate AEGIS integration in other ships if required.

At present, the total ship system for the DG includes the AEGIS MK 7 Mod 1 with two illuminators, one MK 26 Mod 2 Guided Missile Launching System, AN/SPS–49 Surveillance Radar, AN/SPS–55 Surface Search Radar, AN/SQS–56 Sonar, two MK 32 ASW triple torpedo tubes, HARPOON, and a LAMPS helicopter. The concept design includes space and weight for the AN/WLR–8 ECM equipment and two Close-In Weapons Systems in the current total DG ship system.

Obsolescence of AEGIS System

Chairman McClellan. What risk is there of the AEGIS system becoming obsolete before it is deployed in the fleet?

Dr. Potter. AEGIS will not become obsolete prior to deployment, or for years after that time. Technological improvements have been incorporated during the four years of engineering development based on parallel assessment, test and evaluation of new techniques as they become available. The design must constantly trade off the exotic against the producible in the engineering process. The AEGIS development project has consistently stayed with the producible in due recognition of the ill-fated TYPHON program which preceded it and which was not re-producible. AEGIS engineering has more than kept technological pace with the 5 years change in the 10C. The principle improvement under consideration at this time is the use of advanced computer programming techniques. If adopted, these techniques will reduce program cost, schedule and performance risks.

The question of obsolescence must be addressed both from the standpoint of system approach and supporting technology. From the system approach point of view, AEGIS is among the most advanced in the AAW field. The AEGIS system is based upon the use of a phased array radar to detect and track multiple targets simultaneously while directing the engagement of a significant number of intercept missiles. Design of the phased array radar was driven by requirements to:

a. Perform search and track in a single radar system.

b. Provide extremely rapid and automatic transition from detection to track.

c Provide a high track data rate to acquire and maintain track on fast maneuvering targets.

d. Provide the ability to hold hundreds of targets in track to avoid saturation by excess targets.

The radar is also capable of acquiring, tracking and controlling multiple missiles simultaneously. It can be reprogrammed relatively easily to fire emerging new type missiles. These capabilities designed into the radar system ensure freedom from obsolescence for decades to come.

Similarly, the launching system has been designed with the future in mind. Not only does it provide an extremely rapid load and fire sequence, but also it can accommodate several different missile types.

As advances are made in terminal homing technology, other forms of guidance can readily be accommodated. Active and passive seekers are examples. Considered from the standpoint of technology, AEGIS is in the forefront in many areas.

a. The forward wave crossed field tubes SFD-261 in the final power amplifier of AN/SPY-1 are among the most modern. These provide high power, high efficiency and spectral purity in a light-weight package. A further advantage is a low operating voltage which allows reduction in size and weight of insulation. These tubes have since been selected for several other applications.

b. The phase shifter and phase shifter driver of the AN/SPY-1 phased array are the most modern development for use at this frequency. The phaser design is based upon the use of a garnet material. It is controlled by a unique metered flux feedback driver. The material assembly techniques and method of driver were assessed recently by the DOD Production Engineering Services Office as the latest state-of-the-art and applicable to the Army advanced SAM-D system.

c. The CWI transmitter uses a high power TWT to produce 10 kw with instantaneous tunability over a broad band. Spectral purity requirements for CWI are extremely stringent and are met with margin in this design. The TWT has been developed by the AEGIS program and represents a first in power level at the frequency of operations.

d. The AEGIS circuits are the latest available with the requisite reliability, producibility, and application history.

e. AEGIS has utilized the latest Navy standard general purpose digital computer, the AN/UYK-7. This computer is a very well suited and capable machine.

In summary, as a system concept, AEGIS is the most modern of surface-to-air missile systems. It is implemented with up-to-date components and technology, and because of the signal and data processing techniques can accommodate change without complete redesign.

This will involve implementation of the AEGIS weapons system, integrated Automated Data Transmission (ADT), lightweight gun and fire control systems for the 1980s, advanced lightweight torpedoes and integration of LAMPS III.

Reducing Manpower Requirements

Intrinsic to all discussions of future systems, especially and including new ship developments, is the overriding concern for reducing manpower requirements.

Manning of Navy Weapon Systems

Chairman McClellan. Mr. Secretary, with increased technology in Navy weapon systems, has the number of men manning these systems been proportionally reduced?

Dr. Potter. It is difficult to relate most technology improvements directly with changes in levels of manning, although I believe that technology properly used has considerable potential for reducing the manning level of the Navy. It is the manner in which technology is used in systems design which really determines the amount of savings in this area. For instance, advances in technology have always provided visible opportunities for increases in overall weapons effectiveness, as measured by such criteria as speed, altitude, delivery range, dollars to destroy target, or minutes to perform a task. However, these potential gains in performance usually had a trade-off with another parameter such as cost, maintainability or manning level. Emphasis was usually placed on increased performance in order to respond to anticipated increased threats. However, in the past few years, greater emphasis in systems design and technology studies have been placed on cost, maintainability and manning levels. The following examples demonstrate a few of the areas in which manning levels have been reduced, some through deliberate attention to that subject.

Technology advances in shipboard main propulsion projects have made it possible to use gas turbines in the DD 963 class destroyers instead of steam turbines. This change has resulted in a decreased manpower requirement of 34 men per ship. Since 30 ships are planned for this class of destroyers, the savings Navy wide is almost 1,000 men.

Some of the objectives in the development of technology related to undersea mines are: (a) to increase the ready storage to 5 years or more (present limitation is 10 mo. to 2 years) with little or no maintenance and increase in-water life to 1 year (present in-water life is 3 mo.–1 yr.) (b) to assemble and test mines from unattended storage to combat readiness in 30 minutes (present limitation is 84 manhours). These objectives, when attained, should result in some manning level reductions.

At-sea testing was conducted to demonstrate the feasibility of reducing ship bridge manning through policy and procedure changes and through the application of off-the-shelf equipments. Pilot program ship experiences during Fleet operations indicated that a seven to ten man bridge watch (dependent upon ship types) is possible for ships other than CVAs. An eighteen man watch was recommended for the CVA due to her peculiar requirements. These levels represent a substantial reduction from conventional manning as expressed by the ship manning document. Implementation of these reductions is contingent upon Fleet endorsement.

To further reduce bridge manning to a normal 2–3 man watch, an integrated bridge system is being developed. This effort will include the fabrication, installation, and demonstration of the integrated bridge system aboard a destroyer escort–1052 class destroyer during FY 76.

An automated machinery control system will be designed for a destroyer escort–1052 class ship. A feasibility demonstration will be conducted on a destroyer escort at sea. The first phase will result in a system design package including the parts of the steam plant to be automated and expected watch-standing reductions (from 16 to 8) per watch section.

It is planned to conduct an at-sea demonstration of several concepts aimed at reducing shipboard manning in several functional areas. Concepts being developed and evaluated include:

a. Ship Controlman—Combines into one rating, under one division, all personnel who stand bridge watches. Presently being evaluated on an Atlantic Fleet Destroyer.

b. Facilities Maintenance—Application of new materials, cleaners and also training and instructions on proper use of materials and equipment.

c. Shipboard Administration—Reduction of duplicated reports, centralization of offices and computer applications.

d. Wireless Communications—Use of wirefree communications for operations, engineering and damage control to eliminate messengers and restraints of phone wires.

It is also possible, as in the case of the PF ship design, to establish manning level goals. Careful systems designs and many different technologies will assist us in trying to reach such established manning goals.

Chairman McCLELLAN. Proceed.

Dr. POTTER. The need to reduce manpower is impacting on all stages of concept formulation, design, development and implementation. In general, our designs are directed toward achieving platform capability of the future at about 30 percent of the manning of comparable ships of today, yet possessing equivalent or greater capability. Equipment designed and produced for this concept must also require minimum maintenance.

SUB-SURFACE WARFARE

In the Sub-Surface area, excluding Strategic, the objective of our R&D program in the sea control mission is to assure tactical superiority in submarine missions in the face of rapid technological advancement of threat platforms. This effort is made up of various segments such as sensor improvement, reduction of own ship detectability, passive weapon defense, weapon and weapon support improvements, mobility and endurance, and command, control and communications improvements. Representative projects are the *BQQ–5 Sonar*, rapid passive localization, submarine silencing, target strength reduction, acoustic warfare systems, *Encapsulated HARPOON*, *Integrated Attack Center*, *Natural Circulation*

Nuclear Propulsion Plant, HY–130 Steel, and the *Integrated Acoustic Communications system.* The dollars in this area are declining slightly. This is not a reflection of lack of importance, but rather demonstrates the significant impact the TRIDENT system exerts on the overall Navy R&D budget.

Ocean Engineering

Our Ocean Engineering RDT&E program is also in the Sub-Surface area. The funding level for these projects is modest, but the payoffs, which will permit us to operate more effectively in the naval environment, are of immense importance.

The major thrust of the Navy's ocean science and engineering programs can best be judged when applied to the full spectrum of the Nation's national security needs—economic and social, as well as defense. The oceans of the world play a critical role in each of these areas. Within the next decade, it is reasonable to expect an ever expanding interest in under sea technology and the ability to do useful work in the oceans in the face of growing demands for energy, foodstuffs and other vital materials. For our part, the Navy will continue to structure programs to meet those specific defense requirements inherent in our national security policy. At the same time, however, the manpower and facilities dedicated to these programs, constitute a positive asset that, when integrated into other elements of policy, directly support our national interests on a global scale.

Some projects of significant importance are *LOSS* (Large Object Salvage System), *Fuel Cell Power Source, Advanced Deep Diving Submersible, Deep Ocean Technology* and *Deep Submergence Biomedical Development.*

Strategic Program

The objective of the Strategic RDT&E program is to assure that the sea-based deterrent force remains invulnerable, effective and survivable. This year, funding for these Strategic programs increases by $185.7 million.

TRIDENT

The *Trident* strategic weapons system will embody the latest technological improvements and provide an improved ability to negate a wide spectrum of ASW threats.

In addition, improved equipments are being developed in the *FBM Systems* projects to maintain the effectiveness of the present-day Polaris and Poseidon submarines. A program encompassing all technological areas has been undertaken to analyze existing and potential threats to the sea-based deterrent force through the *SSBN Security Program.* The Strategic *Submarine Launched Cruise Missile* is being developed to diversify the U.S. strategic deterrent forces. Some other significant developments in this area are new SSBN sonars, improved navigation and missile accuracy improvements.

Communications

Efforts to upgrade and improve our secure, reliable and real time communications links with our strategic forces are reflected in programs such as *Gryphon, Hydrus* and *Sanguine.*

Command and Support

In the Command and Support area, the dollars remain nearly constant. Programs in this important area encompass *Shipboard Tactical Communication Systems; Cryptologic Activities; Satellite Communications;* and *Aerospace Ocean Surveillance.* Highlighting this area are *FLTSATCOM, Fleet Command Support* and *TRI-TAC, Navy.* These projects and others will enhance information dissemination and process, and display this vast amount of information into a readily evaluated package for the requisite force commander.

Ship Acquisition and Improvement

The Ship Acquisition and Improvement area encompasses new ship design, advanced ship developments, shipboard propulsion systems, surface platforms, ASW and undersea surveillance.

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This area contributes to the Navy sea control mission and options. For example, anti-submarine warfare operations in the generic sense may be characterized as consisting of detection, classification, localization and destruction phases. While all these functions may not be accomplished by a single platform or system, the performance of each platform/system contributes to the total effort. Our current R&D efforts address platform/system improvements that will increase capabilities in each of these functions. Examples of programs in this area include *Superconducting Propulsion Machinery, SES, Amphibious Assault Landing Craft, Improved SSBN, NATO PHM, Towed Array,* and the *Moored Surveillance System.* There is a funding increase in this area of about 60 million over our previous request.

Before leaving this area, I would like to stress the importance of the advanced ship development and ship contract design efforts. These efforts link directly with the shipbuilding program in SCN and form the basis of our evolving designs through experiment and analysis before we have to commit the ship for construction.

Marine Corps

The Marine Corps, with a research and development budget of slightly over one percent of the RDT&E, N appropriation and less than one half of one percent of the DOD RDT&E appropriation, relies heavily on other Services' developments. Marine Corps' R&D efforts are directed toward modernization and readiness—recognizing the need for innovation and imagination as well as sound fiscal planning and management.

In May 1973, a Tentative Specific Operational Requirement (TSOR) for the *Landing Vehicle Assault (LVA)* was published. Development of the LVA by the Marine Corps is in accordance with its primary responsibility for "development of those landing force doctrines, tactics, techniques and equipment which are of common interest to the Army and the Marine Corps." The LVA is the follow-on assault amphibian to the LVTP7 and is forecast for an Initial Operational Capability (IOC) of FY 1986. The Chief of Naval Material has designated the Naval Ship Systems Command as the Principal Development Activity and a development effort is now underway. The ability to move an amphibian assault vehicle such as the LVA at high speed from over the horizon, traverse a surf zone and proceed inland over marginal terrain will represent a significant technological breakthrough and will have a major impact on landing force effectiveness, doctrine, tactics and techniques of the future.

TIPI and MAGIS Programs

Operating jointly with the Air Force in the *TIPI* (Tactical Information Processing and Interpretation) *Program,* the Marine Corps has successfully met the development milestones of the Marine Air Ground Intelligence System (*MAGIS*). MAGIS should enable the combat commander to effectively utilize his personnel and weapon resources based upon integrated, real time intelligence within the overall Marine Corps Tactical Command and Control Systems (*MTACCS*) concept. Operational Test and Evaluation (OT&E) of the van-mounted initial Imagery Interpretation (*II*) segment is underway at Cherry Point, N.C. The IOC for MAGIS is FY 1976.

Position Location Reporting System

Another development under the MTACCS concept is the Position Location Reporting System (*PLRS*), a means to determine and rapidly update the geographic location of tactical ground units and supporting aircraft by means of a lightweight ground- or air-transportable location system. Upon completion, PLRS will meet the operational needs of the Marine Air Ground Task Force Commander. Two Engineering Development Models will undergo Operational Evaluation in FY 1975 and 1976 with system IOC scheduled for FY 1977.

Quadrapole Resonator

In a continuing effort to detect and destroy metallic and non-metallic mines and booby traps, the Marine Corps has sought out innovative technology. During FY 1975, prototype procurement and testing will be accomplished on the Nuclear Quadrapole Resonator (*NQR*), a device to detect uncased explosives. The NQR

effort is being undertaken in the Mine and Booby Trap Countermeasures project. This project involves monitoring U.S. Army mine countermeasures programs and the advanced development of certain other mine and booby trap detection and neutralization systems to meet Marine Corps requirements. For example, this project also provides funds for the continuation of Technical Evaluation and laboratory support of the Mass Air-Delivered Fuel Air Explosive (*MAD-FAE*) in FY 1975. Efforts will include flight, static and environmental tests as well as design review of final drawings.

Other Programs

There is a modest increase of $10 million for the final area. This area primarily encompasses logistics, human resources, medical, training, environmental protection and a newly articulated initiative—the *Navy Energy Program.*

In August of 1972, a Navy study was undertaken to assess the impact of a potential national energy crisis on the Navy and what Navy R&D could do about it. The major impact identified for the near term was the potential curtailment of naval operations if denied the opportunity for overseas purchase of fuel. Examination of what R&D should do revealed numerous programs planned or underway in other Federal agencies and private sectors. These efforts are being increased in scope based on the President's request for integrated national programs and may be further expanded by bills now pending in Congress.

Programs Related to Energy Crisis

Accordingly, it appeared prudent to limit the role of Navy R&D to sponsoring a few critical experiments that would illuminate our problems and needs to other agencies and industry and thus assist in identifying specific problems foreseen for the Navy. The most critical of these are: (1) The need for hydrocarbon fuels for an existing inventory of propulsion machinery; (2) The need for intensive conservation measures to stretch out stockpiles of existing fuels; and (3) The need to exploit alternate sources of energy for overall improvement in the energy posture of our mobile forces and remote facilities. We are conducting much research in this particular aspect of the problem.

Liaison With Industry

To facilitate this approach, a central Navy R&D office was established in the Naval Material Command under the Chief of Naval Development to carry on close liaison with industry and other Federal agencies. One of the principal activities of this office is to identify energy technology emerging from their programs which is ready for Navy exploitation and promote such exploitation through demonstration experiments. These experiments are selected to convince our engineers of the viability of solutions proposed by industry and others, as well as motivate industry to further solution of our problem. This will give us a program responsive to Navy needs while at the same time one which is fully integrated with the overall national effort.

Human Resources

In the *human resources* area, the thrust and focus of our program is to set goals with measured payoffs and to translate R&D findings into operating systems. For example, we plan to develop computerized tools for the management of manpower, contribute to hardware system design by specifying the role of people in the systems, shorten training time, and alter the student/staff ratios and design career systems which will keep good people in the service. In short, the main thrust is to develop and evaluate modern technologies that can be employed to effect needed improvements in the management, training, utilization and performance of Navy manpower and personnel.

Education and Training

The objective of our R&D efforts as related to Navy education and training is to achieve, through a rigorous instructional system design, increased individual performance minimizing cost and optimizing utilization of resources. This effort is typified by the current and projected use of simulators for training. Some

notable examples are the *Aviation Wide-Angle Visual Trainer; Inflight ASW Trainer; Mobile/Shipboard Intergrated System Trainer, Evaluator and Recorder (MISTER)*; and the *Submarine Acoustic Trainer.*

Special Activities and *Special Processes* show a generally level funding trend. Progress in this area is provided separately to you.

V. CONCLUSION

Since the start of this decade, the Navy has had as primary goals the modernization of the fleet and meeting the challenge of a burgeoning Soviet naval threat. To this end, the development programs that would provide near term improvements in surface warfare, fleet air defense, anti-submarine warfare and close-in anti-ship cruise missile defense were emphasized. I have spoken to the several programs which will provide significant improvements in these areas and will be entering service in the next few years.

The Harpoon will provide the fleet with a significant new dimension in naval warfare, the stand-off surface-to-surface missile.

The F–14A with the Phoenix missile will provide the Navy with a unique and demonstrated air defense weapon system that is unsurpassed.

The S–3A Viking is a major step forward in providing ASW protection to our task forces at sea; the BQQ–5 sonar development will insure our SSN force retains an offensive edge over Soviet submarines; and the Captor mine provides a new anti-submarine weapon which, at reasonable cost, both complicates enemy submarine operations and enhances our other ASW force capabilities.

Defense of Fleet

Defense of the fleet at sea is of major importance in view of the considerable anti-ship cruise missile capability possessed by the Soviets. The NATO Seasparrow missile system will provide a near term hard kill capability. The Vulcan/Phalanx Close-In Weapon System (CIWS) is being developed to provide a low cost, fully automatic system that can be used on all naval ships, combatant and auxiliary.

High-Low Mix

At the end of this decade and into the early years of the 1980s, programs initiated under the high-low mix philosophy and design-to-a-price will enter service. The developments reaching operational capability during this period reflect the Navy's priorities of strategic forces and sea control.

The emphasis during this time frame will be on the low side of the mix. AEGIS with SM–2 installed on DG/DGNs will complement the F–14/Phoenix and Close-In Weapon System and be a main factor in fleet defense-in-depth anti-cruise missile capability. The Sea Control Ship with a complement of highly capable ASW helicopters, HSX and VSTOL multi-mission aircraft will provide greatly increased ASW protection to the sea lines of communication.

TRIDENT

A new system, TRIDENT, will enter the Nation's strategic arsenal during this time frame. The TRIDENT system will significantly enhance the Nation's nuclear deterrent posture.

New Programs

In addition, several new programs are planned to complete development by the start of the 1980s that will enhance the Navy's overall capability on a broad front, viz: a new strategic cruise missile for submarine and air launch, jointly developed with the Air Force; improved acoustic surveillance sensors (for example, the towed array surveillance system TASS); an improved LAMPS helicopter, the MK III; integrated command and control systems such as the Tactical Flag Command Center (TFCC) and Fleet Command Support Center (FCSC); and vastly improved world-wide communications using FLTSATCOM. In electronic warfare the Navy "design-to-price" modular electronic warfare development will provide alternative electronic warfare suites tailored to the high-low mix of the force and a software reprogrammable anti-radiation missile, HARM, will provide a hard kill weapon with long operational life expec-

tancy. The advanced lightweight torpedo will provide a modern ASW weapon for our air and surface forces.

Space Technology

In the long term, the Navy will be looking toward a "new dimension" for naval warfare. Space technology, faster, more agile surface platforms and missile standoff capability will be exploited as intrinsic elements of this new dimension.

New hull forms and surface platforms such as hydrofoils and surface effect ships are being investigated as promising programs to provide the speed and agility for this new naval warfare dimension.

Satellite technology will provide another degree of freedom to the dimension. Improved and highly accurate navigation, surveillance systems, as well as communications, command and control, will be evolved from satellite capabilities.

The diminishing petroleum reserves require active pursuit of not only fuel alternatives, but alternative sources of energy such as further exploitation of nuclear power plants.

To provide the weapons for the future Navy and exploit the broader horizon provided by satellites, longer range standoff missiles will be required. New sensors wil be evolved from developments in the infra-red, dual-mode, active optical and micro-radiometry developments. Evolutions from the Navy's ramjet engine development will provide powerplants for these new missiles.

More Reliable Systems

Pervasive throughout the Navy's developments is the demand for more reliable, more maintainable systems to reduce the pressure on our resources—fiscal, material and manpower. Navy programs designed to reduce manpower requirements through automation will continue to be pursued both for near term payoff and longer term dividends. Better training at lower cost through the use of simulators will likewise receive continued emphasis.

In summary, our overall RDT&E program is designed to meet the challenges of the Soviet Navy and the reality of fiscal constraint.

Mr. Chairman, in my presentation today, I have highlighted our Research, Development, Test and Evaluation Navy/Marine Corps programs for FY 1975.

With your support, we will carry out this R&D program as a means of providing our naval forces with the capability to stand up to the challenges of today and tomorrow.

Mr. Chairman, I request the Committee's approval of these programs. We are prepared to answer your questions.

VI. APPENDIX

APPENDIX A

Unobligated Balances

The Navy's Research. Development, Test and Evaluation appropriation finances many technical projects which are subject to fluctuations as technological changes and advances occur. In addition, changes in priorities and new operational requirements dictate shifts in emphasis which require nearly constant reevaluation of the RDT&E,N program. The overall impact is that the funding will show some unobligated balances. Funding requirements for a given fiscal year are determined on the basis of implementing the planned program during the next and subsequent fiscal years; almost all funds would be obligated during the initial year of availability if the program could be strictly executed in accordance with initial plans and in a timely manner. Because of variable factors, it is not possible to estimate future unobligated balances on the basis of a project analysis alone. On the basis of past experience and by recognizing management's efforts to reduce unobligated balances to a minimum, the financial plan projections are made on a gross appropriation basis as realistically as is possible.

During the past seven years, the Navy has placed great emphasis on reducing the unobligated balance carried forward at the end of each year. The carryover has been reduced from 19 percent in FY 1966 to three percent in FY 1973. We expect the carryover in FY 1974 to be approximately three percent.

INCREMENTAL FUNDING

We believe that the principles of the incremental funding policy are constructive in that they enforce a discipline on all levels of management in the way they plan and execute their R&D projects, thereby minimizing the amount of "forward funding" that would otherwise be included in the budget request. The Navy management is continuing to inform management at all levels to ensure an understanding of and compliance with the incremental funding policy.

BUDGET ACTIVITY 1—MILITARY SCIENCES

[Dollars in millions]

	Fiscal year 1974	Fiscal year 1975	Change
Total	$134.4	$138.3	+$3.9
In-house independent lab research	13.3	13.2	−.1
Defense research sciences	102.7	105.0	+2.3
Studies and analysis support/MC	2.2	2.3	+.1
Studies and analysis support/Navy	9.0	10.1	+1.1
MarCorps operations analysis group	.7	.8	+.1
Center for Naval analysis/Navy	6.5	6.9	+.4

DISCUSSION

This Budget Activity, which is basically a level-of-effort program, includes the Navy's efforts in research and in studies and analysis. The increase of $3.9 million, approximately three percent, is less than the DOD RDT&E price escalation indices; so in terms of buying power, the FY 1975 program can be considered to be actually below the FY 1974 level.

BUDGET ACTIVITY 2—AIRCRAFT AND RELATED EQUIPMENT

[In millions of dollars]

	Fiscal years—		
	1974	1975	change
Total	269.5	349.3	+79.8
A6 squadrons	10.9	10.4	−.5
A7 squadrons	5.1	7.6	+2.5
F401 engine	17.0	27.5	+10.5
F–14A	40.7	11.8	−28.9
EW counterresponse	4.0	5.9	+1.9
Aircraft (expl. dev.)	20.4	19.0	−1.4
Airborne EW equip. (adv. dev.)	15.8	21.0	+5.2
Adv. A/C propulsion sys	4.7	12.7	+8.0
Air ASW—LAMPS III	9.5	17.9	+8.4
VSTOL for SCS	24.3	19.3	−5.0
Adv. prop. for VSTOL	5.9	7.9	+2.0
Acoustic search sensors (adv.)	9.0	12.6	+3.6
Tact. air reconn		5.3	+5.3
Avionics development	1.8	6.8	+5.0
Airborne ASW dev	14.8	14.2	−.6
Air EW (eng. dev.)	6.8	5.9	−.9
Aerial target sys. dev	8.9	14.6	+5.7
CH–53E	28.8	46.7	+17.9
Acoustic search sensors (eng.)	1.6	13.8	+12.2
Fighter prototype		34.0	+34.0
All other programs	39.5	34.4	−5.1

Budget Activity 2, Aircraft and Related Equipment, finances research, development, test and evaluation related to airframes, engines, airborne detection and fire control equipment are brief summaries of some of the more significant programs under this Budget Activity.

As Squadrons will be providing the A–6E with an improved capability for location and surveillance of opposing naval forces, and the countering of operations during periods of darkness. The Target Recognition Attack Multisensor

(TRAM) system includes a passive imaging infrared sensor for target classication and identification, a laser target designator/ranger boresighted with the I/R sensor for delivery of laser guided weapons, and a laser search set to locate targets illuminated by external laser designators. Weighing less than 500 pounds and located in a 20-inch diameter turret, the TRAM components will not replace or degrade existing A–6E capability. In FY 1975 we plan to complete NTE and IOT&E and initiate start of full production.

A7 Squadrons, similar to the A6 Squadrons, will provide TRAM components for the A–7E aircraft. Mounted in a wing pod will be a passive I/R imaging device and sensor platform integrated with the A–7E computer and cockpit displays. In FY 1975 we expect to complete prototype avionics fabrication and aircraft installation and initiate contractor test and evaluation.

The *F401 Engine* program is a joint development under executive management of the Air Force. Using a common gas generator or core, two engines will be developed—the F100–PW–100 for the F–15 and the F401–PW–400 for Navy potential use in the F–14, the Thrust Augmented Wing VSTOL and other VSTOL and strike fighter aircraft proposals. In FY 1975 completion of a 60-hour substantiation test is anticipated.

The *F–14A* high performance air superiority/fleet air defense fighter aircraft development program will be substantially completed in FY 1975 with conclusion of contract or flight test and field station TECHEVAL, and fleet introduction of the system. Procurement will continue.

The *Electronic Warfare Counter Response* program is intended to continue development of airborne electronic countermeasures receivers and jammer pods to counter improved Soviet radars and their improved modes of operation. Development effort is directed toward the EA–6B, and when completed, will be incorporated into the EA–6B. In FY 1975 we expect to perform work on communications jamming, integration receiver and other system improvements.

Aircraft Exploratory Development is directed mainly to the developments in the technologies of aircraft weapon systems analysis; fluid dynamics; structural design/test; aircraft propulsion/auxiliary machinery; aircraft instrumentation; control electrical energy conversion; noise and signature reduction; handling/servicing equipment; and personnel protection/flight safety.

Airborne EW Equipment consists of development of systems to provide defensive electronic countermeasures and I/R missile countermeasures for use with fleet attack, fighter and reconnaissance aircraft. For example, the largest effort in FY 1975 will continue development, integration and preparation for initial testing of the Tactical Airborne Signal Exploitation System (TASES) to exploit enemy tactical communication and radar activity in real time. Initial effort will use an S–3A aircraft as the test vehicle.

Advanced Aircraft Propulsion Systems is intended to support Advanced Development of propulsion systems to meet future Navy needs. In FY 1975 we are pursuing efforts which will develop advanced propulsion components suitable for operation at high turbine inlet temperatures (2500°F). In addtion we will initiate development of an advanced turboprop engine and associated propellers for the Marine Corps OV–10A aircraft. This 1000-shaft horsepower engine upgrade will be completed in FY 1976.

The *LAMPS III* follow-on to our current LAMPS MK I operational system will continue in FY 1975 with completion of fabrication of the prototype avionics system. This will be installed into an H–2 helicopter testbed and we will conduct an extensive series of trials, both over land and at sea, to verify the prediction of system performance. We will also be putting together an "expanded mission" prototype system for test in a larger H–3 helicopter in preparation for sea trials in [deleted] to investigate our capability to successfully operate the LAMPS III system against submarines detected farther than 35 miles away from the parent ship.

One area of air R&D technology which has matured after two decades of experimentation is the *Vertical/Short Takeoff and Landing* capability for otherwise conventional aircraft. Only one vehicle, however, the subsonic Harrier (AV–8A) has entered full operational service in the U.S. Marine Corps and the Royal Air Force. VSTOL technology is particularly adaptable to naval forces for it divorces the aircraft from a dependency upon catapults and arresting gear. Present VSTOL aircraft pay a penalty in performance for the unique vertical capability, but the day is coming when that penalty approaches or equals that of conven-

tionally catapulted and arrested aircraft. Future aircraft carrier design may be able to eliminate peculiar shipboard equipment which has for decades been a major factor in cost, weight and manpower.

Before this transition can be accomplished, the orderly development of high performance supersonic VSTOL aircraft must be completed. To explore the potential, we have several advanced development prototyping programs underway. The Rockwell International XFV–12 prototype shows the most promising approach. This Thrust Augmented Wing (TAW) design is the most compatible with the flight deck environment. In March of this year, we expect to demonstrate the required thrust augmentation of 1.55 using flight-weight components in a test rig. The ability of this design approach to lift the aircraft will be demonstrated late this fall. First flight in a conventional takeoff mode is expected in November of this year with the first vertical takeoff in February of 1975. Another approach utilizes dedicated engines to assist in the lift maneuver. A small engineering effort is underway to evaluate this concept as an alternative. The Pegasus 11 engine used in the Harrier has modest growth potential. This potential is being explored by a joint US/UK government and contractor team to define a possible follow-on Pegasus 15 engine and Advanced Harrier (AV–16) combination. We are evaluating the concept of developing this AV–16 for use by the Marine Corps in the mid-term period.

The *Acoustic Search Sensors* program is designed to improve airborne acoustic detection systems to cope with the quieter submarine threat projected through the 1980s by developing passive/active search sensors and communications link equipment. In FY 1975 we will contract for advanced development models of a Passive Advanced Sonobuoy and the Expandable Reliable Acoustic Path Sonobuoy and for advanced development models of the Advanced Sonobuoy Communications Link (ASCL).

New in FY 1975 is a project—(Tactical Air) *Reconnaissance Pod*—to design and develop a less expensive means of obtaining tactical information by use of sensor pods capable of being carried on carrier-based tactical aircraft. This design-to-price development may preclude the necessity for dedicated reconnaissance aircraft. This system is expected to be operational in the late 1970s.

Avionics Development in FY 1975 consists of one project—development of the A–4M Attack Delivery System. This program will develop an integrated angular rate bombing system consisting of a dual mode (TV–Laser) tracker, a head-up display and a digital computer for incorporation into the Marine Corps A–4M aircraft. The system will be ready for production by the end of FY 1975.

In FY 1975 under *Airborne ASW Developments*, we will continue Engineering Development of projects containing acoustic and non-acoustic sensors for the detection, classification and localization of submarines as well as aircraft electronics system for ASW for introduction to the fleet [deleted].

Air Electronics Warfare Engineering Development will continue development of EW environmental simulations for testing and evaluating Airborne EW equipment, a system to provide an evaluation of electromagnetic performance of aircraft and ships systems and technical intelligence collection systems.

Aerial Target Systems Development provides requirements for systems and technical approaches including vehicles and associated equipments to duplicate or simulate characteristics of threats for purposes of realistic testing, evaluation and training. In FY 1975 work will continue on a tri-service Integrated Target Control System, Anti-Ship Missile Target and a full scale Aircraft Target.

The *CH–53E* helicopter system will provide a 16-ton lift capability for Marine Corps amphibious assault, combat retrieval of downed aircraft and tactical movement of weapons and equipment and for Navy Vertical On-Board Delivery, ship-to-shore logistics and towing of craft and mine countermeasures devices. In FY 1975 we expect to start engineering development of two production prototypes for delivery in early FY 1976, this to update the two existing development prototypes to a production configuration, and continue ground tests and evaluations. DSARC III is scheduled for FY 1976.

We will commence development in FY 1975 of an advanced *Fighter Prototype*—the *VFX*—intended to replace the aging F–4 inventory and augment the F–14A aircraft. Our efforts will include examination of industrial capability to provide aircraft which exceed minimum specified requirements within a design-to-price goal. General goals will be stated in pre-solicitation notices. Responses will permit a more definitive Request for Proposal based on refined performance mini-

mums and design-to-price goals. We will emphasize tradeoff studies to insure acceptable preformance for an affordable price. In FY 1975, we expect to receive contractor proposals and conduct evaluation leading to a selection. Our general goal is approximately 400 of these aircraft.

Fiscal Year 1975 will also see the start of an important new program which we call *HSX*. This development will lead to the replacement of our aging SH–3 and CH–46 helicopters in the early-mid 1980s. We call this a "family" development because we are starting development with a goal to satisfy our needs in at least two different mission areas—ASW and amphibious assault—which have the same basic vehicle requirements: a medium-size vertical takeoff and land (VTOL) aircraft. We will employ the ASW version from our CVs and Sea Control Ships. The Marine version will be used from LPHs and LHAs and ashore for the assault troop lift role. In FY 1975 we plan to continue program definition to the point where we will be ready to request proposals from industry for review in 1976.

BUDGET ACTIVITY 3—MISSILES AND RELATED EQUIPMENT

[In millions]

	Fiscal year 1974	Fiscal year 1975	Change
Total	$992.2	$1,152.6	+$160.4
FBM system	14.3	46.7	+32.4
SSBN defense	16.4	18.8	+2.4
Sanguine	12.9	13.2	+.3
Gryphon	8.2	12.5	+4.3
Hydrus	6.9	7.2	+.3
Sparrow AIM–7F	5.4	6.0	+.6
Condor	9.4	10.2	+.8
Missile propulsion technology (exploratory development)	8.5	7.9	−.6
Strike warfare weapon (exploratory development)	37.0	37.5	+.5
Long range surface weapons system	4.7	13.6	+8.9
Agile	18.0	20.0	+2.0
Advanced air launched ASM system	6.7	6.7	
Weaponizing (prototype)	3.0	6.2	+3.2
Cruise missile (SLCM)	2.6	45.0	+42.4
Harm	13.9	18.1	+4.2
Encap Harpoon	11.7	9.7	−2.0
Aegis	40.2	67.0	+26.8
Surface launch weapons system and technology	5.0	13.1	+8.1
Phalanx CIWS	29.0	32.1	+3.1
Point defense improvements	12.7	5.3	−7.4
Trident missile system	527.7	648.8	+121.1
Harpoon	81.1	57.7	−23.4
Surface missile guidance	15.9	32.2	+16.3
Pacific missile range	67.9		−67.9
All other programs	33.1	17.1	−16.0

Discussion

The Navy's missile development program, Budget Activity 3, supports RDT&E in three major warfare areas—Strategic, Surface and Air. Some of the most significant programs in this Budget Activity are described in the following pages.

Fleet Ballistic Missile System in FY 1975 will continue development of improved SSBN sonar equipment and completion and launch of the second Transit satellite. A third satellite will be fabricated.

The *SSBN Defense* program is dedicated to maintaining continuing survivability of the SSBN force. In FY 1975 we will continue with laboratory and at-sea tests in the areas of acoustic quieting, [deleted].

The *Sanguine* ELF is intended to provide survivable command and control of our strategic forces, particularly SSBNs, deployed worldwide. The FY 1975 planned program for Sanguine will continue testing and evaluation of prototype components; H-field antenna development; noise quieting and on-hull antenna developments; submarine receiver design and simulation; biological and ecological investigations; and complete advanced omnidirectional receiving antenna development.

The *Gryphon* (shore-to-ship) and *Hydrus* (ship-to-shore) programs will provide primary and complementary secure communications with our FBM forces

and other SIOP forces. Among other efforts we will continue development of the TACAMO Improvement Program under GRYPHON and continue efforts on satellite and covert systems under Hydrus.

The *AIM–7F Sparrow* program is intended to increase Sparrow III performance in the areas of fuzing, countermeasures and low altitude, and to redesign for lower production cost. In FY 1975 we expect to complete testing of the system for reliability and producibility as a prerequisite to full scale production. Work will progress to provide a competitive choice for procurement.

The *Condor* missile will provide a highly accurate, long range [deleted] (miles) stand-off air-to-surface attack capability for use against heavily defended, high value land or sea targets. The basic Condor EO guided missile with data link has demonstrated a miss distance of less than [deleted] during demonstration firings. As a growth item, development of an all-weather, dual mode (EO and active radar) has been initiated. OPEVAL/DTE of the basic Condor commences in FY 1974 and will be completed in FY 1975 followed by initiation of full production. OPEVAL/DTE of the dual mode version of the Condor will be completed in [deleted].

The *Missile Propulsion Technology* (exploratory development) element provides the technology for the improvement and fabrication of new missile propulsions systems, subsystems and components. Included is work on the propulsion subsystems of strategic and tactical weapon systems, guided and unguided missiles and areodynamics.

Strike Warfare Weaponry Technology (exploratory development) includes concepts, techniques, components and systems which support surface-to-surface, surface-to-air, air-to-surface and air-to-weapon systems. It also provides a technology base for improvements of existing systems and development of future systems. Systems investigations; weapon structures and dynamics; guidance and control; counter-countermeasures; warheads and fuzes; air/surface launching; handling and servicing technology; special weapons and advanced energy sources are included in this effort.

The *Long Range Surface Weapon System* program will apply the "smart ordnance" concept to gun-fired projectiles through incorporation of terminal homing techniques. These guided projectiles under development will be capable of being fired from existing 5''/54 guns and the 8'' Major Caliber Lightweight Gun. In FY 1975, the 5-inch program will complete advanced development, specifications for engineering development will be established, and the program will be ready for DSARC II review near the end of FY 1975.

The *Agile* program incorporating the design-to-cost discipline, is in the concept validation phase. A production cost goal of $50,000 (FY 1979 dollars) per missile in lots of greater than 5,000 was set. Cost/performance tradeoff studies are underway. This close-in (dogfight) air-to-air missile will be a wingless vehicle using thrust vector control. In FY 1975 we expect to complete component and subsystem validation, continue work on the motor and seeker and countermeasures investigation and implementation. DSARC II is expected about [deleted].

The *Advanced Air-Launched Air-to-Surface Missile Systems* program will develop advanced propulsion and guidance systems for advanced long range supersonic cruise missile systems. Included are the Air-launched Low Volume Ramjet (ALVRJ) and Advanced Tactical Inertial Guidance/Microwave Radio metric systems (ATIGS/Micrad). In FY 1975 free flight testing of the ALVRJ will continue and airborne captive testing of Atigs/Micrad will be conducted. In addition, free flight demonstrations will be completed on seeker concepts for an advanced Night Attack System.

The *Weaponizing (Prototype)* advanced development element is presently devoted to efforts in the area of lightweight weapon systems for ships, particularly smaller ships and craft such as fast patrol boats, Surface Effect Ships and hydrofoils. Present efforts are devoted to demonstration of a Vertical Launched Standard Missile, a Vertical Ejection Launch Aero-Reaction Control (VELARC) and a Small Craft Fire Control System demonstration. In FY 1975 we expect to continue launch testing of Vertical Standard with completion in [deleted], continue at sea testing of the Small Craft FCS with final report in [deleted] and complete testing of Velarc in [deleted]. We will undertake engineering development of these new programs after evaluation of technical findings and additional proposals

The *Submarine Launched Cruise Missile* project is intended to develop a strategic cruise missile with a very low flight profile and a great circle range, at least 1,400 nautical miles; and using the same technological approach, a tactical cruise missile with at least a [deleted] conventional warhead and a great circle range of 300 nautical miles. Designed for launch from submarine torpedo tubes, these missiles could be deployed from a variety of air, surface, subsurface and land platforms if required. This technology program will encompass subsystem development commencing with the airframe. In FY 1975 the design, testing and demonstration of hardware items; aero, wind tunnel, structure and hydro studies; hardware and/or configuration mockups; and submarine/tender walkthrough and ejection tests will be completed. An option will be exercised in [deleted] to have the two contractors conduct technology demonstrations in the areas of airframe and propulsion characteristics, range/payload capabilities, and reduced radar cross section. The integrated missile guidance system will be tested.

In order to upgrade and correct for tactical deficiencies in the existing antiradiation missiles, Shrike and Standard ARM, we are developing the High Speed Anti-Radiation Missile HARM. The HARM missile will have broad bandwidth coverage [deleted]. Primary program objectives are low cost and compatibility with different aircraft/avionics suites. In FY 1975 two testbed guided missiles with HARM-type seekers and control sections will be flight tested and fired during the baseline verification phase of the program. After completion of this concept validation phase, DSARC II review will be held. The HARM system will be released to engineering development and the design and fabrication of engineering model hardware will then commence.

Moving to Engineering Development, the *Aegis* program will, in FY 1975, complete at-sea tests of the EDM–1 system and commence necessary engineering design modifications to incorporate the AEGIS into the DG.

The principal FY 1975 effort under *Surface-Launched Weaponry, Systems and Technology* will be to perfect dual mode (anti-radiation and infrared) seeker technology, and upon confirmation of lethality requirements, select for dual mode modification the smallest, cheapest missile which will provide reasonable assurance of kill against a representative anti-ship missile threat. In FY 1975, we expect to complete technical evaluation, select appropriate missiles for modification and initiate development.

One of our principal efforts in the area of Anti-Ship Missile Defense is the *Vulcan/Phalanx Close-In Weapon System*, now in engineering development. An engineering model has been undergoing at-sea testing aboard USS KING since August of last year. Test firings aboard the King have resulted in 15 successful engagements out of 16 target presentations. Evaluation of the results of this series of tests have shown that the independent radar of the Phalanx successfully and consistently detects, evaluates and tracks and corrects the firing of the gun when presented with incoming targets. The automatic features of the system enable it to react and open fire in sufficient time and with the required accuracy to achieve the number of hits required to destroy missile targets at sufficient range to prevent or minimize damage to a ship. The at-sea tests have also demonstrated the capability of the system to operate without creating or being susceptible to electronic interference with other shipbased systems and that the system is suitably resistant to shipboard motion and vibration. Testing aboard the King has established the level of confidence in the system to provide a basis for procurement of preproduction prototype operational suitability models. In FY 1975 the Navy plans to undertake a series of Phalanx firing tests against warhead-configured drones and missiles. The Phalanx will be installed aboard a remote controlled terminal defense test platform where it will be safe to present free-flying targets including modified U.S. drones, [deleted]. This will constitute Phase III of the IOT&E and should clearly demonstrate the system's capabilities.

Under the *Point Defense Improvements* element, we are developing a Target Acquisition System (TAS) which, when coupled with the NATO Seasparrow Surface Missile System, will form our Improved Point Defense Surface Missile System. In this program, we will also support integration and test of the two systems combined. In FY 1975 we plan to complete ship installation of TAS in July 1974, conduct contractor shipboard tests in September and complete Techeval/Opeval in [deleted] 1975.

Our largest development effort in FY 1975 is devoted to the Trident program which is being pursued with utmost priority to develop the Trident Missile

System and Trident Submarine System (to be discussed in Budget Activity 5) with a common deployment date of October 1978 as the ultimate goal. Development of this new longer range strategic missile has the best long term prospect for high prelaunch survivability in the face of a growing Soviet threat.

The Trident system is undergoing engineering development and will incorporate the latest technological advances in both the new Trident missile and submarine, plus new subsystems unique to the strategic mission. The Trident strategic weapon system includes the missile, launcher, fire control, guidance and navigation subsystems. An advanced development maneuvering re-entry system is also being pursued.

The Trident missile development effort includes conduct of full scale propulsion tests; continue design release and start fabrication and assembly of C–4 X–1; the commencement of Trident dedicated underground nuclear tests for evaluating missile and re-entry body candidate materials; and completion of the re-entry body supplemental flight test program initiated in FY 1974.

In the fire control development, the final specification will be prepared, the software to support the flight test program will be completed and engineering and design work will continue to support an initial production release for fire control equipment in the next fiscal year. In the launcher development, the start of engineering evaluation testing on the launcher tube, conduct of developmental testing on the launcher control group and missile hoisting unit, and design authentication of the umbilical restraints mechanism will take place in FY 1975. In navigation, the electro-static gyromonitor development model, navigation satellite receiver and sonar will be tested on board the USS Compass Island (AG–153) and detailed engineering design of hardware and software will continue. The data recording system development in FY 1975 will include the fabrication of breadboard models of all systems elements, functional and environmental testing of these models, and design and fabrication of a development model of the total system. In addition, construction will start on the explosive handling wharf for the Trident weapon facility and the Trident training facility.

In that the *Harpoon* will provide surface ships, submarines and certain aircraft with a long range standoff all-weather antiship weapon system to counter the Soviet bloc surface navy threat, it is related to ASMD. The first half of calendar year 1973 was consumed in the development, test and evaluation firings of design phase missiles and verification of associated ship and aircraft weapon control systems. The launch platforms employed in this phase were those of highest priority for fleet introduction, the DD–1052 class escorts and P–3 aircraft. Eleven guided missiles were fired, of which seven struck the target. Of the four that failed, engineering data was adequate to pinpoint the failure mode on each and take corrective design action. The transition from engineering design phase for full weapon system development was accomplished in July 1973 when the contract option was executed. The 1974 effort will concentrate on proof of the prototype missile and launch system designs. Eight prototype missiles will be fired in the spring of 1974 to provide IOT&E data as a prelude to initiation of the pilot production effort for full scale OT&E scheduled to commence about [deleted]. Additional prototype firings will continue until commencement of OT&E to further verify the design of the missile and expand the platforms to all aircraft, surface ships and submarines scheduled to employ Harpoon.

The *Encapsulated Harpoon* program will provide our SSNs with a standoff anti-ship missile weapon system compatible with the long range passive detection capabilities of our attack submarine sonar systems. The overall effort is to adapt the basic *Harpoon* missile for submarine launch through the development of a capsule that will be compatible with submerged launch from existing submarine torpedo tubes and fire control systems. Two test vehicles (dummy missile with live booster encased in a capsule) have been successfully launched from a submerged, moored torpedo tube; and eight dummy capsules have been launched from an SSN underway submerged. Further testing through FY 1975

will include at least eight launchers of engineering development model capsules from a submerged SSN followed by at least eight launches of prototype capsules and a series of four launches of prototype capsules with dummy missiles and live boosters from a submerged SSN. The weapon system development phase will complete and Operational Evaluation will begin by the end of [deleted], providing an initial operational capability in [deleted].

By incorporating mid-course guidance into the *Standard Missile 2* (SM–2), we will improve the capability over the SM–1 by doubling the range and area covered, increase the number of targets simultaneously engaged by a system and the probability of hits and provide a potential for over-the-horizon intercept of surface targets. In FY 1975, we expect to complete design, fabrication and flight test 14 missiles and procure missiles for IOT&E of Terrier and Aegis systems with the SM–2.

Operation of the *Pacific Missile Range*, which was included in this Budget Activity in FY 1974, is included in Budget Activity 8 in FY 1975.

BUDGET ACTIVITY 4—MILITARY ASTRONAUTICS

[In millions]

	Fiscal year 1974	Fiscal year 1975	Change
Total	$52.9	$38.7	−$14.2
Satellite communications	41.5	27.3	−14.2
Weather service	2.1	1.4	−.7
Navigation satellite	9.3	7.5	−1.8
Space technology		2.5	+2.5

Discussion

Budget Activity 4 Military Astronautics and Related Equipment provides for programs directed towards the improvement of space technology for military purposes and the development of space vehicles for specific military applications. There are four Program Elements under this Budget Activity.

The first, *Satellite Communication*, has as its principal thrust in FY 1975 the development of the Fleet Satellite Communications (FLTSATCOM) System providing most urgent worldwide UHF near-term Navy operational requirements and high priority USAF users. In FY 1975 we expect to complete full ground testing of satellite model, award production contract for three satellites and continue system improvements.

Weather Service will develop shipboard readout terminal (SROE) capable of receiving high quality satellite meteorological data from an existing AF satellite system and also software and hardware for a Navy Satellite Data Processing System (SATDAT). The FY 1975 effort will consist of completion of technical checkout and deficiency correction for SROE and development of storage and retrieval programs and display and projection techniques for SATDAT.

The *NAVSTAR Global Positioning System* is the Navy portion of a Joint Service Development Program for an Advanced Satellite Global Positioning System. Navy will develop 3 Navigation Technology Satellites (NTSI–3) as testbeds. In FY 75 we will continue tests and evaluation of NTS–2 (launched in late FY 1974), complete design and commence fabrication of NTS–2.

The fourth element, *Space Technology*, is devoted to design, development launch and operation of a satellite system capable of continuous real time monitoring of Solar X-ray, ultra-violet, and particle emission and other study of space environment parameters affecting defense Systems. Solrad II is planned for launch in the 3rd quarter FY 75.

BUDGET ACTIVITY 5—SHIPS, SMALL CRAFT, AND RELATED EQUIPMENT

[In millions of dollars]

	Fiscal year—		
	1974	1975	Change
Total	635.2	727.5	+92.3
Submarines—BQQ–5 sonar	18.0	16.0	−2.0
Surf sonar modernization	1.1	7.1	+6.0
Submarine silencing	8.8	8.8	
Cryptologic activities	7.5	11.2	+3.7
Special activities	127.7	127.7	
Nuclear propulsion (expl dev)	21.6	25.4	+3.8
Ships, subs and boats (expl dev)	18.9	20.7	+1.8
Reactor propulsion plants	6.9	6.3	−.6
Ships propulsion system (adv)	15.3	21.6	+6.3
Radar surveillance equipment	2.5	[Deleted.]	[Deleted.]
Adv navigation dev	2.1	5.1	+3.0
Adv command data system	3.9	5.1	+1.2
Surface effect ships	60.9	58.0	−2.9
Surface ASW	3.6	13.3	+9.7
Ships development (adv)	13.1	19.0	+5.9
Amphibious assault craft	15.9	19.8	+3.9
Hydrofoil craft (adv)	2.3	6.0	+3.7
A4W/AIG nuclear prop plant	7.3	7.2	−.1
D2W nuclear prop reactor	7.0	7.2	+.2
Adv design sub nuc prop plant	11.6	12.4	+.8
Test bed dev and demo	10.0	[Deleted.]	[Deleted.]
Improved SSBN		16.0	+16.0
Submarine comm	4.9	5.2	+.3
Radar surveillance equip	8.3	10.9	+2.6
Sub surveil equip prog (Eng)	8.4	[Deleted.]	[Deleted.]
Surface EW	9.4	7.1	−2.3
Trident submarine system	126.3	107.2	−19.1
NATO PHM	18.9	15.7	−3.2
Ship development (Eng)		29.4	+29.4
Design-to-price EW suite (Eng)	8.6	17.1	+8.5
All other programs	84.4	88.2	+3.8

Discussion

This Budget Activity provides for applied research, development, test and evaluation of ship structures and equipment, including propulsion, communications, navigation and surveillance sytems directly affecting ship operations. It includes the design, prototype fabrication and performance evaluation of new types of ship sonars, countermeasure devices, marine gas turbine propulsion systems and nuclear propulsion systems and nuclear propulsion plants. Described in the following pages are some of the more important programs under this Budget Activity.

The objective of the *AN/BQQ–5 Sonar* system is to counter the threat of new classes of Soviet SSNs and SSBNs having significantly reduced radiated noise levels and improved sonar capability. The AN/BQQ–5 Sonar system is designed to detect submarines, surface ships, ASW helicopters and torpedoes via the direct Convergence Zone (CZ) and Bottom Bounce (BB) paths to optimize performance under varying ocean acoustic conditions. The equipment which is comprised of state-of-the-art modifications to AN/BQQ–2 Sonar system will provide new equipment to meet requirements for the SSN–688 class submarines and will replace out of date AN/BQQ–2 equipments aboard existing SSN–594 and SSN–637 class submarines. In FY 1975 we will complete development and institute corrective actions for pre-production systems and provide logistic support to the fleet and training facilities.

The *Surface Ship Sonar Modernization* programs will develop improvements for the AN/SQS–26 sonar, the first models of which are reaching their 10-year life point and for which no replacement is under development. The equipment is representative of the technology of the early 1960s and presents a reliability and maintainability problem. Previous improvement development has concentrated on hard-wired digital equipment replacement for the system and would not have permitted the application of recent developments in digital software techniques, nor would it permit the integration of LAMPS and towed array processing into the surface sonar system. Therefore, this Program Element has been redirected

to make maximum use of the technology paid for by submarine sonar and air signal processing developments. Incorporation of the planned developments into the system will allow future modification without the purchase of more hardware.

An acoustical advantage is vital for detecting, classifying, tracking and destroying enemy submarines. To maintain advantage, U.S. nuclear submarines must find improvements to reduce acoustic noise with respect to radiated (noise enemy hears) and sonar self (noise that interferes with own sonars hearing the enemy) noise. *Submarine silencing* goals are to reduce [deleted] radiated noise levels to where submarines are undectable by passive and active acoustical sensors and reduce sonar self noise levels [deleted].

The goals of the silencing program cover identification of noise offenders aboard submarines and their causes; development of corrective procedures, designs and materials; applications; and operational evaluation. Results are applied to submarine designs, construction, conversions and backfits. In FY 1975 it is our plan [deleted]; as well as continuation of other individual efforts.

The *Cryptologic Activities* program consists of development and upgrading of signal intelligence (SIGINT) related equipment that is associated with Supplementary Radio Spaces (SUPRAD) abroad major combatant ships required to detect, monitor and locate signal sources [deleted] necessary to provide technical analysis and control facilities for timely processing in Fleet Marine Force Radio Battalions and utilized on shipborne platforms [deleted] and tactical naval needs.

The two Exploratory Development programs in this Budget Activity are:

Nuclear propulsion.—This element consists of three projects directed toward a program of exploratory research, development, test and evaluation of nuclear propulsion plants for application to naval vessels. Effort in the development program covers all aspects of plant development including design, maintainability, operation, refueling, safety and noise levels of the plant.

Ships, subs and boats.—This technology is devoted to those needed to improve existing types of marine vehicles and to create new types of ships, submarines, boats and craft. Developments include investigations of advanced vehicles concepts; structural design and test; vehicle control; electrical energy conversion; main propulsion; auxiliary machinery; personnel protection; damage control; and acoustic and magnetic silencing.

In FY 1975, the *Ships Propulsion System* program consists of two projects. We are developing a family of gas turbine engines to meet future non-nuclear power requirements for all Navy ships and craft (except submarines) and associated propulsion system equipment. We are working on three dual purpose (generator or propulsion) units in the 1000 to 5000 horsepower range and three large propulsion units in the 10,000 to 40,000 shaft horsepower range. Also included are clutches, gears, thrusters and reversing systems. In the other project we are developing a capability to build superconducting electrical ship propulsion systems up to 75,000 hp/shaft sometime in the future. In FY 1975 we will complete shipboard evaluation of the Naval Ship Research and Development Center research 400 horsepower superconductive motor/generator system and initiate design and fabrication of a 3000 horsepower research propulsion system.

The *Radar Surveillance Equipment* element consists of three projects in FY 1975. ECCM Module Development is devoted to development of improvements for inservice radar sensors, providing validated ECCM procedures and ECCM technical training support, and establishing the design standards necessary to ECM-harden radar sensors of the future. Pulse Doppler Radar is a 1975 start with the purpose of developing a small moderate cost radar to detect and designate [deleted] for use on ships not receiving a larger radar. Advanced Radar System is to develop advanced technology in the area of [deleted].

In advanced development, there are several programs devoted to development of *Nuclear Reactor Propulsion Plants.* There are three submarine plants, the Natural Circulation Nuclear Propulsion Plant, the High Speed Attack Submarine Propulsion Plant (SSN–688 plant) and the Advanced Design Submarine Nuclear Propulsion Plant having as its primary goal the achievement of significantly increased submerged speed on a sustained basis. A major milestone in naval nuclear propulsion development will be reached when USS *Nimitz* CVAN–68, puts to sea in FY 1975. Her nuclear propulsion plant has been a very challenging developmental effort. Her engines deliver about the same horsepower as the engines in USS *Enterprise*, but with only two reactors instead of eight.

Moreover, in addition to each Nimitz reactor being about four times as powerful as each Enterprise reactor, initial nuclear fuel is expected to provide about 13 years of operation as compared to three years for the initial Enterprise fuel loading.

The Electrically Suspended Gyro Navigator (ESGN) developed under the *Advanced Navigation Development* element is an inertial navigation system for use aboard surface ships and attack submarines and will permit highly precise position without the necessity of daily resetting. In FY 1975 we will complete one evaluation of the advanced development model based on a modified Air Force system design and we will award the engineering development contract.

The *Advanced Command Data* program element is intended to develop standard hardware and software to effect integration of independently developed shipboard command data systems; and maintain compatibility with the existing Navy Tactical Data System (NTDS) hardware and software while continuing to expand and improve command and control capabilities (in particular to optimize exploitation of the Navy Standard AN/UYK–7 computer which was developed under this element). In addition, we will develop the Tactical Flag Command Center, an automated processing system which will integrate, correlate and display information from other shipboard and ashore tactical information systems to provide the Tactical Force Commander with a precise total tactical and strategic picture.

Moving to the *Surface Effect Ship* program which promises revolutionary operational gains in naval warfare. Formal test and evaluation of the two 100-ton test craft, which have attained speeds of 76 knots, has provided validation and excellent correlation of our design and predictive techniques for developing a 2000-ton size SES. Tests of the 100-ton craft will continue in order to gain additional data to aid in our design of the oceangoing 2000-ton size SES. Four contractors, Bell, Aerojet, Rohr, and Lockheed have completed preliminary design work on the 2000-ton SES. The test results, combined with our analysis, continue to support the feasibility of the next step in the program—that of further analysis and experiment prior to contract design.

Following a DSARC review in December 1973, the Deputy Secretary of Defense authorized the Navy to continue the development of the 2000-ton SES with the near term objective of demonstrating the adequacy of the subsystems peculiar to this technology and other subsystems influenced by the SES environment at the 2000-ton scale, to be followed by a further DSARC review in about a year which will address the characteristics and authorize detailed design and construction of the prototype ships. This is, to some extent, a slow-down to the program plan presented last year in order to allow the time needed for additional test verification of key elements in the 2000-ton design before entering the contract design and construction phase. This does not imply any lessening of the program priority.

The major effort under *Surface ASW* in FY 1975 is the MK–46 Torpedo improvement. The MK–46 was originally designed to counter a [deleted] submarine. The threat foreseen in the late 1970s and early 1980s is substantially different, and improvements must be pursued that will enable us to attack these lower acoustic strength target submarines. Investigations will include torpedo sensitivity [deleted] and reduced self-noise improvements, and warhead effectiveness. All improvements are presently being designed for incorporation into both the existing MK–46 inventory by retrofit and/or new production torpedoes. These planned improvements will address the expected Soviet submarine threat into the early 1980s while maintaining compatibility with existing launch platforms.

There are ship development programs in both advanced development and engineering development. Under *Advanced Ship Development*, new ship design efforts are conducted for ships in the Navy's shipbuilding program as are new ship concepts and capabilities for ships not yet in the shipbuilding program. In FY 1975, conceptual efforts will be started for the DGN and AE ships and will be continued for the SSN. Preliminary design will be continued for the T&E Ship (TES) and MFS and will be initiated for the CVX, MCM/SRS and oceanographic ships. In *Ship Development (Engineering)*, we conduct ship contract design providing for the basis for award of a contract for detailed design and construction of one or more ships. Commencing in FY 1975, this program is shown for the first time under RDT&E,N, having been transferred from SCN at the direction of the Congress. In FY 1975 we will start contract design efforts on the DG, AS

and AD–7601. We will also complete contract design on ARDM, ATF, AO and AD–7501.

The next element was established to develop an *Amphibious Assault Landing Craft* system which will provide an improved capability in ship to shore and over the beach delivery of personnel and equipment. Particular emphasis is placed upon the capability to launch amphibious operations from the fleet while dispersed and a considerable distance from the beachhead. After careful examination of conventional planning hulls and unconventional craft, since 1971 the program has concentrated on the design and costruction of two differently configured air cushion vehicles (ACVs). These fully amphibious, high speed ACV craft will provide the needed combination of speed, range, payload capacity and over the beach capability. Major long lead time items will be delivered and the construction of the two configurations will progress. Final detailed designs of the craft/ship interface and ship modifications will be developed in the form of a ship alteration for a selected LSD/LPD. Final plans for the establishing, equipping and manning of the test site at the Naval Coastal Systems Laboratory will be completed and procurement of unique test site instrumentation will be initiated. Final plans for Navy crews to man test craft will be completed. Navy Systems Trials Plans will be initiated.

The *Hydrofoil Craft* program will develop the technology and demonstrate the effectiveness and suitability of larger and faster hydrofoils. The program uses PCH–1 and AGEH–1 hydrofoils as test platforms. These test craft combined with subsystem and component development will provide data for the design of the Deepwater Escort Hydrofoil (DEH) and the Development Fast Hydrofoil (DFH) tests of which will in turn provide data for design of future hydrofoils.

Established in FY 1974, the *Test Bed Development and Demonstration* program will provide a dedicated test ship for at-sea demonstrations of the High Energy Laser (described in Budget Activity 7) weapon and provide support for demonstration tests of the weapon. [Deleted.]

A New Start in FY 1975 is the *Improved SSBN* program consisting of concept and design studies for a new, smaller SSBN to complement the Trident in providing a higher survivable deterrent force with a "high/low" capabilities mix of missiles and submarines. This SSBN will be designed as an option to replace some of the Polaris/Poseidon submarines not replaced by TRIDENT, and at a lower initial acquisition cost. Additionally, this plan would permit more extended use of the Trident I (C–4) missiles as the Trident II missile becomes available for the Trident submarine and the last of the Polaris/Poseidon SSBNs are retired. These SSBNs are expected to be only slightly larger than our current SSBNs and will incorporate many state-of-the-art improvements now included in Trident. Although lacking the missile growth room and space for future technological improvements available with the Trident submarines, this improved SSBN will provide significant increases in effectiveness over our present SSBN submarines.

The first element in engineering development is *Submarine Communications* under which we are developing the Submarine Integrated Antenna System. This antenna system will allow submarines to communicate with ships, aircraft and shore stations from operating depths with the least possible restriction on speed, depth and maneuverability Included in the communications antenna system are all elements of radio frequency transmission and reception feeding the inboard receivers of transmitters. Masts, buoys, cradles, erecting mechanisms, cables, fittings and their associated handling devices are part of the system. While contributing to the ASW mission, this development program provides major communication support to SS, SSN and SSBN classes of submarines in the conduct of their various missions.

The *Radar Surveillance Equipment* program provides for the development of search radar improvements such as Automatic Target Detection (ATD); Digital Moving Target Indicator (DMTI); and Coherent Side Lobe Cancellation (CSLC). In addition, all engineering development associated T&E projects for surface ship search radars are conducted within this program. In FY 1975, efforts will include work related to the SPS–49, SPS–48, SPS–30, SPS–10, SPS–52C, SPS–55 and SPS–58 radars.

The *Submarine Surveillance Equipment Programs* (advanced and engineering development) develops and provides [deleted].

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The *Surface Electronics Warfare* program will improve the defensive and offensive EW posture of the fleet by engineering development and testing of passive and active EW equipments for shipboard use. The operations in EW are surveillance, classification/identification and countermeasure and/or providing early target acquisition data to own weapons systems.

The *Trident Submarine* development effort includes the certification of the land-based evaluation facility for the command control system, operational evaluation of the oxygen generator, fabrication of the prototype carbon dioxide scrubber, technical evaluation of the carbon monoxide hydrogen burner, system level integration test of CCS software and both contractor and Navy test and evaluation of the integrated radio room full scale prototype will be started. Battery life test will continue. Submarine mockup erection, air conditioning plant technical evaluation, ship control station studies, LBEF software, final sonar system hardware/software design and defensive weapon system Engineering Development Model factory testing will be completed. The missile tube prototype will be completed and its evaluation tests started.

Under NATO, the U.S. offered to share its hydrofoil technology with other interested nations and took the initiative in planning a cooperative program to meet a common set of performance requirements. In November 1972, a Memorandum of Understanding (MOU), covering the detail design and lead ship construction stages of the *NATO PHM* program was signed by Italy, Germany, and the U.S. This MOU contains formulae for sharing costs during the total design and lead ship construction phases. The design, as approved by the participating governments, will result in a 40±5 meters long ship displacing 224 metric tons, having capability of accepting additional payload within the existing configuration. The hull will be constructed of aluminum, the foils and struts of steel. Hullborne and foilborne propulsion will be by waterjet, powered by one LM 2500 gas turbine foilborne, and two MTU diesel engines hullborne. Ship speed will be approximately [deleted] knots foilborne and [deleted] knots hullborne. The armament of the US PHM consists of HARPOON surface-to-surface missiles and the Oto Melara 76mm gun with associated MK 92 Mod 1 Fire Control System. The ship will be manned by a crew of 21 officers and men. Because of the NATO involvement, the PHM will be designed to metric units and will use metric dimensioned components where they exist. A major criterion of the US PHM program is a cost objective of $18 million (FY 1974 dollars) average basic cost for follow-on production ships, given production quantities on the order of 20–30 ships. The program planned for FY 1975 includes completion of lead ship construction, including the conduct of builder's sea trials and IOT&E. DSARC III is also planned to obtain production decision.

The last program element to be discussed in this Budget Activity is the *"Design-to-Price" Electronic Warfare Suite*. The high cost of developing and procuring currently identified EW suites has limited their consideration for retrofit of in-service ships, and will preclude their consideration for new, small ship procurements. There is, however, a requirement for threat-reactive EW capability on these ships. In order to provide an EW capability to the maximum number of naval platforms, the systems will be modular to allow installation in various configurations. The "Design-to-Price" program was an FY 1973 "new initiative." The objective of the program is to develop a family of EW suites for surface vessels other than capital ships and certain helicopters and fixed-wing applications to a fully installed fixed production price constraint of $3M, $2M, $1M, $.5M, and $.3M. A three-phase program is underway. Phase I—Multiple contracts were awarded to conduct system tradeoff studies based on Navy-furnished scenarios, threat data and prospective platforms to define the five cost configurations. Phase I contracts were awarded January 4, 1973, for a 120-day effort. A critical design review was accomplished at the completion of the Phase I effort, and based on further Chief of Naval Operations direction, an additional option (approximately $1.4M in production) was solicited from those contractors still in competition. Phase II—Two contractors have been selected to develop prototype systems for Navy test and evaluation. Phase III—Production will be awarded to the contractor winning the Phase II competition.

BUDGET ACTIVITY 6—ORDNANCE

[In millions of dollars]

	Fiscal year—		
	1974	1975	Change
Total	84.9	92.3	+7.4
Captor	21.8	11.2	−10.6
MK–48 torpedo	13.6	5.4	−8.2
Undersea warfare weap. tech (expl)	18.7	18.3	−.4
Mine development	1.8	6.5	+4.7
Surface launched munitions	7.7	11.2	+3.5
Gun systems	.5	5.0	+4.5
Fire control systems (engr)	11.2	17.0	+5.8
All other programs	9.6	17.7	+8.1

Discussion

Budget Activity 6 Ordnance and Related Equipment consists of weapons systems not including aircraft, ships or missiles which provide the Navy and Marine Corps forces with their strike capability as well as a defensive capability.

In FY 1975, we plan to complete TECH/OPEVAL and hold DSARC III for the ASW mine Captor with the initial production contract in [deleted]. Captor is a [deleted] mine which launches a MK–46 torpedo against submerged submarines while rejecting surface targets.

The MK–48 Torpedo entered the production stage in FY 72. Additional tasks requirements were identified during OPEVAL and Fleet introduction and remain to be accomplished. These tasks are in the areas of noise reduction, warhead exploder sensor, acoustic and homing improvements, safety improvements, and operational support development.

In FY 75 we will conduct in-water tests of an improved warhead exploder sensor, commence test and evaluation of production prototype acoustic and homing system hardware; and continue investigations to determine and correct causes of certain significant [deleted] in the torpedo's radiated noise [deleted].

Undersea Warfare Weapons Technology is the Exploratory Development program devoted to efforts directed toward the development of the technology of undersea weapons, including torpedoes, mines, destructors, launchers, warheads, fuzes, explosives, propellants, guidance, fire control, countermeasure protection—systems and components.

The Advanced Mine Development program consists of two efforts—Quickstrike, a new bottom mine [deleted] with influence systems compatible with [deleted]. Bombs and the Advanced Modular Warhead program [deleted]. In FY 1975 we will continue field tests including air drops of advanced development hardware for Quickstrike [deleted].

The FY 1975 effort in *Surface Launched Weapons* is devoted primarily to the Hi Fragmentation (HIFRAG) projectile warhead with improved lethality against ASM, enemy ships, light material land targets and personnel targets and to development of two advanced fuzes to replace six different types of gun ammunition fuzes now required for the same missions.

There are three projects under *Gun* Systems in FY 1975. However, the major effort is development of the Lightweight Intermediate Caliber Gun (LICG), and extremely light weight, automatic, high rate of fire gun system for fast patrol craft, hydrofoils, SES, and other light displacement ships. In FY 1975 we expect to conduct T&E of a prototype baseline gun fabricated and tested in FY 1974.

There are several Fire Control Systems or improvements to fire control systems under the element *Fire Control Systems (Engineering)*. The largest effort in FY 1975 is devoted to the 8"/55 caliber MK–71 Lightweight Gun developed for use aboard [deleted] ships to perform the naval gunfire support and antiship missions. The Gun was designed, fabricated, assembled and tested as a

175mm/60 caliber gun. It was converted to 8''/55 caliber and successfully completed an Operational Evaluation ashore. In FY 1975, we will conduct at-sea Techeval/Opeval. We will also fabricate and test a prototype automatic ammunition handling system which will permit the gun to become an unmanned mount.

BUDGET ACTIVITY 7—OTHER EQUIPMENT

[In millions of dollars]

	Fiscal year—		
	1974	1975	Change
Total	417.6	479.3	+61.7
Undersea surveillance systems	34.4	37.3	+2.9
TRI-TAC, Navy	1.9	15.2	+13.3
Undersea target surveil (expl dev)	25.9	25.2	−.7
Surf and aerospace tgt surveill (expl)	15.5	14.7	−.8
Command and control tech (expl)	20.1	16.1	−4.0
Countermeasures tech (expl)	12.8	13.0	+.2
Biomedical technology (expl)	8.0	8.0	
Ocean and atmos support tech (expl)	20.9	19.2	−1.7
Logistics technology (expl dev)	9.8	11.3	+1.5
Materials tech (expl dev)	13.8	13.3	−.5
Electronic device tech (expl)	11.5	13.0	+1.5
Human resources (expl dev)	8.9	9.0	+.1
Chem/bio def tech (expl dev)	.2	.2	
Energy and environ prot tech (expl)	5.2	9.1	+3.9
LAB IED (expl dev)	14.7	13.1	−1.6
Ocean engineering sys dev	4.7	5.5	+.8
Medical develop (adv)	4.9	5.2	+.3
Ocean engr tech dev	8.3	9.9	+1.6
Education and training	5.5	6.9	+1.4
Environmental protection	6.6	9.5	+2.9
ASW Force Cmd control sys	5.6	7.9	+2.3
High energy laser	19.6	[Deleted]	
Aerospace ocean surveil	25.8		
Other MarCorps dev (adv)	3.5	5.2	+1.7
ASW surveillance	30.5	40.0	+9.5
Long range acoustic prop (LRAP)	7.5	8.8	+1.3
Special processes	43.5	54.6	+11.1
Training device proto dev	7.6	7.0	−.6
Other MarCorps dev (eng)	4.7	7.4	+2.7
All other programs	35.7	51.1	+15.4

Discussion

Budget Activity 7, Other Equipment, provides for RDT&E of equipment not separately provided for under other activities. The bulk of the Navy Exploratory Development Program is funded in this Budget Activity.

In accordance with guidance included in the House Appropriations Committee Report on the FY 1974 RDT&E budget request, we have restructured Exploratory Development (Category 6.2) to be more compatible with the structures used by Army and Air Force. As a result, the FY 1975 budget request includes 19 program elements for Exploratory Development (as opposed to 7 in FY 1974) and Exploratory Development now appears in 5 separate Budget Activities whereas it was previously all in Budget Activity 7.

The *Undersea Surveillance Systems* element is one part of an overall program to develop an integrated undersea surveillance system capable of detecting, classifying and localizing current and future Soviet submarines anywhere they may threaten the interests of the United States. The undersea surveillance RDT&E program has two other elements in addition to this operational systems development program—advanced systems development (ASW Surveillance) and the Long Range Acoustic Propagation Program (both discussed elsewhere in this Budget Activity). The Undersea Surveillance Systems element provides improvements to the existing SOSUS and the technology [deleted] that can be exploited in future new systems.

TRI-TAC, Navy supports the Navy portion of the Tri-Service Tactical Communications program. In FY 1975 we will carry out efforts in such fields as Shipboard Data Systems, Line-of-Sight Task Force Communications, Low Resolution Facsimile and the Naval Communication Automation Program, as well as joint service testing of equipment.

Undersea Target Surveillance Technology efforts are directed toward the detection, identification, classification and localization of undersea targets. These efforts include sonar, magnetic anomaly detectors, chemical detectors, passive electromagnetics and optical sensor systems.

Surface/Aerospace Target Surveillance Technology—efforts under this element are directed toward development of sensors to detect, classify and identify objects which are on or above the seas. Included are infrared, radar, passive electromagnetics, IFF, photographic and optical surveillance systems.

Command and Control Technology—support of Navy command and control systems which acquire, process and disseminate information required by commanders in planning, directing and controlling operations. Efforts encompass acoustic and electromagnetic communications; acoustic, radio frequency, optical, geophysical, inertial and other navigation technology; and data processing, including information transformation, storage, retrieval and display technology.

Countermeasures Technology—exploratory development in this program element is directed toward defeating enemy vehicles, weapons, surveillance systems and command/control systems. Included are efforts related to acoustic and electromagnetic jamming and deception, special mine equipment, minesweeping and EOD equipment and techniques.

Biomedical Technology develops biomedical information for the selection, maintenance and performance enhancement of Navy and Marine Corps personnel and supports technology for the prevention of disease and injury, the recovery of performance after disease and injury. It includes efforts in clothing and protective and emergency escape equipment for the survival and rescue of personnel.

Ocean and Atmospheric Support Technology efforts support developments in areas within which equipment operate—the atmosphere, the oceans, space and the polar regions. The program is directed toward the areas of general ocean dynamics, marine biology, underwater sound propagation, precise positioning, solar radiation and ionosphere effects, meteorological observation and prediction/modification.

Logistics Technology efforts support material control, distribution and storage in the depot-to-user logistic sequence including underway replenishment. It includes development of engineering techniques and methods in the field of integrated logistics support implementation, development of new building concepts, and development of logistics facilities.

Materials Technology efforts are directed toward attaining new and improved structural and functional materials to advance Navy air and sea-based weapon systems. The material developments include new metals and alloys such as higher strength steels, noncorrosive aluminum and tougher titanium; non-metals, such as graphite, carbon-carbons, ceramics and composites; and organics, such as hydraulic fluids; lubricants and fuels.

Electronics Device Technology—this program element supports the development of new and improved electronic materials and components for electronic systems and techniques and methods for ensuring the mutual electromagnetic compatibility of electronic systems in a total ship/aircraft environment.

Human Resources—the major effort in this element is broad range investigations to develop more effective solutions to problems in Navy training methoddogy, training equipment, manpower requirements, planning the man-machine interface, and personnel planning and policy making for total force planning.

Chemical/Biological Defense Technology—efforts under this program are directed toward the development of technology for a coordinated and unified Navy CW/BR program. It supports the interpretation of the operational requirements and the coordination of these requirements with the Army and Air Force for CW/BR defense procedures and equipment.

Energy and Environmental Protection—efforts under this element comprise the core exploratory development programs in energy and environmental protection. The programs are designed to ensure the availability and conservation of energy resources used for naval operations and to develop technology necessary to meet Federal, state and local standards in environmental protection with minimal adverse impact on operational capabilities.

Laboratory Independent Exploratory Development—this program element provides funds to the Navy in-house research and development laboratories to be used at the discretion of the laboratory technical directors to support in-house generated ideas. Ideas supported must be within the mission of the laboratory.

Once feasibility of the idea has been demonstrated, further development is funded under other program elements in exploratory or advanced development.

Under advanced development, *Ocean Engineering Systems Development* consists of five projects in FY 1975; a Fuel Cell Power System for the DSRV; Extended Salvage Depth Capability; Large Object Salvage System; Surface Supported Diving System; and Advanced Deep Dive Submersible. The largest effort—the FCPS—will increase the power available for the DSRV from 110 KWH to 700 KWH. Fabrication will be completed in FY 1975 and modification to DSRV will commence.

Medical Development (Advanced) is devoted to development of medical and dental care and health maintenance systems, health care delivery systems and medical systems to support crew/troop performance effectiveness and disease and injury prevention and control systems. The element consists of four projects in FY 1975: Advanced Medical Development; Medical Support Systems; Air Crew Impact Injury Prevention; and Trauma Care System. We expect to complete validation of return-to-duty guidelines for hospitalized drug abuse and alcoholism patients; continue development and determination of individual tolerances to vibration and ship slam; conduct additional experimental runs to test for impact injury; and continue development of procedures and equipment for processing frozen blood components.

Ocean Engineering Technology Development is composed of three projects: Deep Submergence Biomedical Development (BIOMED); Man-in-the-Sea Continental Shelf (MITS-CS); and Deep Ocean Technology (DOT). In FY 1975, we plan to carry out the following effort: BIOMED—Establish cause and prevention of divers' "8th" nerve damage; define metabolic requirements for saturation divers; develop method to prevent and treat diver deafness, vestibular problems, aseptic bone necrosis and oxygen toxicity. MITS-CS-Continue development of diver heating, integration of communications systems to various diving platforms and methods for conserving diver breathing gas. DOT—Continue SEACON II—array implant—developing and demonstrating mechanical technologies required for major array implants. Complete development of low-cost syntactic foam buoyancy material for 20,000' depth.

The objectives of the *Education and Training* element are to test and evaluate operational, technical and financial feasibility of new advances in education, training and training device technology for operational implementation ashore and afloat. In FY 1975, test and evaluation should be completed on the Integrated System for Job-Specific Training and assignment at COMNAVAIRPAC on the mini-computer shipboard training system and the experimental assessment of PLATO IV, a large scale computer-aided instruction system.

The *Environmental Protection Development* program is designed to produce instruments, devices, systems and operating procedures that will permit the Navy to conform to EPA standards and Executive Order 11507 in a timely, reliable, cost effective manner. The major effort in FY 1975 is devoted to the following efforts: Shipboard Waste Management—complete laboratory evaluation of multi-waste incinerator and construct prototype for ship evaluation; complete laboratory evaluation of submarine compactor/encapsulator and initiate ship evaluation; complete ship evaluation of large horizontal compactors for large ship use and laboratory evaluation of vertical unit for small ship application; complete laboratory evaluation of garbage grinder to assure reliability and install aboard various classes of ships for evaluation. Oil Pollution—complete ship evaluation of commercial/Navy modified bilge separator; complete development and ship evaluate flexible membrane system in center line tank of AB; conduct ship evaluation of G.E. parallel plate ballast water separator; and conduct laboratory evalution of competing oil content monitors developed under joint Navy/Coast Guard/EPA funding.

The *ASW Force Command Control System* includes the development work necessary to provide the Navy a responsive, integrated command and control capability for the broad areas of responsibility assigned to our Fleet CINCs and the Numbered Fleet Commanders. Both an ASW Centers Command and Control (ASWCCCS) capability and a Fleet Command Support Center (FCSC) capability are included in this effort. The ASWCCCS consists of information processing terminals located at ASW Force and Sector headquarters connected via real-time

digital data and secure voice communications links and augmented by computerized analytical displays. The FCSC creates integrated command centers for our Fleet Commanders which will have an order of magnitude increase in the capability to monitor and respond to any level of conflict or crisis. This emerging program capitalizes on existing and ongoing Navy and National command and control programs, and specifically provides real-time integration of the ASWCCCS, the Ocean Surveillance Information System and the Navy's readiness and casualty reporting systems.

Our *High Energy Laser* program is intended to develop a first generation HEL-[deleted] weapon system for an at-sea feasibility demonstration. In FY 1975 we expect to complete [deleted], fabrication and carry out testing. We will also complete fabrication and [deleted] land tests of the Navy/ARPA [deleted] laser.

The *Aerospace Ocean Surveillance* Program is in advanced development and will provide the necessary air and space sensors, integrated with data processing and display systems, to provide the operational commander with the information he needs in near real time. These systems will also be interfaced with the National Command Authority to provide such information as may be desired. The goal of this program is a specification of the types of platforms and sensors to be used in subsequent engineering development designs. The space program is working toward an initial capability with limited coverage based on current technology and toward the adaption of space sensor technology to other Navy mission requirements. In FY 1975 we plan to acquire advanced sensors and conduct engineering and operational appraisal flights.

Other Marine Corps Development provides RDT&E funds for the advanced development of all Marine Corps items except those in the areas of weaponry and vehicles and data systems. In FY 1975, projects such as the following are included in this program: Tactical Exercise Simulator/Evaluator—to provide a combat simulation model for use in Marine officer professional education systems; Hostile Weapons Locator—to locate hostile weapons (artillery, mortars, rockets) with sufficient accuracy to permit their destruction by counterfire; Small Tactical Aerial Mobility Platform (STAMP)—to provide battalion commanders the capability of moving individuals and supplies rapidly on the battlefield; and Human Resources Management and Forecasting—to provide properly motivated, qualified and trained personnel and ensure their efficient use.

The FY 1975 program in *ASW Surveillance* (advanced systems development) will include several main efforts: Towed Array Surveillance Systems; Suspended Array Surveillance Systems; Fixed Distributed Array Systems; and Moored Surveillance Systems.

The *Long Range Acoustic Propagation Project* (LRAPP) provides acoustic environmental information required for the design, development, deployment and optimal operation of undersea surveillance systems. This involves experiments and measurements at sea, model development and validation. and geographic area assessment.

The *Training Devices Prototype* development program supports the development of prototype general purpose simulation training systems such as the Mobile Integrated System Trainer, Evaluator and Recorder (MISTER); Computer-Aided Instruction; Training Device Prototype Development; Communication and Navigation Training System; and Mine Warfare Trainer. The goals are to reduce training costs via substitution of simulation for expensive production models of systems dedicated to training while increasing training effectiveness. This is accomplished through shore-based training systems and through simulators feeding shipboard systems to enable individuals and teams to train on their own operational equipments.

For *Other Marine Corps Development*, this program provides RDT&E funds for the engineering development of all Marine Corps items except those in the areas of weaponry, vehicles and data systems. In FY 1975, the following projects are included: Position Location Reporting System—to provide an electronics system which will produce accurate, rapidly updated and comprehensive friendly position determination information on all elements of a landing force; and Tactical Logistics Support—to provide for the engineering development, test and evaluation of logistic and engineering equipment to enhance operational capabilities and to obtain maximum functional standardization.

BUDGET ACTIVITY 8—PROGRAMWIDE MANAGEMENT AND SUPPORT

[In millions of dollars]

	Fiscal year 1974	T. & E. effect	Fiscal year 1975	Change
Total	156.7	+103.5	283.9	+127.2
Management and technical support	8.7		10.3	+1.6
Tactical electronics support	5.5		2.8	−2.7
ASMD test range	6.4		10.0	+3.6
R.D.T. & E. labs and facil mgt supp	47.6	−15.3	44.8	−2.8
R.D.T. & E. inst and material support	30.0	−10.5	22.4	−7.6
R.D.T. & E. ship and A/C support	39.8	−6.4	34.7	−5.1
Test and evaluation support		+135.7	135.7	+135.7
All other programs	18.7		23.2	+4.5

Discussion

This Activity provides for those costs of operation, management and maintenance of Research, Development, Test and Evaluation facilities which are not distributed directly to other activities. There is a net change of $127.2 million in FY 1975 over the amount budgeted for FY 1974 in this line item. The primary reason for the change is the new DOD uniform funding policy for use at various designated Test and Evaluation activities. The new policy directs that all the costs of retaining and operating the T&E support activity which could not be directly attributed to the benefitting users would be consolidated in a single, separately identified budget line, or program element, aggregating groups of T&E support activities, and these indirect costs would be financed on an institutional basis. The new policy required a recomputation by all the Services of the total costs associated with the T&E operation, a redetermination of the distribution of these costs to both customers and institutional funding sources and a shifting of funds from various institutional support budget lines into program (customer) budget lines—both intra- and inter-service. Of the $135.7 budgeted for Test and Evaluation Support, $23.4 million represents funds formerly included in other appropriations of the Navy, the Army and the Air Force; the remainder is the net redistribution from other Navy RDT&E program elements.

Questions and Answers

[Additional questions by the subcommittee and Departmental answers follow:]

E–2C Improvement Over E–2B

Chairman McClellan. If the E–2C does not achieve the reliability specifications, how much of an improvement will the E–2C be over the E–2B?

Admiral Moran. To provide a realistic value under actual carrier operating conditions, the E–2C reliability specification was deliberately written to require fulfillment during the first two deployments. The results of data acquired at the Board of Inspection and Survey (BIS) trials and during Fleet operations thus far have been most encouraging. A number of reliability improvements have been and are being made to the E–2C. We fully expect to meet or exceed reliability specifications when required—during the first two deployments.

Navy data from August 1973 through January 1974 shows the operational readiness rate and the full systems capability of the E–2C are up 23 and 31% respectively over the E–2B. Maintenance man hours per flight hour are down more than 50%. Even though all reliability improvements have not yet been incorporated in every E–2C, the E–2C today is three to four times more reliable than the E–2B.

Advanced Radar Processing System (ARPS)

Chairman McClellan. What are the results of the tests conducted on the Advanced Radar Processing System (ARPS)? If funds are not made available for ARPS, what effect will there be on the E–2C's tracking capability over land?

Admiral Moran. The Advanced Radar Processing System (ARPS) is the planned change to the APS–120 radar which will provide improved operation [deleted] and enable the detection system to operate in a fully automatic mode against targets over land. The system has completed over 2½ years of develop-

ment and test. Following successful laboratory testing at both General Electric and Grumman, the system was installed in one of the E–2C prototype aircraft and was tested in flight in January 1974. Operation of the entire ARPS verifying integration with the E–2C weapons system has been completed. Flights have been made which provided calibration and map signals to check [deleted] of the ARPS. Results were good. Results also indicate good progress toward meeting ECCM specification. Detection tests to demonstrate automatic tracking of small targets are not yet complete but indications are that results substantiate early data.

Funding has already been committed to complete the required test phase. Funds for program implementation, including non-recurring requirements are planned from existing and requested procurement authorizations. Were the authorizations to be rescinded or denied, the capability of the E–2C would be constrained in threat environments which now exist and severely degraded in potential future operations.

Problems With Tactical Software Programs

Chairman McClellan. Have the problems encountered during BIS with the tactical software programs been resolved?

Admiral Moran. Yes. The Contractor implemented changes which resulted in significantly improved performance. A preliminary report from BIS states the detection and tracking provided by the E–2C system provides the Fleet with an order of magnitude improvement in AEW capability.

E–2C Air Raft

Chairman McClellan. With the DOD's decision to cut $2.2 million for peculiar ground support equipment and repair parts, will there be adequate safety levels to prevent the E–2C air raft from being grounded due to parts shortages?

Admiral Moran. The DOD decision in November 1972 to cut $2.2M from FY 74 funds was part of a DOD-wide change in computational methodology to reduce safety levels from 60 to 55 days. Support depth has subsequently been readjusted which increases the grounding risk by approximately 8%. This risk could be serious in a small community of specialized aircraft such as the E–2C.

Effect of Production Break on Subsequent Buys

Chairman McClellan. What effect will a production break in fiscal year 1975 have on subsequent buys?

Admiral Moran. Three elements of cost are involved in any production line breaks: (1) closing the line and preserving/storing the tooling (2) depreservation and reactivation of the production facility (3) loss of learning curve, i.e., dismissal/dispersal of production workers, engineers and, at a later date, rehiring personnel unfamiliar with the product. Depending on the length of the line shutdown, a rough approximation of the cost would be about $5M to shut down the line and about $20–$25M to reactivate it.

MARK I Configuration

Chairman McClellan. If the planned modification of the Mark I configuration is cancelled, would this result in a corresponding reduction of Mark I ships at a further savings?

Dr. Potter. Some savings would result if the ship modification program were also stopped, but it is doubtful whether the Navy would desire to give up operational flexibility by having fewer ships equipped to carry and operate a LAMPS helicopter. In considering this action, several facts should be noted: First, there are no new ships involved in the LAMPS Mark I program, just modifications, of existing ships. Secondly, there are only eleven ships left to fund in the program: seven are scheduled for the modification in FY 75 and four in FY 76, that will complete the 72 ship Mark I conversion effort. Third, most of the new equipment for these ships already has been purchased and the funds requested for these ships in FY 75 and 76 are largely for the structural changes and equipment installations (O&MN) for LAMPS which will be accomplished during these ships' next regular overhaul periods. Fourth, the amount of savings created by cancelling the last eleven ship mods would not be very

great. It would total about $16.6 million, of which $8.6 million (O&MN) would be FY 75 funds.

Chairman McClellan. Could the $20 million provided for the modifications of the thirty aircraft, referred to in paragraph I above, be more effectively used to upgrade the Mark I system capability by using more advanced sensors, and equipment, such as that planned for Mark III?

Dr. Potter. It is doubtful if we could effectively utilize the funds in FY 75 for that purpose, for several reasons: First, the FY 75 increment of the Mark I aircraft modification effort is fifth in a continuing series and to change the modification at this late date probably would be counter-productive and cause extensive program delays, since equipment contracts already are ready for execution. Secondly, since the House Appropriations Committee disapproval of our FY 72 plans to make a major improvement in Mark I, which was the Mark II program, we discontinued our planning for a big aircraft avionics improvement in Mark I. Third, the Mark III equipment and sensors which would make a significant improvement to Mark I are not ready for procurement now. The structure of the R&D program, with all its required test and evaluation, is geared to complete operational testing by the end of [deleted]. That schedule could be altered, of course, to permit individual items of equipments to be readied for production earlier; however, that would constitute another significant change to the R&D effort and positive results in FY 1975 would not be likely. Further, the cost impact of that change might be rather high. The first airborne testing of Mark III equipment development models is not even scheduled to commence until [deleted].

Mark III Technical Risk

Chairman McClellan. Wouldn't this approach be useful for providing operational test data to reduce Mark III technical risk?

Dr. Potter. To some extent it would be useful for that purpose; however, this would apply only in cases where the Navy could procure equipment now which would be fully representative of the equipment to be procured in the LAMPS MK III production, commencing in [deleted]. In that MK III still has to go through its two major Development Test and Evaluation phases and its Initial Operational Test and Evaluation in the [deleted] period, a number of changes are likely before the final production configuration is approved. The currently planned LAMPS Mark III T&E effort within the R&D program is quite adequate now. The Navy will have two H–2 and one H–3 flying test bed aircraft, equipped with the Mark III prototype equipment, in a DT&E program that will span 18 to 20 months with much of that testing being conducted at sea, flying from LAMPS destroyers against real submarine targets. For IOT&E, there will be 6 to 8 new Mark III prototypes built and a very extensive series of operational trials, conducted by fleet personnel in our independent operational testing agency, will be accomplished prior to full scale production approval. This extensive test program, conducted by experts in the field, already has been designed into the R&D project to reduce the technical risks.

LAMPS and HSX Development

Chairman McClellan. Both Mark III and the proposed air vehicle for the Sea Control Ship (designated HSX) have similar initial planned operational capability dates. If a long range helicopter, such as UTTAS, is selected for Mark III, will consideration be given to using LAMPS as the air vehicle for SCS? Can the Navy afford LAMPS and HSX developments? What is the rationale for soliciting proposals (for contracting) for total Mark III systems integration before firmly defining LAMPS's mission role and completing the analysis to validate Mark III cost mission effectiveness?

Dr. Potter. UTTAS can be termed a long range helicopter only by comparison to the other LAMPS candidates: the UH–1N, SH–2 and WG–13 which have effective ASW ranges of about 35 miles. To avoid confusion it would be preferable to use the term Extended Mission LAMPS in relation to the use of the UTTAS aircraft in the LAMPS program. Even with a UTTAS aircraft for LAMPS, the LAMPS helicopter will still be able to act only in a reactive capacity on its extended mission profile. It must still rely on the parent ship or some other sensor platform to develop initial contacts for LAMPS prosecution.

A UTTAS LAMPS helicopter would be able to fly out to [deleted] miles from its parent ship on a prosecution mission; however, it would not have the on-station endurance nor the sensor capacity to enable it to conduct a fully independent search type mission at that range.

The HSX, on the other hand, will be developed to conduct the independent ASW search type mission in the mid-range area of responsibility It will have a radius of action capability of at least [deleted] miles and be able to stay on station at least [deleted] hours with sufficient sensor and weapons capacity to conduct the full ASW mission. It will fill the gap between the S3/P3 on the outer perimeter of the task force and the Destroyer-LAMPS team on the inside. Conceivably, given optimum placement of forces. LAMPS could be used to prosecute some contacts generated by the HSX search patterns, leaving HSX free to maintain the integrity of the barrier. The HSX and LAMPS III systems should be considered to be complementary parts of the force ASW team and not as competitors.

The Navy has considered using an ASW configured UTTAS helicopter, like the system proposed for LAMPS Mark III, from the Sea Control Ships. Our studies are showing that it would not be cost effective to try to do this because of the significant differences in mission requirements. Preliminary estimates indicate that it would take more than [deleted] times as many ASW UTTAS helicopters as HSX aircraft to fly the same kind of mission from the Sea Control Ship; whereas, the cost differential between the two aircraft appears to be only about [deleted].

Affordability is a major consideration in the decision making process for all of our programs and it was a prominent issue in the Navy's decision to move forward with the HSX program. The Navy has been able to find room in the Five Year Defense Plan for both LAMPS Mark III and HSX developments. HSX is on the list of the NAVY's eleven high priority Force Modernization R&D projects and ranks with LAMPS and the VSTOL Fighter as TOP priority air developments.

The system integration contract is written at this time only to cover the span of the R&D project's Advanced Development phase. The remaining phases of the systems integration will be the subject of subsequent contract coverage. The major undertaking in this phase involves making the aircraft and ship's avionics and electronics systems fit together and work successfully together. Much of the work in this phase can be accomplished independent of the actual aircraft to be used for LAMPS. The biggest difference between the short range and extended mission LAMPS system is in the performance characteristics of the aircraft itself: speed, range, endurance and payload. There will have to be some improved sensor/equipment capabilities added to the Extended Mission Aircraft to take full advantage of its better operational capabilities. The improvements will amount to expansions of the smaller system, rather than a wholesale refit of equipment. Of the many items of equipment in the smaller aircraft, conversion to the extended mission capability will only involve: 1) Modification of five items for expanded capability, 2) two additional pieces of communications/navigation equipment, and 3) a new operator's station with a display and control console. The point here is that systems design, integration, software package and lessons learned on the smaller system are in a very large part all transferable directly into the Extended Mission system. Selection of a contractor responsible for these tasks at this time is not considered premature.

Systems Costs Effectiveness

Chairman McClellan. What steps are being taken to establish objective standards for comparisons of systems cost effectiveness? For example, in comparing LAMPS and P3C costs, will the Navy analysis use only fly-away airframe costs or will it include support costs of land and ships components?

Dr. Potter. The comparisons will have much more depth than simply using fly-away airframe costs. The Navy intends to include in its study complete life cycle costs, but precisely what standards will be established for use in systems comparisons has not yet been defined. The LAMPS program office is working with Navy Systems Analysis and the OSD office of Program Analysis and Evaluation on this now. Achieving an accurate base of comparison, agreeable to all parties which must use the study results, can get rather difficult when support costs of land-based versus sea-based systems become involved.

WESTINGHOUSE CLAIM

Chairman MCCLELLAN. Does the Navy plan to delay settlement of the claim submitted by Westinghouse Electric Corporation for $70 million until such time that the settlement funds would have to be paid by the U.S. Treasury rather than the U.S. Navy?

Dr. POTTER. The Navy has no plans to delay this settlement. On the contrary, the Navy is working as hard and as fast as it can to process the papers, etc. necessary to the settlement, with at least 19 persons working full time at it. The Navy is advised that the Armed Services Board of Contract Appeals cannot hear the case before October 1974, and possibly as late as Spring 1975. The fiscal responsibility for the claim reverts to the U.S. Treasury in July 1974, which is due to the age of the original contract under litigation, not due to any delay.

MK 48 PROGRAM

Chairman MCCLELLAN. How many depreciable assets, other than Mark 30 targets, are going to be extensively used on the MK 48 program and have the cost of these assets been assigned to the Mark 48 program?

Dr. POTTER. All the torpedoes shipped from the Contractor's plant have success-maintenance activities in a sense are depreciable assets, as are the Mark 27 targets which were specifically designed to support the MK 48 program. The cost of acquisition and support of all these is assigned to the MK 48 program and reported in the SAR.

TORPEDO SHIPMENTS

Chairman MCCLELLAN. Why did local representatives of the Defense Contract Administrative Services allow torpedoes to be shipped from the Contractor's plant that cannot pass acceptance tests at the Naval Torpedo Station, Keyport, Washington?

Dr. POTTER. All the torpedoes shipped from the Contractor's plant have successfully passed the prescribed factory acceptance tests.

MANAGEMENT CONSULTANTS

Chairman MCCLELLAN. Why does the Navy need several management consultants on this program when the program occupies the talents of about 1,000 Government employees on a full time basis?

Dr. POTTER. The vast majority of the full time Government employees supporting this program are stationed at field activities such as the Naval Torpedo Station, Keyport, Washington, and the Naval Ordnance Laboratory, White Oak, Maryland, and are involved in technical or industrial support functions. It has been more cost effective to supplement the effectiveness of the headquarters staff—almost constantly under pressure to reduce it size—by resort to consultants for ad hoc or short term tasks.

COUNTERMEASURE DEVICE

Chairman MCCLELLAN. What are the characteristics of a countermeasure device that might be successful against the MK 48 and have you tested the torpedo against a device with these characteristics?

Dr. POTTER. The MK 27 or 30 target would be examples of good countermeasures to the MK 48 if they could be effectively packaged and deployed. Any ping-actuated transponder of this kind would be a difficult CM to defeat. Obviously, the MK 48 has been tested against this type as well as other kinds of decoy countermeasures and jamming devices.

AIM–9L SIDEWINDER

Chairman MCCLELLAN. Will increased sophistication of the AIM–9L Sidewinder missile result in decreased reliability, as compared to previous versions of the missile? What is being done to ensure that the planned increased capability of the AIM–9L is not offset by decreased reliability?

Dr. POTTER. No decrease in reliability of the AIM–9L is expected. The increased capability of the AIM–9L is achieved without a significance increase in the number of parts. (The guidance unit parts are less, the fuze parts are more.) The mechanical portions of the seeker (gyro optics and fin actuating mechanisms)

have only minor configuration changes. The reliability of the AIM–9L is being evaluated in each phase of development. The reliability demonstrations of the AIM–9L in the Development Phase have met the goals assigned for that phase.

Flying-in-Afterburner Tactic

Chairman McClellan. We understand that one evasive action that can be taken against a heat-seeking missile is flying in afterburner. Could you explain this tactic? Has the AIM–9L been tested against a target flying in afterburner?

Admiral Moran. Employment of afterburner will move the aim point of current Sidewinders from [deleted]. This feature is no defense for missile approaching from the aft quadrant. Missile approaching from the beam may be effective if the fuzing function is correct. The Navy combat results in SEA were achieved against targets which were in afterburner much of the time. A modification to current Sidewinders is in Test & Evaluation which moves the aim point [deleted] for both afterburning and non-afterburning targets. This feature is called Lead Bias. It has been tested succesfully against an afterburning QF–4, achieving a contact hit on the [deleted]. The AIM–9L seeker uses the [deleted]. The AIM–9L should retain this tracking point for both afterburning and non-afterburning targets. A flight test of the AIM–9L against a maneuvering QF–4 in afterburner is planned for [deleted].

Nitrogen Contamination

Chairman McClellan. We understand there has been a nitrogen contamination problem in some Sidewinder missiles. Could you explain the problem and will it affect the AIM–9L?

Dr. Potter. Foreign particles (contamination) which are allowed to enter the nitrogen bottles will block the narrow passageways in the cryostat of the missile and prevent sufficient gas flow to properly cool the detector element. The missile loses sensitivity and provides a degraded audio tone to the pilot. Proper nitrogen flow is checked prior to flight with the assistance of a ground crewman and his special flashlight.

Nitrogen-cooled Sidewinders have been in service in the Navy for ten years. Nitrogen contamination has not been a significant problem. Contaminated nitrogen bottles have been found most often at shore stations and are generally the result of inadequate test of the purity of the source of supply or of the depleted air bottle. Special cleaning ovens and simplified purity testers are being procured to decrease the incidence of contaminated bottles. The AIM–9L will be slightly less sensitive to nitrogen contamination than previous Sidewinders.

AIM–9L Capability

Chairman McClellan. If the Navy should decide to use the AIM–9L Sidewinder on the F–14, could you contrast the capability of an F–14 using an AIM–9H and an F–14 using an AIM–9L against the current and project threat?

Dr. Potter. The AIM–9L will provide increased firing opportunities and improved lethality over the AIM–9H for all client aircraft for both the current and projected threat. The AIM–9L provides firing opportunities for all target aspects as compared to only the aft quadrant of the target for other Sidewinders. The increased maneuverability of the AIM–9L improves the inner boundary and thereby further increases the firing opportunities. Lethality is improved by a fuze which is more precise and a warhead which increases the energy delivered to the target.

Agile Missile Status

Chairman McClellan. What is the current status of the Agile missile which is supposed to replace the Sidewinder missiles? Why do we need the AIM–9L Sidewinder, since we plan to replace it with the Agile?

Dr. Potter. The Agile missile is in advanced development. The program plan anticipates transition to full-scale development early in [deleted] and an initial request for procurement funding in [deleted].

The AIM–9L Sidewinder is needed to improve the dogfight performance capability as an interim to Agile. The all-aspect capability will simplify tactics and training and reduce the time in a dogfight necessary to achieve a firing opportunity. This all-aspect capability will significantly increase the targets of oppor-

tunity available in combat since it is not necessary to commence a dogfight in order to generate a firing opportunity. The results of each firing will be more evident to the pilot enabling him to continue the fight or pursue other opportunities.

CONDOR MISSILES

Chairman MCCLELLAN. What is the basis for the continued decrease in the number of Condors required?

Dr. POTTER. Fiscal constraints with rising inflation is the only reason for decreasing the Condor procurement. The Condor requirement remains valid.

FLY-BEFORE-BUY CONCEPT

Chairman MCCLELLAN. Considering the deficiencies noted in the recent Condor tests and the fact that system was approved for pilot production, does the system meet the requirements of fly-before-you-buy concept?

Dr. POTTER. The Condor has met the requirements of the fly-before-buy concept in all testing to date. All deficiencies identified were corrected and subsequently successfully retested in the last series of flight tests. It was on the basis of this testing that pilot production of Condor was given a go-ahead.

Chairman MCCLELLAN. What current weapon mission deficiency is fulfilled by the Condor?

Dr. POTTER. Condor is the only air-to-ground weapon which provides a combination of:

a. Adequate stand-off range for use against present enemy surface-to-air weapons.

b. A capability against land and shoreline targets as well as ships.

c. A high accuracy of less than [deleted] which is independent of range because it includes an aim point up-date capability.

d. A target discrimination capability which includes an ability to abort, if necessary, during the final flight phase.

e. A damage assessment capability based on known point of impact.

Chairman MCCLELLAN. Is the Condor compatible with current and future aircraft in light of the continued increases in aircraft speed?

Dr. POTTER. Condor is compatible with current and future higher speed aircraft because one of the original design requirements called for its use on the supersonic MACH No. [deleted] or better F111B. It is currently being integrated on the A6E and is useable on the A7, P–3, S–3A, B–52 and any aircraft capable of carrying the required payload.

Chairman MCCLELLAN. What is the overall effectiveness of the Condor when it is limited to only daylight operations?

Dr. POTTER. The majority of the Condor targets are fixed installations e.g. bridges, POL's, harbor facilities, missile sites and buildings where there is some flexibility in choice of time (and therefore weather and light conditions) of attack. In addition there is a dual mode Condor under development to meet the all-weather day-night requirement which employs both radar and television guidance.

Chairman MCCLELLAN. In light of the Condor's limitations and continued unit price increases, doesn't the Navy's Harpoon appear to be a more acceptable and cost effective system and if not, why not?

Dr. POTTER. Harpoon and Condor complement each other. Harpoon is useable as an anti-ship weapon at sea. Condor provides a capability against land and shoreline adjacent targets where Harpoon is not useable. Condor has, in addition, a less than [deleted] miss distance high accuracy and a target discrimination capability. Each weapon is cost effective in its own area of application. Condor unit costs are comparable or lower than that of any other weapons with a like capability when compared on an equal quantity basis.

BIS REVIEW OF EXCAP

Chairman MCCLELLAN. What are the conclusions and recommendations made in the BIS review of EXCAP completed in November 1973?

Dr. POTTER. As of 1 May 1974, 51 discrepancy sheets had been received. Of these discrepancies, 17 have been corrected, 17 are in the process of correction, 14 are under investigation and undergoing further test and 3 discrepancies are design improvements which will be considered in future updates of the aircraft.

EA–6B

Chairman McClellan. What are the conclusions and recommendations made in Navy through the 1980's in light of the continued decrease in number of aircraft carriers?

Admiral Moran. The projected carrier force through the 1980's is 12 CVA's. The five year defense plan as reflected in the FY–76 POM calls for a total operating force of 48 EA–6B's plus aircraft for training, pipeline and attrition. The 48 EA–6B's are planned as 12 four plane squadrons, one for each of the 12 CVA's. Total aircraft requirements are broken down as follows:

12 squadrons	48
CRAW	5
Pipeline	10
Loss	13
Inactive	1
Total	[1] 77

[1] Includes 1 R & D prototype and 4 pre-production aircraft.

Chairman McClellan. What considerations are being given to using another aircraft considering the age of the EA–6B?

Admiral Moran. At the present time there are no plans for a follow on airframe for the Navy's EA–6B. The first EA–6B was delivered to the fleet in January 1971. The airframe was built with a 10,000 hour life, which with projected monthly userage equates to a life span which will carry it beyond the 1980 time span.

SSN 688 Program

Chairman McClellan. The SSN 688 Program was reduced from 5 ships per year to 2 or 3 ships per year and the total for the FYDP from 43 to 36 ships. Does the Navy have definite plans as to the total ships it will build in the Class? What is this plan?

Dr. Potter. Plans for the number of SSN 688 Class submarines have not been extended beyond the period of time covered by the Department of Defense Five-Year Defense Plan (FYDP). The current approved FYDP for FY 70 through 79 includes, in addition to 36 SSN 688 Class submarines, funds for long lead time materials for [deleted] additional submarines of the Class in FY 80.

Trident Procurement

Chairman McClellan. During a period of austere funding which we are now witnessing, will the procurement of the Trident submarine have any impact on the number of ships to be procured in the SSN 688 Class?

Dr. Potter. As you know, Defense Department programing and budgeting is broken down into a number of programs, the first two of which are Program I—Strategic and Program II—General Purpose Forces. Trident submarines would be procured under the former; SSN 688 Class submarines, together with all other U.S. Navy General Purpose Forces, are procured under the latter. While the division of Department of the Navy expenditures between Program I and Program II affects the total amount of money which can be spent on Navy General Purpose Forces, the number of 688's to be procurred is more directly affected by the urgent need to modernize and balance overall Navy General Purpose Forces than by the procurement of Trident submarines.

Chairman McClellan. Newport News Shipbuilding and Dry Dock Company was design agent for the SSN 688 Class, yet has been awarded contracts for 5 of the 23 ships under contract (the balance being awarded to Electric Boat). Isn't the Navy concerned that this may be a trend towards a sole source (Electric Boat) for nuclear submarines? What action is being taken to preclude this from happening in the SSN 688 Class as well as other shipbuilding programs?

Dr. Potter. The Navy is concerned about the unequal numbers of SSN 688 Class ships under contract at Electric Boat and Newport News. It is the Navy's policy to obtain competition wherever feasible and each procurement for SSN 688 Class ships since the lead ship has been competitive. We expect that because of a declining workload at Newport News during the period the FY 75–76 SSN

688 Class submarines will be under construction, Newport News will be competitive for future procurements of this class, thus precluding development of a sole source situation.

Chairman McCLELLAN. The trend in the SSN 688 Class seems to be towards anti-submarine warfare. Is the attack role of the submarine towards surface ships neglected?

Dr. POTTER. The role of the SSN 688 Class towards surface ships is not neglected. The first and second designed tasks of the SSN 688 Class are: (1) To destroy enemy submarines, and (2) To destroy enemy surface ships. The current primary weapon for this Class is the MK 48 torpedo which is both an anti-submarine and anti-surface weapon. When the Harpoon missile enters production, this anti-surface ship weapon will be added to the SSN 688 Class.

TOWED ARRAY RECEIVER

Chairman McCLELLAN. A towed array receiver is scheduled to be attached to the submarine. Won't this towed array hinder the maneuverability of the submarine when the submarine is taking sudden evasive action at increased speeds?

Dr. POTTER. No. [Deleted] the maneuverability of a submarine operating at increased speeds or taking sudden evasive action will not be hindered by the towed array.

Chairman McCLELLAN. Will this towed array have a 360 degree capability? If not, what is the area of the "dead zone"?

Dr. POTTER [Deleted.] The towed array will have a [deleted] degree capability.

S3A PROGRAM

Chairman McCLELLAN. What is the probability of breaching the DCP cost threshold on the S3A Program?

Dr. POTTER. The current estimate of the total program cost for the S3A program as reported to Congress in the 31 December 1973 Selected Acquisition Report (SAR) is $3,241 million dollars. This figure is $80 million dollars below the DCP threshold of $3,321 million. This increment between total program cost estimate and DCP threshold is in fact increasing with time rather than decreasing. It was reported as $27 million in the 30 September 1973 SAR, thus the probability that the threshold will be breached is decreasing. The Navy maintains that the threshold will not be breached under the current program.

Chairman McCLELLAN. What will be the impact on aircraft performance and procurement quantities if the threshold is breached?

Dr. POTTER. As stated in the previous answer, the Navy maintains that the threshold will not be breached under the current program. However, should some unforeseen circumstance cause the threshold to be exceeded, there would be no impact on aircraft performance since the design is frozen and over half of the total production is already on order.

As to procurement quantities, reduced procurement of aircraft, support equipment, simulators, and associated spares would, of course, decrease total program costs. The quantities of each of these now planned are considered to be the optimum required to create a well balanced, effective force. Specific reductions would be carefully evaluated as to extent and impact if such became necessary.

RELIABILITY AND MAINTAINABILITY TESTS

Chairman McCLELLAN. What are the results of the reliability and maintainability tests performed during the BIS trials which started in October 1973?

Dr. POTTER. The Board of Inspection and Survey (BIS) Trials report has not been forwarded from the Naval Air Test Center; however, the Weapons System Tests were completed on schedule in March indicating no major discrepancies. When significant problems are encountered during BIS trials, a deficiency report would be issued immediately. No deficiency reports on Reliability or Maintainability were issued. Therefore, it can be assumed that the S3A did not do poorly. How well the system performed in this area can be determined once the report is issued. The report is expected this summer.

VAST S3A Test Program Sets

Chairman McClellan. When will complete VAST be available for S3A use?

Dr. Potter. All VAST S3A Test Program Sets for the major systems, the Weapons Replaceable Assemblies (WRA), will be available in October 1974. For those sets not currently available, various other procedures and test equipment are in use. No delay in the Initial Operational Capability date of December 1974 is foreseen. Approximately fifty of the required sixty-four WRA Test Program Sets are currently available and in use. The four production aircraft utilized in weapon system testing during Board of Inspection and Survey Trials met the readiness level expected in order to complete on schedule. They were primarily supported by VAST. The secondary subsystems test program sets will be completed by December 1975.

Chairman McClellan. How will lack of complete VAST capabiilty affect S3A readiness?

Dr. Potter. Lack of complete VAST capability would require the continued use of interim procedures and equipment in lieu of those items for which VAST was planned. These interim procedures and test equipments are available and have been used in small quantities during the S3A development. Until full VAST capabilities are in hand, some maintenance inefficiencies will be present, but it is not expected that readiness will be significantly effected. For any subsystems and components which are not full covered by VAST and therefore could not be repaired in the unit, additional spare parts will be provided in compensation for that deficiency.

DD 963 Class Ships

Chairman McClellan. What is the installation schedule for the following subsystems on the DD 963 class ships?

(a) An active electronic warfare capability for deterring incoming missiles which is integrated with the command and decision subsystem

(b) A chaff decoy system

(c) A variable depth sonar system or a comparable substitute.

Admiral Moran. (a) The Navy has no plans at the present time to install an active electronic warfare capability on the DD 963. Navy analysis of overall fleet EW requirements, which included cost versus projected capability of equipments, has determined that DD 963 should be initially fitted with passive EW (ESM). If effective active EW (DECM) is forthcoming from the Navy's Design-To-Price development program, it may be desirable to backfit this equipment on DD 963 at a later date.

(b) The DD 963 has space and weight reservations for a chaff decoy system and funds are reserved within the end cost of the program. The space and weight reservations were predicated on the CHAFFROC MK 28 Mod 4 system which was in development at the time of contract award. A commitment to install this system on DD 963 was deferred awaiting results of the development effort. In 1973 the R&D program for CHAFFROC was cancelled due to the technical difficulties encountered with this particular system. The Rapid Blooming Overhead Chaff (RBOC) recently completed OPEVAL and is expected to be service approved in the near future. Assuming service approval, there is a good probability that a decision will be made to install the RBOC system on the DD 963. However, no commitment has been made to-date. Considering procurement lead time, installation of this system during post delivery would be necessary on at least the early ships.

(c) The Navy has no plans at the present time to install a Variable Depth Sonar (VDS) or a comparable substitute on the DD 963. Space and weight does exist in the ship to accommodate a VDS or a passive towed array. However, as noted in the Development Concept Paper, VDS would be considered for installation on the DD 963's, on *a selective basis*, only if fleet experience clearly showed a sufficient gain in performance to justify the high cost of procurement and installation.

Chairman McClellan. What are the estimated costs of these subsystems and other subsystems in the space and weight category?

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Admiral MORAN. It is impossible to quote meaningful cost estimates on the numerous subsystems in the space and weight category on the DD 963. The Navy has made no commitment to buy these subsystems and, obviously the cost of any equipment is dependent on many factors including the size of the procurement unit buy and the year in which it is purchased. Unfortunately, the fact that the design philosophy for the DD 963 is little understood has resulted in some unwarranted criticism of the Navy from time to time. Historically, the hull life of a ship is approximately 30 years and it has been necessary to upgrade the weapons suite of a ship approximately every 10 years. In recognition of this fact the Navy, in the case of DD 963, was forward looking in their design concept and provided space, weight, power and other margins to accommodate modernization and conversion. This, of course, would ultimately reduce life cycle costs. If it had been possible to design modernization growth into a ship without calling out specific equipments, the Navy would have done so. However, it was necessary to call out certain equipments in order that the contractor could include the desired growth potential in his design. A number of these equipments are still under development some of which are not expected to be operational until 1981. As stated earlier, the Navy has made no commitment to procure and install these subsystems and it is therefore impossible to provide meaningful cost estimates.

Chairman MCCLELLAN. When does the Navy plan to incorporate helicopters on the DD 963 ships to assist in classifying, localizing, or attacking long-range sonar contacts?

Admiral MORAN. The DD 963 will be capable of employing either one SH–3 or two UH–2C helicopters upon delivery as required by the contract. This capability was designed into ship to increase its ASW effectiveness. Because of the developmental status of the LAMPS program at the time the contract was awarded a LAMPS capability was not called out for the ship. The Navy is currently examining the most feasible way of incorporating an all up LAMPS capability in the DD 963. It should be noted that with the current capability to employ the SH–3H ASW helicopter the only LAMPS degradation is the nonavailability of a passive sonobuoy on board read out capability.

LHA-CLASS SHIPS

Chairman MCCLELLAN. What is the estimated cost of subsystems in the space and weight category on the LHA class of ships?

Admiral MORAN. Space and weight reservations on the LHA included only those for fleet modernization growth, and no item has been reported in SARs as major mission oriented equipment. Therefore, there are no cost estimations made or reported. Further, there are no approved plans for installing any of these items on LHA, and no funds in any appropriation have been reserved for their installation.

However, in order to be responsive to the type of space and weight reservation questions of interest on LHA, the following listed equipments and their present status and future plans are:

a. *CHAFFROC.*—This system was initially called out for original installation as not required for LHA mission requirement for "limited self-defense" against aircraft, small craft and swimmers, but providing some added "last ditch" capability to LHA. When it became clear that another system was under development Rapid Blooming Overhead CHAFF—RBOC, which was superior and less costly, the already reserved space and weight reservation was maintained. If and when such a system is approved for all ships, it will be made part of the Fleet Modernization Program, and may be authorized, approved and funded if considered required for LHA 1–5.

b. *Shortstop/SLQ–17/SLR–13.*—Space and weight and power for the SHORTSTOP Electronic Warfare System which was then under development was reserved early in the LHA program prior to contract. This specific program has been cancelled; however, the reservation will be sufficient for the system now being developed for the fleet, the Design-To-Price (DTP) EW suite, a less costly and lighter modular/building block concept, whose active and passive features may be determined a requirement for LHA, when service approved. The stated IOC of such equipment will be in the Summer of 1977. Depending upon the suite considered needed for LHA, when considered in context with the mix of fleet units in company with LHA, the other equipments mentioned in the GAO

draft report, the SLQ–17, and SLR–13 (this program cancelled) can be replaced by modular units as part of the DTC suite.

c. *Joint Intelligence Center.*—The additional equipment for which space and weight was reserved was intended for a separate intelligence data system if the contractor could not provide an integrated operational and intelligence system, sharing computer space. The contractor has been successful in providing an integrated system. The modest equipment space and weight reservation will in fact be maintained, should it later be needed for additional, and as yet unspecified, requirements that may develop in the service life of LHA. Costing must follow authorization to modernize this center with specific equipment.

d. *Large Screen Display.*—Space and weight and electric power was reserved for introduction of this new display system presently installed and under improvement on the LCC's. Here again, an added capability to display in certain spaces information that is provided in other displays (in real time) may later prove to be necessary. It is an upgrade of display capability that is intended, but no present specified mission degradation without the large screen display should be inferred.

e. *General Purpose Navy Tactical Data System.*—This console additional space and weight reservation is designed to allow for future display expansion within the ship. Consoles are to be added when practice indicates they may be needed. These units, if later authorized, are standard fleet equipment, purchased in quantity; thus the exact cost, when authorized will depend upon a given procurement at the time. Meantime, it was prudent to insure design could incorporate growth.

Chairman McCLELLAN. The DD963 and LHA1 were launched on schedule. However, the percentage of completion at launch was less than planned. How will this affect delivery schedule for these and follow-on ships?

Admiral MORAN. While the percentage of completion at time of launch is an indication of work still to be performed after launch, the percentage is not a significant indication as to affect on delivery. Manpower availability and proper use of overtime after launch could make up any potential deficit in completion at time of launch. Since the DD964 is not scheduled for delivery until April 1975, or six months after DD963, percentage of completion of DD963 at time of launch should have no impact on delivery schedules of follow-on ships. Any slippages in delivery of the DD963 or LHA–1 would be due to causes other than percentage of completion at time of launch.

Chairman McCLELLAN. Problems have developed in the pre-assembly/pre-outfitting (400) and modular erection (500) areas of the new shipyard. The contractor has been unable to (1) process assemblies thru the 400 area on time and (2) complete planned pre-outfitting or processed assemblies.

Also, slippage has occurred on modular in process or planned to be in process in the 500 area.

What is the estimated impact of these problems on program costs and delivery schedules?

Admiral MORAN. The DD963 Program is now proceeding very close to plan as far as pre-assembly thru the 400 area. The extent of pre-outfitting in the 400 area is increasing. The slippages in the 500 area have not impacted launch on the DD963 and 964 nor is there any indication that the launch of DD965, scheduled for June 1974, will be impacted. There is currently strong emphasis on the part of the contractor to complete planned pre-outfitting work prior to completion of erection in the 500 area and start of ship integration (600 area). This effort, which is more in accordance with original planning concepts, should increase the contractor's probability of constructing the DD's within contract and delivery schedules. From a facility point of view, the problem in the 400–500 areas should have little or no impact on the DD program cost and delivery schedule.

Since the LHA contract is presently at ceiling price, it is not anticipated that further slippage will increase contract cost. Like the DD963 program, the problem in the 400–500 areas should have little or no impact on the delivery schedule.

Chairman McCLELLAN. A major problem which has impacted on construction schedules is the inability of the contractor to obtain a labor force which is adequate in terms of both numbers and productivity.

What are the prospects of the contractor resolving these problems in the future?

Admiral MORAN. Manpower continues to be a problem, and the contractor's prospects of completely resolving it in the near future is not good. Manpower problems are the current headache of the entire shipbuilding industry, and may worsen with an expanding projected workload.

From Sept. 1973 to Feb. 1974 Ingalls has increased total shipyard employment from about 17,600 to about 19,200. This may appear beneficial except that the majority are apprentices who will not be contributing a good deal until training efforts take hold.

While every effort is being made to obtain an adequate workforce to build these ships, we must be prepared to see manpower problems similar to those plaguing the shipbuilding industry as a whole. Lack of adequate manning with its attendant productivity impairment can only result in schedule slippage.

TEST PROGRAM SETS (TPS)

Chairman MCCLELLAN. Test Program Sets (TPS's) provide for the software interface between the aircraft avionics component to be tested and the VAST station. It is understood that by July 1974 all TPS's for weapon replacement assemblies (WRA's) will be available for the F–14A. When will the TPS's be completely available for the E–2C and S–3A?

Dr. POTTER. TPS development status is as follows:

F–14A: 42 of 44 complete by July 1974. All complete by September 1974.

E–2C: 37 of 41 complete by September 1974. All complete by January 1975.

S–3A: 64 of 64 complete by September 1974.

Chairman MCCLELLAN. Not all TPS's have been delivered and the Navy intends to fill the gap by manual testing with VAST and the use of additional avionic spares. What are the Navy's plans for providing the required level of spares support?

Dr. POTTER. Test Program Sets for the Weapon Replaceable Assemblies are currently in the process of delivery. Most Test Program Sets will be available by September 1974. Once delivered, the requirement for interim support is eliminated. Prior to delivery of the TPS, the primary method of test support is by manual probing. In those instances where components could not be repaired at the local level and additional spares were procured to allow for retrograde time to a depot facility, it was recognized that the spares would serve a dual function of also outfitting new sites after the requirement for interim support terminated.

Chairman MCCLELLAN. In order for VAST to be fully effective the test program sets must be maintained current so as to be compatible with installed aircraft avionics equipment. What are the Navy's plans for this type of a configuration management effort?

Dr. POTTER. A special appendix to the Naval Air System Command Instruction on Configuration Management has been developed for VAST and VAST supported avionics. This is Appendix C of NAVAIR INST. 4130.1 dated 27 June 1972. The basic plan is that, prior to NAVAIR approval of any avionics change, the corresponding TPS must be programmed for update. Delivery of avionics changes is to be concurrent with delivery of updated TPS's. This will maintain VAST in a current status with aircraft avionics equipment.

Chairman MCCLELLAN. Have all VAST performance characteristics been demonstrated? If not, when are they and what is the Navy's plan for their demonstration?

Dr. POTTER. The VAST test and evaluation effort conducted at NATC Patuxent River, Maryland was completed on 5 March 1974. All performance characteristics were satisfactorily demonstrated.

F–14A

Chairman MCCLELLAN. Will the sale of F–14A aircraft to Iran include VAST? If it does, how will this impact on the cost of VAST to the U.S. Navy?

Dr. POTTER. Yes, sir. The sale of F14A aircraft to Iran does include VAST. There will be no impact on the cost of VAST to the U.S. Navy since these VAST systems are being procured through Foreign Military Sales funding. There is no R,D,T&E effort involved and since only four VAST are being procured for Iran, it is not anticipated that until cost of VAST stations will be reduced.

FYDP

Chairman McCLELLAN. The current FYDP provides funding for a total of 74 VAST stations. There are indications, however, that in order to support the planned F–14A buy and Marine Corps requirements, an additional 15 VAST stations are required. What is the current VAST procurement plan?

Dr. POTTER. The FYDP has not been revised to include the 15 additional stations. The current VAST procurement plan is for 89 VAST systems—83 for Navy in support of F–14A, E–2C and S–3A aircraft and 6 for Marine Corps F–14A support.

TPS Costs

Chairman McCLELLAN. It is understood that VAST hardware is funded and procured under separate contracts and is not part of the airframe contract. It is also understood that the TPS's are funded by the aircraft project office but under a separate contract with the airframe contractor. Since the TPS's are (1) funded by the aircraft project office; (2) developed by the airframe contractor; (3) used to support equipment which is peculiar to a particular aircraft; and (4) not included as part of the VAST hardware program cost, why are they not included in the aircraft program cost estimate?

Dr. POTTER. The TPS cost *are* included in the aircraft program cost estimates as reflected in the Selected Acquisition Report, but not as a separate budget entry.

F–14

Chairman McCLELLAN. The Deputy Secretary of Defense, by memo of June 7, 1973, increased the fiscal year 1977 procurement of 29 aircraft by 21 for a total of 50. This increased the planned procurement of the F–14 from 313 to 334 aircraft. What was the rationale for this decision and what will be the eventual F–14/Phoenix force size?

Dr. POTTER. The decision to increase the planned F–14 procurement from 313 to 334 aircraft was made in order to support the pipeline for the operating aircraft in the Navy and Marine Corps tactical squadrons.

The 334 aircraft program provided 16 F–14 squadrons for the Navy and Marine Corps. Additional F–14s will be required until the nex VFAX aircraft is available and for attrition to maintain force levels.

Chairman McCLELLAN. It is understood that all F–4 replacement aircraft will have a Phoenix capability. If this be the case what alternatives (e.g., F–15, new development, modified F–4) are being considered to make up the Navy fighter force size in addition to the F–14? Will a "design to cost" and/or a "competative fly-off" between alternative aircraft be considered?

Dr. POTTER. Deputy Secretary of Defense Clements recommended to the Senate Armed Services Committee (Tactical Air Subcommittee) that the Navy be allowed to pursue a new development to satisfy their fighter force requirements. It will be managed under the "design to cost" philosophy, but no "competitive fly-off" is being considered.

F401 Engine

Chairman McCLELLAN. What are the Navy's plans for the F401 engine? Will the 60 hour substantiation test, which was suspended on 11–27–73, due to a failure, be rerun? If it is and production plans are approved, will the two MQT's previously planned be run to provide the basis for a production decision?

Dr. POTTER. The F401 engine has emerged as a very promising candidate to fulfill the propulsion requirements of VFAX, TAW and other aircraft applications in the 1980's, as well as follow-on F–14 buys. As a result of engine technical problems, associated schedule slippages and cost increases of the Joint Engine Development Program, the Navy is in the process of redefining an F401 program which will result in engine qualification in approximately three years.

Current plans include a 60 hour substantiation test.

If production plans are approved, the production decision will be based on completion of two MQT's.

Chairman McCLELLAN. If the F401 is approved for production and use with the F–14, what will be the extent of retrofit in terms of cost and quantity of aircraft involved?

Dr. POTTER. At this time, it is not planned to retrofit the F401 engines into F–14 aircraft.

PHOENIX PERFORMANCE

Chairman MCCLELLAN. Have all of the critical Phoenix performance parameters and conditions been demonstrated? If not, what remains to be demonstrated to assure satisfactory performance in an operational environment? How realistic and representative of the threat are the targets to be used in test?

Dr. POTTER. All of the critical Phoenix performance parameters and conditions have been successfully demonstrated in as closely a simulated tactical environment as possible. Some of the more significant performance demonstration achievements are:

Six missiles simultaneously in guidance towards six targets.
Target kill from a launch range of 110 nautical miles.
Simulated [deleted] kill-target flying at mach [deleted] at 82,000 feet.
Several simulated small, low altitude cruise missile kills.
Several target kills in ECM environments.
Dogfight maneuver, tail attack, launch-and-leave capabilities.

The test targets have been very realistic, though perhaps not as realistic as is desired. The optimum test target is the actual threat vehicle operated in the expected tatical scenario. Since this is impossible to achieve, threats are simulated by the Navy test facilities. The principal operational parameters which make a simulated target realistic from a Phoenix missile test point of view are:

Target size.
Target speed and altitude.
Threat ECM environment.
Threat tactics.

Practically all Phoenix missiles launched to date have been against realistically sized targets flown in speed and altitude regimes characteristics of real enemy threat aircraft.

F–14A SALE TO IRAN

Chairman MCCLELLAN. The recent sale of the F–14A to the Iranian Government should result in the increased share of development costs. If so, what will be the impact of the sale on the cost of the F–14A to the U.S. Navy?

Dr. POTTER. The Iranian Government is paying a pro-rata share of F–14 non-recurring R&D costs amounting to $67 million. This amount was arrived at by dividing the total F–14 R&D costs by the sum of the current approved U.S. program and anticipated foreign military sales cases to arrive at a unit cost. As collections are received from the Government of Iran, they will be applied to the appropriate appropriation accounts in accordance with prescribed OSD policy.

It must be recognized that entitlements to collections from foreign customers do not become due nor are they collected at the time a sales agreement is consummated. Rather, these collections are earned and received as production progresses and items are delivered. On major items such as the F–14 this process will not be completed until FY 1977.

Cost savings to the U.S. Government in FY 1975 because of the Iranian procurement are estimated between $15–22 million. Navy negotiations with Grumman are expected to be concluded in July 1974 with a fixed price type contract reflecting realistic savings. We cannot predict the outcome of the upcoming negotiation but do recommend a FY 1975 F–14 budget reduction of $15 million pending completion of negotiations.

F–14A PROCUREMENT

Chairman MCCLELLAN. The Deputy Secretary of Defense memo of June 7, 1973, directed a limited rate of procurement of F–14A aircraft which was not to exceed 50 per year. This resulted in breaking the airframe contract at a significant increase in program cost per unit. What was the rationale for this decision?

Dr. POTTER. The OSD Program Budget Decision to reduce from 88 to 48 F–14A aircraft in Fiscal Year 1974 was made on 5 December 1972. On 8 December 1972 the Navy exercised its option for 48 LOT V Aircraft which was rejected by Grumman on 11 December 1972. Subsequently, it became apparent that because of the then current economic situation, to force Grumman to produce F–14's at the original contract price beyond LOT V would result in company losses exceeding their capital assets . . . bankruptcy. Following intensive discussions with the

Navy, Grumman on March 1973 agreed to produce aircraft under the terms of the original contract through LOT V and to produce the 48 aircraft requested in Fiscal Year 1974 under a separate (new) re-negotiated contract provided that the Congress authorized and appropriated the necessary funding.

In June 1973, Secretary Clements directed a procurement rate of 50 aircraft per year.

In summary, the original plan for procurement of 88 F–14's in Fiscal Year 1974 was changed to 48 aircraft, then to 50 which was within the allowable variable LOT formula, and accordingly, was not the action that broke the airframe contract. The number 50 was chosen as being a more arithmetically pure avenue of procurement toward reaching 334 aircraft (i.e., 50, 50, 50, 50, vice 48, 48, 48, 54).

Chairman McCLELLAN. Deficiencies and critical issues were discussed in the F–14A initial operational test and evaluation (IOT&E) report which were not addressed in the report submitted to the Congress under Section 506 of Public Law 92–156. What is the reason for not disclosing this information to the Congress?

Dr. POTTER. The deficiencies uncovered during the F–14A initial operational test and evaluation (IOT&E) were already a matter of public record in that the deficiencies had been previously uncovered during Navy Preliminary Evaluations I and II, reports of which were provided for the record during Fiscal Year 1973 hearings. The issues labeled critical in the IOT&E report were being addressed at the time the report was written or there were plans to do so. Accordingly, the IOT&E issues were no longer considered to be critical.

AIM–9 SIDEWINDER

Chairman McCLELLAN. Which version of the AIM–9 Sidewinder is planned for use with the F–14A? Have compatability tests with the missile been conducted?

Dr. POTTER. The AIM–9G, 9H and 9L are planned for use with the F–14A. Compatibility tests have been conducted. The AIM–9H will be used on initial deployment.

GAU–7/A

Chairman McCLELLAN. The Air Force is currently developing an advanced technology gun, the GAU–7/A which is to replace the M–61. Does the Navy have any plans for procuring the GAU–7/A gun for use with the F–14?

Mr. POTTER. The Navy currently has no plans for procuring the Air Force GAU–7/A gun for the F–14A. The Navy is thus far satisfied with the M–61 gun which is achieving extremely good hit rates.

AIM–7F SPARROW

Chairman McCLELLAN. It is highly unlikely that the AIM–7F Sparrow will be available for use with the F–14A at time of deployment. If this be the case which other version of the AIM–7 will be utilized? Is the inventory of this substitute missile and also the AIM–9 adequate to meet the demand? If not, how will the shortfall be resolved?

Dr. POTTER. The AIM–7F is not required for first deployment of the F–14A in the U.S.S. Enterprise and U.S.S. Kennedy. The AIM–7E–2 will be utilized. This version of the AIM–7E retains the medium-range capability while providing a reduced minimum launch range. Inventory of this missile and the Sidewinder are adequate to meet the demand. The first deployment of the F–14A is not sensitive to the AIM–7F availability.

Chairman McCLELLAN. The Air Force claims that the F–15 with the AIM–7F has a Foxbat kill capability. Can the F–14A with the AIM–7F make the same claim?

Dr. POTTER. The F–14A would basically have the same chance at intercept of a Foxbat with the AIM–7F as the F–15 in that the principal factor is the missile itself. The AIM–7F has a recognized capability, although a relatively small envelope, against FOXBAT. The Navy would prefer to use the Phoenix against the Foxbat to achieve maximum attrition. The Phoenix missile aerodynamic and tracking capability allows the F–14 to maintain air superiority while remaining at a suitable fighting altitude for subsequent attacks on hostile aircraft at any other altitude.

F100 and F401 Engines

Chairman McClellan. We understand that the Air Force F100 and Navy F401 engines have the same core. Are the problems which have surfaced in each during development similar? If they are, why has the Air Force gone into production while the Navy has not?

Dr. Potter. The F100 and F401 engines have essentially the same core and most problems which have occurred during development are applicable to both engines. It should be noted, however, that the F401 engine is a higher thrust engine and the core of the engine may operate at higher pressures and temperatures for certain flight conditions. As an example, the F401 engine which failed during the official 60 hour substantiation test on 27 November 1973, was operating with turbine cooling air 50°F higher and speeds 250 RPM higher than those that the first F100 to complete MQT (033) was operating for the same flight condition.

The F401 engine is not in production due to engine technical problems, such as described above, associated slippages in schedule and cost increases associated with the Joint Engine Development Program. It should also be noted that even though the engine development program was funded 50/50 by Air Force and Navy, the F401 engine is at a lower stage of development than the F100, as indicated by the number of full scale engine test hours achieved on both engines at the time of the F401 failure noted above: F401—5900 hours; F100—8200 hours.

Lot VI Procurement of F–14A

Chairman McClellan. The Lot VI procurement of F–14A aircraft includes specification requirements which have been reduced to reflect actual performance which has been demonstrated. What is the impact of these reduced requirements on DCP thresholds and operational requirements?

Dr. Potter. The F–14 aircraft performance specifications have been reduced for the FY 74 procurement from the original contract specification. The basic effect on performance of the reductions in the specification is minimal.

I would also point out that changing of aircraft specifications to reflect the actual performance of the aircraft as it is being built and accepted is a normal situation. Following is a table reflecting specification change history on several Grumman aircraft:

DETAIL SPEC. CHANGE HISTORY—GRUMMAN AIRCRAFT

[Key: O=Original; M=Modified]

Type	Fiscal year—															
	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
6A	O	O	M	M	M	M	M	M	M	M	M	M				
6E												O	M	M	M	M
A6B											O	M	M	M	M	M
2C										O	(1)	(1)	O	M	M	
X–14											O	O	O	O	O	M

[1] Development.

A review of the McDonnell built F–4 series will also reveal many specification changes.

The design of any new high performance airplane is a major engineering effort utilizing the very latest analytical and technical methods and techniques—and while it is done very scientifically it is not an exact science. When the finishel product flies we normally find that there are variations from our original design.

The question then becomes one of assessing the overall capability of the finished product to do the required missions.

After over 10,000 hours of flight time in development test and evaluation, Board of Inspection and Survey Trials, and operation by fleet pilots in 3 squadrons now operation, all reports from the Navy indicate that the F–14 is an unqualified success, and they believe it has the greatest total weapons system capability of any fighter airplane in the world today. The Navy is no longer talking about a

paper airplane—they are talking about the F–14 as it exists—the airplane they are flying.

In addition to highlighting the specification deficiencies we must also recognize that the contractor has, through his design effort, attained several very meaningful pluses in the performance of the F–14. These include the additional internal fuel capacity to give the Navy its required range; additional structural strength to make the F–14 essentially a [deleted] airplane for greater maneuverability; the absolutely superb performance of the variable sweep wing giving the F–14 superior performance over such a wide range of flight regimes: The spin resistant characteristics of the F–14 and the extremely fine handling characteristics of the airplane throughout the flight envelope, and particularly in high angle of attack flight; and the capabilities and performance of the AWG–9 fire control systems and the Phoenix missile are recognized as an unparalleled success in weapons system/missile development.

The Navy has indicated that it is extremely pleased with all facets of the fine performance it is experiencing with the F–14 and feels that the F–14 will meet all of its mission requirements.

Operational Testing

Chairman McClellan. Will the operational tests to be conducted on the interim SCS during this year clearly demonstrate the effectiveness of:

(1) SH–3H helicopters to detect and localize submarines and pass off the target to the LAMPS helicopters to prosecute the attack on the submarines?

(2) HARRIERS (AV–8A's) to kill oncoming enemy airborne and surface targets?

(3) Maintenance capability of the SCS to maintain for 15 consecutive days its entire airwing—14 helicopters and 3 HARRIERS, plus the LAMPS helicopters from accompanying escort ships?

Admiral Moran. All three of these capabilities have already been demonstrated in tests conducted to date and will continue to be demonstrated in the forthcoming tests as the opportunity arises.

COMOPTEVFOR

Chairman McClellan. The Navy's Operational Test and Evaluation Force (COMOPTEVFOR) has recommended that a three-dimensional radar (SPS–52B) be added to the SCS in place of the SPS–40B. What impact will the costly SPS–52B have on the design-to-cost goal of the ship?

Admiral Moran. The AN/SPS–52 radar is included in the current design and costs of the SCS as reported in the Congressional data sheets for FY–75. The design-to-cost goal of less than $90M in FY–73 unescalated dollars for follow-ships has not been exceeded by substitution of the SPS–52B for the SPS–40B.

Sea Control Ship

Chairman McClellan. What is the predicted exchange ratio (Russian subs killed to SCS lost) for the Sea Control Ship?

Admiral Moran. In convoy, the SCS is indistinguishable (to a submarine) from the ships it is escorting. Depending on the threat scenario, we can project that as high as [deleted] submarines will be sunk for every SCS damaged (but not necessarily sunk).

A mission of the SCS is to escort ships to their destination with as few losses as possible. After early detection of a submarine, diversionary tactics such as evasive maneuvers can delay attacking forces and gain time for the SCS and other escorts to damage or destroy hostile submarines or to deter torpedo or missile attacks. Thus, even if no attacking submarines were sunk and the majority of escorted ships survived, the SCS would have performed its mission successfully.

Chairman McClellan. How vulnerable is the SCS to torpedo attack and to missile attack?

Admiral Moran. SCS casualties can result from either attacks in which that ship is sought out, or as the result of submarine missile or torpedo attacks which are distributed randomly among the convoy ships. In view of the number of overall encounters and the scarcity of SCS, the random distributed threat is considered most likely. Missile hits tend to be randomized, since ESM subverts discrimination in terminal homing. Using a randomized binominal distribution

in which some ships get multiple hits while others are unhit, it was concluded that the probability of hit on the SCS is [deleted] depending on the threat. Once the submarine penetrates the outer layers of ASW defenses, torpedo attacks are most likely directed against closest useful targets in military ship convoys. It is doubtful that deliberate attacks against SCS represent a good strategy since these attacks would have to be conducted with torpedoes close aboard, at a cost in time (and submarine survival) for locating the SCS. However, if we assume that the submarine is aware an SCS is within the formation and seeks it out for attack then the probability of hit on the SCS would be [deleted] depending on the threat.

If torpedo attack results are combined with missile hits the probability that the SCS is sunk (hits do not equate to sinkings) is [deleted] optimistic/pessimistic by improved threat).

Looking at the problem in the context of a campaign with all 8 SCS we can get a better perspective of SCS survivability. SCS campaign analysis results project that [deleted] of military ships (merchant hull construction) are sunk in the first 30 days, the peak period for ship attrition. Assuming that all 8 SCS were deployed over that period, this would equate to a loss of [deleted] SCS. Compared to the norm of military shipping, the SCS has capabilities which reduce its vulnerability, including: (1) ability to quickly react to an alerting event and execute evasive maneuvers; (2) utilize its air group on station and surge to suppress submarine activity; (3) the two CIWS are predicted to significantly reduce the threat of homing missiles, compared to ships not so equipped. The predicted result is that the SCS is expected to be [deleted] as vulnerable as other military shipping. In terms of the D+30, highest attrition period in the NATO FIRST scenario, this results in from [deleted] SCS sunk. This means we would have [deleted] SCS surviving the high attrition period, and even assuming the worst case (reduced vulnerability of the SCS totally ignored) [deleted] would survive. This still constitutes a viable force and it further supports the Navy's contention that ships in numbers are essential to our success in controlling the sea lanes.

Phalanx System

Chairman McClellan. Since the Phalanx system (2 Vulcan 20 mm guns) will not be available for the lead ship, what system will be substituted so as to provide the ship with a close-in-weapon support system?

Admiral Moran. Current information indicates that although the CIWS program has been delayed, production units will be available in late CY–77 allowing ample time for incorporation in the lead ship. Vulcan-Phalanx is a standalone system and once available, installation is rapid and simple.

Should the Vulcan-Phalanx system not be available for some reason until well after delivery of the lead ship, the Navy would consider substitution of another point defense system, such as NATO Sea Sparrow, for the CIWS in the SCS.

LM–2500 Engine

Chairman McClellan. Has testing the planned LM–2500 engine for the SCS demonstrated capability to achieve the required shaft horsepower and a sustained speed? Have the speed requirements of the SCS changed, and if so, why?

Admiral Moran. LM–2500 Engine testing has demonstrated that the 45,000 shaft horsepower required for the SCS is achievable. The speed requirements for the SCS have not changed. A sustained speed of 23–25 knots is expected which will provide a top speed of 26–27 knots.

Anti-Submarine Warfare (ASW)

Chairman McClellan. The SCS is only one system that must team with other systems to perform a given mission particularly in the area of anti-submarine warfare (ASW). The Navy was previously directed by the Deputy Secretary of Defense to complete a comprehensive air, surface, and subsurface escort force study. That effort was postponed because of higher priority work. Since the last study was completed in 1967 which did not include the SCS, is it not appropriate at this time to complete such a study prior to award of the lead ship?

Admiral Moran. The Navy was previously directed by the Deputy Secretary of Defense to complete a comprehensive air, surface and subsurface escort force

study. The Secretary of Defense postponed the study effort for a number of reasons. Although higher priority work was partially responsible for the postponement, there were other considerations which we felt must be fully explored before we could responsibly respond to OSD direction. An important consideration was the contribution we could expect from studies in progress at the time in regard to the projected escort force mix. As these studies progressed, it became apparent that the need for a study dedicated to the examination of escort forces would be redundant, because other studies such as SEAMIX met the immediate requirement for a comprehensive study which considered projected forces in the 1981 time frame within the context of a world wide NATO FIRST scenario. In addition, these analyses tend to support the planning factors which were originally derived from the Major Fleet Escort Study. In view of this we have used SEAMIX results and separate sub-analyses within the Navy program planning process. Since SEAMIX considered the SCS as well as other escort forces, it proved to be an ideal vehicle from which we could take departure on the numerous analyses which were used to arrive at the optimum escort force mix in our planning process.

ASW DEFENSE

Chairman MCCLELLAN. Since the SCS apparently is to fulfill the gap in our ASW defense, what systems are available presently to perform the function planned for the SCS?

Admiral MORAN. In 1968 we had 23 aircraft carriers in inventory with 7 of these carriers dedicated to anti-submarine warfare (CVS). Since then carrier force levels have declined to 14 today with further reductions anticipated until we reach a total of 12 in 1977. As carrier force levels have declined the CVS has been phase out. To help compensate for the loss of ASW carriers we are in the process of converting attack carriers (CVA) to CVs, carriers which have an ASW capability as well as providing tactical air support. But, these carriers will be dedicated to high threat areas in a NATO war with their ASW assets (S–3A) being used for the protection of their own force. With the carriers committed to the high threat areas, there are not sea-based air assets to dedicate to protection of the sea lines of communication. The SCS fulfills this requirement.

The SCS is a key member of a weapon system mix which makes up the SCS team. The SCS team will normally be composed of the SCS, surface combatants with LAMPS and tactical towed arrays, and SSNs or P–3C aircraft when available. The P–3C in the protection role will provide an extended range forward screen [deleted] ahead of the force. SSN escorts (SSNE) can be used to back-up the P–3C forward screen (or substitute for it) by placing them as an intermediate screen about [deleted] miles ahead of the force. Additionally, we have the option of placing surface combatants with towed arrays in the intermediate screen area if desired. Normally, if SSNEs and P–3Cs are available, most of the surface combatants will be assigned to the close-in screen with the strongest concentration of these forces in the van of the formation. In effect, a submarine attempting to close from ahead will have to penetrate all of these screens to arrive at a torpedo firing position and all but the close-in screen to arrive at a missile firing position. However, the intermediate screen covers the area where a missile firing submarine ahead of the formation would probably launch its missiles; therefore, the submarine must assume a high risk from flaming datum prosecution by intermediate screening units, particularly LAMPS aircraft if a missile attack is initiated.

The advantage of using surface combatants as protection in the forward sector of the formation is the capability to employ high-powered active sonars to best advantage. The submarine can make a quiet approach (low speed) toward its target from ahead. Therefore, the submarine is more difficult to detect with passive acoustic sensors, but with high powered active sensors the submarine's quietness is of no consequence. With the more capable active sensors committed to the van, passive sensors are employed in other sectors where submarine quietness is more difficult to achieve due to the high submarine speeds involved.

The SCS is employed to protect the flanks of the formation. The SCS utilizes its ASW/surveillance helicopters to maintain and monitor flank barriers on each side of the force. These flank barriers normally consist of [delete] passive sonobuoys spaced about [deleted] miles apart. This forms a barrier over [deleted] miles long which provides passive acoustic surveillance [deleted] on each side of the formation. The SH–3H monitoring each barrier relays raw acoustic data

from each sonobuoy to the SCS ASCAC for processing. Submarines closing from the flanks must maintain higher speeds if a successful intercept of the formation is to be achieved. The submarine at high speed becomes noisy enough for the passive sonobuoys in the flank barrier to provide a high probability of detection. When the SCS Anti-Submarine Classification and Analysis Center (ASCAC) detects a submarine penetration, the synergistic payoff of the SCS team becomes apparent as surface and ASW air elements blend their capabilities in the ASW localization and attack problem. For example, while the SH–3H maintains the flank barrier LAMPS aircraft can be called in to prosecute the ASW problem, and if required surface combatants can also be employed. The combined team is most effective in the ASW localization problem as demonstrated in recent sea control exercises. The tactical commander also has the option of surging additional SH–3H aircraft to prosecute the contact or to augment other forces on the scene. In total the combined capability of the team provides a broad spectrum of ASW sensors that can be brought to bear on a detected intruder.

The question has tied the SCS and the remainder of the team to ASW. True, this is a primary mission but the team contributes much more. The SCS provides air surveillance, air intercept and an air strike capability against enemy surface forces. The PF adds an area defense ASMD capability to the force which the SCS backs-up with its CIWS for its own defense. Further, all of the surface combatants will carry HARPOON. The synergism of the SCS team does not stop with the ASW task but carries over into all dimensions of naval warfare. So the SCS should not be considered as filling an ASW need only, but as providing a three dimensional defense of shipping and naval forces in low threat areas.

Until the first SCS enters the fleet, we will provide the best SLOC protection we can with the assets available, but there is not substitution for the sea-based air support, as shown above, that could be provid'd by an SCS unless we should choose to hold back some of the carriers for SLOC protection. Considering the number of convoys, URGs and amphibious groups which need protection and the limited number of carriers available to meet commitments in high threat areas, the utilization of carriers in SLOC protection in low threat areas is not a viable option. The shortfall in sea-based air is the very reason we are pressing for approval of the SCS program so we can proceed with ship construction on an urgent basis.

Chairman McCLELLAN. Since the eight SCS's now planned seems to be only an initial buy, what is the ultimate number of SCS's planned by the Navy?

Admiral MORAN. When the SCS was considered in the Navy program planning process it was concluded that funds could be allocated for development and procurement of 8 SCS which would meet our needs for the foreseeable future. There are no present plans to enlarge this force, but, obviously if the world situation should dictate we might procure more of this type ship. As with any other warship the SCS is being signed for wartime employment. Under wartime conditions we would undoubtedly want all of the SCSs we could get. As new technologies prove themselves it is conceivable that at some later date we might want to expand the SCS force with more advanced platforms, but this is speculative at this point in time.

With the constraints in funds for force development and procurement it is doubtful we will consider additional SCS procurement until after we have realized an 8 ship force. In the 1960s the Navy built up its force of highly capable ships and the 1970's have become the decades of low mix force procurement, SCS being one of these systems. Once the low mix forces are well underway to completion we will have to turn our attention back to the more capable systems which could further delay any consideration of expanding the SCS force structure.

LAMPS HELICOPTERS

Chairman McCLELLAN. A change was made in the PF design to provide accommodations for two LAMPS helicopters instead of one originally planned. As a result of cost increases resulting from this change, a more expensive and capable sonar and electronic countermeasures equipment was exchanged for less expensive and capable equipment. Since the LAMPS helicopter originally planned for the ship may not be available, and the advanced LAMPS helicopter of which only one is now scheduled for the PF, will not be available until about 26 PFs have been built, what is the effect on the operational capability of the PF?

Admiral MORAN. The planned operational capability of the PF is not impacted by the discussion above. Navy plans call for LAMPS I helicopters to be operational on several classes of surface combatants, including the PF. Although there are more LAMPS I spaces aboard ships than there are aircraft, the aircraft will be deployed principally on those combatants for which there is an operational requirement; e.g., two on a deployed PF, one on a PF engaged in local operations, none on a PF undergoing overhaul. When LAMPS III aircraft became available, they will be employed in a similar manner. Further, the Navy decided to increase the LAMPS capability of the PF because the exploitation potential of LAMPS in surface and sub-surface warfare was considered to be high in comparison with that of ship sonars. In the process of trade-off analyses, the Navy concluded that the less expensive AN/SQS–56 sonar, which is roughly equivalent to the AN/SQQ–23 in the direct path mode, would be adequate for the PF mission application. Finally, a definitive selection of the electronic surveillance measures (ESM) suite for the PF has not been made. The Navy is developing an ESM family within specified cost limits, and selection of the PF suite is contingent upon the development of this system. The requirement for the PF suite has not changed.

Chairman MCCLELLAN. In light of the above what is the basis for procuring the PF from three shipbuilders simultaneously?

Admiral MORAN. The basis for procuring PFs from three shipbuilders simultaneously is not influenced by the previous discussion. This number of production yards achieves early delivery of ships to the Fleet and is compatible with both shipyard capacity and the limiting delivery rate of major equipment shipsets, i.e., one per month. Except for full production yards such as Litton and modernized yards, U.S. shipyards are, in general, limited to a maximum delivery rate of four destroyer type ships per year. Thus, three conventional yards operating at nominal capacity absorb the available major equipments. Production in only two conventional yards would stretch out ship deliveries. Production in more than three would reduce numbers per yard to such an extent as to degrade series production savings. Because continuity of the follow ship program is central to least cost, it is vitally important to maintain the planned production rates of these urgently needed ships.

DE 1052 DESTROYER

Chairman MCCLELLAN. Since the current price of the PF is fast approaching other ships such as the DE 1052 destroyer, which is as capable a ship as the PF, it would appear appropriate for the Navy to make a cost effectiveness study on these ships. What are the Navy's plans to complete such a study and if not, why not?

Admiral MORAN. During the conceptual phase of the PF, the Navy made a specific comparison of the PF versus a guided missile-configured DE 1052. The cost of the DE 1052 was estimated in unescalated FY 73 dollars to be $51–58 million compared with $45.7 million for the PF, and was thus determined to be a less cost-effective alternative for meeting the Navy's urgent need for additional escorts to fulfill minimum total Navy requirements. The existing DE 1052 class cannot effectively be back-fitted with current area AAW missile systems and can accommodate a lesser number of Harpoon missiles than the PF. Additionally, it takes considerably more men to man a DE 1052.

PHALANX SYSTEM

Chairman MCCLELLAN. Since the Phalanx system (two Vulcan 200 MM guns) will not be available until sometime later than originally scheduled, how does this affect the design-to-cost amount established for the PF?

Admiral MORAN. Later availability of the Phalanx system has no affect on the design-to-cost amount estabilshed for the PF. This system is currently identified as a space and weight item in the ship characteristics. The Navy has deliberately not included within PF costs any reservation for Future Characteristics Changes. It is intended that if and when a requirement for a change becomes evident, and provide development is of requisite maturity, the Navy will request authorization and appropriation of the necessary funds. By reserving space and weight in the ship design, the Navy has provided the necessary basic flexibility to incorporate such changes at minimum impact on the cost of the ship. It is noted that the space and weight for Vulcan-Phalanx CIWS is a no-

tional reservation only. If more cost effective alternatives to Phalanx became available, they may be requested providing they are viable choices in terms of the discrete reservation in the PF design.

PF-Type Ship

Chairman McClellan. The PF represents a new class of ship in that the type of maintenance normally performed on such ships will no longer be done on board but has been transferred to land-based maintenance sites. Is the maintenance cost related to such land-based maintenance?

Admiral Moran. The maintenance concept for the PF is more properly a reorientation of the shipboard maintenance effort, not an elimination of it. Shipboard level maintenance will only partially be transferred ashore. For example, most presentive maintenance not requiring disassembly of equipment will still be conducted on board ship as will corrective maintenance. However, on board repairs will, in general, be accomplished through modular replacement rather than piece part repair, which is consistent with the current state-of-the-art. Repair of the modules per se will generally be done on tenders or ashore.

Because a program is being developed Navy-wide to accommodate this new trend toward off ship maintenance on PF, PHM, and SCS, specific cost estimates for PF alone are not available pending full program development. However, the costs for maintenance ashore for PF equipment are considered to be substantially less than the associated savings that result from reducing shipboard maintenance and manning. This savings, based on the approximately 50 less men required to man a PF compared to a similarly-equipped conventional ship, is estimated to be $50 million per year for the 50-ship PF program.

Cruise Missile Programs

Chairman McClellan. Why are there cruise missile programs in both the Navy and Air Force?

Dr. Potter. The Navy and the Air Force are developing long range cruise missiles to satisfy the requirements of different launch platforms. The Air Force Air Launched Cruise Missile (ALCM) will be designed for internal carriage in SRAM rotary launchers of the B–52 and follow-on aircraft. The Navy Submarine Launched Cruise Missile (SLCM) is designed for launch from the torpedo tubes of nuclear powered submarines and will also be compatible with surface launch platforms.

Technology bases are being shared between the ALCM and SLCM. The Air Force has been designated as having the technology lead in the development of advanced turbofan engines while the Navy has the technology lead in cruise missile strategic guidance systems.

The Air Force Cruise Missile Program Office has assigned a resident Deputy for Air Force Matters to the Navy Cruise Missile Program Office. Similarly, the Navy Missile Program Office is assigning a resident Deputy for Navy Matters to the Air Force Cruise Missile Program Office.

Submarine Launched Cruise Missile

Chairman McClellan. Will the SLCM be used on SSBNs? How compatible are their ranges?

Dr. Potter. The Submarine Launched Cruise Missile is being designed for compatibility with all nuclear submarine torpedo tubes. If desired, this weapon could be carried on ballistic missile submarines.

Normal patrol areas of our primary retaliatory force, ballistic missile submarines, are outside of the range of the SLCM; however, the SLCM would add to the arsenal of these submarines additional survivable strategic weapons for follow-on strike from shorter range launch positions. In order to launch from closer, more hostile launch positions, the ballistic missile submarines need only penetrate to within launch range rather than continuously occupy the area.

Chairman McClellan. How severely would a Strategic Cruise Missile load degrade other SSN missions?

Dr. Potter. Most of our SSN's have room to carry [deleted] torpedoes, counting those in the tubes. If we take [deleted] of those spaces and replace them with strategic cruise missiles, then we have degraded other SSN missions by only

[deleted] World War II experience indicates that the limiting mission parameter was not being out of weapons, so this is an upper limit on the possible degradation. In the SSBN situation the normal torpedo load is [deleted] weapons. The number of weapons needed for self-defense includes a good bit of redundancy. Going from [deleted] would not degrade the SSBN's capability in its normal role.

Chairman McCLELLAN. Will the relatively short range of the torpedo tube launched Strategic Cruise Missile significantly affect platform prelaunch survivability? How do we rationalize a short range system when the current trend is toward longer ranges?

Dr. POTTER. The SSBN's are an alert force around the clock, around the year. It behooves us for a stable world to get these SSBN's out of the narrow seas and onto the high seas, and so there is no possibility of the Soviets bit by bit establishing a pattern and being able to find them if they make some breakthrough in our ASW. The SSNs that would carry the SLCM would not be an alert force that would always be in communications, always ready to fire on a few minutes' notice. They would come in at a certain time late. It is two completely different problems, and the differences are that one is an alert force and the other is not.

The alert force must have credibility as an alert force, always ready to fire. Those forces we need, and when we build a ship and expect it to last for some 20 or 25 years, we need to know with a considerable degree of certainty that we have not wasted the taxpayers' money and to be sure that it meets this credibility and the Soviets have no possibility of finding them.

[Deleted.]

The Navy's position is that at low altitude flight profile we could get 1,400 nautical miles. In order to achieve the [deleted].

Therefore, we do not consider the SLCM to be "short range" or to impact the pre-launch survivability of either the SSNs or SSBNs.

STRATEGIC CRUISE MISSILE

Chairman McCLELLAN. What is the minimum range capability of a Strategic Cruise Missile so as to make it a credible threat?

Dr. POTTER. Here we should note the geographic asymmetry favoring the Soviet Union. With existing missiles of [deleted] nm range, the Soviet Union can endanger more than [deleted] of the U.S. population from along our lengthy coastlines. To achieve a comparable capability against the Soviet Union, a cruise missile with a range of at least 1200 nm is required. Our research indicates that we can now do substantially better than this with torpedo tube launched missiles.

Mission analysis efforts indicate that [deleted] nautical miles gives the SLCM sufficient range to attack a significant percentage of Soviet targets (approximately [deleted] of the Soviet Union population). This was the initial threshold range stated in the Request for Quotations. Additional range extends target coverage and allows greater submarine standoff or more sea operating area. Range capability now appears to be [deleted] nautical miles, depending on flight profile.

Chairman McCLELLAN. What will be the mission of a long-range Tactical Cruise Missile? Will the tactical version be dual capable-nuclear and conventional warheads?

Dr. POTTER. The tactical variant of this missile with a high degree of commonality to the strategic version will deliver a payload of approximately [deleted] at ranges to 300 nm, thereby taking full advantage of existing and future target detection systems and maximizing the destruction potential of each torpedo tube load. This latter effect is most important for submarine deployed weapons, wherein the number of weapon loads is extremely limited.

The tactical variant will be designed for maximum launch platform adaptability so that it can be accommodated on major combatant surface ships as well as submarines.

The tactical cruise missile will employ a conventional high explosive warhead; however, a tactical nuclear warhead has not been precluded and is technically feasible. We are currently examining this possibility.

Chairman McCLELLAN. [Deleted.] What problems will this present?

Dr. POTTER. The intended navigation system, by its ability to recognize discrete geographic points, [deleted]. The arming and fuzing system will dud any errant missiles.

Chairman McCLELLAN. Can terrain avoidance system be spoofed?

Dr. POTTER. [Deleted.] The survivability, cost, and reliability trade-offs are being examined.

Chairman McCLELLAN. How flexible are the launch points, or must the platform be rigidly tied to a small launch area?

Dr. POTTER. The SLCM would not be tied to a small launch area. Its range permits a significant standoff capability allowing the submarine maximum operating area. Under the present concept, the submarines would be in their normal operating areas and not be required to be in specific locations or areas solely for the purpose of launching cruise missiles. Sufficient target data is stored aboard the submarine to permit nearly instantaneous retargeting of the missiles to take account of where the normal operating area might be at the time.

DIFFERENCES BETWEEN SLCM AND SCAD

Chairman McCLELLAN. Explain the major differences between SLCM and SCAD.

Dr. POTTER. The major differences between the Air Launched Cruise Missile (ALCM), formerly SCAD, and the Submarine Launched Cruise Missile (SLCM) are platform design criteria, range, and program philosophy and schedule.

The ALCM is designed for internal carriage on the B–52 and B–1 SRAM rotary launchers, and external carriage on the B–52. High altitude launch is also required. The SLCM is designed for torpedo tube launch from submarines and has potential application for launch from surface ship, or land-based platforms. The SLCM would be too large for the SRAM rotary launcher.

Design range for the ALCM is [deleted] nautical miles. SLCM range is on the order of [deleted] nautical miles in a low altitude flight profile, or up to [deleted] nautical miles in a high-low altitude profile.

The ALCM program will make maximum use of SCAD development for the air vehicle and engine. IOC would be achieved in [deleted]. The SLCM is utilizing a competitive procurement philosophy in all major subsystems, including air vehicle, engine and guidance. IOC is scheduled for early [deleted]. Both programs will be integrated in such a manner as to minimize duplication of development efforts. The Air Force has been directed to carry out turbofan engine and fuel development as common to both programs and the Navy has been directed to provide guidance technology common to both programs.

Chairman McCLELLAN. How adaptable will the missile be to air and/or surface launch, or would this require extensive redesign of the airframe as well as the platform?

Dr. POTTER. In order to survive in the submarine torpedo room environment, the SLCM must be ruggedly designed. The changes to the missile to accommodate other launch platforms would be minimal.

PLATFORM MODIFICATION COSTS

Chairman McCLELLAN. What are the platform modification costs?

Dr. POTTER. The platform modification costs for the MK 117 Fire Control System equipped SSN's is estimated to be between $0.5 and $1.5 million per ship in current dollars. The lower estimate includes the cost of adding a disc file to the fire control system. The higher estimate includes the fire control modifications and a provision for additional communications.

SSN SEA CONTROL MISSION

Chairman McCLELLAN. Will forward basing of Strategic Cruise Missile equipped SSNs be required?

Dr. POTTER. No. To fulfill the SSN sea control mission, you can often do more with fewer SSNs with forward basing, and we are often driven to thinking about forward basing for other purposes. However, there is no forward basing requirement because of the SLCM.

Chairman McCLELLAN. Is the SLCM a SALT bargaining chip?

Dr. POTTER. The SLCM is not a SALT bargaining chip.

Chairman McCLELLAN. Assuming that the prototype demonstration is successful, what are the projected procurement and operating costs over the period FY 75–79?

Dr. POTTER. Following a successful prototype flight demonstration, engineering development in [deleted] and procurement of test and evaluation (T&E) missiles will commence in [deleted]. There is currently budgeted $633 million through [deleted] for engineering development and procurement of T&E missiles. To complete development and procurement of production missiles, additional funding will be required [deleted].

SOVIET SURFACE SHIPS

Chairman MCCLELLAN. The surface ships of the Soviet Navy are much newer, more modern in concept, and seem to have much more firepower than our ships. How can your missile help our surface ships to reach a comparable level in firepower?

Dr. POTTER. The tactical variant of the SLCM would provide our surface ships with a long range standoff anti-ship missile.

STRATEGIC SYSTEMS COSTS

Chairman MCCLELLAN. The cost of strategic systems is enormous. What we really need is an inexpensive, survivable, strategic system that will not in turn generate other major systems to support it. How expensive will your strategic cruise missile system really be?

Dr. POTTER. The current estimate of advanced development cost including the FY 75 request for $45 million is $167 million. Currently budgeted for engineering development and test and evaluation (T&E) missile procurement is $633 million; engineering estimates will be refined based upon real cost experience in our prototype development program.

Our cost goal for the strategic missile is $630 K and $525 for the tactical missile. These goals appear quite realistic based on contractor's and the government's estimates of both production and development cost. The Navy is using a "Designing to Produce to a Cost" management approach as a base for its acquisition philosophy, as well as competitive prototype development to ensure on schedule and cost development.

Chairman MCCLELLAN. A year or two ago, the Navy was working on a preliminary design for a large cruise missile submarine. One of its features was twenty vertical launching tubes for cruise missiles. Could any of your missiles be used on a submarine like that?

Dr. POTTER. The Navy is no longer requesting the large cruise missile submarine. However, the Submarine Launched Cruise Missile (SLCM) can be launched from the standard torpedo tubes of any submarine. The concept of vertical launch from submarines is no longer being pursued, in view of the range capabilities predicated from torpedo tube sized cruise missiles.

Chairman MCCLELLAN. What is the advantage in a bigger tactical missile? Are increased range and a bigger warhead significant improvements?

Dr. POTTER. The major advantages are in the larger warhead and increased range capabilities, as you noted. These are significant in that the [deleted] warhead increases the single shot kill probability against destroyer escort and larger sized enemy combatants. The increased range allows greater standoff and is more comparable with Soviet capabilties. The Soviet anti-ship missiles have proven capabilities and new developments indicate further increases in this threat. The answer to this threat appears to be deployment of Harpoon as soon as possible and taking advantage of the SLCM development to provide a follow-on capability with longer range and larger warhead. It should also be noted that while the tactical SLCM is able to take advantage of the strategic SLCM airframe, it is optimized for its tactical role through use of a modified Harpoon guidance and turbojet sustainer engine.

SLCM GROWTH POTENTIAL

Chairman MCCLELLAN. Will the tactical submarine launched cruise missile have any growth potential? I am particularly interested in its use on other types of ships.

Dr. POTTER. Yes. The tactical SLCM has growth potential in payload (warhead and countermeasures), range, and platform adaptability.

Chairman MCCLELLAN. Can its range be increased?

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Dr. POTTER. Yes. Range growth to about [deleted] nautical miles appears achievable. With a smaller conventional warhead or tactical nuclear warhead, still longer ranges could be achieved. The present range and payload combination takes into account submarine handling weight limits, range limits of submarine sensors for acquiring targets, and ship kill probabilities.

Chairman MCCLELLAN. Does it have the growth potential to cope with more advanced defensive systems than now exist?

Dr. POTTER. Yes. The combination of extremely low flight and minimal radar, infrared and visual signatures [deleted]. Growth potential to defeat more sophisticated defenses include the use of [deleted].

Chairman MCCLELLAN. Could a version of your missile be used as a remotely piloted vehicle for reconnaisance? How would you adapt your basic airframes for this mission?

Dr. POTTER. The SLCM air vehicle appears to be a viable candidate for use as a remotely piloted vehicle. The basic airframe would be essentially unchanged. The particular RPV mission would determine the payload. A variety of sensors could be carried to conduct reconnaissance, depending on requirements.

HARPOON ENGINE

Chairman MCCLELLAN. I noticed that you plan to use the Harpoon engine and guidance for the tactical missile. Are they just pulled off the production line or are we really talking about new developments?

Dr. POTTER. We plan to use the basic Harpoon guidance and engine, slightly modified for the SLCM. The guidance will have to cope with longer ranges and a missile that banks-to-turn. Similarly, the engine mounting will have to be strengthened to withstand a higher shock environment.

Chairman MCCLELLAN. It seems that many times when we design a weapon for one purpose, and then adapt it for another use, we end up with an inferior hybrid. My concern is that we will have a first class strategic cruise missile and a second or third class tactical missile. Is this likely to happen in your program?

Dr. POTTER. Each version of the missile will have an engine, guidance system, and warhead tailored for its particular mission. The rest of the missile components are state-of-the-art technology equally suitable for either strategic or tactical missions.

Chairman MCCLELLAN. For a follow-on to Harpoon, isn't your tactical missile too slow? Shouldn't we be looking at supersonic missiles?

Dr. POTTER. The SLCM tactical missile has not been designed as a follow-on to Harpoon. It is a variant of the strategic SLCM, offering a relatively inexpensive option which increases delivery range and payload.

This development capitalizes on the low signatures in radar cross-section and infra-red emission obtainable by subsonic flight at low altitude.

Chairman MCCLELLAN. Why doesn't the Navy develop one engine and give it to both contractors?

Dr. POTTER. The SLCM program is pursuing a competitive engine development program in order to minimize cost and schedule risk and to ensure that the best turbofan engine in terms of cost and capability will ultimately be used in full scale development. To achieve this, the airframe contractors will be teamed one with Williams Research and the other with Teledyne, through completion of the validation phase.

SCAD ENGINE DEVELOPMENT

Chairman MCCLELLAN. The Air Force is developing an engine for SCAD, why don't you let the Air Force develop your engine?

Dr. POTTER. Air Force engine requirements are different from ours. First, the engine must be repackaged to fit the envelope of our missile. There are differences in shape between the missiles, which in turn were dictated by the launch platform requirements. Our engine will have to be strengthened to meet more stringent shock requirements. Finally, for submarine safety reasons, we are constrained in the types of fuel we may use. In summary, we must each design to our launch platforms and operational environment using common technology when feasible.

TERCOM

Chairman McCLELLAN. You said that TERCOM aided cruise missiles are inherently more accurate than ballistic missiles. Considering the cruise missiles' longer flight time, how can that be?

Dr. POTTER. The cruise missile is able to combine the accuracy of precision inertial measurement units with position updates from terrain contour matching (TERCOM). Fixes near a target allow a final update to assure high accuracy. The speed of a ballistic missile, even one possibly equipped with a terminal guidance system, works against its accuracy. The SLCM project is now pursuing a goal of [deleted] CEP. It should be noted that although this accuracy gives the SLCM targeting flexibility against a full range of military and urban/industrial targets, it does not create a first strike capability. The lower speed and the strategic reserve operational concept preclude such use.

Chairman McCLELLAN. Does the Soviet Union have a strategic cruise missile? If so, how is it guided?

Dr. POTTER. Yes. [Deleted.] They have a variety of other cruise missiles, deployed or under development, which are apparently limited to anti-ship roles. Some of these can be launched from under the water. The Soviet cruise missiles have ranges sufficient to attack many U.S. targets.

Chairman McCLELLAN. Granted the TERCOM works on U.S. test ranges, how do we know it will work [deleted].

Dr. POTTER. [Deleted.]

Chairman McCLELLAN. My concern lies in the fact that the Air Force, which will appear before this committee in a few weeks, is requesting $80M in FY 75 for a test program that parallels yours in time. How can you match their progress on your funding profile?

Dr. POTTER. The Navy Cruise Missile Validation Phase is built around a competitive demonstration of capability in a series of decoupled tests. The contractors are tasked to provide test vehicles that will demonstrate their capabilities in mastering various risk areas. Government "how-to" direction and the broad imposition of standard military specification requirements have been eliminated in all areas except for personnel and test launch platform safety. The decoupled testing concept will prevent a situation where a contractor must either spend his way to total success or face elimination from the competition. These steps are designed to result in a demonstration of Navy Cruise Missile capability with a minimum government expenditure and commitment.

While I am unable to address the funding for the ALCM program, I am convinced that the FY 75 funding request of $45M for the SLCM is an absolute minimum. In fact, the Navy is presently in source selection for the strategic guidance system which could result in slightly increased total development costs. Any reduction in FY 75 funds can only result in a stretch-out of the program with its resultant cost growth due to inflation.

COST OF WEAPONS SYSTEMS

Chairman McCLELLAN. Somehow despite the best management efforts of both industry and the DOD, weapons systems generally cost more than originally estimated. In some programs, the cost growth has been so significant, that if the true cost of the system had been known early enough, other more cost effective alternatives or modifications could have been chosen. Do you have any plan to insure that both you, the DOD, and the Congress will have early realistic assessments of the validity of your cost estimates?

Dr. POTTER. The Navy Cruise Missile Project is using a "Designing to Produce to a Cost" management approach as a base for its acquisition philosophy.

The Design to Cost strategy followed in the Cruise Missile Project was to define the configuration and performance envelopes through studies. These characteristics were the basis for the development of Navy parametric cost estimates which resulted in the establishment of the Navy DTC objective of $630K average unit flyaway cost for the strategic version of the missile and $525K for the tactical version in a combined program. These objectives (which are defined in constant FY 1974 dollars) include reasonable allowances for problems in design,

development, subcontracting and material procurement and manufacturing. These objectives became a part of the basic thresholds for the system.

All Request for Quotation have specified production quantities and rates. They also define both thresholds and goals for all design parameters including average unit flyaway cost. For performance requirements, the thresholds were obtainable with existing technology while the goals pushed the state of the art. For design to cost, the goals were desirable but extremely difficult levels to reach given the performance thresholds.

The quoters were required to make practical cost/performance tradeoffs between the thresholds and the goals to provide for the optimum configuration mix of performance and cost. Using his "optimum" configuration as a base, each quoter broke down his average unit flyaway cost to produce goals (in constant FY 1974 dollars) to the fourth level of the Work Breakdown Structure. The quoters were required to establish Design to Cost for subsystems, test vehicles and production missiles, and to establish traceability of cost goals and their achievement throughout the design, development, and production phases of the program. For example, configuration comparability and cost goals for the advanced development test articles were related to the Design to Cost goal for the production articles so that progress towards the ultimate unit flyaway cost goal can be assessed as manufacturing costs for development articles are incurred.

Chairman McCLELLAN. Have you or can you assure the taxpayer that you will be able to maintain options throughout this program that will enable the Navy to deliver a viable weapon system without having to resort to the "spend your way to success" plan of action?

Dr. POTTER. In order to provide an early verification of both the contractor's and the government's estimates of both production and development cost, a system of traceable components, subsystems, and vehicles is being utilized. By identifying the relationships in materials, production techniques and facilities, and learning curve positions between the given component, subsystem, and/or test vehicle and the same type of component, subsystem or complete missile in production, the validity of the production estimate can be projected early in the development process. We have identified both kinds of components and subsystems that shall be traced and the degree of traceability each has to be the production article. Our traceability starts with the manufacturing of the handling test vehicle early in the Validation Phase and continues through Full Scale Development and Pilot Production into Full Production.

Each of the prime contractors will be required to report status relative to his Design to Cost goal monthly on an exception basis; i.e., only significant new or changed design and/or cost data. In addition, indepth reviews of contractor progress towards Design to Cost goals will be held in conjunction with the attainment of critical program milestones. The prime contractors also will be required to continually update their cost/performance tradeoff studies as to identify attractive potential tradeoffs to the Navy prior to major program decision points, with the objective of maximizing the options available to the Navy Project Manager.

Competition between two contractors will be maintained throughout the validation phase for the three critical Cruise Missile subsystems—the airframe, the strategic guidance, and the strategic engine. The competition is the principal incentive for ensuring that the optimum cost/performance mix within the overall design thresholds is attained. The single contractor selected for engineering development of each subsystem will have demonstrated a very high probability of achieving program cost and performance goals with his production article.

Chairman McCLELLAN. The Soviet Union is heavily defended by surface-to-air missiles and high performance fighter planes. How can the strategic cruise missile penetrate these defenses?

Dr. POTTER. [Deleted.]

Chairman McCLELLAN. You mentioned flying at [deleted] feet over the terrain. Isn't that likely to destroy many of the strategic missiles while enroute to the target?

Dr. POTTER. Extensive study indicates that flying at these low altitudes is feasible and will enhance survivability. The key goal of our test program is to define the operational limits of the cruise missile system. The issue of how low a missile can safely fly will be resolved by flying the guidance set in both drones and test vehicles. The technology will therefore be demonstrated well before the missile system is ready for deployment.

Cruise Missile Development

Chairman McClellan. Considering all the Soviet defenses deployed, or postulated for the near future, it would seem to be very inexpensive for them to defeat cruise missiles. Why then should we embark on an expensive program to develop cruise missiles?

Dr. Potter. There are no existing defenses against small, very low flying cruise missiles. To counter the strategic SLCM would take a massive Soviet defense development and deployment effort, probably costing billions.

Chairman McClellan. The Congress also requested that the Navy conduct certain studies in relation to the Cruise Missile. Has this been done?

Dr. Potter. The Navy Cruise Missile Project Office has conducted extensive design studies and development rationale studies. Additionally, they have sponsored systems analysis efforts specifically addressing survivability. The Office of the Chief of Naval Operations is currently conducting a formal mission analysis and a requirements study to bring into focus the many study efforts of the last several years. The conclusions of all efforts to date support the need, effectiveness, and low system cost of the cruise missile.

Operational Requirement (OR)

Chairman McClellan. Does the Navy Cruise Missile Program have an SOR?

Dr. Potter. The Navy is developing an OR (Operational Requirement) for the SLCM. The OR is similar to the older SOR, but has been streamlined. The SLCM OR is presently circulating within the Office of the Chief of Navay Operations for review and approval.

Chairman McClellan. Have you made sufficient progress in your component development to warrant proceeding into the validation phase?

Dr. Potter. Design studies, previous guidance tests, and system analysis efforts would have warranted entry into the full validation phase last October. In view of Congressional direction to limit efforts to subsystem and component design work, the two winning airframe contractors were awarded contracts for airframe design. This has proceeded very well during the past five months and includes significant steps in meeting submarine shock environment requirements, as well as developing inert vehicles for handling and ejection tests. Guidance efforts have proceeded with mission demonstration flights from the Naval Air Test Center establishing the reasonableness of the very small CEP goals. Engine efforts include ALCM funded work on the Williams Research turbofan and company funded work by Teledyne CAE. It is my conviction that entry into a full prototype development effort should now commence; i.e., immediate entry into the validation phase.

Regulus Program

Chairman McClellan. The Regulus program and other cruise missile work was terminated by the Navy many years ago. Why should we now initiate a new cruise missile development?

Dr. Potter. The Regulus program had many drawbacks, including the requirement for surface launch and specially configured submarines with hangar decks. The SLCM Program takes advantage of current electronics miniaturization, small turbofan technology, and considerable experience gained from the Harpoon program. It represents an order of magnitude improvement in capabilities over the Regulus. Further, achievement of 1400 [deleted] mile range in a torpedo tube sized vehicle allows utilization of all existing submarine torpedo tubes. No new platform development is required to achieve a significant increase in a survivable nuclear deterrent.

DSARC

Chairman McClellan. Has the Navy Cruise Missile Program had a DSARC yet? What were the results?

Dr. Potter. The Navy Cruise Missile Program had a formal DSARC on 12 February 1974. The decision paper resulting from the DSARC is attached for insertion in the record. Basically, it directs the Submarine Launched Cruise Missile Program to proceed as planned.

[The statement follows:]

THE DEPUTY SECRETARY OF DEFENSE,
Washington, D.C.

Memorandum for: The Secretary of the Army, The Secretary of the Navy, The Secretary of the Air Force.

Subject: Cruise Missile program

(U) As a result of the DSARC Milestone I review of the Cruise Missile Program conducted on 12 February 1974 the following specific direction for the Service programs is provided:

(C) The Navy will proceed to accomplish the Submarine Launched Cruise Missile (SLCM) program as presented with prototype development commencing at the beginning of Fiscal Year 1975.

(C) The Air Force will proceed with the proposed Air Launched Cruise Missile (ALCM) program modified to include an 18 month prototype phase prior to finalizing the design of the engineering flight test articles. The prototype phase will be initiated at the beginning of Fiscal Year 1975 and will constitute a complete demonstration of the system technology including flight test of at least two vehicles during Fiscal Year 1976. The prototype phase will include sufficient test and evaluation to resolve the issues relating to carrier aircraft compatibility, achievable range, radar cross section reduction, and terrain following.

(C) The Air Force will make every effort to minimize delay of the later engineering flight test schedule IOC by continuing the engineering design effort in parallel with the prototype flight test such that design release for the engineering test article can be accomplished by the end of CY 1975 and such that the flight test schedules for the engineering model and IOC date as presented at the DSARC of 12 February will not slip by more than six months. Further, the Air Force is directed to initiate an additional engine development effort such that two sources of small turbofan engines for the SLCM will be available. Regarding the guidance system for ALCM, the Air Force will make maximum use of the data being obtained by the Navy's SLCM TERCOM/INERTIAL test program. It is the opinion of the DSARC panel that the guidance objectives of the ALCM are sufficiently different from those of the previous SCAD program that the selection of the guidance contractor should be re-evaluated through competitive procurement.

(S) The goals of the cruise missile programs remain the same: to provide a highly proliferated low altitude threat in conjunction with our strategic bomber force and which has a high probability of penetrating the most sophisticated defense postulated for the next decade. This effort should result in a weapon system which has the yield and accuracy combination to be effective against a wide variety of targets including selected hard military targets.

(S) To achieve such a capability, the two cruise missile programs will have the initial technical goals shown below. Appropriate tradeoffs among these parameters should be performed during the advanced development phase.

Range*, in excess of [deleted] nautical miles
Speed in the Mach [deleted] range
Altitude approximately [deleted] or less over relatively smooth terrain
Radar cross section approximately [deleted] square meters or less within [deleted] nose on and over the frequencies of interest
Warhead approximately [deleted]
Accuracy [Deleted] nm or less for selected targets

An integrated test plan will be prepared for each Service program and be made available for the DD(T&E) review and coordination within OSD prior to 1 June 1974. An approved DCP for each program will be available for consideration by July 1974 which specifically address the tests to be accomplished, the results to be obtained, acceptable thresholds for the results, and milestones for test accomplishments. The Test and Evaluation changes to the ALCM program as briefed to the DSARC and which result from this directive should be briefed to the DD(T&E) no later than 30 April 1974.

*ALCM with range extension module and SLCM in the strategic configuration.

The Army will maintain liaison with the SLCM program to insure that the land surface launch mode of operations is adequately addressed during the Navy prototype validation program.

Continued close cooperation between the Navy and the Air Force is encouraged.

I desire that these prototype programs be pursued vigorously to resolve all technical issues in the most expeditious manner.

WILLIAM P. CLEMENTS, Jr.,
Deputy Secretary of Defense.

SSBN

Chairman MCCLELLAN. Is there any emerging capability by an enemy to threaten our present SSBNs through the use of detection and tracking techniques?

Dr. POTTER. Althuogh we have not seen a new, revolutionary threat to our present SSBNs, we must anticipate a degradation in their surviability in the future. The obvious interest shown by the Soviets in antisubmarine warfare, their technological advances in the past, and their experience in operating an SLBM system similar to our own necessitate the prosecution of increased SLBM survivability in a timely manner.

Our current SSBNs are considered invulnerable at this time but it is not prudent to await the appearance of a threat before developing and deploying a counter. Our intelligence sources have, in the past, been surprised at times by the emergence of unexpected Soviet technological improvements. Due to the 7–10 year interval between initiation and deployment in force of a new strategic system, we cannot afford to wait for a threat to emerge before deploying an advanced system which is designed to counter all known and postulated ASW threats. We will soon have this system, TRIDENT, in hand. The increased operating area made available by the TRIDENT missile and the ability of the TRIDENT submarine to covertly use this area due to its greater quiet patrol speed relative to our current SSBNs, will blunt any Soviet ASW effort envisioned by even our most vocal critics.

Chairman MCCLELLAN. If no significant threat is emerging, what is the reason for changing the date for beginning installation of TRIDENT missiles in POSEIDON configured submarines from 1982 to 1979?

Dr. POTTER. First of all, we must assume that some significant threat to our current SSBNs is indeed emerging. Certainly, at the very least, the technology of the Soviets is being brought to bear on ASW in a manner to focus on detection and tracking of submarines. The Soviets have made great strides in naval capability in recent years including efforts in [deleted]; MOSKVA and KIEV class carriers; and increasing experience in operating an SSBN system almost identical to our own. Such potential threats must be combated by a viable aggressive SLBM force improvement program on our part.

The change in date for the backfit program must be viewed in the light of such ASW efforts by the Soviets. This change was directed by the Deputy Secretary of Defense during January 1974 program restructuring. This program restructuring also included a reduction of the TRIDENT submarine procurement rate from three per year in fiscal years 1975, 1976 and 1977 to two per year in fiscal years 1975 through 1978 with the last submarine in the currently planned ten ship force procured in fiscal year 1979. The early backfit program compensates for the reduced TRIDENT submarine procurement rate by providing a capable force mix. The backfitted force hedges against an increased ASW threat or loss of forward bases while the TRIDENT force deploys a more capable platform with growth room for both missile and ship systems. The early backfit program, therefore, helps to maintain the overall SLBM force survivability which was originally envisioned under the 1,3,3,3 TRIDENT submarine procurement schedule.

VULNERABILITY OF SUBMARINE FORCES

Chairman MCCLELLAN. If an enemy ever develops effective detection and tracking techniques, would a small or large submarine force—all other factors being equal—be less vulnerable to destruction in a simultaneous attack?

Dr. POTTER. Given equal tube levels in an SLBM force it is not necessarily true that a large number of submarines with a small number of tubes in each submarine is more survivable than a small number of submarines with a large number of tubes in each submarine. Not only must the specific threat be defined but a careful review of survivability characteristics of the respective platforms must be conducted. There are two general threats which could be postulated for any enemy seeking destruction of a significant portion of our SLBM forces.

First, one could consider a [deleted]. In such a scenario, more submarines in the force would imply greater survivability if all submarines have the same survivability characteristics. An important factor to consider, however, is the distance of enemy bases from an SSBN site such as Bangor, Washington, and the force levels [deleted] which would be required to mount such a threat. The cost of procuring and maintaining such a force level would be prohibitive. Another factor to consider is that such ehemy operations would be conducted in close proximity to our home waters and could, therefore, be easily thwarted through the use of our own general purpose forces. In addition, exercises have shown that our most advanced SSNs have very limited success in trailing even [deleted].

The second, and probably only valid, threat to our SSBNs is an open ocean search and destroy effort by enemy anti-submarine warfare forces. Once again, this is a threat which [deleted]. In such a scenario, assuming enemy forces have no specific information on SSBN locations prior to the search, any equal tube forces are essentially equally survivable independent of submarine numbers. This is because a larger force level would have more submarines in a given area and would be more susceptible to destruction individually due to this larger SSBN density. For example, a force of ten submarines, each with twenty tubes, in an area of 20 million square miles would average one submarine every 2 million square miles. With twenty submarines each with ten tubes we have two submarines in every 2 million square miles. In both cases there are 20 tubes in every 2 million square miles. If a certain portion of the ocean is then searched, there would be twice as many targets each with half as many tubes in the case of the larger force level and the payoff in tubes destroyed would be the same as in the case of the smaller force level.

In summary, the size of the submarine force level, given equal tube levels and logical ship construction practices (limitations on tube numbers due to ship stability constraints) has little impact on force survivability. A critical factor then becomes cost for force procurement. A force of many submarines with small numbers of tubes is significantly more expensive to procure than a force of few submarines with larger numbers of tubes since submarine cost is the driving factor and does not vary greatly as tubes are added or deleted from the design. For cost-effective procurement of SSBNs, therefore, a smaller force of submarines with large numbers of missiles in each submarine appears reasonable.

TRIDENT

Chairman MCCLELLAN. Will the TRIDENT submarines reduced vulnerability due to its quieter operations offset, if not more than compensate for, any increased vulnerability caused by a smaller number of submarines?

Dr. POTTER. In those cases where the TRIDENT force might be more vulnerable due to a smaller number of submarines, such as [deleted] discussed previously, the TRIDENT submarine's quieter operations offsets such potential force vulnerability. The quieting features which will be incorporated in the TRIDENT submarine will make acoustic detection and tracking difficult, if not impossible, while the ability of the TRIDENT submarine to patrol all operating areas made available by the longer range TRIDENT missile further enhances survivability of each TRIDENT submarine and, therefore, the entire TRIDENT force.

Chairman MCCLELLAN. What will be the comparative quietness of TRIDENT and SSBN–X submarines?

Dr. POTTER. The TRIDENT submarine and the SSBN–X cannot be compared except in very general terms. A program of feasibility and conceptual design work for the SSBN–X will be initiated with fiscal year 1975 funds subject to Congressional approval. One of the results of this advanced development effort, which should be completed in fiscal year 1978, will be SSBN–X characteristics and specifications including quieting goals. Incorporation of state-of-the-art quieting features within hull size constraints are planned for the SSBN–X which

should provide significant improvements over the radiated noise levels of our current SSBNs. Due to its smaller size, it is probable that the SSBN–X will not incorporate all of the quieting features of the TRIDENT submarine and will threfore have higher radiated noise levels in many operational scenarios when compared to TRIDENT.

USEFUL LIFE OF SSBN's

Chairman MCCLELLAN. What is the estimated useful life of existing SSBNs?

Dr. POTTER. The useful life of our existing SSBNs cannot be explicity stated. The specifications in effect at the time these ships were designed assumed a nominal ship life of 20 years. We are already experiencing increasing difficulty and costs in maintenance of these submarines even though the oldest is only 14 years old. Although studies are being conducted in attempts to lengthen the expected life of these ships, it is not prudent at this time to base firm planning on a life far beyond that expectancy to which the ships were designed. The importance of deterrent forces demands performance and reliability. The credibility is undermined if degraded frequently by the ills of maintenance and aging.

It should be noted that aging projections are extremely difficult if not impossible for a number of reasons. First, the statistical data base does not exist whereupon one might make such extrapolation. In the automobile or refrigerator industry, decades of use and thousands or millions of samples exist. A meaningful percentage basis can be projected. In the nuclear submarine field, the experience has only commenced. The Navy discovers problems each year which could not have been anticipated. The oldest SSN is only now reaching a 20 year life. Patrol reports of our SSBNs show an increasing incidence of failures with advancing age to an extent that a knowledgeable submarine engineer can readily question the wisdom of assuming reliable operation much in excess of the 20 years now stated as the life expectancy. Shipyard overhauls of the oldest SSBNs have increased in length, and maintenance efforts on and between patrols have increased.

The submarine operates in a medium in which second-rate machinery or system performance is unforgiving. Safety in submarine operations is far removed from that in other fields more familiar to the non-Navy observer. In addition, when one must consider that the sea based missile system provides the keystone for our deterrent, in that it is the single most survivable and, therefore, stabilizing element, it does not appear prudent to insist upon chancing reliable performance. Some element of that system, if periodically updated to provide trouble-free operation with equipment containing updated technology, should appear to be a requirement. Certainly, by waiting until breakdowns occur as the signal to commence replacement of SSBNs one can be assured of massive problems on a broad scale, since our current force of 41 ships was built in the short time of 7 years. This figure represents the leadtime alone in construction of a TRIDENT submarine.

QUIETING TECHNIQUES OF TRIDENT

Chairman MCCLELLAN. When will test data be available to show whether TRIDENT submarine risks pertaining to quietness goals, [deleted], and command and control center objectives have been reduced to acceptable levels?

Dr. POTTER. Incorporation in TRIDENT of many of the quieting techniques, systems, designs and equipments which have been developed, refined and proved in operating submarines during the past decade promises to make TRIDENT the quietest nuclear submarine ever built. The solutions for three potential noise sources are presently under test. The dates by which testing will confirm the validity of these solutions are: [Deleted.]

Risks in the integration of the TRIDENT Command and Control Systems (CCS) will be resolved through integration testing and operational testing of the CCS at the Land Based Evaluation Facility. Testing of the CCS hardware and software begins in November 1975. An operational appraisal of the integrated CCS using realistic simulation and stimulation will complete in November 1976.

Chairman MCCLELLAN. When will test data be available to show whether technological uncertainties in developing TRIDENT missiles to attain range and reliability goals have been eliminated?

Dr. POTTER. While ground test data is now available to support predicted TRIDENT I missile range performance, we must await data from the Flight Test Program commencing in [deleted] to confirm fully these predictions.

Confidence in the achievement of reliability goals requires a statistically significant number of production missile tests in the operational environment. These will consist of actual TRIDENT missile launches from TRIDENT submarines after deployment of the system in 1978. The Navy is currently examining a proposal to accelerate substantially the schedule of such testing relative to the POLARIS and POSEIDON programs. If the proposal is sufficiently attractive to warrant support and the additional necessary funding is provided, the reliability achieved in the TRIDENT I Missile System [deleted].

TRIDENT TRIALS

Chairman MCCLELLAN. Will acquisition of the TRIDENT and SSBN–X systems necessitate early retirement of existing SSBNs and land-based ICBMs due to strategic arms limitation agreements?

Dr. POTTER. No. The first TRIDENT submarine is scheduled to go on initial sea trials in September 1977, one month prior to the expiration of the Interim SAL Agreement. If the outcome of SALT II contained the SLBM limitations of the Interim Agreement we would be required to decommission 24 TITAN ICBMs or two POLARIS submarines at that time. This cannot be considered early retirement as far as the POLARIS submarines are concerned since the two oldest POLARIS submarines would be about 18 years old, close to the end of their assumed life-time. Despite this one possibility, it is impossible to predict the outcome of SALT II and its impact on the SLBM force. Developing both the TRIDENT and the SSBN–X gives us the flexibility to react to any SALT agreement, or lack of agreement. If a need exists to put more tubes at sea quickly, or to have a greater missile (throw-weight) capability within the sea-based force, the TRIDENT submarine will be available. If we desire more platforms under a tube limitation, as well as lower cost replacement of a large portion of our POSEIDON force, we can follow the initial ten ship TRIDENT program with the SSBN–X. In any case, we will have the ability to respond to a variety of situations which might confront us in the 1980's and beyond. At any rate, acquisition of TRIDENT, complemented as practicable with SSBN–X, will take place at a rate to replace aging SSBNs when they are required. The Navy and the country cannot afford to retire any ship before the end of its useful life. There are no plans to procure either at a rate which would force early retirement of SSBNs. The Navy cannot respond to aspects of "early retirement" for ICBMs; however, one might judge from the provisions of SAL–I that the signatories assumed that a 20 year life for such a system fulfilled expectations of a normal useful life. (In addition, one might note that TITAN procurement was terminated with introduction of the first MINUTEMAN systems.)

In addressing the subject of SSBN–X it is desired to comment upon certain intimations that the SSBN–X program could indicate recognition by the Navy that a smaller submarine force with a greater number of missiles per submarine is more vulnerable to an ASW threat than a larger submarine force with fewer missiles per submarine.

This is an incorrect supposition. The Navy has not advanced the SSBN–X design commencement on this premise, and does not recognize the vulnerability as conjectured. Against a particular, specific ASW threat of one unique type, this statement can have some validity—if such a threat were capable of development. Against the spectrum of ASW threats, as has been explained elsewhere in classified response, the statement is not valid. SSBN–X, if design commences now, cannot be ready to replace SSBN's until the 1982 time frame. It cannot replace TRIDENT, which is planned to go to sea in 1978 at a time when the most vulnerable—from age or threat—of our SSBNs attains an advanced age. With the design of a smaller and therefore less costly SSBN–X in hand, the country can have a choice between the larger, more capable TRIDENT *or* the smaller ship as a replacement for the bulk of our SSBNs as they require retirement. Without SSBN–X, no design other than TRIDENT will exist. SSBN–X will be a greatly improved ship as compared to present SSBNs, but will not possess the capabilities of TRIDENT in either missile or survivability aspects. If SALT results in a marked downward limitation on numbers of SSBNs, then

some hedging against even the remote threat may be desirable by providing more ships within that lower launcher limit, but, more importantly, greater flexibility within such a lower number would be forthcoming by providing more numbers. In the extreme case, one might see that were all the launchers permitted to be installed in only several ships, removal of one by breakdown or overhaul could impinge upon operational and targeting aspects. This is not a major considerational given the numbers now available, therefore the cost effectiveness of 24 tubes per ship is the driving considering as reflected in the TRIDENT design.

SANGUINE Program

Senator Young. What is the status of the SANGUINE program?

Dr. Potter. The Navy is complying with guidance from the Secretary of Defense to suspend the FY 74 research and development effort for the Navy's SANGUINE program for the balance of the fiscal year (16 April 1974 through 30 June 1974). The Secretary of Defense authorized expenditure of $11,752,000 from FY 74 RDT&E,N funds for SANGUINE. These funds are being used for the following purposes:

(*a*) Payment of costs incurred under the continuing resolution and while clarifying the intent and desires of Congress, $11,517,000.

(*b*) Payment of termination costs incurred in contract termination, $195,000.

(*c*) Expenses associated with caretaker personnel at the Wisconsin Test Facility to safeguard government property, $40,000.

The Navy plans to resume the SANGUINE program on 1 July 1975 with FY 75 RDT&E,N funds at a level of effort consistent with the continuing resolution.

Senator Young. What will the requested funds for SANGUINE in FY '75 be utilized to accomplish?

Dr. Potter. The Navy is requesting $13.2 million for the SANGUINE program in FY '75. The planned funding by task is as follows:

Tasks	*Funding*
System engineering and technical assistance	1,100,000
Government administration/evaluate concept validation effort	655,000
Environmental compatibility	1,770,000
Conduct long term large animal experiment	
Utilize modulated signal for central nervous system study	
Bird migration studies	
Develop Sanguine signal simulator for laboratory studies	
Complete testing on improved telephone neutralizing transformer	
Continue and intensify ecology studies—Wisconsin test facility	
Complete supplement to the environmental impact statement	
Submarine antenna development	770,000
Develop omni-submarine receiving antenna	
Design validation	8,405,000
Site study of federally owned lands	
Test Sanguine operational capability	
Procure/install 15 receivers on operational submarines	
Test selective call capability (bell ringer)	
Make noise/propagation measurements—ocean areas	
Make noise/propagation measurements—land-based	
Develop/test critical Sanguine hardware	
ELF transmitters	
Control/monitor equipment	
Transmitter capsule	
Transmitter support equipment	
Message injection equipment	
Survivability test and evaluation	500,000
Continue design of EMP test equipment	
Total	13,200,000

Lightweight Fighter

Senator Young. What is the Navy's interest in the lightweight fighter?

Dr. Potter. The YF–16 and YF–17 Air Force lightweight fighters are excellent designs but, unfortunately, do not satisfy minimum carrier mission requirements

unless rescaled for greater strength and range/payload capability. When appropriately scaled, both basic designs become competitive with other new aircraft concepts from industry. We are closely monitoring these programs, however, to take advantage of the lessons learned in this prototyping approach.

Senator YOUNG. Do you foresee a mix of F–14 and lightweight fighters in the Navy?

Dr. POTTER. A mix is clearly our present plan, however, the actual numbers in each case are highly judgmental and must be considered in the light of changing threat.

SES DEVELOPMENT

Senator YOUNG. What has been accomplished on the development of the SES since last year?

Dr. POTTER. Four contractors, Aerojet, Bell, Lockheed, and Rohr, each completed a preliminary design of a 2000-ton prototype Surface Effect Ship (SES) last August. The Navy evaluated them and has concluded that each of them demonstrates that it is feasible to build an ocean-going SES. The program was reviewed by the DSARC in December. The Deputy Secretary of Defense subsequently authorized continued advanced development of the 2000-ton SES prototype, with financial and program planning to be on the basis of two prototypes, and the issue of the number of prototypes to be addressed at the next DSARC review. The OSD guidance constituted sufficient redirection of the program that it was necessary for the Navy to issue a new request for proposals from the four preliminary design contractors. These proposals were submitted on 1 April. The Navy will evaluate them, and intends to select two contractors to continue the development of the 2000-ton prototypes. We expect to spend about a year in development and testing of subsystems and components, and in ship system design, to be followed by a DSARC review to authorize contract design and construction of the prototypes.

Additionally, our two 100-ton SES test craft have successfully completed initial contractor evaluation, validating our design and predictive techniques. We intend to next refurbish and modify them to incorporate certain design features planned for the 2000-ton prototypes.

SEA-CONTROL SHIPS

Senator YOUNG. Has the Navy changed emphasis on the V/STOL aircraft for the Sea-Control Ships? Will the augmented lift development continue to receive major Navy effort or has this effort shifted to the Harrier type vehicle?

Dr. POTTER. The Navy plans in the V/STOL arena remain unchanged. With the MARRIER operational and providing increasing information about V/STOL utility, performance and flexibility in land based and sea roles, the Navy is searching for an aircraft with high performance to operate with these unique capabilities. Of the three technology approaches, the thrust augmented wing has the greatest potential promise and is being pursued as a prototype program. The lift plus lift/cruise type is being examined as an alternative but constraint to preliminary designs. The advanced HARRIER, AV–16, is a fall back position if the high performance approaches fail.

JUSTIFICATION

Chairman MCCLELLAN. At this point in the record there will appear certain information from the justifications for Research, Development, Test and Evaluation, Navy.

[The justification follows:]

PROJECT LISTING
SUMMARY BY PROGRAM CATEGORY
($ In Thousands)

		FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
6.1	RESEARCH	112,690	115,921	118,200
6.2	EXPLORATORY DEVELOPMENT	273,658	292,404	293,958
6.3	ADVANCED DEVELOPMENT	492,304	558,698	781,561
6.4	ENGINEERING DEVELOPMENT	798,352	1,038,812	1,282,235
6.5	MANAGEMENT AND SUPPORT	237,196	244,678	303,988
	TOTAL RESEARCH AND DEVELOPMENT PROGRAM	1,914,200	2,250,513	2,779,942
	TOTAL OPERATIONAL SYSTEMS PROGRAMS	627,404	492,903	481,991
	TOTAL RDT&E - DIRECT	2,541,604	2,743,416	3,261,933
	REIMBURSEMENTS	45,175	46,700	46,700
	TOTAL PROGRAM	2,586,779	2,790,116	3,308,633

PROJECT LISTING
($ In Thousands)

1. MILITARY SCIENCES

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
6.1		RESEARCH				
61152N		IN-HOUSE INDEPENDENT LABORATORY RESEARCH	12,387	13,247	13,200	1
61153N		DEFENSE RESEARCH SCIENCES	100,303	102,674	105,000	4
		General Physics	11,596	11,738	11,664	5
		Nuclear Physics	2,602	2,630	2,595	8
		Chemistry	3,548	3,570	3,877	11
		Mathematical Sciences	7,782	7,681	7,939	14
		Electronics	8,908	9,285	9,145	17
		Materials	9,741	10,084	10,758	20
		Mechanics	7,437	7,793	8,080	23
		Energy Conversion	5,259	5,182	5,626	26
		Oceanography	21,391	22,532	23,316	29
		Terrestrial Sciences	4,491	4,734	4,810	35
		Atmospheric Sciences	2,683	2,281	2,284	38
		Astronomy and Astrophysics	2,418	2,367	2,349	41
		Biological and Medical Sciences	9,432	9,701	9,472	44
		Behavioral and Social Sciences	3,015	3,096	3,085	47
		Subtotal Research Category	112,690	115,921	118,200	
6.5		MANAGEMENT AND SUPPORT				
65151M	C9101	STUDIES AND ANALYSIS SUPPORT, MARINE CORPS	2,350	2,200	2,346	51

PROJECT LISTING
($ In Thousands)

1. MILITARY SCIENCES

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
65152N		STUDIES AND ANALYSIS SUPPORT, NAVY	9,145	9,044	10,094	54
	M9102	Navy Medical Support Capability	93	101	100	
	R9103	Technical Systems Evaluation	1,200	1,110	1,433	
	W9104	Navy Air Systems Capability	1,180	798	807	
	R9105	R&D Planning Analyses	817	800	910	
	R9106	Operational and Strategic Analyses	2,042	1,870	2,028	
	Z9107	Director of Navy Laboratories Studies and Analyses	555	465	500	
	R9108	CNO Program Analysis and Evaluation	1,558	2,200	2,266	
	R9109	Methods for Analysis of Fleet Performance	1,550	1,600	1,950	
	R9110	National Research Council, Undersea Warfare Committee	150	100	100	
65153M	C9301	MARINE CORPS OPERATIONS ANALYSIS GROUP	532	700	764	57
65154N	R9302	CENTER FOR NAVAL ANALYSES, NAVY	3,456	6,500	6,858	60
		Subtotal Management and Support Category	15,483	18,444	20,062	
		Total Military Sciences	128,173	134,365	138,262	

PROJECT LISTING
($ In Thousands)

2. AIRCRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
		GENERAL PURPOSE FORCES				
24134N	W1193	A6 SQUADRONS--A6E/TRAM (Target Recognition Attack Multisensor)	5,500	10,920	10,413	65
24135N		A7 SQUADRONS	4,000	5,110	7,579	69
	W11X5	A7E/WALLEYE II Data Link Integration	100	-	-	
	W1196	A7E/TRAM (Target Recognition Attack Multisensor)	3,900	5,110	7,579	69
24152N	W1602	EARLY WARNING AIRCRAFT SQUADRONS--AEW CV-Based Aircraft E2C	13,900	1,400	-	
24234N	W2106	S-3 SQUADRONS--CV ASW Aircraft S3A	38,774	5,175	950	74
24243N	W2118	LAMPS (LIGHT AIRBORNE MULTI-PURPOSE SYSTEM) (63254N)	18,524	9,465	-	
25662N	W4543	AIRCRAFT PROPULSION EVALUATION GENERAL	5,395	4,384	2,461	82
25663N	W4542	AIRCRAFT FLIGHT TEST GENERAL	4,325	5,032	2,939	85
25666N	W1628	F401 ENGINE	104,600	17,000	27,500	87
25667N	W1627	F14A--F14A Aircraft	58,000	40,695	11,800	92
25674N	W3357	ELECTRONIC WARFARE COUNTER RESPONSE	5,355	4,020	5,946	102
		Subtotal General Purpose Forces	258,373	103,201	69,588	

PROJECT LISTING
($ In Thousands)

2. AIRCRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
6.2		EXPLORATORY DEVELOPMENT				
62241N		AIRCRAFT TECHNOLOGY	20,387	20,389	19,039	104
	F41-411	Systems Investigations	3,622	3,823	2,250	
	F41-421	Fluid Dynamics	2,840	2,436	2,606	
	F41-422	Structural Design and Test	3,669	4,353	4,629	109
	F41-423	Vehicle Control	2,138	1,916	1,812	
	F41-431	Electrical Energy Conversion and Distribution	862	746	736	
	F41-432	Main Propulsion Engines, Turbines and Related Technology	2,554	2,885	2,695	
	F41-433	Auxiliary Machinery/Equipment	1,064	1,272	1,201	
	F41-451	Habitability, Personnel Protection and Damage Control	1,848	1,632	1,519	
	F41-453	Magnetic and Electromagnetic Silencing	260	145	60	
	F41-461	Vehicle Handling and Servicing	1,530	1,181	1,531	
		Subtotal Exploratory Development Category	20,387	20,389	19,039	
6.3		ADVANCED DEVELOPMENT				
63201N	W2144	AIRBORNE ASW DETECTION SYSTEM--Airborne ASW Deception Devices	1,082	3,050	2,041	113
63202N		AVIONICS	1,152	2,075	3,713	116
	W3150	All Application Digital Computer (AADC)	685	2,075	3,191	121
	W3415	Carrier Aircraft Inertial Navigation	467	-	-	
	W45X1	Advanced Aircraft Electronic System	-	-	522	
63203N		V/STOL DEVELOPMENTS	225	1,365	1,572	125

PROJECT LISTING
($ In Thousands)

2. AIRCRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	W1423	High Speed Helicopter Rotor	-	-	1,065	
	W4559	Helicopter Escape and Survival System	225	1,365	507	
63204N		AIR/SURFACE FIRE CONTROL SYSTEMS	1,170	-	-	
	W1118	Multi-Mission Radar	898	-	-	
	W1119	Airborne Bombing Equipment	272	-	-	
63206N		AIRBORNE ELECTRONIC WARFARE EQUIPMENT	9,986	15,818	21,036	130
	W3311	Airborne Defensive Electronic Countermeasures	3,735	3,511	[Deleted]	
	W3312	Airborne Infrared Countermeasures	2,101	4,612		133
	W3338	Tactical Airborne Signal Exploitation System	375	1,000		135
	W3344	Miniature Expendable Jammers	500	506		
	W3351	Integrated Tactical Electronic Countermeasures	1,060	1,583		137
	W3355	Visual Countermeasures	170	-		
	W3360	Communications Jamming	915	3,067		
	W3361	Super Bandwidth/Dual Mode Defensive Electronic Countermeasures	1,130	1,539		
63207N		ENVIRONMENTAL APPLICATIONS	1,490	1,972	2,119	141
	W3712	Atmospheric Applications	651	688	725	
	W3713	Automated Environmental Prediction System	615	906	944	
	W3714	Meteorological Measurement System	224	378	450	
63210N		ADVANCED AIRCRAFT PROPULSION SYSTEMS	1,765	4,670	12,725	145
	W4555	Propulsion Component Technology	965	2,262	5,154	149
	W4565	Fully Modulated In-Flight Thrust Reverser Control System	800	500		

PROJECT LISTING
($ In Thousands)

2. AIRCRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	W4571	OV-10D System	-	1,908	7,571	152
63216N		AIRBORNE LIFE SUPPORT SYSTEM	1,031	1,092	1,578	155
	W4558	Advanced Airborne Oxygen System	1,031	555	269	
	W4567	Aircraft Protective Clothing and Devices	-	537	1,309	
63228N	W2141	CV TACTICAL SUPPORT CENTER	2,950	1,625	1,155	160
63254N	W2118	AIR ASW--LAMPS III (24243N)	-	-	17,935	163
63257N	W11X3	V/STOL AIRCRAFT DEVELOPMENT--Thrust Augmented Wing Prototype	11,270	24,300	19,300	171
63258N		ADVANCED PROPULSION FOR V/STOL	6,526	5,900	7,863	175
	W11W1	Lift and Lift-Cruise Prototype	-	-	1,745	
	W45X3	PEGASUS XV	-	1,600	3,909	181
	W4566	Advanced Propulsion for V/STOL	6,526	4,300	2,209	
63259N		ACOUSTIC SEARCH SENSORS (ADVANCED)	8,513	8,995	12,620	183
	W21W2	ERAPS (Expendable Reliable Acoustic Path Sonar)	-	635	3,765	187
	W21W7	Advanced Signal Processor (ASP)(64261N)	-	7,397	-	
	W21W8	Advanced Sonobuoy Communications Link (ASCL)	-	393	3,102	190
	W21W9	PADS (Passive Advanced Sonobuoy)	-	570	5,753	193
	W2140	Advanced Acoustic Search Sensors	8,513	-	-	

PROJECT LISTING
($ In Thousands)

2. AIRCRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
63260N		AIRBORNE MINE COUNTERMEASURES	4,196	6,234	2,615	197
	W2612	Advanced Airborne Mine Countermeasures Equipment	2,571	2,334	2,157	
	W2618	Airborne Mine Hunting System	1,625	3,900	458	
63261N	W36X8	TACTICAL AIR RECONNAISSANCE--Reconnaissance Pod	-	-	5,300	200
		Subtotal Advanced Development Category	51,356	77,096	111,572	
6.4		ENGINEERING DEVELOPMENT				
64203N		AVIONICS DEVELOPMENT	1,875	1,796	6,750	203
	W1171	A4M Attack Delivery System	-	1,047	6,750	203
	W4520	Avionics Development (VAST--Versatile Avionic Shop Test System)	1,875	749	-	
64205N	W1165	LASER TARGET DESIGNATOR--Laser Spot Tracker	1,040	145	-	
64206N	W1163	TRAM (TARGET RECOGNITION ATTACK MULTISENSOR)	100	-	-	
64210N	W4554	SEARCH AND RESCUE SYSTEM	-	-	253	206
64211N		AIMS/ATCRBS (AIR TRAFFIC CONTROL RADAR BEACON) MARK XII	1,553	799	1,562	209
	W1714	IFF (Identification Friend or Foe) MARK XII	365	-	232	
	X1714	Shipborne IFF/MARK XII	368	-	839	
	W1715	IFF/ATCRBS	715	693	385	
	X1715	AIMS/ATCRBS/MARK XII	105	106	106	

PROJECT LISTING
($ In Thousands)

2. AIRCRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
64215N	W4551	AIRCRAFT HANDLING AND SERVICING EQUIPMENT	1,238	1,495	2,078	211
64218N	W3717	ENVIRONMENTAL MODIFICATION SYSTEM--Airborne Pyrotechnic Seeding Devices	585	530	751	215
64219N		AIRBORNE ASW DEVELOPMENTS	10,940	14,848	14,156	217
	W21W1	P3 Avionics Improvement	-	481	4,721	221
	W21W6	SH-3 Update (Sea Control Ship) CV Helicopter Improvement	-	573	3,323	223
	W21X9	ASW Tactical Support Center Update for Patrol Aircraft (VP ASTACS Update)	-	-	350	
	W2117	Airborne ASW Radar	955	-	-	
	W2120	Airborne Active Sonobuoy System (CASS)	2,835	2,716	1,487	
	W2142	Helicopter Sensors	2,940	2,724	334	
	W2143	Deep Passive Sonobuoy	2,760	4,400	2,321	
	W2145	Airborne ASW Pods	-	1,500	-	
	W3672	Project BEARTRAP	1,450	2,454	1,620	
64220N	W4560	AIRCRAFT INFRARED SIGNATURE SUPPRESSION	735	435	333	227
64223N	W1631	VISUAL TARGET ACQUISITION, IDENTIFICATION AND WEAPON CONTROL SYSTEM DEVELOPMENT	1,395	1,610	1,346	229
64255N		AIR ELECTRONIC WARFARE	4,979	6,839	5,867	231
	W3323	Electronic Warfare Environmental Simulation	2,281	3,592	3,733	235
	W3352	Electromagnetic Performance of Air and Ship System (EMPASS)	1,998	1,032	522	
	W3679	Airborne Intelligence Collection Equipment	700	2,215	1,612	

PROJECT LISTING
($ In Thousands)

2. AIRCRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
64258N		AERIAL TARGET SYSTEMS DEVELOPMENT	8,859	8,940	14,586	237
	W47X1	Full Scale All Attitude Maneuvering Target (FSAAMT)	-	1,900	1,935	
	W4733	Aerial Target Systems Development	8,859	7,040	9,423	241
	W4741	Missile Flight Evaluation System	-	-	3,228	246
64259N	W11X8	VCX	-	1,000	4,961	249
64260N	W1425	CH-53E	10,000	28,800	46,713	251
64261N		ACOUSTIC SEARCH SENSORS (ENGINEERING)	740	1,620	13,767	257
	W21W7	Advanced Signal Processor (ASP) (63259N)	-	-	13,477	259
	W2138	Machine Assisted Detection and Classification	740	1,620	290	
64262N	W21X7	HSX (ENGINEERING)--VTOL Aircraft System (HSX)	-	-	2,000	263
64263N	W1633	FIGHTER PROTOTYPE--VFX	-	-	34,000	267
		Subtotal Engineering Development Category	44,039	68,857	149,123	
		Total Aircraft and Related Equipment	374,155	269,543	349,322	

PROJECT LISTING
($ In Thousands)

3. MISSILES AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
		STRATEGIC FORCES				
11221N		FLEET BALLISTIC MISSILE SYSTEM	14,750	14,278	46,669	269
	J1310	Fleet Ballistic Missile System	14,750	14,278	45,900	275
	S1318	Countermeasures Devices	-	-	769	
11224N	J1514	SSBN SECURITY	11,753	16,379	18,772	285
11401N	X15X3	SANGUINE	8,706	12,935	13,205	288
11402N	X1508	GRYPHON--Shore-to-Ship/GRYPHON	4,914	8,163	12,500	293
11403N	X1511	HYDRUS--Ship-to-Shore/HYDRUS	4,000	6,883	7,200	298
		Subtotal Strategic Forces	44,123	58,638	98,346	
		GENERAL PURPOSE FORCES				
25638N	U1709	SURFACE MISSILE SYSTEMS PROJECT	2,049	-	-	
25664N	W16X2	SIDEWINDER (AIM 9L)	8,551	8,900	522	303
25665N	W1608	PHOENIX--PHOENIX Missile System	4,962	4,186	-	
25668N	W1614	SPARROW (AIM 7F)	7,000	5,366	5,952	309
25669N	W1107	CONDOR	7,975	9,425	10,156	319
		Subtotal General Purpose Forces	30,537	27,877	16,630	

PROJECT LISTING
($ In Thousands)

3. MISSILES AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
6.2		EXPLORATORY DEVELOPMENT				
62331N		MISSILE PROPULSION TECHNOLOGY	7,963	8,534	7,900	324
	F31-332	Solid Propulsion	3,350	3,063	3,144	329
	F31-333	Liquid and Hybrid Propulsion	104	-	-	
	F31-334	Air Breathing Propulsion	4,509	5,471	4,756	333
62332N		STRIKE WARFARE WEAPONRY TECHNOLOGY	34,135	37,028	37,514	337
	F32-311	Systems Investigations	3,578	4,187	4,647	341
	F32-319	Navy Science Assistance Program	2,500	2,861	2,562	
	F32-322	Guided Missile Structures and Fluid Dynamics	1,739	2,060	2,342	
	F32-323	Unguided Weapons Structures and Ballistics	1,914	1,298	2,980	
	F32-342	Anti-Air Weapons Guidance and Control	4,348	3,902	3,281	344
	F32-343	Anti-Surface Guidance and Control	2,604	3,134	2,749	
	F32-344	Multipurpose Weapons Guidance and Control	4,344	5,726	5,653	347
	F32-352	Anti-Air Warheads and Fuzes	1,639	1,696	1,833	
	F32-353	Anti-Surface Warheads and Fuzes	5,320	4,795	5,560	350
	F32-362	Surface Weapons Launching, Handling and Servicing Technology	827	1,370	1,321	
	F32-363	Air Weapons Launching, Handling and Servicing Technology	1,538	2,400	2,110	
	F32-382	Directed Energy Weapons and Devices	2,275	2,619	1,978	
	F32-383	Weapon Energy Sources	909	980	498	
		Subtotal Exploratory Development Category	42,098	45,562	45,414	

PROJECT LISTING
($ In Thousands)

3. MISSILES AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
6.3		ADVANCED DEVELOPMENT				
63301N		LONG RANGE SURFACE WEAPON SYSTEM	5,979	4,712	13,608	355
	U1426	5 Inch Guided Projectile	5,979	4,712	8,963	359
	U1427	Extended Range Projectile	-	-	4,645	363
63303N	W1148	ARM (ANTI-RADIATION MISSILE) SYSTEM TECHNOLOGY--ERASE (Electromagnetic Radiation Source Elimination) Technology	1,850	3,315	2,959	369
63305N	W1625	AIR-LAUNCHED AIR-TO-AIR MISSILE SYSTEM (AGILE)	16,480	18,020	19,987	372
63306N		ADVANCED AIR-LAUNCHED AIR-TO-SURFACE MISSILE SYSTEM	8,793	6,735	6,708	377
	W11A3	Air-to-Surface Missile Guidance Technology	3,375	1,725	1,501	
	W1155	Night/Day, Air-to-Surface Missile System Technology	618	893	2,173	
	W1156	Air-to-Surface Missile Propulsion Technology	4,800	4,117	3,034	379
63312N	W1174	AIR-LAUNCHED/SURFACE-LAUNCHED ANTI-SHIP MISSILE (HARPOON) (64364N)	59,864	-	-	
63353N	W11A1	AIR-TO-GROUND WEAPON TECHNOLOGY--Special Effects Warhead	-	-	2,602	383
63358N	U12X2	WEAPONIZING (PROTOTYPE)	2,714	3,000	6,193	387
63361N	W15X2	CRUISE MISSILE--Submarine-Launched Cruise Missile	4,000	2,590	44,971	391
63362N	W1314	CRUISE MISSILE	1,348	-	-	

PROJECT LISTING
($ In Thousands)

3. MISSILES AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
63363N		HARM (HIGH-SPEED ANTI-RADAR MISSILE)	6,700	13,852	18,100	397
	W1188	High-Speed Anti-Radar Missile Avionics	2,300	-	-	
	W1189	High-Speed Anti-Radar Missile (HARM)	4,400	13,852	18,100	397
63364N	W1313	ENCAPSULATED HARPOON	12,000	11,660	9,725	402
63366N	U1771	SURFACE MISSILE GUIDANCE (ADVANCED)	-	-	3,000	412
		Subtotal Advanced Development Category	119,728	63,884	127,853	
6.4		ENGINEERING DEVELOPMENT				
64302N	U1756	3T MAJOR SYSTEMS DEVELOPMENT--Combined Anti-Air Warfare/Anti-Submarine Warfare Guided Missile Launching System (MK-26)	1,247	-	-	
64303N	U1706	AEGIS	78,481	40,204	67,012	413
64352N		SURFACE-LAUNCHED WEAPONRY, SYSTEMS AND TECHNOLOGY	5,139	4,957	13,142	420
	U1744	Surface-to-Air Missile Anti-Missile Capability	5,139	4,957	3,282	423
	U1746	Ultra High Frequency Telemetry	-	-	311	
	U1770	ASMD Missile System	-	-	9,549	430
64358N	U1226	CLOSE IN WEAPON SYSTEM (PHALANX)	10,921	28,993	32,100	435
64359N	U1227	STANDARD SURFACE-TO-SURFACE MISSILE	22,788	10,248	2,050	442
64361N	U1747	NATO SEA SPARROW	2,425	4,970	4,109	451

PROJECT LISTING
($ In Thousands)

3. MISSILES AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
64362N	U1748	POINT DEFENSE IMPROVEMENTS	21,546	12,732	5,266	455
64363N	B1509	TRIDENT MISSILE SYSTEM	348,400	527,674	648,767	460
64364N	W1174	ANTI-SHIP WEAPONRY--Air-Launched/Surface-Launched Anti-Ship Missile (HARPOON) (63312N)	-	81,050	57,730	467
64365N	U1752	SURFACE MISSILE WARHEAD DEVELOPMENT--Standard Missile Warhead	-	-	1,934	478
64366N	U1765	SURFACE MISSILE GUIDANCE--Standard Missile Mid-Course Guidance	12,089	15,871	32,222	481
		Subtotal Engineering Development Category	503,036	726,699	864,332	
6.5		MANAGEMENT AND SUPPORT				
65351N	W9830	PACIFIC MISSILE RANGE (65864N)	66,523	67,947	-	
65352N	W9840	SYSTEMS TEST AND INSTRUMENTATION--Missile Flight Evaluation System	1,200	1,615	-	
		Subtotal Management and Support Category	67,723	69,562	-	
		Total Missiles and Related Equipment	807,245	992,222	1,152,575	

PROJECT LISTING
($ In Thousands)

4. MILITARY ASTRONAUTICS AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
		INTELLIGENCE AND COMMUNICATIONS				
33109N		SATELLITE COMMUNICATIONS	40,021	41,512	27,293	485
	X3279	Tactical Satellite Communications (Shipborne)	3,585	2,511	1,807	
	X3294	Advanced Ship Super High Frequency	8,521	6,397	6,238	489
	X3298	Fleet Satellite Communications	27,915	32,604	19,248	491
35111N		WEATHER SERVICE	2,108	2,063	1,440	497
	W3719	SATDAT (Satellite Data Processing System)	200	808	727	
	W3709	Shipboard Satellite Readout Equipment	1,908	1,255	713	
		Subtotal Intelligence and Communications	42,129	43,575	28,733	
6.3		ADVANCED DEVELOPMENT				
63401N		NAVIGATION SATELLITE TIMING AND RANGING GLOBAL POSITIONING SYSTEM	8,140	9,350	7,465	501
	X34X3	Expanded Transit	-	-	955	
	X3411	Defense Navigation Satellite	8,140	9,350	6,510	505
63451N	W3718	SPACE TECHNOLOGY--Solar Radiation Satellite System/ High Altitude Orbit (SOLRAD HI)	-	-	2,518	509
		Subtotal Advanced Development Category	8,140	9,350	9,983	
		Total Military Astronautics and Related Equipment	50,269	52,925	38,716	

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
		GENERAL PURPOSE FORCES				
24281N	S2332	SUBMARINES--AN/BQQ5 Sonar	29,947	17,991	16,000	513
24573N	X3807	NAVY COVER AND DECEPTION PROGRAM--Beach Jumper Integrated System	2,795	2,348	3,735	519
25617N	W3406	ALL WEATHER CARRIER LANDING SYSTEM	855	-	-	
25623N		SURFACE SONAR MODERNIZATION	1,901	1,140	7,111	523
	S2202	AN/SQS-26	-	1,140	7,111	523
	S2239	AN/SQS-26	1,901	-	-	
25634N	S4628	SUBMARINE SILENCING	7,867	8,848	8,848	526
25670N	W3668	TACTICAL INTELLIGENCE PROCESSING SUPPORT--Shipboard Tactical Intelligence Support	750	350	2,012	529
		Subtotal General Purpose Forces	44,115	30,677	37,706	
		INTELLIGENCE AND COMMUNICATIONS				
31011N		CRYPTOLOGIC ACTIVITIES	5,385	7,520	11,188	534
	C3303	Marine Corps Signal Intelligence Development	782	700	700	
	X3602	Shipboard Signal Intelligence System	1,242	1,782	3,348	539
	X3607	Signal Intelligence Support	1,161	1,459	4,107	541
	X3666	Submarine High Frequency Signal Intelligence System	329	118	146	
	X3671	Signal Intelligence Techniques	1,707	2,141	857	

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	X3680	Ships Signal Exploitation System	164	200	-	
	X3683	New Signals-Threat Class Sorter	-	300	250	
	X3686	Underwater Communications Exploitation	-	820	1,073	
	X3687	Classic Saltbush	-	-	707	
31015N		TECHNICAL SENSOR COLLECTION	1,500	5,800	[Deleted]	543
	R3682	PRAIRIE SCHOONER	1,500	5,800		
	R3688	TECRAS/DELPHI	-	-		
31022N	X3684	SCIENTIFIC AND TECHNICAL INTELLIGENCE	500	515	520	546
31025N	X36X7	INTELLIGENCE DATA HANDLING SYSTEM	-	315	536	548
33401N		COMMUNICATIONS SECURITY	4,219	3,294	[Deleted]	551
	X3259	Communications Security R&D	3,473	1,675		
	X3291	CLARINET VALLOR	198	806		
	X3296	CLARINET SOCRATES	172	-		
	X3299	CLARINET PLATO	376	813		
34111N		SPECIAL ACTIVITIES	128,146	127,700	127,700	553
	R1001	Special Activities	-	45,000	82,700	555
	S1001	Special Activities	128,146	82,700	45,000	556
		Subtotal Intelligence and Communications	139,750	145,144	147,794	

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
6.2		EXPLORATORY DEVELOPMENT				
62542N		NUCLEAR PROPULSION TECHNOLOGY	21,000	21,600	25,413	557
	F42-441	Submarine Nuclear Propulsion	6,000	6,300	7,463	561
	F42-442	Surface Ship Nuclear Propulsion	6,300	6,500	7,350	564
	F42-443	Multipurpose Nuclear Propulsion Technology	8,700	8,800	10,600	567
62543N		SHIPS, SUBMARINES AND BOATS TECHNOLOGY	17,058	18,939	20,656	571
	F43-411	Systems Investigations	1,184	2,569	2,320	
	F43-419	Navy Science Assistance Program	2,500	2,860	2,457	
	F43-421	Fluid Dynamics	1,865	1,907	2,700	
	F43-422	Structural Design and Test	5,712	5,151	5,890	577
	F43-423	Vehicle Control	420	608	600	
	F43-431	Electrical Energy Conversion and Distribution	268	191	427	
	F43-432	Main Propulsion Engines, Turbines and Related Equipment	275	845	1,282	
	F43-433	Auxiliary Machinery and Equipment	1,380	888	1,135	
	F43-451	Habitability, Personnel, Protection and Damage Control	331	301	418	
	F43-452	Acoustic Silencing	2,883	3,323	3,100	582
	F43-453	Magnetic and Electromagnetic Silencing	240	296	327	
		Subtotal Exploratory Development Category	38,058	40,539	46,069	
6.3		ADVANCED DEVELOPMENT				
63501N		REACTOR PROPULSION PLANTS	7,095	6,902	6,276	585
	S4604	Natural Circulation Nuclear Propulsion Plant	1,720	1,362	799	
	S4637	S6G Nuclear Attack Submarine Propulsion Plant	5,375	5,540	5,477	589

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
63502N	S2619	SURFACE MINE COUNTERMEASURES--Mine Hunting and Neutralization	541	837	3,997	593
63504N		SUBMARINE SONAR DEVELOPMENTS (ADVANCED)	1,954	2,647	3,971	595
	S23X2	Rapid Passive Localization Sonar	-	-	1,373	
	S2305	AGSS Sonar	954	-	-	
	S2326	Submarine Sonar System Advanced Development	1,000	2,647	2,598	
63505N	S2232	ADVANCED SURFACE SHIP SONAR DEVELOPMENT--Towed Linear Array Sonar	1,109	-	-	
63506N		ACOUSTIC COUNTERMEASURES	1,298	1,160	2,036	600
	S2243	Ship Acoustic and Torpedo Countermeasures	-	-	2,036	600
	S2706	Ship Acoustic and Torpedo Countermeasures	1,298	1,160	-	
63508N		SHIP PROPULSION SYSTEM (ADVANCED)	15,045	15,304	21,635	602
	S4622	Gas Turbine Propulsion System	12,223	11,524	16,920	607
	S4658	Superconductor Propulsion Machinery	2,822	3,780	4,715	617
63509N	S4633	NEW SHIP DESIGN--Computer Aided Ship Design	647	1,441	1,603	621
63511N		AIR CONTROL	1,512	425	2,645	624
	W3425	Integrated Tactical Air Control System	902	-	1,717	
	X3426	Marine Remote Area Approach and Landing System (MRAALS)	510	425	428	
	W3427	National Microwave Landing System	100	-	500	

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PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
63512N		AIRCRAFT LAUNCHING AND RETRIEVING	1,352	1,436	-	
	W4524	Catapults	554	602	-	
	W4525	Shipboard Arresting Gear	658	834	-	
	W4526	Visual Landing Aids	140	-	-	
63513N		SHIPBOARD SYSTEM COMPONENT DEVELOPMENT	1,233	1,492	2,844	630
	S4632	Shipboard Auxiliary Systems Development	395	439	1,077	
	S4665	Electric Power System, Solid State Equipment	838	1,053	1,767	
63514N		SHIPBOARD DAMAGE CONTROL	2,784	3,178	3,306	633
	S4643	Damage Control	2,084	2,113	2,094	
	W4736	Aircraft and Ordnance Safety	700	1,065	1,212	
63515N	W1620	ADVANCED IDENTIFICATION TECHNIQUES--Radar Techniques (TRISAT)	1,020	2,476	1,043	637
63516N		RADAR SURVEILLANCE EQUIPMENT	650	2,509	[Deleted]	640
	U17X3	Pulse Doppler Radar	-	-		
	U1764	Electronic Counter Countermeasures/Modifications Development	650	2,509		
	U1772	Advanced Radar System	-	-		643
63518N	S3412	ADVANCED NAVIGATION DEVELOPMENT--Electronically Suspended Gyroscope Navigator	1,015	2,108	5,141	645
63519N		ADVANCED COMMAND DATA SYSTEM	2,128	3,910	5,105	648

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	S3105	Command Data Systems	2,128	3,635	3,221	653
	X3142	Tactical Flag Command Center	-	275	1,884	
63520N		ADVANCED COMMUNICATIONS	1,386	2,757	2,159	657
	X32X4	High Volume Information Transfer	-	-	794	
	X32X5	SSN Integrated Communications Center	-	460	970	
	S32X8	Data Multiplex System	-	775	-	
	X3278	Integrated Shipboard Communications (28010N)	886	1,170	-	
	U3292	Anti-Compromise Destruction System	500	352	395	
63521N		SURFACE ELECTRONIC WARFARE	5,370	6,285	4,516	661
	S3307	Ship Advanced Electronic Warfare (SHORTSTOP)	3,192	-	-	
	X3350	Electronic Countermeasures Tubes	540	2,685	2,372	
	X3353	Multi-Mode Electronic Countermeasures	138	1,315	-	
	S3358	Ships Electro-Magnetic Effectiveness Evaluation	-	255	551	
	X4737	BADEYE	1,500	2,030	1,593	
63522N	X3643	ADVANCED SUBMARINE SURVEILLANCE EQUIPMENT PROGRAM	3,851	4,657	[Deleted]	664
63531N	S2336	HY 130 STEEL	4,405	3,957	3,785	668
63534N	S4629	SURFACE EFFECT SHIPS	32,012	60,900	57,981	671
63538N	R1517	BLUE MAIL	500	-	-	
63541N	Y4102	NUCLEAR ELECTRIC POWER PLANTS--Portable Electric Power Plants	40	-	-	

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
63553N		SURFACE ASW	1,000	3,605	13,344	676
	U2246	Light Weight Torpedo Improvements (MK-46)	1,000	3,105	9,307	679
	U2247	Advanced Light Weight Torpedo	-	-	3,000	681
	S2248	Escort Ship Silencing	-	500	1,037	
63561N	S4642	SUBMARINES (ADVANCED)--Submarine Atmosphere Control System	-	-	705	685
63562N		SUBMARINE TACTICAL WARFARE SYSTEMS (ADVANCED)	-	-	3,231	689
	U23X5	Torpedo Advanced Development	-	-	1,211	
	S2303	Submarine Acoustic and Torpedo Countermeasures	-	-	220	
	S2344	Target Strength Reduction	-	-	1,800	
63564N	S4627	SHIP DEVELOPMENT (ADVANCED)--Advanced Ship Development	12,179	13,143	19,042	693
63566N	S1417	AMPHIBIOUS ASSAULT CRAFT	12,182	15,922	19,841	697
63567N	S4606	HYDROFOIL CRAFT (ADVANCED)--Hydrofoil Craft	5,813	2,300	6,000	703
63578N	S4601	A4W/A1G NUCLEAR PROPULSION PLANT	9,138	7,250	7,188	707
63579N	S4612	D2W NUCLEAR PROPULSION REACTOR	7,310	7,000	7,188	710
63580N	S4651	ADVANCED DESIGN SUBMARINE NUCLEAR PROPULSION PLANT	18,275	11,600	12,397	713
63582N		COMBAT SYSTEM INTEGRATION	-	1,018	2,046	716
	U17X2	ASMD Combat System Integration	-	1,018	1,031	

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	S46X4	Tactical Combat System Development	-	-	1,015	
63583N		JOINT SONAR DEVELOPMENT	7,361	4,387	2,337	720
	S2242	Joint United States/United Kingdom Sonar	5,371	2,262	1,204	
	S2244	Joint United States/French RAP (Reliable Acoustic Path) Sonar	1,990	2,125	1,133	
63584N	X1769	OTH (OVER THE HORIZON) TECHNOLOGY--Shipboard OTH Radar	2,849	3,130	2,999	723
63585N	S4659	SHIPBOARD AUTOMATION DEVELOPMENT--Surface Ship Bridge Control System	100	489	1,731	726
63586N	S3820	NAVAL INSHORE WARFARE CRAFT--Naval Inshore Warfare Craft	4,156	368	2,444	728
63587N	U4740	TEST BED DEVELOPMENT AND DEMONSTRATION	-	10,000	[deleted]	732
63588N	B4667	IMPROVED SSBN	-	-	16,000	737
		Subtotal Advanced Development Category	167,310	204,593	272,864	
6.4	ENGINEERING DEVELOPMENT					
64502N	S3203	SUBMARINE COMMUNICATION--Submarine Integrated Antenna Subsystem	7,219	4,859	5,233	739
64503N	S23X3	SUBMARINE SONAR DEVELOPMENT (ENGINEERING)--Submarine Sonar Improvements	1,790	3,575	2,606	743

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
64508N	U1708	RADAR SURVEILLANCE EQUIPMENT--SPS Radar Improvements Program	3,965	8,313	10,940	746
64510N		COMMUNICATIONS SYSTEMS	2,955	4,465	1,738	750
	X32B2	Consolidated Telecommunication Systems	-	-	1,000	
	X32W1	MOMCOMS (Man-on-the-Move Communications)	-	-	738	
	X32W5	TSAPG Engineering	-	1,220	-	
	X32X3	Line of Sight Task Force Communications (28010N)	-	1,645	-	
	X3215	HARPY	100	-	-	
	X3256	Data Terminal System (28010N)	62	-	-	
	X3285	Communication Traffic Management and System Control (28010N)	2,793	1,600	-	
64511N	W3123	INTELLIGENCE SYSTEMS--Joint Inflight Data Transmission System	2,385	-	-	
64514N	S3404	NAVIGATION SYSTEMS--Independent Navigation System	304	-	-	
64515N	X3601	SUBMARINE SURVEILLANCE EQUIPMENT PROGRAM (ENGINEERING)	9,550	8,375	[Deleted]	753
64517N		JOINT ADVANCED TACTICAL COMMAND AND CONTROL COMMUNICATIONS PROGRAM	3,426	3,749	4,915	756
	S3129	Navy Advanced Tactical Command and Control Communications Program	3,261	3,464	3,915	761
	X3169	Navy Advanced Tactical Command and Control Communications Program	165	285	1,000	
64518N		COMBAT INFORMATION CENTER (CIC) CONVERSION	4,803	2,491	3,524	763

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	S31X5	Escort Command and Control System	-	-	1,503	
	S3118	Junior Participating Tactical Data System	1,535	-	-	
	S3131	Data Display System	2,135	2,213	1,621	
	X3152	Standard Mini Processor Development	1,133	278	400	
64521N	U4649	SHIP ANTI-MISSILE INTEGRATED DEFENSE (SAMID)	2,939	-	-	
64554N		SURFACE ELECTRONIC WARFARE	12,882	9,385	7,070	769
	S3303	Jamming and Deception	1,177	-	-	
	X3303	Jamming and Deception	-	3,451	1,952	
	X3307	Ship Advanced Electronic Warfare (SHORTSTOP)	-	1,409	727	
	X3322	Tactical Electronic Warfare Deception System (Decoys)	3,598	2,350	1,333	
	X3348	Effectiveness of Navy Electronic Warfare Systems (ENEWS)	2,607	2,175	3,058	773
	S3356	Threat Detector	5,500	-	-	
64559N	S46X6	DEEP SUBMERGENCE TECHNOLOGY (NUCLEAR POWER)--NR-2 (63713N)	-	2,200	[Deleted]	777
64560N	B1519	TRIDENT SUBMARINE SYSTEM	122,000	126,296	107,238	779
64562N		SUBMARINE TACTICAL WARFARE SYSTEMS (ENGINEERING)	6,277	3,792	4,476	793
	S1315	Submarine Integrated Attack Center	1,150	2,507	2,951	
	S2334	Submarine Acoustic Warfare System	5,127	1,285	1,525	
64564N	S4663	NATO PHM (PATROL HYDROFOIL MISSILE) SHIP	30,367	18,886	15,733	797
64565N	S4664	SEA CONTROL SHIP	9,997	-	-	

PROJECT LISTING
($ In Thousands)

5. SHIPS, SMALL CRAFT AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
64566N	S2318	ACOUSTIC COMMUNICATIONS	7,696	9,182	3,140	805
64567N	S46X7	SHIP DEVELOPMENT (ENGINEERING)--Ship Contract Designs	-	-	29,449	814
64568N	X3363	DESIGN TO PRICE ELECTRONIC WARFARE SUITE (ENGINEERING)--Low Cost Electronic Warfare Suite	2,500	8,648	17,114	816
		Subtotal Engineering Development Category	231,055	214,216	223,072	
		Total Ships, Small Craft and Related Equipment	620,288	635,169	727,505	

PROJECT LISTING
($ In Thousands)

6. ORDNANCE, COMBAT VEHICLES, AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
		GENERAL PURPOSE FORCES				
24304N	U2507	MINES AND MINE SUPPORT--CAPTOR	21,300	21,761	11,154	821
25645N	W1102	MODULAR GLIDE WEAPON IMPROVEMENT PROGRAM	1,905	1,575	2,519	825
25660N	U2306	MK-48 TORPEDO (OPERATIONAL SYSTEMS)	6,826	13,565	5,400	828
26620M		MARINE CORPS WEAPONRY	556	420	1,160	838
	C1403	Landing Vehicle Tracked Personnel Model-7 Product Improvement	-	-	1,160	838
	C4703	Landing Force Assault Amphibian Vehicle	556	420	-	
		Subtotal General Purpose Forces	30,587	37,321	20,233	
6.2		EXPLORATORY DEVELOPMENT				
62633N		UNDERSEA WARFARE WEAPONRY TECHNOLOGY	16,714	18,693	18,300	841
	F33-313	Systems Investigations	1,709	2,137	2,270	
	F33-321	Undersea Weapons Structures and Fluid Dynamics	1,593	1,690	1,707	
	F33-331	Undersea Weapons Propulsion	1,825	1,905	1,693	
	F33-341	Undersea Weapons Guidance and Control	7,982	8,304	8,565	845
	F33-351	Undersea Weapons Warhead and Fuzes	1,179	1,373	1,154	
	F33-354	Explosives Research and Safety	1,619	1,837	1,625	
	F33-361	Submarine Weapons Launching, Handling and Servicing	748	1,296	1,184	
	F33-363	Air Weapons Launching, Handling and Servicing	59	151	102	
		Subtotal Exploratory Development Category	16,714	18,693	18,300	

PROJECT LISTING
($ In Thousands)

6. ORDNANCE, COMBAT VEHICLES, AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
6.3	ADVANCED DEVELOPMENT					
63601N		MINE DEVELOPMENT	1,632	1,774	6,469	849
	U2519	Destructor MK 41/42	1,632	1,774	4,669	853
	U2520	RECO	-	-	1,800	
63605N		ADVANCED CONVENTIONAL ORDNANCE	796	1,070	2,245	857
	W1133	Advanced AP/AM (Anti-Personnel/Anti-Materiel) Cluster Weapon	300	-	-	
	W1175	Advanced Modular Warheads	-	1,070	2,245	857
	W1190	Lightweight 20MM Gun Pod	496	-	-	
63606M		ADVANCED MARINE CORPS WEAPONS SYSTEMS	707	2,555	2,120	860
	C1202	Laser Homing Ordnance (64606M)	498	1,300	-	
	C1203	High Energy Laser (63765M)	-	-	400	
	C1204	Marine Corps Shoulder-Launched Multi-Purpose Assault Weapon	-	400	400	
	C1405	Landing Vehicle Assault	-	-	500	
	C1703	Mobile Surface-Air Missile System	-	-	200	
	C4101	Tactical Motor Transport Vehicles	152	155	120	
	C4701	Ammunition for M 202 (64606M)	56	500	-	
	C4702	Encapsulated Flame Round	1	200	500	
63609N		SURFACE LAUNCHED MUNITIONS	6,469	7,749	11,245	863
	U12X7	Advanced Gun Weapons System Ammunition	-	-	528	
	U12X8	Lightweight Intermediate Calibre Gun Ammunition	-	-	501	
	U1223	High Fragmentation Projectile	2,538	2,344	4,932	867

PROJECT LISTING
($ In Thousands)

6. ORDNANCE, COMBAT VEHICLES, AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	U1224	Ammunition Development	3,931	5,405	5,284	870
63652N		FIRE CONTROL SYSTEM (ADVANCED)	-	-	2,619	873
	U12X4	Lightweight Modular Gun Fire Control System	-	-	1,806	
	U12X5	Advanced Weapon Fire Control System	-	-	813	
63653N		GUN SYSTEMS	-	511	5,000	876
	U12X3	Light Weight Intermediate Caliber Gun System	-	511	3,571	881
	U12X9	Advanced Gun Weapons System	-	-	1,122	
	U1413	Integrated Small Craft Weapons System	-	-	307	
63654N	U4734	JOINT SERVICE EXPLOSIVE ORDNANCE DISPOSAL DEVELOPMENT (ADVANCED)--Explosive Ordnance Disposal Equipment	1,038	1,547	1,585	883
		Subtotal Advanced Development Category	10,642	15,206	31,283	
6.4	ENGINEERING DEVELOPMENT					
64603N		UNGUIDED CONVENTIONAL AIR-LAUNCHED WEAPONS	325	219	1,077	886
	W1120	GATOR	-	219	-	
	W1162	Fuel Air Explosive Weapon II	325	-	1,077	886
64605N	U1229	CONVENTIONAL ORDNANCE EQUIPMENT--Major Caliber Gun Ammunition	285	-	-	
64606M		MARINE CORPS ORDNANCE/COMBAT VEHICLE SYSTEMS	2,335	1,610	3,810	888
	C1202	Laser Homing Ordnance (63606M)	-	-	1,500	
	C1205	Dragon Maintenance Set	368	-	-	

PROJECT LISTING
($ In Thousands)

6. ORDNANCE, COMBAT VEHICLES, AND RELATED EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	C1209	Marine Corps Ground Weapons	188	455	1,210	
	C1402	Marginal Terrain Vehicle	25	-	-	
	C1701	Lightweight Air Defense Weapon System (LADS)	1,626	1,000	600	
	C4103	Tactical Motor Transport Vehicle	128	155	-	
	C4701	Ammunition for M 202 (63606M)	-	-	500	
64652N		FIRE CONTROL SYSTEMS (ENGINEERING)	4,810	11,247	17,015	891
	U1204	Lightweight Gun Weapon System	1,350	1,218	1,782	
	U1210	Major Caliber Lightweight Gun	669	1,907	8,261	895
	U1228	MK-68 Improvement	1,891	3,092	3,114	897
	U1230	MK-92 Gun Fire Control System	900	5,030	3,858	900
64654N	U4739	JOINT SERVICE EXPLOSIVE ORDNANCE DISPOSAL DEVELOPMENT (ENGINEERING)--Explosive Ordnance Disposal Equipment	605	610	617	903
		Subtotal Engineering Development Category	8,360	13,686	22,519	
		Total Ordnance, Combat Vehicles, and Related Equipment	66,303	84,906	92,335	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
		GENERAL PURPOSE FORCES				
24311N		UNDERSEA SURVEILLANCE SYSTEMS	29,040	34,350	37,289	905
	X2404	Undersea Surveillance	29,040	-	[Deleted]	
	X2415	Undersea Surveillance	-	11,320		911
	X2416	Improved Caesar Processing	-	13,100		915
	X2417	Caesar Underwater Improvement	-	2,520		923
	X2418	Applied Caesar Technology	-	7,410		926
26617M	C4104	MARINE CORPS OPERATIONAL LOGISTICS DEVELOPMENT	973	225	485	933
26619M		MARINE CORPS OPERATIONAL ELECTRONICS DEVELOPMENT	482	855	645	936
	C3118	Marine Corps Operational Electronics Development	306	675	645	936
	C3129	Integrated Logistic Support for Communication Electronic Equipment	-	180	-	
	C3611	IOS-1 (Integrated Observation System - 1)	176	-	-	
26622M		MARINE CORPS DATA SYSTEMS (OPERATIONAL SYSTEMS)	3,084	4,140	3,765	939
	C3116	Tactical Systems Inter/Intra-Operability Program (TACIIP)	525	660	935	
	C3120	Marine Air Command and Control System (MACCS)	2,559	3,480	2,830	
28010M		TRI TAC - MARINE CORPS	3,211	3,550	2,430	941
	C3108	Data Transmission and Switch	375	340	240	
	C3109	Tactical Satellite Communications Equipment	424	505	170	
	C3114	Landing Force Integrated Communications System (LFICS)	45	470	200	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	C3115	Electromagnetic Compatibility Center Support for the Marine Corps	120	180	470	
	C3119	Tactical Electronic Switching Facilities	328	225	200	
	C3125	Transmission Subsystem Improvements	128	230	100	
	C3126	TRITAC Implementation	1,601	1,200	700	
	C3128	Tactical Ultra-High Frequency Communications Control	-	200	200	
	C4102	Power Source Systems	190	200	150	
28010N		TRI TAC - NAVY	-	1,850	15,247	944
	S32A7	Shipboard Data System	-	-	2,580	
	X32W6	Quality Control and Monitor System	-	-	1,567	
	X32W8	Navy Access Switch	-	-	1,567	
	X32X3	Line of Sight Task Force Communications (64510N)	-	-	3,354	953
	X32X6	Low Resolution Facsimile	-	515	1,120	
	X32X7	Joint Service Testing	-	515	370	
	X3256	Data Terminal System (64510N)	-	-	1,015	
	X3278	Integrated Shipboard Communications (63520N)	-	-	1,220	
	X3285	Traffic Management/System Control (64510N)	-	-	1,249	
	X3295	Naval Communication Automation Program	-	820	1,205	
		Subtotal General Purpose Forces	36,790	44,970	59,861	
		INTELLIGENCE AND COMMUNICATIONS				
33131N	X3297	MEECN (MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NET)-- Support of MEECN	1,000	1,500	3,100	955
		Subtotal Intelligence and Communications	1,000	1,500	3,100	

PROJECT LISTING
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7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
6.2		EXPLORATORY DEVELOPMENT				
62711N		UNDERSEA TARGET SURVEILLANCE	23,571	25,878	25,163	958
	F11-111	Systems Investigations	2,044	1,579	1,314	
	F11-121	Acoustic Undersea Surveillance	17,884	19,983	19,769	963
	F11-122	Radio Frequency Undersea Surveillance	420	292	240	
	F11-123	Optical/Infrared/Ultraviolet Undersea Surveillance	1,490	1,662	1,915	
	F11-124	Magnetic Undersea Surveillance	654	924	800	
	F11-125	Special Unconventional Undersea Surveillance Techniques	1,079	1,438	1,125	
62712N		SURFACE AND AEROSPACE TARGET SURVEILLANCE	11,311	15,507	14,707	967
	F12-111	Systems Investigations	2,083	2,165	1,908	
	F12-131	Radio Frequency Surface Surveillance	10	180	-	
	F12-132	Optical/Infrared/Ultraviolet Surface Surveillance	919	1,040	1,026	
	F12-133	Special/Unconventional Surface Surveillance	-	170	390	
	F12-141	Radio Frequency Aerospace Surveillance	2,665	3,749	2,612	
	F12-143	Special/Unconventional Aerospace Surveillance Techniques	780	1,031	1,331	
	F12-151	Multipurpose Radio Frequency Surveillance	4,352	6,588	6,735	973
	F12-152	Multipurpose Optical/Infrared/Ultraviolet Surveillance	502	584	705	
62721N		COMMAND AND CONTROL TECHNOLOGY	19,467	20,111	16,129	979
	F21-211	Systems Investigations	2,922	2,164	1,890	
	F21-221	Acoustic Communications	197	868	500	
	F21-222	Electromagnetic Communications	7,198	8,428	6,533	985
	F21-224	Internal Communications	163	870	770	
	F21-231	Acoustic Navigation	400	132	-	
	F21-232	Radio Frequency Navigation Technology	1,640	816	730	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	F21-234	Inertial Navigation	2,333	1,610	642	
	F21-235	Miscellaneous Navigation Technology	1,528	2,157	1,950	
	F21-241	Information Transformation	1,408	1,719	1,954	
	F21-242	Information Storage and Retrievals	1,204	961	660	
	F21-243	Displays	474	386	500	
62734N		COUNTERMEASURES TECHNOLOGY	11,020	12,818	13,040	991
	F34-311	Systems Investigations	437	305	354	
	F34-371	Undersea Target Countermeasures and Deception	5,282	5,277	5,525	997
	F34-372	Aerospace and Surface Target Countermeasures and Deception	3,192	4,418	4,597	1001
	F34-373	Underwater Demolition Team/Explosive Ordnance Disposal Equipment and Techniques	1,101	1,425	1,343	
	F34-384	Nuclear Warfare Vulnerability and Hardening	1,008	1,393	1,221	
62758N		BIOMEDICAL TECHNOLOGY	9,429	8,015	8,000	1007
	F51-523	Personnel Protection and Survival	2,316	1,226	1,150	
	F51-524	Medical Support	7,113	6,789	6,850	1013
62759N		OCEAN AND ATMOSPHERIC SUPPORT TECHNOLOGY	18,774	20,923	19,200	1019
	F52-511	Systems Analysis	213	-	-	
	F52-512	Special Laboratory Support	214	226	293	
	F52-551	Aerospace Environmental Support	4,282	5,563	3,415	1023
	F52-552	Ocean Environmental Support	12,930	11,481	11,080	1028
	F52-555	Polar Environmental Support	280	1,663	1,430	
	F52-556	Deep Ocean Engineering	855	1,990	2,982	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
62760N		LOGISTICS TECHNOLOGY	9,681	9,843	11,300	1033
	F53-511	System Investigations	179	175	100	
	F53-531	Material Control, Distribution and Storage	2,488	3,054	4,506	1039
	F53-532	Development Engineering and Test Support	2,420	1,892	1,566	
	F53-534	Shore Facilities Support	1,134	1,455	1,597	
	F53-536	Amphibious and Advanced Base Technology	1,013	1,169	1,212	
	F53-537	Test Equipment Technology	651	539	614	
	F53-538	Non-Electronic Components	1,796	1,559	1,705	
62761N		MATERIALS TECHNOLOGY	13,121	13,777	13,300	1043
	F54-511	Systems Analysis	-	620	-	
	F54-541	Metallic Materials	3,496	3,671	3,645	1047
	F54-542	Inorganic Non-Metallic Materials	921	797	1,058	
	F54-543	Organic Materials	3,243	2,746	2,389	
	F54-544	Composite Materials	2,402	2,195	2,140	
	F54-547	Reentry Vehicle Materials Technology	3,059	3,748	4,068	1051
62762N		ELECTRONIC DEVICE TECHNOLOGY	10,966	11,454	13,000	1055
	F53-533	Electromagnetic Compatibility	2,707	2,643	3,390	1059
	F54-545	Electronic Materials and Components	8,259	8,811	9,610	1063
62763N		HUMAN RESOURCES	8,805	8,886	9,000	1067
	F55-521	Personnel Management	2,724	2,455	2,337	
	F55-522	Personnel Training	4,230	3,902	4,196	1073
	F55-525	Human Engineering	1,851	2,529	2,467	

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7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
62764N		CHEMICAL/BIOLOGICAL DEFENSE TECHNOLOGY	631	152	150	1077
	F56-561	Chemical and Biomedical Defense	518	152	150	1077
	F56-562	Chemical Safety Technology	113	-	-	
62765N		ENERGY AND ENVIRONMENTAL PROTECTION TECHNOLOGY	5,794	5,157	9,053	1079
	F57-571	Energy Technology	-	200	3,916	1083
	F57-572	Environmental Protection	5,794	4,957	5,137	1087
62766N		LABORATORY INDEPENDENT EXPLORATORY DEVELOPMENT	13,831	14,700	13,094	1093
	F61-112	Special Laboratory Support/Target Surveillance	2,944	3,384	3,036	1097
	F61-212	Special Laboratory Support/Command and Control	871	1,254	1,113	
	F61-312	Special Laboratory Support/Weaponry	3,955	3,743	3,335	1099
	F61-412	Special Laboratory Support/Naval Vehicles	3,504	3,617	3,244	1101
	F61-512	Special Laboratory Support Technology	2,557	2,702	2,366	
		Subtotal Exploratory Development Category	156,401	167,221	165,136	
6.3	ADVANCED DEVELOPMENT					
63702N		OCEAN ENGINEERING SYSTEMS DEVELOPMENT	4,070	4,711	5,520	1105
	S4603	Fuel Cell Power System	-	-	2,326	
	S4615	Submarine Location, Escape and Rescue	2,398	1,144	-	
	S4617	Large Object Salvage System (LOSS)	722	829	1,123	
	S4618	Extended Salvage Depth Capability (ESDC)	-	100	516	
	S4654	Surface Supported Diving System	50	500	1,035	
	S4660	NR-1	900	1,813	-	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	S4666	Advanced Deep Dive Submersible, 20,000 Feet	-	325	520	
63704N	H3704	OCEANOGRAPHIC INSTRUMENTATION DEVELOPMENT--Portable Oceanographic Survey System	218	286	516	1110
63705N		LOGISTICS	1,000	312	2,456	1113
	Y41X4	OSDOC II (Off-Shore Discharge of Container II)	200	-	-	
	Y41X5	Pontoon Causeway System	-	-	1,135	
	Y41X6	Container Ship Off-Loading	-	-	310	
	T4112	NAVLIS (Navy Logistics Information Sharing)	800	312	1,011	
63706N		MEDICAL DEVELOPMENT (ADVANCED)	3,927	4,918	5,245	1121
	M4305	Advanced Medical Development	2,433	1,939	1,412	
	M4311	Medical Support System	542	769	790	
	M4312	Air Crew Impact Injury Prevention	952	1,232	1,367	
	M4318	Trauma Care System	-	978	1,676	
63707N		MANPOWER EFFECTIVENESS	1,690	2,688	3,217	1126
	P4307	Manpower Management Effectiveness	1,181	1,760	1,824	
	W4313	Human Factors Engineering Technology	509	928	1,393	
63709N	U3812	ADVANCED MARINE BIOLOGICAL SYSTEM	2,296	2,549	3,010	1129
63713N		OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT	9,090	8,279	9,946	1132
	M4306	Deep Submergence Biomedical Development	2,844	2,828	3,358	1137
	S46X6	NR-2 (64559N)	200	-	-	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	S4619	Man-in-the-Sea, Continental Shelf	569	499	845	
	S4620	Man-in-the-Sea, Deep Ocean	150	-	-	
	S4636	Deep Ocean Technology	5,327	4,952	5,743	1140
63714N		NUCLEAR VULNERABILITY/SURVIVABILITY	1,110	-	[Deleted]	1143
	X48X1	Nuclear Survivability Navy Communication Facility	-	-		
	S4814	Nuclear Warfare Survivability of Ships	710	-		
	W4816	Nuclear Survivability of Aircraft	400	-		
63715N	X3657	ELECTRONIC INTERCEPT SYSTEM--RASUR	810	-	-	
63717N	X3515	INTEGRATED OCEAN SURVEILLANCE INFORMATION SYSTEM (OSIS)	2,901	5,750	4,455	1146
63720N		EDUCATION AND TRAINING	2,074	5,548	6,871	1150
	P4303	Education and Training Development	1,505	2,804	2,801	
	R4303	Education and Training Development	569	519	1,000	
	W4308	Training Devices Technology	-	2,225	3,070	1153
63721N		ENVIRONMENTAL PROTECTION	3,640	6,576	9,535	1157
	U41X3	Ordnance Reclamation	-	552	1,620	
	Y4121	Pollution Abatement Ashore	770	683	1,455	
	S46X1	Shipboard Waste Management	1,597	1,184	2,435	
	S46X2	Oil Pollution Abatement	550	2,387	2,711	
	S4657	Sewage Treatment	723	470	614	
	W4569	Jet Engine Test Cell Noise Abatement	-	1,300	700	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
63722N		NAVAL SPECIAL WARFARE	2,388	1,857	3,463	1164
	S2705	Defense Against Underwater Swimmers	1,132	1,027	2,182	
	U3801	Swimmer Weapons System	724	440	377	
	S3802	Swimmer Support System	532	390	904	
63723N		ASW FORCE COMMAND CONTROL SYSTEM	4,094	5,550	7,882	1170
	X31X3	Fleet Command Support Centers (FCSC)	1,000	2,220	6,290	1175
	X3133	ASW Centers Command Control System	3,094	3,330	1,592	
63724N		NAVY ENERGY PROGRAM (ADVANCED)	-	-	1,600	1179
	Y41W1	Radioisotope Thermoelectric Generator	-	-	800	
	S41X9	Light Refined Liquid Fuel for Ships and Aircraft	-	-	800	
63754N	U1754	HI ENERGY LASER--Electro/Optical Techniques	18,222	19,608	[Deleted]	1184
63763N		AEROSPACE OCEAN SURVEILLANCE	33,000	25,804		1189
	W3518	Aircraft Systems	8,100	8,905		1193
	X3519	Space Systems	19,500	13,236		1196
	X3520	Advanced Space Systems	4,800	2,963		1197
	X3521	Space Systems Application	600	700		1199
63765M		OTHER MARINE CORPS DEVELOPMENTS (ADVANCED)	2,978	3,450	5,155	1201
	C1203	High Energy Laser (USMC) (63606M)	175	300	-	
	C3102	Tactical Exercise Simulator and Evaluator (TESE)	40	1,000	525	
	C3127	Automatic Test Equipment (ATE)	-	350	-	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	C3301	Transportable Communications Countermeasures System (64765M)	-	400	-	
	C3302	Ground Radar Countermeasures	131	-	-	
	C3602	Remote Sensor Devices	250	250	400	
	C3604	Amphibious Reconnaissance Support System	26	30	-	
	C3607	Hostile Weapons Locator (64765M)	302	-	2,210	
	C3610	Small Tactical Aerial Mobility Platform (STAMP)	1,075	420	1,005	
	C3612	Modular Universal Laser Equipment (64765M)	-	250	-	
	C4107	Mine and Booby Trap Countermeasures	886	250	100	
	C4108	Tactical Logistics Support	-	-	200	
	C4302	Human Resources Management and Forecasting	93	200	565	
	C4501	Aviation Support Material and Equipment	-	-	150	
63766M		MARINE CORPS DATA SYSTEMS (ADVANCED)	3,297	4,455	4,200	1204
	C3101	Marine Tactical Command and Control Systems (MTACCS)	1,145	1,105	775	
	C3103	Marine Integrated Fire and Air Support System	791	1,200	1,750	
	C3104	Tactical Combat Operations System (TCO)	956	900	930	
	C3106	Marine Air Command and Control System (MACCS)	-	500	300	
	C3132	Marine Tactical Command and Control Communication System	340	-	345	
	C4106	Marine Integrated Logistic System (MILOGS)	-	250	-	
	C4301	Marine Integrated Personnel System (MIPS)	65	500	100	
63791N	R41X1	RELIABILITY AND MAINTAINABILITY	4,998	500	1,000	1207
63793N	S22X7	ASW SENSORS (PROTOTYPE)--PF (Patrol Frigate) Sonar Prototype	1,500	1,200	200	1210
63794N		ASW SURVEILLANCE	20,954	30,494	40,000	1212
	X24W1	Fixed Distribution System	-	610	[Deleted]	

PROJECT LISTING
($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	X24X1	Passive Active Surveillance	-	1,130	[Deleted]	
	X24X2	Towed Array Surveillance System (TASS)	-	14,340		1217
	X24X3	Moored Surveillance System (MSS)	-	7,070		1220
	X24X8	Suspended Array Surveillance System (SASS)	-	7,344		1223
	X2407	ASW Surveillance	20,954	-		
63795N	R2408	LONG RANGE ACOUSTIC PROPAGATION (LRAP)	7,375	7,500	8,844	1227
63796N	W3359	AIRBORNE ELECTRO-MAGNETIC AND OPTICAL SYSTEMS-- Airborne Electro-Optical Countermeasures	506	713	3,200	1231
63797N		SURFACE ELECTRO-MAGNETIC AND OPTICAL SYSTEMS (ADVANCED)	1,090	2,301	3,302	1233
	X33X6	Infrared Search and Track	-	-		
	X3318	Infrared Countermeasures	-	1,251	[Deleted]	
	X3660	Shipboard Electro-Optical Surveillance	1,090	1,050	-	
63798N		SPECIAL PROCESSES	1,900	43,520	54,640	1236
	R1002	Linear Shark	-	4,500	-	
	R1003	Linear Tank	1,900	39,020	54,640	
		Subtotal Advanced Development Category	135,128	188,569	228,006	
6.4		ENGINEERING DEVELOPMENT				
64702N	X3658	COUNTERINTELLIGENCE SYSTEMS--Counterintelligence Equipment	410	400	412	1237

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($ In Thousands)

7. OTHER EQUIPMENT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
64703N		TRAINING DEVICES PROTOTYPE DEVELOPMENT	2,015	7,621	7,042	1239
	U3149	MISTER	1,000	1,012	1,477	
	P43X1	Computer Aided Instruction	-	508	-	
	X4309	Training Device Prototype Development	-	-	170	
	W4314	Communication and Navigation Training System	515	515	-	
	U4315	Mine Warfare Trainer	500	500	409	
	S4319	Submarine Ocean Acoustic Training System	-	586	2,986	
	U4320	Generalized Individual Fire Control Operator Trainer (GIFCOT)	-	1,000	1,300	
	S4321	Radar Navigation Trainer	-	700	700	
	X4325	Warfare Analysis Research System	-	1,600	-	
	P4326	AN/SQS-53 Trainer	-	1,200	-	
64706N		REMOTE UNATTENDED SENSOR WARFARE	2,653	595	1,525	1242
	X3677	General Purpose Remote Sensor System	1,611	595	1,525	1242
	X3817	Small Unit Remote Sensor System	1,042	-	-	
64710N	S41W2	NAVY ENERGY PROGRAM (ENGINEERING)--Shipboard Energy Conservation	-	-	1,400	1245
64761N	X36X5	INTELLIGENCE (ENGINEERING)--Foreign Material Exploitation	-	-	1,609	1248
64765M		OTHER MARINE CORPS DEVELOPMENT (ENGINEERING)	5,498	4,685	7,355	1250
	C3110	Lightweight Three-Dimensional Ground Controlled Intercept Radar	1,360	780	500	
	C3111	Position Location Reporting System (PLRS)	2,425	2,245	2,180	
	C3112	Tactical Warfare Analysis and Evaluation System	1,435	1,000	250	

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($ In Thousands)

7. OTHER EQUIPMENT

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	C3130	Test Equipment Development	-	50	150	
	C3131	Naval Gunfire Transponder	-	100	100	
	C3133	NOGS Video Link	65	-	-	
	C3301	Transportable Communications Countermeasures System (63765M)	-	-	900	
	C3607	Hostile Weapons Locator (63765M)	213	510	-	
	C3612	Mod Laser Design/Range Finder (63765M)	-	-	750	
	C4109	Tactical Logistic Support (Engineering)	-	-	2,250	
	C4110	Mine and Booby Trap Countermeasures (Engineering)	-	-	275	
64766M	C3608	MARINE CORPS DATA SYSTEMS (ENGINEERING)--Marine Air/ Ground Intelligence System (MAGIS)	533	325	320	1253
64771N		MEDICAL DEVELOPMENT (ENGINEERING)	-	1,008	526	1255
	M4317	Closed Cycle Respirator	-	1,008	506	
	M4322	Medical Suction Pump	-	-	20	
64792N		SURFACE ELECTRO-MAGNETIC AND OPTICAL SYSTEMS (ENGINEERING)	753	720	-	
	X3641	Night Observation Devices	753	-	-	
	X3675	VANVIS (Visible and Near-Visible Frequency Intercept System)	-	720	-	
64793N	U47X2	FOREIGN WEAPONS EVALUATION	-	-	3,000	1259
		Subtotal Engineering Development Category	11,862	15,354	23,189	
		Total Other Equipment	341,181	417,614	479,292	

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($ In Thousands)

8. PROGRAMWIDE MANAGEMENT AND SUPPORT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
6.5		MANAGEMENT AND SUPPORT				
65803N	S9940	ELECTROMAGNETIC COMPATIBILITY AND EFFECTIVENESS	1,019	-	1,049	1263
65804N	Z9941	TECHNICAL INFORMATION SERVICES	1,000	958	1,059	1265
65852N	Z9850	ATLANTIC UNDERSEA TEST AND EVALUATION CENTER (AUTEC)	12,056	2,117	2,290	1268
65853N		MANAGEMENT AND TECHNICAL SUPPORT	9,848	8,687	10,287	1271
	R3651	ASW Intelligence Support	2,750	1,600	1,835	
	R9942	ASW Tactical and Operational Analyses	3,011	2,500	3,744	1275
	R9943	Fleet ASW Data Analysis Program (FADAP)	-	500	508	
	U9944	ASW Systems Support	4,087	4,087	4,200	1278
65854M	C9945	DEVELOPMENT CENTER SUPPORT--Management Support Marine Corps	2,973	2,390	1,895	1281
65855N	R9202	NAVAL ARCTIC RESEARCH LABORATORY, POINT BARROW	4,061	4,000	4,168	1284
65856N		STRATEGIC TECHNICAL SUPPORT	1,350	1,777	1,721	1286
	J1510	Advanced Ballistic Reentry System Support	500	500	200	
	R1513	Management and Technical Support of Stragetic Systems	850	1,277	1,521	
65857N		INTERNATIONAL RDT&E	568	651	660	1288
	R5000	Systems Allied Command Atlantic ASW Research Center	288	341	347	
	R9401	International Cooperative RDT&E	280	310	313	

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8. PROGRAMWIDE MANAGEMENT AND SUPPORT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
65858N		TACTICAL ELECTRONICS SUPPORT	4,581	5,503	2,799	1290
	X31X4	Intelligence and Reconnaissance Support	3,881	3,493	724	
	R3364	Tactical Electromagnetic Support	700	2,010	2,075	
65859N	U4738	ASMD (ANTI-SHIP MISSILE DEFENSE) TEST RANGE	5,000	6,381	10,049	1294
65860N	U4661	USS HIP POCKET	4,000	3,053	3,129	1298
65861N		RDT&E LABORATORY AND FACILITIES MANAGEMENT SUPPORT	41,734	47,643	44,809	1301
	M9910	Bureau of Medicine and Surgery Management Support	2,621	1,971	2,319	
	R9912	Office of Naval Research Management Support	6,584	7,400	7,661	1303
	R9913	Independent Research and Development (IR&D) Support	32	50	50	
	R9914	Navy-wide Long Term Training	500	1,038	1,045	
	R9915	Office of Naval Research Research and Development Technical Support	11,090	11,704	12,197	1305
	U9916	Naval Ordnance Systems Command Management Support	1,317	770	913	
	W9917	Naval Air Systems Command Management Support	16,305	20,300	16,116	1306
	Z9919	Director of Navy Laboratories Management and Support	3,285	4,410	4,508	1308
65862N		RDT&E INSTRUMENTATION AND MATERIAL SUPPORT	26,520	29,989	22,395	1311
	M9920	Bureau of Medicine and Surgery Instrumentation and Material Support	432	1,273	1,320	
	P9921	Bureau of Naval Personnel Instrumentation and Materie Support	975	516	540	
	R9922	Office of Naval Research Instrumentation and Material Support	1,576	1,245	1,291	

PROJECT LISTING
($ In Thousands)

8. PROGRAMWIDE MANAGEMENT AND SUPPORT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
	S9923	Naval Ship Systems Command Instrumentation and Material Support	324	232	245	
	T9924	Naval Supply Systems Command Instrumentation and Material Support	180	192	199	
	U9925	Naval Ordnance Systems Command Instrumentation and Material Support	266	900	934	
	W9926	Naval Air Systems Command Instrumentation and Material Support	8,195	10,345	3,952	1313
	Y9927	Military Construction and Military Personnel Support Equipment	1,563	1,633	1,694	
	Z9929	Director of Navy Laboratories Instrumentation and Material Support	13,009	13,640	12,149	1315
	X9935	Naval Electronics Systems Command Instrumentation and Material Support	-	13	71	
65863N		RDT&E SHIP AND AIRCRAFT SUPPORT	38,355	39,753	34,732	1317
	S9931	RDT&E Ships Support	9,666	8,002	9,619	1319
	W9932	RDT&E Aircraft Flight Hours	9,460	8,206	3,268	1320
	W9933	RDT&E Aircraft Support	19,229	23,545	21,845	1322
65864N		TEST AND EVALUATION SUPPORT	-	-	135,651	1325
	W9830	Pacific Missile Range, Point Mugu, California (65351N)	-	-	66,919	1327
	W9831	Naval Air Test Center, Patuxent River, Maryland	-	-	37,129	1330
	W9832	Naval Air Propulsion Test Center, Trenton, New Jersey	-	-	8,439	1332
	W9833	National Parachute Test Range, El Centro, California	-	-	6,308	1334
	Z9834	Naval Weapons Center Ranges, China Lake, California	-	-	14,156	1336
	W9836	Naval Air Test Facility, Lakehurst, New Jersey	-	-	2,700	

PROJECT LISTING
($ In Thousands)

8. PROGRAMWIDE MANAGEMENT AND SUPPORT

PROGRAM ELEMENT NUMBER	PROJECT NUMBER	TITLE	FY 1973 ACTUAL	FY 1974 ESTIMATE	FY 1975 ESTIMATE	DESCRIPTIVE SUMMARY PAGE NUMBER
65865N		OPERATIONAL TEST AND EVALUATION CAPABILITY	925	3,270	3,003	1337
	Z9810	Operational Test and Evaluation Force Support	925	1,270	1,803	
	Z9820	Operational Test and Evaluation Capability	-	2,000	1,200	
65866N		NAVY TELECOMMUNICATIONS SYSTEMS ARCHITECTURE SUPPORT	-	500	4,230	1341
	X32A8	Telecommunications System Architecture Support	-	-	1,510	
	X32A9	Telecommunications Engineering Support	-	-	1,210	
	X32B1	Telecommunications Laboratory Support	-	500	1,510	
		Subtotal Management and Support Category	153,990	156,672	283,926	
		Total Programwide Management and Support	153,990	156,672	283,926	

DEPARTMENT OF DEFENSE, MILITARY
RDT&E, NAVY
FEDERAL CONTRACT RESEARCH CENTERS
DESCRIPTION AND JUSTIFICATION

General: Federal Contract Research Centers (FCRCs) are those organizations sponsored by the Department of Defense and primarily engaged in providing independent specialized technical and scientific effort necessary to supplement that available in the Navy.

Applied Physics Laboratory, Johns Hopkins University: The planned Navy funding at this FCRC in FY 1975 is $45,397,000. The Applied Physics Laboratory, Johns Hopkins University (APL/JHU) has developed a comprehensive understanding of all aspects of missile and space technology, the peculiar problems and limitations of the shipboard environment and operating personnel, and the interactions of the various sections of the Navy organization. The technical staff of APL/JHU includes specialists in the specific scientific and engineering fields embodied in missile and space technology and, more particularly, has developed systems engineers capable of directing teams engaged in development of composite systems. Furthermore, this Laboratory has a proven capability not only in R&D but also in the resolution of problems of production, or introduction of equipment to the fleet, of maintenance, and of logistics. The unique capabilities of the Laboratory stem from the body of knowledge, experience, data and facilities developed over a period of 29 years of highly diversified technical work on Naval problems.

APL/JHU has broad experience, excellent facilities and exceptional capability to support the Defense Department in the areas of responsibility assigned. In addition, the Laboratory is committed by formal, legal agreement to continued dedication of its facilities and staff to the service of the Department of Defense as long as the need exists. Finally, with a strong systems background developed over the years, APL/JHU is in the independent position of being able to make objective recommendations to the Navy without bias. For the same reason, private industry can work freely with APL/JHU and can exchange technical information without fear of competition or loss of a proprietary position.

Applied Research Laboratory, Pennsylvania State University: The planned Navy funding at this FCRC in FY 1975 is $7,140,000. The Navy has a continuing need for qualified personnel and specialized facilities in certain scientific areas required for undersea weapons research and development. The specific areas in which the Applied Research Laboratory (ARL) has a special competence include hydrodynamics, acoustic homing systems, guidance and control systems, noise reduction, and closed cycle propulsion systems. One of the principal advantages of ARL to the Navy is the availability of University personnel with very special capabilities to the Laboratory and thus to the Navy on a part-time basis when required.

The ARL has competence in hydrodynamics research not found elsewhere in Navy or commercial laboratories. This is due largely to the availability of the Garfield Thomas water tunnel, which is the largest water tunnel in the western world. The 48 inch diameter test section makes possible hydrodynamic factors which might affect flow noise, drag reduction techniques, propeller designs, pump jet design, and other hydrodynamic factors affecting undersea weapon performance. A highly qualified group of hydrodynamists are available to operate the water tunnel and to reduce the resulting data into meaningful results for undersea weapons research and development. Although hydrodynamists are available in other Navy laboratories and in commercial laboratories, the availability of the 48 inch water tunnel provides a unique facility at the ARL which is not available elsewhere. In conjunction with the academic

program of the University, this facility is the training ground for many of the hydrodynamists in the United States.

The ARL has specialized in acoustic homing systems, including signal processing techniques to provide reliable torpedo homing under adverse natural conditions or in a countermeasure environment. Historically they have developed the homing system technology for the Torpedo MK-27 Mod 4, MK-21, MK-37, and the Torpedo MK-48 Mod 0/2. Homing systems, resulting from ARL work, have been engineered for production by commercial activities with the technical assistance of the ARL engineers. Present and planned future effort is centered around using matched filter techniques which should provide a much more capable homing system for future torpedo systems.

The ARL has served as technical director of the MK-48 Mod 0/2 program and is currently providing research, engineering, consultation, liasion and assistance to Naval activities and contractors on the MK-48 weapon system.

Center for Naval Analyses, University of Rochester, Rochester, New York: The planned Navy funding at this FCRC in FY 1975 is $9,900,000. This Center manages and conducts a continuing program of studies and analytical efforts concerning development of concepts, doctrine, tactics, techniques, weapons systems, forces, and equipment required for all aspects of Naval warfare, including amphibious operations. Assistance is rendered to the operating forces by means of operational analyses to help improve current force capabilities and to provide operational data bases for other studies and analyses.

The Center for Naval Analyses (CNA) was established in 1962 as a private scientific organization to provide continuing research assistance to the Department of the Navy. The research program provides an independent base of analyses to assist the Navy in formulation of policies and programs concerned with the development, application and improvement of Naval capabilities.

The Navy has found a continuing need for the work of the Center for Naval Analyses. The Navy needs a group familiar enough with its operations and Naval problems to do relevant work, but independent enough to address controversial issues objectively and present unpopular views effectively. CNA operations are carefully monitored to ensure that the work is relevant and applied to Naval problems and that the operation efficiently uses government funds. Naval officer analysts are assigned to CNA to bring operational judgment and experience to the work. The field program whereby CNA analysts serve on ships and in other operating commands has been a continuing feature of the Navy program.

CNA has historically kept close ties with its Navy sponsor and has contributed work on central issues. With direct access to Naval decision-makers and the confidence of the Chief of Naval Operations and fleet commanders, a unique relationship of mutual trust has developed. As a result CNA's work is focused on major Navy problems. A variety of management and procedural practices ensure that Navy leaders play an active role in the analytical program of CNA and that this program is responsive to Navy needs without undermining CNA's responsibility to produce independent and high quality work. CNA is also unique in that it works with all levels of its sponsor. Support is provided to fleet support activities, unit commanders, type commanders, and the Chief of Naval Operations and his staff offices. This results in more realsitic and informed analyses at all levels and provides for cross-

fertilization of ideas between the fleet and study groups. Military personnel who are assigned to CNA also contribute to more realistic studies as operational factors are given due consideration. CNA's analytical efforts are almost fully focused on Naval and national defense problems. Yet its direct affiliation with a University provides an external review. It also provides one of the main channels for Navy contact with the academic world.

Aerospace Corporation: The planned funding at Aerospace in FY 1975 is $3,175,000. It will provide primarily for continuing the general systems engineering and technical direction support through the life of the Fleet Satellite Communications program development and production phases; for technical support in the area of systems engineering for the Radar Satellite System; for special technical advice and conduct of tests and evaluations in connection with the Navy Strategic Missile Technology program; investigation of the properties of superconducting Josephson junctions as parametric amplifiers at microwave and millimeter wave frequencies for use in surveillance and communications; and for Chemical Laser Research involving investigation of chemical reaction processes for high power lasers.

Support for the Defense Advanced Research Projects Agency is included in this budget because the Navy is managing two programs in FY 1975. The purpose of the proposed work under "Magnetospheric Wave-Particle Interaction Studies" is to study the feasibility and design of plasma injection experiments. The work under "Atmospheric and Ionospheric Modeling" is needed as input to ionospheric modeling for applications to radio communications and satellite surveillance navigation.

Lincoln Laboratories: The planned funding at Lincoln Laboratories in FY 1975 is $2,180,000. Continuing support is required from this Federal Contract Research Center in connection with the Fleet Ballistic Missile Communications program for the utilization of Lincoln Laboratories as a primary electronic and communications technology center in assisting the Navy in discharging its responsibilities.

Lincoln Laboratories will also conduct technical analysis and experimental evaluation of techniques for controlling and optimizing the energy distribution in laser beams in the atmosphere. This project will integrate matter from several measurement sites around the country and provide a basis for design of Navy systems.

Mitre Corporation: Planned RDT&EN funding for Mitre in FY 1975 is $1,200,000. It will provide for support to the Naval Telecommunications System Architect in the areas of technical program definition, engineering and technical program appraisal, and in system studies and analyses; support for producing engineering data to assist in the system engineering of the Naval Telecommunication Network; assist in the analysis and evaluation of the Navy C^3 system proposals as related to the effective use of Naval forces and as bounded by existing DoD policy and budgeting constraints; serve as systems engineer in a project to improve effectiveness of S-3A ASW flight crew training through introduction of a computer assisted instruction system.

The RDT&E,DA funding reflected is for the purpose of strengthening and improving Navy's Operational Test and Evaluation (OT&E) capability by continuing Mitre efforts with particular emphasis on unique support to the AEGIS program and OT&E of ships.

SUBCOMMITTEE RECESS

Chairman McCLELLAN. Is there anything else?

Gentlemen, thank you very much.

We will stand in recess until Thursday, May 9 at 10 a.m.

[Whereupon, at 11:05 a.m., Friday, May 3, the subcommittee was recessed, to reconvene at 10 a.m., Thursday, May 9.]

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